MOSAiCH 2018: Proposal for Question Contributions

Cognitive style, attitude importance and response quality

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1. Motivation

Advances in the social psychological field of attitude research have highlighted the importance of understanding variation in the strength of people's attitudes (see Howe and Krosnick (2017) for a recent review). Attitude strength has implications for the reliability of attitude measurements; weaker attitudes tend to be less coherent, more labile and more vulnerable to different kinds of response effect associated with attitude questions in surveys (Krosnick, 1991; Petty and Krosnick, 1995). Increased variance in attitude measurements, in turn, can have consequences for the validity of research findings relating to variations in attitudes across population subgroups and over time, to predictors and correlates of attitudes in different domains, and to the behavioural consequences of attitudes. Given its significance in the study of public opinion, and its potential to explain variations in response quality across survey respondents, a priority for surveys designed to measure social attitudes should be to provide researchers with a way to distinguish people with regards to the strength with which they hold particular views. From the point of view of furthering social psychological theory and improving the effectiveness of applied research that draws on this theory, there is also an impetus to investigate the determinants of attitude strength, and how different features of attitude strength exert an influence on behavioural outcomes.

Given that the MOSAiCH survey represents a key resource for researchers of Swiss social attitudes, the present proposal is to include a number of additional questions in the 2018 questionnaire designed to measure a) strength-related attitude features (including, notably, attitude 'importance') for attitude measures from the main questionnaire, and b) indicators of two individual-level measures of 'cognitive style' – need to evaluate (Jarvis and Petty 1996), and need for cognition (Cacioppo and Petty, 1982) – that are thought to play an important role in attitude formation and expression, and as such may turn out to be important antecedents of strength-related attitude features. This possibility has so far not received much research attention, but if it did indeed turn out to be the case, the MOSAiCH data would make an important contribution to the literature on the causes of attitude strength, and its implications for measurement quality in social surveys.

The measurement of attitude strength and its determinants could not only be valuable for substantive survey researchers, but also for survey methodologists. For the former, the interest lies in the possibility of being able to identify and distinguish different types of respondents on the basis of attitude strength. For example, focusing substantive research on respondents with more crystallised attitudes on a given topic could strengthen the validity of conclusions relating to their causes and consequences. For the latter, the interest lies not only in understanding the causes of weaker attitudes, but also their consequences for measurement quality. If cognitive style indeed predicts variations in the formation and expression of attitudes, then it could

be a key factor in determining a) people's willingness and ability to participate in attitude surveys, and b) the quality of the answers they give. Thus, cognitive style could be a key explanatory variable in the nexus between nonresponse and measurement error, which in a panel survey design, could potentially be exploited to adjust survey estimates from later waves.

In the following, I discuss in more detail measures of attitude strength and measures of cognitive style that could be useful additions to the MOSAiCH questionnaire, before presenting a concrete proposal for which questions to include in 2018.

a) Strength-related attitude features

Strong attitudes share a number of characteristics that make them particularly interesting to researchers of public opinion. Notably, stronger attitudes tend to be more resistant to change, more persistent over time, more likely to motivate and guide knowledge acquisition and information processing and more likely to influence behaviour (Krosnick and Petty, 1995; Visser et al., 2016). Howe and Krosnick (2017; p.330) summarise different features of attitudes related to strength that have formed the focus of previous research. They include among others: (1) attitude-relevant *knowledge*; (2) attitude *certainty*; (3) *elaboration* (how much people have thought about an attitude); (4) *extremity* (how much people like or dislike the attitude objet); (5) *accessibility* (the ease with which an attitude comes to mind); (6) *ambivalence* (the degree to which a person simultaneously holds both positive and negative evaluations about an object); (7) *intensity* (the strength of the emotional response elicited by the attitude); and (8) *importance* (the degree to which an individual attaches psychological significance to the attitude). These different features of attitude strength have been demonstrated to correlate highly with one another, as well as to predict the key characteristics of strong attitudes mentioned above (Visser et al., 2016).

Of the eight attitude strength eight indicators, attitude importance is the feature that has received the most research attention, and has been demonstrated empirically to be highly consequential as a determinant of attitude-behaviour congruence (Howe and Krosnick, 2017). In particular, it plays a key role in motivating people to think about particular issues, gather information about them and process that information, as well as to take action related to that issue. For this reason, I propose to include questions relating to the importance attached to attitudes measured in the main 2018 ISSP/MOSAiCH survey. Attitude importance is typically measured by asking respondents to state how important a particular issue is to them, or how much they care or are concerned about it (*ibid.,* p. 329). As well as measuring attitude importance, I propose to include measures of *elaboration* and *intensity*, and to use paradata from the web survey instrument measuring item-level response latencies (if available) as indicators of attitude *accessibility*.

b) Indicators of cognitive style

The key notion behind attitude importance is that some issues /attitudes are considered to be more significant psychologically than others. In other words, it is a feature of the attitude itself, rather than of the individual reporting their attitude. Research into the causes of important attitudes has focused on variables such as self-

interest, values, and social identifications, which have a long history in the political science and political/ social psychological literature on policy preferences (Visser et al., 2008). Yet a separate branch of research in social psychology has explored personality variables that are antecedent to the formation and expression of stronger or weaker attitudes (in surveys). Measures of cognitive style in particular are noteworthy here, because as well as potentially explaining some of the variation in attitude strength across issues or objects (see Britt et al., 2009), they may additionally be informative about variations in response quality in attitude surveys – and antecedent to that, the propensity to respond to attitude surveys to begin with.

Need for cognition (NC) (Cacioppo and Petty, 1982) is assumed to reflect individual differences in the inclination to engage in effortful cognitive activities. It has been shown to predict high elaboration of attitude-relevant information, and so people who are high in need-for-cognition may be more likely to form stronger attitudes (irrespective of issue importance). It is also likely to act as an important motivator for a) participating in surveys to begin with, and b) engaging in effortful responding or 'optimising' (as opposed to satisficing) (Krosnick, 1991).

Need to evaluate (NE) (Jarvis and Petty 1996) is assumed to reflect individual differences in the propensity to engage in evaluative thinking – i.e. to form and update opinions on the basis of new information – and the ease with which those attitudes are expressed (Leeper, 2014). This tendency to evaluate plays an important role in how people report their attitudes in response to social survey questions seeking to measure them. For those with stronger evaluative tendencies, retrieving and reporting an attitude is relatively straightforward, for those with weaker evaluative tendencies, the task of responding to attitude measures poses greater burden, as the respondent must construct their attitude on-the-spot based on retrieved considerations that are typically most accessible or salient in memory. Consequently, the attitudes reported by respondents who are low in need to evaluate have been found to be weaker or more ambivalent, exhibiting more don't know responses or other indications of satisficing, than those of respondents who are high in need to evaluate (*ibid.*). In other words, need to evaluate predicts certain features of attitude strength (e.g. extremity, accessibility, ambivalence, elaboration), as well as the propensity to optimise (and presumably, the willingness to participate in surveys in the first place). It is of theoretical interest to investigate whether this is indeed the case, and in particular, the extent to which need to evaluate also explains some of the variance in attitude importance, as the work of Britt et al. (2009) would suggest to be true.

Thus, as well as being informative about the underlying causes of strength-related attitude features, both need for cognition and need to evaluate may serve important roles as common causes of nonresponse and measurement bias, making them potentially useful candidates as adjustment variables in a panel survey setting. It has long been recognised that socio-demographic variables alone are insufficient to adjust survey error on measures of interest in social surveys (Peytcheva and Groves, 2009), and psychological variables are likely to be more useful, to the extent that they simultaneously correlate with the propensity to respond and the measures of interest. Establishing empirically the utility of cognitive style indicators in this respect would be a valuable endeavour for FORS, therefore, particularly at a time when a number of its surveys already include multi-wave data collection designs, and when the need to adapt to mobile web-based data collection implies the need to reduce response burden by offering multiple, shorter questionnaires. The proposal to include cognitive style

measures, therefore, serves multiple purposes for researchers with both substantive and methodological interests in the MOSAiCH survey.

2. Proposed concepts and questions

In the present proposal, I recommend to include a number of indicators of attitude strength, so that their relationship with antecedent variables and a number of outcome variables can be investigated. The main antecedent variables of interest are the two measures of cognitive style I am proposing to include (presented below). The main outcome variables of interest here are 1) measures of response quality (notably, the presence of response effects associated with satisficing, reliability (response stability/ consistency across survey waves) and validity (e.g. strength of correlations between related variables); and 2) willingness to participate in the second wave of the survey. Other antecedent and outcome variables could also be investigated, depending on the availability of suitable indicators in the MOSAiCH questionnaire. Some suggestions based on previous literature are included in Table 1 below.

Table 1 – Summary of Measures of Interest

Antecedent Variables	**Indicators of Attitude Strength**	**Outcome Variables**
Cognitive style: - Need for cognition - Need to evaluate	**- Importance** – how important is the attitude object? **- Intensity** – how strongly does the person feel about the attitude object? **- Accessibility** – how easily does the attitude come to mind?	**Response quality –** - Presence of response effects associated with satisficing (non-differentiation, Don't Knows ('Can't choose'), midpoint responding, acquiescence) - Validity – e.g. correlations between related variables - Reliability – i.e. response stability/consistency over time **Propensity to respond** to wave 2
Other: - Self-interest - Values - Group identities	**Other:** **- Ambivalence** – does the person hold both positive and negative evaluations of the object **- Extremity** – how much does the person like or dislike the object **- Elaboration** – how much has the person thought about the attitude object?	**Other:** - Knowledge acquisition and information processing - Influences behaviour

Given the preceding discussion, I propose to capitalise on the multi-wave design of the MOSAiCH survey, by including the measures of cognitive style in wave 1, and

ideally, some indicators of attitude strength in both waves 1 and 2. In addition, I propose to repeat a small number of attitude measures from wave 1 in the wave 2 questionnaire, to enable an evaluation of response stability (reliability) over time.

Cognitive style

The proposal is to include four measures of cognitive style – two items measuring need for cognition and two items measuring need to evaluate. It is important that these items be asked in wave 1 so that they can be used to predict the propensity to respond at wave 2. The source for the proposed items is the American National Election Studies.

Need for Cognition [NC]

Q1. Some people like to have responsibility for handling situations that require a lot of thinking, and other people don't like to have responsibility for situations like that. What about you?

Do you like having responsibility for handling situations that require a lot of thinking, do you dislike it, or do you neither like nor dislike it?

Like it a lot [1]
Like it somewhat [2]
Neither like nor dislike it [3]
Dislike it somewhat [4]
Dislike it a lot [5]

Q2. Some people prefer to solve simple problems instead of complex ones, whereas other people prefer to solve more complex problems. Which type of problem do you prefer to solve: simple or complex?

Simple [1]
Complex [2]
Don't Know [9]

Need to evaluate [NE]

Q3. Some people have opinions about almost everything; other people have opinions about just some things; and still other people have very few opinions.

What about you? Would you say you have opinions about…

Almost everything [1]
Many things [2]
Some things [3]
Very few things? [4]

Q4. Compared to the average person, do you have fewer opinions about whether

things are good or bad, about the same number of opinions, or more opinions?

A lot fewer opinions than the average person [1]
Somewhat fewer opinions than the average person [2]
About the same number of opinions [3]
Somewhat more opinions than the average person [4]
A lot more opinions than the average person [5]

Attitude objects and measures of attitude strength

The main focus of the 2018 MOSAiCH questionnaire is the module on religious attitudes and behaviours. As such, it already includes a number of relevant indicators of the strength of attitudes, and potentially interesting antecedent and outcome variables, which could be used to test some of the theoretical ideas discussed here. The basic analytic approach would be to examine the extent to which antecedent variables predict attitude strength, and how these in turn influence the outcome variables. Examples of existing measures from the main questionnaire are shown in Table 2 below:

Table 2 – Examples of existing measures relating to religious attitudes and behaviours in the 2018 MOSAiCH questionnaire

Antecedent Variables	**Indicators of Attitude Strength**	**Outcome Variables**
- **Self-interest** (socio-demographic variables/ group affiliations relevant to target attitudes) - **Values** (e.g. Christian values; moral traditionalism – e.g. Q3, Q4) - **Group identities** (e.g. attitudes towards in-groups and out-groups – Q35 & Q6 in optional items)	**- Importance** – how important is the attitude object? (e.g. importance of churches; self-reported importance of role of religion in various behaviours; importance of religious affiliation) **- Extremity** – how much does the person like or dislike the object (e.g. Q29) **- Accessibility** – how easily does the attitude come to mind? (e.g. response latencies paradata)	**- Response quality –** - Presence of response effects associated with satisficing (non-differentiation, Don't Knows ('Can't choose'), midpoint responding, acquiescence on agree-disagree items) - Validity – e.g. correlations between related variables (e.g. Q17 & Q32; Q34a & Q34b; Q8 & Q10) - Reliability – i.e. response stability/consistency over time (possible if repeat measures available in waves 1 and 2) **- Influence on behaviour** (e.g. Q24, Q25, Q26, Q27, Q28, Q5 in optional items (behavioural intention)

My proposal is to supplement the existing measures on religious attitudes and behaviour to permit a deeper investigation of the relevance of attitude strength and cognitive style in this domain, as well on one other topic. Specifically, I propose to

include measures of attitudes strength in wave 2 related to two issues that are related to multiple other items in the main questionnaire:

- **Morality in society** [Relates to questions 3, 4, 7c, 7e, 8a,b,c, 9 in the optional items and other items in the main questionnaire]
- **Women's rights** [Relates to questions 5, 6, 17, 32]

I have chosen 'morality in society' because I think it would be helpful to distinguish respondents who believe the issue of morality in society is important, though they may not be religious. An alternative could be to say 'Religion in society', which would be closer to the other attitude measures in the main questionnaire, but would not allow this distinction. A further alternative would be 'Morality and religion in society', but I am concerned that this would be 'double-barrelled' for respondents believing in one and not the other.

Respondents will be asked how important the issues are to them personally (importance), and how strongly they feel about them (intensity).

Q5. How important are the following issues to you personally?

Morality in society

Not important at all [1]
Not too important [2]
Somewhat important [3]
Very important [4]
Extremely important [5]

Q6. Women's rights

Not important at all [1]
Not too important [2]
Somewhat important [3]
Very important [4]
Extremely important [5]

Q7. Would you say that your feelings on the issue of morality in society are…

Extremely strong [1]
Very strong [2]
Fairly strong, [3]
or not strong? [4]

Q8. Would you say that your feelings on the issue of women's rights in society are…

Extremely strong [1]
Very strong [2]
Fairly strong, [3]
or not strong? [4]

Repeat measures

In addition, I propose to repeat two attitude measures from wave 1 in wave 2 of the survey, and ideally, to add one new question relating to government and morality. Specifically, the following items are the items to be repeated:

Q9. Do you agree or disagree with the following statements?

A husband's job is to earn money; a wife's job is to look after the home and family.

Strongly agree [1]
Agree [2]
Neither agree nor disagree [3]
Disagree [4]
Strongly disagree [5]
Can't choose [8]

Q10. Religions are usually a barrier to equality between women and men.

Strongly agree [1]
Agree [2]
Neither agree nor disagree [3]
Disagree [4]
Strongly disagree [5]
Can't choose [8]

The following item – taken from the Pew Social Trends Muslim Americans Survey (2007) – is the proposed addition:

Q11. Which of the following two statements comes closest to your own view?

The government should do more to protect morality in society [1]
I worry the government is getting too involved in the issue of morality [2]
Both equally [3]
Neither [4]

The argument for including this item is to supplement the items in the main questionnaire relating to the role of religion in government (e.g. Q8, Q10 and Q9 in the optional items), but to put the focus on morality for people who do not consider religion to be important to them.

Publication plan

The proposed additions to the 2018 MOSAiCH survey would initially provide data for two projects giving rise in the first instance to at least two publications in high-ranking, peer-reviewed international journals. I would carry out these projects myself, most likely in collaboration with students from the MA in Public Opinion and Survey Methodology or with future doctoral students.

Project 1 would focus on the question of whether cognitive style is predictive of attitude importance across the two topics of interest, and to compare its relative importance as a predictor alongside other antecedent variables. This work could also examine the consequences of attitude strength for different outcome variables (e.g. measures of religious behaviour). Project 2 would focus on whether cognitive style is correlated with the propensity to respond to surveys (e.g. by using the measures to predict participation at wave 2, or by conducting a level-of-effort analysis to compare reluctant and more cooperative survey respondents on NE and NC), and the extent to which this in turn relates to different indicators of response quality. This would provide an interesting and original way to investigate the nexus between nonresponse and measurement error.

The measures I am proposing to include are of wider interest to social and political psychologists, political scientists, as well as to survey methodologists, and the two projects listed above are just two initial ideas. The aim would be to continue to exploit the data in future investigations, perhaps alongside similar data gathered in other contexts (e.g. the ANES) to permit a stronger test of the theories of interest.

References

Britt, T.W., Millard, M.R., Sundareswaran, P.T., Moore, D. (2009). Personality variables predict strength-related attitude dimensions across objects. *Journal of Personality*, 77(3):859–82.

Cacioppo, J.T., and Petty, R.E. (1982). The Need for Cognition. *Journal of Personality and Social Psychology* 42:116–31.

Howe, L. C., & Krosnick, J. A. (2017). Attitude strength. *Annual Review of Psychology*, 68, 327-351.

Jarvis, W. Blair, G., and Petty, R.E. (1996). The Need to Evaluate. *Journal of Personality and Social Psychology* 70:172–94.

Krosnick, J.A. (1991). Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys. *Applied Cognitive Psychology* 5:213–36.

Leeper, T. J. (2014). Cognitive style and the survey response. *Public Opinion Quarterly*, 78(4): 974-983.

Montgomery, J.M. (2016). *The efficient measurement of personality: Adaptive personality inventories for survey research*. Paper presented in the seminar of The Program for Quantitative and Analytical Political Science (Q-APS), Princeton University. https://q-aps.princeton.edu/sites/default/files/q-aps/files/adaptivepersonalityinventories.pdf. Date accessed: 11/9/17.

Petty, R. E., and Krosnick, J. A. (1995). *Attitude strength: Antecedents and consequences.* Mahwah, NJ: Erlbaum.

Peytcheva, E., and Groves, R.M. (2009). Using variation in response rates of demographic subgroups as evidence of nonresponse Bias in survey estimates." *Journal of Official Statistics*, 25(2):193–201.

Visser, P. S., Holbrook, A., & Krosnick, J. A. (2008). Knowledge and attitudes. In W. Donsbach & M. W. Traugott (Eds.), *The SAGE handbook of public opinion research* (pp. 127 – 140). SAGE Publications Ltd.

Visser, P. S., Krosnick, J. A., & Norris, C. J. (2016). Attitude importance and attitude-relevant knowledge: Motivator and enabler. In Krosnick, J. A., Chiang, I.-C., & Stark, T. (Eds.), *Political Psychology: New Explorations*. Psychology Press. New York, New York.