Ernst Stähli, Michèle, Sapin, Marlène, Pollien, Alexandre, Ochsner, Michael and Nisple, Karin

MOSAiCH 2023 on National Identity and Citizenship and related topics. Survey Documentation.

Lausanne, 22.01.2024

Suggested citation of this report:

Ernst Stähli, Michèle, Sapin, Marlène, Pollien, Alexandre, Ochsner, Michael, and Nisple, Karin. (2024). *MOSAiCH 2023 on National Identity and Citizenship and related topics. Survey Documentation*. Lausanne: FORS – Swiss Centre of Expertise in the Social Sciences.

Suggested citation of the MOSAiCH 2023 dataset:

Ernst Stähli, Michèle, Sapin, Marlène, Pollien, Alexandre, Ochsner, Michael, and Nisple, Karin. (2024). *MOSAiCH 2023. Measurement and Observation of Social Attitudes in Switzerland. Study on National Identity and Citizenship and related topics.* (Version 1.0.0) [Dataset]. Lausanne: FORS data service. https://doi.org/10.48573/ae9w-0w40

Table of Contents

Index of tables:

MOSAiCH 2023 in a nutshell

MOSAiCH is a cross-sectional survey that focuses on the Swiss population's values and attitudes towards a wide range of social issues. The thematic focus of the 2023 edition lies on *National Identity and Citizenship*, defined by the 2023 module of the International Social Survey Programme (ISSP) which is a combination of the earlier National Identity and Citizenship Modules (www.issp.org). This international part is supplemented by selected socio-demographic questions, and a module composed of questions specific to Switzerland. The questions of this Swiss part are selected through a public call, either expanding the ISSP module thematically or measuring other dimensions that are of special interest to Switzerland.

Topics:
- National Identity and Citizenship (ISSP 2023, combination of the earlier 2013 National Identity and 2014 Citizenship Modules), including international optional questions.
- Sociodemographics (education, work, income, household composition, nationality, religion, etc.)
- Questions from 4 different proposals from the call on: 1) Immigration Misperceptions: Exploring their Nature and Drivers 2) Intentionalism in Sociological Attitudes toward Immigrants 3) Nationalism, Identification to one's Country, and Meaning in Life 4) National and Supranational Collective Narcissism, Identity, and Immigration Attitudes

Design:
- Self-administered interviews (web/paper)
- Questionnaire in two parts (first questionnaire with the ISSP and Background questions, and one follow-up questionnaire with the complementary questions from the call).
- Individuals are invited through postal letters and up to 3 reminders, the paper questionnaire is offered with the second reminder (push-to-web design).
- The second part is sent out to the respondents of Part 1 in the mode of their first answer.

Population:
- Country: Switzerland
- Unit of observation: Individuals
- Universe: Permanent resident population of Switzerland, aged 18 and over (no upper age limit), living in private households (and speaking either German, French or Italian)

Sample:
- Simple random sample, drawn on national level by the Swiss Federal Statistical Office from the SRPH (Population register: Stichprobenrahmen für Personen- und Haushaltserhebungen)
- Gross sample size 6016
- Net sample size (without ineligibles): 6012
- Valid interviews in Part 1: 3204 (AAPOR response rate= 53.3%)
- Valid interviews in Part 2: 2119 (66.1% of the Part 1 interviews)

Field:
- Field period: from 17.02.2023 to 11.07.2023 (from sending of first invitation to record of last answer); the follow-up survey (Part 2) started 05.05.2023
- Data collector: FORS, Swiss Centre of Expertise in the Social Sciences, Lausanne

Weighting:
- No design weighting; all weights = 1 according to the sample design (all respondents have the same probability to be selected);
- For bias in Part 2, please refer to the analysis in this Survey Documentation Report

Funding: Swiss National Science Foundation, Research Infrastructure nr. 198472

1   Description of MOSAiCH 2023

1.1 The MOSAiCH Project

MOSAiCH is a cross-sectional survey that focuses on the Swiss population's values and attitudes towards a wide range of social issues. The acronym stands for "**M**easurement and **O**bservation of **S**ocial **A**ttitudes **i**n Switzerland (**CH**)".

The respondents are drawn from a probabilistic sample representing the country's population from the age of 18. While MOSAiCH was conducted every two years as a face-to-face survey until 2017, it is carried out once a year as a self-administered survey (push-to-web design) since 2018. This design invites individuals to an online survey and only offers the option of a paper questionnaire later in the survey process.

In terms of content, the survey is designed in order to enable comparisons both over time and across countries. The thematic focus lies on the current module of the International Social Survey Programme (www.issp.org). This international part is supplemented by selected socio-demographic questions, as well as a module including questions specific to Switzerland. The questions of this Swiss part are selected through a public call and either expand the ISSP module thematically or measure other dimensions that are of special interest to Switzerland.

The MOSAiCH survey was founded in 2005; selected parts of the survey, however, have been administered in Switzerland for more than 20 years (for an overview of the topics covered by MOSAiCH, see section "Topics/editions" on the website: https://forscenter.ch/projects/mosaich).

Main aims:
- The aim of the MOSAiCH survey is to provide internationally comparable data of very high quality that documents the Swiss population's attitudes and opinions relating to a wide range of social issues.
- The purpose of the annual call for question contributions is to provide interested researchers with a valuable tool for the collection of representative data for their research projects. This data is also freely accessible to the wider scientific public.

1.1.1 Organisation and funding

MOSAiCH is financed by the Swiss National Science Foundation (SNSF) and directed by the FORS International Surveys team. Under the lead of Michèle Ernst Stähli, the International Surveys team has the following responsibilities:

- Overall planning and organisation of the survey;
- Development of the Swiss part of the questionnaire;
- Translation of the current ISSP-Module from English into three national languages (French, German and Italian);
- Sample drawing for Switzerland;
- Development of specific survey methods;
- Cleaning, documentation and processing of the MOSAiCH data.

Coordination of the International Social Survey Programme (ISSP)

The ISSP is an international collaborative program that conducts annual surveys on beliefs, attitudes and behaviors with respect to several topics relevant for social sciences. Established

in 1984 by its founding members Australia, Germany, Great Britain and the US, the ISSP (www.issp.org) expanded through the years to count now 44 member countries covering various cultures around the globe. Since its foundation, over one million respondents from all around the globe have participated in ISSP surveys.

The cross-national collaboration between members is routine and continual, which allows to study societal processes in a cross-time and a cross-national perspective. The ISSP is unique in its specific democratic form of organization, comparable to the one of United Nations (Scholz et al., 2017). There is an annual General Assembly that takes final decisions by majority vote notably on strategic decisions and on the content of the questionnaires. All active members have equal rights and vote in elections (Smith, 2009). The rotating ISSP Secretariat is responsible to deal with day-to-day business and chairs the General Assembly. Several committees composed of ISSP members support the Secretariat in its tasks. The elected Standing Committee for instance assists in political decisions, while the Methodological Committee, composed of ISSP members with expertise in survey methodology, assists in assessing and enforcing the methodological standards of the ISSP. Other methodology subcommittees work on various tasks in the research area, such as mode, translation, or demography to define standards and working procedures. For each ISSP module, a Drafting Group, composed of elected members, works on the development of the source questionnaire.

FORS has been strongly involved in various ISSP working groups over the past years. Represented by Dr. Marlène Sapin and Prof. Stephanie Steinmetz as Swiss representatives in the ISSP, FORS is involved in several ISSP research groups (non-response, mixed-mode, translation, weighting, demography) and was chair of the Methodology Committee until mid-2021. Since mid-2021, FORS is in charge of the ISSP Secretariat.

1.1.2 Design and Sampling

MOSAiCH is a web/paper survey following a push-to-web design (see section 2.2.1 for a detailed description). Due to its comprehensive coverage of topics and its length, it is fielded in multiple parts. Part 1 contains the ISSP module and background information on the respondents, later parts contain the questions suggested by researchers of the Swiss research community, selected through a competitive call for questions. The parts are fielded in a sequential order, only respondents having answered Part 1 are invited to subsequent parts.

In order to enhance the quality of the data, the methodical procedure is constantly adapted and improved. Among other things, these measures include a rigorous translation procedure for the questionnaire (TRAPD, Harkness 2003), optimised random sampling and extensive measures based on current methodological research to increase the response rate. The comparability between the two interview modes is maximised through a unimode questionnaire design (see chapter 2.3 for details).

The respondents are drawn from a probabilistic sample representing Switzerland's population from the age of 18. Since 2010, MOSAiCH is considered a survey of national importance to Switzerland, which means that a sample of individuals can be drawn randomly from the sampling register of the Swiss Federal Statistical Office, in accordance with Art. 13c, para. 2, lett. d, of the Ordinance on the Execution of Federal Statistical Surveys dated 30 June 1993.

While a net sample size of at least 1,000 respondents is required for the ISSP, MOSAiCH is designed to achieve a net sample of 1,000 respondents for the follow-up interviews.

1.2 The ISSP 2023 module on National Identity and Citizenship and background information

The first questionnaire of the 2023 edition of MOSAiCH is mainly composed of the ISSP 2023 questionnaire "National Identity and Citizenship" and a socio-demographic part that focuses on usual survey dimensions. A detailed list of the dimensions measured in the ISSP 2023 module as well as of the background variables, with the corresponding variables in the MOSAiCH 2023 dataset, is presented in section 5.2.

1.2.1 The ISSP 2023 module on National Identity and Citizenship

The ISSP module on National Identity and Citizenship is an unprecedented merging of two existing ISSP studies into a single study. It combines the two modules National Identity (conducted in 1995, 2003, and 2013) and Citizenship (fielded in 2004 and 2014). Swiss data are available for all editions except the first National Identity survey in 1995. The comparative ISSP data are available at https://www.gesis.org/en/issp/modules/issp-modules-by-topic and the Swiss data can also be downloaded from SWISSUbase (see links to the individual studies below).

As a combination of two earlier studies, the 2023 module contains 30 items from the National Identity III module and 20 items from the Citizenship II module, as well as 10 completely new items. 7 optional items are also included in the ISSP 2023. The repeated dimensions in the 2023 questionnaire focus on National Pride, Immigration and Immigrants, Globalization, Rights and Obligations of Citizenship, Satisfaction with Democracy as well as Trust and Evaluation of Institutions. The new main theme included in the 2023 questionnaire covers different forms of Populism.

The ISSP 2023 source questionnaire and further information are available on the ISSP webpages (see https://issp.org/ISSP2023_NatIdCit_source-questionnaire.pdf).

The Swiss data and documentation for the different editions of the ISSP modules "National Identity" and "Citizenship" are available on SWISSUbase:

Eurobarometer & ISSP 2003 (NatId II):www.swissubase.ch/en/catalogue/studies/7772/15200
MOSAiCH 2013 (NatId III): www.swissubase.ch/en/catalogue/studies/11468/12173
MOSAiCH 2005 (Citizenship II): www.swissubase.ch/fr/catalogue/studies/8343/15014
MOSAiCH 2015 (Citizenship III): www.swissubase.ch/fr/catalogue/studies/12089/13292

1.2.2 The background questions included in MOSAiCH 2023

The **socio-demographic part** is designed to meet the ISSP requirements for the 2023 module. Supplementary background variables were added to complement the MOSAiCH survey data. Standard variables on household composition, education, occupational situation, religious affiliation, electoral and other forms of participation, as well as social origin are measured. To assess the educational level, an instrument with detailed categories has been proposed to fulfil the requirement of the recoding into several classifications (see Annex 3, page 36), notably to the ISCED 1997 and ISCED 2011 classification. The instruments gauging personal and household income are based on the income deciles of the whole Swiss population (the details of the building of those instruments are described in Annex 4, page 39).

1.3 The call for question contributions

For the subsequent part(s) of MOSAiCH, the Swiss research community is invited to suggest additional questions fielded along or in complementation to the main topic of the survey defined by the ISSP module. The questions preferably relate to the ISSP annual topic or add value to MOSAiCH as a whole (e.g. by introducing a small module that might be analysed in innovative ways together with the ISSP module or adds methodological insights significant to MOSAiCH). The proposed questions should also be of relevance for a larger scientific public.

The MOSAiCH call 2023 was published on January 18, 2022 and closed on April 25, 2022. Four proposals were submitted and evaluated by the MOSAiCH commission. The submitters were asked to revise their proposals according to the comments brought forward by the commission during the peer review process. The proposed questions and modules were implemented in joint collaboration between the FORS International Surveys Team and the submitters.

A detailed list of dimensions and concepts measured in Part 2 of MOSAiCH 2023, with the corresponding variables in the dataset, is presented in chapter 5 (from page 25 on).

1.3.1 The MOSAiCH commission and the procedure of evaluation

The MOSAiCH scientific commission guarantees the strong interconnection of MOSAiCH with the Swiss research community and other authorities related to research in social sciences. The commission is mandated by the Foundation Board of FORS. According to its mandate, the duty of the commission is to guarantee the quality of the Swiss part of this research project and to strengthen the network of research in social sciences in Swiss universities and other concerned authorities. The commission also advises FORS on strategic orientations of MOSAiCH. After the evaluation, FORS assures the methodological elaboration of the successfully evaluated proposals and their appropriate implementation in the three linguistic regions in collaboration with the proposing scholars.

Composition of the scientific commission

The FORS Foundation Board elects the members of the scientific commission for a 3-years' term. Re-elections are possible. The members should represent the diversity of Swiss social science research regarding universities and other research institutions in Switzerland, disciplines, research topics and theoretical orientations. Members can also be nominated from non-Swiss academic institutions. FORS is represented by at least one member with survey expertise. The presidency of the commission is determined by the FORS Foundation Board. The commission meets at least once a year, the MOSAiCH operational team contributes to the meeting in an advisory function without voting rights and keeps the minutes.

The commission for MOSAiCH 2023 was composed of the following members:

- Chair: Prof. Bart Meuleman (KU Leuven, Belgium)
- Prof. Kaspar Burger (University of Zürich)
- Prof. Axel Franzen (University of Berne)
- Prof. Eva Green (University of Lausanne)
- Prof. Spartaco Greppi (SUPSI, Università della Svizzera Italiana)
- Prof. Anita Manatschal (University of Neuchâtel)
- Prof. Stephanie Steinmetz (University of Lausanne)

- Prof. Boris Wernli (FORS)

The operational team was represented by Dr. Michèle Ernst Stähli and Dr. Marlène Sapin.

Evaluation of the proposals for MOSAiCH 2023

The scientific commission of MOSAiCH 2023 evaluated the proposals according to the following criteria:

a. The scientific interest of the proposal (incl. the scientific interest of the scope and expected results, the development of the idea and the conceptual coherence, the quality of the state of the art, the innovation and the originality of the proposal and the appropriateness of the proposed measures)

b. The pertinence of the proposal with the current edition of MOSAiCH (incl. the potential synergy with the ISSP module data and/or other proposals in relation to the main topic of MOSAiCH, the coherence for the respondents, the parsimony of the questions, the relevance of fielding the questions in the current edition rather than in another data collection)

c. The methodological quality (including the quality of the measure, the potential methodological innovations, the pertinence for a general population survey, the feasibility in a multilingual mixed-mode self-completion survey)

d. Additional other features (including the relevance to other researchers, the high chance of being widely used and of giving rise to quality publication, the overall benefits for the MOSAiCH project)

1.3.2 Retained proposals and design definition of the survey

All submitted proposals for MOSAiCH 2023 were accepted with suggested modifications (the proposals are detailed in chapter 5.1, page 25):

The first proposal, written by Philippe Lutz (University of Geneva) and Marco Bitschnau (University of Neuchâtel), aims to capture the concept of misperceptions about immigration using a novel approach to distinguish between being misinformed and being merely uninformed and reflecting its multi-dimensionality (innumeracy; culture; economy; security).

The second proposal, by authors Florian Cova (University of Geneva) and Alexandre Pollien (FORS), uses a vignette design to examine lay people's theories about the causes of immigration and how these relate to attitudes toward migration.

The third proposal focuses on nationalism, identification with one's country, and meaning in life. It aims to shed light on the interrelation between meaning of life and the experience of belonging, using a 'presence of meaning' and a 'need for meaning' scale. The proposal was written by Angela Abatista (University of Geneva).

The fourth proposal, by Jessica Gale and Eva G.T. Green (both University of Lausanne), is a comprehensive set of questions on national and supranational collective narcissism, identity, and immigration attitudes. It includes measures of general group identification at three levels of abstraction (Switzerland, Europe, humanity), collective narcissism at two levels of abstraction (Switzerland and Europe), and support for migrants coming from different regions.

1.3.3 Preparation and implementation of the proposed questions

The MOSAiCH scientific commission met in person on June 10, 2022 (two of the members participated online) and finalized its evaluations and recommendations to the authors during the summer. The revision of the proposed questions was done in collaboration with the authors. We thank the authors for their responsive and efficient collaboration. All the questions were translated by two professional translators per language (German, French, Italian), even those with proposed or existing translations. All translations (new and old) were then reviewed following the TRAPD procedure (Harkness, 2003) to ensure consistency with the whole survey and across languages.

1.4 The MOSAiCH 2023 survey

MOSAiCH 2023 is a push to web survey fielded in two parts. The first part contains the ISSP 2023 questionnaire (National Identity and Citizenship) and an extended part with background information about the respondents (mainly socio-demographic variables). Sample members could participate in the first part either through web or paper mode. Part 2 contained the questions from the public call in relation to the ISSP topic. All questions were implemented both on web and paper.

2   Fieldwork information: preparation and investigation

2.1   Sampling and universe of the survey

MOSAiCH is based on a random sample of the resident population 18+ in Switzerland. No design weight is needed, as all sample units have the same probability to be selected.

2.1.1   The target population

The target population is the permanent resident population aged 18 and over in Switzerland, living in private households. The size of the permanent resident population in this age category in Switzerland was of 7.232.157 individuals by 31.12.2022, including however institutional households, which are not in our sample (STATPOP data retrieved 22.01.2024, SFSO; institutional households represent about 2% of the population.).

2.1.2   The sampling frame and design

The sample is randomly drawn from the national register. This register is obtained by joining/matching population registers of cantons and municipalities, and federal registers (of immigrants, international civil servants, etc.). As far as we know, the coverage of this sampling frame is excellent and we did not detect specific populations or parts of Switzerland that would be excluded from the sampling frame. However, our sample is purposely restricted to people living in private households, whereas the number of residents above also includes people living in institutions. They represent about 2%, all ages confounded.

The MOSAiCH sample is essentially a simple random selection of residents aged 18 and over on national level drawn by the Swiss Federal Statistical Office from the SRPH (Population register: Stichprobenrahmen für Personen- und Haushaltserhebungen). However, in order to avoid multiple selections of units within the same households and unnecessary repeated selections of households over time, a two-stage procedure and coordinated Poisson sampling procedure in the first stage is applied. The proportional probability by NUTS2 (the 7 Swiss regions) insures that some regions with heavy survey loads are not underrepresented in the gross sample (namely in region Ticino, which is very often oversampled). The sampling is done using Poisson sampling and is therefore neither systematic nor stratified. The Poisson procedure often results in an actual sample size that is not exactly the desired sample size but differs only slightly. The seven great regions are used in order to better control the size of the sample, as the inclusion probabilities can be defined using the seven great regions. However, the seven great regions don't act as stratification frame. The sampling frame consists of all the individuals resident in Switzerland. The inclusion probabilities in the different regions are identical: the proportional stratification by region is done to avoid that the Poisson sampling by chance results in some small regions being underrepresented. The sampling frame contains additional information which enables for example an oversampling, but not a stratified sampling with fixed size for a specific sub-group.

The SFSO uses a negative coordination with previous surveys at the first phase 'household selection' to minimize probabilities of selecting repeatedly the same households over time. Households which were sampled previously are not excluded but have lower sampling probabilities as a result of this. The final design effect is therefore not exactly 1, but so close to 1 that there is no need to weight for design (Qualité, 2011). A Poisson sampling procedure is used. Note that it does not consist of simply removing previous samples from the target

population but it is a correct coordinated sampling whereby the joint inclusion probabilities in different surveys are controlled while respecting the first order inclusion probabilities assigned for each separate survey.

We received a sample of 6.016 units. The sample frame contains the name and address to contact people, indication if there is a landline telephone in the household, if they have a registered telephone number, and some basic demographics such as sex, age, civil status, nationality and household size.

2.2 Design and timing of the survey

2.2.1 General design of MOSAiCH 2023

The MOSAiCH 2023 survey is a general population survey with a push-to-web design. It is therefore basically a mixed-mode survey, providing two possible modes of participation: on the web and on paper. The respondents are "pushed" to answer online even though the mode of contact is initially by post mail. Respondents are encouraged to provide a valid email address so that they can be contacted via this mode rather than by postal mail for the remainder of the survey.

The general contact procedure for both Parts contained a prenotification and invitation as well as three reminders in case of nonresponse. Fieldwork lasted from February 17 (reception of invitation to Part 1) to June 30 (official end, but answers were accepted until July 11). The invitation to Part 2 was received on May 5.

MOSAiCH 2023 followed a sequential design: All respondents to Part 1 who had completed at least 50% of the web questionnaire or from whom a valid paper response (not blank) had been received by April 27 were invited to Part 2.

All invitations and reminders included an individual login necessary to participate in the web questionnaire of the respective survey Part and which would make it possible to identify the individual respondents in the collected data. The letters and emails also included a free hotline number and an email to get in contact with FORS. Respondents who communicated their refusal or ineligibility to participate in the survey were excluded from all further contacts.

This contact procedure has been chosen based on results of the experiments performed in MOSAiCH 2018. These experiments have shown that prenotification letters work well in the long run, grouped invitation to the second part can be implemented without loss of response rate compared to individualized timely invitation, and the use of e-mail communication for the second part is as effective as postal communication when the addresses are given by the respondents.

2.2.2 Invitation and reminder letters for MOSAiCH 2023

Both a prenotification and an invitation letter to Part 1 were sent to all sample members. The prenotification (L1 – for contact abbreviations and timing see Table 1 and Table 2, and letter PDFs in annex) to the survey included a letter announcing the invitation letter and informing the recipients of their inclusion in the MOSAiCH sample, mentioning the legal basis for drawing their address form the SFSO national register. The prenotification also included a flyer with general information on the MOSAiCH survey and an information sheet with more detailed

information on data protection and the confidentiality of the respondents' personal data with regards to the survey. The invitation to Part 1 (L2) included CHF 10 cash as unconditional incentive with the login information for the online questionnaire.

Addressees who contacted us by phone or email throughout fieldwork indicating that a participation via online questionnaire was impractical for them (e.g. lack of technical affinity or internet access) were motivated to participate in the study via paper questionnaire. Persons who agreed to this or directly asked for the possibility to participate by paper were informed that they would receive the paper questionnaire at the scheduled time of the 2nd reminder and they were excluded from the 1st reminder if their request was made before that time.

The first reminder for Part 1 (L4) was in post card format to attract attention. Because of the high number of contact attempts for non-respondents, all reminders were formulated in a simple, short, and polite way, avoiding blaming or formulations that could cause harassment. The second reminder to Part 1 (L5 'rappel') included a paper questionnaire to ease participation for those not wanting to fill in the questionnaire online. As mentioned, persons having requested a paper questionnaire received it on the same date. A specific cover letter was attached for those respondents (L5 'commande') instead of the reminder letter. A postage prepaid envelope was attached to the paper questionnaires so that respondents could send back the filled out brochures without having to pay the postage themselves. The 2nd reminder to Part 1 was followed up by a 3rd reminder (L6) in case of non-response.

In the course of Part 1, postnotification letters were sent to the sample members who had participated in the survey. These postnotifications were sent on four different dates. In these letters the participants were thanked for their participation and were made aware of the upcoming invitation to Part 2. Two different postal notifications were sent each time: One for people who had responded via web and who had provided a valid email address in the online questionnaire (L3 'email'). These persons were made aware that the invitation to Part 2 would be sent to them by email. To those who replied either by paper format (no request for an email address was made in the paper questionnaire) or by web without providing a valid email address, a postnotification was sent without this remark (L3 'papier'). This distinction (provision of a valid email address during Part 1 or not) splits the respondents into two groups with regards to the following description of contacts realized during the survey, which will be referred to as "group email" and "group postal letters".

The invitation to Part 2 was preceded by another prenotification (L7), which was only sent to the "group email" 2 days in advance of the invitation. It informed the recipients that they would receive an email invitation with a login to participate to Part 2 via web in the following days. This prenotification was intended to ensure that the respondents would check their email inboxes for emails regarding the survey. It therefore would be the last contact by post the "group email" would receive in the course of the fieldwork. The following invitation contained an invitation letter for respondents who had participated to Part 1 via web without providing a valid email address (L8 'web') and another letter with a paper questionnaire to Part 2 for all respondents who participated to Part 1 by this mode (L8 'qp') with a postage prepaid return envelope. "Group email" respondents received an invitation email (E8). This invitation was followed up by three reminders to Part 2 (E9/L9, E10/L10, E11/L11).

Disregarding pre- and postnotifications, the survey letters and emails were in general sent in a two weeks' rhythm; the reception day of the letters was generally on a Friday.

Table 1 and Table 2 give an overview of the different contacts realized during the survey.

Table 1. Sequence of contacts by group, Part 1

#	Date of receipt	contact	Group email	Group postal letters
1	Mo., 13.02.2023*	Prenotification	**L1** – Letter (A4) + Flyer (folded A4) + Data protection leaflet (A4) in C5 envelope, B Mail	
2	Fri., 17.02.2023	Invitation	**L2** – Letter (A4) with 10 Swiss francs incentive, in C5 envelope, A Mail	
3	Tue., 28.02.2023*	Postnotification (1/4)	**L3** (with email) – Letter (A4) in C5 envelope, B Mail	**L3** – Letter (A4) in C5 envelope, B Mail
4	Fri., 03.03.2023	1st reminder	**L4** – Postal card (A5) in C5 envelope, A Mail	
5	Tue., 14.03.2023*	Postnotification (2/4)	**L3** (with email) – Letter (A4) in C5 envelope, B Mail	**L3** – Letter (A4) in C5 envelope, B Mail
6	Fri., 17.03.2023	2nd reminder + paper questionnaire	**L5** (Cover letter for paper questionnaire on demand Pt. 1) – Letter (A4) + paper questionnaire Pt. 1 (A4 brochure, 32p.) + postage prepaid B4 envelope in B4 envelope, A Mail **L5** (Second reminder Pt. 1 with paper questionnaire) – Letter (A4) + paper questionnaire Pt. 1 (A4 brochure, 32p.) + postage prepaid C4 envelope in B4 envelope, A Mail	
7	Tue., 28.03.2023*	Postnotification (3/4)	**L3** (with email) – Letter (A4) in C5 envelope, B Mail	**L3** – Letter (A4) in C5 envelope, B Mail
8	Fri., 31.03.2023	3rd reminder	**L6** – Letter (A4) in C5 envelope, A Mail	
9	Tue., 27.04.2023*	Postnotification (4/4)	**L3** (with email) – Letter (A4) in C5 envelope, B Mail	**L3** – Letter (A4) in C5 envelope, B Mail

*: Letters sent by B Mail bulk mailing could have been received by individual addresses up to two working days (Mo.-Fr.) before or after indicated date.

Table 2. Sequence of contacts by group, Part 2

#	Date of receipt	contact	Group email	Group postal letters
10	Wed., 03.05.2023	Prenotification	**L7** – Letter (A4) (with 3 x 300 Swiss francs lottery incentive), in C5 envelope, A Mail	-
11	Fri., 05.05.2023	Invitation (+ paper questionnaire)	**E8** – email (with 3 x 300 Swiss francs lottery incentive)	**L8** (Invitation Pt. 2 without paper questionnaire) – Letter (A4) in C5 envelope, A Mail **L8** (Invitation Pt. 2 with paper questionnaire) – Letter (A4) + paper questionnaire Pt. 2 (A4 brochure, 27p.) + postage prepaid C4 envelope in B4 envelope, A Mail
12	Fri., 22.05.2023	1st reminder	**E9** – email	**L9** – Letter (A4) in C5 envelope, A Mail
13	Fri., 05.06.2023	2nd reminder	**E10** – email	**L10** – Letter (A4) in C5 envelope, A Mail
14	Fri., 16.06.2023	3rd reminder	**E11** – email	**L11** – Letter (A4) in C5 envelope, A Mail

2.2.3 Incentives

As already mentioned, all sample units received an unconditional incentive in form of CHF 10 cash, sent along with the invitation letter. 4,3% of these incentives came back, either because of invalid addresses or because they were sent back by people who refused to participate. In

addition, a conditional incentive was offered to the respondents to the second part of the survey in form of a lottery (3 times CHF 300.- cash each). This was announced in the invitation to the second Part. The winners' prizes were sent by bank transfer.

2.3 Preparation of the online and paper questionnaires

The design of the web and paper questionnaires followed the unimode approach suggested by Dillman et al. (2014), in order to reduce the possible mode specific measurement effects. This means that differences between modes are kept at their minimum. This applies to web vs paper questionnaire, as well as to desktop vs mobile devices. For example, the structure minimizes filtering, the items are shown one by one and answers by web are not mandatory (they can be skipped as on paper). The few differences are clearly stated in the PDF questionnaires with a '*' (based on the paper questionnaire, with screenshots of the web questionnaire in case of difference) and in the trilingual questionnaire template "*MOSAiCH 2023 Questionnaires*".

The web survey was programmed with Qualtrics, and the paper questionnaire has been formatted in a text editor and printed as an A4 brochure (see the Questionnaires in the Appendix documentation for the layout). The data from the paper questionnaires was scanned and reviewed with Remark Office OMR Software.

2.4 Fieldwork monitoring information

The field progress was monitored day by day. No changes to the fieldwork plan were necessary. Fieldwork monitoring activities included receiving notifications from the telephone hotline, receiving postal and electronic mails, recording refusals and other reasons for non-participation, investigating address issues and giving support to technical issues.

A particular challenge of surveys using paper mode is the unavoidable time lag required for the operations (printing documents and sending letters). This difficulty is amplified by the two-part design of the survey. The main issue concerns the delay between the compilation of the target-addresses and the receipt of the mail by the respondent. Some inappropriate crosspostings occur during these few days which are apparent in the contact file (e.g. reminder when already responded).

3   Data processing

The data of the online questionnaires was coded directly by the Qualtrics survey software, while the data of the paper questionnaires was manually entered and coded in office. In order to maximise comparability with the paper version, the web questionnaire included no value limitation nor plausibilisation of answers.

3.1 Data check and cleaning

To identify invalid cases, the following checks were performed:

- Check for cases of substitutions: Plausibility check using the sample frame data on whether the correct person in the household answered Part 1 (36 interviews of Part 1 were removed because of substitution). Plausibility check whether the correct person answered Part 2 (29 interviews invalidated). In case P2 is invalidated, all answers of the corresponding part are coded as missing (with code -6), in order to keep the answers to Part 1. The values however of the administrative variables of P2 (such as mode) are maintained.
- Check for issues with identification numbers (errors on paper data entry and web login).
- Check for double answers, submitted by the same person in both modes (answering both to the web and paper questionnaires): the most complete version or, if equivalent, the first answer was retained. The most frequent cases concerned Part 1 and early drop-outs from the web survey.

The following checks were performed to identify data quality issues:

- Multiple, ambiguous and unclear answers given on paper were coded as invalid answers.
- Incorrect filter paths on paper answers were corrected according to the filters implemented in the web version.
- Inconsistent household size indications (number of adults, number of children above school entry age and number of children below school entry age) were plausibilised with a minimum of intervention. Many respondents do not indicate zero and leave the field blank when there is no child (1363 and 1624 cases). Another source of error is that the total does not fit to the details. It may be related to the uncertain status of some household members such as shared child parenting, student. Variables indicating the number of persons in the household were plausibly adjusted using information from the sample data. The change is applied according to the extent of corrections (missings replacement first, then number of replacement required).

- Outliers were checked: 9 highly improbable household compositions have been identified and corrected according to other information available. Improbable answer on year of birth was coded as missing (cases where year of birth was 1900).
- Distribution of socio-demographic information were compared with previous MOSAiCH editions to detect eventual systematic errors.
- Other implausible data or data combinations were not changed because of a lack of information where the error lies. We suggest that researchers check for implausible

     answers depending on their research question and decide themselves on how to handle them.
- Additional check of duplicate answers in the final data: no cases of almost identical answers on factual questions were found among the valid cases (such duplicates could happen in our case for example trough handling errors).

No active back-checks have been performed (we did not contact respondents and invalid sample units to verify their answers or status). The substitution checks based on the sample frame data offer enough opportunity for quality checks.

In general, the principle of minimal intervention was followed. We remind the reader that the web questionnaire included neither value limitation nor plausibilisation of answers to assure comparability with the paper version.

3.2 Incomplete interviews

The AAPOR Standard definitions distinguish three status for item nonresponse to applicable questions: break-off, partial and complete. These definitions might vary depending on the type of survey. We applied the following rules of item nonresponse defined by the ISSP (see variable Compl_wp1r):
- Complete interview if at least 80% of the questions in the main ISSP module have a valid answer ("can't choose" and "don't know" are considered as a valid answer); optional questions of the ISSP module are not considered.
- Partial interview if 50% to 80% of the questions in the main ISSP module have a valid answer
- Break-off if less than 50% of the questions in the main ISSP module have a valid answer. These cases are invalidated and are not part of the dataset.
- For complete and partial interviews, we additionally apply the condition of minimal background information. This means 2 valid answers on the 2 following questions: sex and age; or at least 50% of valid answers on the basic background information of 31 variables.

Interviews with less than 50% of valid answers in the main ISSP module or without minimal background information are not included in the dataset. Filtered questions are considered as answered. Don't know/ Can't choose are considered as valid answers. 56 break-offs with less than 50% of the ISSP module answered have been invalidated and removed from the dataset. Eventual answers in Part 2 have also been invalidated consequently.

All partial interviews of Part 2 are included in the dataset, if Part 1 is considered as valid. The variable Compl_wp2 indicates the percentage of questions answered.

3.3 Anonymization

Two different data sets are available for MOSAiCH 2023 with two levels of anonymization: A highly anonymised dataset that is directly downloadable from SWISSUbase (https://10.48573/ae9w-0w40 for version 1) and a protected dataset that includes variables with more detailed information that can be requested by filling in a confidentiality statement, a description of the project and indication why the highly anonymized version is not sufficient.

The highly anonymized dataset does not include open-ended responses and replaces some variables with aggregated codification (country, geographical level, occupation variable).

In the protected dataset, all open answers are anonymized by deleting proper names, places, dates and private or very detailed information. They are replaced by generic information. For example, a specific company name is replaced by "company in this sector".

In both datasets, rare respondent's profiles are detected, and, in these cases, some information is generalised or altered: we look in particular at large households, exposed or rare occupations, rare nationalities (or rare combinations between nationality, languages, origin, etc.). This avoids that such cases can be clearly identified.

3.4 Recoding

All open answers reported in the categories "others" are recoded in existing codes as far as possible. If necessary, a new code has been created. Uncodable answers remain in the category "others".

Countries are coded following the standard ISO 3166-1. Nationalities (DEMO3) are further recoded into geographical regions following the UN categories (https://unstats.un.org/unsd/methodology/m49/).

Languages are coded following the ISO 639-2 standard.

Occupations (WORK4ISCO, PWORK4ISCO) are postcoded into ISCO08 from title and description of type of work. On the web, respondents can choose the title of their occupation from a very comprehensive list established by the Swiss Federal Statistical Office, indicating the corresponding ISCO code (Nomenclature Suisse des Professions de 2000, version 2019, reduced version for surveys with 8913 denominations, downloaded in January 2022). The list has been further reduced by our team, by deleting 443 pure educational denominations. The answers are checked with the help of the description of work, and corrected accordingly if necessary. Other complementary information about work, such as supervision, can be used to code unclear titles and description.

The highest educational level attained, measured with 23 categories, is recoded according a detailed ISCED97 scheme adapted to Switzerland and compatible with ISCED11 (EDU1CHISCED; for details, refer to Annex 3, page 36).

The geographical information is postcoded from the postal code of residence following a table of the SFSO ("Raumgliederung", "Niveaux géograhiques": districts, cantons, linguistic regions, size of communes, agglomerations etc.); as the SFSO dropped the update of several typologies from 2016 on, we propose the old and new ones to allow for comparisons over time, as far as the SFSO still offers them.

3.5 Missing values

-1 = Don't know / Can't choose
-2 = No answer (or invalid answer)
-3 = Refusal / No participation
-4 = Non-codable answer
-5 = Not applicable
-6 = Question specific 'not applicable' / Follow-up refusal
-7 = Filtered question
-8 = Not asked on paper/web

3.6 System of data naming and labelling

The variable names are conceived to facilitate international and over time comparisons.

The variable names of the ISSP module follow the original numbering of the source questionnaire, with the first letter indicating the topic of the module ("NIC" in MOSAiCH 2023 for National Identity and Citizenship). Supplementary ISSP items have the prefix NICS.

The Swiss variable names of the first questionnaire (excluding ISSP variables) are a combination of mnemonic and numbering, without respecting the order in the questionnaire. They have been thoroughly revised in 2015 compared to previous MOSAiCH editions in order to improve coherence and facilitate comparison over the years. Most of these variables are indeed repeated at each MOSAiCH edition, but their position in the questionnaire might change.

The questions embedded in the follow-up survey (Part 2) are considered as being a supplement to the ISSP module and are therefore named NICS followed by a sequential numbering, the answer mode(s) and an indication of the part.

The table below (Table 3) gives the main logic of this variable naming.

The questionnaire template «MOSAiCH2023_questionnaires_FDI.pdf» includes the variable names and the question numbering of the paper questionnaire (see Appendix 1).

Table 3. Principles of MOSAiCH variable naming

Variable name	Topic	Origin
NIC	National Identity and Citizenship	ISSP 2023 (National Identity and Citizenship) Variables
NICS	Family and Changing Gender Roles	Complementary variables on National Identity and Citizenship (Swiss supplementary from call)
POL / SOC / LIFE / REL / EDU / DEMO / WORK / HH / PWORK / HWORK / INC / ORIG / METH	Sociodemographics (political, social, satisfaction, education, work, origin, …)	Sociodemographical variables in a large sense
XXXr	-	Recoded variables
XXX_wp2	-	Asked in the second questionnaire (Part 2) on web and paper
XXX_w2		Asked in the second questionnaire (Part 2) only on web

The dataset is thoroughly labelled in English, although the survey instrument is in German, French and Italian. The labels are either derived from the source question wording, if in English, or have been translated internally for easy use of the data. Please refer to the fielded instrument (questionnaires in Appendix 1) for exact and reliable question wording.

4   Results of the fieldwork

Fielded between February and July 2023, Part 1 achieved a response rate of 53.3% (N=3204), while the follow-up survey Part 2, fielded between April and July 2023, achieved a response rate of 35.2% (N=2119), representing an attrition rate of 33.8% (66.1% of the respondents of Part 1 also participated in Part 2).

4.1   Response rate and other fieldwork outcomes

Of all 6016 addresses, we were informed about 325 persons not willing to participate (5.4%), 53 persons not able to participate due to illness, language barrier or technical issues (0.9%), and 97 persons could not be contacted because of a change of address or not traceable address (1.6%). We were also informed about 4 ineligible cases (0.1%) according to AAPOR standards[1] (i.e. sample members not being part of the population): 3 sample members were deceased and 1 sample member lives abroad, leading to 6012 eligible cases. However, in a web-based survey where contacts were made by letters without involving interviewers, we have only information about nonresponse from sample unit or relatives who actively informed us. The number of ineligible sample members might in fact be higher. For the same reason, the share of non-informed nonresponse is high: we did not receive any information for 38.0% of the gross sample. Nevertheless, the low rate of ineligibles and non-addressable letters reflect the high quality and up-to-datedness of the sample data.

For Part 1, we received 3246 questionnaires in total, without considering substitution of respondents (not answered by the target person) and break-off (answered to less than 50% of the applicable questions of the module: see chapter 3.1 and 3.2 for the definitions). 42 questionnaires are considered as invalid: 36 substitutions and 6 break-offs. These cases are not included in the data file, and the eventual subsequent answers of Part 2 were also erased. We so end up with 3204 valid interviews for Part 1, with a response rate of 53.3%.

For Part 2 we ended up with 2119 valid interviews (response rate of 35.2%), after deletion of invalid answers of Part 1, empty questionnaires and substitutions in Part 2. Since the questionnaire is valid and includes 1 answer, interviews are accounted for and included in the dataset, whatever the degree of completeness.

The detailed fieldwork outcomes, based on the processed dataset, are shown in the following tables.

The field period (following the registered answers) is for:
- Part 1: 17.02.2023 - 21.06.2023
- Part 2: 05.05.2023 - 11.07.2023

---

[1] The American Association for Public Opinion Research. 2016. Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 9th edition. AAPOR.

Table 4. Outcomes of sample in Part 1 of the MOSAiCH 2023 survey

Part 1	Frequency	Percent
Total sample:	6016	100.0%
Valid interviews:	3204	53.3%
Valid interview (more than 80% completed)	3197	53.1%
Valid partial interview (50%-80% completed)	7	0.1%
Invalid interviews:	42	0.7%
Invalid interview (Break-off, less than 50% completed)	6	0.1%
Substitution (other person completed interview)	36	0.6%
Informed non answers:	478	7.9%
Refusal	325	5.4%
Language barrier	7	0.1%
R mentally, physical unable, ill sick	26	0.4%
Feedback without answer: question, technical issue	20	0.3%
R not available, away	3	0.0%
R moved to unknown destination	17	0.3%
Address not traceable	80	1.3%
Ineligibles:	4	0.1%
R deceased	3	0.0%
R moved out of country	1	0.0%
Nonresponse (no information)	2288	38.0%
Eligible	6012	99.9%
Response rate Part 1 (complete + partial)/eligible		53.3%

Table 5. Outcomes of sample in Part 2 of the MOSAiCH 2023 survey

Part 2	Frequency	on total	on Part 2
Total sample	6016	100.0%	
Eligible	6012	99.8%	
No follow up invitation because of no Part 1	2770	46.0%	
Missed invitation to follow up (late response, omission)	123	2.0%	
Total invitations Part 2	3119	51.9%	100.0%
Break off part 1	9	0.1%	0.3%
Valid interviews[1]	2119	35.2%	67.9%
Substitution	40	0.7%	1.3%
Informed non answers:	74	1.2%	2.4%
Refusal	32	0.6%	1.1%
R not available, away	1	0.0%	0.0%
R mentally, physical unable, ill sick	3	0.0%	0.1%
R deceased	1	0.0%	0.0%
Language barrier	1	0.0%	0.0%
R moved to unknown destination	13	0.2%	0.4%
Address not traceable	13	0.2%	0.4%
Question, technical issue	10	0.2%	0.3%
Nonresponse	881	14.6%	28.2%
Response rate Part 2		35.2%	67.9%

[1] in the second part, the uncompleted interviews are considered valid.

The share of answers on paper was of 12.2% in Part 1 while it amounted to 10.1% in Part 2. They contribute to the response rate with respectively 6.6 and 3.8 points (on the total), meaning that without the paper questionnaire the response rate would be of 46.7% in Part 1 and 31.5% in Part 2. Beyond improving the response rate, offering a paper questionnaire with the second reminder also lowers the nonresponse-bias. Our previous research showed that this design improves the overall representativeness, especially on characteristics such as age, urbanisation and nationality (Ernst Stähli et al., 2015; Roberts et al., 2016). The following analyses of the sample composition consider the whole dataset, without distinction of interview mode.

4.2 Sample composition and response analysis

The sample frame covers the whole national territory. As far as we know, the coverage of the SRPH sampling frame is excellent and we did not detect specific populations or parts of Switzerland that would be excluded from the sampling frame. However, the sample is purposely restricted to people living in private households, whereas the SFSO definition of residents also includes people living in institutions. They represent about 2%, all ages confounded.

In the following, we present an analysis of (non)response of the two parts of MOSAiCH 2023. First, we compare the outcomes to benchmark data from the Swiss Federal Statistical Office to analyse bias with regard to estimates for some variables known for the population. We then use the auxiliary variables in the sample frame to analyse response bias. For the second part, we then use variables from the first part to analyse response bias with regard to some attitudinal questions.

4.2.1 Response to Part 1
TO COME

4.2.2 Response to Part 2
TO COME

5   Detailed dimensions measured in MOSAiCH 2023

5.1 Summary of the proposals and included questions

The content of the first part of the survey (Part 1) is mainly defined by the ISSP (see chapter 1.2), while the content of the follow-up survey, Part 2 in the case of MOSAiCH 2023, is defined by the proposals from the open call for question contributions.

In the following, we present the rationale of the proposed dimensions and concepts in the framework of the call for contribution and the source of the developed instruments.

5.1.1 Proposal "National and Supranational Collective Narcissism, Identity, and Immigration Attitudes" by Jessica Gale and Prof. Eva G.T. Green (University of Lausanne)

<u>Summary</u>

A central question among social and political psychologists has long been the way in which national and supranational identification are associated with attitudes towards immigration. With contemporary world events such as the invasion of Ukraine, the Israel-Hamas war, and the migration crisis, the question is timelier than ever. The present proposal's goals are twofold:

(1) to disentangle and examine selective versus universal support for migrants coming from different regions of the world, and

(2) to distinguish and investigate the role of secure versus insecure (narcissistic) forms of identification at the national and European levels.

Assessing collective narcissism alongside national and European identification allows researchers to tease apart secure and insecure identification, which has major implications for understanding attitudes towards newcomers (Federico et al., 2021; Golec de Zavala et al., 2013; Gorska et al., 2022; Verkuyten et al., 2022). Furthermore, existing research confirms that collective narcissism is distinct from blind patriotism or nationalism, the latter being more concerned with securing the group's dominant position, and collective narcissism being specifically concerned with defensive validation of the group (Federico et al., 2023; Golec de Zavala et al., 2009). In particular, collective narcissism reflects heightened sensitivity to threats (Cichocka, 2016), especially salient in the context of international crises (see e.g., Politi et al., 2021). Given the widespread critiques concerning double standards which suggest some nationalities are considered more valuable – more European, more "one of us" – than others in the context of these crises (e.g., Hankir & Rabah, 2022; see also Gorodzeisky & Semyonov, 2019), the present proposal seeks to examine how secure or insecure identification with national and supranational groups shape either selective or universal solidarity with migrants coming from different regions.

The proposal and research is associated with the SNF funded project "Attitudes Towards Migration and Democracy in Times of Intertwined Crises" (Green co-PI, Gale SNF postdoc) that is part of the NCCR on the move Phase III (2022 – 2026).

<u>Concepts, items, and sources</u>

1. **National identification, European identification, and identification with humanity**
   (Source: adapted from ISSP National Identity Module 2013, 2003, 1995; see also Postmes et al., 2013)
   a) Identification with Switzerland (Item NICS1c)
   b) Identification with Europe (Item NICS1d)
   c) Identification with world humanity (Item NICS1e)

2. **Collective narcissism**
   These questions reflect defensive identification at national and European levels of abstraction. When collective narcissism is partialled out (i.e., controlled for), the questions above assess a rather secure sense of identification.
   (Source: https://collectivenarcissism.com/blog/3item_cns describing 3-item version of the measure; see also Golec de Zavala et al., 2009, 2013; Gorska et al., 2022; Guerra et al., 2020; Marchlewska et al., 2020; Verkuyten et al., 2022)
   a) National narcissism (Items: NICS2a_wp2, NICS2b_wp2, NICS2c_wp2)
   b) European narcissism (Items: NICS3a_wp2, NICS3b_wp2, NICS3c_wp2)

3. **Support for migrants coming from different regions**
   The origins cited in these questions reflect the origins that are most present in Switzerland as refugees today (Federal Statistical Office, 2022; State Secretariat for Migration, 2023). They allow for a distinction between regions that vary in terms of their geographical and cultural distance from Switzerland, as well as their political situation in relation to Europe and the European Union. They also allow for an assessment of selective or universal support of migrants from different regions
   (Source: adapted from Kende et al., 2017; Roblain et al., 2020)
   a) From Ukraine (Item NICS4a_wp2)
   b) From Afghanistan (Item NICS4b_wp2)
   c) From Syria (Item NICS4c_wp2)
   d) From Eritrea (Item NICS4d_wp2)
   e) From Turkey (Item NICS4e_wp2)

   In the online survey, the questions were shown in random order to the respondents. The variables from NICS4ao_wp2 to NICS4eo_wp2 indicate the display order.

All these items have been integrated in the follow-up questionnaire (Part 2), fielded on web and paper, and represented 11 questions for the respondents (without considering the 3 items of the ISSP module in Part 1).

5.1.2 Proposal "Intentionalism in Sociological Attitudes toward Immigrants" by Prof. Florian Cova (University of Geneva) and Alexandre Pollien (FORS)

<u>Summary</u>

As members of a social species, we generally interpret the behaviour of other human beings to understand and predict their behaviour. The capacity to do so, which is shared by most human beings, is known in the literature as "theory of mind" (Wellman, 2018). However, theory of mind mainly interprets and explains human behaviour from an individual, agent-focused point of views (Leslie et al., 2004). This has led certain authors to hypothesise that theory-of-mind might foster an "agency bias" that lead people to prefer explanations of human and social

phenomena that are cast in terms of individual agents' beliefs and desires. This preference for agent-based explanations over system-based explanations has been observed in the domain of economy (Leiser et al. 2010), and has been shown to foster conspiratorial explanations of economic phenomena (Leiser et al., 2017) and social phenomena (Brotherton & French, 2015).

Here, the goal of the authors is to investigate whether this inclination for intentional (agent-based) explanations of human phenomena could also affect sociological explanations. More precisely, they propose to investigate the lay theories the general population puts forward to explain the causes of immigration. To do so, they propose in the questionnaire three streamlined versions of main sociological theories of immigration in form of vignettes: the rational model, the system model, and the network model. The questions related to the vignettes ask the level of support to these explanations and the extent to which they are interpreted from an agent-based perspective, with the hypothesis that hypotheses that are more likely to be interpreted from an agent-based perspective are also more likely to be adopted.

As such, the goal of this proposal is threefold:
(i) Investigate the extent to which lay people agree with sociological models about the causes of immigration.
(ii) Investigate the extent to which lay people's understandings of sociological models on immigration differ from scientists by bringing forward intentional (agent-level) rather than systemic (system-level) explanations.
(iii) Investigate the connection between these deviations in lay people's understanding of immigration model and their attitudes towards immigrants and immigration.

Concepts, items, sources and implementation

The vignettes and the subsequent questions have been developed by the authors and tested through 8 cognitive tests and one quantitative pretest in collaboration with the FORS MOSAiCH team. The cognitive tests in French aimed at developing the most comprehensible versions possible of the vignettes. The names used in the vignettes are supposed to be gender neutral, so that each respondent is free to imagine a man or a woman putting forward this theory. The quantitative pretest has been implemented in the FORS web panel 'Connect' in October 2022 and was answered by 1366 German and 883 French speaking respondents in Switzerland. It aimed at testing the comprehension of the questions by a larger public and whether the ordering of vignettes influences the comprehension. As the ordering did not alter much the comprehension, we decided to implement the vignettes in a fixed order on paper. On web, the vignettes appear in a random order, each followed by the 5 subsequent questions. The variable NICS5o_wp2 indicates the order in which the respondent has received the vignettes.

Table 6: Vignettes, concepts and variables

	Rational model	System model	Network model
Level of endorsement of the explanation	NICS5a_wp2	NICS6a_wp2	NICS7a_wp2
Interpretation in terms of intentionalism 1) individual factor 2) individual factor (others) 3) holistic factor	 NICS5b_wp2 NICS5c_wp2 NICS5d_wp2	 NICS6b_wp2 NICS6c_wp2 NICS6d_wp2	 NICS7b_wp2 NICS7c_wp2 NICS7d_wp2
Appreciation	NIC5e_wp2	NIC6e_wp2	NIC7e_wp2

The level of endorsement is an indirect way of measuring agreement of the respondent with the proposed explanation.

The three questions about the interpretation assess 1) to which extent respondents interpret the explanation as emphasizing the personal intents of the migrants themselves 2) emphasizing the personal intents of other individuals 3) emphasizing systemic factors. These three questions allow to build the dimension of intentionalism.

The appreciation approaches the intentionalism normatively, by asking whether theories imply value judgements about migrants. This last measure addresses the link between social theory and respondent's attitude towards immigration.

All these items have been integrated in the follow-up questionnaire (Part 2), fielded on web and paper, and represented 15 questions for the respondents in addition to the lecture of the vignettes.

5.1.3 Proposal "Immigration misperceptions: Exploring their nature and drivers" by Dr. Philipp Lutz (University of Geneva) and Marco Bitschnau (University of Neuchâtel)

Summary

While issues of immigration and national identity are central to political contestation in most European democracies, views on the matter are typically shaped by perceptions rather than reality (e.g., Blinder 2015; Gorodzeisky and Semyonov 2020). Consequently, they are quite susceptible to what we refer to as misperceptions, i.e., perceptions that do not align with the best evidence currently available. This special class of perception covers a wide array of different subjects and may range from innumeracy, i.e., the overestimation of the immigrant share in one's country or neighbourhood (e.g., Herda 2010) to complex conspiracy theories such as that about an alleged Great Replacement of native Europeans (Gaston and Uscinski 2018). It thus comes with no surprise that misperceptions about immigration have been identified as a crucial puzzle piece in explaining related attitudes and political behavior (Alesina et al. 2022; Sides and Citrin 2007): They foster polarization and undermine the public's ability to engage in rational decision-making. Still, there has been limited scholarly attention so far and some of the most important questions concerning the nature of these misperceptions remain unanswered. How common are they in society? Do people really believe in them or are

they uninformed rather than misinformed? How do specific concepts of national identity motivate them? Building on previous insights (Lutz and Bitschnau 2023), this MOSAiCH 2023 item battery is geared to help answering some of the questions by giving us a more thorough and holistic understanding of immigration misperceptions. Its eight questions cover both basic innumeracy (i.e., the population share of immigrants and refugees) and more specific items that match the domains of cultural, economic, and security-related aspects of immigration.

Rationale

To understand misperceptions about immigration, one needs to distinguish them from two related but different epistemic categories with which they are often confused. First, they are not just *attitudes or preferences*, which dominate the literature about public opinion on immigration. An attitude is one's stance on how the world *ought* to be, whereas a perception is one's subjective impression of how the world actually *is* (irrespective of whether this impression is accurate or inaccurate). A misperception is consequently defined as a perception that deviates from reality inasmuch as it runs counter to the best available evidence we currently have – *currently* because this evidence is not the same as objective truth. Rather, it may be incomplete or outdated and is in some cases itself based on estimates instead of knowledge (e.g., the number of irregular immigrants). Still, it remains the best benchmark we have. Second and in addition to this, misperceptions are more than simple cognitive errors. They are the result of being misinformed, i.e., holding objectively false beliefs, and not of being uninformed, i.e., holding no beliefs at all (Kuklinski et al. 2000). In consideration of both of these crucial distinctions, we define misperceptions about immigration as *evidently wrong beliefs* about immigration, i.e., perceptions that are at the same time inaccurate and *held with certainty*.

Knowledge gaps

The item battery advances our understanding of misperceptions about immigration by addressing the following shortcomings of previous survey research:

1. Misperceptions are seldomly treated as a phenomenon sui generis but frequently confounded with the aforementioned attitudes and preferences. In particular, many often-used items are vague and unspecific, sometimes not covering misperceptions at all (e.g., by asking instead whether immigration is good for a country, which is a measurement of an attitude towards, or value on, immigration).
4. Many of these items are also confined to a narrow understanding of immigration innumeracy and neglect the diversity of misperceptions (Herda 2015).
5. Often, there is no clear distinction between actual misperceptions and inaccurate perceptions that stem from uninformedness (Kuklinski et al. 2000).

Concepts, items, and sources

To overcome these shortcomings, we propose two innovations: First, we introduce the battery below, which is aimed at capturing the multi-dimensionality of misperceptions. Second, we complement each item with an uncertainty measure, which allows us to empirically distinguish between those who are misinformed (genuine misperceptions) and those who are uninformed (lack of information).

As stated before, the items included in the battery cover innumeracy as well as culture, economy, and security. Thus, both quantitative and qualitative aspects of immigration are

equally taken care of. The corresponding questions are as precise as possible and backed up by reliable empirical data.

For each item, we asked our respondents for their estimate of population shares: the immigrant share of the Swiss population (1, 7), and the share of specific subgroups (e.g., refugees, Muslims, EU citizens) of the immigrant flow (2) and stock (3-6). Respondents could give a value between 0 and 100 percent, with each item followed by another one asking for the level of certainty of the estimate on a scale from 0 to 10. See Table 1 for the item wordings in German. These estimates then can be compared to a benchmark value taken from official statistics (see Table 8).

Concept	Question	Variable Name	Rationale and Data Source
Innumeracy	Was meinen Sie: Wie viel Prozent der in der Schweiz lebenden Personen sind ausserhalb der Schweiz geboren?	*Estimate:* NICS8a_wp2 *Certainty:* NICS8b_wp2	Standard innumeracy items as it is widely used in the study of immigration misperceptions. *Benchmark value:* *Link to* official statistic
Innumeracy	Was meinen Sie: Wie viel Prozent der Personen, die im vergangenen Jahr in die Schweiz zugewandert sind, sind Flüchtlinge? Unter Flüchtlingen verstehen wir Personen, die in der Schweiz ein Asylgesuch gestellt haben und in der Folge eine Aufenthaltsbewilligung aus humanitären Gründen erhalten haben.	*Estimate:* NICS9a_wp2 *Certainty:* NICS9b_wp2	Specification as refugees and immigrants are categories that get often confused (in the sense that people think most migrants are refugees). *Benchmark value:* *Link to* official statistic
Culture	Was meinen Sie: Wie viel Prozent der in der Schweiz lebenden Ausländerinnen und Ausländer sind muslimischen Glaubens?	*Estimate:* NICS10a_wp2 *Certainty:* NICS10b_wp2	Religious affiliation is a standard item for culture – here it might be even more relevant as there is also a cultural understanding of being Muslim and a variety of related stereotypes. Moreover, the literature hints at common perceptions of immigrants as Muslims and vice versa. *Benchmark value:* *Link to* official statistic
Culture	Was meinen Sie: Wie viel Prozent der in der Schweiz lebenden Ausländerinnen und Ausländer stammen aus der Europäischen Union?	*Estimate:* NICS11a_wp2 *Certainty:* NICS11b_wp2	Swiss-specific cultural item, as EU nationals are a majority of the Swiss migrant population. *Benchmark value:* *Link to* official statistic
Economy	Was meinen Sie: Wie viel Prozent der in der Schweiz lebenden Ausländerinnen und Ausländer sind als arbeitslos registriert?	*Estimate:* NICS12a_wp2 *Certainty:* NICS12b_wp2	Standard economy item that is based on the assumption that people consider immigrants to burden the welfare state. In this sense it corresponds to realistic group theory. *Benchmark value:* *Link to* official statistic

Economy	Was meinen Sie: Wie viel Prozent der in der Schweiz lebenden Ausländerinnen und Ausländer besitzen einen Hochschulabschluss?	*Estimate:* NICS13a_wp2 *Certainty:* NICS13b_wp2	Education-related item that makes for a contrast to the more negative first economy item. It is empirically anchored in Switzerland being a country of destination for highly skilled individuals and their families. *Benchmark value:* *Link to* official statistic
Security	Was meinen Sie: Wie viel Prozent der Personen, die im vergangenen Jahr in der Schweiz wegen einer Straftat verurteilt wurden, sind Ausländerinnen oder Ausländer?	*Estimate:* NICS14a_wp2 *Certainty:* NICS14b_wp2	Item that aims at the security threat, with the percentage of immigrants among those sentenced as the (currently best available) proxy for the number of crimes committed by them. *Benchmark value:* *Link to* official statistic
Security	Was meinen Sie: Wie viel Prozent der Personen, die im vergangenen Jahr in der Schweiz wegen einer Straftat verurteilt wurden, sind Ausländerinnen oder Ausländer?	*Estimate:* NICS15a_wp2 *Certainty:* NICS15b_wp2	Item that aims at the governability of immigration, with the share of undocumented immigrants as a proxy for immigration control capacity. *Benchmark value:* *Link to* official statistic

Quantitative Cognitive Tests

Given the novelty of the approach and complexity of the task, the authors and MOSAiCH team developed and conducted a series of tests in order to assess the validity of the items and to adjust the questionnaire design accordingly. As we did not only want to investigate the comprehension of the cognitive dimension (i.e., heuristics used to estimate percentages), but also the optimal wording and outcome (i.e., is the variance large enough when the real value is small), we decided on implementing quantitative cognitive tests by means of an online survey. In addition to that, we included an open-ended question after half of the items, in which we asked the respondents to describe how they came up with their answers and posed a three-point scale question on whether having been given the possibility to provide a certainty value had helped them or made answering more difficult (or neither). The question module was fielded in an online panel, with around 1440 respondents.

All in all, these tests have been a useful source of information on how respondents give estimates and answer the questions regarding their certainty level. They gave us a clear indication that the questions were interpreted as intended and yield valid measurements for analysis. They also helped us identify a question in which there was ambiguity in the wording as well as with regard to the benchmark value, i.e., the actual official statistic.

In particular, we tested (a) two alternatives to the wording of the main task, (b) the clarity of the items, and (c) whether the certainty measure was considered helpful and used as intended.

As regards the wording of the main task, we tested two alternatives here as the European Social Survey (ESS 2016) fielded a similar item and we experienced issues in the ESS pretests. The formulation of the ESS ("Of every 100 people, how many would you say are…") avoids the term percentage because this was thought to be a cognitive burden – yet the

experience during the pretests of the ESS questionnaire was that respondents were rather confused by this formulation ("Do you mean percentage?" "What is the difference to percentage?"). For this reason, we tested both the ESS version and a more directly phrased alternative, namely "What percentage of all persons living in Switzerland…". Taking into account both numeric and text responses to the cognitive open questions in our decision making, we observed a quite clear result: The alternative wording was well understood, while the ESS wording proved to be a possible source of confusion. Therefore, the alternative was included in the survey.

Regarding the clarity of the items, we particularly focused on whether asking for estimates was feasible – more precisely, we wanted to know whether respondents would check the real values online before answering. As in the previous case, both quantitative as well as qualitative answers were analysed. Our quantitative results suggest that respondents refrain from doing so (which would be a time-consuming task in many cases): the variance was large, and most answers differed noticeably from empirical reality. Our qualitative results corroborated these findings. Giving us detailed insights into their heuristics, only few respondents admitted that they had attempted to look up a value. Commonly, their estimates were based on everyday experiences and perceptions (as intended by the researchers).

The tests were also used to investigate the general clarity of our questions, i.e., whether their wording is easily and correctly understood. Here, both the qualitative and quantitative results indicated that a great majority of respondents interpreted the questions in the intended way. That said, we discovered that our question about the percentage of foreigners among those convicted of a crime (NICS14a_wp2) was not phrased in a statistically correct way, i.e. there were ambiguities in the statistics and wording. As a consequence, we changed the text from "Wie viele Prozent der in der Schweiz lebenden Personen, die im vergangenen Jahr für eine Straftat verurteilt worden sind, sind Ausländerinnen oder Ausländer?" to "Wie viel Prozent der Personen, die im vergangenen Jahr in der Schweiz wegen einer Straftat verurteilt wurden, sind Ausländerinnen oder Ausländer?"

Finally, we evaluated whether the task of giving a certainty value for each item was understood by the respondents and whether they would comply with it in the intended way. Our qualitative data showed that the task was clear and our quantitative results further strengthened this assumption: On the one hand, the respondents did respond to the question to indicate different levels of certainty depending on the item. On the other hand, only 7% of the respondents expressed the opinion that giving certainty values made it more difficult to answer the questions, which illustrates that this was not thought of as overly burdensome or even as a distraction from providing the estimate.

All these items have been integrated in the follow-up questionnaire (Part 2), fielded on web and paper, and represented 16 questions for the respondents.

5.1.4 Proposal "Nationalism, identification to one's country, and meaning in life" by Angela Abatista (University of Geneva)

Summary

In recent years, human and social sciences, and particularly psychology have become increasingly interested in the experience of meaning in life and its determinants (King & Hicks,

2021). Along with theoretical considerations positing meaning in life as a constitutive part of psychological well-being (Huta & Waterman, 2014), a recent meta-analysis suggests that the Presence of Meaning in Life serves as crucial positive predictor of subjective well-being. On the contrary, the Search For Meaning in Life seems to be associated with negative affects and a decrease in subjective well-being (Li et al, 2021). The Presence of and the Search For Meaning have been shown to be two different dimensions of the Feeling of Meaning in Life, and the lack of meaning seems to conduct to the active pursue of it (Steger, Kashdan et al., 2008). If the need for meaning seems to be a widespread motivator for beliefs and behavior (Abeyta & Routledge, 2018), individuals find meaning in life in different sources such as relationships, spirituality, self-actualization, and attachment to social norms (Schnell, 2009). Recent studies also suggest that belongingness (i.e. the feeling of belonging or having found one's place in a social group) might play a key role in the feeling of having a meaningful life (Lambert et al., 2013; Zhang et al., 2018).

This suggests that the feeling of belonging to a cohesive social group and contributing to the welfare of this group might be a way to fulfil people's need for meaning. Adding questions measuring people's meaning in life might shed light on the role of existential needs in fostering people's attachment to their country and national identity and help us better understand the importance of this identification within individuals' lives.

Concepts, items, and sources

Meaning in life

The construct of meaning in life is measured by The Meaning in Life Questionnaire (Steger et al., 2006) included in numerous studies around the world, and in several internet-based resources concerning happiness and fulfilment. It has two dimensions, each measured through five items:

    a) the *presence of meaning* (variables: NICS16a_wp2, NICS16d_wp2, NICS16e_wp2, NICS16f_wp2, NICS16i_wp2) and
    b) the *search for meaning* (variables: NICS16b_wp2, NICS16c_wp2, NICS16g_wp2, NICS16h_wp2, NICS16j_wp2).

The scale shows robust psychometric properties across gender, age (Steger et al. 2010), racial (Kiang & Fuligni, 2010), and national groups (Steger, Kawabata et al., 2008).

All these items have been integrated in the follow-up questionnaire (Part 2), fielded on web and paper, and represented 10 questions for the respondents.

5.2 Overview of dimensions and corresponding variables in the dataset

In this last section, we give an overview of the detailed dimensions measured in the MOSAiCH 2023 survey, in Part 1 and 2. Table 7 shows the dimensions measured in the first questionnaire (Part 1) and the corresponding variables in the dataset. Similarly, Table 8 gives details on the dimensions and variables of the second questionnaire (Part 2).

Table 7. Dimensions and variables of questionnaire Part 1

Dimensions	Variables
Questionnaire Part 1	
NATIONAL IDENTITY AND CITIZENSHIP (ISSP 2023), and optional + supplementary items	
Being truly a Swiss	NIC1a-NIC1f
National pride	NIC2a-NIC2e, NIC5a-NIC5f
Globalization	NIC6a-NIC6f
Immigration and immigrants	NIC7a-NIC7d, NIC8-NIC9
Duties of citizenship	NIC10-NIC14
Satisfaction with democracy	NIC15-NIC17
Citizen's rights in a democracy	NIC18-NIC21
Political efficacy and orientation	NIC23-NIC25
Evaluation of institutions	NIC26-NIC27
Social trust	NIC35-NIC36
Populism	NIC22, NIC28-NIC32
Nationalism	NIC3-NIC4, NIC7e, NIC44
Media use for politics	NIC33-NIC34
R's citizenship of Switzerland	NIC37
Attitudes towards EU	NIC38-NIC42
Emotional attachment (from regional to global level)	NICS1a-NICS1d
SOCIO-DEMOGRAPHICS	
Political interest	POL1
Satisfaction with life *(at the beginning of ISSP module)*	SOC15v2
SOCIO-DEMOGRAPHICS – Education, occupation and work situation	
Educational level	EDU1, EDU2, EDU3, EDU1CHISCED
Paid work (current/past)	WORK1b
Status and job conditions (self-employed, hours, …)	WORK15, WORK2
Role in business activity (company size, hierarchy)	WORK8a, WORK18av2, WORK18b, WORK16v3
Type of organization (non-profit/profit, public/private)	WORK9, WORK10
Occupation (current/past)	WORK4n, WORK5, WORK4ISCO
Main activity	WORK3
SOCIO-DEMOGRAPHICS - Situation of household	
Sexe, Age	DEMO1, DEMO2
Household composition and household type	HH5v2, HH10fv2, HH10dv3, HH10ev3, HH10g, HHtype
Marital status	DEMO7v2
Live with a partner	HH1v2, HH1_y
Partner's work conditions	PWORK1, PWORK2, PWORK15, PWORK18av2
Partner's occupation (current/past)	PWORK4n, PWORK5, PWORK4ISCO, PWORK3
Partner's nationality	PDEMO3_1 – PDEMO3_3mc
Income (personal and household)	INC1, INC3
Self-positioning on social scale	SOC1
Place of living: self-perception urban/rural area	DEMO8
Residence municipality	DEMO10

SOCIO-DEMOGRAPHICS – Participation, politics, nationalities and languages	
Trade union membership	WORK24
Confession	REL1v2 – REL1n
Attendance of religious services	REL2v4
Party voted at the last Federal elections in October 2019	POL6a, POL6, POL6n
Party proximity	POL5b, POL5bn
Nationality	DEMO3_1 – DEMO3_3mc
Years lived in Switzerland	DEMO5, DEMO5a
Language spoken at home	DEMO6_1 – DEMO5_3
Mother/Father's country of origin	ORIG1, ORIG1m, ORIG1mc, ORIG2, ORIG2m, ORIG2mc
R's identification to Swiss ethnic groups	SOC17a, SOC17b
METHODOLOGICAL VARIABLES	
Interest while responding to survey part 1	METH7_wp1
ADMINISTRATIVE VARIABLES	
Personal ID	IDNO
Interview duration (in seconds) for web respondents part 1	Duration_w1
Mode part 1	mode_wp1
Device information for web respondents part 1	OSdevice_w1, device_w1, HV_w1
Language of interview part 1	language_wp1
Level of completion ISSP module, part 1	complr_wp1
Level of completion socio-demographic module	bvcompl_wp1, BVinvalid_wp1
Date.1: Date reaction part 1	inDate_wp1
GEOGRAPHIC VARIABLES	
Large regions (Nuts2)	Nuts2
Cantons (Nuts3)	Canton
Language regions 2016	langreg_2020
Urbanisation	urbreg_2012, commsize_2022, agglosize_2012, city_2012, urbrur_2012, Greatercity_2011, Funcarea_2014
Other geographical classifications	District, tcom9_2012, tcom25_2012, labreg_2018, mountreg_2019

Table 8. Dimensions and variables of questionnaire Part 2

Dimensions	Variables
Questionnaire Part 2	
Age and civil status to control for substitution	DEMO2_wp2, DEMO7v2_wp2
Social identification	NICS1a_wp2 - NICS1g_wp2
National narcissism	NICS2a_wp2 - NICS3c_wp2
Support for migrants	NICS4ao_wp2 - NICS4e_wp2
Sociological intentionalism	NICS5o_wp2 - NICS7e_wp2
Misperception of immigration	NICS8a_wp2 - NICS15b_wp2
Meaning in life	NICS16a_wp2 - NICS16j_wp2
Social contacts	NICS17_wp2
Collective and voluntary activities	NICS18a-c_wp2
Use of social media	METH9v2, NICS19_wp2
ADMINISTRATIVE VARIABLES	
Interest while responding to survey part 2	METH7_wp2
Interview duration (in seconds)	duration_w2
Mode part 2	mode_wp2
Device information for web respondents part 2	OSdevice_w2, device_w2, HV_w2
Language of interview part 2	language_wp2
Level of completion part 2	compl_wp2
Date 2: Date reaction part 2	indate_wp2

Appendix

These files are publicly available in SWISSUbase, Ref study 20024 "Documents": https://www.swissubase.ch/en/catalogue/studies/20024/.

1. Questionnaires

- *MOSAiCH 2023 Questionnaires:* This document reports all question wordings and their translations in a tabular format (Source_German_French_Italian) as prepared for the web questionnaire. It also includes the question names, the variable names and the codes. Finally, a note refers to elements that had to be adapted in the paper version of the questionnaire. This document is also available at https://forscenter.ch/projects/mosaich/ (questionnaire)

- *MOS23_Part 1 questionnaire (D, F and I):* This is the original paper questionnaire Part 1, in the respective language. It also includes, at the end, a selection of screen prints of the web version.

- *MOS23_Part 2 questionnaire (D, F and I):* This is the original paper questionnaire Part 2, in the respective language. It also includes, at the end, a selection of screen prints of the web version.

2. Contact letters and flyers

All material sent to the sample units and respondents (letters (postal and email messages), flyer and other material such as the postal check template) is compiled in chronological order of sending. There is one single document per language: *MOS23_Letters+Flyer_de / _fr / _it.pdf*.

For the detailed scheme of the different letters and contact procedure, please refer to section 2.2.2, page 13 of this document.

3. Instrument to measure the attained level of education

The measurement tool for educational attainment in the MOSAiCH survey is designed to obtain precise information about the highest level of education the respondent, the partner (and in some editions, the parents) have successfully completed. It has to be suitable throughout Switzerland (with cantonal educational systems), for people having completed their education outside Switzerland, and for a large span of time (the youngest respondents being 18 years old and possibly still in education, and the parents of the oldest respondents having completed their education over 120 years ago). As the MOSAiCH contains the ISSP modules, the tool must allow for recoding into the ISSP educational variable based on ISCED97.

Aims of the tool:
- suitable for the Swiss educational system, which integrates the different cantonal systems and is characterized by a strong vocational training sector, especially the dual training (apprenticeship);
- suitable for education completed in foreign countries;
- suitable for current education and those over the whole past century;
- allowing for international comparisons (detailed ISCED 97 and ISCED 2011).

In order to reflect these needs, the tool developed in 2010 proposes 23 different categories[2]. These precise categories, including the most frequent diplomas and institutions as examples, are structured following the two main dimensions of the Swiss system: 1) general vs. vocational education and 2) educational levels. They support the respondent finding the best-suited category. Until 2017, these categories were shown on a single, structured showcard[3]. This structure and format is kept on the paper version of the questionnaire. For the web survey, however, it has to be fielded in two steps, with a branching structure, reproducing the visual structure of the paper version. First, the broad categories are shown, and second, the detailed category has to be chosen. Some categories appear in more than one general categories.

The following table shows the correspondence between the 23 detailed categories and the variable in the data file (EDU1) and the ISCED97 and ISCED 2011 denomination, as well as the correspondence between the 23 categories and the Swiss specific recoded version called XXXCHISCED. Note that the Swiss Federal Statistical Office (SFSO) follows a slightly different logic when coding education into ISCED levels.

The structure, visual layout and actual wording in the survey languages can be visualized in the questionnaire (MOSAiCH 2023 Questionnaire Part 1).

---

[2] This tool has been used for the first time in the European Social Survey 2010 and has been applied since then in all ESS and MOSAiCH surveys, with very minor amendments.
[3] Since 2018, the MOSAiCH survey collects data through self-administered web and paper questionnaires. Before, data collection mode was CAPI Face to Face Interviews, using showcards.

Table 9. Education: Table of correspondence between codes of measurement tool, ISCED, final variables and recoded variables in MOSAiCH 2023

Section in paper questionnaire	English label	Detailed ISCED 97	Comments for ISCED	Codes on paper quest.	Reordered codes (=var EDU1 etc.)	Code of CHISCED variables	ISCED 2011	ISCED 2011 following SFSO[5]
Primary school	**Uncompleted primary school**	0		1	1	1	0	0
	Primary school	1		2	2	1	1	1
Secondary school	**Secondary education (first stage)**	2Ag (and 3Cgl)		3	3	2	2	2
	Additional year of secondary education, preparation for vocational training	2Ag/p, 2Bg/p (and 3Cgs)		4	4	2	2	2
General education school	**General training school (2-3 years)**	3Ag	gives -but not in all cases- access to lower ISCED5 (with or without baccalaureate!)	5	7	5	3	3
Baccalaureate	**Baccalaureate preparing for university**	3Ag		6	10	5	3	3
	Baccalaureate for adults or apprenticeship after Baccalaureate	4Av, 4Bv, 3B plus 4Ag	ISCED4 like SFSO (if as second education lasting at least 2 years)	7	13	6	4	4
	Diploma for teaching in primary school or preprimary school	3Av	if completed before the introduction of vocational tertiary cursus, otherwise code Q	8	9	5	3	3
	Vocational baccalaureate	4Av, 4Bv, 3B plus 4Ag		9	8	6	3	3
	Vocational baccalaureate for adults	4Av, 4Bv, 3B plus 4Ag	ISCED4 like SFSO (if as second education lasting at least 2 years)	10	12	6	4	4
Vocational education	**Elementary vocational training (enterprise and school, 1-2 year)**	3Cvs, 3Bvs		11	5	3	3	3
	Apprenticeship (vocational training, dual system, 3-4 years)	3Bvl, 3Av		12	6	4	3	3
	Second vocational training (or apprenticeship as second education)	4Cv	for SFSO it is 4 if the second education lasted at least 2 years; SFSO had not specified for 2011 in doc[4]	13	11	6	4	4
	Advanced vocational qualification (specialization exam, federal certificate or diploma of advanced vocational training)	5B short (or 4B)	the SFSO considers this category as 5B, we would rather put it into 4B, as it is not really tertiary (5 vs 6 and even 7 for	14	14	6	5	6, 7
	Higher vocational training (diploma of a high school in domains such as technical, administration, health, social work, applied arts)	5B short (or 4B)	the SFSO considers this category as 5B, we would rather put it into 4B, as it is not really tertiary (5 vs 6 for ISCED 2011)	15	15	6	5	6
	Higher vocational training (diploma of some specific high schools having obtained a recognition of tertiary level)	5B short		16	16	7	5	6
University of applied science and pedagogical university	**University of applied science and pedagogical university (Bachelor)**	5A med 1st	included diploma for teachning in secondary schools or above	17	17	7	6	6
	University of applied science and pedagogical university (Master)	5A long 2nd/further	includes further training (formation continue, Weiterbildung) only if lasted at least 1 year fulltime	18	18	7	7	7
Universities, Federal Institutes of Technology	**University diploma (intermediary level)**	5A short int	as we ask for achieved diploma, we classify in level below	19	19	6	5	-
	University diploma and post-graduate (including technical) (Bachelor and short university degree)	5A med 1st		20	20	8	6	6
	University diploma and post-graduate (including technical) (degree requiring more than 4 years)	5A long 1st		21	21	8	7	7
	University diploma and post-graduate (including technical) (Master)	5A long 2nd/further		22	22	8	7	7
	Doctoral degree	6		23	23	9	8	8

note: SFSO= Swiss Federal Statistical Office; note[5]: see document do-d-40-vz_user-SHAPE on SFSO website (but with errors when document accessed, corrected here through email exchange with SFSO)
https://www.bfs.admin.ch/bfs/fr/home/statistiques/catalogues-banques-donnees/publications.assetdetail.267947.html

4. Instrument to measure personal and household income

The instruments measuring personal and household income are based on the income deciles of the whole population. The proposed deciles are calculated separately, for households and for individuals, based on the most recent EU-SILC data available for Switzerland (Statistics on Income and Living Conditions). For the current survey, the SILC 2020 data have been used. For individuals, the deciles refer to income for all individuals aged 18+. For households, deciles refer to income for all households, unadjusted for size or type. Income means total income, after tax and compulsory deductions, from all sources. The decile categories have been rounded to CHF 100.

The income data to create the deciles have not been indexed. While the level of income is generally very stable, 2023 was characterised by high inflation of 3.5% and some employers granted an increase in salary. However, the increases were low (around 2.5% for professions with a labour agreement, according to the syndicates, see Bauer, 2022) and not equal among professions and income ranges. The change is also still smaller than the precision of the estimates of the incomes used for the deciles, which are +/- 3%. Moreover, data on the evolution of salaries are only available for the employed. The Federal Statistical Office has no information on the evolution of the income of the independent nor of rents, social benefits and old age pensions.

We ask for the **total net income from all sources**. Net income in Switzerland means after deduction of the mandatory contributions to the social insurances. However, unlike many other countries, in Switzerland 'net' means before payment of health insurance and taxes. The net income is the best known, as for employed people it is what they receive each month on their bank account. It is called 'net' because social insurance, such as accident, unemployment and basic rent schemes, is deduced directly from source income.

Only the categories of monthly income are shown, as we did not find a suitable and comparable way of representing both, annual and monthly, income on mobile devices. This means that people knowing better their annual income have to calculate the monthly income themselves. But monthly income is well suited for the majority of the respondents; still, some receive it in 13 parts while we calculate it as the yearly income divided by 12. Weekly income is very rare in Switzerland.

Respondents are asked for both, their individual and the household income, even if living in a single person household.

References

Abeyta, A. A., & Routledge, C. (2018). The need for meaning and religiosity: An individual differences approach to assessing existential needs and the relation with religious commitment, beliefs, and experiences. *Personality and Individual Differences, 123*, 6–13. https://doi.org/10.1016/j.paid.2017.10.038

Alesina AF, Miano A and Stantcheva S (2022) Immigration and Redistribution. The Review of Economic Studies, https://doi.org/10.1093/restud/rdac011

Bauer, T. (2023). Lohnabschlüsse 2023: Durchzogene Resultate. Medienkonferenz vom 19.12.2022. Travail.Suisse. https://syna.ch/images/Lohn-Salaire/2022_12_19_Redebeitrag_Bauer-TravailSuisse_D.pdf

Blinder, S. (2015). Imagined Immigration: The Impact of Different Meanings of 'Immigrants' in Public Opinion and Policy Debates in Britain. *Political Studies* 63, 80–100.

Brotherton, R., & French, C. C. (2015). Intention seekers: Conspiracist ideation and biased attributions of intentionality. *PLoS One, 10*(5), e0124125.

Cichocka, A. (2016). Understanding defensive and secure in-group positivity: The role of collective narcissism. *European Review of Social Psychology, 27*, 283-317. https://doi.org/10.1080/10463283.2016.1252530

Dillman, D. A., Smyth, J. D. and Christian, L. M.. 2014. Internet, Phone, Mail and Mixed-Mode Surveys: The Tailored Design Method, 4th edition. John Wiley: Hoboken, NJ

Ernst Stähli, M., Joye, D. and Roberts, C. (2015). Alternatives au problème de couverture dans les enquêtes CATI: enseignements de l'expérience mixed-mode de LIVES-FORS. Presentation at the Workshop FORS – OFS 'Erfahrungen mit mixed mode in Surveys', Neuchâtel, Switzerland

Federal Statistical Office (2022). Bénéficiaires et taux d'aide sociale dans le domaine des réfugiés selon la nationalité. https://www.bfs.admin.ch/bfs/fr/home/statistiques/securite-sociale/aide-sociale/beneficiaires-aide-sociale/domaine-refugies.assetdetail.23566256.html

Federico, C. M., Golec de Zavala, A., & Bu, W. (2023). Collective narcissism as a basis for nationalism. *Political Psychology, 44*, 177-196. https://doi.org/10.1111/pops.12833

Federico, C. M., Golec de Zavala, A., & Baran, T. (2021). Collective narcissism, in-group satisfaction, and solidarity in the face of covid-19. *Social Psychological and Personality Science, 12*, 1071-1081. https://doi.org/10.1177/1948550620963655

Gaston, S. and Uscinski, J. E. (2018). *Out of the Shadows: Conspiracy Thinking on Immigration.* London: The Henry Jackson Society.

Golec de Zavala, A., Cichocka, A., & Bilewicz, M. (2013). The paradox of in-group love: Differentiating collective narcissism advances understanding of the relationship between in-group and out-group attitudes. *Journal of Personality, 81*, 16-28. https://doi.org/10.1111/j.1467-6494.2012.00779.x

Golec de Zavala, A., Cichocka, A., Eidelson, R., & Jayawickreme, N. (2009). Collective narcissism and its social consequences. *Journal of Personality and Social Psychology, 97*, 1074-1096. https://doi.org/10.1037/a0016904

Gorodzeisky, A., & Semyonov, M. (2019). Unwelcome immigrants: Sources of opposition to different immigrant groups among Europeans. *Frontiers in Sociology, 4,* 1-10. https://doi.org/10.3389/fsoc.2019.00024

Gorodzeisky, A. and Semyonov, M. (2020). Perceptions and misperceptions: actual size, perceived size, and opposition to immigration in European societies. *Journal of Ethnic and Migration Studies* 46, 612–30.

Gorska, P., Stefaniak, A., Marchlewska, M., Matera, J., Kocyba, P., Lukianow, M., Malinowska, K., & Lipowska, K. (2022). Refugees unwelcome: Narcissistic and secure national commitment differentially predict collective action against immigrants and refugees. *International Journal of Intercultural Relations, 86*, 258-271. https://doi.org/10.1016/j.ijintrel.2021.11.009

Guerra, R., Bierwiaczonek, K., Ferreira, M., Golec de Zavala, A., Abakoumkin, G., Wildschut, T., & Sedikides, C. (2020). An intergroup approach to collective narcissism: Intergroup threats and hostility in four European Union countries. *Group Processes and Intergroup Relations, 25*, 415-433. https://doi.org/10.1177/1368430220972178

Hankir H., & Rabah, H. (2022, March 2). Arab refugees see double standards in Europe's embrace of Ukrainians. Swissinfo. https://www.swissinfo.ch/eng/arab-refugees-see-double-standards-in-europe-s-embrace-of-ukrainians/47395932

Harkness, J. A. (2003). Questionnaire Translation. In: Harkness, J. A., van de Vijver, F. and Mohler, P. Ph. (eds.). Cross-cultural Survey Methods. New York. John Wiley and Sons. pp. 35-56.

Herda, D. (2010). How many Immigrants? Foreign-Born Population Innumeracy in Europe. *Public Opinion Quarterly* 74, 674–95.

Herda, D. (2015). Beyond innumeracy: heuristic decision-making and qualitative misperceptions about immigrants in Finland. *Ethnic and Racial Studies* 38, 1627–45.

Huta, V., & Waterman, A. S. (2014). Eudaimonia and Its Distinction from Hedonia: Developing a Classification and Terminology for Understanding Conceptual and Operational Definitions. *Journal of Happiness Studies, 15*(6), 1425–1456. https://doi.org/10.1007/s10902-013-9485-0

Kiang, L., & Fuligni, A. J. (2010). Meaning in Life as a Mediator of Ethnic Identity and Adjustment Among Adolescents from Latin, Asian, and European American Backgrounds. *Journal of Youth and Adolescence, 39*(11), 1253–1264. https://doi.org/10.1007/s10964-009-9475-z

Kende, A., Lantos, N. A., Belinszky, A., Csaba, S., & Lukács, Z. A. (2017). The politicized motivations of volunteers in the refugee crisis: Intergroup helping as the means to achieve social change. *Journal of Social and Political Psychology, 5*, 260– 281. https://doi.org/10.5964/jspp.v5i1.642

King, L. A., & Hicks, J. A. (2021). The Science of Meaning in Life. *Annual Review of Psychology, 72*, 561–584. https://doi.org/10.1146/annurev-psych-072420-122921

Kuklinski JH et al. (2000) Misinformation and the currency of democratic citizenship. *Journal of Politics,* 62, 790–816.

Lambert, N. M., Stillman, T. F., Hicks, J. A., Kamble, S., Baumeister, R. F., & Fincham, F. D. (2013). To Belong Is to Matter: Sense of Belonging Enhances Meaning in Life. *Personality and Social Psychology Bulletin, 39*(11), 1418–1427. https://doi.org/10.1177/0146167213499186

Leiser, D., Bourgeois-Gironde, S., & Benita, R. (2010). Human foibles or systemic failure - Lay perceptions of the 2008-2009 financial crisis. *The Journal of Socio-Economics*, *39*(2), 132-141.

Leiser, D., Duani, N., & Wagner-Egger, P. (2017). The conspiratorial style in lay economic thinking. *PloS one*, *12*(3), e0171238.

Leslie, A. M., Friedman, O., & German, T. P. (2004). Core mechanisms in 'theory of mind'. *Trends in Cognitive Sciences*, *8*(12), 528-533.

Li, J. Bin, Dou, K., & Liang, Y. (2021). The Relationship Between Presence of Meaning, Search for Meaning, and Subjective Well-Being: A Three-Level Meta-Analysis Based on the Meaning in Life Questionnaire. *Journal of Happiness Studies, 22*(1), 467–489. https://doi.org/10.1007/s10902-020-00230-y

Lipps, O., Herzing, J. M. E., Pekari, N., Ernst Stähli, M. Pollien, A., Riedo, G., Reveilhac, M. (2019). Incentives in surveys. FORS Guide No. 08, Version 1.0. Lausanne: Swiss Centre of Expertise in the Social Sciences FORS. doi:10.24449/FG-2019-00008

Marchlewska, M., Cichocka, A., Panayiotou, O., Castellanos, K., & Batayneh, J. (2018). Populism as identity politics: Perceived in-group disadvantage, collective narcissism, and support for populism. *Social Psychological and Personality Science, 9*, 151-162. https://doi.org/10.1177/1948550617732393

Lutz, P. and Bitschnau, M. (2023). Misperceptions about Immigration: Reviewing Their Nature, Motivations, and Determinants. *British Journal of Political Science* 53/2, 674-689. https://doi.org/10.1017/S0007123422000084

Ochsner, M. (2021). Representativeness of Surveys and its Analysis. FORS Guide No. 15, Version 1.0. Lausanne (FORS). doi: 10.24449/FG-2021-00015.

Politi, E., Lüders, A., Sankaran, S., Anderson, J., Van Assche, J., Spiritus-Beerden, E., Roblain, A., Phalet, K., Derluyn, I., Verelst, A., & Green, E. G. T. (2021). The impact of COVID-19 on the majority population, ethno-racial minorities, and immigrants: A systematic literature review on threat appraisals from an inter-group perspective. *European Psychologist, 26*, 298–309. https://doi.org/10.1027/1016-9040/a000460

Pollien, A., Herzing, J. M. E., & Antal, E. (2020). Preparation of survey data. FORS Guide No. 13, Version 1.0. Lausanne: Swiss Centre of Expertise in the Social Sciences (FORS). doi:10.24449/FG-2020-00013

Postmes, T., Haslam, S. A., & Jans, L. (2013). A single-item measure of social identification: Reliability, validity, and utility. *British Journal of Social Psychology, 52*, 597-617. https://doi.org/10.1111/bjso.12006

Qualité, Lionel (2011). Developments on Coordinated Poisson Sampling. *Int. Statistical Inst.: Proc. 58th World Statistical Congress*, 2011, Dublin (Session CPS046), 5041-5046.

Roberts Caroline, Joye Dominique, Ernst Stähli Michèle (2016). Mixing modes of data collection in Swiss social surveys: Methodological report of the LIVES-FORS mixed mode experiment,. LIVES Working Papers, 48 pp. 1-42. Peer-reviewed. [DOI: 10.12682/lives.2296-1658.2016.48]

Roblain, A., Hanioti, M., Paulis, E., Van Haute, E., & Green, E. G. T. (2020). The social network of solidarity with migrants: The role of perceived injunctive norms on intergroup helping behaviors. *European Journal of Social Psychology, 50*, 1306-1317. https://doi.org/10.1002/ejsp.2700

Scholz, E., R. Jutz, J. H. Pammett, and M. Hadler (2017). "ISSP and the ISSP 2014 Citizenship II Module: An Introduction." *International Journal of Sociology* 47(1):1–9. doi: 10.1080/00207659.2017.1264825.

Schnell, T. (2009). The Sources of Meaning and Meaning in Life Questionnaire (SoMe): Relations to demographics and well-being. *Journal of Positive Psychology, 4*(6), 483–499. https://doi.org/10.1080/17439760903271074

Sides, J. and Citrin, J. (2007). European Opinion about Immigration: The Role of Identities, Interest and Information. *British Journal of Political Science* 37, 477–504.

Smith, T.W. (2009). The ISSP: History, organization and members, working principles and outcomes: An historical sociological account. In M. Haller et al. (Eds), *The International Social Survey Programme, 1984-2009. Charting the Globe,* 2-27. London, Routledge.

State Secretariat for Migration (2023). Asile.: statistiques de mars 2023. https://www.sem.admin.ch/sem/fr/home/sem/medien/mm.msg-id-94326.html

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, *53*, 80-93.

Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality, 76*(2), 199–228. https://doi.org/10.1111/j.1467-6494.2007.00484.x

Steger, M. F., Kawabata, Y., Shimai, S., & Otake, K. (2008). The meaningful life in Japan and the United States: Levels and correlates of meaning in life. *Journal of Research in Personality, 42*(3), 660–678. https://doi.org/10.1016/j.jrp.2007.09.003

Steger, M. A., Oishi, S., & Kashdan, T. B. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *Journal of Positive Psychology, 4*(1), 43–52. https://doi.org/10.1080/17439760802303127

Verkuyten, M., Kollar, R., Gale, J., & Yogeeswaran, K. (2022). Right-wing political orientation, national identification and the acceptance of immigrants and minorities. *Personality and Individual Differences, 184*, 111217, https://doi.org/10.1016/j.paid.2021.111217

Wellman, H. M. (2018). Theory of mind: The state of the art. *European Journal of Developmental Psychology*, *15*(6), 728-755.

Zhang, H., Sang, Z., Chan, D. K. S., & Schlegel, R. (2019). Threats to belongingness and meaning in life: A test of the compensation among sources of meaning. *Motivation and Emotion, 43*(2), 242–254. https://doi.org/10.1007/s11031-018-9737-8

Questionnaires and surveys referred to in this document

ESS 2016 R8:
>Michèle Ernst Stähli, Dominique Joye, Alexandre Pollien, Michael Ochsner, Marlène Sapin, Karin Nisple: European Social Survey, Switzerland - 2016 (Round 8) [Dataset]. FORS - Centre de compétences suisse en sciences sociales. Distributed by FORS, Lausanne, 2018. https://doi.org/10.23662/FORS-DS-929-2

Eurobarometer and ISSP 2003, including ISSP National Identity II:
>Dominique Joye, Nicole Schöbi, Eugen Horber, Jean-Claude Deschamps: Erhebung zur europäischen Integration, allgemeine politische Fragen, nationale Identität, Familie und Partnerschaft - 2003 [Dataset]. Schweizerischer Informations- und Daten-Archivdienst für die Sozialwissenschaften - SIDOS, Neuchâtel; Université de Genève; Université de Lausanne. Distributed by FORS, Lausanne, 2005. https://doi.org/10.23662/FORS-DS-407-1

MOSAiCH 2005, including ISSP Citizenship II:
>Dominique Joye, Nicole Schöbi, Céline Kaenel: MOSAiCH: Erhebung zu allgemeinen politischen Fragen, sozialen Netzwerken, zur Bürgerschaft und Arbeit - 2005 [Dataset]. Schweizerischer Informations- und Daten-Archivdienst für die Sozialwissenschaften - SIDOS, Neuchâtel. Distributed by FORS, Lausanne, 2007. https://doi.org/10.23662/FORS-DS-462-2

MOSAICH 2013, including ISSP National Identity III:
>Ernst Stähli, M, Joye D., Sapin, M., Pollien, A., Duemmler, K. Kessler, D. : MOSAiCH: Enquête sur la famille et le changement des rôles homme-femme, l'identité nationale et la citoyenneté - 2013 [Dataset]. FORS - Centre de compétences suisse en sciences sociales, Lausanne. Distributed by FORS, Lausanne, 2014. https://doi.org/10.23662/FORS-DS-645-3

MOSAiCH 2015, including ISSP Citizenship III:
>Michèle Ernst Stähli, Dominique Joye, Marlène Sapin, Alexandre Pollien, Michael Ochsner, Karin Nisple, Anthe van den Hende: MOSAiCH: Befragung zur Staatsbürgerschaft und zum Sinn der Arbeit - 2015 [Dataset]. FORS - Schweizer Kompetenzzentrum Sozialwissenschaften, Lausanne. Distributed by FORS, Lausanne, 2015. https://doi.org/10.23662/FORS-DS-683-3

STATPOP:
>Population and Households Statistics STATPOP, Table: Permanent resident population by age, 2022, Reference day: 31 December, Data updated: June 2023. Swiss Federal Statistical Office. https://www.pxweb.bfs.admin.ch/pxweb/en/ accessed 22.01.2024

Index of abbreviations

AAPOR	American Association for Public Opinion Research
DOI	Digital object identifier
FDI	French-German(Deutsch)-Italian
ISCED	International Standard Classification of Education
ISSP	International Social Survey Programme
MOSAiCH	Measurement and Observation of Social Attitudes in Switzerland (CH)
SFSO	Swiss Federal Statistical Office (BFS in German, OFS in French)
SILC	Statistics on Income and Living Conditions
SLFS	Swiss Labour Force Survey
STATPOP	Swiss Population and Households Statistics
TRAPD	Translation – Review – Adjudication – Pretest - Documentation