L I V E S

W O R K I N G

P A P E R

2 0 1 1 / 4

TITLE

TRACES: Methodological and technical report

Research report

Authors

Dario Spini

Guy Elcheroth

Rachel Fasel

http://dx.doi.org/10.12682/lives.2296-1658.2011.4

ISSN 2296-1658

FNSNF

Swiss National Science Foundation

The National Centres of Competence in Research (NCCR) are a research instrument of the Swiss National Science Foundation.

Swiss National Centre of Competence in Research

** The survey data can be accessed through the Data and Research Information Services from the Swiss Foundation for Research in the Social Sciences (www.unil.ch/daris), where they are permanently archived.*

Authors

Spini, D. (1)

Elcheroth, G. (2)

Fasel, R. (3)

Abstract

Transition to Adulthood and Collective Experiences Survey (TRACES) is a research program focusing on war and economical victimization in ex-Yugoslavia and their impact on young adult's attitudes and values. The main quantitative survey was launched in 2006; Principal Investigator: Dario Spini; Project Coordinator: Guy Elcheroth. Its design included two partially embedded samples following a random sampling strategy stratified in 80 areas covering the entire ex-Yugoslavian territory. An individual-based questionnaire (Cohort sample, including individuals born between 1968 and 1974; N = 2'254) was coupled with a representative sample of the adult population (Random sample; N = 3'975). This second sample enabled to record, using life calendars, valid data on the experiences communities faced from 1990 to 2006 and during individuals' transition to adulthood (from 15 to 35 years old) across diverse regions of former Yugoslavia. As a result TRACES presents an innovative multilevel survey design enabling the location of respondents' experiences in time and space. This methodological and technical report provides details about survey design and instruments, about the context of the production of data and data quality. The purpose is to offer information as transparent as possible for current and future data users and to share this experience with the broad scientific community.

Keywords

Transition to adulthood |Victimization | Life calendars |Social attitudes | Ex-Yugoslavia

Authors' affiliations

NCCR LIVES, University of Lausanne

Correspondence to

dario.spini@unil.ch

LIVES
Swiss National Centre of Competence in Research

LIVES Working Papers
University of Lausanne
Bâtiment Vidy ▪ 1015 Lausanne ▪ Switzerland
T. + 41 21 692 38 38
F. +41 21 692 32 35
contact@lives-nccr.ch

Table of contents

Foreword

There are three central objectives to this methodological and technical report on the *Transition to Adulthood and Collective Experiences Survey* (TRACES): First, to share with the broad scientific community the innovative design of TRACES; second, to evaluate the quality of the data which was collected; third, to make the context of the production of survey responses as transparent as possible for current and future data users. A preliminary version of this report has been accessible to all researchers of the TRACES network since summer 2007. Permanent archiving of and access to the survey data at the *Data and Research Information Services* from the *Swiss Foundation for Research in the Social Sciences* (see www.unil.ch/daris) is in preparation. The future will tell us if this effort will favor the utilization of TRACES data, which will hopefully be useful to social scientists to study how individual trajectories and life experiences in ex-Yugoslavia were embedded in specific historical, economical and social contexts and how these contexts are related to social identities, belief systems and moral judgments. Before presenting the content of this report, we would like to briefly present the aims of TRACES and the context in which this survey was organized and conducted.

TRACES is a scientific project with the ambition to collect information on the collective experiences of young adults' vulnerability in the beginning of the nineties. The general hypothesis we follow is that collective experiences of vulnerability, be they due to armed conflicts or economic penury, shape social representations related to societal issues like rights, justice or intergroup relationships.

In order to deal with these issues, we first decided to direct our investigations to a close region that had recently experienced such collective and dramatic events: former Yugoslavia. Then, a second important decision was to think about a survey design that would enable us to articulate individual expressions of attitudes to contexts in which individuals experienced different types of life experiences. In order to do so, we needed to gather data on collective experiences structured by time and space. However, precise information on what happened in former Yugoslavia during the wars is full of gaps. We thus had to imagine an innovative sampling strategy. We came to the conclusion that we needed to link the individual-based questionnaire on a specific cohort (individuals born between 1968 and 1974) to a representative sample of the adult population, which would enable us to record, using life calendars, valid data on the experiences communities faced during the nineties across diverse regions of former Yugoslavia. This resulted in what we could call a multilevel survey design, which we believe makes TRACES a very innovative survey within social sciences.

TRACES project is a great adventure that formally began in 2004 and is still ongoing. It includes many people and institutions. While tracing its history we want to warmly acknowledge all the partners, people and institutions that worked with us, helped us during the two phases of TRACES.

The first phase of the project could start thanks to the Swiss National Science Foundation financing (SNF fund 100012-103664; Dario Spini, main applicant; René Levy, co-applicant). We are especially thankful to social psychologist colleagues Willem Doise (University of Geneva), Alain Clémence and Jean-Claude Deschamps (University of Lausanne) for their support and scientific expertise when the project was germinating and in the course of it. In this first phase, different exploratory analyses were undertaken in order to prepare the main study of TRACES. These were in part a continuation of the research program on human rights' social representations directed by Willem Doise (Doise, 2002; Spini & Doise, 2005) and analyses on the data of People on War (Greenberg Research Inc., 1999) during and after collaboration with the International Red Cross Committee (Elcheroth, 2006; Spini, Elcheroth, Fasel, 2008). On this basis, a pilot study in four

countries of ex-Yugoslavia was run in December 2004 in collaboration with Dino Djipa and his team from PRISM Research (hereafter PRISM) in Sarajevo (see Elcheroth & Spini, 2009; Fasel & Spini, 2010; Spini, Fasel & Elcheroth, 2007). All these studies clearly indicated that attitudes toward rights were related to contextual factors which should include, in an innovative way, temporal (related to life trajectories and historical time) and collective dimensions (related to collective experiences and collective vulnerability) in our theories and methods. Another part of this first phase was dedicated to the analysis of focus groups realized in Bosnia and Herzegovina and provided by the International Red Cross Committee (a qualitative section of People on War). Ildiko Dao Lamunière was involved in this analysis as a research assistant. The outcome was the creation of several new scales to be included in the second phase of TRACES.

As a consequence a new application was sent to the Swiss National Science Foundation, which decided, on the basis of this preparatory works, to finance the main study of TRACES (SNF fund No100012-109623; Dario Spini, main applicant; Guy Elcheroth project coordinator), described here. Rachel Fasel, who had already worked on TRACES, was hired as a research assistant in this framework and participated actively to all project phases. We also want to mention the support of René Levy and Jean-Marie Le Goff, co-applicants of the second Swiss National Science fund, which financed the realization of TRACES.

On this basis, the second phase was launched. The main survey was designed and prepared, again in close collaboration with PRISM, and especially with Dino Djipa and Marina Franic-Kadic who helped us define in detail the procedures to follow and had the responsibility of the general logistic operations. Marina Franic-Kadic was the project leader in PRISM for TRACES and worked in close collaboration with us. She wrote a first methodological report (Franic-Kadic, 2006) providing details on the fieldwork. Chapter 3 was based on this document.

Moreover, thanks to new collaborations developed in the frame of the Scientific Cooperation between Eastern Europe and Switzerland (SCOPES, SNF fund No IB7310-110881), Dario Spini, main applicant; Guy Elcheroth, project coordinator), we were able to beneficiate from suggestions of Dinka Corkalo Biruski (University of Zagreb, Croatia), Vera Cubela Adoric (University of Zadar, Croatia), Gordana Jovanovic and Mirjana Vasovic (University of Belgrade) who were also co-applicants in this project. This collaboration resulted in the integration of new research perspectives and in the inclusion of new instruments in the questionnaire. It further enabled us to check the translation-back translation procedure in Croatian and Serbian. Our colleague Sabina Rondic (University of Lausannne) was also a precious help in this procedure. Moreover Mirjana Vasovic and Vera Cubela Adoric helped us during the process of pre-testing some instruments in Belgrade and Zadar.

We are indebted to the Laboratory for Life Course Studies (PaVie Lab, University of Lausanne, previously Interdisciplinary Institute of Life Trajectories Studies) and to the Center for Life Course Studies (PaVie Center, Universities of Lausanne and Geneva), which gave financial help in the project's starting phase and direct support thanks to Tatiana Lazzaro who helped us in all administrative questions. Within the PaVie Center, we have beneficiated of support from our colleagues Dominique Joye and Eric Widmer with whom a scientific interdisciplinary collaboration on TRACES has been developed, which also includes Jacques-Antoine Gauthier and Francesco Giudici. Finally, we would like to thank Christophe Hunziker (Maillefer & Hunziker, Office of Environmental Studies - GIS, Yverdon-Les-Bains) who helped us in designing the maps and more generally in using GIS programs.

In this report, different issues related to the followed procedure and the data quality will be presented. In the first part, a detailed description of the rather complex multilevel (articulation of a representative sample with the cohort sample and selection of individuals within sampling points

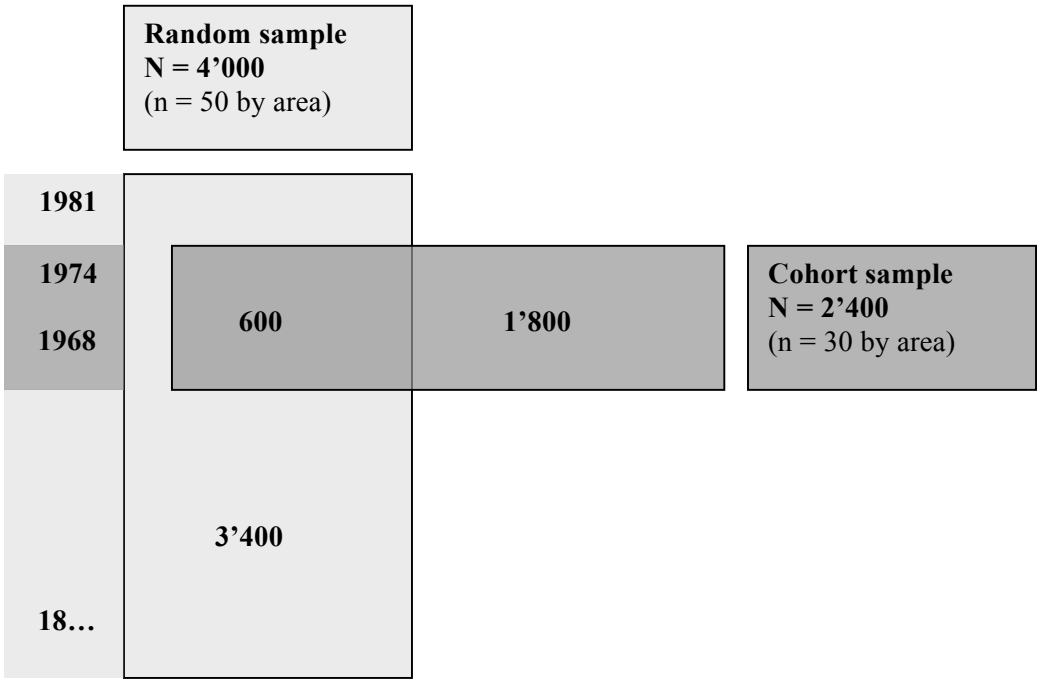
municipalities within regions) sampling design is provided. Then, we document the survey materials (life calendars, scales) that were used. The sequence of foreseen and unexpected events that enabled data collection, are presented in the third section. The fourth part gives information on the data quality from different perspectives: data coding; data consistency (data checking and cleaning, treatment of missing or inappropriate values); interviewer effects. Finally, an evaluation of the final sample characteristics (response rates, design effects, net and effective sample sizes) is provided and procedures for weighting the data are described.

Our wish is that this methodological report will be useful to all researchers using TRACES data set. We feel that the data we collected is very rich and prone to result in meaningful outcomes. We especially hope that our efforts will enable a better understanding on how communities' fates and cohort specific experiences durably shape adults' representations of their social world.

1. Sampling strategy

TRACES design includes two partially embedded samples. Both follow a random sampling strategy stratified in 80 areas covering the entire ex-Yugoslavian territory. The first, called *random sample* is a random selection of 50 respondents belonging to the general adult population (born in 1981 or earlier) in each area. We thus expected a total sample of 4'000 individuals. These respondents answered to the first part of the questionnaire (details are provided in Chapter 2). The second sample, named *cohort sample,* was a random selection of 30 residents born between 1968 and 1974 within each area. A sample of 2'400 individuals, who answered to the first and second part (attitudinal items) of the questionnaire, was expected. In every survey area, 15 sampling points were randomly selected, that means a total of 1'200 sampling points for the whole survey.

Figure 1.1. Survey design: sample size expected



One of the survey's particularities is that both samples partially overlap (see Figure 1.1). There was a two-stage strategy in the samples' constitution. During the first stage, individuals were selected for the random sample. If a selected respondent fulfilled the cohort sample criterion, he or she was asked to answer the second part of the questionnaire as well. That means that

respondents that did not accept were included into random sample and those who did accept were included into both random and cohort samples. At the second sampling stage, cohort sample quotas were completed. The estimated breakdown of samples within cohorts, as shown in the figure below was based on the assumption that this part would be of about 15%. Based on this estimation, 3'400 short interviews (only the first part of questionnaire) in addition to the 2'400 long interviews (first and second part of questionnaire) were expected. As both samples partially overlap, the final total number of interviews by area was estimated to be about 75 on average.

The following chapter provides more details about the sampling strategy. As a general rule, demographical data we relied on comes from the last population census as provided by the statistical office of the country (or subdivision of country) in question. Two exceptions depart from this rule: when the last census was relatively old (1991 for Bosnia and Herzegovina), or when the census data was not reliable (the 1991 census was boycotted by most Albanians in Kosovo). In these cases we used most recent official population estimates. The precise sources that have been used for each country or country's subdivision are provided in Appendix A.

1.1. Stratification by survey areas

A stratification plan that divides the ex-Yugoslavian territory into 80 geographical areas was elaborated. A particular objective of the stratification procedure was to over-sample ethnic or national groups that represent between 5% and 10% of the total sample (Albanians, Bosniaks, Slovenes and Macedonians) in order to be able to compute statistical estimates for the sub-groups separately. Concretely, we established the following guidelines for defining areas:

1. Areas are regional subdivisions within current state boundaries, as well as within boundaries of different political entities (i.e. Federation of Bosnia and Herzegovina / Republika Srpska; Serbia Proper / Montenegro / Vojvodina / Kosovo).
2. Each area is geographically continuous.
3. The total number of areas for the whole former Yugoslavia has been fixed to 80.
4. Each area is defined as a cluster of a certain number of municipalities, which respects the current boundaries of these municipalities.
5. When intermediate levels of political subdivisions exist (Croatia: counties; Federation of Bosnia and Herzegovina: counties; Serbia Proper and Vojvodina: districts; Kosovo: UNMIK districts; FYR Macedonia: historical communes), areas should as far as possible correspond either to one unit defined by this subdivision or to a cluster of several smaller units.
6. Six urban areas are defined by the boundaries of the major cities: Belgrade, Ljubljana, Pristina, Sarajevo, Skopje, and Zagreb.
7. Apart from the six urban areas, numbers of inhabitants by area should not vary dramatically from one area to another, especially within one political entity.
8. Smaller political entities are over-sampled compared to larger political entities, i.e. there should be smaller average numbers of inhabitants for areas within smaller countries than within larges countries.
9. Regions populated mainly by major ethnic groups that are less numerous within former Yugoslavia (Albanians, Bosniaks, Macedonians, and Slovenes) are over-sampled compared to regions populated mainly by the two most numerous ethnic groups (Croats and Serbs).
10. Regions which are highly heterogeneous with regard to geographical or historical factors - especially factors that affected their inhabitants' destiny during the 90s wars - should not be clustered within the same area.

11. Codes for non-urban areas are composed of two letters referring to the larger geographical region followed by one number which specifies the precise location: areas are ranked from West to East and from North to South within geographical regions. Codes for urban areas are composed of two letters only, referring to the city's name.

In order to define the survey strata, current and historical country divisions were identified (see Table 1.1). In accordance with the preceding guidelines and because subdivisions vary from one country to another, the precise stratification strategy for every country is presented hereafter.

Slovenia: for this country, we relied on the 12 statistical regions that are used by the Republic's Statistical Office. The regions with fewer inhabitants were grouped together with their neighbouring region. Thus, 8 survey areas were delimitated for Slovenia, made of one, two or three statistical regions, plus one urban area, that is the city of Ljubljana.

Croatia: The country is divided into 20 counties, plus the city of Zagreb. The city of Zagreb is one area by itself. Afterwards, areas are made of either one county or two smaller ones. One condition for two counties to be clustered within the same area is that both belong to the same historical geographical region (Central Croatia, Dalmatia, Slavonia, Istria, Lika and Gorski Kotar). The clustering resulted in 17 survey areas for Croatia.

Bosnia and Herzegovina: The country is divided into two entities; the Federation of Bosnia and Herzegovina, and the Republica Srpska. The District of Brčko has a particular status because it is directly connected to the federal government. The Federation of Bosnia and Herzegovina is made of 10 cantons. Usually, an area includes only one canton, apart from some exceptions: in two occurrences two smaller cantons were put together; the very small District of Brčko was clustered with the Posavski canton; the very big canton of Tuzlanski was cut into two equal areas (one including western and the other eastern municipalities). The city of Sarajevo is an area by itself. The Republica Srpska has no other official divisions than municipalities. However, historically, Bosnia and Herzegovina is made of two regions: Bosnia, that represents about 80% of the territory at the northern part and Herzegovina, which is a small triangle at the south of the Dianaric Alps. This is why the southern part of the Republica Srpska was delimitated into a cluster called Eastern Herzegovina. District of Brčko splits the Republica Srpska into two parts that we called northern and eastern Bosnia. According to the number of inhabitants within the municipalities in each part, the first one was divided into 3 areas, the second one into two. The final cluster for Bosnia and Herzegovina includes 16 survey areas (10 for the Federation of Bosnia and Herzegovina including the District of Brčko, and 6 for the Republica Srpska).

Serbia, Montenegro: At the time of our stratification work, the Republic of Serbia and the Republic of Montenegro were two parts of Serbia-Montenegro State. Besides Serbia Proper, the Republic of Serbia includes two autonomous provinces: Vojvodina and Kosovo. Kosovo has a particular status because it is under an interim civilian administration led by the United Nations (UNMIK) from 10 June 1999, following the Security Council (resolution 1244). Kosovo has then been divided into 7 survey areas, corresponding to the administrative divisions used by the UNMIK, plus one area for the city of Pristina. According to the Republic of Serbia administrative divisions, the territory is divided into 29 districts, plus the district of Belgrade City (17+1 districts for Serbia Proper, 7 for Vojvodina and 5 for Kosovo). Sometimes two neighbouring smaller districts were grouped together and other times one district is an area of its own. The huge City of Belgrade district was cut into two areas: City of Belgrade, urban municipalities, and City of Belgrade, suburban municipalities

Table 1.1. Territorial organisation

Political entities	***Official administrative units***	***Source***	***Historical or geographical subdivisions***
Slovenia	193 municipalities (2002) 12 statistical regions	NUTS Regulation adopted in 2003 (Common Classification of Territorial Units for Statistics).	
Croatia	20 counties + city of Zagreb 122 towns (124 in 2005) 423 municipalities (426 in 2005)	Croatian Law on Territories, 2001	6 historical geographical regions
Bosnia and Herzegovina	142 municipalities	Bosnia and Herzegovina Constitution, 1995	Historical geographical regions of Bosnia and Herzegovina
Federation of Bosnia and Herzegovina + District of Brčko	10 cantons 79 municipalities (2005) + 1 in District of Brčko		
Republica Srpska	62 municipalities (2004)		
Serbia	24 districts + City of Belgrade 162 municipalities	Law on Territorial Organization, 1991	
Serbia Proper	17 districts+ 1 (City of Belgrade)		
Vojvodina	7 districts		
Kosovo	30 municipalities (5 districts for Serbia)		
	7 districts recognized by UNMIK	UNMIK, 1999	
Montenegro	21 municipalities	Territorial Division, 2004	
FYR Macedonia	84 Municipalities (since 2004)	Law for territorial organization, 2004	34 historical communes (1976) 123 Municipalities (1996)

This resulted in 12 (Central Serbia) plus 5 (Vojvodina) survey areas for the Republic of Serbia (without Kosovo). The republic of Montenegro was divided into two areas, considering a geographical north-south criterion and taking into account the number of inhabitants by municipality (the south part has a higher population density).

FYR Macedonia: The Law for territorial organization (2004) divides the country into 84 municipalities. In order to group these municipalities, we relied on the historical territorial organization of 1976 (34 communes, 5 of them belonging to Skopje supra-commune). This implies that two actual municipalities belonging to the same historical commune have been clustered within the same area. According to the population density in every commune, the areas are made of one to five historical communes. The city of Skopje is a cluster by itself, grouping 5 historical communes together. Twelve survey areas have been delimitated for FYR Macedonia.

Table 1.2 provides a stratification design summary, which takes into account the population size. As the territorial organisation is not similar in each country, the number of municipalities by area varies considerably among countries. When there is only one municipality within an area, it is always the main city urban area. The maximum number of inhabitants by area is the one of the main city for Croatia, Serbia, Kosovo and FYR Macedonia.

Table 1.2. Stratification design and demographical data by political entity

Political entity	***Total number of inhabitants***	***Number of areas***	***Number of municipalities by area***			***Number of inhabitants by area***		
			Min.	Max.	**Mean**	Min.	Max.	**Mean**
Slovenia	1'964'036	**8**	1	44	**24**	120'875	336'484	**245'505**
Croatia	4'437'460	**17**	17	55	**33**	122'870	779'145	**261'027**
Bosnia and Herzegovina	3'880'521	**16**	4	18	**9**	82'402	401'401	**242'533**
Serbia	7'498'001	**17**	4	16	**9**	214'011	1'273'651	**441'059**
Montenegro	620'145	**2**	9	12	**11**	270'161	349'984	**310'073**
Kosovo	2'601'121	**8**	1	6	**4**	190'622	564'800	**325’140**
FYR Macedonia	2'022'547	**12**	3	13	**7**	72'328	506'926	**168'546**
TOTAL	**24'772'208**	**80**			**16**			**309’653**

1.2. Selection procedures for sampling points

Within each survey area, 15 sampling points have been selected by the use of a multi-stage cluster design. Most typically, a three-stage-procedure for selecting sampling points has been used: random selection of (1) municipalities within areas, (2) settlements within municipalities, (3) sampling points within settlements.

Selection of municipalities
The first stage consisted in the random probability proportional to size with replacement (hereafter PPS) selection of municipalities (except for the six urban areas). The number of municipalities selected within each area depended on the total number of existing municipalities in the area. The more municipalities existed in an area, the more municipalities were selected, according to the rule in Table 1.3

Table 1.3. Rule for the number of municipalities selected in each area

Total number of municipalities existing in an area	**Number of municipalities selected for the survey sample in this area**
1	1
2	2
3-10	3
10-45	33% of total number of municipalities in the area
More than 45	15

This strategy was implemented by the coordinating team in Lausanne, on the basis of the final population database by areas. The list with the selected municipalities as well as the number of sampling points per municipality was sent via PRISM to the local partner team coordinator.

Concerning the six entirely urban areas defined by the strata design (cities of Belgrade, Ljubljana, Pristina, Sarajevo, Skopje, and Zagreb), a direct random PPS selection of 15 settlements by area was carried out.

Selection of settlements
The second stage was the random PPS selection of settlements within selected municipalities (except for Kosovo). Reliable census data specifying the number of inhabitants by settlement exist for Croatia, Serbia, Montenegro, Slovenia, and FYR Macedonia. The local partner agencies used these databases to carry out random selection of settlements using a PPS procedure. In Bosnia and Herzegovina, voter registration lists provided reliable estimates of the size of settlements, and were used by PRISM for PPS random selection of settlements. Only in Kosovo, reliable information on the settlements' size was not available. An alternative random selection method was used in this context: starting points were randomly selected on geographical maps by the local coordinator. However, this strategy implies a systematic bias: inhabitants of neighbourhoods with a high population density have a lower selection probability than individuals living in less densely populated areas. In order to be able to compensate (partially) this bias, interviewers in Kosovo were instructed to record two indicators of population density at each respondent's place of residence: (1) the number of households within the same building, (2) the distance to the nearest neighbouring building in meters. Then these allow computing a population density weighting coefficient.

Another particularity of Kosovo is that the Serbian minority is mainly concentrated in the smallest municipalities of two of our survey areas (KO3 and KO6). In order to assure a Serb representation among Kosovo respondents, we included all municipalities of these two areas and randomly selected a number of sampling points which is proportional to the municipality population's size (instead of PPS sampling of municipalities).

Selection of sampling points
The last stage was the random selection of sampling points, i.e. addresses of starting points for random walk routes, within the selected settlements (except for Kosovo).
a) In urban areas, interviewers were instructed to select the central street in the given settlement. They always had to start from the beginning of the given street or at a chosen address, depending on the reference point.
b) In rural areas, interviewers had to come to the given part of the town, settlement, and to choose in that given part or settlement some arbitrary selected addresses, and turn their face toward the object (house, building) on that given address. In rural areas, the first address was the village centre itself, and in the case of smaller villages, the first house at the entrance of the village, in the direction from which the interviewer arrived. The referent point in the larger settlement or village from which the interviewing began could be a public building (post office, school) or other (beginning or end of some street, street cross etc.).

This is PRISM's standard procedure for selection of sampling points, and was applied as such in all household surveys. The procedure was described in the main training conducted in all the agencies, and as such, had to be followed by all survey teams (see Chapter 3).

1.3. Selection procedures for individual respondents

Households' recruitment
A random Walk Technique was applied in order to randomly select households during the respondents' recruitment. Each agency was free to apply its own methodology of Random Walk Technique. For example, PRISM applied the selection rule of each second object (house, building) right to the direction of the interviewer's movement. In any case, detailed instructions were provided to interviewers, making sure that the choice of households did not depend on interviewers' discretion.

Respondents' recruitment
The detailed procedure for recruitment of respondents can be found in Appendix B, "Interviewer instructions for introducing the survey and selecting the respondent". The broad lines are presented hereafter. The respondents' selection was divided into two successive stages: (1) "random sampling," and (2) "completion of cohort sample."

First stage: Random sampling
At this stage of sampling, all individuals born on or before 31st December 1981 were eligible for participation in the survey. Within each household, one respondent who corresponded to this birth criterion had to be selected randomly, following the precise procedure described in Appendix B. Most typically, respondents were invited to take part in a 15-minute life events interview (first part of the questionnaire) at that stage. Only selected respondents born between 1st January 1968 and 31st December 1974 could take part in either a [50-minute/ 60-minute[1]] life events and political attitudes interview (first and second part of questionnaire) or in a 15-minute life events interview. In fact, if the selected respondent fulfilled the cohort birth criterion, interviewers asked him/her to take part in a [50-minute/ 60-minute] interview. If he/she refused, he/she was asked to take part

in the 15-minute life events interview. Interviewers had to complete 3 or 4 (number specified by the regional coordinator) interviews at this stage.

Second stage: Completion of cohort sample
At this stage, the random walk procedure for the households' selection was identical to the procedure applied during the previous stage. However, the instructions for selecting individual respondents within households were different. Only individuals born between 1st January 1968 and 31st December 1974 were eligible for the cohort sample. Thus, within each household, one respondent who corresponded to this more restrictive birth criterion had to be selected randomly, following the precise procedure described in Appendix B.

At the end of this stage, two [50-minute/ 60-minute] interviews had to be completed by sampling point. If one or two [50-minute/ 60-minute] interviews had already been completed with members of the 1968-74 cohort during the previous stage of random sampling, this/these interview(s) could be deduced from the total number of interviews that were still to be conducted.

Interviewers were not allowed to interview the person in the household that satisfied the criterion of cohort sub-sample, only because he/she satisfied this criterion, during the phase of recruiting for the random sample.

Survey questionnaire and calendars

1.4. Scale sources and validations

The survey interviews were organized in two parts. The first part (common to the entire sample), consisted mainly in the completion of two life events calendars, followed by a series of items on social affiliations and origins. The second part (only for the cohort sample) consisted in a series of attitudinal items (see Appendix B).

Two life events calendars (inspired mainly by the work of Axinn, Pearce & Ghimire, 1999) were designed for the study: *Calendar A*, for recording marker events of transition to adulthood, occurring between the age of 15 and 35. This calendar, structured by respondents' age were intended notably to study changing structures of opportunities across cohorts; *Calendar B* for recording negative or traumatizing life events, occurring between 1990 and 2006. This calendar, structured by the collective timeline, was intended notably to study the structure of collective vulnerability, in particular during the period of armed conflicts. In both calendars, dates of all events were recorded by quarters. Additionally, residential trajectories (coded by 80 survey areas or by countries outside former Yugoslavia) were recorded for the time intervals covered by the calendars. This way, life events are contextualized temporally, as well as geographically. The accuracy of dates' recall is enhanced by the simultaneous graphical representation of multiple time frames and memory cues: calendar years, seasons, birthdays, geographical locations, previously completed personal events, as well as subjectively relevant historical events, used as additional temporal anchoring points. Interviewers were instructed to use the calendars in a flexible way regarding the sequence of recording events and dates, and facilitating accurate remembering by making memory cues graphically available to the respondents during the completion, as well as by encouraging them explicitly to rely on these cues. This last part of the questionnaire was completed by items on professional occupation, national, linguistic, associational, and confessional affiliations, as well as on family status and social origins.

The second part of the questionnaire consisted of a series of attitudinal scales, listed in Table 2.1. In addition to eight existing scales on political support, social identity (ethnic identification,

collective guilt, social distance, and levels of affiliation), sense of justice (belief in a just world, and anomy), and overall life satisfaction, five original scales, grasping moral judgments related to human rights violations, were developed and validated for the purposes of this research program. Two scales, condemnation of norm violations and support of international jurisdiction, were inspired by previous work using concrete cases of formally recognized human rights violations on the basis of court judgments (Doise, Dell'Ambrogio & Spini, 1991; Staerklé & Clémence, 2004). The items following the two vignettes presenting a violation of the European social charter (script B) or of International humanitarian law (script C), were developed throughout a survey on social rights among French youngster (Elcheroth & Spini, 2007), and/or the TRACES pilot study (Elcheroth, 2007; Spini, Fasel & Elcheroth, 2007). Applying the same logic to judicial rights, a third vignette (script A) has been newly designed for the present questionnaire. This vignette was based on a case judged by the European court of human rights, which recognized violation of rights to a fair trial and protection against illegal imprisonments. Further, three scales related to judgments on war behaviour, by individual or collective actors, within the specific context of former Yugoslavia, were designed using an inductive approach. Systematic thematic analyses of transcriptions of focus group discussions carried out by the International Committee of the Red Cross in Bosnia and Herzegovina enabled us to highlight major themes structuring moral debates of war experiences, and sets of specific statements which provide contextually meaningful concrete expressions of moral arguments. Item wordings scales on the responsibility of the international community, war morality and prosecution of war crimes scales were derived from these statements. Next, a pre-test study among university students in Belgrade and in Zadar, in November 2005, allowed us to select the most valid items within a longer list of initial formulations. Likert scales were used as the general response format for these scales. In some cases, existing scales were partially adapted (see Table 2.1). In Croatia, Serbia and Montenegro only, a 27-item scale on national identification, developed by Dinka Corkalo, was added to the cohort questionnaire. The final version of the questionnaire was elaborated in close consultation with our research partners in the framework of the SCOPES-TRACES network.

1.5. Translation procedures

The original questionnaire in English has been translated in the six survey languages, using a 12-step procedure (see Table 2.2): Albanian (FYR Macedonia, Kosovo), Bosnian (Bosnia and Herzegovina), Croatian (Croatia), Serbian (Serbia, Montenegro, Kosovo), Macedonian (FYR Macedonia), Slovene (Slovenia). Bosnian translation was carried out first, in order to enable final testing of all wording in real survey conditions, throughout a series of pilot interviews were carried out in the surroundings of Sarajevo. Insights gained from interviewer debriefings resulted in minor changes (e.g. clarification of response scales), carried out simultaneously in the English and Bosnian versions of the questionnaire at that stage. After that, translations in the remaining five survey languages were launched. In order to avoid cumulative errors, Albanian, Macedonian and Slovenian translations were based on the English original version of the questionnaire only. However, given the important similarities between Bosnian, Croatian, and Serbian languages, the latter two translations were based on both English and Bosnian questionnaire versions, ensuring maximal equivalence in the wordings used between these three related linguistic versions.

All translations were carried out by local native speakers fluent in English and familiar with survey research. Back-translations were carried out independently by local residents who are fluent in English and familiar with survey research. Bosnian and Albanian translators and back-translators were directly hired and supervised by PRISM. Slovenian, Croatian, Serbian, and Macedonian versions were delegated by PRISM to the corresponding local partner agencies, which hired and supervised translators and back-translators. Standard guidelines for translators were explicitly

defined in a translators' guide document, in order to ensure a common logic of translation and quality standards.

Bosnian, Croatian and Serbian translations were checked by members of the SCOPES research network. Furthermore, all back-translations were checked by the coordinating team in Lausanne. A document specifying each wording which had a significantly different meaning from the original was sent back, via PRISM, to the translators.

Translators then responded with a short report, specifying the final solution for each of these problematic wordings, i.e. the meaning of the wording correction, or the reason why it had not been corrected (e.g., a correct wording had been badly back-translated). For each linguistic version, the translation process was considered as finalized once the Lausanne team had accepted this report. The final version of the Macedonian was transcribed into Cyrillic alphabet at that stage.

Table 2.2. Translation process

Step 1	Original questionnaire translation into Bosnian, and independent back-translation into English
Step 2	Translation and back-translation review, recommendations
Step 3	Corrections in the Bosnian translation
Step 4	Pilot interviews in Sarajevo, recommendations
Step 5	Final version of the English questionnaire
Step 6	Final version of the Bosnian questionnaire
Step 7	Translations into Croatian, Serbian (on the basis of the final versions of both English and Bosnian questionnaires); translations into Slovenian, Macedonian & Albanian (on the basis of the final version of the English questionnaire only)
Step 8	Evaluation of Croatian and Serbian translations (with the help of colleagues from Belgrade, Zadar & Zagreb), recommendations
Step 9	Corrections in the Croatian and Serbian versions
Step 10	Five independent back-translations
Step 11	Review of all back-translations, recommendations
Step 12	Final versions of the Croatian, Serbian, Macedonian (Cyrillic transcription), Slovenian, and Albanian questionnaires

Table 2.1. Overview on survey scales

Scale label	*Item nbs*	*Original source*	*Adaptation*	*Sub-scales*	*Previous validation work*[1]
Political support	39-45	Muller, Jukam & Eligson (1982)	Weak (one item removed)	-	*EVA, pilot;* FIC[2] , Conceptual validity
Condemnation of norm violations	46-49 94-97 128-131	Own work		1. Violations of social rights 2. Violation of political rights 3. Violation of humanitarian law	*Pilot (only subscales 1 & 3):* FIC, Conceptual validity
Support of international jurisdiction	50-53 98-101 132-135	Own work		1. Violations of social rights 2. Violation of judicial rights 3. Violation of humanitarian law	*Pilot (only subscales 1 & 3):* FIC, Conceptual validity
Ethnic identification	56-59	Doosje et al. (1995)	None	-	
Collective guilt	60-74	Branscombe, Slugoski, & Kappen (2004)	Weak (identity categories)	1. Collective guilt acceptance 2. Collective guilt assignment 3. Whole group accountability	
Social distance	75-88	Bogardus (1925); Babbie (2003)	Strong (wordings & target groups)	1. Social distance based on ethnicity (multidimensional) 2. Social distances based on citizenship (multidimensional)	
Levels of affiliation	89-93	Klingemann & Bacevic (1992)	Weak (wordings)	(multidimensional)	
Responsibility of the international community	103-110	Own work		-	*B-Z :* FIC
War morality	111-122	Own work		1. Normative ambiguity 2. Preservation of humanity	*B-Z :* FIC
Prosecution of war crimes	123-127	Own work		-	*B-Z :* FIC
Beliefs in a just world	137-149	Dalbert, Montada & Schmitt (1987) Dalbert (1999)	None	1. General belief in a just world 2. Personal belief in a just world	*Pilot (only subscale 1):* FIC
Sense of anomy	150-158	McClosky&Schaar (1965)	None	-	
Satisfaction with life	159-163	Diener, Emmons, Larsen & Griffin (1985)	None	-	*Pilot:* FIC, Conceptual validity

[1] Outcomes of own validation analyses carried out on three different datasets are mentioned: a study on social rights carried out among French youngsters, October 2003, see also Elcheroth&Spini, 2007 (« EVA »); the TRACES pilot study, December 2004 (« pilot »), as well as a small pre-test study carried out among University students in Belgrade and Zadar, November 2005, (« B-Z »). More detailed information can be obtained from the authors on demand. Additional information on existing scales can be found in the original publications, as well as in Robinson, Shaver and Wrigthsman (1993).
[1]Factorial structure, Internal consistency & Cross-contextual item equivalence.

3.1. Fieldwork network[2]

The fieldwork across all areas of former Yugoslavia was conducted by six field teams, working together in a network coordinated by *PRISM*[3]. Part of the tasks were centralized and directly carried out in the PRISM headquarter:

- the preparation and printing of all the sampling, fieldwork and training materials, in particular the complete interviewer sets in all survey languages
- all data entry and coding
- overall supervision of fieldwork activities and regular reporting of progress and difficulties
- archiving of all completed questionnaires for five years

The remaining tasks were carried out by the local field teams. PRISM relied on its own staff in Bosnia and Herzegovina and in Kosovo. Contracts with four partner agencies were established by PRISM in Slovenia (*Mediana, Institute for Market and Media research*), Croatia (*Hendal market research*), Serbia and Montenegro (*Argument, Research and Analytical Centre*), and FYR Macedonia (*BRIMA Gallup International, Public Opinion Poll Agency*), which were in charge of the following responsibilities:

- translation of survey materials
- hiring of interviewers and regional coordinators
- fieldwork logistics
- back-checks (control of completed interviews)

The overall fieldwork staff thus consisted of one overall project manager (who was at the same time field team coordinator for Bosnia and Herzegovina), five additional field team coordinators, as well as 87 regional coordinators, and 546 interviewers. More details on the fieldwork staff composition are provided in Table 3.1.

Fieldwork project manager
The project manager directly supervised preparation of all sampling, fieldwork and training materials in the PRISM headquarter in Sarajevo. She personally provided training for coordinators and part of each field team's interviewers, in the local agencies' headquarters. Furthermore, together with the field team coordinators, she defined the local strategies for implementing the standardized sampling instructions and guidelines we provided. During the fieldwork, she regularly informed us about the survey progress. When difficulties came up, she acted as a mediator between the logistical and practical concerns stemming from the field teams, on the one hand, and our methodological requirements, on the other.

Field team coordinators
At the head of each field team, one member of the corresponding agency's permanent staff coordinated all local fieldwork activities. Field team coordinators were in particular responsible for implementing the sampling procedure at the level of *settlements* (see section 2.3), for fieldwork logistics, and for reporting fieldwork activities to the project manager. Together with the project manager, they organized local training sessions for regional coordinators and interviewers.

Regional coordinators
Regional coordinators were in charge of the sampling strategy's implementation at the level of *sampling points* (see section 2.3), for the interviewers' debriefing, and for conducting field controls at respondents' residence (verifying authenticity of interviews and faithfulness to sampling instructions), as well as logical control of completed questionnaires. Having had to take into account logistic concerns raised in advance by most of the survey agencies, we had to give up our initial

plan to have one regional coordinator in charge of each survey area defined by the survey's stratification design.

Table 3.1. Composition of the six local field teams

Field team	***Number of regional coordinators***	***Number of interviewers***	***Mean age of interviewers (age range)***	***Part of female interviewers***	***Main self-reported ethnic identity among interviewers***
Slovenia	9	43	24 (15-54)	76 %	Slovene (100%)
Croatia	6	244	36 (18-71)	65 %	Croat (95 %)
Bosnia and Herzegovina	17	79	30 (17-56)	65 %	Bosniak (47%) Serb (28 %) Croat (18 %)
Serbia, Montenegro	28	108	34 (22-69)	62 %	Serb (85 %) Bosniak (12%) Montenegrin (2%)
Kosovo	6	28	26 (20-44)	75 %	Albanian (82 %) Serb (18 %)
FYR Macedonia	21	44	36 (21-65)	63 %	Macedonian (74 %) Albanian (23 %)

3.2. Fieldwork timeline

The first coordinator and interviewer training sessions were held in Bosnia and Herzgovina in April 2006 and followed by about forty survey interviews. At that stage, other local agencies started to report difficulties with the implementation of the required sampling and interviewer design. In order to ensure a common design and timeline, the fieldwork was postponed until realistic solutions were found to all concerns raised by some of the agencies. The actual fieldwork beginning therefore occurred between the end of May (in Bosnia and Herzegovina) and the end of June (Serbia). The first interviews started in principle within a week's time after the training sessions. Interviews were completed first in Slovenia, by the midst of July, and last in Serbia, during the last days of August. After that, completed questionnaires were checked by local supervisors, and transferred to Sarajevo, where data entry for the entire survey was carried out by PRISM. A first version of database was delivered by PRISM in October 2006. Our screening of this database revealed two types of major problems: (1) within the Serbian sample, sample sizes were largely above the target sample sizes across several survey areas, (2) within the Kosovo sample, a series of interviews had to by removed from the database, because they did not meet the required data quality standards (see Chapter 4). As a consequence, a complementary fieldwork was organised in December 2006 across the eight survey areas in Kosovo and another 11 survey areas in Serbia. All interviews were completed before the end of the year. The complementary database was delivered by PRISM in January 2007.

3.3. Interviewer selection and training

As a general rule, it was required that only coordinators and interviewers who had completed their basic training as interviewers and already had a significant experience in face-to-face surveys were to be hired for this demanding project. Whenever possible, interviewers who took part successfully in the pilot study were hired again. Interviewers had to be fluent in the local survey language. In Kosovo, both Serbian and Albanian interviewers were hired. In FYR Macedonia, both Macedonian and Albanian interviewers were hired.

The content of fieldwork staff training sessions and of standardized training material were prepared in close collaboration between Dino Djipa and Marina Franic-Kadic, on the one hand, and Dario Spini and Guy Elcheroth, on the other hand, in particular during a two day working session in March 2006, in the PRISM headquarter in Sarajevo.

In addition to the survey questionnaires and standardised instructions for selecting respondents and introducing the survey, which we provided, the project manager, in close collaboration with us, summarized all relevant aspects of interviewer training in a 35 page-document labelled "Interviewer Instructions". This document was prepared in Bosnian, and translated into Albanian, Macedonian and Slovenian language. (It was not translated into Serbian and Croatian, given the linguistic proximity with Bosnian.) Each staff member received this document in the local survey language during the training sessions. Fieldwork coordinators received this document earlier, enabling them to become familiar in advance with the methodological and practical requirements, and thus to take an active role in the training sessions' preparation.

The whole set of survey materials handed out to the interviewers consisted of the following elements:

- Short version of the questionnaire (life events questionnaire, applied to the general adult population's random sample)
- Long version of the questionnaire (life events questionnaire & attitudinal questionnaire, applied to the cohort sample). In Croatia, Serbia and Montenegro this questionnaire version included a series of country specific items.
- Show-cards: 10 show-cards with response scales or scripts completing the attitudinal questionnaire (11 for Serbia, Montenegro and Croatia, due to country specific items).
- Two life events calendars.
- Questionnaire Appendix 1: Detailed instructions related to the survey's introduction to the person who opened the door and the respondent, as well as guidelines for the procedure of selecting the respondent.
- Questionnaire Appendix 2: List of area codes by municipalities for former Yugoslavia, and world country codes.
- Contact sheets: An adapted version of a standardized contact sheet used by PRISM, enabling us to record relevant information about location of sampling points, outcomes of contacts, household composition, and interviewers' expenditures.
- Control sheets: explains the purpose and control manner to the respondent, including a brief questionnaire that the respondent is asked to complete independently once the interviewer has left.
- Sample specification: List of settlements and sampling points' addresses (starting points for random walk).
- Detailed interviewer instructions: Document summarizing the sampling, interviewing, and quality control procedure.

Survey questionnaire and calendars with Appendix 1 and Appendix 2 are provided in Appendix B.

Local half-day training sessions for all fieldwork and regional coordinators were held by Marina Franic-Kadic, in the local agencies' headquarters (see Table 3.2). Most frequently, only interviewers living near the headquarters took part also in these main training sessions. Other interviewers were trained afterwards by the fieldwork coordinator or by the regional coordinator, who organised local training sessions, using the same structure and training material than for the main training sessions.

Thus, our initial purpose to provide each single staff member with training by the overall project manager (benefiting of a two-year long experience on this project) was not reached. The only positive exception to this was the field team from FYR Macedonia, where it was possible to bring together all members of the field staff during one single training session. On the other side, the field team of Serbia and of Montenegro appears as a negative exception. In this context, not even all regional coordinators – actually only a minority of coordinators – took part in the only local training session held by the project manager in Belgrade. The remaining regional coordinators were trained by the fieldwork coordinator afterwards. It is very likely that this failure to assure direct transmission of survey instructions had a negative impact on data quality in Serbia and in Montenegro.

Table 3.2. Main training sessions for fieldwork staff

Field team	***Place***	***Date***	***Coordinators' attendance***	***Interviewers' attendance***
Slovenia	Ljubljana	24th May 2006	full	partial
Croatia	Zagreb	23rd May 2006	full	partial
Bosnia and Herzegovina	Sarajevo	21st April 2006	full	partial
Serbia, Montenegro	Belgrade	16th June 2006	partial	partial
Kosovo	Potok Prishtina	1st June 2006 2nd June 2006	full	partial
FYR Macedonia	Skopje	2nd June 2006	full	full

The duration of all training sessions was approximately of four hours. Each training session consisted of the following parts:

- The study's objectives and purposes
- Introducing sampling and respondents recruitment procedure
- Introducing survey materials
- Detailed explanation of the core questionnaire administration
- Calendars A and B administration procedure
- Administration procedure of contact sheets
- Quality control procedure
- Role playing exercises (interviewer-respondent)

Beyond common guidelines regarding respect of confidentiality and a non-intrusive attitude, which have been part of the basic training of recruited interviewers, ethical issues specific to the TRACES project, such as having a respectful attitude when it comes to sensitive personal experiences or political opinions, were explicitly addressed during the training sessions.

A further requirement was that before starting the regular interviews, each interviewer should in principle have successfully completed at least one trial interview. Regional coordinators were to carefully check the completed questionnaire and calendar, and to debrief the interviewer between his personal trial interview and further interviews.

3.4. Interviewer supervision and back-checks

Within each field team, a random selection of 20% of respondents were contacted again within a one-week period by the regional coordinator, in order to check that interviewers had actually completed the entire interview, and faithfully followed the methodological guidelines. As controls were conducted at respondents' residence, controllers were in particular able to check whether the addresses of sampling points and contacted households were consistent with the standardized random walk instructions, which left no discretion to the interviewers for the households' selections.

The precise procedure was the following: The interviewer was supposed to leave a control sheet to the respondent, after he/she had finished the interview. The respondent was instructed to keep this control sheet at least seven days from the date the interview had been conducted, knowing that there was the possibility the agency's controller would visit him and ask him to give this control sheet to the controller. When the staff member in charge of the control came to a household which had been selected to be controlled, first of all, he/she asked the respondent to give him the control sheet in order to verify the interviewer had actually been in the given household. After this, he/she asked the respondent to answer a few highly reliable questions from the survey questionnaire and compared the answers with those registered in the questionnaire, in order to verify that the questionnaire was not fake. Finally, the respondent was asked to estimate the interview duration, as well as comment interviewer's behaviour during the interview (for example, whether he/she had/hadn't used show cards properly, read the questions properly etc.). In the case the respondent had lost the control sheet, but he/she claimed that the interviewer had visited the given household, then he/she was still asked to answer some of the highly reliable questions from the questionnaire, and the same procedure was repeated. In addition, a first logical control of responses was completed by regional coordinators immediately after the return of each completed questionnaire, in order to check for incomplete or inconsistent patterns of answers, which might indicate poor comprehension of the instructions or lack of rigor from interviewers. Furthermore, in Bosnia and Herzegovina only, an additional form of control was used: all interviewers were instructed to send SMS message with a special code before and after the start of each interview.

As an outcome of data control, 101 interviews were identified as invalid (see Table 3.3), either because questionnaires were completed inaccurately or incompletely, because calendars were used wrongly, or because sampling instructions were violated. However, no blatant case of deliberate cheating (e.g. interviewers filling in questionnaire on their own) was reported by any field team. Each invalid questionnaire was removed, and replaced by an additional interview conducted at the same sampling point. Households and respondents for additional interviews were selected by continuing the random walk procedure from the last previously contacted household on.

Table 3.3. Outcomes of interview controls by field team

Field team	***Number of invalid interviews***
Slovenia	10
Croatia	30
Bosnia and Herzegovina	26
Serbia, Montenegro	20
Kosovo	15
FYR Macedonia	0

3.5. Difficulties and unexpected events

Network
Following important discrepancies between our methodological requirements and the concrete turn of fieldwork preparations in Serbia and Montenegro, PRISM had to cancel its collaboration with the local partner agency, shortly before the expected start of the fieldwork. Fortunately, an agreement with a new local partner was rapidly established, but this last-minute change in the network however had a negative impact on the overall project timetable, as well as, most likely, on the quality of the fieldwork preparation in Serbia and Montenegro.

Fieldwork staff
Field teams from Croatia, Slovenia, Serbia, and Kosovo complained about unusually high rates of withdrawal of interviewers during the fieldwork. The high complexity of the interviewer instructions was mentioned in some cases as an explanation for this phenomenon, the sensitive issues to be covered in other cases. Following the report of PRISM, the situation was the most problematic in Croatia, where even a regional coordinator withdrew during the fieldwork. In Serbia, Montenegro two interviewers gave up right from the beginning of the training session. A consequence of interviewers' withdrawal was that in some cases, local agencies had to hire and train new interviewers in the middle of fieldwork.

Sampling
In the Montenegrin survey area MN2, the regional coordination took the initiative to add one municipality (Budva) to the sample frame, in order to reach the target sample size while keeping the number of interviews fixed at 3 (instead of alternating between 4 and 4). This was the only case where another municipality than those that we selected initially was covered. Forty-one randomly selected addresses for sampling points could not be covered for practical reasons (see Table 3.4). Unfortunately, precise reasons were not systematically recorded. In some cases, field teams argued that the sampling points were selected in very small settlements, without inhabitants from the targeted cohort. Particularly in Kosovo, security considerations came into play. In all cases, the sampling point was replaced by another address in the next neighbouring settlement.

A particular difficulty was reported by the Croatian field team in Slovenia. Interviewers – all ethnic Croats - felt uncomfortable about contacting ethnic Serbs living in this region. Following our reluctance to change the sampling design in order to avoid settlements inhabited by ethnic Serbs, the regional coordinator covered some of these settlements himself, without eventually reporting any negative incident. The most important problems related to sampling procedures occurred in Serbia, where the required sample sizes were clearly not reached in many survey areas. On our demand, complementary interviews were therefore conducted in December 2006 in these areas.

Table 3.4. Number of sampling points listed in the sample specification replaced by the next neighbouring settlement during the fieldwork (by PRISM)

Country	Area	Municipality	Number of sampling points replaced	Total
Bosnia and Herzegovina	SJ	Stari Grad	1	6
	CB1	Gornji Vakuf-Uskoplje	1	
	CB2	Zenica	2	
	CB4	Gradačac	1	
	NB1	Šipovo	1	
Slovenia	LJ	Ljubljana	2	4
	SL3	Dobrepolje	1	
	SL5	Sevnica	1	
Kosovo	KO1	Istog	1	6
	KO4	Fushe Kosove	1	
	KO5	Dragash	4	
Montenegro	MN1	Rozaje	1	1
Serbia	BG	Zvezdara	1	8
	CS3	Kragujevac	2	
	ES1	Jagodina	1	
	ES2	Nis	2	
	ES4	Babusnica	1	
	ES5	Leskovac	1	
FYR Macedonia	EM3	Vinitsa	1	4
	EM4	Valandovo	1	
	SM4	Prilep	2	
Croatia	CC1	Karlovac	2	12
	CC2	Velika Gorica	1	
	CC3	Kraljevec na Sutli	1	
	CC5	Varaždin	1	
	CC7	Daruvar	1	
	SV1	Pozega	1	
	SV3	Dakovo	1	
		Osijek	1	
	SV4	Vinkovci	2	
		Borovo	1	

Interviews

Interviewers were instructed to carry out the interviews within the respondent's household, and to do everything possible in order to avoid another person being in the same room during the interview, including the suggestion to come back at a later moment. Whenever this was not possible for practical or cultural reasons, interviewers were asked to make sure that no other person explicitly interfered with the interview, and to record (within the interviewers' part at the end of the questionnaire) relevant information on other present persons. When non-interference of others could definitely not be assured, interviewers were not supposed to complete the interview. In practice it turned out, however, that interviewers were frequently not able to arrange being alone with the respondent during the interview (see Table 3.5). This situation was most dramatic in FYR Macedonia, where almost two thirds of the interviews were conducted in the presence of at least one other person, in most cases a close family member. These situations were generally

commented by the fieldwork coordinators as ordinary circumstances of survey research in their country.

Table 3.5. Interview context, by field team

Field team	***Part of interviews not conducted at respondents' place***	***Part of interviews conducted with another person present in the room***	***Part of respondents described as "uncertain, nervous" by the interviewer***	***Part of respondents described as "not very interested" by the interviewer***
Slovenia	0.7%	20.5%	6.8%	10.1%
Croatia	0.6%	41.8%	16.7%	19.8%
Bosnia and Herzegovina	6.8%	26.7%	9.0%	10.1%
Serbia, Montenegro	3.7%	31.4%	16.5%	26.5%
Kosovo	1.7%	24.6%	11.0%	14.0%
FYR Macedonia	1.0%	65.2%	7.3%	9.8%

In a few cases, interviewers from the Croatian and Bosnian teams reported strong emotional, or even hostile reactions from respondents, when it came to war experiences or to sensitive political issues. Croatia was also, together with Serbia and Montenegro, the context in which interviewers described respondents the most frequently – in actually one out of six cases - as "uncertain, nervous". Questionnaires were sometimes described by the fieldwork staff as demanding for both interviewers and respondents, too long, or boring due to repetitive question wordings and answering formats. Again, the highest rates of respondents perceived by interviewers to lack interest were recorded within Serbia and Montenegro and, to a lesser extent, within Croatia.

4. Data quality

4.1. Data coding

PRISM was in charge of the data entry. We provided the data entry form in SPSS format and coding instructions (see Appendix C). As the two samples (random and cohort) were overlapping, the data were entered into one single database (that we split afterwards into two). Coding instructions were followed faithfully. In rare cases where there were some ambiguities, the necessary clarifications were provided. Hereafter, some particular aspects of the TRACES databases are underlined:

- As recorded in calendars, all time periods and dates were entered starting with the most ancient event. Every calendar date was recorded in the database as a date type format, with the quarter and the year specified (qQyyyy). For Calendar A, one single date was recorded for

the first time a positive life event occurred if any. For Calendar B, time periods were recorded for negative life events by two separate variables, the first specifying the start of the time period and the second specifying its end. More than one period could have been recorded for the same kind of negative event. For war events, only the precise date was recorded, but if a type of war event occurred more than once, more than one date was recorded for that event.

- The precise month was specified (mmyyyy) for the date of birth and the date of arrival in country (if applied). Year of death and year of arrival in country (if applied) were entered as a numeric type format, without specification of the quarter.
- Areas were coded by the interviewer during the interview, according to coding instructions. During the data entry, areas were recorded as string format variables in order to avoid typing errors. In the final databases, areas were recoded into numeric type variables.
- Respondent's and his/her parent's occupations were recorded verbatim during the interview. During the data entry process, verbatim answers were translated by the local agencies. All occupations were then coded by the fieldwork project manager according to ISCO-88 (Revision of the International Standard Classification of Occupations, adopted by the Fourteenth International Conference of Labour Statisticians, October-November 1987[4]) with a precision of three numbers.
- Four different codes for missing values were used (for numeric variables only): Explicit refusals or 'don't know' answers recorded as such by the interviewer, were coded 9 'Refusal'; Missing information in items for which no specific 'refusal' category had been defined in the questionnaire were coded 0 'Not mentioned'; items which did not apply to the respondent were coded -1 'Does not apply'; Information that got lost because interviewers recorded responses or non-responses incompletely were coded -2 'not recorded'.

The following variables that could not be found in the questionnaire were added or modified in the databases:

- An individual identification code (id) was attributed to each respondent. In each of the two samples, id-values are integer numbers ranging between 1 and N, corresponding to the respondent's range when the data are successively sorted by survey areas, sampling points, and time at the start of interview.
- During the data entry process, every respondent was identified with one unique number on the paper questionnaire recorded simultaneously in the database to keep a link with the paper questionnaire archived in Sarajevo, in order to allow future back checks. On our demand, complementary interviews were conducted in Serbia and Kosovo (see section 3.2). In the final databases, the two "waves" of interviews can be identified with the variable "code_arc": if the archiving code ends with ".1", that means the interview was conducted during the first wave, ".2" meaning second wave. The variable also allows a link between random and cohort samples: Individual respondents included in both the random and the cohort sample, are identified by the same archiving code (but not the same id), across both samples.
- The interviewers in Kosovo had to report two supplementary pieces of information about the surroundings (see sections 2.2, 5.3). Thus, two variables were added for Kosovo's interviews: "number of households within the same building" ("building") and "distance to nearest neighbouring building in meters" ("distance").
- Because many respondents answered having citizenship from Kosovo (in Kosovo areas), the variable "Citizenship of Kosovo was added in the databases ("cit_ko").

4.2. Data consistency and data cleaning

The first analyses launched in order to check data consistency were done on the total database received from PRISM, before it was split into random and cohort samples. The purpose was to

identify possible inconsistencies or blanks that could be checked in the paper questionnaire and perhaps be corrected.

Consistency check
We checked whether there were inconsistencies with calendar dates, (e.g. at the date when a positive event was recorded the individual was older than 35, or the date of the end of a negative event period was earlier than its beginning). The few incongruence occurrences we found (73 questionnaires) were typing errors corrected according to the archived paper questionnaires. Some other kinds of inconsistencies were also found (municipality codes non- correspond to area codes, mostly in Kosovo, area code or date of birth missing…) but these were very few exceptions and each of them was corrected.

Data cleaning
The following cleaning procedures were handled on the raw database:

- We imputed a month of birth for 13 respondents for whom only the year or the quarter and the year of birth was recorded (code_arc: 945.1; 1185.1; 3808.1; 3874.1; 4021.1; 4089.1; 4092.1; 4301.1; 4516.1; 4519.1; 4750.1; 5033.1; 5080.1)
- Areas of location in calendars A and B were missing only in very few cases, because interviewers were instructed that these items were indispensable. In those cases, the current area code was copied, if, and only if the respondent declared explicitly having been living all the time in the same area. Moreover, when the area of location in the calendar was not the same as the survey area or when a move was recorded, the answer to "living all the time in area or not" was re-coded into "No" (if it was not already the case). Further, when the answer to "living all the time in area or not" was not recorded and the area of location in calendar was the same as the survey area with no move recorded, "living in area all the time" was re-coded into "Yes".
- When a date was recorded for an event in the calendar and the event was recorded as "not having happened", the event was re-coded as "having happened".
- Some dates for positive events were recorded up to three quarters before the 15^{th} birth date or up to three quarters after the 35^{th} birth date. In the first case, we replaced the date with a missing value. In the second case, the event was re-coded as if it had not happened (because it did not happen before 35 years old) and the date was replaced by a missing value.

Finally, we deleted a total of 100 interviews for the following reasons (which are not mutually exclusive):

- 44 interviews conducted by three interviewers in Kosovo because they contributed a lot to interviewers' effect (see chapter concerning interviewers' effects). As this problem was detected during our checking process, these interviews were replaced by supplementary interviews we asked for (second wave of interviews).
- Interviews with more than one third of missing values on either the first (14) or the second part (38) of the questionnaire. Only one interview was deleted for both reasons, which means a total of 51 interviews were deleted because of many missing values (details are provided in the next chapter).
- One interview in which the date of birth was missing.
- Three interviews in which the survey area and municipality were missing.
- Two interviews that did meet the criteria for inclusion nor for the random sample (i.e. respondent selected during the first stage of random sampling), nor for the cohort sample (i.e. respondent born between 1968 and 1974, and completion of both parts of the questionnaire).

4.3. Missing values

Due to criterion for inclusion in the sample and to data cleaning (see Chapter 4.2.) some items have no missing values at all. These are: Field team; Date of birth; Area of residence at 15 years old (in Calendar A); Area of residence in 1990 (in Calendar B); Residence in area all the time from 15 to 35 years old; Residence in area all the time from 1990 until today.

The first purpose of analyses on missing values was to identify individual respondents that had very high missing rates. We computed two individual missing rate indicators, one for the questionnaire's first part, the other for the second part (only for cohort sample). In order to calculate these indicators, we took into consideration only closed questions to which all respondents were supposed to answer. This meant 37 items (*Common items on life events*) for the first part of questionnaire, and 93 items for the second part (*Political attitudes*). The individual missing rate for the first part of the questionnaire is the percentage of missing answers across 37 items, and for the second part, the rate is calculated across 93 items. Two kinds of missing answers were added: those recorded as "Refusal" and those coded as "Not recorded" in the database (meaning that no answer was recorded by the interviewer). For "Nationality in 1991", another missing answer was taken into account: "Cannot remember".

As shown in Tables 4.1 and 4.2, there are a few individuals whose missing rate is running beyond 33% (14 for the first part, 38 for the second one). We considered a questionnaire with more than a third of missing values for closed questions in the first or the second part was unreliable and decided to suppress these individuals from the database. The questionnaires we suppressed were mostly from Kosovo (15), Bosnia and Herzegovina (14), and Serbia, Montenegro (13) field teams.

After this first missing data screening and the removal of the problematic questionnaires, the whole raw data base was split into two data bases; one for the random sample and the other for the cohort sample. According to the survey design, some individuals are represented in both random and cohort samples. The following analyses on missing data are then presented for the cohort and the random samples separately.

Table 4.1. Number of individuals with missing value rate for closed questions running beyond 33%, first part of questionnaire

Field team	***N***	***33% < x < 50 %***	***≥ 50%***	***Total > 33%***
Slovenia	578	-	1	1
Croatia	1182	-	2	2
Bosnia and Herzegovina	1171	6	2	8
Serbia, Montenegro	1303	1	-	1
Kosovo	728	-	1	1
FYR Macedonia	740	-	1	1
TOTAL	**5702**	**7**	**7**	**14**

Table 4.2. Number of individuals with missing value rate for closed questions running beyond 33%, second part of questionnaire

Field team	*N*	*33% < x < 50 %*	*≥ 50%*	*Total > 33%*
Slovenia	234	-	-	-
Croatia	471	2	1	3
Bosnia and Herzegovina	460	4	2	6
Serbia, Montenegro	519	7	5	12
Kosovo	293	7	7	14
FYR Macedonia	329	1	2	3
TOTAL	**2306**	**21**	**17**	**38**

Figures 4.1 and 4.2 show missing rate's distribution for closed questions in the questionnaire's first and second part, across the field teams (same indicators as presented previously, without individuals that have been suppressed). Most respondents have no value at all for the first part in every field team (The lowest score is 71.6% for the random sample and 73.3% for the cohort sample). FYR Macedonia and Slovenia have the better profiles. Without surprise, the distribution of missing rates for the attitudinal items of the questionnaire's second part (concerning only the cohort sample) reveals slightly more frequent cases of moderately high values. However, more than 62.0% of individuals in each field team still have no missing values, and more than 79.9% have less than 5% of missing values. Table 4.3 displays the mean missing rate value for closed questions across field teams. In order to allow comparisons between field teams, the mean value across field teams[5] -hereafter simply called "mean"- is presented in the table's last row (this type of mean is represented with a blue area in the following figures in this chapter). For the first part, the mean value is very low. The highest rate for both random and cohort samples can be found in Serbia, Montenegro and Bosnia and Herzegovina.

Figure 4.1. Cumulative percent of individual missing value rate for closed questions, first part of questionnaire (Random sample on the left, cohort sample on the right)

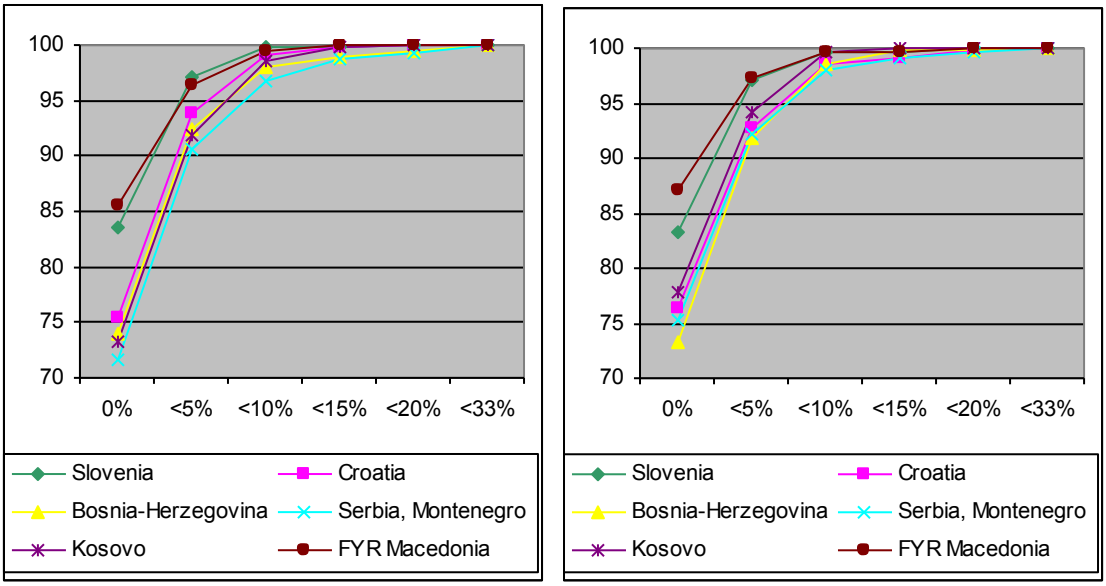


Figure 4.2. Cumulative percent of individual missing value rate for closed questions, second part of questionnaire (cohort sample only)

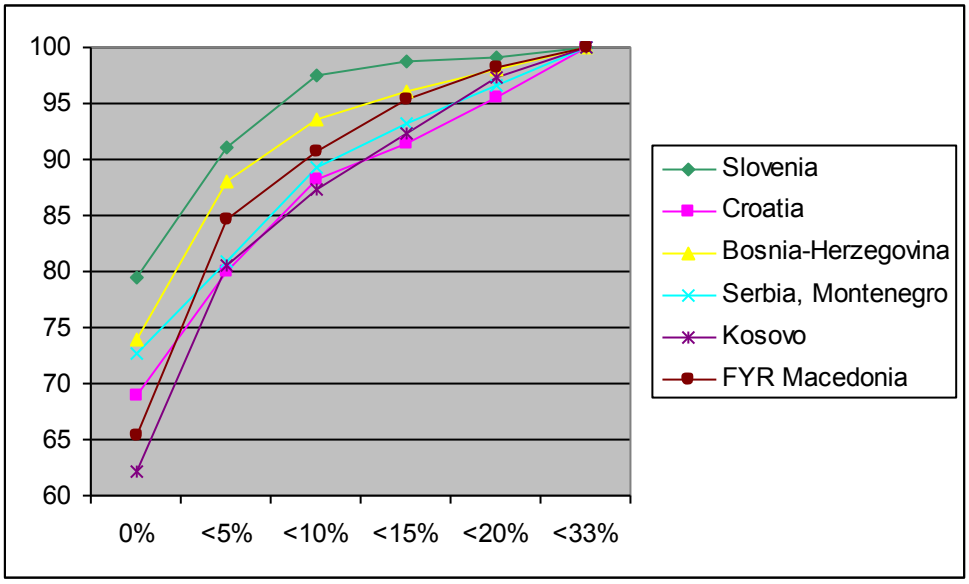


Table 4.3. Mean rates of individual missing rate for closed questions across field teams

	Random sample		***Cohort sample***		
Field team	**N**	**Part 1**	**N**	**Part 1**	**Part 2**
Slovenia	406	0.56%	234	0.60%	1.09%
Croatia	850	0.93%	468	1.05%	3.07%
Bosnia and Herzegovina	746	1.21%	454	1.12%	1.87%
Serbia, Montenegro	876	1.39%	511	1.11%	2.65%
Kosovo	551	1.09%	261	0.80%	3.00%
FYR Macedonia	546	0.54%	326	0.48%	2.30%
MEAN		**0.95%**		**0.86%**	**2.33%**

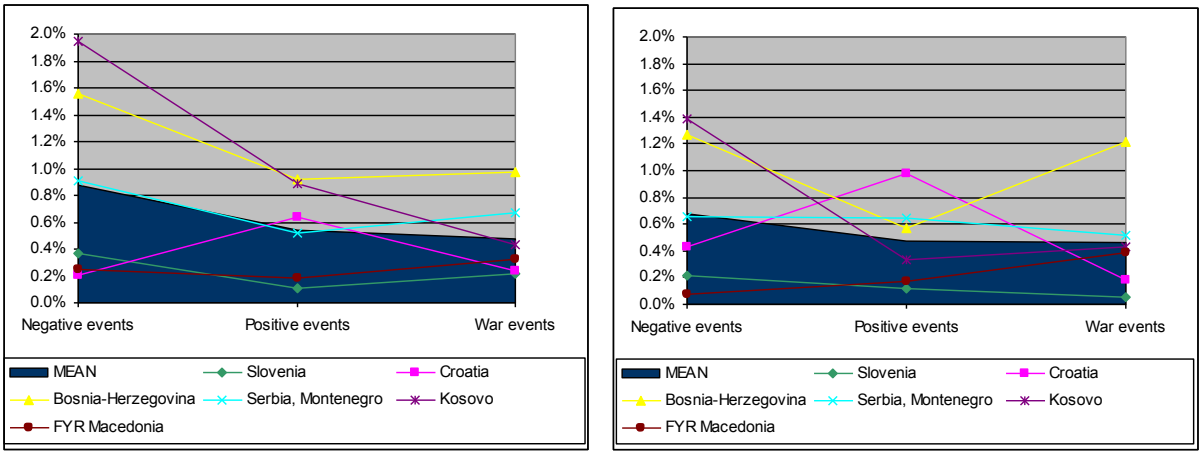
In the following pages, we provide some details about several topics appearing in the closed questions of the questionnaire's part one. After that, missing rates for methodological data, calendar dates, follow up items and political attitudes are presented for each field team. As a general rule, only high missing values, and thus possibly problematic, will be presented with more detail.

Common items on life events and demographical data

As can be seen on Figure 4.3, the answer concerning negative events' possible occurrences (mean out of 8 items) is more often missing in Kosovo and Bosnia and Herzegovina. Missing rate of positive events' possible occurrences (mean out of 7 items) and war events (mean out of 8 items) never runs over 1.0%, except in Bosnia and Herzegovina where the rate is the highest.

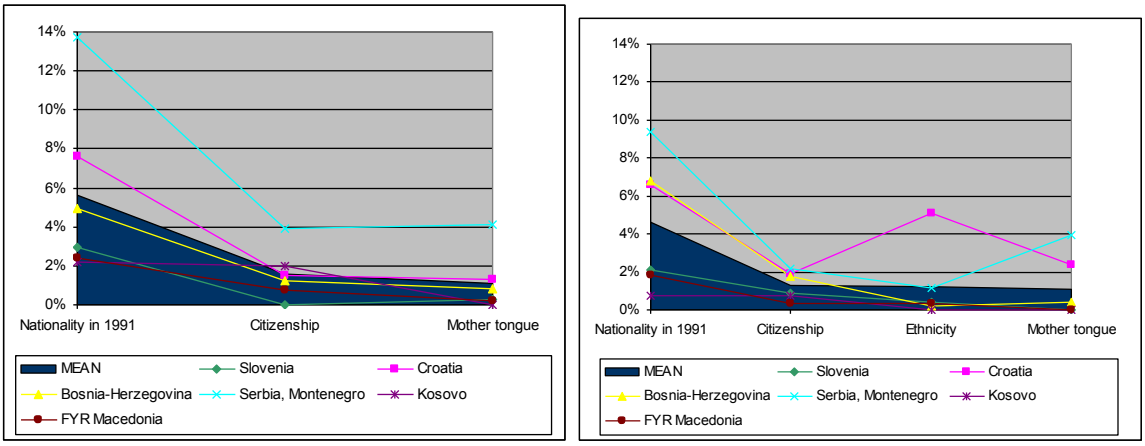
For general demographical data (6 items) the general missing rate mean across field teams is 0.9% for both random and cohort samples. The highest rate is 1.3% in Serbia, Montenegro for both samples and also in Slovenia for the cohort sample. The mean missing rate for parents' data (4 items) is somewhat higher but still not problematic (1.4% for random; 1.5% for cohort).

Figure 4.3. Mean of missing values for three kinds of life events across field teams (Random sample on the left, cohort sample on the right)



In the random sample, three items about specific demographical data have higher missing rates (see Figure 4.4): nationality in 1991 in every field team (always beyond 2%), moreover in Serbia, Montenegro (13.7%), Croatia (7.6%) and Bosnia and Herzegovina (5.0%); citizenship (3.9%) and mother tongue (4.1%) in Serbia, Montenegro. In the cohort sample, the same items have high missing rates in some field teams: nationality in 1991 in Serbia, Montenegro (9.4%), Croatia (6.6%) and Bosnia and Herzegovina (6.8%); citizenship in Serbia, Montenegro (2.2%), Croatia (1.9%) and Bosnia and Herzegovina (1.8%); mother tongue in Serbia, Montenegro (3.9%) and in Croatia (2.4%); plus ethnicity (applied only to cohort sample) in Croatia (5.1%).

Figure 4.4. Mean of missing values for specific demographical data across field teams (Random sample on the left, cohort sample on the right)



Sampling and methodological data

Sampling and methodological data had to be provided by interviewers at the beginning and at the end of the questionnaire. An answer is missing when the variable is coded as "Not recorded" in the database signifying there is a blank in the questionnaire. The question concerning the "number of eligible respondents in the household" is the only one which has a high rate of missing values for the six field teams (mean across field teams = 33.3% for random sample; 45.8% for cohort sample). The highest rates are recorded in Serbia, Montenegro (72.3%; 85.7%), Kosovo (49.9%; 64.4%) and FYR Macedonia (high rate, 67.8%, for the cohort sample only). This implies a lack of

precision concerning the calculation of the design weight coefficient that directly depends on this data. Two data requested for Kosovo only have also very often been omitted; these are "distance to nearest building" (36.8%; 37.2%) and "number of households within the same building" (42.3%; 41.4%).

As regards to other methodological data, missing rates are very low for Slovenia, Bosnia and Herzegovina and FYR Macedonia (most often lower than 0.5%). For some items in other field teams, missing rates are much higher. The rates that go far beyond the mean across field teams are listed hereafter (percentages of missing rates are between parentheses; the first percentage is for the random sample, the second one for the cohort sample):

- Date of interview in Croatia (6.2%; 5.3%) and in Serbia, Montenegro (7.8%; 17.8%)
- Interviewer's code in Croatia (8.8%; 4.3%) and in Kosovo (20.0%; 27.6%)
- Coordinator's code in Kosovo (21.4%; 3 1.0%)
- Code of municipality in Serbia, Montenegro (5.3%) and in Kosovo (4.2%), only for cohort sample
- Time at start of interview in Croatia (69.9%; 11.5%) and in Serbia, Montenegro (11.9%; 17.6%)
- Time at end of interview in Croatia (21.2%; 22.0%), in Serbia, Montenegro (12.4%; 18.4%) and in Kosovo for random sample only (12.2%)
- Items concerning the interview's context in Kosovo for random sample (place of interview, 12.5%; presence of other persons, 17.6%; cooperation, 12.2%; interest, 12.7%); Place of interview in Serbia, Montenegro (4.1%), Presence of other persons in Serbia, Montenegro (3.9%), Kosovo (10.7%) and in FYR Macedonia (4.0%) for cohort sample
- Gender of interviewer in Kosovo (11.3%), only for random sample
- Gender of respondent in Croatia (3.4%; 2.4%)

To summarize, interviewers completed questionnaires with the information they had to provide. This job was very well done in Slovenia, Bosnia and Herzegovina and FYR Macedonia. For Croatia, Serbia, Montenegro some data are less complete, but the most systematic lack of information concerns interviewer and coordinator's codes as well as the description of the interview's context in Kosovo.

Life calendar dates

Every time a respondent answered that he/she had experienced an event (a move, a positive, negative or war event), he/she was asked to mention the date when it occurred. For each event, the missing rate is the number of interviews without the date recorded among those in which respondents were reported as having experienced the corresponding event.

When the respondent was recorded as having been living somewhere else since 1990 (calendar B), the date of the first move is missing in many cases (mean across field teams =17.0% for random sample; 12.4% for cohort). The missing rate is at highest in Serbia, Montenegro where the date is missing for more than one quarter of persons in the random sample (see details on Figure 4.5). Bosnia and Herzegovina and FYR Macedonia have lower rates. When the date was not recorded, nor was it for the destination. Furthermore, every time a date was recorded, so was the destination. This means there will be a lack of precision for the mobility trajectories because a lot of people who mentioned they moved during the period under study did not give the date when it happened nor the destination they went to. Reasons of first move were frequently omitted. The mean of missing rates across field teams is 35.4% for the random sample, and 28.0% for the cohort sample. Rates for Kosovo (41.1%) in random sample and for Serbia, Montenegro (57.3% in random sample; 51.3% in cohort sample) are beyond the mean.

Figure 4.5. Rates of missing dates for first move since 1990 across field teams (Random sample on the left, cohort sample on the right)

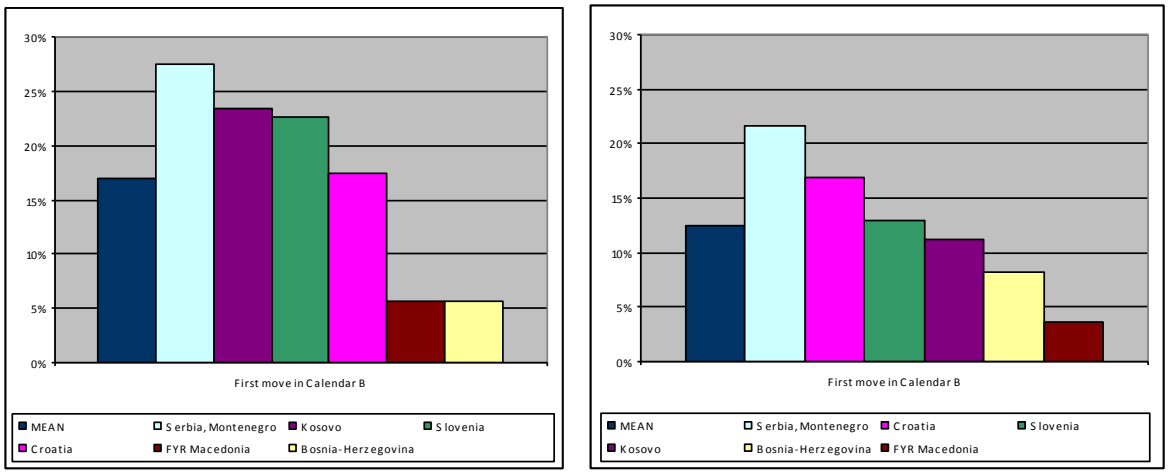


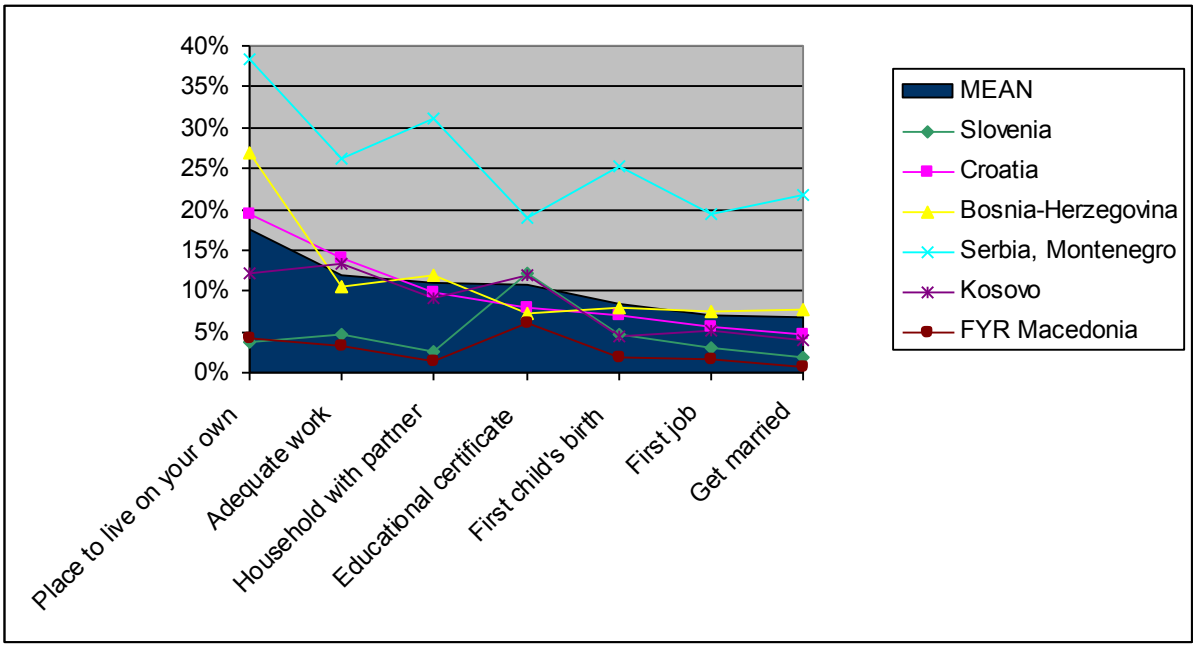
Table 4.4 provides a general view of respondents' number who quoted each event in the total random sample and the percentage of those who did not mention a date. The database user has to be aware there is a high occurrence of respondents quoting an event without specifying its date. On average, dates are less missing for positive events, than for negative events and war events are in-between (see date missing for "total count" in Table 4.4).

Table 4.4. Mean percentage of missing dates when a life event is mentioned

	Life events	Random sample		Cohort sample	
		n	Date missing	n	Date missing
Positive events	*Place to live on your own*	2'265	21.3%	1'290	18.8%
	Adequate work	2'079	13.7%	1'175	10.7%
	Household with partner	2'815	12.4%	1'659	9.4%
	Educational certificate	3'082	11.4%	1'919	9.0%
	First child's birth	2'899	9.3%	1'704	6.0%
	First job	2'716	8.2%	1'603	7.9%
	Get married	3'009	7.7%	1'758	5.6%
TOTAL		**18'865**	**11.6%**	**11'108**	**9.2%**
Negative events	*Exposed to threats*	405	33.6%	227	39.2%
	Separated from important people	1'246	30.4%	760	27.1%
	Not allowed to express opinion	491	29.9%	270	30.4%
	Unemployed	2'151	29.4%	1'420	26.5%
	Discrimination	335	27.8%	182	28.6%
	Arbitrary treatment	402	26.9%	233	27.9%
	Lack of resources	1'947	23.1%	1'113	23.0%
	Homeless	615	20.5%	335	21.2%
TOTAL		**7'592**	**27.3%**	**4'540**	**26.4%**
War events	*Imprisoned or kidnapped*	115	29.6%	72	20.8%
	Wounded by the fighting	138	23.9%	127	21.3%
	Using a weapon	405	23.5%	354	24.6%
	Carrying a weapon	501	22.6%	435	24.4%
	Damage to property	922	20.0%	539	19.7%
	Member of family killed	340	18.2%	146	22.6%
	Forced to leave home	1'004	16.1%	580	17.8%
	House looted	811	10.7%	428	13.6%
TOTAL		**4'236**	**18.2%**	**2'681**	**20.0%**

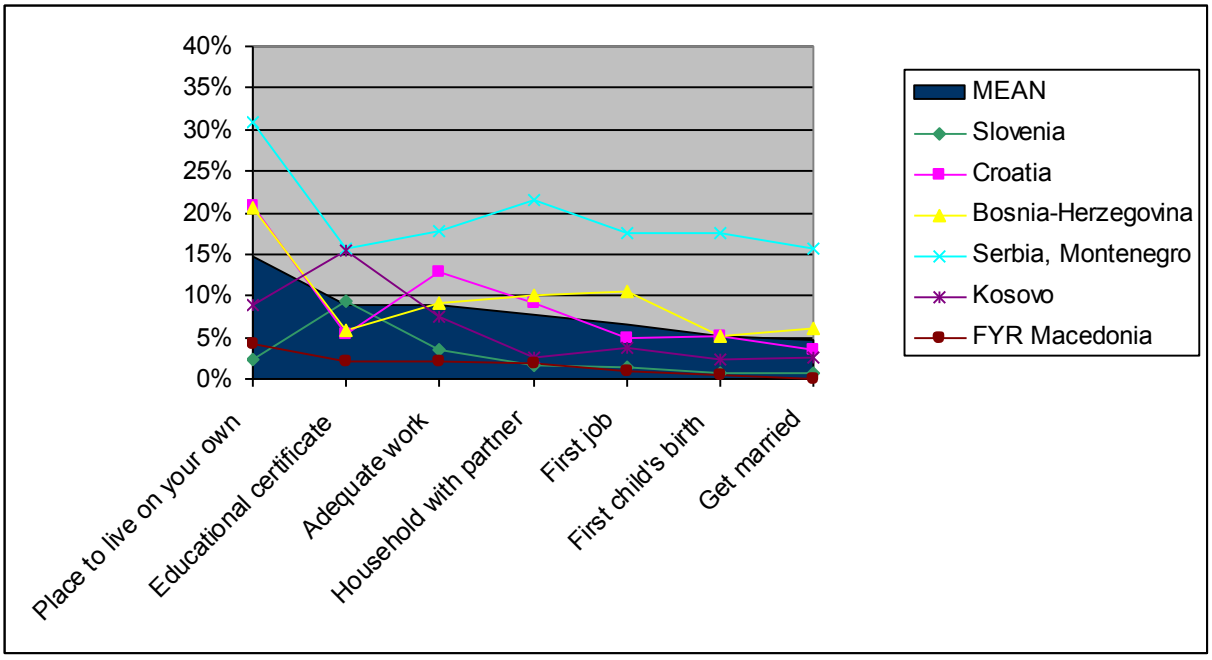
On the six following Figures (4.6, 7 and 8) missing dates across field teams for every life event are reported (Figures a are for the random sample, Figures b for the cohort sample). When an event was recorded for less than 15 respondents in a field team, the rate is not reported on the figures (this occurs only for negative and war events, e.g. many times in Slovenia). The events are ordered from the one with the highest general mean of missing rate to the lowest one.

Figure 4.6a. Mean of missing dates for positive events across field teams (Random sample)



Generally speaking, date's missing rates are lower for positive events (ranging from 6.8 to 17.5% for random sample; from 4.7 to 14.6% for cohort sample) than for negative events (ranging from 20.1 to 39.5%; 20.1 to 43.0%) and war events (ranging from 15.2 to 26.9%; 14.8 to 25.5%) are in between.

Figure 4.6b. Mean of missing dates for positive events across field teams (Cohort sample)



Serbia, Montenegro is always clearly beyond the mean curve. FYR Macedonia has high scores for negative and war events. By and large, Slovenia and Kosovo have the lowest missing rates through events. Croatia and Bosnia and Herzegovina are oscillating around the mean curve with some peaks.

Figure 4.7a. Mean of missing dates for negative events across field teams (Random sample)

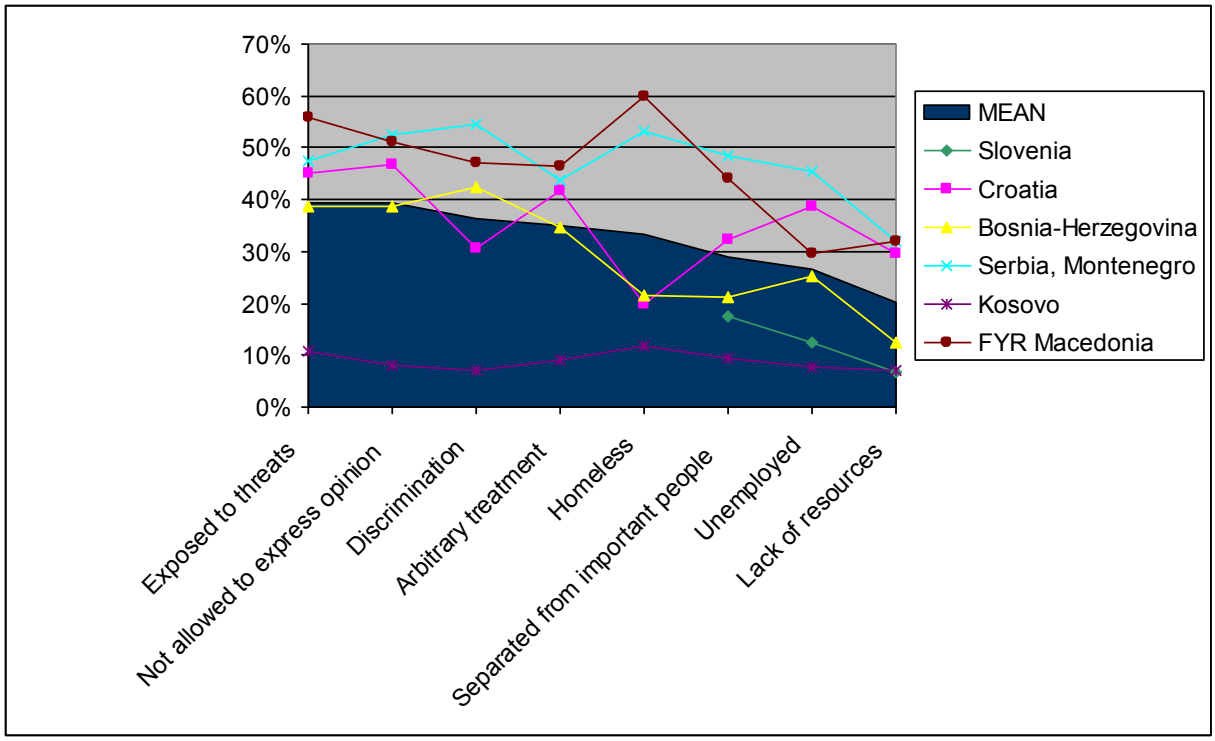


Figure 4.7b. Mean of missing dates for negative events across field teams (Cohort sample)

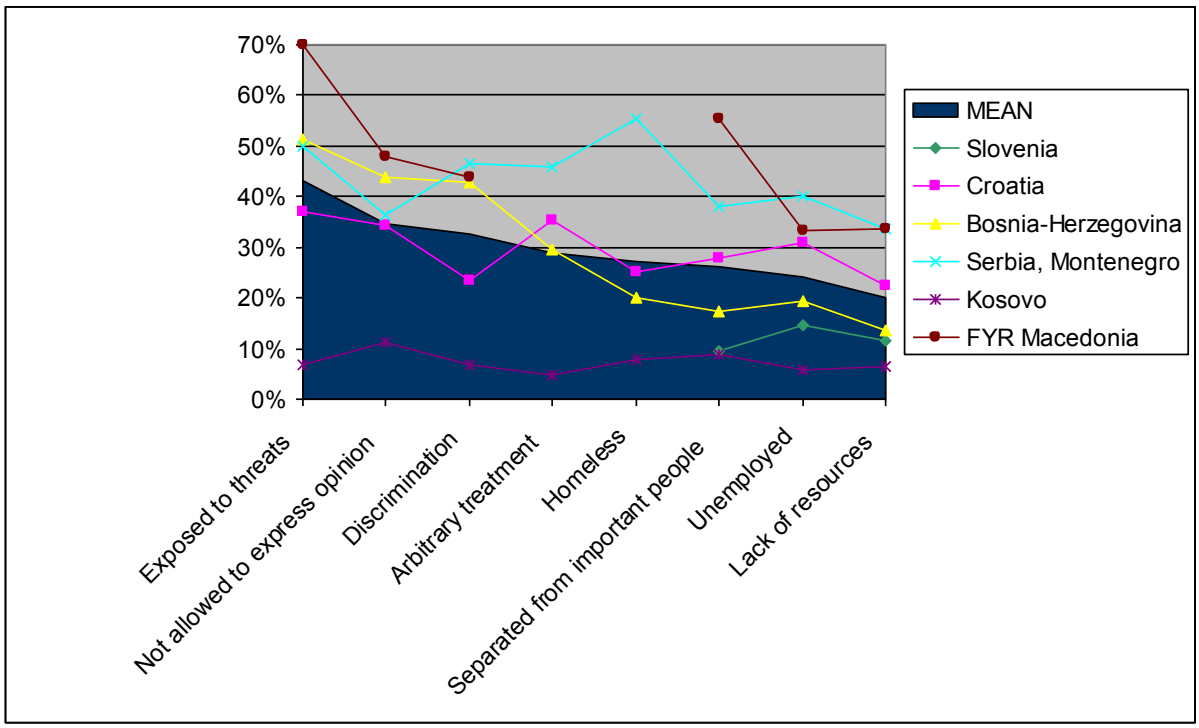


Figure 4.8a. Mean of missing dates for war events across field teams (Random sample)

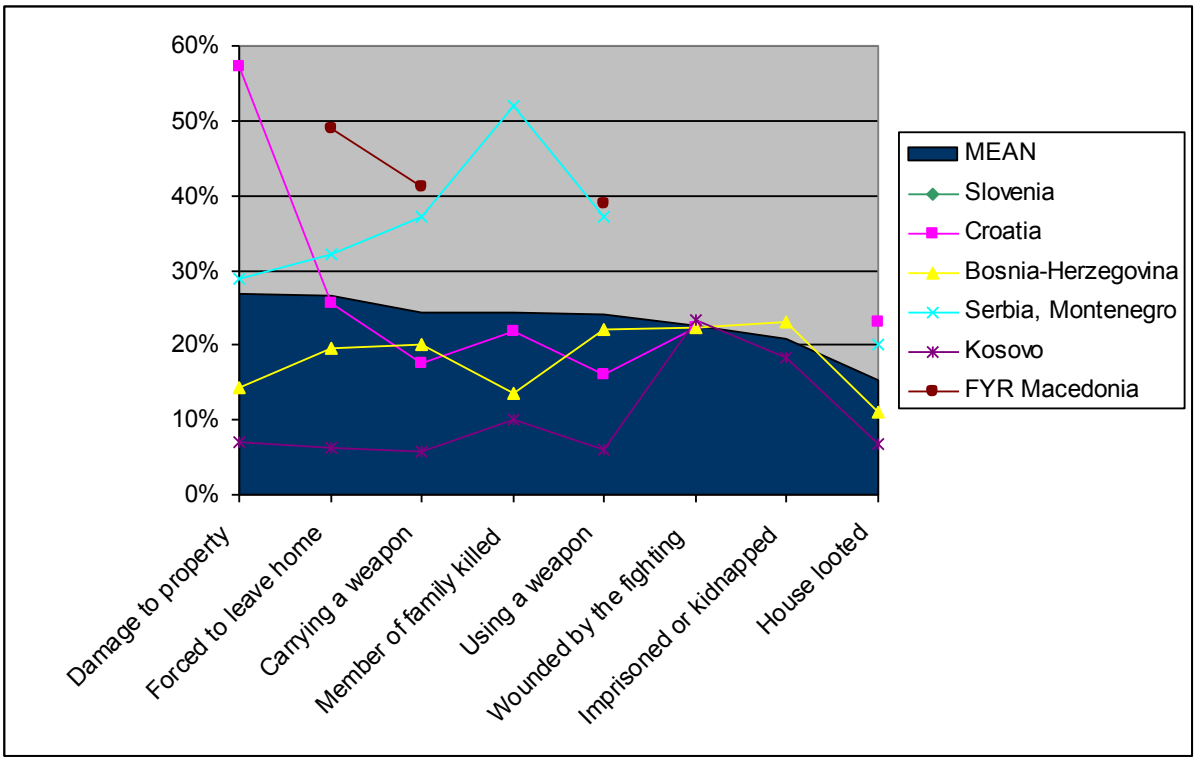
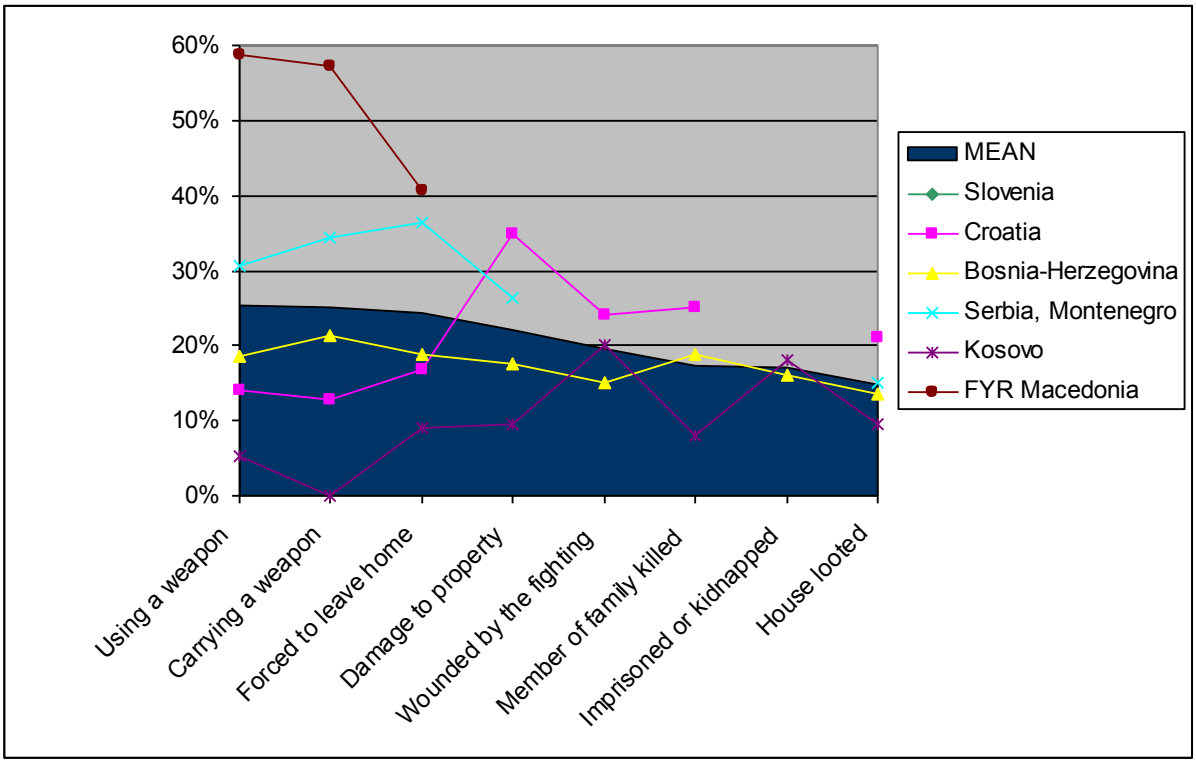


Figure 4.8b. Mean of missing dates for war events across field teams (Cohort sample)



Follow-up items

Follow-up items do not apply to every respondent. These are complementary pieces of information about a preceding question (e.g., how many children the respondent has if he/she answered having any). The missing rate is calculated on the basis of respondents who were concerned with the follow-up.

The missing rates are considerably higher for items intended to grasp further information about the respondent's or his/her parents' activity. Figures 4.9a & b show that the general missing rate hardly ever goes below 20%! The activity of almost 30% of paid workers in FYR Macedonia and more than 40% in Kosovo has not been recorded. The figure is even worse for self-employee's activities where the lower missing rate is found in Serbia, Montenegro and is already as high as 18.5% for the random sample, 23.4% for the cohort sample. The missing rate is dramatically high for Bosnia and Herzegovina in the random sample (62.1%). It is beyond 45% for Croatia, Bosnia and Herzegovina and Kosovo in the cohort sample and it reaches 100% in Slovenia, suggesting that interviewers have not been correctly instructed about the way to use this branching.

Figure 4.9a. Mean of missing values for questions concerning activities across field teams (Random sample)

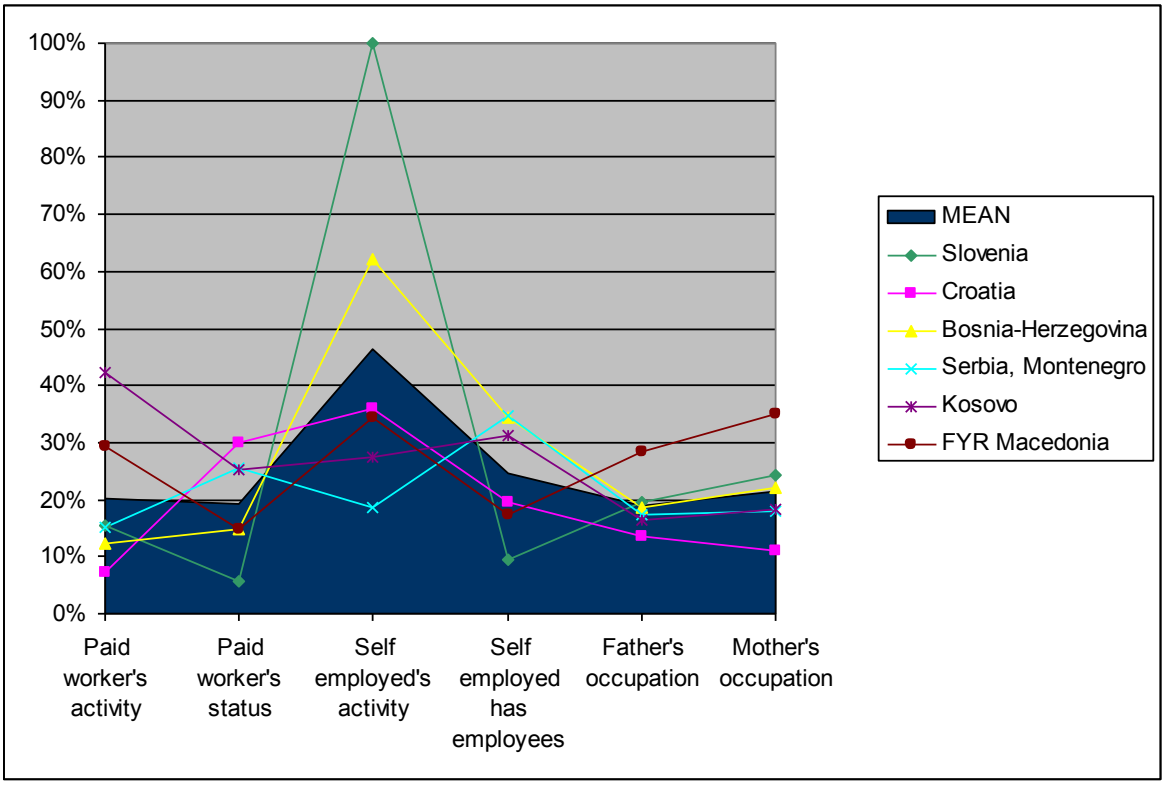
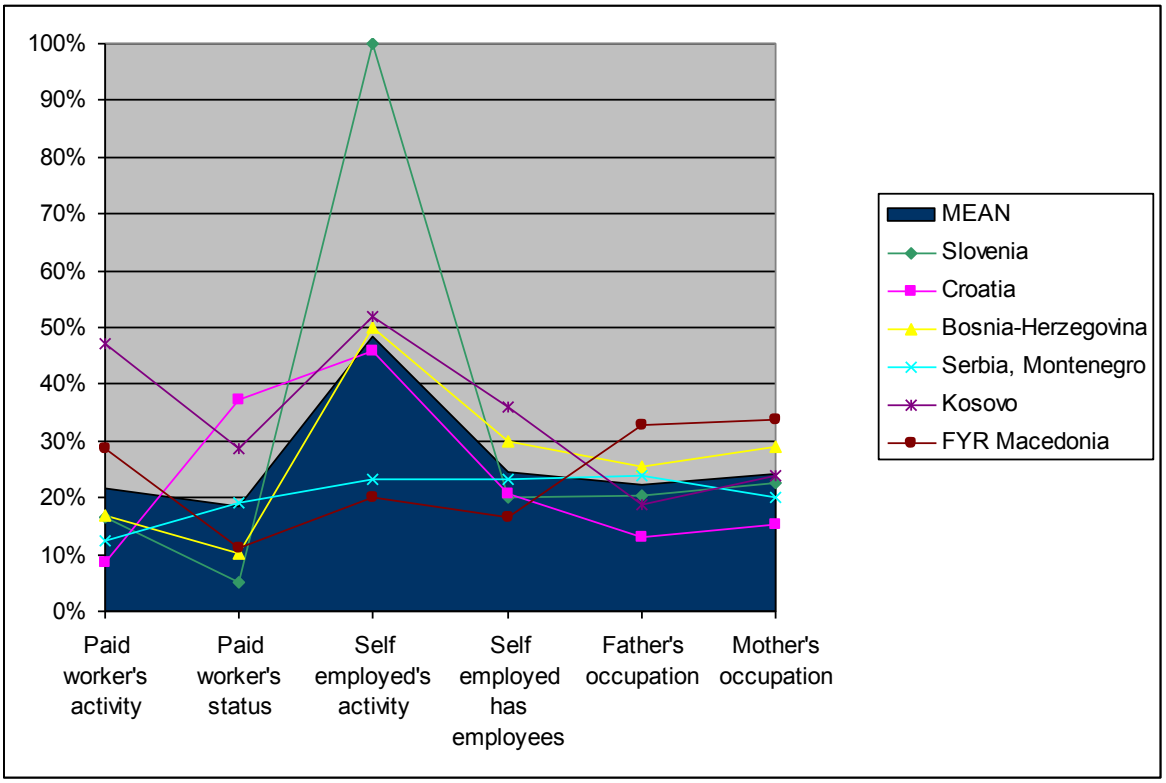


Figure 4.9b. Mean of missing values for questions concerning activities across field teams (Cohort sample)



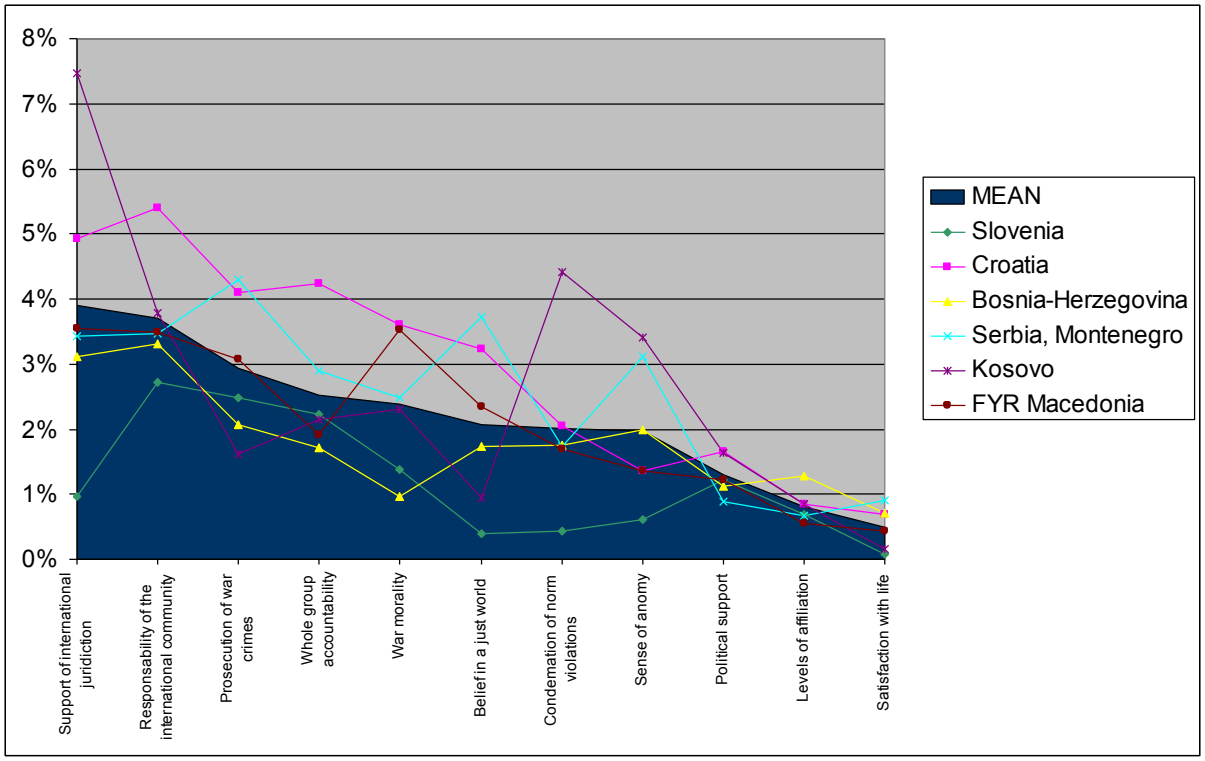
Political attitudes

Political attitudes first encompass 93 items (11 scales) to which every respondent was intended to answer. Figure 4.10 displays mean of missing rates across items of one scale, for every field team, sorted by decreasing order of the general mean. Scales related to international community and justice have the highest missing rates, followed by scales concerning sense of justice and responsibility, and finally items regarding inter-group loyalties and satisfaction with life.

Kosovo has missing rates far beyond the mean for "support of international jurisdiction", "condemnation of norm violations" –which are related to the scripts - and "sense of anomy". Croatia scores high for international and war topics, plus "belief in a just world". In Serbia, Montenegro, high missing rates concern "prosecution of war crimes", "belief in a just world" and "sense of anomy". FYR Macedonia has a high rate for "war morality".

"Ethnic identification" and "collective guilt" are treated separately, because these scales only concern respondents that mention an affiliation with an ethnic group. The first one has a quite low missing rate across field teams (1.1%). The second one has higher missing rates (mean = 2.6%), especially in Serbia, Montenegro (4.1%), FYR Macedonia (2.8%) and Kosovo (2.6%).

Figure 4.10. Mean of missing rates across field teams for political attitudes scales



The particular items about existence of laws and the bases of these laws (only for respondent answering that laws or rules exist) have very high missing rates in every field team (see Figure 4.11). As a mean value across field teams, 32.7% of respondents refuse to answer the questions concerning existence of laws (mean across the three items) and the information is not recorded for an additional 2.0%. The total missing rate is the highest in Slovenia (almost 49.6%), Kosovo (40.4%) and Croatia (38.5%). Among respondents who answer that laws or rules exist, the missing rate for every field team concerning the base of these laws is always higher than 5.5%, whatever kind of rights the laws are about (judicial, social or humanitarian). Slovenia is an outlier with missing rates even higher for political and humans rights.

Social distance indicators also have high missing rates. The global indicators showed on Figure 4.11 are calculated for every field team among 54 items (social distance toward other ethnic groups) and 30 items (social distance toward citizens of other countries). Social distance toward other ethnic groups is made of 6 items multiplied by 9 ethnic groups. Because respondents typically belong to one of these groups, the number of persons supposed to answer for one particular ethnic group varies. Nevertheless, the global indicator is weighted in accordance to the number of individuals supposed to answer each item. The mean of missing rates in every field team is always higher than 2%, except for Slovenia, Kosovo and FYR Macedonia (only "distance to citizens" items). Serbia, Montenegro has the highest rates (more than 6%). Looking at the details for social distance toward ethnic groups, we can see that higher missing rates are found when respondents belonging to a minority group have to indicate their relation to the majority group: In Slovenia, 23 individuals should have answered for the Slovenian ethnic group and 26.1% of them did not; in Croatia, among 57 non Croat respondents, the mean missing rate toward Croat ethnic group is 35.1%; in FYR Macedonia, the mean missing rate among 82 non Macedonians respondents toward Macedonian ethnic group is 11.0%. In those field teams, interviewers were typically belonging to the majority group. No such phenomena are found in Bosnia and Herzegovina (where interviewers have

ethnically diversified backgrounds), or in Serbia, Montenegro (where the missing rates are always high, whatever the ethnic group considered may be).

Figure 4.11. Mean of missing rates across field teams for items concerning laws

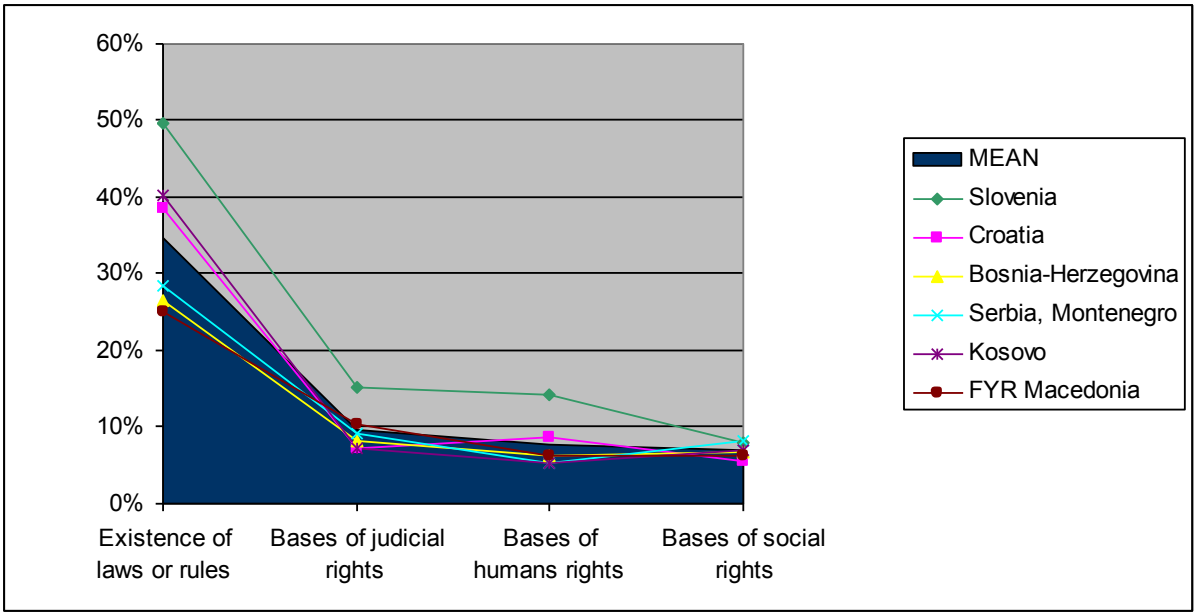
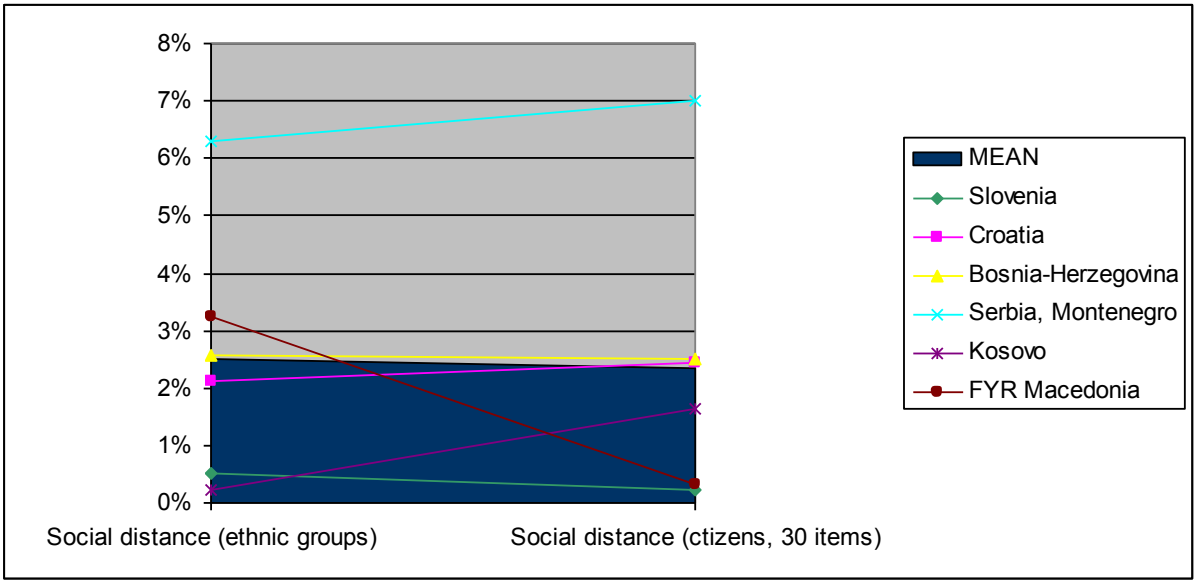


Figure 4.12. Mean of missing rates across field teams for items concerning social distance

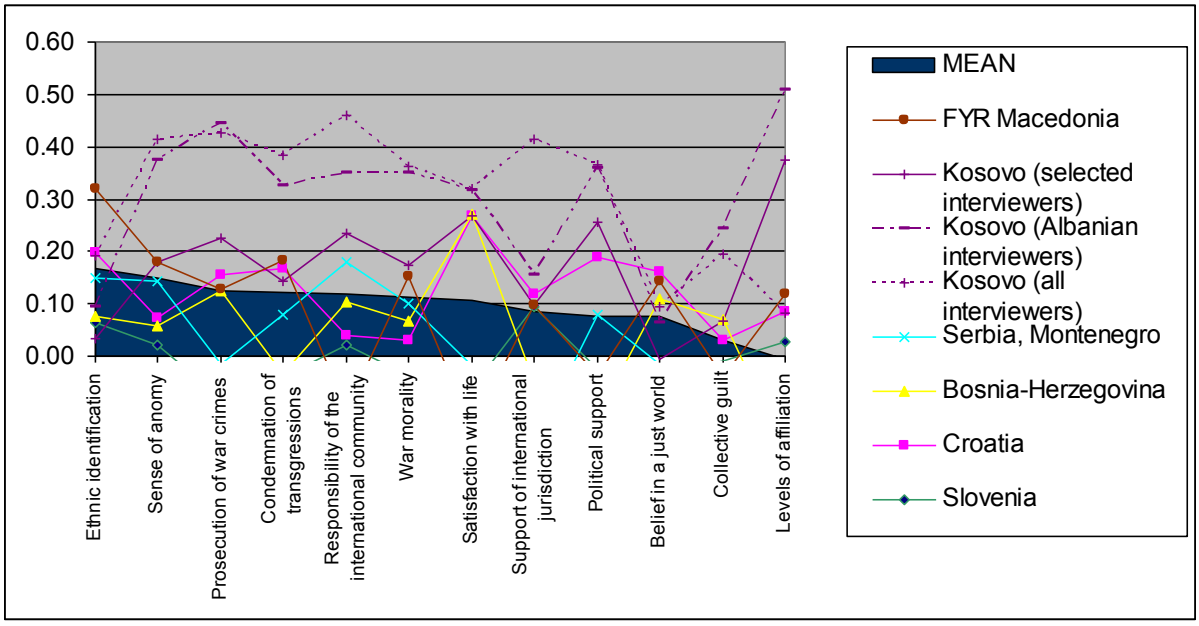


4.4. Interviewer effects

Interviewer effects correspond to the part of response variance due to interviewers. When survey responses highly depend on the person who carries out the interview, this can be taken as an indication of poor interviewer training, insufficient standardisation of interviewer instructions, or ambiguous item wordings, which systemically require interviewers to provide their own, complementary explanations. In this sense, estimates of interviewer effects provide interesting indicators of overall data quality. In face to face surveys, interviewer effects are most typically confounded with geographical clustering effects: when each individual interviewer is in charge of

one particular geographical area, it is impossible to know to what extend the part of variance that can empirically be explained by the interviewer variable is caused by different interviewer styles on the one hand, or by actual differences between respondents related to social segregation, mutual influences between people living close to each other, or similar substantive processes, on the other hand. In order to be able to disentangle interviewer and cluster effects, contrary to common practices, we applied a highly intermingled survey design: Most interviewers carried out interviews in more than one municipality, and most municipalities were covered by more than one interviewer. This allowed us in particular to draw a random subsample of interviews with each of them having been carried out in a different municipality, while several interviews were able to be carried out by the same interviewer. This subsample can be seen as hierarchically nested across three levels: survey areas, interviewers, and individual respondents (which in this particular case are equivalent to municipalities). It allows computing "pure" interviewer effects (i.e. which can not be explained by confounded geographical effects), by calculating the part of response variance within survey areas explained by interviewers.

Figure 4.13. Interviewer effects for attitudinal items, across field teams



Previous attempts to isolate interviewer effects (O'Muircheartaigh & Campanelli, 1998) lead to the conclusion that intra-class correlations for pure interviewer effects roughly ranging between 0 and 0.1 can normally be expected for surveys carried out in convenient conditions, and that strong interviewer effects are more likely for attitudinal than for factual items. For this latter reason, we concentrated our own analyses on the 107 attitudinal items included in the cohort data base. Figure 4.13 shows interviewer effects expressed as mean values of intra-class correlations (see section 5.3. for technical details on the computation of ρ-values) for 12 groups of items, computed separately for each field team. The results reveal that interviewer effects vary in an important way between field teams. Only in Slovenia and in Serbia, Montenegro, interviewer effects are randomly distributed around zero, the median for ρ-values across 107 items being Mdn=.00 in both cases. Interviewer effects are low in Bosnia and Herzegovina (Mdn=.03), moderate in FYR Macedonia (Mdn=.08), and relatively high in Croatia (Mdn=.13). Whereas in each of these five teams, the magnitude of interviewer effects still lies within a relatively "normal", though not necessarily optimal, range, these effects appeared to be dramatically high in Kosovo (Mdn=.34).

In order to account for this complete outlier position of the Kosovo team, we first envisaged the hypothesis that in this sample, interviewer effects could be confounded with true differences

between ethnic groups: Only in Kosovo, respondents with different ethnic affiliations were systematically interviewed by different interviewers. However, as shown in Figure 4.13, a replication of the analyses carried out on the sole subsample of the majority group of Albanian interviewers produced virtually the same results, which allowed ruling out of this hypothesis. Then, we used an iterative procedure, in order to detect individual interviewers with abnormally homogeneous responses across different respondents. Three (Albanian) interviewers seemed to show such an outlier profile. It turned out that by removing these three interviewers from the sample, it was actually possible to dramatically diminish the interviewer effects within the Kosovo sample, and to obtain values which, though still high, came close to those of the other field teams (Mdn=.14). We took this as a serious indication of insufficient data quality related specifically to the interviews carried out by these three interviewers, and decided to remove all of them from the final databases (see section 4.2).

Finally, some interesting differences in the size of interviewer effects across scales can be mentioned. Items which explicitly requested the respondents to declare the subjective importance of his group membership ("ethnic identification") or to evaluate the strength of norms within the community ("sense of anomy") appear to be the most sensitive to interviewer effects. These two categories are followed by four types of items by which respondents express judgments on human rights violations, in particular related to war crimes.

5. Sampling effects

5.1. Net sample sizes

As explained in Chapter 1, our sampling strategy targeted 50 individual respondents in each of the 80 survey areas for the random sample, and 30 respondents by area for the cohort sample. Table 5.1 provides final net sample sizes, after removal of partially completed or invalid interviews (see sections 4.2 and 4.3) for each field team. Most typically, actual sample sizes are slightly below the target sample sizes. Only in the case of the cohort sample for Serbia, Montenegro, the difference between the expected and the actual sample size reaches a 10% threshold.

Table 5.1. Target and net sample sizes by field team

	Number	***Random sample***		***Cohort sample***	
	of areas	**Target sample size**	**Net sample size**	**Target sample size**	**Net sample size**
Bosnia and Herzegovina	16	800	746	480	454
Croatia	17	850	850	510	468
FYR Macedonia	12	600	546	360	326
Serbia, Montenegro	19	950	876	570	511
Slovenia	8	400	406	240	234
Kosovo	8	400	551	240	261
TOTAL	**80**	**4'000**	**3'975**	**2'400**	**2'254**

The total size of the random sample is 3'795, which is virtually equal to the targeted 4'000 respondents. It should however be noted that this includes a significant number of interviews beyond the target sample size in Kosovo. The cohort sample size is 2'254, i.e. 93.9% of the target value. As both samples partially overlap, 625 individual respondents belong to both samples simultaneously, i.e. 15.7% of members of the random sample are born between 1968 and 1974 and

accepted to complete the long version of the survey questionnaire. This value comes close to the initial estimation of cohort members in the population (15%), on the basis of which an expected value of the overlap between the two samples had been defined a priori (n=600).

5.2. Survey outcome rates

Outcomes for each contacted household or individual were recorded by the interviewers using the codes of the American Association for Public Opinion Research (2004). These can be classified among the following categories:

- (I) Complete interview (respondent included in one of the final databases)
- (P) Partial interview (including questionnaires removed due to low data quality)
- (R) Refusal or break-off (at the respondent or household level)
- (NC) Presumably eligible non-contact (at the respondent or household level)
- (O) Other eligible non-interview (e.g. respondent unable to participate)
- (U) Case of unknown eligibility (e.g. interviewer unable to reach the household)

Furthermore, the proportion of cases of unknown eligibility that are actually eligible (e), was estimated on the basis of the ratio between eligible individuals among cases of known eligibility. Unfortunately, outcomes were not recorded separately for random versus cohort samples, i.e. outcome rates can only be computed for the aggregate of both samples. Three types of outcome rates are reported in Table 5.2. In order to enable comparisons with other surveys, each one has been computed, using the standard formula provided by AAPOR:

- The overall *response rate* (RR3) corresponds to the ratio of completed interviews by (estimated) eligible respondents:

$$RR3 = \frac{I}{I + P + R + NC + O + eU}$$

- The *contact rate* (CON 2) informs about the interviewers' ability to get in touch with members of eligible households. It corresponds to the ratio of contacts at the household level by estimated eligible respondents:

$$CON2 = \frac{I + P + R + O}{I + P + R + NC + O + eU}$$

- The *cooperation rate* (COOP3) informs about the interviewers' ability to complete an interview, once contact could be established. It corresponds to the ratio of complete interviews by eligible respondents able of cooperation and member of a contacted household:

$$COOP3 = \frac{I}{I + P + R}$$

Table 5.2. Survey outcome rates by field team

	Response rate (RR3)	***Contact rate (CON 2)***	***Cooperation rate (COOP3)***
Bosnia and Herzegovina	74.5%	84.7%	88.0%
Croatia	64.2%	83.3%	77.3%
FYR Macedonia	67.6%	83.0%	81.7%
Serbia, Montenegro	54.8%	79.8%	69.0%
Slovenia	35.2%	68.6%	51.5%
Kosovo	68.9%	76.9%	91.8%
TOTAL	**59.5%**	**79.4%**	**75.4%**

Survey outcome rates reported in Table 5.2 show that the initially defined target interval for response rates (65%-70%) was reached in FYR Macedonia and Kosovo, almost in Croatia, and even passed in Bosnia and Herzegovina. Whereas Serbia and Montenegro is beyond the target range, the response rate for Slovenia is clearly the most worrisome. The disappointing outcome of 35% of responses is due to both poor contact and poor cooperation. On our demand, the field team coordinator for Slovenia provided two short explanations, which only accounted for the low contact rate: (1) an important part of the population was in summer holidays at the time of the survey, (2) some interviewers did not follow the instruction to carry out the survey only in late afternoon and in the evening. It should however be noted that ironically, Slovenia was actually the context where interviews were conducted during the latest time of the day, on average. For example, "only" 49% of the random sample interviews started before 16 hour in Slovenia, but 64 % within the overall random sample. These figures show that, unfortunately, the instruction to start interviews in the late afternoon, in order to reduce sampling biases, seems to have been systematically ignored by all field teams. The relatively smaller value found in Slovenia either indicates that interviewers less often tried to establish contact earlier in the day, or that it was more difficult to reach respondents out of working hours in Slovenia than elsewhere.

5.3. Design effects and effective sample sizes

As it is typically the case for face-to-face surveys, respondents were selected within survey areas by the way of a multistage cluster sampling (see section 2.2), which is only an imperfect approximation of simple random sampling. Clustering of respondents within municipalities and sampling points is likely to increase the sample's homogeneity. Interviewer effects (see section 4.4) further contribute to the homogenization of responses within sampling points. The consequence is that standard errors based on net sample sizes provide biased (i.e. too small) estimates of confidence intervals for population values.

The goal of this section is hence twofold: First, we aim to assess the effective precision of inferential statistics computed on for the TRACES data, taking into account clustering effects in addition to sample sizes. Second, we will provide a practical solution for data users who want to compute more realistic statistical estimates and avoid spurious significance effects in their findings. At the end of this section, we will therefore provide average estimates for design effects (D_{eff}) for two types of indicators (life events data, and attitudinal items) and six different contexts. These estimates can be used to transform raw standard errors (se) as provided routinely by data analysis in standard statistical packages into effective standard errors (se_{eff}), by way of a simple multiplication:

$$se_{eff} = se \times D_{eff}$$

This bias can be corrected on the basis of the empirical values of the respondents' number by cluster, and of the intra-cluster correlation (ρ), i.e. the part of the total response variance, which is due to differences *between* clusters of respondents.

Our estimation of ρ concentrates on the part of response variance due to clustering of individual respondents *within* strata, i.e. within survey areas. This means that ρ indicates the part of response variance due to sampling points, once differences between survey areas are partialled out. Theoretically, its value is a cumulative function of cluster effects at the municipality level, cluster effects at sampling points' level, and interviewer effects. On the basis of empirical analyses aiming at isolating cluster effects at the municipality level, it can be specified that they typically revealed values of intra-class correlations distributed around zero, i.e. individuals interviewed within the same municipality at different sampling points by different interviewers did not provide responses systemically more similar than those of respondents interviewed across different municipalities within the same survey area. Interviewer effects, on the contrary, seem to contribute significantly to the total cluster effects in most contexts (see section 4.4).

Mainly for practical and computational reasons, two different but conceptually equivalent techniques for estimating ρ-values were used for 107 continuously distributed attitudinal variables (cohort sample), and for 22 dichotomous variables on life events (common part of the survey). For continuous variables, first, the total response variance (σ_{total}) for each item was computed on residual scores, after partialling out the effect of survey areas. Second, the response variance within sampling points (σ_{within}) was computed, by using residual scores after partialling out effects of sampling points and by adjusting actual degrees of freedom by subtracting the number of sampling points. Intra-cluster values for each item could then be calculated rather straightforwardly using the following formula:

$$\rho = \frac{\sigma_{total} - \sigma_{within}}{\sigma_{total}}$$

Intra-cluster correlations for dichotomous variables were computed by the way of three-level logistic regression analyses, carried out with HLM 6 (Raudenbush, Bryk, Cheong & Congdon, 2004). These analyses directly decompose response variance for each item across the three levels of the hierarchically nested data structure: survey areas, samplings points, and individual respondents. Using a formula provided by Snijders & Bosker (1999, p. 224), HLM estimates of response variance at the intermediate level of sampling points (τ_0^2) could be transformed into ρ values, where π and, hence, $\pi^2/3$ represent constant values of approximately 3.14 and 3.29 respectively:

$$\rho = \frac{\tau_0^2}{\tau_0^2 - \pi^2/3}$$

The distribution of the computed intra-cluster correlations can be summarized by mean values across the 22 items on life events, computed separately for the random and cohort samples, as well as 107 attitudinal items, which apply only to the cohort sample. These three types of mean values for ρ were computed for the overall « pan-contextual » sample, as well as for each of the six

subsamples corresponding to the six field teams. In Table 5.3, these 21 different estimates for ρ are translated under the form of design effects (D_{eff}), using the standard formula:

$$D_{eff} = 1 + (n_{clus} - 1)\rho$$

In this formula, n_{clus} stands for the mean number of individuals by cluster, i.e. by sampling point. Consistently with the explicit sampling instructions, these values are typically close to 2 for the cohort sample, and slightly above 3 for the random sample.

5.4. Design and population weights

Two different weighting variables were added into the databases. The purpose of these variables is to compensate for unequal probability of respondents' selection, within or between survey areas. Whenever the aim of an analysis is to compute estimates which are relevant at the population level, the data need to be weighted by one or both of these variables.

First, *design weights* were computed ("des_weight"), in order to correct for different selection probabilities within survey areas. With the exception of the eight survey areas in Kosovo, probability-proportional-to-size procedures for the selection of municipalities and settlements assure equal probability at the household level, but not at the level of individual respondents. More precisely, the probability to be included into the sample is inversely proportional to the number of eligible household members. Thus, apart from Kosovo, design weights simply express the relative value of household size, i.e. the number of eligible persons composing a respondent's household, divided by the mean number of eligible household members within the same survey area. In the case of Kosovo, an ingenious procedure needed to be used in order to reduce sampling biases due to differential population density: As sampling points were randomly selected on the basis of their geographical coordinates, selection probability is inversely proportional to population density. Interviewers were asked to record two types of information enabling to develop a rough estimate of the population density in the neighbourhood where a respondent lives: number of households in the same building, and physical distance to the nearest neighbouring building. These two values were mathematically transformed in order to represent two ordinal axes (ranging both from 1 to 10) of a hypothetical two-dimensional grid, used as a proxy for proximal population density. Correction coefficients for population density were obtained by multiplying values for the two dimensions of this grid, and by dividing the resulting individual values by the corresponding mean values for each survey area. Final design weights for the eight Kosovo areas were computed by multiplying the household composition coefficient by the population density coefficient. As both components of the design weights are, by definition, distributed around 1 within each survey area, the same is true for the final, multiplicative coefficient. Unfortunately, interviewers frequently omitted to collect the empirical information, which is needed in order to compute design weights (see section 4.3), which significantly reduces the actual opportunity to correct appropriately for sampling biases. Whenever empirically based design weights were missing, the default value of 1 was attributed to an individual respondent.

Secondly, *population weights* were computed, in order to enable computation of statistical estimates at a level which is an aggregation of several survey areas (e.g. all survey areas composing one country), or even all survey areas, i.e. former Yugoslavia as a whole. Population weights are identical within the same survey area, but differ across survey areas. They simply express the ratio of the population size (see Appendix) of a survey area, divided by the sample size of the same area, i.e. the number of individuals in the population represented by each respondent. Raw population

weights ("pop_weight_r") were further divided by their grand mean value, enabling to have population weights ("pop_weight_c"), which, just as the design weights, are distributed around 1.

To summarize, whenever the purpose of an analysis is to compute statistics, which are relevant for the population's description of one particular survey area, or to compare statistics across several survey areas, design weights should be activated before carrying out the analysis. When the purpose of an analysis is to compute statistics which describe in a relevant way a population composed by inhabitants of more than one survey area, both design weights and population weights need to be activated simultaneously. This can be achieved e.g. by multiplying design weights and grand centred population weights, and by weighting the data by the outcome values of this multiplication.

Notes

1. "60-minute" for Croatia and Serbia, Montenegro (but not for Kosovo), and "50-minute" in all other contexts
2. This chapter is partially based on a report written by Marina Franic-Kadic.
3. We have closely collaborated with Dino Djipa and Marina Franic-Kadic since September 2004, in order to prepare the survey. In particular, both had already led the pilot study's fieldwork in December 2004. Their extensive knowledge about this survey's objectives and methodological requirements were of particular importance during this demanding fieldwork's realisation.
4. Details about the classification is available on the International Labour Organization website: http://www.ilo.org
5. This is not a mean across all sample individuals but a mean where each field team has the same weight.

References

The American Association for Public Opinion Research (2004). *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys.* Lenexa, Kansas: AAPOR.

Axinn, W. G., Pearce, L. D., & Ghimire, D. J. (1999). Innovations in life history calendar applications. *Social Science Research, 28*, 243-264.

Branscombe, N. R., Slugoski, B., & Kappen, D. M. (2004). The measurement of collective guilt: What it is and what it is not. In N. R. Branscombe & B. Doosje, B. (Eds.), *Collective guilt.* Cambridge: Cambridge University Press.

Bogardus, E. S. (1925). Measuring Social Distance*. Journal of Applied Sociology,* 9, 299-308.

Babbie, E. (2003). *The Practice of Social Research,* 10th ed. New York: Wadsworth.

Dalbert, C. (1999). The world is more just for me than generally: About the Personal belief in a Just World Scale's validity. *Social Justice Research*, *12***,** 79-98.

Dalbert, C., Montada, L. & Schmitt, M. (1987). Glaube an eine gerechte Welt als Motiv: Validierungskorrelate zweier Skalen (Belief in a Just World as motive: Validity correlates of two scales). *Psychologische Beiträge, 29*, 596-615.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71-75.

Doise, W. (2002). *Human rights as social representations*. London: Routledge.

Doise, W., Dell'Ambrogio, P., & Spini, D. (1991). Psychologie sociale et droits de l'homme. *Revue Internationale de Psychologie Sociale, 4*(3/4), 257-277.

Doosje B., Ellemers, N., & Spears, R. (1995). Perceived intragroup variability as a function of group status and identification. *Journal of Experimental and Social Psychology*, *31*, 410–436.

Elcheroth, G. (2006). Individual-level and community-level effects of war trauma on social representations related to humanitarian law. *European Journal of Social Psychology, 36*, 907–930.

Elcheroth, G. (2007). *Les expériences de vulnérabilité collective: de la fragilisation de principes normatifs à leur réaffirmation, de la problématisation de frontières intergroupes à la reconnaissance de droits universels.* PhD Thesis, University of Lausanne.

Elcheroth, G. & Spini, D. (2007). Classes sociales et jugements normatifs de jeunes français : la justification du système par les défavorisés revisitée. *Cahiers Internationaux de Psychologie Sociale* 75-76, pp. 117-131.

Elcheroth, G. & Spini, D. (2009). Public support for the prosecution of human rights violations in the former Yugoslavia. *Peace and Conflict : The Journal of Peace Psychology 15*(2), 189-214.

Fasel, R. & Spini, D. (2010). Effects of victimization on the belief in a just world in four ex-Yugoslavian countries. *Social Justice Research* 23(1), 17-36.

Franic-Kadic, M. (2006) *Transition to Adulthood and Collective Experiences Survey: Methodological report.* Sarajevo: PRISM Research.

Greenberg Research, I. (1999). *The People on War Report: ICRC worldwide consultation of the rules of war*. Geneva: International Committee of the Red Cross.

Klingemann, H.-D. & Bacevic, L. (1992). *Public Opinion in Serbia 1992*. Institute of Social Sciences, University of Belgrad, Yugoslavia-Serbia

McClosky, H., & Schaar, J. H. (1965). Psychological dimensions of anomy. *American Sociological Review, 30*(1), 14-40.

Muller, E. N., Jukam, T. O., & Seligson, M. A. (1982). Diffuse political support and antisystem political behaviour: A comparative analysis. *American Journal of Political Science, 26*(240-264).

O'Muircheartaigh, C., and Campanelli, P. (1998). The relative impact of interviewer effects and sample design effects on survey precision. *Journal of the Royal Statistical Society, Series A, 161*, 63–77.

Raudenbush, S., Bryk, A., Cheong, Y. F., & Congdon, R. (2004). *HLM6. Hierarchical Linear and Nonlinear Modeling*. Lincolnwood: Scientific Software International.

Robinson, J. P., Shaver, P. R., & Wrigtsman, L. S. (1993). *Measures of Personality and Social Psychological Attitudes - Measures of Political Attitudes*: Academic Press.

Snijders, T. A. B., & Bosker, R. J. (1999). *Multilevel Analysis - An introduction to basic and advanced multilevel modeling*. Thousand Oaks, C.A.: Sage Publications.

Spini, D., & Doise, W. (2005). Universal human rights and duties as normative social representations. In N. J. Finkel & F. Moghaddam (eds.), *The psychology of human rights and duties : Empirical contributions and normative commentaries* (pp. 21-48). Washington, DC: American Psychological Association.

Spini, D., Elcheroth, G., & Fasel, R. (2008). The impact of group norms and generalization of risks across groups on judgments of war behavior. *Political Psychology 29*(6), 919-941.

Spini, D., Fasel, R., & Elcheroth, G. (2007). Collective vulnerability, morality, and intergroup conflict: The beast, the angel, and the madman. In V. Cubela Adoric (ed.), *15th Psychology Days in Zadar - Book of Selected Proceeding* (pp. 53-67). Zadar: University of Zadar.

Staerklé, C., & Clémence, A. (2004). Why people are committed to human rights and still tolerate their violation: A contextual analysis of the principle-application gap. *Social Justice Research, 17*(4), 389-406.

Appendices*

**Appendices are not available in this online version. They can be provided on demand by the authors:*

A. Survey areas, municipalities, and population estimates

B. Survey questionnaire and calendars with

Appendix 1: Interviewer instructions for introducing the survey and selecting the respondent

Appendix 2: Interviewer instructions for coding geographical areas (including a geographical map of the areas)

C. Coding instructions