2. Methodology

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The emergence of the international research project is described in part 1. The present chapter specifies the methodological aspects concerning the collection, analysis and interpretation of the data.

2.1 Background of the Study

Our study is the first international empirical study on confirmation work that goes beyond the limited scope of small-scale – often qualitative – research. It was carried out in seven European countries and is based on a quantitative approach and on national sub-samples that come as close to the ideal of representative sampling as possible. The most important aim of the study was to gain a general picture of confirmation work in the participating countries and to make possible a comparative analysis of the data. Consequently, we had to keep the data as standardised as possible. At the same time, our study had to be sensitive to the different presuppositions in the different countries and regions, which means that we had to adapt our questionnaires to the country-specific settings as much as necessary. The focus was not only on winning comparable individual descriptions of confirmation work for the seven countries involved but rather on combining the data in such a way that we could compute correlations or differences on a statistical level »country by country« as well as »item by item«. This required a high level of uniformity concerning issues like the definition of the answering scale, layout of the questionnaires, order of the items, etc.

The international research project has profited from the extensive methodological preparatory work in some of the countries. Especially the ongoing support from *GESIS – Leibniz Institute for Social Sciences* proved to be very valuable for the whole process. In some countries (especially Finland, Germany, Sweden and Norway), expertise from earlier research projects has been integrated into the preparation of the international study. The German team (located at the University of Tübingen, in cooperation with the Comenius Institute in Münster) administered the survey on a general level, brought together the different experiences and suggestions, provided the data base and recorded the decisions for all procedures of the study in an internal manual.

By involving nearly 20000 confirmands and several thousand workers, the main methodological approach could only be a quantitative one. Only the items with set answers to choose from were included in the international comparison. On the national level, open questions were added and the answers were transcribed for content analysis. Thus qualitative and quantitative approaches were combined in the study but only the quantitative results will be presented here. The results of the qualitative parts of the study in the different countries will be published in national publications.

As our focus is on presenting empirical data, we restricted the bibliographical references to a minimum. Most of the literature cited is in English or (more seldom) German. Texts in Nordic languages are only cited in special cases.

2.2 Samples and Timing

Table 1 displays the sample sizes for the countries involved.

Table 1: Number of persons questioned in the countries

country	TOTAL	DE	AT	CH	DK	FI	NO	SE
units/groups	943	635	29	39	34	107	65	34
confirmands	19445	11513	540	598	1193	2176	2343	1082
workers	2386	1601	118	64	46	212	130	215
parents	6909	5788	240	246	–	–	635	–
confirmed in 2006	467195	262194	3169	4075	50452	58624	42587	46094
comments				only Zurich		+ 429 YCVs		

The number of confirmands in the year 2006 was used as basis for the weighting factors. The number of confirmands in Switzerland only refers to those confirmed in the Canton of Zurich, which was the regional Church that cooperated with the international study (details see chapter 3.3).

The column »confirmed in 2006« additionally holds the number of confirmands per year which also was the basis for computing the weighting factors for the statistical analyses. In addition to weighting factors that were applied to the German data to balance the number of involved confirmands in the different regional Churches, a »total weight« was applied for computing analyses with the whole datasets as they are reported in part 4 of this book. With this weighting procedure the proportions of the number of confirmands in the study to the number of confirmands in a country were balanced. This procedure assures that the results resemble the picture that would have been gained if one had asked all confirmands in all countries. As Table 1 shows, the German

confirmands account for 56 % of all confirmands in the seven countries. Thus the international results are more strongly influenced by the results of Germany than of the other countries. This also explains the effect, that in the comparison between country results Germany is always close to the total.

The number of interviewees involved in the study differs from country to country. In some countries, one aim was to keep the results representative for smaller units as well (for example, the regional Churches in Germany), so the number of interviewees had to be higher. For other countries it was enough to include only 500 adolescents (like in Austria). The crucial point is that the integrated data are representative for the respective region. It was the task of the research teams in each country who know about the respective structural characteristics of the country (urban – rural, different church regions, but also regions with ethnic minorities, etc.) to guarantee this. In all the parishes selected for the representative study, the questionnaires were filled in by the groups that were confirmed in 2008.

The selection of the people to be interviewed in addition to the confirmands was more difficult than expected. In Denmark, it is usually only the minister who is responsible for confirmation work. In other countries, however, there are special workers involved in the confirmation time who may even carry the main responsibility. The person who confirms the adolescents is, therefore, not always the main person in the preparation for confirmation. In many places, volunteers increasingly play an important role in confirmation work. The solution we found for our study was the following: each worker who was involved in the work with the confirmands of the respective year, not only sporadically but on a regular basis, was asked to complete a worker's questionnaire. In addition, there were special questions in t_0, t_1 and t_2, which were only answered by the person with the main responsibility (in the following called the »leaders«). Finland added a special survey for the »Young Confirmed Volunteers« (YCVs) whose results were not counted as part of the general results for the Finnish workers (for details see chapter 3.5).

2.3 Topics

We designed our research as a general study on (almost) all relevant aspects of confirmation work. The preparation phase for the questionnaires included interviews with confirmands, workers and experts in order to find out which topics seemed to be relevant. We examined published literature on confirmation work and former studies undertaken in this field. In addition, we profited from consultations on national and international levels with researchers and

practitioners. Cognitive pre-tests of the questionnaires were conducted individually in most of the countries.

Exemplary questions are:
- motivation of the confirmands for taking part (t_1)
- changes of attitudes of the confirmands concerning belief, church and confirmation (t_1 and t_2)
- effects of the confirmation time from the point of view of the confirmands (i. e.: cognitive, spiritual, social) (t_2)
- church services during the confirmation time (attendance obligation, attractivity, active participation, etc.) (t_1 and t_2)
- aims of the workers for confirmation work (t_1)
- methods and materials in confirmation work (t_2).

Since we have been working with a broad scope of topics, no in-depth answers to all the topics included should be expected. The limited scope of the present study is evident, for example, with the results concerning church services. Our data clearly prove that services that are attractive to adolescents and that include their active participation have a positive effect on their perception of the services. However, *how* the participation should be and *how* exactly services can become attractive to adolescents cannot be specified on the basis of the present data alone. The data create something like a »map of confirmation work« which opens up wide perspectives. Yet while it helps to identify possible paths, a map does not specify which one should be chosen.

2.4 The Questionnaires

Questionnaires were filled in at two points of time by the confirmands and by the workers. In some countries, structural information on the parishes was collected beforehand (t_0). Parents' questionnaires were added in Austria, Switzerland, Germany and Norway. Figure 1 shows the general design of the study. In some countries, deviations from the general timetable or other special adaptations were inevitable. For example, most parishes in Finland did not fill in t_1 before the beginning of 2008 because some of the parishes had not started their confirmation work before this time.

Figure 1: Questionnaires in the international study
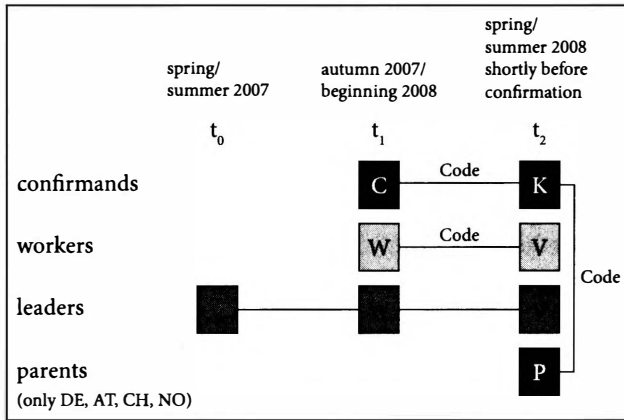
There are two different numbering systems for the items:

Each questionnaire has an ascending *question-number*, mainly for the use of those who complete the questionnaires. As the questionnaires differ slightly in each country, these ascending numbers could not be kept standardised for all countries.

The *item-names* that are used for the interpretation of the data, consist of two letters and a two-digit number, e. g. WB07.

The first letter indicates the questionnaire (cf. Figure 1):
C = confirmands t_1 K = confirmands t_2
W = workers t_1 V = workers t_2
P = parents (only t_2)

The second letter indicates the section within the questionnaire. Sections with the same second letter in t_1 and t_2 correspond with each other, e. g. CE01 corresponds with KE01. The section-letters between confirmands and workers, however, are independent from each other. In the appendix (p. 332) there is a correspondence list that shows »pairs« of items, i. e. the combination of workers' aims and confirmands' reports.

All data (confirmands, workers, parents) have been computed in such a way that they can be linked to the respective group. So it is, for example, possible to relate the methods named by the workers to the feedback of the adolescents. In some countries, the parish is not always the appropriate framework for describing a local confirmation work setting. The setting can also be a camp where confirmands come together from different regions (as it often is the case in Sweden). Thus, in the international context, the framework for one coherent confirmation work group (i. e. workers and »their« group of confirmands) is

called a »unit«. This is relevant especially for the analysis at the group level, for example, if effects of confirmation time on the confirmands are analysed against the influence of methods or structures (Is a camp included in confirmation time? Are there voluntary workers cooperating with the staff? etc.).

2.5 Translation: Country-specific Particularities

A typical problem of international studies are semantic differences in the translation of the items. Qualitative studies face particular challenges in respect to the meaning of individual expressions while their contextual nature supports additional interpretations. Quantitative studies have the advantage of working with a limited number of questionnaire items that can be discussed in detail and coordinated internationally – a task that was carried out in a number of consultations during the preparation phase of the present study. Nevertheless, mistaken interpretations can only be avoided by exerting additional care for linguistic pitfalls.

All questionnaires were printed in German, Danish, Norwegian, Swedish and Finnish. Because all members of the team speak English, this language was chosen as the language for common communication. This allowed for direct communication within the team but the translations always required an intermediate step from English into the vernacular. A certain validation of the various questionnaires could be achieved through a member of the Tübingen team (Henrik Simojoki) who understands all the languages involved and who helped with the final adjustments of all six versions of the questionnaires. This guaranteed a maximum of semantic proximity of the questionnaires.

In the process of developing the questionnaires, English templates were defined by the research group (in meetings and online). Experts in each country translated the questionnaires into their language, also making sure that confirmands could understand the wording. Some items turned out to be not appropriate for specific countries and consequently were left out. For example, questions about volunteers in confirmation work made no sense in Denmark where confirmation work lies almost exclusively in the hands of pastors. For some areas of special interest, the four Nordic countries agreed to incorporate additional items for their context. Altogether, the questionnaires in the different countries share more than 80% of their items. They are identical concerning the layout and the order of item-sections.

An English version of all questionnaires is available on the internet (www.confirmation-research.eu). One exemplary questionnaire (confirmands t_2) is printed on pages 333-336 of this book. Although the English versions of

the questionnaires are the ones that were discussed throughout the project and their wording is used in this book, it is important to keep in mind that these English versions have never been used as such. They merely function as the basis for the questionnaires in the respective languages of the countries.

In order to ensure a coherent way of reporting the data, the group made a number of linguistical decisions. For example, we consistently use »confirmation time« for the whole of the process, »ministers« for the pastors, theologians, etc. These words were translated into the terms that are most commonly used in the respective languages.

2.6 Handling and Reporting of the Data

In each parish, the confirmands were asked to fill in the questionnaires, usually during a group meeting. Completing the questionnaires was voluntary for the confirmands as well as for the workers and parents. All of them were assured that the results would be anonymous. The respective codes of ethics and judicial guidelines were observed.

All questionnaires were recorded either manually or by a scanning system into the software SPSS. Plausibility analyses were performed, for example, to exclude questionnaires in which a confirmand had ticked the same box for all answers. These analyses, but also the feedback from workers in the groups, affirm that most confirmands were indeed very open to the questions and felt taken seriously by the questions about their experiences and opinions. When asked how they felt completing the questionnaire in t_2, only a minority of confirmands answered »it annoyed me« (total 18 %, range from 14 % in Germany to 30 % in Norway; not asked in Sweden), most confirmands said »it was okay« or even »I liked it«.

Technically, all data were stored in three different SPSS-data sets. A data set for the confirmands, a data set for the workers, and a data set on the unit level storing structural data for each unit as well as the mean values of all confirmands' and all workers' items for the unit. Where there was only one leader per unit, his or her answers on the leaders' questionnaire were taken as structural data for this unit. In a unit with several leaders, a mean value of their answers was computed for the unit level data set.

Most of the items in our study are listed with their detailed results in the appendix of this book (p. 305 ff.). Due to the large number of items, though, we decided to document only the items with the (usually 7-point) Likert-scales typically used in the study. This means, that results of items like »How did you feel filling in this questionnaire? 1 = I liked it; 2 = it was okay; 3 = it annoyed me«

are not reported in the appendix, whereas item sections like the question on satisfaction with different aspects in confirmation time are fully reported (which account for about 90 % of all items). Wherever the item-name is given in the text, this item can be found in the appendix. Example: »most of the confirmands are satisfied with camps (77 %; KN11)«. Additional items, that were used only in selected countries, are not reported in the appendix.

2.7 t_1-t_2 Comparisons

For confirmands, workers and leaders, the study worked with two questionnaires. One in the beginning of confirmation time, the second one shortly before the day of confirmation. While it was possible to do the second round of interviews at the same time in all of the locations, the different durations of the confirmation time (between one and two years) created a problem concerning the first round of interviews that could not be solved. Had we done all of the first interviews at the beginning of the confirmation time, the interval between t_1 and t_2 would have been very different. This is why t_1 was set for about 9 months (if possible) prior to t_2 thus mirroring the situation in the beginning phase of confirmation time for some parishes and the situation »half way through« confirmation time in others.

There are two kinds of correspondence between t_1 and t_2:
- Items concerning personal attitudes towards faith and church have exactly the same wording in t_1 and t_2. The difference between both indicates a change of attitude during confirmation time. These items can be found mainly in sections CE/KE, CF/KF, CG/KG and CH/KH.
- Other items relate an expectation (t_1) to an experience (t_2), like »During confirmation time it is important for me … to have a lot of action« (CK05) – »During confirmation time … we had a lot of action« (KK05). These items can be found mainly in CB/KB and CK/KK for the confirmands and WB/VB, WC/VC and WD/VD for the workers. It is noteworthy that not all of the expectations are matched with a respective experience and vice versa. For example the item »I registered … to be allowed to be a godparent« (CB05) is important for asking as a motivational factor in t_1 but cannot be mirrored by a respective t_2-item.

The individual matching of the questionnaires of t_1 and t_2 was based on an anonymous code which remained the same over time (cf. Figure 2). This method makes it possible, for example, to analyze, on an individual level, the statements of those adolescents whose interest in youth groups increases strongly against those with whom it decreases. Depending on the procedure in the re-

spective country, it was also possible to match the individual parents' question-naires to the ones of the confirmands. Altogether 13455 pairs of t_1- t_2 confir-mands' questionnaires could be matched, accounting for 74% of all 18191 t_2-questionnaires. The exact percentages of questionnaires matched are given in the respective country reports. The use of the anonymous code has proven to be a very helpful technique. Most of the confirmands were able and willing to fill it in. As the code is invariant over life-time, it is one of the easiest methods to match questionnaires individually without asking for the person's name.

Figure 2: Anonymous code (in some countries the layout was different)
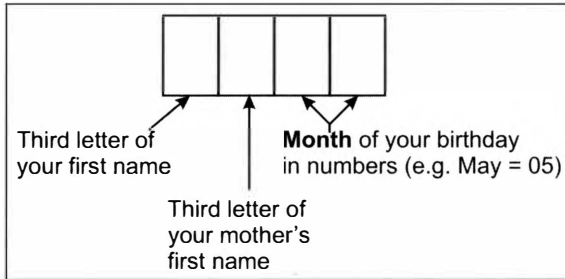
As the matching rates certainly do not reach 100%, the existence of matched and non-matched questionnaires allows for two ways of presenting data. On the one hand, it is possible to compare the overall results in t_1 and t_2 for all questionnaires. On the other hand, the comparisons between t_1 and t_2 become more precise if only matched cases are used because this guarantees for the same data base in t_1 and t_2. In this book we usually print results for all ques-tionnaires. Only when it comes to specific questions about changes from t_1 to t_2 (for example in chapter 4.5), the results are based on »matched cases only« and can thus deviate slightly from the overall values. Practically, the difference be-tween using all questionnaires and only the matched ones is small as Table 2 shows for an exemplary item.

Table 2: Comparison between results of all vs. »matched only« questionnaires for CE10/ KE10.

CB10/KB10: »It is important for me to get money or presents at the day of my con-firmation.«	N all	Mean all	N matched only	Mean matched only
CE10 (t_1)	18922	4.44	12876	4.50
KB10 (t_2)	17655	5.09	12876	5.13
Difference of mean values		(0.65; not used)		0.63

2.8 Indexes

Indexes are computed in order to facilitate analyses and comparisons and to improve the validity of interpretations. Our indexes were created using a factor analysis (Varimax with rotation). They are computed as the mean values of all the items enclosed in the index. We only use indexes with Cronbach Alpha > 0.7 for the whole dataset and additionally restrict us to use only those indexes where Cronbach Alpha is > 0.6 in each of the participating countries.

The index-name starts with an »i«, followed by two letters indicating the relevant item-section and a number (e.g., iCA1). The complete list of all indexes is given below. The overall Cronbach Alpha is stated in brackets. Cronbach Alpha for the individual countries is reported in Table 3. The results of the indexes of each country are printed in the appendix (p. 306).

iCA1: Social orientation and activities (0.71)
- CA08: because I had been told that confirmation training is fun.
- CB02: to experience community in the confirmation group.
- CB06: to meet and get to know friends.
- CK03: come into personal contact with the leaders and workers.
- CK05: to have a lot of action.

iCB1: Religious interest (0.78)
- CB01: to learn more about God and faith.
- CB03: to come to my own decision about my faith.
- CB08: to be strengthened in my faith.

iKB1: Experience of growth in faith (0.78)
- KB01: I have learnt more about God and faith.
- KB03: I have been enabled to come to my own decision about my faith.
- KB08: I have been strengthened in my faith.

iCE1: Christian Beliefs (t_1) (0.87)
- CE01: God created the world.
- CE03: God loves all humans and cares about each one of us.
- CE04: Jesus has risen from the dead.
- CE08: Faith in God helps me in difficult situations.
- CE09: I believe in God.

iKE1: Christian Beliefs (t_2) (0.87)
- KE01; KE03; KE04; KE08; KE09 (wording: cf. iCE1)

iCG1: Adherence to the Church (t_1) (0.71)
- CG01: It is important for me to belong to the Church.
- CG06: If I should have personal problems, I would turn to a minister.
- CG07: Our church building means a lot to me.

- CG08: I would be interested in taking part in a Christian youth group after confirmation.

iKG1: Adherence to the Church (t_2) (0.72)

- KG01; KG06; KG07; KG08 (wording: cf. iCG1)

iCH1: Religious practice (high value = strong) (t_1) (0.73)

- CH01: I think about God.
- CH02: I pray by myself.
- CH03: I pray together with others.

iKH1: Religious practice (high value = strong) (t_2) (0.73)

- KH01; KH02; KH03 (wording: cf. iCH1)

The values in iCH1 and iKH1 have been reverted (1 = 5 etc.), because in the questionnaires the answer »never« was coded 5. A high value in the index thus goes along with high religious practice.

iCK1: Orientation for life in faith (0.71)

- CK01: to find my own point of view concerning my own life.
- CK02: to learn central Christian texts by heart (e. g., to a Creed).
- CK03: to come into personal contact with the leaders and workers.
- CK11: that my questions concerning faith will play a role.

iKK2: Ethical learning (0.81)

- KK44: I have experienced that my commitment to other people is important.
- KK45: I have become (more) conscious of my responsibility for ecological problems.
- KK46: I have experienced that my commitment to peace is important.

iKK3: Experienced openness of the parish (0.76)

- KK03: I came into good personal contact with the leaders and workers.
- KK04: I was allowed to decide about the topics together with my fellow confirmands.
- KK05: we had a lot of »action«.
- KK11: My questions concerning faith were addressed.
- KK25: I got to know our parish better.
- KK30: I experienced forms of worship adequate for young people (e. g., youth church services).
- KK37: In our parish, I feel welcome and accepted.

iKN1: Satisfaction with group experiences (0.79)

- KB02: I have experienced a good community in the confirmation group.
- KN02: [satisfaction with:] having fun
- KN04: [satisfaction with:] feeling of community
- KN11: [satisfaction with:] camp(s)

iKN2: Satisfaction with liturgical experiences (0.83)

- KN10: [satisfaction with:] church services
- KN13: [satisfaction with:] prayers in the group

- KN14: [satisfaction with:] music, songs and singing

Workers:

iWA1: Importance of Christian dogmatics (0.77)
- WA03: Baptism
- WA04: The Lord's Supper
- WA06: A Creed
- WA07: Jesus Christ
- WA08: Holy Spirit

iWA2: Importance of topics related to the life-world (0.79)
- WA12: Ecology and preservation of the Creation
- WA14: The meaning of life
- WA15: Justice and responsibility for others
- WA16: Friendship
- WA17: Body and sexuality
- WA18: Violence and crime

iWC1: Importance of relating to the parish (0.73)
- WC05: get to know our parish better.
- WC06: get to know what the youth work of the church offers to them.
- WC07: be won for continuing as voluntary workers in the church.

iVM1: Workers' satisfaction (0.71)
- VE06: I would like to be relieved of working in confirmation training. *[values have been reverted]*
- VM01: How satisfied are you with the confirmation work in your parish?
- VM02: How do you like doing the confirmation work?

Table 3: Cronbach Alpha for all indexes for all countries

Cronbach Alpha Index	Total	DE	AT	CH	DK	FI	NO	SE
iCA1: Social orientation and activities	**0.71**	0.64	0.69	0.70	0.61	0.76	0.64	0.77
iCB1: Religious interest	**0.78**	0.76	0.73	0.78	0.78	0.82	0.84	0.78
iKB1: Experience of growth in faith	**0.78**	0.81	0.84	0.80	0.74	0.72	0.75	0.75
iCE1: Christian Beliefs (t_1)	**0.87**	0.85	0.85	0.89	0.83	0.91	0.88	0.87
iKE1: Christian Beliefs (t_2)	**0.87**	0.86	0.84	0.89	0.85	0.91	0.88	0.90
iCG1: Adherence to the Church (t_1)	**0.71**	0.70	0.69	0.71	0.70	0.76	0.77	0.72
iKG1: Adherence to the Church (t_2)	**0.72**	0.69	0.70	0.75	0.73	0.72	0.78	0.77
iCH1: Religious practice (t_1)	**0.73**	0.69	0.61	0.72	0.68	0.78	0.77	0.73
iKH1: Religious practice (t_2)	**0.73**	0.70	0.63	0.70	0.72	0.76	0.79	0.79
iCK1: Orientation for life in faith	**0.71**	0.71	0.67	0.66	0.69	0.79	0.77	0.68
iKK2: Ethical learning	**0.81**	0.81	0.83	0.84	0.75	0.86	0.79	0.80
iKK3: Experienced openness of the parish	**0.76**	0.75	0.79	0.70	0.74	0.82	0.78	0.75

Index	Cronbach Alpha	Total	DE	AT	CH	DK	FI	NO	SE
iKN1: Satisfaction with group experiences		0.79	0.79	0.83	0.76	0.65	0.81	0.75	0.86
iKN2: Satisfaction with liturgical experiences		0.83	0.79	0.81	0.79	0.79	0.84	0.81	0.88
iWA1: Importance of Christian dogmatics		0.77	0.76	0.77	0.70	0.75	0.67	0.75	0.80
iWA2: Importance of topics related to the life-world		0.79	0.79	0.71	0.75	0.81	0.80	0.77	0.71
iWC1: Importance of relating to the parish		0.73	0.71	0.66	0.83	0.70	0.74	0.67	0.64
iVM 1: Workers' satisfaction		0.71	0.71	0.67	0.72	0.79	0.66	0.70	0.71

## 2.9 Prospect for Further Interpretations Using Multi-level Analysis

Our study with nearly 20000 confirmands involved allows for a great variety of possible statistical procedures. In this book we limit our analyses to the common methods in order to make the results easily accessible for the reader.

One method of further scrutinising the dataset will be applied in an ongoing doctoral dissertation by Wolfgang Ilg (Ilg 2010). This will be done using multi-level analysis, a way of evaluation that is used in large-scale studies with nested structures (confirmands nested in parish-groups, groups nested in countries, etc.), for example, the PISA-studies. As the results of these analyses are highly complex, they cannot be part of this book. Nevertheless, the following section tries to give a short insight into the rationale of multi-level analysis.

The multi-level analysis is a statistical procedure that analyses the influence of parameters on an individual and on a group level simultaneously. An example can be given assuming that certain confirmands gain a more positive attitude towards the church during their confirmation time while others become more distant from the church. Maybe the rising proximity is particularly true for those who have rather religious parents. Effects like this can be computed by common regression analysis predicting the degree of change in attitude by predictors describing the religiousness of their home. However, there might also be further variables of influence. One can imagine that confirmands develop a positive attitude towards the church especially in those parishes in which volunteers are involved in confirmation work. Perhaps there are also correlations with the duration of the camp, etc. With the common statistical methods (correlations and linear regression), all of this can only be calculated in a way that assumes a coherent correlation for all groups of confirmands involved. Figure 3 renders a typical regression line for the relation of a predictor variable X (for example, the religiousness of the parents) and the criterion variable Y (for example, the adherence to the church). The regression line is determined by a

fixed intercept β_0 and a fixed slope β_1 with the respective mathematical formula: $Yi = \beta_0 + \beta_1 X_i + e_i$.

Figure 3: Linear regression on level 1
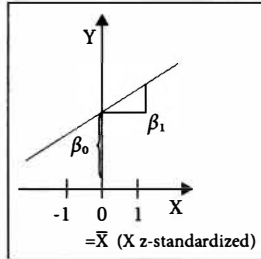
But what happens if the interdependence of X and Y is not the same for the different groups? One could assume, for example, that the relation is on a higher level according to the length of the time period spent at a camp. Or the relation could possibly be different in big cities, towns or villages. Figure 4 shows further regression lines that are possible for certain subgroups.

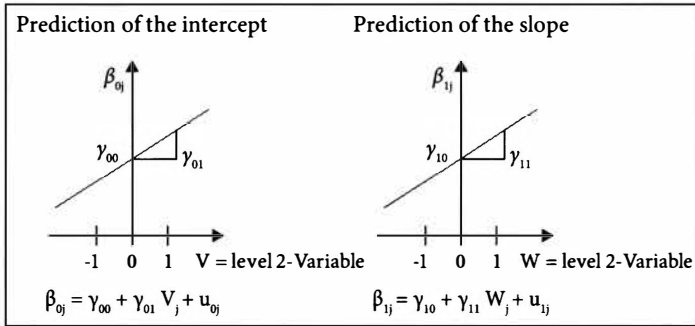Figure 4: Possible linear regressions for different groups
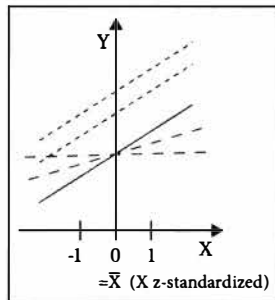
The dotted lines show alternative regression lines with different intercepts (β_0 varies). The dashed lines show alternative regression lines with different slopes (β_1 varies).

If the individual regressions (or level 1-regressions) are different for every group without any identifiable system, no analysis of influence factors is possible. But it is fair to assume that structural variables can be identified that determine the way of interdependency between level 1-variables. Those structural variables are called level 2-variables because they do not describe individuals but group-settings. Multi-level analysis tries to find regression equations that predict the respective level 1-intercepts and level 1-slopes by level 2-variables. Figure 5 displays the regression of level 1-intercepts and level 1-slopes by pos-

sible background variables (here called V and W). The advantage of those multi-level analysis models is that influences on an individual level (level 1) and on group level (level 2) can be computed at the same time.

Figure 5: Prediction of level 1-intercepts and level 1-slopes by level 2-variables

Prediction of the intercept	Prediction of the slope

$$\beta_{0j} = \gamma_{00} + \gamma_{01} V_j + u_{0j}$$ $$\beta_{1j} = \gamma_{10} + \gamma_{11} W_j + u_{1j}$$

W and V are level 2-variables, for example, the duration of camps or the aggregated aims of the workers.

In the dissertation mentioned above, research will focus on one specific influential factor on the group level, namely the aims of the workers. The question is, whether and to what degree the aims of the workers predict the outcomes of a group process, e. g., the learning effects, the social cohesion and the change of attitudes of the confirmands. Although the aims of the workers and the mentioned criteria variables are all on an individual level, there is no way of computing a correspondence between level 1-results of confirmands and workers. Rather the mean value of all workers of a group can be seen as one determinating level 2-variable amongst others. In preceding studies in other fields of youth work (Ilg 2008), the aims of the workers proved to be quite influential variables for predicting group processes for some areas of interest (especially concerning Christian teaching), whereas only little influence could be detected for other areas of group processes, for example, the emergence of a good sense of community within the group of adolescents. Surveys like the international confirmation study entail one of the rare opportunities to research these questions, as the number of comparable groups (in our study nearly 1000) allows for reliable analyses on the group level.

2.10 Recommendations for Improvements

One of the major outcomes of a pioneering study is the discovery of methodological potentials, possibilities and challenges when researching a new field. By pre-testing our questionnaires, we could avoid a lot of possible problems. Nevertheless, we discovered some issues that could be improved upon when further research is planned, as the following two examples show:

- Some items in t_1 were introduced by the wording: »I registered for confirmation time ...« followed by an item expressing possible expectations like »to meet and get to know friends« (CB06). In our study, we interpret the results from this item as the cofirmands' expectation or wish to meet or make friends. One can, though, argue that there is a difference between the reason for taking part and one's expectations regarding confirmation time. According to our experiences with young people and their way of filling in questionnaires, we expect that the introductory sentence does not affect their answers to a high degree because they regard every item individually. Nevertheless, we would recommend using an introduction like »It is important for me during confirmation time ...« for further studies.
- Relying on the matching of t_1 and t_2 some of the countries included basic questions only in one of the questionnaires, for example, the item asking for the profession of the worker (minister, volunteer, etc.). For those workers in t_2 where the corresponding t_1 questionnaire could not be identified, there is no information about their profession. This is only a small group, but the effect could be avoided in a next survey by asking those central issues in t_1 as well as in t_2.

Additional needs for further research are summarised in the conclusion (part 5).

2.11 Explanation of the Terminology

For most of the items, the answers were measured by a scale of 1 to 7, with wordings given in the questionnaire like 1 = »not applicable at all« and 7 = »totally applicable«. In order to reduce the complexity of the tables in this publication, the answering levels 1, 2 and 3 are summarised as »No«, 4 »Middle« and 5, 6 and 7 as »Yes«. In computing the data (e. g., for correlations), the original answering levels have been kept. When reporting results, we usually report »percentages yes« which is easier to understand than mean values. If differences t_1- t_2 are reported, then mean values are reported.

The following statistical abbreviations will be used throughout the book:

- *Items* are the questions within a questionnaire.
- *Percentages (%)* refer to valid percent. The number of missing answers is only about 1-4 % of all answers and will not be stated for every item. Rounding accounts for deviations of percentage sums not equalling 100 %.
- The *scale level* of the Likert-scales (rating scales) is metric.
- *Sample size (N)* stands for the number of valid answers to a certain item.
- *Mean value (M)* is the average of all answers for a certain item.
- *Standard deviation (SD)* indicates the spread of the answers to a certain item.
- *Level of significance (p):* In this book a level of 5 % ($*=p < 0.05$) or 1 % ($**=p < 0.01$) or 0.1 % ($***=p < 0.001$) is used. Due to the large number of questionnaires, not all significant differences can be considered relevant. Therefore, it was agreed to focus on differences > 0.4 for the interpretations. As the sensitivity of the significance test is connected to the sample size, even small differences become statistically significant in Germany, where our study had by far the largest sample size. All differences reported are significant at least on a 0.05-level. Statistical details (F-values, degrees of freedom, etc.) are not reported in order to make the book more accessible to readers without statistical training.
- *Correlation coefficient (r)* states the degree of interdependence of two variables. It ranges from -1 to +1. The closer it is to 0, the smaller the interdependence between the variables.
- *Cronbach Alpha (α)* measures the degree of internal consistency of the items in an index.

When presenting data, we always use the following order of countries, which is no more than a technical convention, German-speaking countries, and then Scandinavian countries: Germany (DE), Austria (AT), Switzerland (CH), Denmark (DK), Finland (FI), Norway (NO), Sweden (SE).