

## 4. Hypotheses

### *Hypothesis 1*

There will be a common basis in the conceptualization of human nature, as well as an obvious influence of culture and life conditions in order to achieve an optimal fit of the individual to its surroundings. The conceptualization will reflect daily life experiences with other persons. I make no prediction about which factors in the concept of human nature will be the same for all sub-samples, and which will be culture specific. I expect to find a higher similarity between Peruvian students and both German sub-samples than between Peruvian students and the other three Peruvian sub-samples.

### *Hypothesis 2*

The conceptualization of meaning of life and happiness will vary in accordance to the years of formal education and the hardness of life circumstances. Both constructs will be understood in more abstract terms by students, and in more concrete terms by the immigrants and Indians. I therefore again expect to find a higher similarity between Peruvian students and both German sub-samples than between Peruvian students and the other three Peruvian sub-samples.

### *Hypothesis 3*

German subjects will produce more individualistic answers, whereas Peruvian subjects will produce more collectivistic answers. However, German and Peruvian students will show a higher similarity than Peruvian students and the lower educated Peruvian sub-groups, which should make the answers of the Peruvian students more individualistic than the Peruvian non-academic groups. In spite of this similarity, Peruvian students are still expected to score higher on collectivism than German students. The Peruvian Indians are expected to produce the highest degree of collectivism in their answers.

### *Hypothesis 4*

I expect to find differences in the structures of Oerter's stage model between the sub-groups. On average, students of both cultures are assumed to produce higher levels than the other sub-samples.

#### 4.1. Analysis of the qualitative data

Participants were divided into sub-groups by culture and level of education: German students, German non-students, Peruvian students, Peruvian night-students, Peruvian immigrants, and Peruvian Indians. For each of these six groups, men and women were evaluated separately, which results in 12 subgroups.

*Hypothesis 1:* The evaluation of the qualitative data for the concept of human nature took place in several steps. First, the transcriptions of the interviews were read to get an overview of the participants' answers. Following Mayring's technique of the summarizing content analysis (Mayring, 1983), a short summary with the interviewee's central ideas was written to prepare and facilitate later structuring. The following passage gives an example.

*Interviewee:* "I'm not sure why so many people don't come close to my ideal. They might be dissatisfied with their jobs and feel uncomfortable. There is one case in particular, one person I am thinking of now. He is not happy in his job and cannot cope with that, and I think that's why he is not so happy in his marriage either. I think this can happen. If you are really satisfied, it is easier to come close to an ideal. It depends so much on how you feel. If you feel fine it is so much easier to behave fair and nicely towards others than if you feel bad".

*Summary:* "Job dissatisfaction has negative effects on social interactions and partnership".

Second, preliminary general content categories and preliminary content sub-categories were developed, based on central ideas which were repeated in the summaries. Defining the preliminary categories was influenced by Oerter's stage model, which is reflected in their names. For instance, the category which was designed for answers depicting human beings as members of a system who should care about societal matters, be politically interested, and wish to make the world a better place for everyone, was called '*Social attitude IV*'. The next passage shows an example of this process.

*Summary:* "A central characteristic for an ideal adult is his concern for generations to come, leaving this planet in a reasonable state, and fighting actively against environmental pollution".

*Preliminary category:* "Social attitude IV".

In a third step, the categorization of the original answers started by listing them into the pre-defined categories, which were modified during the coding process according to new focuses. Additionally, new sub-categories were defined. The general category '*Relationships*',

for instance, contains the three sub-categories 'Family', 'Friends', and 'Partner/Romantic love'. After participants' answers were listed into the categories, those categories which did not contain at least 5 % of the answers were eliminated and integrated into another category. The result was a list of 11 final categories for the ideal concept of a human being and 14 for the real human being, each including one rest-category 'Miscellaneous'. The categories and the answers evaluated are described in more detail in the empirical part.

*Hypothesis 2.* For analyzing the conceptualization of meaning of life and happiness, the categories of Ebersole et al. (e.g. Ebersole & DePaola, 1987) were used to replicate their findings. Although those were only developed to classify meaning of life, it seemed sensible to use the same categories for the concept of happiness in order to obtain a basis for comparison and possible links between these two constructs. In those cases where the description of the categories does not match my data exactly, modifications are described in the empirical part.

*Hypothesis 3:* To determine which sub-samples had primarily individualistic and which had primarily collectivistic attitudes, the frequencies of certain categories for the conceptualization of human nature and for meaning/happiness which expressed one of these attitudes were compared. This procedure is explained in detail in the empirical part.

*Hypothesis 4:* For assigning stage levels to the participants, the complete adulthood interview was evaluated. Excerpts of guidelines on how to classify participants' answers into stage levels can be found in Appendix A. Further descriptions of the procedure are provided in the empirical part.

#### **4.2 Inter-rater-agreement and intra-rater-consistency**

To assure the inter-rater-agreement, six co-raters rated different sections of a certain number of interviews, and the inter-rater reliabilities between the co-raters and the author were tested. Co-raters for the original German data were two German female psychologists, one of whom worked as an assistant to Prof. Oerter and was well acquainted with the stage model (co-rater 2 in Table 3.3). Co-raters for the original Peruvian data (and the translations from Quechua into Spanish) were a Peruvian female secretary and a Peruvian male computer specialist. Apart from rating the original data in German and Spanish, two co-raters, an English male social worker and an English schoolteacher, rated 33 % of the data which had

been translated into English for this thesis. The English raters only worked with data concerning hypothesis 1 and 2. Due to the enormous amount of verbal data, it was not possible to specify the inter-rater-agreement for all data. The following Table 3.3 shows the data-basis and the agreement in percentages. Data basis refers to the number of interviews rated amongst the co-raters. For instance, 60 Indian interviews of the first inquiry (100 %) were co-rated between the two Peruvian raters for testing the first two hypotheses, 30 interviews by each rater. For the concept of human nature, the ideal and the real concept were rated. For happiness and meaning of life, the raters evaluated all questions related to these topics. For determining individualistic vs. collectivistic attitudes, the number of answers in individualistic and collectivistic categories were compared, so no inter-rater-agreement was needed here. For the stage levels, the whole adulthood-interview was taken into account, including sections which were not mentioned in this thesis.

**Table 4.1:** Inter-rater-agreement for the concept of human nature, meaning of life, happiness, and the stage levels.

<b>Categorization of ...</b>	<b>Data basis</b>	<b>Agreement with co-rater 1</b>	<b>Agreement with co-rater 2</b>	<b>Agreement with English co-rater 1</b>	<b>Agreement with English co-rater 2</b>
Concept of human nature, German samples	50 %	82 %	--	81 %	75 %
Concept of human nature, Peruvian samples except Indians	33 %	74 %	71 %	77 %	74 %
Concept of human nature, Indian samples, only etic categorization	100 %	79 %	75 %	84 %	70 %
Meaning of life, German samples	33 %	85 %	--	80 %	78 %
Meaning of life, Peruvian samples except Indians	50 %	79 %	80 %	75 %	73 %
Meaning of life, Indian samples	100 %	81 %	78 %	86 %	80 %
Happiness, German samples	50 %	78 %	--	78 %	71 %
Happiness, Peruvian samples except Indians	33 %	67 %	73 %	72 %	73 %
Happiness, Indian samples	100 %	73 %	78 %	82 %	77 %
Oerter's stage levels, German samples	100 %	--	88 %	--	--
Oerter's stage levels, Peruvian samples	33 %	64 %	--	--	--

*Footnote:* The English co-raters only rated a third of the material, not the percentages which are depicted in the cell data-basis, which only applies to the German and Peruvian raters.

Co-rater 1 and co-rater 2 both consist of two persons each: one for the German, and one for the Spanish data. Hence, the table depicts the results of six independent co-raters and their agreement with the author's rating.

The lowest agreement was reached for the stage levels in the Peruvian samples, which is most likely due to the inexperience of the co-rater with Oerter's model. A much higher

agreement could be obtained with the German co-rater, who was very familiar with the model. On the whole, agreement between the author and the co-raters was relatively high, as determined by absolute agreement ranging from 64 % to 88 %.

The intra-rater consistency was tested for 10 % of the data concerning hypotheses 1, 2, and 4 with a period of six weeks between the two ratings, obtaining an overall consistency of 92 %.

#### **4.3 Weaknesses of the analyses**

The data of the Indian sub-sample present a special case. Unfortunately, we had not been aware that there are different terms for an adult person in Quechua. The one our interviewers chose refers to a person older than 40 years. So the concept of human nature in this sample was restricted to the vision of a specific age group, and did not include young adults as in all other samples. The interviewers did, however, in some cases inquire about younger people as well, to contrast the two different generations. Since this was not done systematically, the original approach of evaluating the data by creating two classification systems, one for younger and one for older adults, was not very fruitful. Therefore, like in all other samples, only one system of categorization was identified with includes data of both younger and older adults.

The sub-samples of the Peruvian immigrants do not contain enough cases to attempt generalizations. Nevertheless, the results were so interesting that it was worth retaining them as part of the sample. Including more cases in the future will be very interesting to see whether the results obtained so far can be replicated by other immigrants.

The inter-rater-agreement could not be tested with 100% of the data, and only two of the six co-raters were psychologists. This last ‘weakness’, however, could also be regarded as a strength, since the content categories are obviously clearly enough defined for non-experts to work with them. It would certainly have been more sensible to have an expert co-rater for classifying the Peruvian data into Oerter’s stage model.