A Cultural Psychological Approach to Analyze Intercultural Learning: Potential and Limits of the Structure Formation Technique

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Abstract: Despite the huge interest in sojourner adjustment, there is still a lack of qualitative as well as of longitudinal research that would offer more detailed insights into intercultural learning processes during overseas stays. The present study aims to partly fill that gap by documenting changes in knowledge structures and general living experiences of fifteen German sojourners in Taiwan in a longitudinal, cultural-psychological study. As part of a multimethod design a structure formation technique was used to document subjective theories on giving/losing face and their changes over time. In a second step results from this study are compared to knowledge-structures of seven long-term German residents in Taiwan, and implications for the conceptualization of intercultural learning will be proposed. Finally, results from both studies serve to discuss the potential and limits of structure formation techniques in the field of intercultural communication research.

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1. Introduction

Sojourner adjustment and acculturation are among the most frequently studied topics in intercultural communication research. While the acculturation models by BERRY (2005; SAM & BERRY, 2006) and WARD (1996, 2004) have proven extremely fruitful and have stimulated much empirical research, they have also perpetuated an essentialist (nation-bound) concept of culture as well as a normative outlook on "adjustment" that is neither fully compatible with current cultural-anthropological concepts of culture nor with the complexity of today's
glocalized societies and multicultural identities (HERMANS & KEMPEN, 1998; WEIDEMANN, 2006). Within the framework of adjustment research, intercultural learning is largely treated as an implicit psychological process that is assumed to take place between "cultural contact" and "adjustment outcomes" (WARD, 2004); it has rarely been precisely defined nor directly addressed by empirical research beyond questionnaire studies. Also, longitudinal studies that document psychological change over time have been scarce. As a result, little is known about what stimulates culture-related learning in a foreign environment, which phases, preconditions and moderating factors can be observed, and how the process is affected by inter-individual differences. [1]

In order to overcome some of the theoretical and methodological limitations of current adjustment research, I propose a cultural-psychological approach to intercultural learning that allows for a non-normative outlook on individual experiences and learning during overseas sojourns. Data from a qualitative, longitudinal study of German sojourners in Taiwan serve to illustrate the potential and limits of structure formation techniques for intercultural communication research. This method was developed in the context of German educational psychology in the 1980s and serves to explicate and graphically represent subjective ("lay") theories of interview partners. In the present study a structure formation technique was used to document changes of everyday knowledge that German sojourners have and develop in order to explain the functioning of their Taiwanese social environment, especially concerning the social practice of "giving/losing face." In a second step results from this longitudinal study are compared to knowledge-structures of long-term German residents in Taiwan in order to detect differences in knowledge structures of "novices" and highly experienced sojourners. Implications for a conceptualization of intercultural learning and competence will be spelled out. As the use of a structure formation technique can be considered innovative in the field of intercultural communication research, the potential and limits of its use will finally be discussed in greater detail. [2]

2. Subjective Theories and Intercultural Learning

Despite some conceptual differences, there is implicit agreement that "adjustment" and "acculturation" during international sojourns refer to informal learning processes, that is, to changes in everyday cognition, knowledge and behavior that largely happen without formal instruction. In an attempt to operationalize "intercultural learning," the present studies focused on knowledge aspects only and followed the assumption that at least part of everyday knowledge is structured as "subjective theories" (GROEBEN, WAHL, SCHLEE & SCHEELE, 1988; DANN, 1990, 1992a). Subjective theories are understood as theories that ordinary people use to explain their everyday environment and thus resemble concepts, such as "lay theories" (e.g., FURNHAM, 1988) or "implicit theories" (e.g. WEGNER & VALLACHER, 1977). While GROEBEN et al.'s concept rests on specific assumptions about the structure and function of subjective theories (GROEBEN et al., 1988), I will use the concept in its wider sense and without sharp distinction with regard to these terms. [3]
Subjective theories resemble scientific theories in structure as well as in function (explanation, prediction, technology), yet in comparison to scientific theories, they are less coherent and consistent, usually implicit rather than explicit. Still, they effectively serve the important function of orientation in everyday life. Following the interest in learning processes during international sojourns, a first study aimed at documenting and interpreting changes of implicit theories. A second study aimed at documenting subjective theories of long-term sojourners for comparative reasons. Insofar as these theories concern cultural practices and cultural difference, changes of implicit theories were understood as expression, of intercultural learning (also cf. WEIDEMANN, 2004). Finally, in order to document changes in subjective theories a restriction of topic was mandatory. Based on a review of both German and Taiwanese social psychological and comparative research, I decided on the topic of "face." Both studies thus center on implicit theories of German sojourners of the Taiwanese/Chinese concept of face and their changes over time. [4]

3. The Chinese Concept of Face

"Face" is usually regarded a universal principle (GOFFMAN, 1955), though local variations are assumed to exist. As a literature review quickly reveals, however, most publications treat face as a distinctly (East) Asian phenomenon. This reflects the great importance of this concept for the social reality of East Asian societies as well as the important role the concept of face has played in the development of Chinese/Taiwanese indigenous psychologies (cf. JIA, 1997; HSU, 1996; HO, 1976, 1994, 1998; BOND & HWANG, 1986; HWANG, 1987). [5]

Face may be translated as "social esteem" or "prestige" and can be regarded as an attribute as well as the unstable result of social interaction and judgment (HO, 1994). Face is accorded or denied on the basis of a social judgment of another's morality, ability, social standing and culturedness (HSU, 1996). It is continuously at stake, is negotiated, claimed, hurt or confirmed. According to BOND and HWANG (1986), face-related behavior can be classified into the following six categories: a) enhancing one's own face, b) enhancing other's face, c) losing one's own face, d) hurting other's face, e) saving one's own face, f) saving other's face. The validity of this classification is further supported by everyday Chinese terminology that includes specific terms for all of these and associated aspects of face-behavior (see, for example, HSU, 1996). [6]

Research confirms the high relevance of face for social interactions in Taiwan and also that Germans are typically unfamiliar with the local concept of face. The present study therefore rested on the assumption that a) German sojourners in Taiwan would most likely be confronted with face-related behavior and b) they were likely to increase their knowledge about face during the course of their stay (WEIDEMANN, 2001). [7]
4. Methods and Research Design

4.1 Structure formation technique

Structure formation techniques were developed in the context of educational research by SCHEELE, GROEBEN and colleagues in the 1980s (SCHEELE & GROEBEN, 1988; SCHEELE, GROEBEN & CHRISTMANN, 1992; KÖNIG, 1995; DANN, 1992b) and have been widely used in German health and educational research (for an overview see STRAUB & WEIDEMANN, 2009). Their development and application are closely linked to the Research Program Subjective Theories (RPST) that stresses a humanistic approach and that is linked to a specific action theory. The RPST regards human beings as self-reflective and (potentially) rational actors who hold their own (subjective) theories about the "why" and "how" of their environment and who regulate their actions accordingly (GROEBEN & SCHEELE, 2001). [8]

An important assumption of the RPST is that subjective theories can be verbally explicated and reconstructed by way of dialogue between researcher and research participant. Subjective theories are reconstructed in a two-step research design that encompasses a semi-standardized interview and a graphic representation of the theory structure on paper. The visualization of the theory structure follows pre-set representational rules and is undertaken jointly by interviewer and research participant. The visualization is considered final when agreement on the structure is achieved between researcher and interview partner ("communicative validation"). [9]

Among the various methods that were developed to explicate subjective theories, structure formation techniques have been the most popular ones. In the context of this two-step research procedure, they are used to produce a visualization of implicit theories. This is achieved by writing theory contents on small pieces of cardboard that are then assembled to a larger picture by linking them with specific relational indicators, such as, "is equal to," "is an example of," "leads to." The statement: "If someone loses control in public, this will be regarded a loss of face" may thus be represented in the following way: "to lose control in public" [leads to] "losing face." Complete theory structures are quite complex (see the examples below) and may feature a large number of contents and relational indicators, often including moderating factors (A leads to B under the condition that C) or meta-level structuring (A and B are sub-categories of D). [10]

4.2 Research design

Study 1: The study followed a longitudinal design and a multimethod approach. Fifteen German students and managers were interviewed four times during their first year in Taiwan. Methods included semi-structured interviews on face, open interviews on general living experiences in Taiwan, and an adapted form of structure formation technique (SFT). During subsequent sessions, interview partners were invited to discuss and change their previous theory structure in order to arrive at an updated representation of their changed knowledge about
the Taiwanese way of dealing with face. Theory graphics thus served to document the intercultural learning process. [11]

Study 2: As the first study could not be pursued over a longer time frame, a comparative design was created which aimed at gaining some understanding of long-term sojourners’ subjective theories on face. How would results of this study relate to those of the earlier one? The same semi-structured interview and SFT as in study one were used to interview seven German sojourners who had lived in Taiwan between seven to fifteen years and who spoke fluent Chinese. [12]

5. Results

5.1 Results of study 1: Intercultural learning of the newcomer

The use of three different methods (open interview on general living situation in Taiwan, structured interview on face, structure formation technique) resulted in two different data formats: interview transcripts and structure graphics. As shall become apparent, a full picture emerges only when data from both sources are related to each another. [13]

Even though German sojourners claimed not to be very knowledgeable about the Chinese concept of face, all interview partners held subjective theories about the topic and produced, at times quite elaborate, structure graphics even shortly after their arrival. Structure graphics were then refined and completed during each subsequent interview session. An analysis of structure graphics reveals the following pattern (also WEIDEMANN, 2001, 2004, 2006):

• Typically, different aspects of face are represented unequally: Knowledge about losing face is usually much more elaborate than knowledge about having and giving face. The unequal distribution of knowledge is in accordance with German, where language includes an expression for losing face, yet lacks direct translations of having and giving face. Surprisingly, in some cases, blanks or near-blanks in the theory graphic indicate that giving face remains a foreign concept even after a one-year-stay in Taiwan.

• The new content of later interview periods usually refers to personally experienced episodes and examples. Even after one year in Taiwan, subjective theories contain few abstract categories.

• Strikingly, and in contrast to first theory graphics, a high proportion of new contents in later theories are negatively tinged. Examples are: the need to save face is considered as hindering efficient problem solving; behavior that aims to increase one's own face, such as owning an overly expensive car, is regarded as irrational and boastful.

• During the course of their stay, interview partners increasingly observe that face is not always protected but sometimes hurt at will. This may happen when people push their own interests against opponents or want to confirm their power position in social space either by denigrating others or by giving
face in order to be granted a favor in reciprocity. Face is thus increasingly perceived to possess power-related aspects. [14]

The emerging picture is that of an inductive learning process that is closely related to personal experience and awareness of face in everyday life. During early interview periods, interview partners would typically agree that face was somehow important in Taiwanese society, yet fail to identify precise examples and incidents. To most of them face remains a "hidden" phenomenon that they do not feel fully competent to deal with. During later interview periods, when awareness of face is increasing, subjective theories extend to fields that were previously underrepresented, such as having and giving face. [15]

Despite these general tendencies, there exist striking differences between individual theory structures that concern differences in content, in complexity, or at the level of abstraction. While some theory graphics contain elaborate knowledge about all aspects of face, other theory graphics feature little content and an unequal distribution of knowledge elements. None of these differences can be explained by demographic data, such as age, gender, occupational status, nor by analysis of theory structures only. Why some interview partners learn what they learn and remain ignorant of aspects that other participants consider important, can only be explained by drawing on additional information contained in the interview transcripts. [16]

The case of Denise will serve as an illustration: Denise's theory structure is very complex even during the first interview period. Aspects of losing, hurting, and having face are illustrated by a large number of examples, and part of the theory structure even features meta-level concepts. Surprisingly, the aspect of giving face remains an exception; it remains basically blank even after Denise stayed in Taiwan for almost one year. Denise herself muses about this fact, yet states that none of her acquaintances ever seem to give face (see the Appendix for Figure 1: Denise's subjective theory about face after 11 months in Taiwan). [17]

While the theory structure allows the analysis of its contents, it does not offer an explanation of this ill-balanced representation. Why does Denise learn so much about having and losing face, and so little about giving face? The interpretation of the biographical interviews suggests an explanation: [18]

Denise came to the south of Taiwan to study at the language institute of a local university. Soon after her arrival, she notices that people stare at her curiously wherever she goes. She is surprised that many people will start conversation with her to find out about where she comes from and why she is in Taiwan. She soon feels harassed by the great number of young men who try to engage her in conversation and by women who want to touch her blonde hair. She starts to resent the lack of privacy and the feeling that she stands out as a "foreigner" at all times. While her Chinese language skills progress, she realizes that many of her ideas meet with little understanding in her new environment. This concerns beliefs about the importance of environmental protection, liberal views about homosexuality or the right of young adults to choose their own way of life. At the
same time she is appalled by the attitudes and life plans of her Taiwanese acquaintances that, to her, appear outdated and unacceptable. She feels that these attitudes are expression of a different cultural system and tries hard to develop endurance and a "thick skin." Despite this effort for "tolerance" she does not increase her understanding, nor her acceptance of the "strange culture." Thus, she is finally caught in a state where she is continuously and painfully confronted with cultural difference, yet lacks creative and positive ways of handling it. Her interpretation of the Taiwanese concept of face is in accordance with this negative and passive outlook on local culture. Almost everything that Denise learns about face consists in, to her, aversive practice. Nothing would appear to increase her personal action potential. Since giving face is by nature an active strategy that creates options in social space, this part of the theory structure remains empty. Even when she is presented with a large number of valuable farewell presents when she quits her job as an English teacher at a Kindergarten, she fails to see a connection to the concept of giving face—a connection that most other interview partners confidently describe. In her general outlook on Taiwanese cultural practice as something to "endure," active and positive ways of investing and giving face are ignored. [19]

As this short example, as well as further results from this cultural psychological study, demonstrate, intercultural learning is profoundly shaped by idiosyncratic meaning structures, motives and perceptions. If face is not easily detected but only comes into view while the construct is gaining subjective validity, it is safe to conclude that "culture contact" is no objective, easily confirmed condition. Clearly, without adequate social categories, face-related incidents remain invisible to the uninitiated foreigner who may not even perceive "cultural difference," or "culture contact," at all. Curiously, cultural difference probably only becomes discernable when the formerly foreign concept has already partly been acquired and, therefore, has already lost some of its "foreignness." Paradoxically, the perception of cultural difference seems to rest on successful steps of bridging it (WEIDEMANN, 2004). [20]

The above example also illustrates that the documentation of subjective theories is a first step to identify individual world views and knowledge structures. Their understanding and explanation, however, requires additional (qualitative) data that allow a reconstruction of individual context variables. [21]

5.2 Results of study 2: Intercultural knowledge of long-term sojourners

As inter-individual comparisons were not the focus of the second study, no biographical interviews were carried out and analysis was restricted to structure graphics and thematically focused interview transcripts. The main objective of the analysis was to identify general characteristics of subjective theories, especially in comparison to those of the less experienced sojourners addressed by study one. Two structure graphics serve as an illustration: While Mr. Weber, a German engineer, can be considered a novice to the Taiwanese environment, Konrad has been living in Taiwan for thirteen years. Differences of structure graphics are clearly visible and are described in further detail below (see the Appendix for
Figure 2: Weber's subjective theory about face after 1 month in Taiwan, and Figure 3: Konrad's subjective theory about face after 13 years in Taiwan). [22]

The analysis of long-term sojourners' structure graphics reveals the following:

• Structure graphics contain a far larger number of content when compared to first theory graphics and in some cases still more than theory graphics that were produced at the end of a one-year sojourn. Long-term residents' knowledge about face is more comprehensive, elaborate and detailed. Differences are most noticeable in the fields of having and giving face but long-term sojourners are also aware of a large number of action and reaction alternatives in situations where face has been lost or hurt.

• Long-term sojourners (LTS) provide detailed knowledge on moderating factors and preconditions. Whereas structure graphs of novices typically feature only simple relations (A leads to B), structure graphics of LTS include a large number of intervening factors (A leads to B only under the condition that C) and relational information, which makes the overall picture far more complex.

• Whereas inexperienced sojourners often express that they are "not sure" and "don't know enough," LTS explain face-related incidents with great confidence. They also use face-related terminology with ease and in a highly differentiated way, often using the Chinese original terms as German translations are not readily available or lack the original emotional content.

• Structure graphics tend to rely on abstract categories instead of the occasional examples that feature in novices' structure graphics. While LTS easily refer to a large number of face-related incidents in the interview, structure graphics are more likely to be based on abstract commonalities and principles that regulate face-related behavior. It is most likely that these abstract categories not only enable LTS to speak about face differently but also to shape their social perception, as face-related behavior will be categorized more easily and effectively. In contrast, novices typically refer to isolated incidents without being able to integrate these occurrences into meaningful meta-structures. [23]

Findings lend support to the interpretation of intercultural learning as an inductive process that integrates multiple experiences and information into knowledge structures of growing abstractness. Comparing these characteristics of long-term sojourners' subjective theories to psychological concepts of "expertise" (SCHULZ, 1998), the interview partners in this study may well be regarded as experts on face. In order to arrive at a theoretically sound and empirically valid concept of intercultural competence, it seems, therefore, highly promising to further explore conceptual links to research on "expertise." [24]

A second observation seems noteworthy: during the interviews as well as during the structure formation session, interview partners often expressed difficulties rendering complex social rules into graphic representations that appeared as inadequately simple. Often-heard comments were that "things depend" and that
there were "no fixed rules." Interestingly, this belief in the malleability of social relationships and cultural rules was also noticeable during my attempts to recruit interview partners in the first place. Almost invariably, the initial expectation and fear of my (potential) interview partners was that they would be asked to draw a simple picture of cultural differences between "Germans" and "Taiwanese" that they felt would be inadequate to their subjective understanding of living in a cross-cultural environment. There was thus a far larger hesitation to participate in my research than for "newcomers" who were typically eager to gain some cultural understanding in the interview situation. This reaction of long-term sojourners is an interesting finding in itself as it reflects the distrust of, and often also bad experiences with, cross-cultural research that far too often transforms sojourners' complex views and experiences into simple truths and dichotomous constructs. [25]

As these observations show, the method proved less applicable to LTS who insisted on a large number of moderating factors and who believe that "things depend." The second study therefore also highlights the tacit preconditions of structure formation techniques: the readiness to reduce the complexity of real-world phenomena to simple rules and representations. [26]

Limitations of their use in cross-cultural settings become apparent: the hesitation to comply with structure formation rules may probably be regarded as another hint to long-term sojourners' successful adaptation to Taiwanese culture. [27]

6. Conclusions for the Use of Structure Formation Techniques

Structure formation techniques and related methods of graphic representation have also successfully, if rarely, been used in other intercultural communication studies. LUMMER (1994) interviewed Vietnamese refugees on their subjective theories about "integration" and compared these to integration theories held by responsible authorities and scientists. MÜTHEL (2006) investigates implicit theories of "trust" of German and Chinese co-workers, and KALLENBACH (1996) explores students' subjective theories about foreign language acquisition. Structure formation techniques have far more frequently been employed in other contexts and have been confirmed as a useful instrument to explore subjective everyday knowledge. As such they principally address the same topic that qualitative interviews also target but they also offer additional strong points (also cf. WEIDEMANN, 2007):

- Structure formation sessions offer the chance to carry on the thematic discussion that was initiated by the interview. Previously made comments may be elaborated, corrected or repeated during this session. Structure graphics may therefore serve the function of triangulation of methods.
- Communicative validation of subjective constructs and concepts: structure formation techniques stress the role of the participant as an equal research partner by actively involving him or her in discussing theory graphics. Central terms and constructs of the theory structure can thus be clarified during the structure formation session until communicative validation is reached.
Interview partners are thus involved in the process of interpretation and category building that is otherwise carried out by the researcher alone.

- Structure graphics constitute an easy-to-grasp representation of individual knowledge structures. As such, they may serve diagnostic functions (are the subjective theories accurate, functional?) or can be used as stimulus material (as in the longitudinal study presented here, or in group discussions). They may also serve as a starting point for focused modifications of dysfunctional subjective theories (MUTZECK, SCHLEE & WAHL, 2002). [28]

However, results from the presented study also reveal methodical limitations. As the example of Denise also shows, interpretations of theory graphics require context information that is neither contained in the visualization, nor in the structured interview on which it is based. In order to arrive at meaningful and "rich" reconstructions of individual viewpoints, structure formation techniques must be supplemented by additional instruments, such as open or narrative interviews that serve to contextualize the focused data, both situationally as well as biographically. Even in multimethod designs, it should be noted that:

- Structure formation techniques are restricted to representing cognitive content. Even if motives, actions and action outcomes are addressed, structure graphics do not provide behavioral data. Nor do they adequately address emotions. If required, additional methods should be used to cover attitudes, emotions, narrations or additional information that may be necessary for the interpretation of structure graphics.

- Structure formation techniques do not merely reconstruct previously existing subjective theories but take an active part in constructing them. Following the RPST’s belief in people as rational actors, the interviewer’s influence is not regarded as interview bias but a supportive action that helps interview partners to formulate their subjective theory.

- Structure formation techniques impose methodical rules that may be less appropriate for the subjective theories of certain interview partners, as in the case of the interviewed German long-term sojourners. Even though limitations of the method may be expressed by the interview partner, his/her "equal role" does not include the option to change structure formation rules.

- Structure graphics are a simplified format for visualizing subjective theories. While their simplicity is an advantage for some purposes, the inevitable loss of information may be a problem in other contexts. However, the degree of complexity reduction partly depends on the choice of representational rules which may be defined with respect to particular research aims and participants.

- The use of structure formation techniques beyond German (and Austrian) cultural contexts still needs to be explored. As the experiences with long-term German sojourners in Taiwan discussed in this paper suggest, there might be cultural limits to its use. The active role of the research partner may be unusual and less acceptable in some cultural contexts. In particular, the objective to reach communicative validation requires a shared understanding.
of the interview situation as non-hierarchical and a preparedness for open communication. Both preconditions are in stark contrast to cultural conventions of politeness in many societies. If used cross-culturally, as by a German researcher in a foreign setting, language competency becomes another important issue, though the visual format of data representation may also help to overcome articulation problems. Regarding the challenges of intercultural interview settings, all issues discussed by BEER (2007) also apply to the semi-structured interview that precedes the structure formation session. [29]

Despite these limitations, structure formation techniques appear to be a promising method in the context of multimethod research designs. They may increase our understanding of how elements of a foreign environment are perceived, if and in which regards cultural difference becomes relevant, and of how originally foreign elements are integrated into subjective psychological theories. In the context of the cultural psychological endeavor to understand how "psyche and culture [...] make each other up" (SHWEDER, 1996, p.73), they provide a means for investigating subjective meaning construction in intercultural contexts. [30]

In the field of intercultural communication research they might be used in order to explicate subjective theories of intercultural professionals and experts. Intercultural expert knowledge may then serve as input to intercultural training in specific professional fields. [31]

Research in the field of medical interventions shows that treatment may be less effective if it does not correspond to the patients' subjective theories about their ailment and healing. It may likewise be helpful to explicate subjective theories of clients, employees or other target groups of intercultural interventions as part of a needs assessment. [32]

As could be demonstrated, structure graphics may also be employed to document change processes. They may thus be put to use in longitudinal designs when modification of knowledge structures would be documented, and they could also be employed for the evaluation of intercultural training programs. Finally, subjective theories may serve as important heuristics for developing scientific theories. Attempts at formulating scientific theories of "integration" or "intercultural competence" could thus benefit from lay theories. Additional research questions may easily be envisionned. [33]

Acknowledgments

The author would like to thank the German Academic Exchange Service (DAAD) for making the empirical longitudinal research in Taiwan possible. Thanks also go to the Fritz Thyssen Foundation for financial support of the second study.
Appendix

Figure 1: Denise's subjective theory about face after 11 months in Taiwan

Figure 2: Weber's subjective theory about face after 1 month in Taiwan

Figure 3: Konrad's subjective theory about face after 13 years in Taiwan

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