

**Children's drawings of self and family:
Bridging cultural and universal perspectives**

Dissertation

zur Erlangung des Doktorgrades (Dr. rer. nat.)

des Fachbereichs Humanwissenschaften

der Universität Osnabrück

vorgelegt

von

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aus

Mannheim

Osnabrück, 2014

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Zweitgutachterin: Prof. Dr. Julia Becker

Acknowledgements

This thesis would not have been possible without the help of many people in different ways. First and foremost, I want to thank Heidi Keller for her enduring and continuous supervision and guidance throughout the research process. Already as undergraduate, her extensive and interesting research program impressed me and the lasting wish arose to work further in this field. As her doctoral student, Heidi gave me the opportunity for multifaceted experiences and insights into the scientific world. Whenever needed, she immediately found the time for critical and challenging feedback that promoted me in my further understandings.

Second, I would like to express my gratitude to Hartmut Rübeling, who accompanied me with helpful and supportive comments throughout the last years. To him and his contagious enthusiasm I owe my research interest in children's drawings. I perceived him as a patient, motivating, and supporting mentor who always had a critical look at the work progress. I would also like to thank Prof. Dr. Julia Becker for accepting to be the second evaluator.

I am particularly grateful to all my colleagues and students from the "Kopffüßlerprojekt", who helped me to collect the data in so many cultural groups and supported me in the coding-process. In this vein, I particularly want to thank Melanie Lenk, Müge Bayramoglu[†], Sina Schwarzer, Mirjam Böning, Sabrina Büßemaker, Jona Holtmannspötter, Marlene Hosak, and Vera Warnsing. I also wish to express my thankfulness to all families and children, who were willing to participate and thereby made this thesis possible. The special attraction of young children's drawings made it a pleasure to work with and look at them over and over again. Further, I would like to thank my friends and colleagues from the Culture and Development Lab for the inspiring discussions and the emotional support in times of stagnation. Without the exchange of frustration and the sharing of successful moments, the last years would have been much more disconsolate.

Last but not least, I want to thank my family for their enduring support throughout this long-term project. I thank Jonas, Lasse, and Juri who daily ensured that I keep a balance between scientific challenges at work and practical challenges at home. Their cheerfulness and affection prevented me from losing track of the most important things in life. I thank Simon for his patient encouragement, his emotional support, and practical assistance whenever needed, and I thank my parents for their steady readiness to bridge the gaps in childcare.

Osnabrück, February 2014

Ariane Gernhardt

Table of contents

| | | |
|----------|---|-----------|
| 1 | <u>INTRODUCTION</u> | 1 |
| 1.1 | THE CONCEPTION OF CULTURE AND CULTURAL MODELS | 2 |
| 1.2 | THE CULTURAL MODEL OF PARENTING | 5 |
| 1.3 | FROM CULTURAL MODELS TO THE EARLY UNDERSTANDING OF SELF AND FAMILY | 6 |
| 1.4 | THE REPRESENTATIONAL CHARACTER OF CHILDREN'S HUMAN FIGURE DRAWINGS | 10 |
| 1.5 | AN ECOCULTURAL APPROACH TO CHILDREN'S HUMAN-FIGURE-DRAWINGS | 13 |
| 2 | <u>EMPIRICAL STUDIES</u> | 18 |
| 2.1 | STUDY ONE: | 22 |
| | GERNHARDT, A., RÜBELING, H. & KELLER, H. (UNDER REVIEW). A CULTURAL PERSPECTIVE ON CHILDREN'S TADPOLE DRAWINGS: AT THE INTERFACE BETWEEN REPRESENTATION AND PRODUCTION. <i>CHILD DEVELOPMENT</i> . | 22 |
| 2.2 | STUDY TWO: | 24 |
| | GERNHARDT, A., RÜBELING, H., & KELLER, H. (2013). "THIS IS MY FAMILY": DIFFERENCES IN CHILDREN'S FAMILY DRAWINGS ACROSS CULTURES. <i>JOURNAL OF CROSS-CULTURAL PSYCHOLOGY</i> , 44(7), 1166-1183. | 24 |
| 2.3 | STUDY THREE: | 26 |
| | GERNHARDT, A., RÜBELING, H., & KELLER, H. (IN PRESS). SELF- AND FAMILY-CONCEPTIONS OF TURKISH MIGRANT, NATIVE GERMAN, AND NATIVE TURKISH CHILDREN: A COMPARISON OF CHILDREN'S DRAWINGS. <i>INTERNATIONAL JOURNAL OF INTERCULTURAL RELATIONS</i> | 26 |
| 3 | <u>DISCUSSION</u> | 28 |
| 3.1 | DISCUSSION OF THE STUDY RESULTS | 29 |
| 3.2 | THE PROPOSITION OF AN INTEGRATIVE FRAMEWORK OF CHILDREN'S HUMAN FIGURE DRAWINGS | 37 |
| 3.3 | LIMITATIONS AND OUTLOOK | 40 |
| 4 | <u>REFERENCES</u> | 43 |

Tables

| | |
|--|----|
| Table 1: Overview of presented studies | 21 |
|--|----|

Figures

| | |
|---|---|
| Figure 1: The cultural model of parenting (Keller, 2007, p. 103)..... | 6 |
|---|---|

| | |
|--|----|
| Figure 2: An integrative framework of children's human figure drawings | 39 |
|--|----|

Abstract

Within the framework of this thesis, three studies are presented that investigated cultural similarities and differences of preschool aged children's self- and family-drawings. The research was guided by the assumption that besides the basic structure of the drawing, specific drawing characteristics would vary cross-culturally, according to differences in cultural models and the associated understanding of self and others. Based on an ecocultural approach, families were systematically selected from diverse cultural contexts across and within national boundaries, representing three different cultural models: (1) the cultural model of psychological autonomy (characteristic for Western urban middle-class contexts), (2) the cultural model of hierarchical relatedness (representative for non-Western rural traditional contexts), and (3) mixed cultural models of autonomous relatedness (e.g., non-Western urban middle-class contexts, migration contexts). The participating children were of similar age, gender distribution, and had reached comparable structural levels of human figure drawings.

Overall, the studies revealed three main findings. First, it could be confirmed that there are basic similarities in children's graphic development. In line with previous reports, the studies demonstrated that the structural composition of the human figure as well as production principles did not differ significantly across cultures. Second, several content-based drawing features varied with cultural context and the associated cultural model. In particular, figure size, the facial depiction, and gender-specific characteristics could be linked to the culturally shaped understanding of self and others in the respective cultural context. Third, it was shown that the composition of children's family-drawings corresponded to the structure of families in the particular cultural context, mainly with regard to number and position of family members, figure size- and gender-differentiation.

The results are discussed with a focus on the role of general and culture-specific drawing characteristics in preschool aged children's drawings of self and family. Based on these and former research findings, an integrative framework of children's self- and family-

drawings is proposed in order to shed light on the origin and relationship of the investigated drawing characteristics. Open research questions are pointed out, as well as limitations and practical implications of the study results.

1 Introduction

*I paint objects as I think them, not as I see them
(Pablo Picasso)*

„If you were asked to draw a picture of yourself, what would your picture look like? Would it show a single figure in the middle of the page? Would you attempt to portray your most typical features (e.g., hairstyle, clothes, facial features)? Or would you show yourself at work, at home, with friends, or within the family?“ (Gardiner & Kosmitzki, 2005, p. 131).

This statement contains two underlying assumptions: First, it is supposed that drawings of the self may reveal something about the drawer him- or herself, more specifically about his or her understanding of self. Second, the specific understanding of self may be conceptualized differently. Indeed, there is ample evidence for both assumptions.

With regard to the first issue, especially children’s drawings have been interpreted as “mirror to their minds” (Cherney, Seiwert, Dickey, & Flichtbeil, 2006), reflecting their inner thoughts, feelings, and perceptions (summarized in Cox, 2005). As these mental states describe essential parts of children’s emerging understanding of self, drawings may provide a developmentally sensitive, non-verbal access to this early self-understanding. On the other hand, there is substantial evidence that the specific understanding of self – and of persons more generally – is situated in sociocultural context (e.g., Kağıtçıbaşı, 2007; Markus & Kitayama, 1991). As integral part of broader cultural models, they relate to culture-specific norms, values, as well as parental beliefs and practices, which in turn impact children’s development and their understanding of self and others from early on (Keller, 2007). Thus, whether children perceive themselves and others as part of a social unit or rather as separate and unique individuals can be regarded as a function of their early socialization experiences, which is situated in sociocultural context (Markus & Kitayama, 1991).

Within the scope of this thesis, three studies will be presented that investigated children’s drawings of themselves and their families from different cultural contexts in order

to examine their linkage to culturally shaped understandings of self and others, in consideration of universal aspects of children's graphic representations. In the first sections of this chapter (1.1), I will provide an outline of the conceptual framework underlying these studies by introducing the theory of cultural models. Following an ecocultural approach, it is argued that the specific combination of ecological and sociodemographic variables result in associated cultural models. The impact of cultural models upon parents' goals and socialization strategies are dealt with in chapter 1.2. The developmental consequences concerning the emerging understanding of self and others are addressed in chapter 1.3. In the next part, I will introduce the topic of children's human figure drawings as an approach to gain insights into children's representational world (1.4). In chapter 1.5, finally, an overview of cultural variations in children's drawings and the linkages to the ecocultural approach is provided.

1.1 The conception of culture and cultural models

Culture can be defined very differently. According to Gardiner and Kosmitzki (2005), there are almost as many definitions as researchers in the field. Nevertheless, most of them agree that the term culture refers to the shared beliefs, values, practices, behaviors, symbols, and attitudes of a particular group of people. Considering all these aspects, culture can be understood as incorporating two components, operating inside and outside of individuals: One is the material side, including *shared activities*, such as cultural practices and behaviors, but also symbols, artifacts, and physical objects. The other component can be described as the symbolic side of culture, referring to *shared meanings*, such as cultural values, beliefs, attitudes, and interpretations (Greenfield & Keller, 2004; Keller, 2007; Rogoff, 2003). Following this approach, culture is understood as a socially interactive process, which is situated in everyday life and transmitted mainly through repeated everyday practices and

accompanying evaluative processes (Crossley, 2000; Demuth, Keller, & Yovsi, 2011; Greenfield & Keller, 2004). Subsequently, caregivers direct the pathway for the development of culture-specific self-ways of their children from birth on within the context of everyday interactions and the construction of implied social meaning systems.

Starting from the *ecocultural approach* (e.g., Berry, 1976; Bronfenbrenner, 1989; Keller, 2007; LeVine et al., 1994; Whiting, 1963), the sources for variations in cultural practices and interpretations of different groups of people can be traced back to the constraints and resources of the ecological and social environment. In particular, the specific combination of ecological (e.g., climate, geography) and socioeconomic parameters, (e.g., economic system, population density, fertility and mortality rate, family structure, and education), constitute specific environments that necessitate particular conceptions of competence and adaptation. Thus, the coping strategies with the demands of these environments result in shared practices and interpretations of specific groups of people, which can be understood as organized in *cultural models* (Keller, 2007). The core dimensions of every cultural model are the two basic human needs of *autonomy* and *relatedness* that are inherent in all individuals across cultures (e.g., Ryan & Deci, 2000). The two needs are regarded as equally important to all people, though their specific manifestation and interplay differs across cultural models, according to their adaptive value in the respective environment. Former research mainly focused on three *cultural contexts*, which are described in the following sections, along with the associated cultural models.

A first cultural context is situated in urban regions of post-industrialized Western information-based societies, which have also been described as “WEIRD” societies¹: “Western, Educated, Industrialized, Rich, and Democratic” (Henrich, Heine, & Norenzayan, 2010). It is composed of highly educated middle class families with late parenthood, few

¹ The term WEIRD refers to the fact that most psychological knowledge is derived from this cultural group, although it is a not a very representative one

children, and a nuclear family structure. In this context, an individual psychological conception of autonomy and relatedness is prevalent, expressed through a strong emphasis on mental states and personal traits, such as own feelings, cognitions, and preferences (Keller, 2012). Traits such as independence, competitiveness, self-reliance, uniqueness, and assertiveness are appreciated and regarded as necessary to become a successful member in the society (e.g., Markus & Kitayama, 1991). Relationships, also within the family, are based on individual preferences, quasi-equal partnerships, and self-defined commitment (Keller & Kärtner, 2013).

A second cultural context is situated in non-Western rural regions of the “majority world” (Kağıtçıbaşı, 2005), where subsistence based economy, low levels of formal education, and extended family structures with many children and early parenthood is prevalent. In this context, a hierarchical conception of relatedness and an action-oriented conception of autonomy is characteristic (Keller, 2012). Families are hierarchically organized and structured as an economically and socially interdependent and inseparable social unit. Every family member enacts his or her responsibilities by being compliant, sharing resources, subordinating to the hierarchical structure, and actively fulfilling their prescribed roles and obligations (Greenfield, Keller, Fuligni, & Maynard, 2003).

Highly educated urban middle-class families in non-Western societies represent one of multiple possible combinations of the previously described contexts. In the last decades, rapid changes towards industrialization in non-Western societies went along with extensive rural-to-urban migration, rapid urbanization, and an increase of formal education and welfare in some parts of the population. Thereby, the adopted Western-oriented education and economic system triggered the importance of psychological autonomy (LeVine, Miller, Richman, & LeVine, 1996). Simultaneously, the maintenance of traditional hierarchical relational patterns remained prevalent within the family (Chaudary, 2004; Kağıtçıbaşı, 2007).

Overall, cultural contexts may not be equated with national borders or single ethnic groups. Rather, within the same country, different cultural models may exist, according to the variety of socioeconomic conditions. Furthermore, as cultural models are conceptualized in terms of adaptive and flexible mindsets, they are highly susceptible to changes of these parameters. Historical and societal changes, for instance, may lead to the formation of new cultural models after only a short period of time (e.g., Keller, Borke, Yovsi, Lohaus, & Jensen, 2005; Keller & Lamm, 2005). Likewise, migration processes lead to new cultural milieus, influenced by the change from one cultural context into another. In particular, the specific interplay of the two independent dimensions *cultural maintenance* of the culture of origin and *cultural adaptation* of the new mainstream culture have been proposed to result in different acculturation strategies (e.g., Berry, 1992).

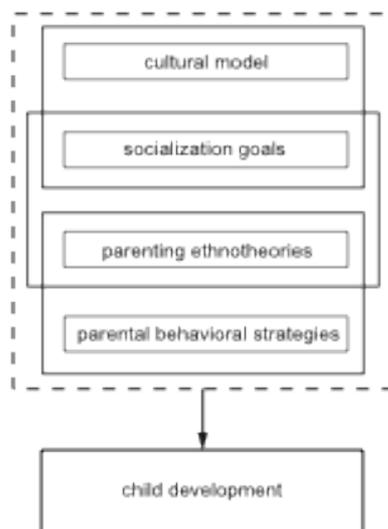
1.2 The cultural model of parenting

In order to examine young children's culture-specific understanding of self and family, it is important to be aware of the linkage between cultural models and children's developmental pathways. In general, children all over the world are faced with the same developmental tasks (Havighurst, 1972), such as the formation of close relationships, knowledge acquisition, and the development of an understanding of self and others. However, the solutions of these tasks vary cross-culturally, in line with caregivers' aim to raise their children to competent members of the respective societies (Kağıtçıbaşı, 2007).

The linkage between cultural models and children's developmental pathways has been conceptualized as *cultural model of parenting* (Keller, 2007). The model differentiates between hierarchically organized, interrelated representational and behavioral levels, explaining different ways of parenting and developmental consequences (see Figure 1). The first level defines the impact of the prevalent cultural model upon parents' socialization goals

as implicit and explicit representations of what is perceived as important skills and competencies. Next, the specific socialization goals are transformed into implicit and explicit parental ideas and beliefs about appropriate and inappropriate parenting strategies to reach the preferred goals. These parental ethnotheories in turn lead to specific child rearing practices, which organize and structure the interactive and co-constructive processes between caregivers and children. Finally, within the framework of repeated, daily interactions, children are informed about the meaning of their social experiences (e.g., Demuth et al., 2011; Rogoff, 2003) and they gradually develop a culturally informed understanding of themselves and others. Thereby, the solution of earlier universal developmental tasks facilitates particular solutions of later tasks, leading progressively to culture-specific, structurally coherent developmental pathways (Greenfield et al., 2003).

Figure 1: The cultural model of parenting (Keller, 2007, p. 103)



1.3 From cultural models to the early understanding of self and family

The postulated structure of the cultural model of parenting and its consequences for parents' strategies and children's developmental pathways has been confirmed in a series of

systematic studies for the three previously introduced cultural contexts. In particular, mothers' socialization goals, their ethnotheories, and childrearing practices could be linked to children's behavior in their first years of life (Keller, 2007). Thereby, special attention has been laid on cultural variations in the development of children's early understanding of self and family. As social products, they develop mainly in the context of daily interactions within the family as the most important socialization context in early childhood (e.g., Kağıtçıbaşı, 2007). Thus, the understanding of self and the understanding of family are interrelated constructs that should not be regarded independent of each other: If the family is conceptualized as a social unit, their individual members are primarily seen as parts of the family-system as well. An individual understanding of self, in contrast, is related to less commitment and obligation of all family members. So far, the emerging cultural understanding of self and family has been investigated in the context of child-caregiver interactions in the first year of life, mirror self-recognition in toddlerhood, and mother-child discourses with 3 and 4 years of age (summarized in Keller & Kärtner, 2013).

In the context of Western urban middle class families, mothers have been demonstrated to endorse the development of self-confidence, independence, and uniqueness, in line with the predominant orientation towards psychological autonomy (Keller et al., 2006). From early on, mothers treat their infants as quasi-equal partners by exploring and verbalizing their mental states, taking their perspective, and leaving pauses for their infants to respond (Demuth et al., 2011). They endeavor interactional contexts of exclusive attention and a distal interaction style, which is characterized by instantiating and maintaining face-to-face interactions and object stimulation (Keller, Borke, Chaudary, Lamm, & Kleis, 2010; Keller et al., 2009). Thereby, they leave the lead to their children and are highly responsive to their initiatives (Keller et al., 2010). Overall, within the context of their early social experiences, children are perceived and treated as individual and independent agents, paving the way for a developmental trajectory to a psychologically autonomous understanding of self and family.

Indeed, infants from this context have been shown to engage longer in face-to-face interactions with their mothers (Kärtner, Keller, & Yovsi, 2010) and to more often express themselves vocally than infants of other cultural contexts (Lohaus et al., 2011). As a first expression of an early conception of self in the course of the second year of life, children recognize themselves earlier in a mirror than do children from rural traditional contexts (Kärtner, Keller, Chaudary, & Yovsi, 2012). This is interpreted as an indicator for children's awareness of themselves as independent and intentional agents. Longitudinal studies furthermore confirmed that parents' direction to their infants' mental states in the course of face-to-face interactions at three months of age promotes mirror self-recognition in toddlerhood (Keller, Kärtner, Borke, Yovsi, & Kleis, 2005; Keller et al., 2004). In preschool age, research on narrative discourses revealed that children are more self-centered in past-event talk with their mothers (Schröder et al., 2011) and focus more on personal attributes when describing themselves (Wang, 2006) than children from other cultural contexts.

In the context of non-Western rural traditional families, mothers set value on goals that reflect their orientation towards hierarchical relatedness, such as obedience, respect, and social harmony (Keller et al., 2006). Their ethnotheories mainly refer to the shared responsibility of childcare within the community, as children grow up within a network of multiple caregivers who appreciate calm and emotionally neutral infants (Keller & Otto, 2009). Mothers prefer a proximal interaction style (Keller et al., 2006), stressing close body contact and rhythmic motor stimulation, which "create a pattern of symmetrical co-participation rather than a negotiable dyad" (Demuth et al., 2011, p. 14). The emphasis on children's gross-motor development ensures the early participation in household chores (Keller, 2007). The relationship between caregivers and children resembles an apprentice-expert relationship, where the expert (mother) trains an apprentice (child). This is characterized by the use of a directive, repetitive conversation style (Demuth et al., 2011;

Schröder et al., 2013) and a “didactic” interaction style, which is based on the principles of reinforcement, repetition, and hierarchy (Bredenkamp & Copple, 1997; Keller et al., 2010).

In line with these strategies, children’s development proceeds in a different pattern as described for children from Western urban middle-class families. Within the first months of life, the proximal parenting style and rhythmic stimulation accelerates children’s gross-motor development (Lohaus et al., 2011). Furthermore, most one-year-old children do not show stranger anxiety (Keller & Otto, 2009), according to mothers’ favor of a calm, emotionally neutral child (e.g., Demuth et al., 2011; Keller et al., 2006). In the second year of life, children are more compliant to their mothers’ requests than children from Western urban contexts, while at the same time, less of them recognize themselves in a mirror (Kärtner et al., 2012). Keller and Kärtner (2013) comment on this finding that “in line with the hierarchical relational orientation, their sense of self needs to be differently organized, especially centering on the communal understanding of self as part of a system and focusing on roles and duties instead of self-actualization” (p. 94). During preschool years, children subsequently direct their past-event talk rather to social contents (Schröder et al., 2011) and refer more to social roles and relationships when describing themselves (Wang, 2006).

Hybrid contexts, such as urban middle-class and immigrant families who originate from traditional non-Western rural regions, have been shown to emphasize both, psychological-autonomous as well as hierarchical-relational socialization goals (Kärtner, Borke, Maasmeier, Keller, & Kleis, 2011; Keller et al., 2007). It is assumed that the increase of formal education and the adoption of Western-oriented education systems result in economic independence from the family and thereby boosts the importance of individuality and the focus on own mental states (Kağıtçıbaşı, 2003; LeVine et al., 1996). In migration contexts, domain-specific models additionally postulate the flexibility of the cultural orientation concerning different life-domains (Arends-Tóth & van de Vijver, 2004). The strive for psychological autonomy, for instance, has been found particularly with regard to

public domains, such as educational and work related situations (Kağıtçıbaşı, 2003), while the maintenance of cultural values and practices has been observed mainly in private domains. This is expressed in close relationships within the family, obedience, and role expectations (Arends-Tóth & van de Vijver, 2003).

With regard to children's development, previous studies confirmed that the cultural orientation in these hybrid contexts is also reflected in children's developmental pathways, for example with regard to self-regulation and self-recognition (Kärtner et al., 2011). Yet, due to the greater heterogeneity and rapid societal changes, findings are often not as clear as in the previously described ones (Keller, 2007). With regard to autobiographical memory, for instance, memory contributions of children from hybrid-contexts were similar high as from Western urban middle-class contexts; they were, however, differentially predicted by mother-child interaction styles (Schröder, Kärtner, Keller, & Chaudary, 2012).

In conclusion, there is substantial evidence that the prevalent cultural model is already manifested in children's emerging understanding of self and family in the first years of life. During preschool age, children's fine-motor and cognitive skills rapidly increase and offer the opportunity to use their human figure drawings as a further developmentally sensitive method to gain access to their non-verbal representational world (e.g., Cox, 2005).

1.4 The representational character of children's human figure drawings

For more than 100 years, many researchers from different fields have been engaged in children's drawings. Most of them were guided by the (implicit) assumption that children's early graphic depictions are mental representations of internal states. There is a long tradition, for instance, to associate children's drawings of the human figure with clinical symptoms (e.g., Koppitz, 1968), intelligence (e.g., Goodenough, 1926; Harris, 1963), stage of development (e.g., Ziler, 1958) or personality (Arnheim, 1980; Cromer, 1983). However, the

question remains, what exactly is reflected in children's (human figure) drawings, and to what extent they are "mirrors" to their minds (Cherney et al., 2006).

George-Herbert Luquet (1927/2001) was the first to propose that a child's drawing motif has a correspondence on the psychological level by stating, "the object being drawn, before it can be translated onto the paper, necessarily takes the form of a visual image" (p. 47). Luquet further argued that this image or *internal model* is not a mere reproduction of the artist's perception, but "a refraction of the objects to be drawn through the mind of the child, a creative, though spontaneous, reconstruction arising from an extremely complex process of elaboration" (p. 47). He concluded that children's drawings do not only display their visually perceived image of reality, but also provide insights into children's mental representations of the subject matter they had depicted (see also Jolley, 2010).

Nevertheless, despite the general approval of Luquet's approach, almost 90 years later it is still unclear, how this internal model exactly looks like (Cox, 1993). In particular, the tadpole figure as the earliest recognizable form of human figure drawings, basically consisting of only a round form (head) and two vertical lines (legs) attached to it, raised questions about the relationship between children's internal model and their drawings. While some researchers assumed that the occlusion of the trunk is due to children's deficient internal model of the human body (Bremner, 1985; Harris, 1963; Piaget & Inhelder, 1972), others have argued that the internal model is complete, but that young children might have difficulties to translate it onto the paper (e.g., Freeman, 1980). Cox (1993), on the other hand explained the discrepancy between internal model and drawing outcome by children's particular interest in specific or salient body parts. Likewise, Luquet (1927/2001) assumed that objects vary in their relative importance or value to the child, which is reflected in their drawings mostly through occlusion, inclusion, or placement of objects and details. Indeed, there is substantial evidence that children's mental image of the human figure is more complete than can be inferred from their drawings. Golomb (1981), for instance, showed that

tadpole drawers were able to name the occluded body parts and to point to them on their body or on human figure drawings and Fayol, Barrouillet, and Chevrot (1995) demonstrated that 3-years-olds were able to sort human-figure-drawings according to their grade of elaboration.

In recent years, many researchers argued that drawing is not a “unitary faculty” (van Sommers, 1995, p. 60), but rather a complex process and interrelated with different domains and mental processes (see also Kirkham, Stewart, & Kidd, 2013; Toomela, 2002). The literature specifically focused on children’s cognitions, emotions, and the perceived value of the subject matter as influential for children’s drawings of persons.

Concerning cognitive aspects, it has to be noted that children’s drawing development from early scribbles to recognizable, figurative representations of real objects can be considered as the interplay of three developmental areas, namely the improvement of fine-motor skills, perceptive skills, and cognitive skills (Toomela, 2002). Children’s increase of memory capacity (van Sommers, 1995), the acquisition of the symbolic meaning of objects (DeLoache, 2004), and the development of planning strategies (Golomb, 2004) describe important cognitive achievements for drawing development. Between 3 and 4 years of age, for instance, children have been demonstrated to proceed in their general use of mental representations (e.g., Perner, 1991). This is expressed among others in their increased and more flexible use of objects in symbolic play (Striano, Tomasello, & Rochat, 2001). Concurrently, most children start to ascribe meaning to their scribbles, indicating that they view their drawings as representatives for something other than itself (DeLoache, 2004). In the further course of the third year, most children also begin to produce their first recognizable figures (e.g., Cox, 1993; Matthews, 1984). Thereby, they already apply planning strategies, for instance concerning the relative size of their figures (Silk & Thomas, 1988), the serial order (Freeman, 1980), or the arrangement of the depicted persons (Cherney et al., 2006; Golomb, 2004; Lange-Küttner, 2009). Previous studies further demonstrated that children vary specific drawing features with regard to the emotional connotation of the

depicted object and its perceived importance. Specifically, children increase figure sizes with perceived importance (Aronsson & Andersson, 1996; Craddick, 1961, 1963) as well as with a positive emotional connotation of the subject matter (Burkitt, Barrett, & Davis, 2003, 2004).

Overall, there is ample evidence that children's human figure drawings are broadly shaped by their internal states, in particular by their cognitions, emotions, and preferences, which are inherent parts of their developing understanding of self, family, and more generally of persons. As these understandings have been shown to vary with cultural context from early on (see chapter 1.3), it can be expected that children's drawings of themselves and their family reflect these differences.

1.5 An ecocultural approach to children's human-figure-drawings

It has been often assumed, that the development and nature of children's human figure drawings follow general, universal patterns (Arnheim, 1974; Freeman, 1980; Goodenough, 1926; Kellogg, 1969; Luquet, 1927/2001). Indeed, there is some evidence for similarities in children's graphic representations of persons across cultures. The tadpole figure, for instance, has not only been observed in Western regions (e.g., Freeman & Hargreaves, 1977; Machón, 2013; Schoenmackers, 1996), but even in non-Western remote areas, which lack graphic representations from other cultural contexts (Cox, 1993; Liebertz, Richter, & Winter-Uedelhoven, 2001; Rübeling et al., 2011). As this may be indicative of a general, *structural* equivalence of children's drawing development, the progress from simple schemes to more complex forms is often regarded as a universal phenomenon (Bombi, Pinto, & Cannoni, 2007; Golomb, 1992; Jolley, 2010). This assumption, however, is not undisputed. The first, who challenged this view, was Paget (1932). He collected 60.000 drawings from rural African and Asian areas. The drawings illustrated a large spectrum of possibilities to draw the human figure. They did not only differ with regard to single features such as the inclusion of

genitalia, but in some cases also concerning the structure of the figures. While children from Western contexts usually depicted the trunk as a distinct round or rectangular form, children from several rural sub-Saharan contexts preferred other structural forms, such as stick figures, bi-triangular bodies, or chain-like figures. Mainly on the basis of this and later collections indicating broad cultural differences of human figure drawings, Cox (1993) concluded that “there is no ideal way of representing the human figure but many possible solutions” (p. 120). Jolley (2010), however, questioned this conclusion and assumed that the reported structural differences might be not as widespread or significant as they first appeared.

Besides the structure, children’s human figure drawings have been also assumed to underlie general drawing *principles*, mainly referring to the use of drawing rules or procedural schemes. In a series of experimental studies in Great Britain, Freeman (1980) observed that tadpole drawers attached arms to pre-drawn human figures depending on whichever was larger, head or trunk. In a more general sense, he also pointed out the importance of drawing demands and cue-dependencies, which affect the drawing outcome by increasingly restricted degrees of freedom while drawing (see also Barrett, 1983). It has been demonstrated, for instance, that already young children considered the proportions between (Silk & Thomas, 1988) as well as within persons (Allik & Laak, 1985) during the drawing process. This has been referred to as ordinal scaling. However, although several authors presumed the existence of general production principles in children’s human figure drawings, to my knowledge, so far no systematic study has been conducted to prove this assumption cross-culturally.

Moreover, even if there are cultural similarities concerning the basic structure of human figure drawings and underlying production principles, this does not preclude cultural influences on other aspects of the drawing. By now, there is empirical evidence that children’s human figure drawings, and in particular their drawings of self and family, vary with regard to figure size (Aronsson & Andersson, 1996; Meili-Dworetzki, 1981; Payne, 1996; Richter, 2001), variety and shape of details (Cherney et al., 2006; La Voy, Brauch, Luxenberg, &

Nofsinger, 2001; Wilson & Wilson, 1984; Yusuf, 2010), and the depiction and positioning of family members (Payne, 1996). Regarding the causes of these cultural variations, however, many authors refer to single impact factors, such as socialization practices (Richter, 2001) or globally on cultural values (Aronsson & Andersson, 1996; La Voy et al., 2001). Only recently, Jolley (2010) summarized various sources for cultural differences in children's drawings to three categories: (a) differences in art culture, education, and drawing resources, (b) different drawing models, and (c) differences in environment, lifestyle, and cultural values. By applying the ecocultural approach however (see chapter 1.1), these sources can be considered as integral parts of the cultural context (e.g., differences in environment and drawing resources) and the associated cultural model, addressing multiple interrelated areas of life, including cultural values, education, and lifestyle (Keller, 2007). The investigation of children's human figure drawings within this broad theoretical framework therefore enables us to generate and prove differentiated expectations about the generality and culture-specificity of drawing characteristics.

Indeed, first empirical studies suggest a linkage between cultural models and several drawing features. These are mainly of *stylistic* nature, concerning the concrete depiction of features on a content level, such as figure size, number, or design of details. *Figure size*, for instance, has been shown to vary with the prevalent understanding of self and others across cultural contexts. Corresponding to the promotion of voluminous, self-contained selves in Western urban middle-class families (see chapter 1.1), children's self-drawings have been shown to be comparably tall (Rübeling et al., 2011; Schröder et al., 2011). The self-depictions of children from non-Western rural contexts, in contrast, were considerably smaller, in line with the prevalent communal understanding of self and others as parts of the broader family system (see chapter 1.1). The figure height from non-Western urban children has been demonstrated to be intermediate (Schröder et al., 2011). Yet, there is no empirical evidence about figure size of children with migration background.

A further reported culturally sensitive feature of children's human figure drawings concerns the *depiction of the face*. In early studies, it was found that children from non-Western rural contexts often omit facial details (Dennis, 1960; Paget, 1932), which was explained by the hierarchical family structure, the cultural value of obedience, and the related behavior to avoid eye contact (Arnoud, 1981). Since then, cross-cultural studies could substantiate the assumed interrelation between cultural models, socialization goals, and caregiver's interaction practices (see also chapter 1.2). Caregiver-infant interactions in contexts with a hierarchical-relational orientation are characterized by close body contact and body stimulation (Keller, Borke, et al., 2005; Keller et al., 2006), which has been related to social cohesion and the acceptance of norms and values (Hetherington & Frankie, 1967; MacDonald, 1992). In Western urban middle-class contexts, in contrast, face-to-face interactions are the primary mode of caregiver-infant-communication and has been demonstrated to accelerate children's perception of themselves as self-sufficient, causal actors (Keller, Kärtner, et al., 2005). Besides, previous research demonstrated that the depicted facial expression corresponds with cultural values and display rules of emotions within a specific culture (Dennis, 1966; La Voy et al., 2001; Super & Harkness, 1986).

Generally, it can be assumed that children try to model their drawings in line with what they consider as 'good depictions of themselves and their family'. For instance, they might design specific drawing features according to what they perceive as appreciated within their cultural model. Children from non-Western rural contexts, who learn to stay emotionally neutral and to control their emotions from early on (Keller & Otto, 2009), might prefer emotionally neutral facial expressions. Children from urban middle-class contexts, in contrast, are supported in their emotional expressiveness, and the display of positive emotions is a central value of child rearing (Keller & Otto, 2009). This might be reflected in the preference for smiling expressions in their drawings. Yet, the systematic examination of these assumptions concerning individual features of self- and other-depictions is still pending.

Another linkage between cultural models and specific drawing features concerns the *composition of family-drawings*. Previous research demonstrated that between 3 and 4 years of age, children begin to plan the arrangement of their drawings, indicating that it comprises symbolic information (Cherney et al., 2006; Golomb, 2004). Spatial proximity between the depicted figures, for instance, has been linked to closeness of relationships (Bombi et al., 2007). Previous cultural studies with school children showed that the inclusion and occlusion of persons, as well as their relative size reflect the perceived importance and hierarchical structure within the family (Andersson, 1995; Payne, 1996) as well as within an educational setting (Aronsson & Andersson, 1996). Furthermore, the pronunciation of gender characteristics within family-drawings may be associated with the hierarchical structure of families in non-Western traditional contexts (Laosa, Swartz, & Diaz-Guerrero, 1974). In these contexts, families are often organized patriarchally, which may result in a more accentuated differentiation and separation of boys and girls (e.g., Sunar, 2002; Sunar & Fisek, 2005). Yet, it is still an unanswered question of how children in preschool age and from different cultural contexts composite and arrange the drawings of their families.

In conclusion, our knowledge about cultural similarities and differences in children's human figure drawings is mainly derived from three different sources, (1) experimental studies with children from Western urban backgrounds, (2) unsystematic drawing collections from several cultural contexts many years ago, and (3) empirical cross-cultural studies that lack a well-grounded theory to embed the findings. It is still an unresolved question, which drawing characteristics are of general nature and which can be regarded as culture-specific. In order to learn more about the possibly interlaced relationship between general and culture-specific characteristics, it is of particular importance to examine these aspects simultaneously.

2 Empirical Studies

The empirical studies of the present thesis served to systematically examine cultural and general influences on preschool aged children's graphic representation of themselves and their families. By applying the ecocultural approach, we included children from diverse sociocultural contexts, representing different cultural models. Based on the assumption of universal drawing aspects concerning the structure of the human figure and underlying production principles, the question arises, in which way single drawing features correspond to young children's understanding of self and family. In all studies, we focused on homogeneous cultural groups, each one representing one of the following cultural models:

- The cultural model of psychological autonomy was represented by Western urban highly educated middle-class families from Berlin and Osnabrück, Germany (Study 1, 2, and 3), and Stockholm, Sweden (Study 1).
- The cultural model of hierarchical relatedness was represented by non-Western traditional families from rural districts around Kumbo, Cameroon (Study 1 and 2), rural Rajasthan, India (Study 1), and the rural Marmara Region, Turkey (Study 3).
- The mixed model of autonomous-relatedness was represented by non-Western urban highly educated middle-class families from Ankara, Turkey (Study 1, 2 and 3), San Rosé, Costa Rica (Study 1) and Tallinn, Estonia (Study 1), as well as by Turkish migrant children from Osnabrück, Germany (Study 3).

In order to gain more systematic knowledge about the specific manifestation and linkage between culture-specific and universal drawing features, we focused (1) on cultural groups that represented different cultural models (all studies), (2) on cultural groups from diverse parts of the world that represented the same cultural model (Study 1), and (3) on cultural groups within the same country representing different cultural models (Study 3). Thereby, the focus of analysis was laid on three different drawing aspects: (1) the content and

stylistic nature of self- and family-drawings, (2) the structure of the depicted figure, and (3) underlying drawing principles.

With regard to the examination of culturally shaped developmental pathways, so far, research has mainly focused on children's development in the first four years of life (Keller & Kärtner, 2013). In the present studies, we aimed to enlarge this knowledge in two ways: first by extending the age range up to six-year-old children and second, by focusing on children's non-verbal, graphic representations of self and family. At this age, children from different cultural contexts start to draw figurative depictions of the human figure (Cox, 1993), and they know about the symbolic meaning of drawings (DeLoache, 2004). Moreover, children's drawings have been shown to reflect their internal cognitions, emotions, and preferences (see chapter 1.4). Building on previous findings that children's figure size corresponds to the prevalent understanding of self and others (Rübeling et al., 2011; Schröder et al., 2011), three studies were conducted to broaden this knowledge.

In the first study presented, we focused simultaneously on general and culture-specific drawing patterns underlying children's tadpole self-drawings. As the first figurative representation of the human figure, tadpole drawings provide the possibility to investigate cultural similarities and differences at a very early stage of drawing development. So far, it is often assumed that these drawings are based on general principals regarding children's graphic development (Freeman, 1980), due to the widespread existence of tadpole drawings in many parts of the world (e.g., Cox, 1993). On the other hand, previous studies demonstrated various cultural differences with regard to children's human figure drawings (e.g., Aronsson & Andersson, 1996; Richter, 2001; Rübeling et al., 2011; Schröder et al., 2011). It is therefore the aim of this first study to investigate tadpole self-drawings from different cultural contexts in order to contribute to our knowledge of these early forms of self-representations. Based on these findings and previous studies about cultural variations in children's self-depictions, the focus of the second study was laid on children's graphic representation of their family. We

assumed that in line with cultural differences in children's self-depictions, their family-drawings would be related to the prevalent cultural model as well. In Study Three, we examined children's self-, flower- and family-drawings from a migrant context in comparison to those from children living in their culture of origin or the mainstream culture. Thereby, it was possible to apply the formerly achieved knowledge about culture-specific drawing characteristics to investigate the consequences of the formation of a new cultural milieu and of diverging socialization influences upon children's early understanding of self and family. Specifically, we examined the drawings from Turkish migrant children in Germany in comparison to native Turkish and native German children from rural and urban contexts, respectively (see Table 1 for an overview of the studies).

Table 1: Overview of presented studies

| | Study 1 | Study 2 | Study 3 |
|---|--|---|--|
| <i>Aim of study</i> | Given the assumption of universal production principles underlying the tadpole figure, the study examined, in what way single drawing characteristics are subject to cultural influences | Examination of cultural differences in preschool aged children's family-drawings as indications of differences in their early understanding of family in three cultural contexts | Examination of migrant children's self- and family-drawings as compared to those from children of their culture of origin or the mainstream culture as indications of their early understanding of self and family |
| <i>Cultural model</i> | | | |
| <i>Psychological autonomy</i> | German urban Swedish urban | German urban | German urban German rural |
| <i>Hierarchical relatedness</i> | Cameroonian rural Indian rural | Cameroonian rural | Turkish rural |
| <i>Autonomous-relational model</i> | Turkish urban Costa Rican urban Estonian urban | Turkish urban | Turkish urban Turkish migrants |
| <i>Drawings</i> | Self-drawings (tadpole) | Family-drawings | Self-drawings Family-drawings Drawings of a flower |
| <i>Analyzed features</i> | <ul style="list-style-type: none"> • Figure size • Facial details • Facial expression • Head-to-legs-ratio • Body-proportion effect | <ul style="list-style-type: none"> • Figure size • Facial details • Facial expression • Arrangement of family members • Spatial organization | <ul style="list-style-type: none"> • Figure size (of self and flower) • Arrangement of family members • Gender-specific features • Torso type |

2.1 Study One:

Gernhardt, A., Rübeling, H. & Keller, H. (under review). A cultural perspective on children's tadpole drawings: at the interface between representation and production. *Child Development*.

Theoretical background: In line with the widespread existence of tadpole drawings, it is often assumed that they are based on general production principles. The body-proportion effect, for instance, describes the finding that tadpole drawers consistently attach arms to pre-drawn head-trunk-figures to whichever is larger, head or trunk. Although this effect has not yet been investigated cross-culturally, it is often regarded as a universal phenomenon. On the other hand, previous research already demonstrated broad cultural differences of single features in children's self-drawings (e.g., Aronsson & Andersson, 1996; Richter, 2001; Rübeling et al., 2011; Schröder et al., 2011). In view of the assumed generality of production principles underlying the tadpole-structure (Freeman, 1980), the present study investigated the linkages between the culture-specific understanding of self and single stylistic, content-based features.

Method: The final sample consisted of 183 tadpole drawings from seven different cultural groups, representing different cultural models. In particular, children were recruited from an urban German (n = 54) and an urban Swedish (n = 12) context, representing a psychologically-autonomous model; children from rural Cameroon (n = 53) and rural India (n = 11) represented the cultural model of hierarchical relatedness and children from urban Turkey (n = 32), urban Costa Rica (n = 12), and urban Estonia (n = 9) represented an autonomous-relational cultural model. The drawings were analyzed with respect to figure size, head size, size of legs, facial details, facial expression, and position of arms.

Main results: The analyses demonstrated that children from all cultural groups were prone to the body-proportion effect in free drawings and did not differ in their head-to-legs-ratio, indicating universal production principles regarding the nature of tadpole drawings. Yet,

according to cultural differences in the early understanding of self, several drawing characteristics of children's self-depictions differed cross-culturally. In particular, tadpole drawers from Western as well as non-Western urban middle-class contexts depicted themselves rather tall, with many facial features, and smiling facial expressions, while children from non-Western rural traditional contexts drew themselves significantly smaller, with less facial details, and a preference for neutral facial expressions. The analyses further demonstrated that the observed cultural differences were only found on an aggregated level of cultural contexts but not between cultural groups who represented the same cultural context.

2.2 Study Two:

Gernhardt, A., Rübeling, H., & Keller, H. (2013). "This is my family": Differences in children's family drawings across cultures. *Journal of Cross-Cultural Psychology*, 44(7), 1166-1183.

Theoretical background: It was the aim of this study to examine family-drawings of preschool-aged children from three cultural contexts, representing different cultural models. Based on previous findings indicating cultural differences in children's self-drawings, we assumed that several features of children's family-drawings are related to the different value of autonomy and relatedness in the respective cultural context. We expected that the number and position of depicted family members and their relative figure size would correspond to the culture-specific understanding of family. Furthermore, we expected cultural differences concerning stylistic, individual characteristics of the parents and the self, such as absolute figure size, facial details, and facial expressions. Besides these differences across cultural contexts, we expected cultural similarity with respect to structural features of the drawings.

Method: The sample consisted of 53 children from Western urban middle-class families from Osnabrück, Germany, representing the cultural model of psychological autonomy, 63 children from rural Cameroonian Nso farming families, representing the cultural model of hierarchical relatedness, and 59 children from urban middle-class families from Ankara, Turkey, representing the hybrid cultural model of autonomous-relatedness. The children were between 41 to 72 months of age and did not differ in gender distribution. The family-drawings were coded with respect to the structural level of human figure drawing, number and position of family members, figure size, facial details, facial expression, and spatial organization of the drawing.

Main results: With regard to structural characteristics of the family drawings, the analyses revealed no significant cultural differences concerning the structural level of human figure drawing and ordinal scaling abilities. Within all samples, 62% and 72% of the children

had reached the conventional level of human figure drawing, and most children drew themselves smaller than their parents.

Beyond that, the analysis of the family-drawings demonstrated significant cultural variations of children's family-drawings, according to the cultural context and the associated cultural orientation towards psychological autonomy and hierarchical relatedness. In line with differences in the family structure, the Cameroonian Nso children depicted more siblings, more non-nuclear family members, and more non-relatives as compared to the children from Ankara and Osnabrück. Furthermore, the Nso children more often drew themselves next to a non-relative, according to the specific care-taking culture in this context. The depiction of stylistic features differed across cultural contexts as well. As expected, children from Osnabrück drew themselves comparably tall. They differentiated between family members through varied figure size, which is in line with the importance of personal space, independence, and individuality in this cultural context. The Nso children, in contrast, drew all figures comparably small without large variations of figure size, according to the importance of the social unit rather than of single individuals. Furthermore, the Nso children included only few facial features and preferred the depiction of neutral facial expressions, corresponding to the comparably low value of the face and the preference for emotional neutrality. The Osnabrück and Ankara children depicted more facial details and preferred smiling facial expressions. These findings are in line with the focus on face-to-face interactions and positive emotionality. Overall, the family-drawings from Ankara and Osnabrück resembled each other more than has been initially expected, probably indicating the advanced cultural change processes of non-Western urban highly educated families towards a psychological autonomous understanding of self and family.

2.3 Study Three:

Gernhardt, A., Rübeling, H., & Keller, H. (2014). Self- and family-conceptions of Turkish migrant, native German, and native Turkish children: A comparison of children's drawings. *International Journal of Intercultural Relations*. <http://doi.org/10.1016/j.ijintrel.2013.12.005>

Theoretical background: The aim of this study was to investigate children's drawings from a migration context as compared to those from associated contexts of the culture of origin and the receiving culture, in order to learn more about the consequences of diverging cultural influences on migrant children's understanding of self and family. In particular, the study addressed Turkish migrant families in Germany, who have been reported to preserve cultural values concerning family domains (e.g., hierarchy, emotional closeness, gender roles), but simultaneously endorse the orientation towards psychological autonomy of the German mainstream culture (e.g., psychological autonomy, individuality). With regard to their self- and family-drawings, we expected that this mixed cultural orientation would correspond with several drawing features, particularly with figure size (of self and flower), gender-specific characteristics, and number and position of family members.

Method: A total of 225 preschool children between 40 and 72 months of age participated in the study, representing different cultural models. Besides Turkish migrant children from Osnabrück, children were recruited from rural and urban contexts in Turkey (Marmara region and Ankara) and Germany (Emsland region and Osnabrück). The families differed in their socio-demographic profiles in line with the postulated differences. The migrant families demonstrated a high orientation towards the German culture, though their orientation towards their culture of origin was even higher, regardless of their duration of stay. Their orientation towards psychological autonomy resembled the German and Turkish urban sample, while they put comparably more emphasis on hierarchical relatedness.

Main results: In line with the prevalent understanding of self in Western childrearing contexts, Turkish migrant children drew themselves significantly taller than did Turkish rural children and only slightly smaller than the other cultural groups. The control of flower size thereby demonstrated that a general tendency to draw rather small or tall as the only explanatory factor could be excluded. On the other hand, with regard to the inclusion of gender-specific features, the migrant children resembled more the Turkish samples, corresponding to their mothers' strong orientation towards their culture of origin. According to the pronunciation of gender differences and specific gender roles in many Turkish contexts, the Turkish samples included significantly more gender attributes and differentiated more between their parents than did the German samples. Furthermore, similar to both Turkish samples, the Turkish migrant children preferred the depiction of an angular torso type, while the German preschoolers favored a round shape.

The analysis of family-drawings revealed that Turkish migrant children's understanding of family included a higher number of persons as compared to the urban middle-class samples from Turkey and German, though unexpectedly, also the Turkish rural children depicted less family members in their drawings as compared to the migrant children. Furthermore, the assumption that Turkish rural and migrant children would include more non-nuclear family members according to the closer emotional bond within the broader family compound in traditional Turkish contexts, was confirmed only on a descriptive level. Yet, the Turkish migrant and Turkish rural children more often depicted a sibling next to themselves, reflecting the emotional closeness to family members besides their parents.

Overall, self- and family-drawings of Turkish migrant children revealed an enduring impact of the culture of origin, manifested in gender-specific characteristics and torso type. Simultaneously, the comparably tall figure size corresponds to the high appreciation of psychological autonomy within the German context.

3 Discussion

The overall aim of the present thesis was the investigation of cultural differences and similarities in preschool aged children's drawings of themselves and their families from several cultural groups in order to examine the linkage between specific drawing features and the prevalent understanding of self and family. The drawings thereby provided a developmentally sensitive and nonverbal method to their mental representations concerning themselves, their family, and persons more generally.

By approaching from an ecocultural perspective, a theoretical framework was applied, within which cultural variations in children's early depictions of self and family become understandable as expressions of the predominant cultural model. Consequently, drawings were collected in various cultural contexts, representing different cultural models. Specifically, we selected prototypical and hybrid cultural contexts within and across national borders in order to get an impression of the full range as well as the finer gradation of cultural differences and similarities in children's self- and family-related graphic representations.

In the subsequent section, I will discuss the results of the presented studies with respect to similarities in children's human figure drawings across cultural contexts as indication for the existence of general drawing patterns concerning the structure and procedural aspects of the drawing. It follows a discussion about cultural differences in individual, content-based drawing features, which we expected to be related to the respective cultural model and the associated understanding of self and family. I will then refer to cultural variations in the composition and arrangement of children's family-drawings in line with cultural differences of families. Based on these findings and previous drawing research, an integrative framework is introduced, which is concerned with the interrelations between

single drawing characteristics and its origins. Last, limitations of the studies, suggestions for future research, and practical implications are addressed.

3.1 Discussion of the study results

General drawing characteristics in children's human figure drawings: According to earlier assumptions about general drawing patterns of children's human figure drawings (Gardner, 1990; Golomb, 1974; Jolley, 2010; Lange-Küttner, 1997), all three studies demonstrated cross-cultural similarities concerning *production principles* and *structural aspects* of children's self- and family-drawings.

With regard to production principles, Study 1 and Study 2 examined the generalization of previous findings that preschool-aged children were capable of ordinal scaling within (Allik & Laak, 1985) and between persons (Silk & Thomas, 1988). In Study 1, the analysis of tadpole self-drawings provided the possibility to investigate the relative size of head to legs *within* young children's self-depictions, expecting that the mean proportion of head-size to leg-size would not differ between cultural groups. Indeed, the mean head-to-legs ratio of the tadpole-figures varied only marginally between and within the three cultural contexts. On average, children across cultural groups depicted the head in a similar proportion smaller than the legs. Study 2 further provided some evidence for ordinal scaling *between* the depicted persons. In their family-drawings, the children of all investigated cultural groups drew themselves on average smaller than their parents. It can therefore be concluded that irrespective of cultural context, children as young as 3 to 6 years of age applied an internal concept of proportions within and between their self- and family-drawings.

Associated with the relative size of head to legs in tadpole-drawings, Study 1 further investigated the assumption that the attachment of arms on either head or legs would depend on the particular ratio of head to legs. In line with findings from Western urban children

(Freeman, 1975), the results of the present study showed that the taller the children drew the head as compared to the legs, the more often they attached arms to the head, irrespective of cultural context. Thus, for the first time, the so-called body-proportion effect (Freeman, 1980) has been demonstrated to be valid for children from different cultural groups, substantiating its universal existence.

Besides, Study 2 and Study 3 confirmed the view of cultural similarities regarding the vertical structure of human figure drawings. In all investigated cultural contexts, between 60% and 76% of the preschool aged children drew conventional forms of the human figure, while between 14% and 32% produced tadpoles. Likewise, age-related differences concerning the proportion of the respective representational form substantiated the view that the graphic representation of the human figure develops similarly across cultural contexts from simple schemes, such as tadpole drawings, to more complex forms, as indicated by more differentiated conventional representations of the human figure (Cox, 1993).

Overall, the findings confirmed the existence of general drawing characteristics concerning production principles as well as the structural composition of the human figure already during preschool age. They provided evidence for Golomb's (1992) view that cultural differences in children's human figure drawings can be regarded as „a limited set of variations on a common underlying structure, indicating that the same rules can generate alternative models that are representationally equivalent“ (p. 333). Thereby an important precondition for the comparison of children's self- and family-drawings from a cultural perspective was met: Although drawing experiences, availability of drawing materials, and pictorial models differed cross-culturally (Jolley, 2010), the preschool aged children of all investigated cultural groups achieved comparable levels of human figure drawings.

Individual, content-based drawing characteristics: Within the framework of the presented studies, we argued that specific drawing features of children's depictions of self and

family would be related to the cultural context and the associated cultural model, mainly mediated through the culturally informed understanding of self and family.

The assumption regarding figure size of children's self- and family-depictions could be substantiated in all three studies. As expected, children from Western urban middle-class contexts living in Germany (Study 1 to 3) and Sweden (Study 1) drew themselves and their parents the tallest, according to the predominant cultural model of psychological autonomy. In this context, family members are primarily perceived as separate, independent, and self-determined individuals, requiring personal space and individuality (e.g., Markus & Kitayama, 1991). In contrast, figure size of self and parents were smallest in children's drawings from non-Western rural traditional families living in Cameroon (Study 1 and 2), India (Study 1), and Turkey (Study 3). This finding corresponds to the communal understanding of persons in hierarchical-relational contexts: The family is organized predominantly communal and family members are perceived as a social unit rather than a composition of single individuals (Kağıtçıbaşı, 2007; Keller, 2007). Children from hybrid contexts living in Turkey (Study 1 to 3), Costa Rica (Study 1), and Estonia (Study 1) drew themselves almost as tall as children from Western urban middle-class contexts, while they differed significantly from the rural traditional contexts. This initially surprising similarity between Western and non-Western urban middle-class contexts may reflect the advanced and steadily increasing orientation towards psychological autonomy in the latter context, due to urbanization, the increasing educational level, and prosperity (Kağıtçıbaşı, 2007; LeVine et al., 1996).

The more differentiated analysis of self- and family-drawings from children with a Turkish migration background as compared to those from children living in the mainstream culture and the culture of origin in Study 3 further contributed to the understanding of hybrid models. In line with the previous finding about cultural variation of figure size, the German urban middle-class children drew themselves on average the tallest, while mean figure size was the smallest for children from the Turkish traditional context. The Turkish migrant

sample thereby took an intermediate position, similar to the Turkish urban middle-class sample and the German rural sample. The mean figure size differed significantly from the Turkish rural but not from the German urban sample. The examination of mothers' cultural orientation further revealed that the orientation towards psychological autonomy was similar high among all samples that depicted comparably tall figure heights. This finding specifies the assumption that children's figure size might reflect the respective value of psychological autonomy in a specific cultural context.

Additionally, the presented studies not only indicated that figure size might be regarded as a function of the respective cultural model, but that it is also a valid marker for children with different levels of drawing development. Study 1 demonstrated that already tadpole drawers showed the same pattern of figure size variation across cultural contexts as it has been observed for conventional drawers (Study 2 and 3). This means that children as young as 3 or 4 years of age, who just started drawing figuratively, and who did not yet have much childcare experience, were prone to cultural variation in figure size. It can thus be argued that often discussed external impact factors upon children's drawings, such as art culture, education, and instructions, only marginally affect children's depicted self-size at this age. Moreover, as the observed differences in figure size describe a stable phenomenon across different age groups, the impact of external influences may be more restricted than has been often assumed. Yet, alternative explanations for cultural variations regarding figure size should be considered. In particular, it might be assumed that children from non-Western rural contexts are guided by a general tendency to draw small, due to the lack of experience with paper sheets or the common economical usage of paper in this context. Nevertheless, the analysis of flower size (Study 3) showed that the expected cultural differences in figure-height remained, irrespective of the size of this non-human object.

Overall, the analysis of figure size across cultural contexts and different drawing levels substantiated the expectation that figure size in self- and family-drawings corresponds

to the prevalent understanding of self and one's role in the family system as it is modeled by cultural context. Thus, in line with previous verbally based research demonstrating that children in preschool age express their culture-specific understanding of self in terms of self-descriptions (Wang, 2006) or early reminiscing (Schröder et al., 2011), the analysis of drawings indicated that this understanding is expressed in the non-verbal mode of human figure drawings as well.

Beyond the analysis of figure size, various distinct drawing characteristics have been addressed. In particular the depiction of facial features in Study 1 and 2 revealed that the number of facial details as well as facial expression was related to cultural values. In line with the preference for exclusive face-to-face interaction as the primary communication mode in contexts with a high focus on psychological autonomy from early on (Kärtner et al., 2010), children from urban middle-class contexts added more facial features in the drawings of themselves (Study 1 and 2) and their parents (Study 2) as compared to children from non-Western rural contexts. In the latter context, children are used to a more proximal interaction mode consisting of close body contact and body stimulation (Keller, Borke, et al., 2005; Keller et al., 2006), which is associated with the importance of social cohesion and the acceptance of norms and values (Hetherington & Frankie, 1967; MacDonald, 1992). Yet unexpectedly, in case of the conventional drawings, the children from Ankara on average drew even more facial features than did the Osnabrück children (Study 2). It is possible that this finding as well as similarities in other drawing variables may be caused by the notably high level of formal education of both parents in the Ankara sample and its impact on their cultural orientation (LeVine et al., 1996). However, this assumption has to be proofed in future research, focusing on quantitative and qualitative aspects of the depiction of the face in relation to underlying communication processes and the value of the face cross-culturally.

Furthermore, according to the strong focus on positive emotionality in urban middle-class contexts (Keller & Otto, 2009), the majority of children from Osnabrück as well as from

Ankara drew themselves (Study 1 and 2) as well as their parents (Study 2) with a smiling facial expression, indicated by the direction of the corners of the mouth. The Cameroonian Nso children, in contrast, who were socialized to control their emotions and to stay emotionally neutral in public (Keller & Otto, 2009), depicted themselves and their parents either without mouth or not smiling. Moreover, the findings about facial details were found irrespective of representational form, in conventional self-depictions (Study 2) as well as in tadpole self-drawings (Study 1), substantiating the validity of this effect.

Additionally, the analysis of gender-specific characteristics as well as torso type within the Turkish and German samples in Study 3 provided evidence for the enduring influence of the culture of origin. Children of all three Turkish samples more often endowed their self-drawings with gender-specific features and an angular torso type (rectangular / triangular) than did the German comparison groups (round shape), according to the strong pronunciation of specific gender roles in many Turkish contexts (Sunar, 2002) as compared to German contexts (Keller, Zach, & Abels, 2005). This finding of concurrent similarities and differences with both the mainstream culture and the culture of origin, corresponds to the specific cultural context of Turkish migrant families in Germany: While the children are exposed to cultural values and childcare philosophies of the mainstream culture in the context of educational settings, within the family, the values and norms of their culture of origin persist. These differences between public and private domains (Arends-Tóth & van de Vijver, 2003) are in line with the orientation of Turkish migrant mothers towards hierarchical relatedness and the Turkish culture on the one hand, and the endorsement of German mainstream culture on the other hand.

On the whole, the examination of individual, content-based drawing characteristics demonstrated a strong association with the predominant cultural model, irrespective of representational form of the drawings. According to the broad differences between the two prototypical contexts of Western urban middle-class families and non-Western rural

traditional families, drawing characteristics differed most between those two contexts, indicating the range of differences regarding individual drawing characteristics. Building on these findings, the comparative analysis of children's drawings from a Turkish migration context with those of native German and Turkish children further contributed to this knowledge. It provided more detailed information about the consequences of socialization experiences upon children's self-related and social perceptions in the context of migration.

Finally, the findings of the presented studies validated the theory of cultural models and its approach to analyze cultural groups on the aggregated level of cultural contexts. In particular, the examination of tadpole drawings (Study 1) from seven cultural groups revealed significant cultural differences in individualistic drawing characteristics on the aggregated level of cultural contexts but not between the cultural groups that belonged to the same cultural context.

Composition of family-drawings: Beyond the analysis of individual drawing characteristics, the specific composition and arrangement of family-drawings provided information about children's culturally shaped understanding of self and family. Study 2 demonstrated that the composition of children's family-drawings corresponded with the prevalent structure of families in the associated cultural context. The Nso children, in particular, did not only draw more persons as belonging to their family according to the larger number of siblings. They also included more persons besides their nuclear family members in their family-drawings as compared to the children from urban middle-class families, reflecting the material and emotional interrelatedness among all family-members and non-relatives of the village-community (Keller, 2007). In Study 3, this finding could be substantiated at least on a descriptive level for the Turkish rural and Turkish migrant children, who have also been reported to establish close emotional bonds with the broader family (Kağıtçıbaşı, 2007; Sunar, 2002). It is reasonable to assume, however, that the

interrelatedness in these Turkish contexts is not perceived as important as in the rural Nso context, where the economic situation (e.g. a higher degree of subsistence farming) probably demands the collaboration of all family members to a greater extent (Keller, 2012).

Nevertheless, regarding the position of self in the family-drawings, within both studies, children from non-Western rural traditional families more often drew themselves next to non-relatives (Study 2) or non-nuclear family members (Study 3), indicating the importance and emotional closeness of these persons to the child (Bombi et al., 2007).

Children from German and Turkish middle-class contexts, in contrast, most often positioned themselves next to one or both parents, who are the major caregivers and the emotional closest persons for children in these contexts (e.g., Keller, Zach, et al., 2005; Sunar, 2002).

Furthermore, the relative figure size between parents varied cross-culturally, which has been associated with differences in the perceived family structure (Payne, 1996). Study 2 demonstrated that the rural Nso children differentiated less between their family members in figure size as compared to children from urban middle-class contexts from Germany and Turkey. This finding corresponds to the relevance and subordination of the individual to the family compound of the rural Nso, while the latter contexts accentuate the uniqueness of single family members to a greater extent (Keller, 2007).

Finally, Study 3 demonstrated that children of Turkish origin more often differentiated between their parents in a gender-specific way than did the German samples, according to the importance of specific gender roles within the family (Sunar, 2002). With regard to Turkish migrant families, this finding might point out that in line with the depiction of gender-specific attributes in their self-drawings, the majority of Turkish migrant families prefer cultural maintenance in the private domain of gender socialization.

Summing up, the analysis of family-drawings completed the previously reported findings about individual drawing characteristics. In particular, the depicted family members, the position of self, the relative size, and gender-specific differentiation have been shown to

correspond with different family structures according to the respective manifestations of autonomy and relatedness.

3.2 The proposition of an integrative framework of children's human figure drawings

The presented studies demonstrated that cultural variations in children's self and family-drawings are related to cultural differences in the respective understanding of self and others. The observed differences were mainly of stylistic nature, concerning content-based drawing characteristics, such as figure size, facial features, and gender-specific characteristics, as well as some compositional aspects of family-drawings, specifically the number and position of family members, their relative size, and gender-specific differentiation. Beyond that, some drawing features have been revealed to be of more general nature. This has been demonstrated for structural aspects of the drawings, in particular the structural level of human figure drawing, and production principles, such as social scaling and the so-called body-proportion effect. Detailed knowledge about the *origins* of these general and culture-specific drawing characteristics as well as the *linkages* is still pending. Based on previous research and the present findings, I want to propose a framework that may be used in future studies as a rough orientation for the analysis of the origin and interplay of drawing characteristics.

The model, which is visualized in Figure 2, starts from two main sources for children's graphic representations of self and others. One concerns *general skills* and describes developmental areas that can be observed on a basic level across cultural contexts. The other one is called *cultural information*, subsuming relevant areas for self- and family-drawings that vary cross-culturally.

General skills encompass children's development of (1) *cognitive skills*, such as planning strategies, memory skills, and the general ability to perceive and work with symbols (symbol use), (2) *perceptual skills*, including spatial perception, figure ground, visual motor coordination, and perceptual consistency, and (3) *fine motor skills*. On a basic level, these skills describe predisposed competencies that are relevant for the development of graphic expressions on a general level, as it has been demonstrated for instance by the examination of brain- and perceptually impaired persons (van Sommers, 1995).² With regard to children's *drawing characteristics*, the development of these basic skills is of double relevance. On the one hand, they inform children's mental image of the human body, particularly their intuitive knowledge of the vertical structure of the human body and the perception of limbs as mobile extensions from a solid entity, which is reflected in the specific structure of tadpole drawings across cultural environments (*structural level*). On the other hand, these general skills lead to similarities in the drawing process, which result in analogous *production principles* and imply the existence of a general graphic scheme of the human body.

Cultural information subsumes children's *socialization experiences* and *perceptual information*. Their influence upon children's human figure drawings is based on the fact that children do not draw anatomically correct bodies but persons. In that sense, culture may elaborate the basic graphical scheme of the human body in several ways (*content-based characteristics*). Perceptual information refer to the pictorial world of the child, including drawing models, art culture, media, typical clothing, and fashion that may influence children's drawing style, mediated by their culturally shaped mental image. Specifically, these elements may enrich the depictions through several discrete drawing features such as (gender-specific) accessories, clothes, and hairstyle. Children's early socialization experiences, in contrast, affect their drawings *explicitly*, for example by instruction, training, and drawing rules as well

² This, however, does not preclude cultural differences of these domains on more elaborated levels (e.g., Nisbett & Norenzayan, 2002)

as *implicitly* by the child’s culturally shaped understanding of self and others, which is conveyed by immediate social interaction within the family. The findings of the presented studies indicate that particularly the latter is relevant for variations in the analyzed drawing characteristics, since they are already observable in the depictions of young tadpole drawers.

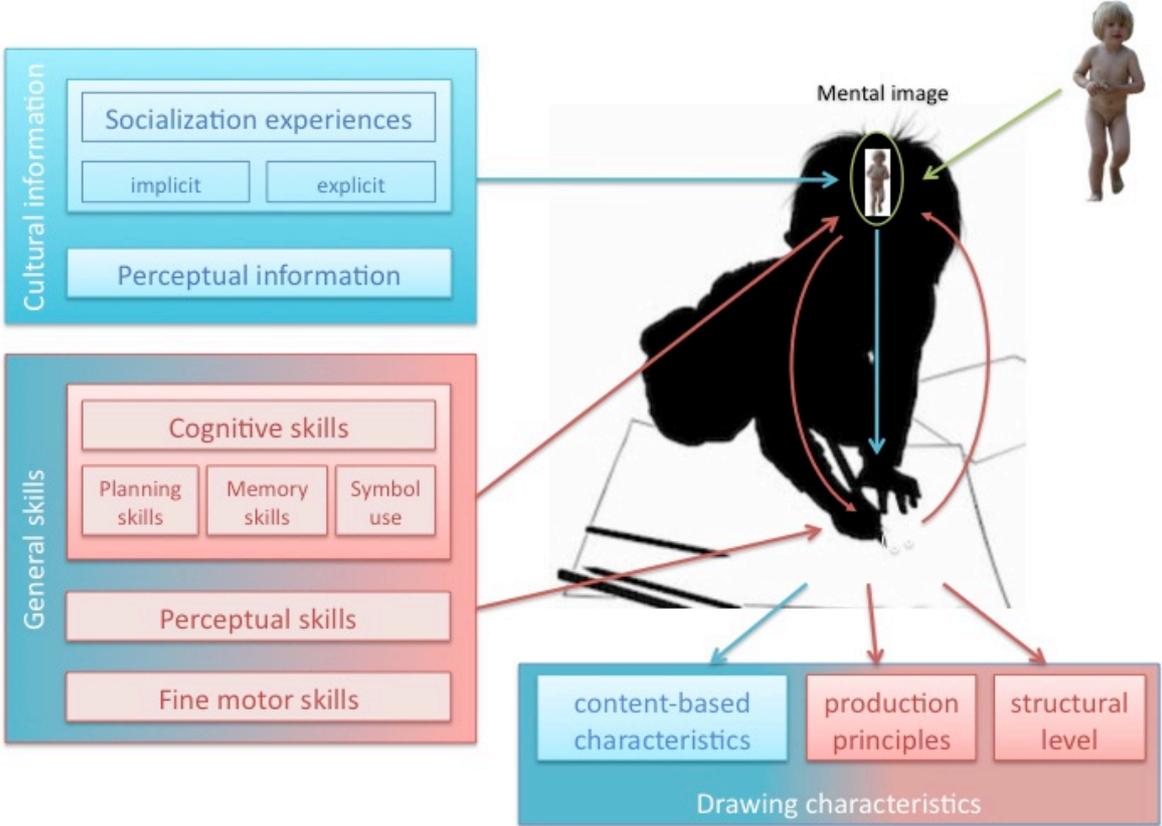


Figure 2: An integrative framework of children's human figure drawings

Overall, it can be concluded that children’s drawings of self and others convey a culturally shaped symbolic activity that enriches the general scaffold of the human body representation. The verification of this framework, however, and the more precise investigation of the interrelatedness between the described mechanisms, describes a challenging task for future research.

3.3 Limitations and outlook

The presented studies have limitations that need to be acknowledged. First, more work is needed to understand the interrelatedness of the observed culture-sensitive drawing characteristics and whether they are sensitive to different aspects of culture. As outlined in the proposed framework, it may be assumed that the depiction of some discrete features such as gender-specific hairstyle, accessories, and clothes may in first line reflect the child's perceptual experiences or culturally mediated knowledge. For these additional characteristics, at least some conscious control and drawing experience may be required. The depicted self-size, on the other hand, is a continuous and more unconscious variable. It may rather reflect the culture-specific role of the child within the family system, which is conveyed by immediate social interaction with relevant caregivers. In fact, irrespective of cultural group, hardly any tadpole drawer of the presented studies added accessories or other distinctive features besides arms and facial details to their self-depictions. Still, they varied in figure size. The exact mechanisms and transmission processes that may lead to the observed cultural differences, however, could only be inferred indirectly within the framework of this thesis. Future research should address this question by systematically comparing the development of discrete and continuous characteristics in young children's self-depictions across cultures. Specifically, the examination of the drawing *process* from early on and the assessment of interactions while drawing would contribute to the broader understanding of *how* culture manifests in children's drawings (Billmann-Mahecha, 2010; Guillemin & Drew, 2010; Pinto, Gamannossi, & Cameron, 2011).

Moreover, the further examination of explicit and implicit socialization mechanisms would be revealing for a deeper understanding of children's development of culture-specific drawing patterns and style. In particular, the assessment of drawing rules and instructions, as well as the role of caregivers, siblings, and peers across cultures would be fruitful.

On the whole, it must be considered that children's human figure drawings are affected by numerous variables. Even though the presented studies contributed to a well-founded understanding of the relationship between cultural models and children's self- and family-drawings on a general level, a one-to-one transfer to the individual level of single children is only possible with reservation. It remains still "very difficult to isolate the role of any one factor when viewing a drawing" (Jolley, 2010).

There are also some methodical shortcomings of the presented studies. First, the sample sizes were in part very small, limiting the generalizability of some findings (e.g., in Study 1 and Study 3). Second, in Study 1 and 2, the cultural model of the assessed cultural groups had to be inferred from existing knowledge. Nevertheless, in Study 3, the underlying assumptions about the cultural orientation of the samples could be confirmed. Moreover, even though we endeavored to select homogenous samples, in case of the Turkish migrant children, it was not possible to divide the samples according to differences of the ecocultural background of the parents due to the restricted sample size. This should be considered in future studies including children with migration background.

Finally, the findings have practical implications. Since migration movements and diversity are constantly increasing in a globalized world, the well-founded understanding of young children's view of self and family gets more and more important. In Germany, for instance, every third child in early childcare has a migration background (Statistisches Bundesamt, 2011), often accompanied by restricted linguistic competencies at preschool age. Knowledge of cultural influences on children's drawings therefore provides an access to their view of self and family, which otherwise would be difficult to obtain solely by verbal communication. This approach to children's view of self and others is facilitated by the fact that most children at preschool age enjoy drawing. Moreover, children's drawings as well as their evaluation and interpretation constitute an integral part of everyday life, at least in Western early childcare institutions (Billmann-Mahecha, in press). Nevertheless, the majority

of early childcare teachers is guided by their own cultural belief system and may not be sensible to cultural differences in children's graphic representations of self and family. It is therefore of particular importance to understand the emergence of cultural drawing differences and its linkage to variations in the understanding of self and family. The assessment of children's drawings thereby opens up for the possibility to develop new insights into children's pictorial and representational worlds and may be used to develop new strategies and conceptions to deal with cultural diversity in early childcare.

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