May 2014

Assessing Attachment Process Among Early Institutionalized Orphans in Burkina Faso, Africa

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Assessing Attachment Process Among Early Institutionalized Orphans in Burkina Faso, Africa

by

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts
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Date of Approval:
March 15th, 2014

Keywords: Early Attachment, Disinhibited Social Behavior, Orphans, Burkina Faso, Mossi

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Acknowledgments

This research would not have been possible without the support of many people. I would like to thank Dr. Daniel Lende, my advisor, for encouraging my project and for his continual support. Special thanks to the members of my committee, Dr. Heide Castañeda and Dr. Rebecca Zarger. I also want to express gratitude to all the members of the French organization Wendkouni who have been supporting the orphanage during the last 20 years; thanks Remy, Rachel, Laurence, and Marc. Special thanks to all the personnel of the orphanage L’Oasis des Enfants, who have welcomed me so warmly and friendly and made my research an exceptional experience. Finally, I am very grateful to all the members of my family who have been supporting unconditionally my studies. Merci Jules, Jean, et Elia, mes enfants, vous êtes ma source d’inspiration.
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Abstract

The focus of this thesis is early attachment among institutionalized infant orphans. Previous research has pointed towards attachment problems in dysfunctional institutions, but did not take a comparative approach to understanding attachment. The present research was conducted in an orphanage in Kaya, a little town located in the Center North Region of Burkina Faso, Africa. The 22 children at the institution were aged four months to five years and were mostly from the Mossi ethnicity. Using mixed psychological and anthropological methods such as behaviors checklist, attachment questionnaires, and participant observation, this research indicates that orphans do not display evident features of unsecure attachment such as avoidant, resistant, or disorganized attachment: 79% of the children would seek proximity with caregivers, 93% would make visual contact, and 79% would often explore their environment. However, a significant number of children in the orphanage showed disinhibited reactive attachment: 36% of the children would seek contact with a stranger; only 21% would be anxious to see a stranger. Using a cross-cultural approach, the study questions the classification of disinhibited reactive attachment as a problematic ailment and suggest that the behavior might not be seen negatively, but can have positive outcome in the transition process from the orphanage to the adoptive family. The research also examines the factors related to orphanhood that can have consequences on the future of children and consecutively on their chances to form secure attachment. The research underlines many other difficulties between caregivers and orphans such as the lack of training, the young age of the caregivers, and the reluctance to get attached to the children in order to avoid difficult separations. This study emphasizes the complexity of the early attachment process of institutionalized orphans.
Chapter 1: Introduction

“It is easier to build strong children than to repair broken men” (Frederick Douglass).

Attachment and Orphans

Today, there are more than 140 millions orphans in the world (Bailey 2012). About 43.4 million orphans live in Sub-Saharan countries; this number has increased by over 50% since 1990. The circumstances of orphanhood are variable from one country to the other. The AIDS pandemic and the lack of access to antiretroviral treatment is an important cause of orphanhood in Africa. Yet, other factors also have a major impact in mortality including war, famine, diseases such as malaria, and poverty (Bailey 2012). Bailey underlines that “our international perspective of the needs and care of orphans around the world are both limited” (2012:1). These deplorable and alarming statistics reinforce the necessity to conduct new research and to find solutions better adapted to the circumstances, cultural specificities, and socio-economical status of each county concerned by alarming and severe problems of orphanhood.

Early attachment research has been among the most prevalent psychological research conducted on children. It has, however, taken time for psychologists to understand the importance of and measure this specific feature of early development. Even if everybody agrees today about the significant impact of early attachment on infants’ lives, controversies remain about specific aspects of attachment such as the mother-centered feature and the possibility of multiple caregivers, and the categorization of attachment disorder. Furthermore, given the major impact of attachment in a human’s life, and the fact that attachment develops very early during the first year of life, testing and measuring this feature is complex because it involves infants who cannot express themselves, even though is also a need to conduct early
testing in order to prevent possible disorders. A large body of research has focused on mother-child attachment, using predominantly the Strange Situation methods developed by Mary Ainsworth; this method focuses on observations of children with their mother during and after short periods of separation and with the presence of a stranger. It is only in the 1990s, after the dreadful discovery of neglected orphans in Romanian institutions, a country that has been under the harsh communist dictatorship of Ceausescu, that more research has been conducted on orphans and the consequences of early deprivation on orphans. Yet, many other institutions exist all over the world, and research needs to be conducted in other places where the number of orphans is prevalent such as in African countries.

**Burkina Faso**

The present research was conducted in one of the poorest countries in the world, Burkina Faso, a landlocked country located in West Africa. Burkina Faso, previously called Upper Volta during French colonization, became independent in 1960. Burkinabe population, formed by 60 different ethnicities, suffers from high maternal mortality rates; the number of orphans is particularly high.

The study took place in Kaya, a town located in the Center North of the country. Even though many ethnic groups cohabit in the country, in Kaya, a majority of the people are Mossi. There is a considerable contrast between the large rather modern cities and the villages in the bush where there is no electricity or running water. Kaya reflects this contrast: not yet as modern as the larger cities such as Ouagadougou, but with a mostly rural population.

**Research Focus, Methods, and Results**

The research took place in an institution called L’Oasis des Enfant founded in 1970 by a couple of Swiss missionaries. Twenty two children aged four months to five years old live in the orphanage led by a director and two assistant directors. The research focus on a sample of 14 children aged one to three years. Nine caregivers work in shifts; the average age of caregivers is 22 years old; four of them never went to school; the average employment duration is 23 months. After two to three years spent at the
orphanage, 80 percent of the children will join their extended family; the other children will be adopted by European families.

The study focused on mental health concerns of institutionalized infants less than three years old, and more specifically on attachment processes that have an important impact on the psychological development of these infants. The first goal was to observe specific forms of attachment disorder such as avoidant attachment, a form of behavior characterized by a lack of interest in making contact with caregivers, and not showing much emotion. The research also concentrated on a different form of attachment, call disinhibited reactive attachment characterized by children’s tendency to seek contact with strangers. As in other research, this form of attachment has been able to be easily observed, yet many questions subsist concerning how this form of attachment develops, how it is understood given the specific cultural environment of the population, and how this form of attachment is perceived by the local population. Disinhibited social behaviors might not be maladapted as our occidental view might presume and as defined in the Diagnostic and Statistical Manual of Mental Disorders (2000).

To respond to these questions, the study not only focused on the measures of attachment features and disinhibited attachment, but has also addressed a more global perspective, looking at the Mossi culture, and the general circumstances of orphanhood. The reasons are that specific contexts can have further implication in the classification of children’s behavior in specific categories of attachment not necessarily related to dysfunctional forms. To further comprehend the specific context of attachment in Burkinabe orphanages, a multi-disciplinary approach was applied, using psychological and anthropological methods such as participant observations, attachment and caregiver questionnaires, case studies, and behavior check-lists; a literature review of research on attachment, child rearing practices, child development in various disciplines was conducted; the disciplines included anthropology, psychology, neurology, biology, and cross-cultural research.
The results indicate that children did not show serious problems of attachment disorders; however, a large number of them (36%) displayed disinhibited social behavior such as seeking contact with a stranger coming to the orphanage. Yet, this behavior has to be understood given the cultural context of the institution in which children might not be able to form attachment with one specific caregivers, many of whom are not inclined to develop attachment to the children to avoid the difficult separation when the child leaves the orphanage. Furthermore, children with such behavior might have more chances to adapt to their extended family when they will go back in their village which is the future more likely for most orphans. However, this behavior might be more problematic for children adopted by European families. Additionally, other factors such as imitation might have an important influence on children’s behavior: the group of older children tends to spend a great among of time together out of the supervision of caregivers, often displaying the same behaviors.

In conclusion, orphans at L’Oasis des Enfants seem not to display sever forms of attachment disorders, yet they do show disinhibited forms of social behaviors that can have several explanations and that also have to be comprehended in the specific cultural context further developed through ethnographic methods.

**Thesis Organization**

The thesis is organized in six chapters. After the introductory chapter, chapter two presents a literature review including the description of the original attachment theory developed by John Bowlby, a review of psychological, bio-neurological, and anthropological research on attachment, and studies on orphans. The third chapter covers the description of the setting, general information about Burkina Faso, and the orphanage where the research was conducted. In chapter four, the investigator explains the methods used in this research, describes the sample, and the data analysis; results are presented in chapter five. Finally, discussion, limitations, and further research are developed in chapter six.
Chapter 2: Literature Review

Introduction

Henrietta Moore suggests that “in any consideration of the relationship between psychoanalysis and anthropology, the question of universals always get raised” (1999: 18). The theory of early attachment is at the heart of such debates, as indicated by the recent book published by Naomi Quinn and Jeanette Mary Mageo, *Attachment Reconsidered: Cultural Perspectives on a Western Theory* (2013), in which the authors severely critique the ethnocentric claims and constructs of attachment theory. The different research conducted on attachment all indicate the necessity to pursue new research, to develop new hypotheses, and to include new and multiple variables. Furthermore, most of the research on orphans focused on institutionalized Romanian or Russian orphans. Little research has been conducted in other countries and directly in the institutions, observing the functioning of the orphanage, the caregivers, and the relationship between caregivers and orphans, regarding also the specific cultural features. Most of the research on early attachment has not integrated a holistic view of early attachment processes, including, psychological, neurological, and cultural research. Applied anthropology offers this unique multidisciplinary approach that can yield new perspectives in the field of early attachment.

Attachment

Definition of Attachment

According to Bowlby and Ainsworth, the attachment bond is a specific type of bond included in a larger class of affectional bonds (Cassidy and Shaver 2007). The specific features of attachment bonds are: persistence of the bond, involvement of specific persons who are not interchangeable, significant emotional involvement, the desire to maintain proximity and/or contact with the person, distress during
involuntary separation, and the necessity of individuals to seek security and comfort in the relationship (Cassidy and Shaver 2008). Attachment bonds are associated with specific attachment behaviors that Bowlby designate as behavioral homeostasis, instinctive behaviors intended to protect the child from danger and stress, and that are characterized by emotional and cognitive regulatory mechanisms; the child learns early to recognize the primary attachment figures and develops different emotional responses to keep proximity with this person (Cassidy and Shaver 2008).

According to Daniel Siegel, “Attachment is a system in the brain that evolves in ways that influence and organize motivational, emotional, and memory processes with respect to significant caregiving figures” (2012: 91). Attachment can be formed as early as seven months. Almost all infants become attached; attachments are formed to only a few persons, and are resulting of social interactions with these persons.

Attachment plays an important role in the developing mind and insecure attachment can be a serious risk factor in developing psychopathology (Siegel 2012). Yet, what is labeled insecure attachment per se is not a form of psychopathology and research has not established yet the specific relationship between unsecure attachment and psychopathologies that can have multiple origins (Cassidy and Shaver 2008). However, certain forms of attachment type (see chart 1) have been linked to anxiety disorders and dissociative disorders (Siegel 2012). According to Siegel “security conveys resilience, whereas insecurity conveys risk….attachment history is correlated with a wide variety of mental processes central to the regulation of emotion and behavior” (2012: 115). Therefore, measuring attachment among orphans is essential in order to eventually prevent possible psychological risk related to unsecure attachment.

Psychological Literature Review

According to Cassidy and Shaver, “attachment theory is one of the best current examples of the value of serious, coherent theorizing in psychology ….Attachment today is in many respect similar to attachment theory 30 years ago, but it has become much more specific and deeply anchored in a wide
variety of research methods, and it is being extended in important new directions as a result of careful and
creative research” (2008: xi). However, methods used in psychology have not been designed to address
all aspects of attachment such as possible cultural variations.

Bowlby’s Attachment Theory

Attachment cannot be studied without considering Bowlby’s work and the first attachment theory
he developed in the 1960s. He is considered the father of attachment theory, and even though we might
want to look at more recent research, his work is certainly the most accomplished and the most frequently
cited in attachment research publications. Bowlby was born in 1907 in London in a upper-middle-class
English family, raised by a nanny, and sent to boarding school at seven (Gahart Mooney 2010: 17). He
studied both medicine and psychoanalysis and became interested in child mental health. His early life
may have had some influence on his interest in early childhood and the influence of environmental family
factors in child development. As for other psychologists in the 20th century, Freud’s theories had first an
important influence on Bowlby, but after doing some research, he questioned many of Freud’s ideas and
developed new theories. Freud had been such an important reference in psychology that it was interesting
how cautiously, and timorously psychologists dared to contradict and defy the master.

The principal argument concerned the testability of psychoanalytic theories; Bowlby believed in a
scientific approach and argued that since Freud’s theories were not testable, they could not been
considered scientific theories (Bowlby 1982: 19). Psychoanalysts at the time agreed that the first
relationship of a child with his/her primary caregivers was fundamental in the development of his/her
personality; however, controversies persisted on the origin and nature of that relationship (Bowlby 1982:
177). Psychoanalytical theories included Secondary Drive, in which the baby becomes attached to the
person who meets his physiological needs, and Primary Object Sucking suggesting that the baby is
attracted to the breast of his/her mother and consequently he/she becomes attached to his/her mother,
Primary Object Clinging which indicates that the infant has a propensity to cling to humans, and Primary
Object Return-to-Womb Craving explaining why a child cling to his/her mother. In his attachment theory, Bowlby completely departed from these previous psychoanalytical theories, and based on observations of mothers and infants, a method also common to anthropologists, he developed a completely new theory:

“The hypothesis to be advanced here is different from any of those listed above and is built on the theory of instinctive behavior already outlined. It postulates that the child’s tie to his mother is a product of the activity of a number of behavioral systems that have proximity to mother as a predictable outcome. Since in the human child ontogeny of these systems is slow and complex, and their rate of development varies greatly from child to child no simple statement about progress during the first year of life can be made. Once a child has entered his second year, however, and is mobile, fairly typical attachment behavior is almost always seen.” (Bowlby 1982: 179)

As Bowlby made observations on infants’ behaviors when separated from their mother, he also looked at earlier studies made by other psychologists in different circumstances such as infants hospitalized or children put in residential nurseries during which distress caused by the separation of infants from their mother had been observed. Three levels of distress have been observed among children following the separation from their primary caregiver: protest, despair, and denial (Van Der Horst and Van Der Veer 2009). These observations resulted in important changes concerning hospital care for children such as the presence of a caregiver (parent) in hospitals.

In the 1970’s, a close collaborator of Bowlby, Mary Ainsworth, developed a method to measure attachment: the Strange Situation, a lab experiment intended to assess attachment behaviors by observing children’s response to mother’s return after a short separation and in the presence of a stranger (Siegel 2012). From this experiment, a classification of attachment patterns has been designed, and four different types of attachment have been defined. An infant classified with a secure attachment (type B) will show signs of missing the parent during the separation, show relief when the parent will come back, and initiate
physical contact; he/she will then return to play. An avoidant infant (type A) will not cry on separation from the parent, he/she will avoid or ignore the parent on reunion, and will not seek contact or proximity. On the contrary, a resistant infant (type C) will be very distressed by the separation and will seek contact on reunion, but will fail to be comforted by the parent and will continue crying and not return to play. The fourth category that was defined later is the disorganized/disoriented category (type D); these infants display disoriented behavior during the parent’s presence and cannot fit in the other categories (Figure 1).

This experiment is still used today to assess attachment (Siegel 2012). Based on the description of these different categories of attachment, new assessments need to be designed in order to measure the attachment processes of infants living in institutions, and for whom the traditional Strange Situation experiment cannot be conducted if they do not have a primary caregiver to rely on.

**Figure 1: Attachment Categories: Defined by the Strange Situation Method**

Furthermore, separating one child from the others might already be a strange situation for these orphans who are never separated. The observation of children in different “natural” settings offers many opportunities to observe attachment behaviors such as how children make contact with caregivers, how they interact with caregivers, how they react when a stranger arrives at the orphanage, and how they explore their environment.

Most critiques made of Bowlby’s theory are that he underestimated the possibility of multiple caregivers, multiple attachment figures and over emphasized the mother/child relationship (Quinn and Mageo 2013). Bowlby’s did not refute the fact that children can form multiple attachments, however, he
suggested that all attachment figures are not equivalent and/or interchangeable, and that there is an
“attachment hierarchy”; Bowlby referred to this feature as monotropy (Cassidy and Shaver 2008) and
argued that even in institutions, children would select a specific caregiver if given the opportunity, and
that children show more distress from the separation of the principal caregivers than from subsidiary
figures. Furthermore, research has indicated that children with two figures of attachment are more
securely attached than children with one, yet a child is also more securely attached to a mother than to
another person. Multiple secure attachments can enhance children’s functioning (Cassidy and Shaver
2008).

Cross-Cultural Psychological Research

The original classification of patterns of attachment was designed based on research conducted
mostly on children raised in the United States. Yet, if the phenomenon of early attachment is universal,
there are nonetheless significant variations in the proportion of children found in each type of attachment
group (Harwood et al. 1995). Cross-cultural research has indicated important differences in other
countries. “Although Group B classifications were observed to be modal in most cultural group, Group A
classification emerged as relatively more prevalent in Western European countries, whereas Group C
classifications were found to be more common in Israel and Japan” (Harwood et al. 1995:11). The most
important questions resulting from these findings are: are these children from other countries maladapted
or should we review the normative categories of attachment? According to Quinn and Mageo, “existing
attachment categories are not sufficient to capture all attachment systems”(2013:40).

Another way to explain cross-cultural differences is to examine the differences of meanings of
attachment behaviors. “The repertoire of attachment behaviors is similar across countries, but the
selection of these behaviors is culturally specific” (Harwood et al. 1995:13). For example, in research
conducted by Levine and Norman (2008) among German infants, the result of the “strange situation”
experiment indicated that about 49% of the infants had avoidant attachment pattern. In comparison, only
20% of American infants were classified as avoidant. Yet, the attachment pattern found in German infants are not the result of attachment disorder, but conform to specific child rearing practices of self-reliance of infants, and the capacity of infant to stay alone. The authors do not support Bowlby’s model of attachment and conclude that:

“The Bowlby-Ainsworth model of attachment posits species universals in the optimal pattern of attachment and has no explicit place for cultural variations other than as “suboptimal”, maladaptive, or pathogenic” (Levine and New 2008: 129).

The necessity of conducting more cross-cultural research with different methods is evident according to cross-cultural psychologists.

Disinhibited Social Behaviors

Bowlby never mentioned indiscriminate attachment as a type of attachment resulting from deprived or neglected child rearing conditions. Yet, indiscriminate friendliness has been reported in many studies concerning institutionalized children (Bakermans-Kranenburg et al 2011). Furthermore, in the Diagnostic and Statistical Manual of Mental Disorder (DSM IV-TR) as in the ICD-10, there are two forms of reactive attachment disorders, including a disinhibited type:

“The essential feature of Reactive Attachment Disorder is markedly disturbed and developmentally inappropriate social relatedness in most contexts that begins before age 5 years and is associated with grossly pathological care. There are two types of presentations. In the Inhibited Type, the child persistently fails to initiate and to respond to most social interactions in a developmentally appropriate way. The child shows a pattern of excessively inhibited, hypervigilant, or highly ambivalent responses…In the Disinhibited Type, there is a pattern of diffuse attachments. The child exhibits indiscriminate sociability or a lack of selectivity in the choice of attachment figures. The disturbance is not accounted for solely by developmental delay and does not meet criteria
for Pervasive Developmental Disorder. By definition, the condition is associated with grossly pathological care that may take the form of persistent disregard of the child’s basic emotional needs for comfort, stimulation, and affection; persistent changes in primary caregiver that prevent formation of stable attachment. The pathological care is presumed to be responsible for the disturbed social relatedness.” (DSM IV-TR: 127-128)

The DSM IV-TR indicates that there are limited data on Reactive Attachment Disorder, but that this disorder is “very uncommon” (129). Indiscriminate Reactive Attachment disorder is an enduring form, even if the child may develop selective attachments. No variations in culture, gender, and age are mentioned in the manual. The differences between Bowlby’s type of attachment and the reactive attachment type described in the DSM IV-TR underlines the difficulties represented by the categorization of early attachment forms.

Because of its prevalence, Chisholm et al (1995) consider that disinhibited social behavior should be an important behavior to consider in the research of attachment in institutionalized children. Zeanah et al. regard this behavior as one of “the most persistent social abnormalities in studies of children adopted out of institutions (2002: 983). Therefore, this specific behavior has to be examined more deeply.

The most interesting aspect of disinhibited attachment disorder is that there is no real agreement on what would be considered a negative or abnormal behavior related to this disorder. Bruce et al. (2009) did not find a significant relationship between cognitive ability, attachment-related behaviors, and/or basic emotional abilities. They suggest that disinhibited social behavior can be associated with insufficient inhibitory control (2009). Zeanah et al. (2002) indicate that indiscriminate behavior was independent from aggressive behavior. They suggest that indiscriminate social behavior should not be considered as a reactive attachment disorder. Furthermore, Zeanah and Fox (2004) consider that temperament might also influence attachment disorder and disinhibited social behavior, but more research
needed to be conducted to define all the factors that may influence attachment disorder and their level of impact.

Bakermans-Kranenburg et al. (2011) suggest that the etiology and the function of disinhibited social behavior might be different from orphan children in institution than for non-institutionalized children. According to them, the major problem of overfriendliness is a lack of self-control. Furthermore, Roy et al. (2004) have found an association between disinhibited social behavior and inattention and overactivity. Therefore, indiscriminate social behavior might rather be a problem of regulation of behavior rather than a reactive attachment. Ruther et al. (2007) also suggest that this type of behavior might explain that some children have been classified as insecure but with no specific type, and that it might also be associated with cognitive impairments and peer relationship problems. Studying attachment in orphanages has to take in considerations all these findings such as the relationship between inattention and overactivity, and more research needs to be conducted to explain disinhibited social behavior.

Neurobiological Research

Bowlby was also interested and conscious of the contribution and the complementarities of other disciplines such as ethology, experimental psychology and neurophysiology in the research concerning early attachment behavior (Bowlby 1982: 38). When Bowlby first coined the theory of attachment, neurological research needed to be conducted on this subject to support the theory. Yet, with the advent of new neuro-technologies during the last two decades, research has been able to reinforce Bowlby’s theory. Bretherton and Munholland suggest that “many of Bowlby’s intuitions about working models have proven to be remarkably prophetic” (Cassidy and Shaver 2008: 108).

Neurological research has indicated important implication of secure attachment in infant brain development (Schore 2001). The two first years of an infant’s life form a critical period of brain growth and a period of extreme sensitivity to adverse environmental factors (Schore 2001). Allan N. Schore, an important figure in developmental neuroscience, has made important contributions in the field of affective
neuroscience. In his article “Effect of a secure attachment relationship on right brain development…” he provides an extensive explanation of infant brain mechanisms involved in human interactions (2001). He proposes that the maturation of the right brain is experience dependent. His psychoneurobiological model of brain maturation posits that early experience can positively or negatively influence the maturation of the brain and consequently influence adaptive or maladaptive mental health: infant brain “is designed to be modeled by the environment it encounters” (Schore 2001:12). Given that the very first human interactions occur between the primary caregiver (often the mother) and the infant, this relationship is essential to the development of the right hemisphere (Schore 2001). Attachment specifically influences this development. Joseph (1999) also underlines the environmental influence on neural plasticity and consecutively on the attachment processes. He argues:

“Unlike the brainstem which is more “hard wired” and initially under direct genetic and reflexive sensory control, limbic system nuclei, such as the amygdale, septal nuclei and hippocampus, as well as the later mature neocortex, require considerable social, emotional, perceptual, and cognitive stimulation during the first several months and years of life in order to develop normally. If sufficient stimulation is not provided, or if exposed to an abnormal or neglectful environment, developing neurons and dendrites will establish or maintain aberrant, abnormal interconnections, or wither, die, and drop out at an accelerated rate.”(Joseph 1998: 190)

The different parts of the limbic system have distinctive maturation rates (Joseph 1998: 194). The amygdale will mature first and rapidly during the first year; it is responsible of indiscriminate socializing whereas the septal nuclei will develop later, between age one and three, will inhibit the indiscriminate behavior and will contribute to the attachment to a specific figure and the development or fear of strangers: 90% of infant would respond negatively when a stranger enter their house. It would be interesting to examine more specifically orphans’ brain development to see if there might be some problems of brain development related to their specific lives in institutions.
The complexity of the development of the infant brain is further underlined by the concept of hierarchical organization of the limbic system. Regions of the brain mature in stages (Schore 2001: 27). The development of the limbic system is not only associated with emotional functions, but has also important impact in the organization of learning and adaption to the environment. A significant feature of the limbic system development is myelination. A research conducted on mice by Makinodan et al. (2001) has indicated that deprivation alters prefrontal functions and myelination. Deprivation is correlated with alteration of white matter in medial prefrontal cortex. The research underlines the relationship between early social experience and forebrain white matter development.

Another important feature in attachment is the symbiosis between the primary caregivers and the infant. Schore (2001) suggests that affective synchrony creates a context of resonance that plays an essential role in brain organization and central nervous system regulations. “In current neuroscience, resonance refers to the ability of neurons to respond selectively to inputs” (Schore 2001: 23). In the case of mother/infant face-to-face interactions, visual and auditory information coming from the mother’s face are processed by the infant right brain, and more specifically in the cortical-subcortical circuits involved in processing socioemotional information. The smiling face of their mother induces a high level of dopaminergic-driven arousal in the baby, and the mother face is then imprinted into the infant’s right interior temporal areas. Plays can have a direct effect in neuronal and synaptique growth: it increases N-methyl-D-aspartate (NMDA) receptors levels resulting in the production of brain-derived neurotrophic factors (BDNF) and synaptogenesis in the infant brain. All these biological mechanisms are involved in the growth of the brain. Furthermore, during mother/child interactions, reciprocal activation of opiates systems (higher level of beta endorphins) increases the pleasure, also called “optimal mutual cueing” by Mahler et al (Shore 2001:26).

Affective synchrony is further emphasized by the neuroendocrine system; the oxytocinergic system also influences attachment (Strathearn et al. 2009). Oxytocin is an important neurohormone involved in different functions: uterine contraction, milk ejection during lactation, and maternal care. A
research conducted by Strathearn et al. (2009) indicates that peripheral oxytocin release was higher in mothers with secure attachment compared to dismissing/insecure mothers when viewing their own infants. Differences in activation of the brain reward regions (ventral striatum and oxytocin-associated hypothalamus/pituitary region) were also observed between the two groups of mothers. Insecure mothers do not cognitively appraise infant cues the same way that secure mothers do; consequently, mothers with insecure attachments patterns are less likely to form secure relationships with their infants, who eventually will not develop secure attachment. This research indicates that there might be a transgenerational transmission of attachment patterns (Strathearn et al. 2009). Furthermore, research has also demonstrated the relationship between mindfulness and secure attachment: “a caregiver’s mindfulness about a child’s mental states appears to be a significant predictor of the likelihood of secure attachment” (Fonagy et al. 2003: 431). This aspect might be important to take in consideration in the specific context of institution in which caregivers might or might not be sensitive to orphans’ mental states.

A significant function of attachment is to help the child to develop stress coping systems. Toxic stress has a deleterious effect on brain development (Lende 2012). During the Strange Situation experiment, infant with disorganized attachment had higher salivary cortisol concentrations compared with secure and avoidant children (Chugani et al. 2001). Using positron emission tomography (PET), the research team has been able to observe reduced brain metabolism in adopted orphans; specific brain regions were affected such as the prefrontal cortex, temporal lobes, and regions associated with higher cognitive functions, memory and emotions like the orbital frontal gyrus, the amygdale, and the hippocampus.

Schore maintains that “atypical development can only be understood in the context of typical development” (2001: 10). Yet, Schore never mentions the influence of culture and child rearing cultural practices in the environmental features that influence brain development: an anthropological domain!
Anthropology and Early Attachment

The recent book written by Quinn and Maego (2013) in which the authors try to reconsider attachment from a cultural perspective underlines anthropological interests in attachment theory. One of their major critiques about Bowlby’s theory is that it is considered ethnocentric because most of the theory is based on research conducted on Westerner children. Quinn and Maego (2013) underline many major flaws in the original attachment theory. The first one is related to the strong focus on the dyadic mother/child attachment; yet, many cultures have different child rearing practices in which multi-caregivers are involved in childcare, creating consequently multiple attachments.

In *Mother and Others* (2009), Sarah Blaffer Hrdy goes further in the critique:

“Even as information from traditional societies with a great deal of alloparenatal involvement flowed in, such cases continued to be viewed as atypical. Bowlbian stereotypes of continuously available, chimpanzee-like mothers prevailed. Textbooks emphasized continuous-care-and-contact mothering among the !Kung and implied that this was both typical of “the” hunter-gatherer and also optimal for natural human development. By the beginning of the twenty-first century, even as systematic data came from African societies with high levels of shared care, anthropologists continued to consider shared care as unusual and to refer to societies with high level of alloparenatal care as having “unique child-rearing system… Only in the past decades have cooperative breeding’s implications for attachment theory begun to be addresses, and its evolutionary implication taken into account.” (2009: 113).

If Hrdy’s arguments appear relevant, there is a lack of further research to see if they might be a hierarchical attachment pattern among all the caregivers as suggested by Bowlby. Measuring children’s attachment security using a cultural relevant approach would also help to negotiate the controversy between multiple caregivers vs. primary caregiver attachment processes. The critique made on the
original attachment theory is sometimes too basics and has not offered yet strong arguments that would contradict the original theory of attachment.

Another critique made by Quinn and Maego (2013) concerns the mother’s sensitivity to produce attachment: these features of sensitivity can vary from one culture to another; mother sensitivity has to be defined in each specific context. Additionally, child independence can also differ from one culture to another in which parents have different child behavior expectations and therefore adapt their practices to these expectations; children’s attachment behaviors can therefore be wrongly interpreted using Bowlby’s categories; consequently the question of defining a secure attachment baseline in different cultural contexts is necessary and consequently defining categories of unsecure attachment. Quinn and Mageo do not address question of institutionalized orphans, not do they raise the particular subject of disinhibited reactive attachment. The difficulties in defining attachment categories are another major critique made by Quinn and Maego about Bowlby’s theory. Yet, from the experience made in fieldwork, it seems evident that categories might not be the major problem, however, the criteria used to classify the diverse type of attachment should be reconsidered in different cultural settings. It is necessary to be able to identify children with insecure attachment in specific settings like for instance orphanages, in order to provide them with the basic care essential to their psychological development.

An additional question about the possible relationship between feeding and attachment is raised by Quinn and Mageo (2013). Based on an early research made by Harlow on rhesus monkeys - he demonstrated that monkeys preferred cloth covered surrogate mother to bare-wired surrogate mother with food dispensers - Bowlby asserted that attachment was not dependant of feeding processes (Quinn and Mageo 2013). Quinn and Mageo believe that, in many societies, feeding has cultural meaning that can have consequences on attachment; however, the relationship between feeding and attachment has not yet been established through cross-cultural research.
Additionally, a major concern is the use of a standard Strange Situation method generally performed in a lab by psychologists. This method might not be replicable in different context such as orphanages, or/and in different cultural settings. Baba suggests that “theory of practice found in the Second and Third Worlds appears to represent a fifth model of theory practice relations that is unique to this context and not replicable in the West” (2000: 35). Even though Ainsworth had first conducted her research in Uganda (Africa) and noticed some differences in attachment processes, she does not conclude that culture influences attachment processes. On the other hand, Quinn and Maego emphasize the utility of ethnography to capture the different aspect of attachment in diverse cultural settings.

Anthropological research on attachment indicates that even though there must be a biological basis to human attachment, attachment is also a complex social and cultural construct and variations have been observed in different cultural communities (Stryker 2000). In his book, “The Evolution of Childhood”, Melvin Konner (2010) compares different hunter gatherer communities (!Kung, Hadza, Efe, Aka, Ache, and Agta) rearing practices; in all these communities, close relationship between infant and mother were observed. Yet variations of this relationship exist in these cultures including fathers and other members of the family’s involvement in child rearing. Therefore, applied anthropologists have to use ethnographic methods to understand and design program adapted to each cultural context.

Another perspective on child rearing practices was observed by Tronick et al. among the Efe (Levine and New 2008). In this research, the authors observed an interesting pattern of multiple caregiving during which a new born will be breast fed by different women in the first day of his/her life and the percentage of time a baby spend in physical contact with other women than the mother increases from 39% at 3 weeks old to 60% at 18 weeks old (Levine and New 2008: 76). Even though the authors in their conclusions challenge the idea of a universal psychological attachment model that emphasizes a continuous care and contact model with a primary caregiver, it does not contradict the idea of the necessity of early infant attachment. Multiple care giving practices have a social function: it will help the
infant to better adapt to Efe’s community life. Yet, Konner suggests that despite multiple caregivers, maternal primacy still apply to the Efes (2010).

An innovative project has been conducted among the Cameroonian Nso by Hilrtrud Otto (2008). Otto employed new methods to assess attachment, and one of these methods consisted in measuring the cortisol reactivity by taking samples of saliva before and after children were confronted with a stranger: the level of cortisol being an indicator of stress. Additionally, the children were videotaped during the procedure, and mothers were interviewed to assess their attachment belief system. The results indicated that Nso children were passive during a supposed stressful event as the confrontation with a stranger; therefore, Nso attachment differs from Westerner concepts. As in cross-cultural research, this study, underlined the problem of attachment categories that do not take in account cultural specificities.

Orphans and Orphanages

The first observations that can be made after conducting an anthropological literature review are that little research has been conducted directly in orphanages, and that the subject of early attachment has not received much attention, or at least not with a multidisciplinary approach. Yet institutionalized orphans are the most vulnerable population in many countries in the world.

Psychological Research on Orphans

A large body of psychological research has been conducted among Romanian institutionalized orphans who have been severely neglected (Kaler and Freeman 1994). These children suffered from acute deficits in cognitive and social functioning. Families who adopted Romanian orphans reported difficulties and stress (Mainemer et al. 1998). As emphasized by Kaler, Romanian orphanages “provided an unfortunate natural experiment on the effects of severe environmental deprivation on young children” (1994: 769). The sad example of these orphans highlights the importance of child care during the first months of their life.
A European team conducted a research among orphans in an institution in Kinshasa (Democratic Republic of Congo) (Muadi et al. 2012). The research compared and contrasted attachment quality between two groups of children living in an intuition and children living in their family, all aged between four and seven years. The age of the children allow them to use a specific method: the Attachment Story Completion Task (ASCT). The children are asked to complete stories that are supposed to assess children’s internal working model of attachment; they also use a doll to enact some scenes. The results showed a significant difference in the rate of attachment between the two groups, with the institutionalized children being less securely attached. The authors also underlined that orphans in Kinshasa have achieved higher rates of attachment than other children in other populations such as Romanian children; they conclude that the children might be more resilient in this population.

Even though the results of this research show interesting patterns, many questions can be addressed. The first one concerns the methods used: is the method culturally relevant? This method has been designed to be used with Western children, with stories adapted to their daily life; for instance, images represent a child who has spilt juice on a table, a child who is afraid of a monster in her bedroom, or a child who has lost her dog. Children at the orphanage are not familiar with such situations. Furthermore, does the method take in consideration specific rearing practices? The second critique of the study is that it does not include important variables such as age of arrival at the orphanage and time spent at the orphanage; a child who might have spent the first years of her life with her mother might have developed secure attachment before entering the institution. This research underlines the complexity of measuring the same construct when comparing research in different context, such as family vs. institution, or different cultural setting such as Westerner countries vs. African countries.

Anthropology and Orphanages

Little anthropological research has been conducted in orphanages. Most of the research concerned older children and their status as orphans. In three different research conducted in Egypt (Gibbons 2005),
Cambodia (Edmond 2009), and China (Quinn et al. 2009), the results indicate that orphans do not have the same life experiences. Even though Cambodian and Chinese orphans consider being lucky to live in their institution because of health care and education access, there are still victim of stigmatization. This phenomenon is further accentuated for female Egyptian orphans who are confronted with discriminations and prejudices in education and marriage; on the other hand, Edmond (2009) underlines the necessity of institutions for children who are unwanted.

Institutions remain essential for the survival of orphans in developing countries; however, there is an evident necessity to pursue psychological and anthropological research in these orphanages, in order to better understand live conditions of orphans and status, and develop better places where these vulnerable children will be given a propitious future.

**Conclusion**

The literature review underlined a void in anthropological research among institutionalized infants, but also revealed the need for further research on attachment and more specifically on the particular feature of disinhibited social behavior. Furthermore, there are contradictions between bio-neurological research indicating that mothers are the best equipped to help develop early attachment in their children, and anthropological research showing that multiple caregivers are frequent in many cultural groups and mothers might have less influence in the development of attachment. The present research conducted in a Burkinabe orphanage will bring new perspectives on orphans’ early attachment and will address more specifically the problem of method, classification of attachment, and the different factors that might induce disinhibited social behavior in the specific cultural context.
Chapter 3: Setting

Introduction

This chapter covers the description of the settings; it includes a general portrayal of the country: geography, history, economy, education, religions, and ethnicities with a focus on the Mossi the most prevalent ethnic group. Finally, a closer look to the town where the orphanage is located and a description of the orphanage and its functioning is presented.

Burkina Faso

Geography and Climate

Burkina Faso is a West African landlocked country sharing boarders with six neighbors: Niger, Mali, Cote D’Ivoire, Ghana, Togo, and Benin (Clancy 2013). The country has a size of 274,200 km² with a population estimated at 15.7 millions in 2010. The territory is divided into thirteen regions, forty-five provinces, and 301 departments.

Burkina Faso was previously called Upper Volta because of the three main rivers that cross the country (Clancy 2013): the Black Volta (Mouhoun) that is also the only river that flows year-round, the White Volta (Nakambe), and the Red Volta (Nazinon). Water is a rare commodity for Burkinabe, and in most villages in the bush people have to draw water from wells, a chore often allocated to children who have to carry heavy water cans.

Burkina Faso has a primarily tropical climate with two different seasons (wet and dry season) (Clancy 2013). During the dry season, between October and May, a hot and dry wind called Harmattan blows from the Sahara. There are three different climatic zones: the Sahel, the Sudan-Sahel, and the
Sudan-Guinea. The Sahel zone receives less rain that the other regions and people in this region often suffer from drought.

History and Politics

This area of Africa was populated between 14,000 and 5,000 BC by hunter-gatherers. Permanent farmer settlements appeared between 3600 and 2600 BC (Skinner 1989). In the central part of Burkina Faso, several Mossi Kingdoms have ruled the country for centuries until 1896, when the French colonized the region. In 1919, different territories including provinces from Cote d’Ivoire were united to form the French Upper Volta. This country became independent on August 5, 1960. The first president or the Republic of Upper Volta was Maurice Yaméogo. The country adopted a constitution in which the president was elected by universal suffrage for a five-year term. However, the democracy was difficult to install; soon after, the new president Yaméogo banned all political parties other than the UDV (the Voltaic Democratic Union). In 1966, a military coup deposed Yaméogo who was replaced by Colonel Sangoulé Lamizane who remained in power throughout the 1970s under a mixed civil-military government. Several military coups d’état left the country in political instability. On August 4th, 1984, Captain Thomas Sankara took the power after another coup d’ état and formed the National Council for the Revolution (CNR) with other Marxist-Leninist members and launched an important development movement. One important change that Sankara brought is the name of the country: Upper Volta became Burkina Faso, the country of upright (or honorable) people. Sankara was one of the most charismatic leaders in this country. However, the country struggled to achieve political stability and on October 15th, 1987, Sankara was assassinated and Captain Blaise Campaore came to power. Campaore has remained the president since then. He completely departed from Sankara’s politics by reversing nationalizations and overturning his policies (Clancy 2013). When interviewing Burkinabe, who remembers Sankara, it is interesting to hear all the different opinions. For the generation of people who were young adults during this period, Sankara has left a fabulous legacy: they remember the hope and enthusiasm the leader conveyed; people had to enroll in volunteer community services to build houses for the poor. Sankara
tried to fight against corruption. However, for other people, Sankara was a dreamer who has not been able to save the country from poverty and corruption. If the country has enjoyed a relatively stable and peaceful period since 1987, the recent sociopolitical crisis in Marsh 2011, prefigures the difficulties of the next presidential elections in 2015, when Campaore will be supposed to retire. Until today, political freedom has been restricted and human rights organizations have decried violence against journalists and members of the opposition (Clancy 2013). Most Burkinabe are pessimistic about the upcoming presidential elections and the possible consequences on the country that already suffers from many social, political and economical troubles.

Economy and Health

A major problem of Burkina is the recurrent poverty that is estimated at 46% in 2009; the country ranked 181th out of 187 countries in the Human Development index (Bertelsmann Stiftung 2012). Burkina Faso belongs to the West African Monetary and Economic Union (UMEOA); the CFA franc is the national currency (Clancy 2013). The natural resources of the country are copper, iron, manganese, gold, tin ore, and phosphates. Yet, the country’s economy relies largely on agricultural production such as cotton that is mostly exported (Clancy 2013). Yet, even though the country is vulnerable to climate variation like rainfall, and oil crises, Burkina Faso has a regular annual growth of over 5.5 percent since 2000 with an average inflation of 3 percent.

The economic improvements have also positive repercussion on the population’s health. Infant mortality has decreased from 81 deaths per 1,000 live births to 65 deaths per 1000 live births between 2003 and 2010 (Clancy 2012). Maternal mortality has also decreased from 484 to 341 per 100,000 live births between 1995 and 2010. In 2004, life expectancy was estimated at 52 for women and 50 for men (Clancy 2012). The median age of the Burkinabe population is 16.6 and the growth rate is 3.109%. The fertility rate is almost 6 births per women. Adult HIV prevalence rate is at 1.1 percent (UNICEF), a value that has remained stable during the past years. Malaria remains the most important health concern for the
country and is the major cause of mortality (Clancy 2013); in 2007, almost 5.5 million cases of malaria were recorded with 12,000 deaths. Children are particularly vulnerable: between birth and age five, each child will have at least once occurrence of the disease with a lethality rate of almost 3 percent.

Education

Burkina Faso has one of the lowest school attendance rates in sub-Saharan Africa (Kobiane 2005): 41.4 percent of boys and 31.4 percent of girls’ aged 7-12 were attending primary school in 2002. There is a strong disparity of school attendance between ethnic groups (Younoussi 2008). Living in urban or rural locations also makes a difference in the access to school. When asking young Burkinabe in Kaya about school, you will learn that classes are overloaded: there are more than 100 students per class (elementary, middle school and high school). Not all children can have books; parents have to pay for the school; only those who are highly motivated and have some support will succeed: according to them, only 10% will be able to make it to high-school; they seem to be fatalistic about education.

Orphans have less chance to attend school than non-orphan children (Kobiane 2005). For example, in 2000 36.3 percent of non orphan children age seven will enter school in urban areas whereas only 15.1 percent of double (mother and father) orphans would, with a large gender difference. These negative effects tend to decrease due to new policy and Western organization support. However, more research needs to be conducted to investigate orphans’ school performances and achievement (Kobiane 2005).

Religion

In the 2006 census, data indicated that 60.5 % of the population practices Islam (mostly Sunni), 19% of the population is catholic, 4.2% are protestant (from various denominations), and 15.3% are animists. Except for the Fula and the Dioula who are majority Muslims, there is a religious heterogeneity among the other ethnicity. Yet, it is difficult to have exact statistics concerning religion in Burkina (Clancy 2013). “A popular saying in Burkina Faso claims that 50% are Muslim, 50% are Christians, and
100% are Animist…. Syncretism, incorporating traditional indigenous beliefs and practices, is widespread among both Christian and Muslims” (Clancy 2013: 67).

Even though political and religious problems are critical in neighboring countries such as Mali and Niger, during the research, the investigator has not perceived religious or political tensions in Kaya, there is rather an impression of harmony between the diverse religious communities in the town. When visiting a village in the bush it is common to see a mosque, a church, and also an altar where the marks of chicken sacrifice could be observed.

Ethnicities

In Burkina Faso, a Sahelian country, there are approximately 60 different ethnicities whose territories sometimes go past the borders of the country. The Mossi, located in the center of the country is the most prevalent ethnicity representing 49 percent of the population. Other important ethncial groups are the Peuls (7.8%) in the North, the Gourmatchés (7%) in the East of the country, the Gourounsis (6%) and the Bissas (3%) located in the South, the Samos (2%) the Markas (1.7 %), the Bobos (1.6%), the Sénoufos (2.2%), the Dagara (3.7%) and the Lobis (2.5%) all situated in the Southwest (Younoussi 2008). Younoussi emphasizes the influence of colonization on the reinforcement of ethncial differenciations: the French government decided to favor some local ethncial group to maintain their power; the affiliation to a specific ethnicity has sometimes furthered the conflict to get power. Many examples are flagrant in several African countries such as Rwanda, Nigeria, Ivory Cost, Mali, etc. Yet, since there is such a large Mossi majority in the country, the country has not (yet) experienced ethncic conflicts like in other countries, even though there might be some tensions between the different minorities. All the ethncic groups have their own language, and French remains the official language since the colonization. There are often tensions between traditional cultural customs and governmental laws. The different ethncic groups share many similar traditions such as genital cuttings, forced and early marriage, sororate (a wife who died can be replaced by her sister), levirate, nutritional taboo (Younoussi 2008). About 28 percent of
girl under 15 year old are forced to be married, inducing increased health problems in pregnancy and birth related to physiological and anatomical immaturity.

The Mossi

The research took place in the center of the Mossi region and a majority of the children and the caregivers at the orphanage are Mossi; therefore a closer look to this culture, their traditions, and the evolution of this ethnicity brings more insight to the understanding of the differences between a child raised in his/her family and a child raised in an institution. In 1964, Elliott P. Skinner wrote one of the first books in English that attempted to describe and understand the Mossi societies: *The Mossi of the Upper Volta: The Political Development of a Sudanese People.* (1989). As Skinner underlined, “most American scholars preferred to work in areas where the lingua Franca was English” (1989: xi). Very little research has been conducted by American anthropologists, yet, despite the long French colonization and the modernity of the big cities such as Ouagadougou and Bobo, villages isolated in the bush have maintained ancestral traditions that makes this country an interesting place of anthropological research. Joseph Issoufou Conombo has described many of these customs in a book written in 1989: *M’Ba Tinga: Traditions des Mossé dans l’Empire du Moogho Naba*. Since this book was written more than twenty years ago, the information collected in this book was used to interview a member of the Mossi community to confirm that those traditions still persists.

*Origin of the Mossi*

The complexity of tracing the history of the Mossi is related to the fact that information is mainly based on narratives and dynastical records (Moniot 1972); in the 15th century, Portuguese explorers also mention the existence of Mossi Kingdoms. Another difficulty is related also to the fact that time is a relative notion for Africans, time is sacred for them; history should only be disclosed in specific circumstances such as during initiations. Africans have rather a sense of philosophical history than an objective and factual one (Zahan 1961).
The first uncertainty of the Mossi history is when the Mossi kingdoms were created; most scholars agree on a time frame between the 11th and the 13th century (Izard 1961, Moniot 1972).

“The origin of the Mossi society lies buried in Myths that not only sanction the power of the ruling families but support the political system with rich traditions of migrations and conquest” (Skinner 1989:7). The Mossi belief that Nyennega, the daughter of an important Ghana ruler, fled from home because her father did not want her to marry. She went to the North and married a man called Riallewho who might have been the son of a Mali chief. They had a son called Ouedraogo (Stallion). This name is highly widespread among the Mossi today and many of the people would say that this name means “prince”. Ouedraogo visited his grandfather in Ghana and received horses as a present; Dgomba horsemen accompanied him back to his home where he married and had three sons. Ouedraogo is believed to be the progenitor of the Mossi, and his mother the progenitrix. The Mossi are well known as accomplished riders and valiant warriors. Different Mossi Kingdoms were founded by the sons of Ouadraogo, but the most important was the Ouagadougou dynasty, founded by Ouedraogo’s son Zoungourana who became the first Mogho Naba (chief of Mossi country). It is interesting to notice the importance of women in the story of the creation of the Mossi kingdoms.

Since then, all the important positions in the political organization have been held by descendants of Ouedraogo, or members of the lion clan or Gegema (Skinner 1989). The Mossi Kingdoms have remained a stable and powerful empire highly hierarchical that did not suffer from invasion from other ethnic groups, nor from slave traders, and protected their religious traditions from the Islamic expansion until the colonization at the end of the 19th century.

The housing in villages has remained almost the same since before colonization. It consists of several courtyards accommodating large families (Conombo 1989). The father (chief) lives in a separate cabin often in the middle of the courtyard, this case is surrounded by other cabins inhabited by the wives – polygamy is still common in the country – each wife has her own cabin in which she lives with the
children. The girls will stay with their mother until they marry, whereas the boys will eventually leave the mother case and go to the bachelor case. When the son marries, he might stay for a while in his father’s courtyard, but after a while he will start his own courtyard next to his father or in the village and will become the chief of his courtyard.

Among the traditions that have remained, marriages are a very important aspect of Mossi’s lives. Mossi lineages are generally exogamous. “Marriage was forbidden between persons who could trace a common maternal ancestor… Most Mossi marriages were based on an exchange of women between two lineages linked by a long-term series of reciprocal exchanges of goods and services. “Women were regarded as the most valuable part of this system” (Skinner 1989: 24). Marrying a person living in the same village is considered incest and we will see later in this paper how incest affects the children at the orphanage. Forced marriage is also today a concern because girls are fleeing their families who try to marry them and they become isolated and often live in precarious situations as it is the case of some of the caregivers at the orphanage.

Yet, in many cases, the traditional ceremonial of marriage is maintained in the villages (Vinel 2005). At a very young age, between 11 and 12 year old, girls know the family of their future husband, they know they have to obey, they know their role. 28% of women 15 years old or less are married, with many negative consequences concerning their health and education (Younoussi 2008). Many rituals precede marriages and these rituals can last years before the marriage.

Beliefs

Among all the beliefs of the Mossi, some of them can have severe consequences on women and children’s lives. For instance, the Mossi believe that a child would never survive if his/her first contact with the external world would be with a non-excised clitoris (Conombo 1989); this belief justifies female genital cutting, that still exists, even though the government has voted a law that forbids excision. Women are often accused of being possessed and are beaten and excluded from the community and become
marginalized. Being excluded from a community has many drawbacks: the woman will not find a place to live; she will have difficulties getting food and medical care. Another belief that has negative repercussion on the newborns, is that colostrums (the first mammary secretion) is considered to be unhealthy for them and should not be given it to the baby; many humanitarian organizing are fighting against this custom and try to educate women about it.

**Child Rearing Practices**

Understanding child rearing cultural practices explains how the process of attachment develops. As indicated by Viginie Vinel (2005), Mossi mothers have the exclusivity of the baby’s care. However, a woman who has her first child will receive advice from the other women living in the courtyard: other wives, and older women (mother in law). The new baby receives all the attention from mother until he/she is weaned, at about 2 two years old. She will carry the baby on her back all day long and play with him/her during rest time (Vinel 2005). Among the various form of care a mother will bring to her child, one of the Mossi practices is quite unusual: the mother will perform an enema on her baby. She will use a liquid made of bark decoction that she will put in her mouth and then inject it directly from her mouth to the anus of the baby (Conombo 1989). The mother will then examine the baby’s stool to see if he/she is in good health. The director of the orphanage has confirmed that this practice is still current nowadays, however, it is not practiced at the orphanage that has more occidental methods of baby care.

**Orphans in Burkina Faso**

Today, there are more than 140 millions orphans in the world (Bailey 2012). About 43.4 millions orphans live in Sub-Saharan countries; this number has increased by over 50% since 1990. In Burkina Faso there were 2.1 million orphans or abandoned children in 2011 (18% of the country population) (IRIN 2012). In 2001, there were 769,000 orphans in the country; among them, 35 percent have lost their parents to AIDS.
Institutionalized orphans are the most vulnerable part of the Burkinabe population given the high risk of mortality, the multiple health and psychological problems, and the little chance they have to receive an education.

**Kaya and the Orphanage “L’Oasis des Enfants”**

The research took place in Kaya, a city located in the center of the country at 100 Km Northeast of Ouagadougou the capital of Burkina Faso. About fifty thousand people live in Kaya, in which the Mossi ethnicity is dominant. The first impressions occidentals have is that Kaya looks more like a large village, with a dominant ocher color that gives an impression of continuity between the streets and the houses; there are also trees and beautiful bougainvilleas full of flowers that give a touch of color in this desert-like atmosphere. Houses look like boxes of bricks made with the ocher soil, covered with corrugated iron; it was surprising to learn that the house surfaces were given using the number of corrugated iron used to cover it: for instance, a young father told us that he has a “24 toles” (24 corrugated iron plate) house. The town houses are formed by numerous little groups of habitations, each surrounded by a wall, which usually accommodated an extended family with a specific hierarchical organization: the patriarch occupied the larger house, each wife has her own house, there might be a house for adult bachelor males, and also a specific place for the cattle. This type of housing organization has a tendency to disappear in large cities, but is typical in villages in the bush. Therefore Kaya can be considered as a large village. Yet, there are also administration buildings such as a police station, a town hall, and different little businesses. An important place in the middle of the town is the market that is organized in different parts. The main building shelters craftsmen; in Kaya, there is a strong tradition of leather art, beautiful jewelers’ boxes, belts, suitcases and bags. All these objects are made of goat leather and a strong smell of goat leather permeates the place. At the market, the fabric shops are also typical: beautiful and colorful African cloth that almost all women are wearing in long skirt or dresses. In Burkina, specific fabrics are manufactured for special events: during the research, the country celebrated International Women’s Day, on March 8th; for this occasion a specific textile was created, on which the
event was printed: “08 Mars 2013: Journée Internationale de la Femme”. At the market, you can also find fashion designers who will created a multitude of different dresses using old manual sewing machine.

Another strong smell that is typical at the market is dry fish. Other merchants sell millet, or other crops. There are also vegetables, tomatoes, onions, and fruits such as mangoes and bananas.

Kaya is not a main tourist place in Burkina Faso, and the country is not a popular touristic destination, even though beautiful places such as the water falls of Banfora could be a real touristic attraction. There are very few occidental or “white” people in Kaya: “Nasara” is the name given to white people by the local population. When you walk along the town streets as an occidental, you will be surprised by the warmness, the kindness, and the generosity of the population, who will always greet you. Compared to more touristic places, you will not have people asking you for money or other things. Another perceptible aspect of the affability of the Burkinabe population is their constant smiles and laughs that are perceptible wherever you go.

Kaya’s orphanage “L’Oasis des Enfants”, was created in 1970 by Josette and André Brisset, a couple of Swiss missionaries, who also founded the International Missionary Alliance (AMI) organization that has supported the orphanage since then. L’Oasis des Enfants was one of the first orphanages created in the country. Before the first orphanages, people used to say, “there were no orphans in the country”. When a mother died during birth, the child was taken to the extended family and there always was a woman who could breastfeed the baby. However, problems of famine changed the situation, and women had just enough milk to feed their own child and often the orphan would die. Furthermore, children born in unacceptable conditions such as incest did not survive. It was to prevent these terrible fatalities that the missionary couple created the first orphanage in very humble conditions because the babies were sleeping in cardboard boxes in their home. Since that difficult start, the orphanage has expanded; the Swiss organization has been able to buy a property on which different buildings were constructed including an office, cabins that are rented to the family who come to visit the orphanage or other visitors (like people
from different organization as we did), the principal building where the children live, and the nutrition center (CREN: Centre de Renutrition). The CREN supports mothers who cannot breastfeed, or families who have taken charge of a newborn child whose mother died during childbirth, by providing milk, clothes, and training about specific new born care. A majority of the children who are institutionalized still have a living father and/or extended families who generally live in distant villages in the bush and cannot access the nutritional center. There are also infants who have been rejected by their family because of the conditions in which they were born (incest), children whose mother are mentally ill and cannot take care of them, and children who have been abandoned. Sometimes, the orphanage will accept a child who suffers from malnutrition. During the research, 22 children lived at the orphanage: newborn to two/three year old children. After turning two years old, a child is either supposed to go back to his/her extended family or to be adopted. However, the adoption process takes often a long time and children might stay longer in the institution.

The orphanage building includes three bedrooms that accommodate seven or eight children by group of age; each child has a bed covered with mosquito nets during night. In each room there is a large sink in which the children are twice a day washed by the caretakers. In the older children’s room, there is a bench with pots for potty training. It is funny to see them all sitting together for potty training. A large corridor connects all the rooms. When the weather is bad, children will spent their day in the hallway, yet most of the time, they can go outside, where the older children who can walk enjoy a large courtyard where they have a considerable freedom to play. The other infants lie on mats arranged on the floor of a shaded terrace in front of the building. Caretakers will be sitting with them.

The orphanage schedule is always the same: the children wake up at 6:00 am, are bathed and potty training for the oldest; then they receive breakfast in the dining room and the babies receive a milk bottle: a caretaker gives the bottle to the youngest until they can grab it themselves. At 8:00 am, all the caretakers and the children will gather in the hallway for a time of religious (Christian) worship: during this time the caretaker will sing, play the djembe, and pray. The orphanage has maintained a Christian
tradition, almost all the caretakers are Christian and the director is also a pastor of an evangelical church; however, not all the children are Christians, most of them are Muslims, but it does not seem to be a problem, neither for the caregivers nor the extended families that will later foster these orphans. After the worship, children go outside. When snacks (local cookies, or other traditional food) are available, children have some with water. The orphanage does not have disposable diapers; caretakers use cloths that they have to change regularly. These cloths are hand washed every day by two employees, along with children clothes and bed sheets: exhausting work!

11:30 is lunch time. The meals are prepared by a cook in a cabin outside the building. The meal is cooked in a large pot on a wood fire. Most of the time, children eat millet, rice or pastas, with a sauce in which the cook might add sometimes dry fish or chicken. After the lunch, the children have a nap until 2:30 pm. They will be bathed again and then go outside until 5:30 pm. At 7:30 pm they have dinner usually made of “ tô”, the traditional meal of Burkina: a sticky paste made of millet and accommodated with a sorrel or baobab leaf sauce. After dinner, the children go to sleep and the night caregiver shift starts.

During the two or three years at the orphanage, children sometimes get out of the orphanage for a walk around the block, but will spend most of their time at the orphanage with the same schedule, and the same caregivers who work in shifts. They form a large family with the “chef” being the director of the orphanage. When the director comes to the orphanage once a day, all the children (those who can walk) run towards him and call him “papa” (dad). On the other hand, children never call the caregivers “maman” (mom). They would call them by their first name. The life of the orphans is very different from children raised by their family who spend most of their time with their mothers, often attached on her back, and accompany their mothers wherever they go which offers these children much more visual, auditory, and olfactory stimulus, and more habits to live in the large society. This major difference in child rearing practices between the orphanage and the general population can already suggest possible differences between attachment forms.
Chapter 4: Research Methods

Introduction

One of the major critiques of the original theory of attachment concerns the method to assess attachment, the Strange Situation method that is hardly applicable in a setting like an orphanage. Therefore, it is essential to apply mixed quantitative and qualitative methods to capture attachment forms in the specific cultural and social setting of this African orphanage. The research took place in March 2013. The investigator stayed in the country 28 days. Mixed quantitative and qualitative methods were employed including participant observation, questionnaires, interviews, and behavior check-lists.

Methods

As underlined by Mary Aisworth, the best way to assess attachment is to do direct observation in children’s natural environments (Garhart Mooney 2010: 26). Yet the traditional test used by Ainsworth called the Strange Situation could not be used in orphanage settings. The principal reason is that infants in that orphanage do not express attachment to a specific caregiver, but often showed attachment to many of them. Furthermore, children are always together, night and day, and never leave the institution. In the Strange Situation method, children would be separated from each other and that could already be misunderstood by children who might feel like they would been punished; it would bias the method. Other methods such as the Attachment Story Completion Task (ASCT) used by Mbiya Muadi et all in their research (2012), were not adapted to infants younger than three years old, and are not necessarily culturally adapted. Therefore the method had to be adapted and designed to the specific cultural context and settings of the orphanage in Kaya. It consisted of participant observations, orally administered attachment questionnaires, caregivers’ questionnaire, interviews, and check-lists of behaviors.
Attachment Questionnaire

The attachment questionnaire was designed to have caregivers’ point of view about specific children’s attachment behaviors. For instance, questions concerning the frequency of crying, proximity seeking, visual contact, playing, smiling, exploring, etc were given to caregivers who would answer these questions in function of their own cultural criteria of child behavior expectations. Theses specific behaviors are referred as attachment behaviors (see chart 1).

The attachment questionnaires were dispensed to both assistant directors who have been working at the orphanage for a long time (17 and 27 years), speak fluent French, and know all the children and their stories. Furthermore, both women expressed a true interest in the research and were very helpful. A questionnaire for each of the 14 children aged one to 5 years was administrated to both assistant directors separately. Interestingly, both assistants gave the same exact answers to the questionnaire. The fourteen questionnaires were used for data analysis (see below).

The questionnaire had two parts. The first part included individual child information such as name, date of birth, date the child entered the orphanage, ethnicity, motility and communication skills, and circumstances of arrival at the orphanage. The second part of the questionnaire addresses direct attachment behavior and their frequency. For instance, if the child cries often, seeks attention and contact with caregivers or strangers, if the child plays, explores, sleeps regularly, shows emotions, is in opposition or is avoidant, plays, smiles, etc. (appendix 1). These various behaviors are expected to point to possible attachment problems. For instance, a child who might never make contact with caregivers, who might not make visual contact or show emotions (according to caregivers criteria of emotions), may display forms of avoidant attachment. On the other hand, a child who would cry often, trying to always make contact, and not willing to explore his/her environment might have reactive attachment form. The investigator deliberately did not use vocabulary such as attachment disorder because there might be large nuances between a form of attachment that can be typical to the culture, and an attachment disorder that
would necessitate a more professional diagnostic; however, it is not clear who would be an expert to do such diagnostics in this specific cultural context.

Caregivers’ Questionnaire

The caregivers’ questionnaire is intended to highlight the caregivers’ profile. Understanding who the caregivers are may also highlight the facilities or difficulties related to attachment between orphans and caregivers. The questions included basic information about age, marital status and parenthood, education, duration of employment, and ethnicity (appendix 2). The investigator completed eleven questionnaires: caregivers and assistant directors answered separately.

Behavior Check-List

A check-list behavior activity was also conducted in order to compare the questionnaire results about children behaviors to directly observed behaviors. The investigator observed each infant separately for two different time periods during the day: one in the morning and one in the afternoon during free time (Appendix 3). These observations consisted of checking several types of behavior and posture such as walking, sitting, opposition, self-stimulation, eating, destruction, vocalization (crying, or screaming, or others), sleeping, playing, clinging on adults, exploring or others. Some of these behaviors represent typical attachment behaviors; yet other behaviors were also observed to give a larger perspective on infant activities. Two sessions of observations for each child were conducted:

- In the morning between 9:00 am and 11:00 am: 9 time intervals of 10 minutes with a five minutes break in between.
- In the afternoon between 3:00 pm and 5:00 pm: 4 time intervals of 10 minutes with 5 minutes break. The investigator decided to reduce the observations in the afternoon because the duration of afternoon free time was shorter compare to the morning.
During the observation intervals, the investigator simply checked when the behavior occurred, and was coded 1. The analysis of the check-list gave an idea of occurrences of each behavior during free time; for instance if they have more occurrence of exploring, or playing, or seeking contact with adults. 13 children were observed. One check-list has not been completed because the child went to hospital for severe fever. Therefore, 12 children have been observed during nine intervals of 10 minutes (five times in the morning, four in the afternoon) for a total of 108 observations of 10 minutes of all children.

Semi-Structured Interviews

Three semi-structured interviews were conducted: one interview with each assistant director separately, and one with the director of the orphanage. These interviews were intended to understand the history of the institution, its functioning, the role of each person, and their goals.

Participant Observation

Besides conducting check-list and interviews, the investigator participated in the daily life of the orphanage as described in chapter 3. This participation has allowed the observation of specific situations that has been described in detailed study cases. As underlined by Quinn and Megeo (2013), ethnographic insights are also very important in the understanding of attachment development because they reveal features that have not been expected and are not quantifiable.

Sample

Twenty two children live at the orphanage l’Oasis des Enfants: eleven girls and eleven boys. The youngest was four months old and the oldest was 5 years old. Generally, children at the orphanage are not older than two years old, but under some circumstances, some children might stay longer. Such is the case of the five year old girl who will not be included in the research, but will be the focus of a study case. Attachment theories assert that the processes of attachment occur during the first year and that are observable after that. Given the structure of the institutions, all children could be observed, but the
The investigator chose to conduct quantitative research only with children who were 12 months old and older to have more chances to observe attachment behaviors. The group studied consisted of 13 children, seven boys and six girls, who were between 12 and 31 months old (mean = 17.68 months, SD = 6.94). Among them, only 5 could walk, and two could talk. All of them did arrive at the orphanage shortly after they were born. One of the children seems to have a mild form of mental retardation that has not yet been diagnosed.

Children’s Ethnicity: Among the 13 children observed, seven children were Mossi, two were Gourmantché, and one child was a Peulh. The ethnicity of three children who have been abandoned cannot be confirmed. As it is the case in the general population, most of the children were Mossi.

The group of caregivers consisted of nine caregivers and two assistant directors. All the employees of L’Oasis des Enfants are Mossi: the director, the assistant directors, and the caregivers. The caregivers are all women between 17 and 43 years old (Mean = 21.8 SD = 8.05). Among the caregivers, eight out of nine are less than 21, and are not married. The caregivers have been employed at the orphanage for three years or less (mean = 23.7 months SD = 13). All of them are Mossi; Four out of nine caregivers have never been to school; the highest level of education achieved is 6th grade. Six of them have received a special 3 days training out of the orphanage, and all of them have been trained by the first assistant director of the orphanage who has been employed there since 1986, who has a degree in child care and has worked with a pediatrician; her role is to manage all the administrative and economical aspects of the orphanage, yet she also often takes care of the children. The second assistant director has a high school degree and has been working at the orphanage for 17 years; she supervises the caregivers, but more often is substitute caregivers when one is missing.

The director has different responsibilities other than the orphanage; he also supervises the nutrition center, a medical center, and is the pastor of an evangelical church. He does not spend much time at the orphanage which is mostly managed by the two assistant directors.
Data Analysis

Attachment questionnaires:

Data collected from attachment questionnaires were gathered in an Excel spreadsheet (see table 1), and descriptive statistic analysis were performed. Each behavior was observed separately.

A Spearman correlation was conducted using SPSS to observe a possible relationship between age and how children react to strangers; Spearman correlation was chosen because of the small sample size.

Check-list behavior:

Data collected during behavior check-list activity were gathered in an Excel spreadsheet and descriptive statics analyses were performed (see table 2 below). These analyses were compared and contrasted to the results obtained with the attachment questionnaires. For instance, some specific behaviors such as exploring occurred frequently; the attachment questionnaire also revealed that children often explore. However, the behavior check-list did not produce enough data that could be further analyzed.

Caregivers’ questionnaires:

The data collected from the caregivers questionnaires have been reported on an Excel spreadsheet (table 3). Descriptive statistic analyses have been performed to observe specific features such as age, employment duration, and education level. The results are developed in chapter 5.

Participant Observations and interviews:

Observations conducted apart from other methods (check-list behaviors) during the presence of the investigator at the orphanage, in addition to information obtained during interviews have produced additional ethnographic information that is reported in chapter 5.
Table 1: Segment of the Attachment Behaviors Spreadsheet. The names of the children have been modified.

<table>
<thead>
<tr>
<th>children</th>
<th>age in months</th>
<th>walk/or crawl</th>
<th>cry</th>
<th>seeks proximity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W or C</td>
<td>Talk</td>
<td>often</td>
<td>some</td>
</tr>
<tr>
<td>Sowe</td>
<td>25 w n</td>
<td>0 0 1 0 0 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nita</td>
<td>16 w n</td>
<td>0 1 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masou</td>
<td>28 w y</td>
<td>0 1 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repi</td>
<td>16 w n</td>
<td>1 0 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shala</td>
<td>15 c n</td>
<td>0 1 0 0 1 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nela</td>
<td>31 w y</td>
<td>1 0 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tinva</td>
<td>12 c n</td>
<td>1 0 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debo</td>
<td>25 c n</td>
<td>0 1 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dere</td>
<td>12 c n</td>
<td>1 0 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baya</td>
<td>12 c n</td>
<td>0 1 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omu</td>
<td>14 c n</td>
<td>1 0 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amo</td>
<td>12 c n</td>
<td>0 1 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inad</td>
<td>12 c n</td>
<td>0 1 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rase</td>
<td>73 w y</td>
<td>0 1 0 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5 8 1 11 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg</td>
<td>21.64</td>
<td>0.36 0.57 0.07 0.79 0.14 0.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std Dev</td>
<td>16.22</td>
<td>0.50 0.51 0.27 0.43 0.36 0.27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Segment of Behavior Check-list spreadsheet. Names on the table have been modified.

<table>
<thead>
<tr>
<th>infant</th>
<th>Exploring</th>
<th>Clinging</th>
<th>Playing</th>
<th>crying</th>
<th>Immobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>nela</td>
<td>6 0 8 0 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inad</td>
<td>5 0 7 1 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baya</td>
<td>7 6 6 1 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debo</td>
<td>3 3 6 3 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masou</td>
<td>5 3 4 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sowe</td>
<td>2 0 9 1 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repi</td>
<td>8 4 4 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nita</td>
<td>7 6 3 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dere</td>
<td>5 6 6 4 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omu</td>
<td>7 6 5 3 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shala</td>
<td>5 2 5 0 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amo</td>
<td>3 1 4 0 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>63 37 67 13 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>5.25 3.08 5.58 1.08 0.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>StDv</td>
<td>1.86 2.50 1.78 1.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3: Segment of Caregivers Data Spreadsheet.

<table>
<thead>
<tr>
<th>Caregivers’ Information</th>
<th>marital status</th>
<th>Children</th>
<th>Employment duration</th>
<th>Studies</th>
<th>Ethnicity</th>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>age 17</td>
<td>single</td>
<td>0</td>
<td>3 years</td>
<td>N/A</td>
<td>Mossi</td>
<td>yes</td>
</tr>
<tr>
<td>age 20</td>
<td>single</td>
<td>0</td>
<td>3 years</td>
<td>3rd grade</td>
<td>Mossi</td>
<td>yes</td>
</tr>
<tr>
<td>age 20</td>
<td>single</td>
<td>0</td>
<td>3 years</td>
<td>N/A</td>
<td>Mossi</td>
<td>yes</td>
</tr>
<tr>
<td>age 19</td>
<td>single</td>
<td>0</td>
<td>2 years</td>
<td>1st grade</td>
<td>Mossi</td>
<td>yes</td>
</tr>
<tr>
<td>age 21</td>
<td>single</td>
<td>0</td>
<td>7 months</td>
<td>6th grade</td>
<td>Mossi</td>
<td>no</td>
</tr>
<tr>
<td>age 43</td>
<td>Married</td>
<td>3</td>
<td>2 years</td>
<td>N/A</td>
<td>Mossi</td>
<td>yes</td>
</tr>
<tr>
<td>age 20</td>
<td>single</td>
<td>0</td>
<td>7 months</td>
<td>N/A</td>
<td>Mossi</td>
<td>no</td>
</tr>
<tr>
<td>age 18</td>
<td>single</td>
<td>0</td>
<td>8 months</td>
<td>2nd grade</td>
<td>Mossi</td>
<td>no</td>
</tr>
<tr>
<td>age 18</td>
<td>single</td>
<td>0</td>
<td>3 years</td>
<td>5th grade</td>
<td>Mossi</td>
<td>yes</td>
</tr>
</tbody>
</table>
Chapter Five: Research Results

Introduction

The results are organized in three categories. First, an analysis of the data was conducted to determine orphans’ attachment features. Another data analysis was performed to examine specific disinhibited social behaviors. Finally, the study of different cases also underlined specific aspects of attachment.

Attachment Features

After completing individual questionnaires with the help of the two principal caretakers, and following observations during participant observation, different aspects of attachment were intended to be observed such as avoidant attachment, reactive attachment, and secure attachment (figure 1).

The results indicate that very few children at the orphanage show forms of avoidant attachment (see figures 2a, 2b, 3a, and 3b). 77 percent of the children often seek caregivers’ proximity (n = 13, standard deviation: 0.44); most of the children are making visual contact: mean: 0.92, (n = 13, standard deviation: 0.28); 85 percent of the children show emotions (n=13, standard deviation: .38); 62 percent of the children ask to be carried (n=13, standard deviation: .51).

Another characteristic of children’s behavior observed during the check-list observation was that children were not inactive: during the nine time intervals seven out of 12 children had always some sort of activities (playing, exploring, clinging, walking, eating, etc); three of them had one time interval during which they were doing nothing, and only one child had four time intervals during which the child was inactive. It is also important to notice that caregivers did not offer any activities during the observation periods. Throughout the three weeks of observation, caregivers never offered any activity to the children;
from time to time they would hand out toys, but not always. Therefore, the children had to entertain themselves and each other.

Observing and measuring reactive attachment features proves more complex. However, some characteristics suggest that there might be few reactive attachment problems (figure 4a, 4b). For instance, a majority of infants explore their environment (mean: .77, n= 13. StD dev: 0.44): infant with reactive
attachment problems often stay close by their caregivers and avoid exploring. These data obtained from the attachment questionnaire were further validated by the behavior checklist data: during the nine time intervals, each child had some exploration occurrences: minimum two occurrences and maximum eight (mean= 5.25; STD=1.86). Even though not all the children could walk (5 out of 12) all of them could move either by crawling, or walking; yet, children who could walk had a larger exploration field.

Crying frequently can be a sign of reactive attachment; yet, children at the orphanage cry moderately based on caregivers’ opinion: 38 percent of children cry often (n= 13, STD=.51), 54 percent cry sometimes (STD=.52), and only few children rarely cry (mean: .08, STD=.28). The check-list observations indicated only few occurrences of crying; six out of 12 children never cried during the observation intervals; three of them cried once, and three other had three to four crying occurrences during the observations. Among the children who cried the most, one of them also had the most occurrence of clinging to caregivers (or any adult present at the orphanage); he would immediately stop crying when he would be held and will be smiling: crying would help him to get attention.

Figure 4a: Exploring

Figure 4b: Crying
**Disinhibited Social Behavior**

The first strong impression upon arriving at the orphanage is that you have many children running to you and wanting to be carried, even though they have never seen you before. This would be considered as indiscriminate or disinhibited social behavior according to Western psychological literature. Based on the behavior questionnaire, 38 percent of the children would seek contact with a stranger ($n=13$, $STD=0.51$). Yet, not all children displayed the same behavior, although none of them would ignore the presence of a stranger, 23 percent would be anxious, and 38 percent would look at the person and show interest without seeking contact (figure 5).

![Figure 5: Children’s Reaction when a Stranger Arrives at the Orphanage](image)

The older they are, the more they seem to show forms of indiscriminate sociability. Using SPSS, a statistical analysis was performed to explore possible correlation between age and reactions to stranger. The hypothesis is that the older the infants are the more they tend to seek contact with strangers and show indiscriminate sociability.

**Data used:**

- Age of infants in months ($n=13$, mean: 17.69, standard deviation: 6.945).
Reactions to strangers were classified in four categories (n: 13, mean: 0.77, standard deviation: 1.301): anxieties to strangers: -1; ignoring strangers: 0; looking at strangers: 1; seeking contact with strangers: 2

The results indicate marginally significant correlation between age and reaction to strangers and likely would be confirmed on a larger sample:

\[ rs = .541, \text{(n= 13, p= .056)} \]: the older the children are the more they seek contact with strangers.

Table 4: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction to strangers</td>
<td>0.77</td>
<td>1.301</td>
<td>13</td>
</tr>
<tr>
<td>age of children</td>
<td>17.69</td>
<td>6.945</td>
<td>13</td>
</tr>
</tbody>
</table>

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Finding a correlation does not indicate any causation, and the phenomenon observed might be more complex than it appears. What is the relationship between indiscriminate behavior and early attachment? Can other factors induce these behaviors like for instance imitation, caregivers rearing
practices changing with the child getting older (less attention), the increased autonomy of the child who can easier meet visitors at the orphanage, the habits to see different visitors coming and more specifically people who are bringing gifts, foreign families who are adopting a child, or relatives visiting the orphans? Discussion about these questions is provided below.

**Study Cases and Other Observations**

Children at the orphanage seem to live in quite good conditions: they have enough to eat, there are many caregivers to take care of them (a ratio of 3 to 4 child per caregiver), and over all they seem to be happy, they are laughing, smiling and playing. When a child arrives at the orphanage, a specific caregiver is designated to be his/her primary caregiver. However, during the month of observation, children never demonstrated any attachment to one specific caregiver. They would go to any caregiver who would be available. Yet, some caregivers seemed willing to be more available to children than others, just by sitting with them during free time.

Based on the information obtained by interviews, there are very sad and poignant stories surrounding the circumstances of infants’ arrival at the orphanage and it is important to take in account these stories because they play a role in the future of these children, and in their psychological conditions; these cases also illustrate specific cultural aspects.

One first poignant example is the case of the older child at the orphanage who is five years old. Her grand-father was taken as a servant by a family at a very young age because he had no living relatives. He found a wife, but unfortunately she died giving birth to their first child who was a girl. The desperate man left the family, and the baby entered the orphanage L’Oasis des Enfants. After a few years, the child went back in the family where her father had lived, and became a servant like him. At a very young age, she had to sell rice at the market. She was eventually raped by a man who has never been identified and she became pregnant. She died giving birth to a little girl. The family brought the baby to the orphanage and never asked about the infant for a period of three years until they decided to take the
child back in order for her to become also a servant. The director of the orphanage who has authority refused to give the child back wishing to end the fatalities that have affected this child’s family for three generations. Meanwhile, he declared that the child has been abandoned. However, the judge never gave permission for the child to be adopted. The child is now five years old; she has a special status in the orphanage and plays the role of the big sister for other orphans. More than any other orphan, she exhibits strong indiscriminate social behavior, this difference between other children would not be reflected in the quantitative method used, but could only be observed. She would run to any new stranger who would come to the orphanage and will ask him/her to hold her and will not let go. She would act as an infant to get the same attention as the other orphans. She would try to push away other children who would also like to be held. Since she is not very tall, she does not look that much older than many of the orphans. Yet, when she is in the group with older children without supervision, she can act like an older sister, holding the hands of a younger orphan, sharing food, giving a toy to a child who is sick, but also fighting to obtain what she wants. She is interested in learning; she loves reading books with an adult (this is also a way to get attention), trying to please adults who want to teach her something, or helping caregivers to give toys to babies, to unhook the laundry, etc. Caregivers will also take her to the church on Sunday mornings. Her situation is very complicated and it has become evident that the orphanage cannot respond to her needs regarding her age. She has some extra freedom to go over the property. I have played many games with her and she learned them very quickly, she is very keen to learn new things. I was at the office, and I let her play with my Ipad, something very new for her; she also learned this very quickly. However, when I sat with the other kids, and had a younger child on my knee or a baby, she also acted like a baby. She is extremely demanding. She always clung on me and it was difficult to push her away because I worried that she could hurt younger infants. I was always a little stressed out that older children might hurt the babies. They are always running on the carpet where the babies are lying. It is surprising that nobody gets hurt. Nonetheless, this particular orphan also takes care of the babies. Three months later, I learned that the judge has decided that the child has to go back to the foster family: I felt really sad; the director asked me if I would accept to become her god-mother, so that the orphanage will be able
to keep some contact with the child: families have to come twice a year at the orphanage with the child, and will receive a large bag of rice and school supplies for the orphan. I hope to be able to do more for her and see her when I will go back to Kaya.

Not all children are the same, and I was not prepared to handle difficult situations. One child demonstrated signs of mental retardation, however, he had not been diagnosed and the level of his mental disability was not known. Furthermore, this child might need some specific attention and stimulations that would certainly decrease some behavior problems. One of the problems I had with him is that he always wanted to hit me, and sometimes with objects that could hurt. I had difficulties preventing his violent behavior against me, and caregivers had to intervene. I understood that most of the time when he would have such behavior, caregivers would spank him and he would stop. However, I could not do this, and so then he continued this behavior. At other moments, he would come and be very affectionate with me. This case illustrates the necessity of looking at other psychological needs among the children. Furthermore, the circumstances during which children were born can also trigger some concerns: this child was found in the bush. Nobody knows how long he has stayed alone without care. Other children who were born with mothers with severe psychological disorder should also receive more attention on their psychological development.

If I had not have witnessed the following event, I would have definitively concluded that there is no severe problem of attachment among the children at the orphanage. During the time spent at the institution, orphans who will later go back to their extended family are supposed to receive the visit of a member of the family every two months. I have been able to observe these events which generally went well: the children accepted being held by these persons. However, in one case, the visit did not turn out well. A fourteen months old girl received the visit of her father for the first time and it was the first time the child saw her father. She reacted very strongly and refused to be carried by her father. She was crying very deeply and only one caregiver could soothe her. This caregiver was not her “preferred” caregiver who was on vacation. The head of the orphanage had a strong discussion with the father, explaining to
him that he should come more often; the tone was firm and the head of the orphanage did not hesitate to scold the father. After the father left, the child refused to let go of the caregiver, and cried bitterly. The caregiver finally attached her on her back and the child calmed down and seemed reassured. During the month I have spent in Burkina Faso, I have never seen a child crying when attached on the back of his/her mother. This specific cultural tradition of carrying babies on the back, observed in many other countries, may have an effect on early attachment that needs to be further examined.

The caregiver who was the oldest caregiver of the orphanage (except the two persons in charge of the institution) plays an important role. On different occasions, I have been able to observe children going to this specific caregiver. She was also the one who first would go to a child who would have hurt his/herself. She is married and has children. The director of another orphanage confirmed that children often prefer older caregivers who are also mothers. Do these caregivers have a different way to take care of orphans? Are they more sensitive to their needs?

Attachment and Caregivers

During the interview, the director of the orphanage indicated that early attachment is a concern for them. The trainings of the caregivers included teaching basic attachment theories and how caregivers can facilitate the attachment process. However, the director deplored that the caregivers did not always follow the advice. For instance, caregivers rarely talk to the children. I have been able to observe an interesting phenomenon: each time I gave the bottle to a baby, I tried to talk to the baby, and each time the baby turned his/her head surprisingly toward me. When observing the caregivers giving bottles to babies, these babies never looked at the caregivers. I also rarely observed caregivers talking to the children during free time; yet this could also be a cultural practice and more research has to be conducted on rearing practices in this country and in traditional families.

The director also underlined the problem induced by strong attachment between caregivers and children during the separation, when children are returning to their extended families or are adopted.
Caregivers who had strong attachment to children suffer from the separation and may be less inclined to form attachment with other children after this difficult experience.

The supervisor of the orphanage told me the story of her attachment to an orphan. This child had become so attached to her that he was following her everywhere. He had some late motor development and the supervisor made great efforts to teach him to walk. However, when she took a one month vacation, the child completely regressed to the point that he couldn’t walk at all when she returned. Additionally, the other caregivers had kept him separated from the other children because they thought he might be ill; the caregivers took him to a doctor in Kaya who did not find any sign of disease. The supervisor decided to take him to another doctor in Ouagadougou; this doctor did not find anything abnormal, and believed that it might be psychosomatic problems. So the supervisor made a great effort to teach the orphan to walk again and she was able to help him to recover. She wanted to be sure that the boy would have all chances to be adopted: he was adopted at the end of 2012 and is now in Italy. This separation was hard for the caregiver, and she decided to take some distance from other orphans. Some caregivers really do suffer from the separation when the child is returned to his/her extended or adoptive family.

In another illustrative case, a child who had been found abandoned in the bushes was brought at l’Oasis des Enfants. Because there are few orphanages in Burkina Faso children are coming from distant villages all over the country. When the child was three years old, a Burkinabe couple decided to become his foster parents. Unfortunatley after 3 years, the foster father brought him back in very bad conditions; he was malnourished and almost dying. The orphanage took him back and nourished him. After two more years, another woman who had no child came to the orphanage and decided to take him and brought the child to her village. After two years, a dispute started in the village because a young girl refused to be married and sought refuge from the director of the orphanage. The parents of the girl were very angry toward the director. Finally the villagers also became angry against the woman who took the boy from the orphanage because she also protected the girl; they told her that she had to separate from the boy because
he was bad luck. The kid had to leave the village. The woman brought the kid back to the orphanage. He was then 12 years old. The director was very sad about this child’s fate and he decided to take him to his home, to give him an education, and even to give him his name. He was not directly adopted, but the director gave him his name. He still lives with them. When I asked the director if they had specific difficulties with the child, the answer was eloquent. The director first said that they understood the child’s problems. He was wetting his bed until he was 15 years old; he was aggressive with other kids. It is obvious that this child suffered attachment disorders. It is interesting to underline that the problem of late bed wetting was also frequent in other cases of orphan adoption.

During a follow up interview with the director, three months after the internship, I addressed the issue of indiscriminate social behavior among the orphans. He was surprised that these behaviors are considered problematic. According to the director, these behaviors facilitate the transitions from the orphanage to the adoptive family.

During my sojourn at the orphanage, I have also been able to meet with orphans who live with their relatives in different villages, and who have French godparents; they came to receive gifts that members of the French organization Wendkouni had brought. I also have had the opportunity to meet with the god daughter that I have been supporting since 2007 and have never met. This was a great moment for her and for me as well. I have met seven other orphans living with extended family. All of the children were very shy. None of them showed overly-friendly behaviors. It is not possible to make any conclusion about the possibility that indiscriminate social behavior might disappear after children go to their extended families, but it raises many questions and more research needs to be conducted on this topic.
Chapter 6: Discussion, Limitations, and Further Research

Introduction

The research has raised many questions about attachment; new methods are essential to the disciplines of anthropology and psychology in order to obtain new cross cultural information such as the influence of multiple caregivers on attachment process, how disinhibited social behaviors can be explained, and what other factors may influence attachment forms.

Methods

Most of the research on attachment has been conducted on children with their mothers or with adopted children from eastern European orphanages. Furthermore, most of the research has been using the Strange Situation methods. On the other hand, little research has been conducted directly in orphanages, and performed on infants between 12 and 30 months old who have multiple caregivers. Bakermans-Kranenburg et al. (2011) also question the utilization of standard assessment in an institutional environment to measure attachment. Therefore, the methods had to be created and adapted to these specific circumstances and environment, taking into account the cultural, economical, and social aspects of the country. The methods used such as direct observations, and attachment questionnaires to the caregivers have offered a general idea of attachment processes. The interesting aspect is that it used caregivers’ criteria to describe infants’ behavior, and not potential Western biased criteria, even though the questions are based on Westerner attachment theory. However, the attachment questionnaire was also reinforced by the direct observation made during the check-list behavior activity and participant observations. As underlined by Quinn and Mageo (2013), ethnographic methods can be a great contribution to the field of attachment; however, quantitative methods are also necessary. Therefore
methods used for this specific research can represent an interesting alternative to the traditional Strange Situation method and to pure ethnographic approach.

Furthermore, a major contribution of the research is that it has been conducted in the natural setting of the institution. The investigator stayed long enough so that the children became used to her presence. All these aspects give to the research a good ecological validity. In addition, the anthropological methods of participant observation might be the best method to use to observe attachment between children and caregivers in an institution; even though this method is more time consuming than typical psychological tests, it offers information that such tests might not provide such as behavior like imitations, specific cases observed during longer observations, and personal information about caregivers and orphans.

**Multiple Caregivers**

When a child arrives at the orphanage, a specific caregiver is designated to take care of the child. During the interviews and the attachment questionnaires to the caregivers, the informants were able to give the name of the designated caregiver for each child. Yet, the investigator has not been able to observe any specific relationship between preferred caregivers and the children. During one occurrence, a child exhibit a specific attachment to a caregiver, yet this was not supposed to be her preferred caregiver. Therefore, it is reasonable to assume that children may have developed multiple attachments to different caregivers. However, it is not clear yet if the attachments are at the same level, and the same quality between the different infants and their caregivers at the orphanage. Bowlby’s argument concerning hierarchical level of attachment needs to be further examined in the specific context of orphanage with new methods.

**Attachment and Disinhibited Social Behavior**

Whereas the first intent of the research was to observe forms of avoidant attachment disorder, none has been observed. All the children displayed emotions, were seeking contact with caregivers, were smiling, and made visual contact. These behaviors were rather usual, regular, and persistent during the
month of observation. Therefore, they might not display disorganized patterns of attachment (see limitations) or reactive attachment disorders. During the month of observation, the investigator was able to get to know each child, and compare caregiver questionnaires results about children’s attachment behaviors to her observations: the investigator would have made the exact same answers to the questionnaire for each child that caregivers did; this is an interesting observation and can indicate that there might not be important cultural differences in the appreciation of child behaviors, but this subject needs further investigation.

No evident form of unsecure attachment as described by Bowlby was detected, other forms of behaviors were observed, and with the most remarkable being disinhibited social behavior. Children not only would seek contact with any caregiver when needed, but many of them would also approach strangers who may visit the orphanage. Even though the correlation between age and indiscriminate behavior was seemingly not strong, it did appear, based on observations, that the older children display more disinhibited social behavior. The investigator has been able to observe similar behavior in two other orphanages. More data needs to be collected on this typical feature. A possible hypothesis based on observations is that the older the children are, the less attention they receive from caregivers, and the more they seek any attention from any adult. Zeanah indicated that “indiscriminate behavior may be viewed as adaptive in the institutional setting for the child craving contact with adults” (2002: 979). From a neurological approach, this behavior can be explained by the maturation of the septal nuclei that is supposed to inhibit indiscriminate behavior (Joseph 1998: 194); it is not clear yet if orphans might have a different development of the septal nuclei: another need for further investigation.

Previous research has questioned the relationship between attachment and indiscriminate social interactions with strangers. Zeanah summarized findings from longitudinal studies of formerly institutionalized children and raised the question of “whether indiscriminate sociability is a sign of attachment disorder or instead an independent problem that arises in the context of emotional neglect” (Zeanah et al. 2002: 984). Different hypotheses can be made to explain this phenomenon. From an
evolutionary perspective, given that attachment has survival functions, indiscriminate behavior can also be interpreted as survival behavior: a way for children to get attachment from different sources and protection. As observed, children would go to any caregiver available when they were either afraid, or hurt.

Another hypothesis is that inhibited behavior can present after a child has formed attachment to caregivers, but this attachment is not longer maintained as the child ages and the caregivers pay more attention to younger orphans. In this hypothesis, indiscriminate behavior would then be associated with a first attachment that has not been continued: the correlation between age and indiscriminate behavior could be an explanation, but the results need to be confirmed by investigations in other institutions.

Another aspect that needs to be taken into account is to what extent indiscriminate behavior can be viewed as maladaptive in our society and not in other cultures. Can a child still be securely attached and have indiscriminate social behavior? It would be interesting to observe how stable the pattern of indiscriminate behavior is, how it evolves in time, and if it changes when children go back to their extended family. Research has underlined that this specific feature is relatively stable among orphans adopted by Westerner families (Zeanah et al. 2002), but has not been examined in other situations. Can disinhibited attachment behaviors have a positive impact in the transition from the orphanage to the extended or adoptive families? What are the negative aspects of over friendliness in this specific cultural context?

**Attachment among Children and Imitation**

The next important feature to take into consideration is attachment among children. During the research, it has become evident that children have developed attachment between each other and some examples have been observed. There were groups of children who were always together, and particularly older ones who could walk and who spend most of their time together. More research should be conducted on these relationships and their importance to the development of attachment.
Furthermore, it has also become clear that an important phenomenon of imitation occurs between the children. This was suggested by the fact that caregivers’ children, (four of them) who stayed at the center during the times their mothers worked, displayed the same indiscriminate behavior as the orphans, whereas other children who were not in contact with orphans did not exhibit such behavior; more research needs to be conducted on behavior imitation in order to sort out which behavior is disinhibited or just imitation, if it is only imitation, this behavior might disappear more quickly than in the case of disinhibited behavior; the most difficult task is to figure out a method to distinguish the behaviors and no research has yet addressed this subject.

**Ethnicity and Caregivers:**

To what extent can the culture of the caregivers influence the relationship they develop with the children? On several occasion, but not often, the investigator has been able to observe the caregivers binding children on their back with typical fabric. Yet they could not do it all the time and it was only at special occasion that they did it; for instance, when a child was crying continuously and caregivers could not soothe the baby, or on other occasion when a child was sick. Observing how infants almost instantly stopped crying when attached to the back of a caregiver indicates how effective such a practice might be in helping children to feel secure. Children raised by their mother and who are constantly tied to their mother’s back, rarely cry compared to the children at the orphanage. During the entire sojourn and during observation in the villages, the investigator has never seen any child tied on his/her mother’s back crying. Does the binding play a role in the attachment process? More research needs to be done.

Another question that should be investigated is if differences between the caregivers and the children of different ethnicities can have consequences. It was interesting to observe that the only child from the Peulh ethnicity seemed to receive less attention. Furthermore, some comments made by Mossi about Peuls seem to indicate that there might not be a good relationship between people of the two ethnicities. The Peulhs are nomads and herders, and the Mossi are farmers who sometimes complain
about the Peulhs’ flock eating Mossi’s crops. Mossi would also say that Peulhs have no land. However, it is impossible to draw any conclusions about the relationship between the Mossi caregivers and Peulh orphans based on one case.

**Limitations and Further Research**

The major limitation of this research is the sample size and consequently the limited data. The small number of children observed and the little data analysis is not sufficient to make strong conclusions about children’s behaviors and attachment processes in institutionalized orphans in Burkina Faso. However, this research can be viewed as a pilot study and the methods used, such as direct observations in the natural setting, have certainly some interesting outcomes in the validity of the data. Anthropological methods, such as participant observations, can provide more ecological validity and include cultural aspects that are often disregarded and overlooked in psychological research. Including these cultural aspects will allow researchers to find adapted solution to problems that are specific to these cultures. Furthermore, economic aspects have not been taken in account, and the constant financial struggles of an orphanage such as L’Oasis the Enfants can also have consequences on the general lives of its members, both caregivers and children alike, as the first priority is to be able to feed and care for the children, to have enough caregivers, to be able to pay them, and to face all other functioning costs of the center.

Bowlby and all other attachment theorists agree that attachment is a mutual process between a child and his/her primary caregiver. Yet, in an institution children may not have always a unique figure of attachment, but multiple caregivers. The organization and functioning of an institution does not always allow the development of a dual child/caregiver relationship. Furthermore, caregivers are not always present. Attachment occurs during the first months of a child’s life; however, when looking closer at the functioning of the institution, we learn that the caregivers have one month vacation every year and that they take these vacations in one block. Therefore, the attachment process might be interrupted during the
month of vacation and the child might start to become attached to another caregiver; one month is a very long time in the life of a child less than one year old.

Comparing children of the orphanage to a control group would also give more information on the attachment processes. In this research, the investigator had to rely on caregivers appreciations that may be different from professional Western psychologist observations. Yet, the investigator has been able to confirm caregivers’ judgments about orphans’ behaviors.

The caregivers’ attachment style should also be investigated, knowing that some of them were also orphans, they might not have developed secure attachment, and consequently would be less able to bond with infants they have in care. Other aspects of caregivers such as age might also influence significantly the attachment process. During the visit of another orphanage, the director indicated that caregivers who also have children are often preferred by the orphans. This was also the case at L’Oasis des enfants where children often went to seek comfort from the older caregivers who also have children. No conclusion however can be made without further research.

In addition, another aspect of the relation caregiver/orphan has to be taken in account: the orphan at some point is going to leave the institution, and in several cases caregivers had suffered from the separation. Therefore, this experience made the caregivers less inclined to build strong attachment with a child. This problem might be difficult to resolve because the caregivers emotional state has also to be considered.

Another factor that could have had consequences on the results of the research is the epidemic of bronchitis, diarrhea, and fever that developed during the research process. An important number of children were affected at different level. Two of them had to go to the hospital. When children had a fever, they had decreased activities during free time. Some of them stayed lying on the carpet. Recovery was also variable from one child to the other. The children demonstrated a high level of resilience. The investigator was unable to collect data during this period of time.
Resilience is certainly another very interesting research prospect. Among the children at the orphanage, some of them have been born premature. A child who was less than three pounds survived at the orphanage without any incubator or other extra life support. During the research, siblings whose mother had died arrived at the nutrition center: one was 5 pounds and the other was 3 pounds; both survived. Can resilience also have an effect on attachment, and more specifically can children be less affected by limited attachment given a high level of resilience in this population who have learned to survive problems such as recurrent poverty, famine, little access to health care, high maternal, and infant death. Whereas we may think that people must be fatalistic when we measure all the problems they are facing, this population is in fact extremely resilient.

Finally, Bowlby underlines that attachment is certainly the type of behavior that is most strongly linked with strong emotion such as love. However, in scientific research, emotions such as love or joy are often disregarded because these emotions seem to belong to other registers such as literature, poetry, and other disciplines considered “less scientific”. The major question of course is: is attachment related directly to love? Can attachment and love be completely dissociated? If not, can anybody bring love to a child as a mother can? Is the love of adoptive parents the same as the love of biological parents? From this question derives another question related to caregivers: can caregivers bring the unconditional love as described in humanistic theories by Maslow and Rogers? Bioneurological research has also shown that there is a mutual phenomenon that occurs during attachment processes between a mother and her child; what happens between a caregiver and a child? Why, is the notion of love never tackled in most attachment research?

An ethical concern related to disinhibited social behavior is the relationship that I have developed with the children. It is almost impossible to push away these children who are spontaneously coming to you and asking for attention and affection. As a mother, I automatically developed natural maternal behavior with these children. It is impossible to completely avoid emotional bias from the investigator.
Most of the limitations do not represent a major detriment to the research results and can easily be surmounted in future research.

Conclusion

The present anthropological research conducted in an orphanage in Burkina Faso, Africa, presents an interesting new approach in the discipline to early attachment of institutionalized orphans in a third world country. The methods designed specifically for this research have proven to be efficient in assessing attachment forms albeit the small sample size. The combination of quantitative and ethnographic methods offered a unique opportunity to observe children’s behaviors in this specific social and cultural context. The results indicate that children do not exhibit evident unsecure forms of attachment such as avoidant or reactive attachment. However, behavior such as disinhibited social behaviors, children’s tendency to seek contact with strangers that have also been reported in other orphanages, have been observed in this specific setting. The phenomenon has not been explained in terms of attachment, and in terms of cultural behavior appropriateness; disinhibited social behavior can be a specific psychological development proper to orphans who do not have primary caregivers; other factors can also influence this behavior such as imitation among children. Furthermore, in the specific cultural and social context, this behavior can have positive outcomes in the transition from orphanage to extended family and might not persist after that. In addition, the research addressed caregivers’ roles and attitudes toward attachment. Besides opening new perspectives on early attachment in the discipline, this study presents an original methodology and offers many new possible directions for research on early attachment.
References

Agbényiga, DeBrenna LaFa, Robert K. Hitchcock, and Deborah J. Johnson

American Psychiatric Association, and Dsm Iv American Psychiatric Association Task Force on

Baba, Marietta L.

Bailey, Jo Daugherty


Balbernie, Robin

Barnett, Douglas, Joan I. Vondra, and Christine M. Butler

Becher, Heiko, Müller, Olaf, Jahn, Albrecht, Gbangou, Adjima, Kynast-Wolf, Gisela, and Kouyaté, Bocar.

Bowlby, John


Cames, Cécile, Cassard, Fanny, Cournil, Amandine, Mouquet-Rivier, Claire, Ayassou, Kossiawvi, Meda, Nicolas, and Bork, Kirsten. 2011 Nonbreast-fed HIV-1-exposed Burkinabe infants have low energy intake between 6 and 11 months of age despite free access to infant food aid. The Journal Of Nutrition 141(4):674-679.


Donahue, J., and B. De Lay

Eigsti, Inge-Marie, Weitzman, Carol, Schuh, Jillian, Marchena, Ashley de, and Casey, B. J.

Fabienne, Hejoaka

Flanagan, Cara

Foster, Geoff, Carol Levine, and John Williamson

Franc, N. M Maury, and D Purper-Ouakil

Franco-Burkinabe, Les Amities

—

Garenne, Michel, Sauerborn, Rainer, Nougatara, Adrien, Borchert, Matthias, Benzler, Justus, and Diesfeld, Jochen

Germann, Stefan Erich

Giagazoglou, Paraskevi, Kouliousi, Chrysoula, Sidiropoulou, Maria, and Fahantidou, Anna

Gorgen, Regina, Birga Maier, and Hans Jochen Diesfeld

Groark, Christina J., Muhamedrahimov, Rifkat J., Palmov, Oleg I., Nikiforova, Natalia V., and McCall, Robert B.
Grossmann, Klaus E, and Karin Grossmann.  
1998  Développement de l'attachement et adaptation psychologique du berceau au tombeau.  
Enfance 51(3):44-68.

Gunnar, Megan R, Van Dulmen, Manfred HM, Achenbach, TM, Ames, E, Ames, EW, Berry, M, Barth  
RP, Bohlín, G, Janols, LO, and Bohman, M.  
2007  Behavior problems in postinstitutionalized internationally adopted children.  
Development and Psychopathology 19(1):129.

Harwood, Robin L., Irizarry, Nydia Lucca, Lucca Irizarry, Nydia, and Miller, Joan G.  

Hermenau, Katharin, Hecker, Tobias, Ruf, Martina, Schauer, Elisabeth, Elbert, Thomas, and Schauer,  
Maggie.  

Hodgins, Miriah  
2009  Should we keep it in the family?: Caretaker preferences for orphan care in Yako, Burkina  

Hofer, Myron A  
2006  Psychobiological roots of early attachment. Current directions in psychological science  

Hrdy, Sarah Blaffer  
2009  Mothers and others: The evolutionary origins of mutual understanding: Belknap Press.

IRIN  

Jones, Heidi, Diop, Nafissatou, Askew, Ian, and Kabore, Inoussa  
1999  Female Genital Cutting Practices in Burkina Faso and Mali and Their Negative Health  

Joseph, Rhawn  
1999  Environmental influences on neural plasticity, the limbic system, emotional  

Juffer, Femmie, Palacios, Jesús, Le Mare, Lucy, Sonuga-Barke, Edmund J. S., Tieman, Wendy,  
Bakermans-Kranenburg, Marian J., Vorria, Panayioti, van Ijzendoorn, Marinus H., and  
Verhulst, Frank C.  
2011  II. Development of Adopted Children with Histories of Early Adversity. Monographs of  

Kathleen, Beegle, Deon, Filmer, Andrew, Stokes, and Lucia, Tierero  
2010  Orphanhood and the Living Arrangements of Children in Sub-Saharan Africa. World  
Development 38:1727-1746.
Keller, Heidi  

Keller, Heidi, and Hiltrud Otto  

Kobiané, Jean-François, Anne-Emmanuèle Calvès, and Richard Marcoux  

Ksoll, C  
2007 Family Networks and Orphan Caretaking in Tanzania.(mimeograph).


Lachaud, Jean-Pierre  

LeVine, Robert Alan, and Rebecca Staples New  

Lieberman, Alicia F.  

Lyons-Ruth, Karlen  

Lyons-Ruth, Karlen, Bureau, Jean-François, Riley, Caitlin D, Atlas-Corbett, and Alisha F.  

MacLean, Kim  

Mbiya Muadi, F, Aujoulat, I, Wintgens, A, Matonda ma Nzuzi, T, Pierrehumbert, B, Mampunza Ma Miezi, S, and Charlier Mikolajczak, D.  
McGinn, Therese, Azara Bamba, and Moise Balma

Meese, Ruth Lyn

Minnis, Helen, Marwick, Helen, Arthur, Julie, and McLaughlin, Alexis.

Moore, Henrietta

Music, Graham
2009 Neglecting neglect: some thoughts about children who have lacked good input, and are 'undrawn' and 'unenjoyed'. Journal of Child Psychotherapy 35(2):142-156.

Naldi, Gino J.

Niemann, Sandra, and Sandra Weiss

Nyambedha, Erick Otieno, Simiyu Wandibba, and Jens Aagaard-Hansen

O'Connor, T. G., and C. H. Zeanah

O'Connor, Thomas G, Diana Bredenkamp, and Michael Rutter

O'Connor, Thomas G, and Michael Rutter

Ohnishi, Mayumi, Nakamura, Keiko, Kizuki, Masashi, Seino, Kaoruko, Inose, Tomoko, and Takano, Takehito
Okrah, J., Traore, C., Palé, A., Sommerfeld, J., and Müller, O.

Pace, C. S., and G. C. Zavattini

Pagnier, J., Kürzinger, ML, Kahn, JG, Kone, A., Hampshire, R., and Dye, TDV.

Pence, Alan

Pignotti, Monica

Quinn, Naomi

Quinn, Naomi, and Jeannette Marie Maego

Raine, Adrian

Reardon, T., and P. Matlon

Rossier, Clémentine, Guiella, George, Ouédraogo, Abdoulaye, and Thiéba, Blandine.

Roy, Penny, Michael Rutter, and Andrew Pickles

Rutter, Michael, Jana Kreppner, and Edmund Sonuga-Barke

Sankoh, O.A., Yé, Y., Sauerborn, R., Müller, O., and Becher, H.

Sanou, Dia, Turgeon-O'Brien, Huguette, Ouedraogo, Sayouba, and Desrosiers, Thérèse.


Scheper-Hughes, Nancy


Schore, A. N.

Schore, Allan N.

Seymour, Susan

Shaver, Philip R., Mario Mikulincer, and Brooke C. Feeney

Siegel, Daniel J.
Skinner, Elliott P.

Skovdal, Morten, Mwasiaji, Winnie, Webale, Albert, and Tomkins, Andrew.

Small, Meredith F.

Smyke, Anna T, Alina Dumitrescu, and Charles H Zeanah

Speirs, Mike


Storeng, Katerini Tagmatarchi, Baggaley, Rebecca F., Ganaba, Rasmané, Ouattara, Fatoumata, Akoum, Mélanie S., and Filippi, Véronique.

Subbarao, K., and Diane Coury

Tizard, Barbara, and Jill Hodges

Zeanah, Charles H, and Nathan A Fox

Zeanah, Charles H, Anna T Smyke, and Alina Dumitrescu
Appendix 1: Attachment Questionnaire

**Fiche individuelle:**

Date:

Prénom et nom:

Date de naissance:

Date d’entrée à l’orphelinat:

Ethnicité:

Circonstances d’entrée à l’orphelinat:

Qui a apporté l’enfant:

Poids (en grs):

Poids à l’arrivée à l’orphelinat:

Taille (in cm):

Marche: Y/N

Prononce quelques mots: Oui/non  Langue:

Commentaire des nourrices sur l’enfant:

Observations:
Questionnaire sur l’attachement de l’enfant:

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<td>Evite les contacts avec les adultes</td>
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Appendix 2: Caregivers’ questionnaire

Questionnaire Nourrices:

Nom:

Age:

Statuts Marital:

Nombre d’enfants et âge:

Combien de temps avez-vous travaillé à “L’oasis des enfants”?

Qui vous a embauche ?

Education et formation:

Ethnicité :

Religion :

Autres :
Appendix 3: Behavior Check list form

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Appendix 4: IRB Approval

2/28/2014

THIS LETTER SUPERSEDES THE LETTER DATED 2/17/2014

Clarisse Barbier, B.A.
Anthropology
4202 East Fowler Ave, SOC107
Tampa, FL 33620

RE:  Full Board Approval for Continuing Review
IRB#: CR1_Pro00011362
Title: Assessing Attachment process among Early Institutionalized Orphans in Burkina Faso, Africa

Study Approval Period: 2/15/2014 to 2/15/2015

Dear Mrs. Barbier:

On 2/14/2014, the Institutional Review Board (IRB) reviewed and APPROVED the above application and documents outlined below.

Approved Item(s):
Protocol Document(s):
Internship Research Protocole.docx

Consent/Assent Document(s)*:
Caregivers consent.pdf
Caregivers Verbal Consent_revised.docx.pdf
Consentement Verbal.docx.pdf
Consentement directeur.docx.pdf
Director consent.pdf
French version of caregivers consent.pdf

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab on the main study's workspace. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).
This research involving children continues to be approved under the minimal risk category 45 CFR 46.404: Research not involving greater than minimal risk.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John Schinka, Ph.D., Chairperson
USF Institutional Review Board