

# Losing a child to the Child Protective Services

*Biological parents' memory of the removal and psychological problems in planned versus acute removals*

**Ingvild Danielsen Rongved**



Hovedoppgave

Department of Psychology

UNIVERSITETET I OSLO

April 2008

**Title:** Losing a child to the Child Protective Services. Biological parents' memory of the removal and psychological problems in planned versus acute removals. Biological parents' memory of the removal and psychological problems in planned versus acute removals

**Author:** Ingvild Danielsen Rongved

**Supervisor:** Associate Professor Annika Melinder, University of Oslo.

## Abstract

**Background:** Every year 427 children in Norway are removed from their biological parents and placed in alternate care settings. The removal of a child is a severe intervention in a child's and a family's life. Today, practical nothing is known about how the parents are doing after they have lost their children in regard to their memory of the potential traumatizing situation (e.g., the removal). An underlying assumption of this thesis is that it is in the child's best interests that their parents are taken care of in short and long while. **Objective:** This study specifically sought to investigate the parent's memory of the removal of their child and psychological problems before and after this stressful event. Based on general theory it was hypothesized that due to the high personal impact of the event, memory would in general be good. Further, arousal and emotional valence would additionally affect memory. It was also predicted that there would be differences between those being removed acute versus planned in regard to memory and problems after the removal. **Results:** Confirming established theories in the field, findings suggested that arousal had a positive effect on memory for central event information, but negative effect on peripheral event information. It was found specific associations between emotional valence and memory. Significant relationship was also found between emotional valence and problems after the removal in planned versus acute removals. **Conclusion:** The findings were compared to existing theories of memory for negative emotional events and implications of the findings are discussed.

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## Acknowledgements

I would like to thank my supervisor Annika Melinder for valuable assistance and engagement throughout the entire process. She has provided support and inspiration necessary for this thesis to come through.

Thanks to project leader Gunn Astrid Baugerud for useful advices along the way and first-hand knowledge about the CPS.

Thanks to Ragnhild Klingenberg Stokke for providing structure and a helping hand when it was needed at the most.

Thanks to Tonje Moe Grimsø for spending hours on inter-rater reliability training with me.

Thanks to the persons in the EKUP lab for encouragement and open doors.

Thanks to the Norwegian Research Council for granting me a student research fellowship, making it possible to devote as much time as needed to this project.

And last, but not least; thanks to all the parents that open their homes and let us interview them in a time of crisis.

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# Contents

ABSTRACT .....	2
ACKNOWLEDGEMENTS .....	3
<b>CONTENTS .....</b>	<b>4</b>
<b>1. INTRODUCTION .....</b>	<b>6</b>
1.2 BIOLOGICAL PARENTS IN THE CPS – WHO ARE THEY? .....	10
1.3 AUTOBIOGRAPHICAL MEMORY AND NEGATIVE EMOTIONAL EVENTS .....	14
1.4 THE REMOVAL- STRESS OR TRAUMA? .....	22
1.5 PRESENT STUDY .....	26
<b>2. METHODS.....</b>	<b>27</b>
2.1 DESIGN.....	27
2.2 PARTICIPANTS .....	27
2.3 MEASURES.....	29
2.4 PROCEDURE.....	33
2.5 ETHICAL CONSIDERATIONS.....	35
2.6 STATISTICS .....	37
<b>3. RESULTS.....</b>	<b>38</b>
3.1 PROBLEMS BEFORE REMOVAL AND REMOVAL REASON .....	38
3.2 MEMORY AND AROUSAL .....	40
3.3 THE IMPACT OF EMOTIONAL VALENCE .....	43
3.4 ACUTE VERSUS PLANNED REMOVALS .....	45
<b>4. DISCUSSION.....</b>	<b>48</b>
4.1 INVESTIGATING THE SAMPLE OF THE STUDY .....	48

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4.2 THE RELATION BETWEEN MEMORY AND AROUSAL.....	48
4.3 THE IMPACT OF EMOTIONAL VALENCE.....	49
4.4 ACUTE VERSUS PLANNED REMOVALS .....	52
4.5 CAVEATS AND LIMITATIONS.....	54
4.6 CONCLUSION AND FUTURE DIRECTIONS.....	55
<b>REFERENCES .....</b>	<b>58</b>

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## 1. Introduction

Quotes from parents losing their child to the Child Protective Services (CPS):

*About the time after the removal: "I took it very heavily so I had to get a sick leave from work. At least for a very long time... I couldn't sleep...I was tired, but my eyes wouldn't close when they were supposed to. So I couldn't concentrate on the job, I couldn't focus... I'm depressed; I think too much, I worry about everything... I can't handle seeing happy kids when I'm in a different situation..."* Mother (25)

*"I know how much is needed now, what we have to prove and how much we have to work to get her back. I think that is what makes me so serious these days, except when I'm with her; then I'm alive again."* Mother (44)

In the year of 2006, 427 children in Norway were removed by the CPS from their parents and placed in different temporary or lasting arrangements. Some were placed for a shorter period of time, but the larger group was placed with the intention of staying for a longer period of time or growing up in their new homes (SSB, 2007). At the end of the year 2006, a total of 6120 children were living in out-of-home placements. The threshold for removing a child from his/her parents is high and usually an array of different incentives has been tried before such an extreme intervention is taken. The removed children have experienced living with parents that are not emotionally or cognitively able to be a sufficient caregiver. Neglect, maltreatment, and abuse are common in these families. But what makes parents not able to care for their own child? Often these parents suffer from mental illnesses, drug addiction, issues from their own upbringing or other problems that makes it difficult to have custody for a developing child. After the removal of their child, they are dealing with a deep personal loss. Although there are incentives in the law to follow-up biological parents, there is very often no formal support system, including supervision of visitations, for this group. The conflict level is generally very high between the parents and the CPS. In addition the caseworkers have strict deadlines to

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follow, which contribute to the extreme pressure they experience. The result is a huge variation from case to case as to what degree the parents are taken care of.

The present thesis is not clinical or epidemiological in its intentions. Instead, it investigates the memory biological parents have of the highly negative emotional event of losing a child to the CPS and it hopefully provides an increased understanding of what these parents are going through. My underlying assumption is that parents that are met on their struggles will be better able to conduct visitations, provide care, and to see their children's needs, also when they are no longer the primary caregiver. The number of adoptions is very low in Norway, and the tendency for adoption is decreasing (SSB, 2006). Thus, for the majority of biological parents that lose their children, visitations represent the type of relationship that will persist between them and their children. According to Norwegian law, biological parents are granted visitations and there is also a possibility of reunification. It is therefore in the child's best interest to help parents cope with their problems.

Before I turn to the study's design and hypotheses, I initially begin with depicting the legal framework of relevance. I then describe the group of parents that have their children taken by the CPS, specifically how their problems affect the children. Finally, the terms of autobiographical memory are theoretically and empirically outlined, especially in relation to negative emotional events.

### *Legal Framework*

*“As the days went, I mobilized; I fought like a lioness and prepared for the trial. I gathered all my strength and was very emotional.”* Mother (50)

The work carried out by the caseworkers in the CPS is carefully regulated, not only by Norwegian law, but also by human rights conventions incorporated in the Norwegian legal system. Highly relevant in the present context are the United Nations Convention on the Rights of the Child, European Human Rights Convention, and the Norwegian law.

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### *The United Nations*

Convention on the Rights of the Child that entered into force in September 1990 is a legally binding instrument that ensures children's rights across the world. It consists of 54 articles, but article number three, part one is particularly important:

“In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.” Important here is that it is the child that is in focus and of primary interest.

### *European human rights*

The European Human Rights Convention (EHRC) (1950) is one of the possibilities the inhabitants of European countries have to defend themselves from misjudgements of the authorities of their country. Article Eight states: “1. Everyone has the right to respect for his private and family life, his home and his correspondence. 2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.”

The European Court of Human Rights in Strasbourg serves as a guarantee for parents that perceive their rights being violated by their national court. It is the last instance where appeals could be delivered. Importantly, also children have the right to file a complaint and are not treated differently than the adult is.

### *Norwegian law: the Child Welfare Act*

The main purpose of the Child Welfare Act (CWA) (Ministry of Child and Family, 1993) is to provide help in the child's best interest, but it also contains a biological principle; it is the intention of the law that children should grow up with their parents, even when there is substantial deficiencies in the parent's caretaking abilities. Removal is a severe intervention in a child's and a family's life, but when a



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separation is inevitable, visitations or other parent-child contact should be the rule. This principle becomes visible in another principle that states that the CPS never should get more involved than absolutely necessary. Still, if it is conflicting interests between the child and its parents, the child interests should always weigh heavier (Innst.S.nr.6 (1996-1997) in The committee of family, culture, and administration (1996-1997)).

The CPS has responsibility to follow up on the parents after the removal of their child. In the CWA it is stated: "The CPS should monitor both children's and parent's well being after the placement, and continuously evaluate if the reasons for placing the child is still fulfilled." In addition the Norwegian government has emphasized that biological parents should be followed closely after the placement of their child, for example in NOU 2000:12 and ST.meld.nr.40 (2001-2002) (Ministry of Child and Family 2002; 2003). However, this is not always done and the national revision found that 70% of the CPS offices where in lack of routines and minimum efforts to follow up on the parents after child placements in alternate care (Mørk-Eidem et al., 2003). This leads to the follow up being random and depending on the individual caseworker. It has to be added that parents often refuse help from the CPS due to the high conflict level. Therefore the authority that does the follow up of the parents would not necessarily be the CPS.

#### *How does the law work in real life?*

Mother (39) about the removal: *"The biggest grief I've experienced, I've never felt so helpless, so misunderstood in my entire life. I am totally ignored. The CPS has never asked me how I am doing, if I need anything... The caseworkers make themselves inaccessible. When they get friendly its reason to be scared because then something comes up..."*

Statements such as this make it clear that many parents experience having no support other than their friends and family. The parents are important in children's life whether or not the child lives at home (Ryburn, 1999). According to the CWA visitations are granted almost all parents unless other is decided to protect the child.

When the parents have no support or guidance, these visitations may easily be spent on anger, grief, and sadness instead of focusing on the child's needs. A different discussion that is beyond the scope of this thesis is whether or not visitations always are good for the child. In any case the difficulty lies in giving the child the primary consideration whilst still involving and looking after the parents. To be able to understand what these parents need one must know some basics about why some parents are not able to care for their children.

## 1.2 Biological parents in the CPS – who are they?

Norwegian statistics shows that the most common reasons for the CPS to get involved in a family is neglect, physical abuse, psychological or emotional maltreatment, incest/sexual abuse, psychiatry, drug problems, lack of caring ability and finally problems with the child; disablement, drug problems, problem behaviour and special needs (SSB, 2007). Important here will be the properties of the carers.

### *Dysfunctional parenting*

Dysfunctional parenting is defined by Kendziora and O'Leary (1993) as: "anything the parent does, or fails to do that may adversely affect the child". Berg-Nielsen, Vikan and Dahl (2002) found that two main dimensions of dysfunctional parenting occur in families with parental psychopathology: Parental negativity and various forms of ineffective discipline practices. Examples of parental negativity could be rejection, criticizing, accusing or ridiculing; it involves an element of hostility. Ineffective discipline practices, on the other hand, could be inconsistency in parental responses or insufficient monitoring. According to Howe (2005) maltreating carers fail to provide the child with information about what is happening emotionally, cognitively and behaviourally and they are not able to make the child feel safe and soothed.

Attachment theory provides one way of looking at child maltreatment. Based on early experiences with parents responsiveness internal working models of attachment

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develop and follow us into adulthood (Bowlby, 1973). Howe (2005) argues that the psychological processes of maltreating parents are those that trigger whenever the self feels anxious, helpless, under threat or under stress. More primitive and survival oriented behaviours get activated when we feel vulnerable and reactions to such situations might be agitated attempts to suppress the cause of distress; avoidance and rejection, or preoccupation with own anxieties and neglect of the needs of others. When the child's attachment system is activated, the parent fails to terminate it and leaves the child aroused and distressed.

According to Lyons-Ruth, Bronfman and Atwood (1999) some parents' unresolved issues of loss and trauma are activated when faced with their child's vulnerability. This can lead to abuse – hostile things seen and hostile things done – or neglect – things not seen and things not done – or combinations of the two. Howe (2005) describes the two categories of maltreatment in these terms:

*Abusive carers* often experience distress and even fear when they are faced with attachment behaviour and emotional dependency. They deal with this distress by defensively excluding negative emotions from conscious mental processing by the deactivation of attachment and care giving related concerns. This means that abusive parents can be warm and accepting when the child is independent and not showing attachment behaviour but when the child displays attachment behaviour the carer ignore or punish these displays.

*Neglecting carers* fail to respond to their children's attachment, social and emotional needs. These carers often have resigned in passivity, they do not intend to harm their children but there is no supervision or emotional involvement and the risk of malnourishment is high. Often the neglecting parents have learning difficulties and/or have been neglected themselves; their own parents suffered depression or abused them sexually or physically (Howe, 2005).

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### *Mental health and parenting*

Typical reasons for abuse and neglect are substance abuse and psychiatric problems, but Berg-Nielsen, Vikan and Dahl (2002) stress the importance of considering parental social functioning and responsibilities as well as psychiatric diagnosis. Data from the Ontario Mental Health Supplement (Walsh, MacMillan, & Jamieson, 2002), which is a large-scale community-based study of over 8500 adults explored the association between parental mental illness and child maltreatment and showed that over 50% of those who reported parental psychiatric disorder did not report abuse in childhood. Two common parental problems will be mentioned here due to their well documented negative effect on parenting; substance abuse and depression. Children of substance abusers are often at risk even before they are born and according to Wolfe (1999) parents of abused and neglected children are much more likely to report alcohol problems compared to controls; from 18 % to 45 % across controlled studies. The more the parent becomes lost in his or her own substance-altered state of mind, the more odd, frightening and confusing the parent is to the child (Howe, 2005). Depressed caregivers are often insensitive and less attuned to their child's needs and they often report high levels of parenting stress (Howe, 2005). According to Gerhardt (2004) children of depressed mothers don't expect support, relief from distress and don't learn how to regulate their feelings. If the carer cannot provide the child with care and protection some children reverse the roles and care for and protect the vulnerable parent (Howe, 2005). This strategy is called "the compulsive care giving strategy" and is often seen in children of depressed parents.

Solantaus-Simula, Pünamaki and Beardslee (2002) asked 990 Finnish 12-year-olds about their feelings and behaviours when their mothers and fathers were feeling down. They found that the children were sensitive members of their families and that they go far in alleviating their parents suffering: The children experienced, 15 % concerning mothers and 10% concerning fathers even if their parents were feeling low rather than clinically depressed. The children experienced negative emotional responses, feelings of guilt and anger and often felt down themselves.

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A review from 2003 by Leverton concludes that the children of psychiatrically ill parents are substantially more likely to develop a psychiatric disorder during childhood. This effect is found for ADHD, depression, bipolar disorders, anxiety disorders, eating disorders and schizophrenia. When getting a psychiatric diagnosis as a child both genetics environmental factors have to be considered. The heritability of specific diagnoses have been calculated, such as for bipolar disorder (80% heritability), schizophrenia (75% heritability) and depression (34-48% heritability) (Rutter, Silberg, O'Connor, & Simonoff, 1999). In other diagnoses such as ADHD and anxiety disorders, there is clear familial links, but the exact contributions of genetics and environment has not been found (Leverton, 2003). What Leverton (2003) did find was that children of psychiatrically ill parents suffer more from behavioural problems, emotional and anxiety disorders, interpersonal difficulties, and attachment disturbances than their peers due to their impaired family environment.

*Reasons to move children from their parents*

*“I’m so sad she can’t stay with me, but I have to stay here (at the treatment centre) and get well so that she can come back to me” (Mother (26))*

The Child Welfare Act states that placing a child outside the home should only be taken into consideration if preventive efforts in the home have not lead to improvements. The placement can be done with or without the parents consent. If there is suspicion of severe neglect or maltreatment the child can be removed immediately, but this is an exception; cooperation should be the rule. Obviously the threshold for moving a child from his/hers parents is high, so what is the causes? According to the CWA there are four reasons to go through with a removal: First, if it is serious deficiencies in the daily care, interpersonal relations or security that the child need according to age and developmental level. Second, if the parents don’t make sure that a child that is sick or in need of special care get the necessary care, treatment or education. Third, if the child is exposed to abuse or maltreatment. Fourth, if it is reasonable probability that the child’s’ health or development can be harmed due to the parents lack of care giving ability. Backe-Hansen (2003) argues

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that caseworkers have to make sure that two demands are fulfilled when proposing out of home placements. First, requirements of the law have to be fulfilled in the specific case. Second, it must be stated beyond reasonable doubt that further incentives in the home will not improve the conditions for the child. Backe-Hansen (2003) has found that caseworkers build their cases mainly in two different ways; as puzzles or all placed on one card. The puzzle cases are based on concrete documentation and it provides an extensive and specific criticism of caring ability and personal characteristics of the care giver. In the other cases the argument is all based on one main point of criticism such as substance abuse and all documentation is build around this.

So far the introduction has provided a framework important to understand how the Child Protective Services works and how the families involved function. This is also the basis for the first prediction:

- Since the participants in this study are a random sample of removal cases in the CPS, removal reasons and parental problems will reflect common problems for the group of parents involved with the CPS. Especially substance abuse and different psychiatric diagnoses will be seen.

The following parts will concentrate on psychological effects of experiences stressful events such as experiencing your child being removed by the CPS with the main focus on memory of this event.

### 1.3 Autobiographical memory and negative emotional events

#### *Memory systems*

Long-term memory as defined as “information maintained for a significant period of time” can be divided into explicit (declarative) and implicit (non-declarative) memory (Gazzaniga, Ivry, & Mangun, 2002; Goodman & Melinder, 2007a). Explicit memory is referring to knowledge we have conscious access to, and implicit memory is referring to procedural knowledge such as

motor and cognitive skills. What is important here is explicit memory that further can be divided into episodic and semantic memory, a distinction introduced by Endel Tulving (1972). This distinction has been supported by studies on healthy individuals (Gardiner, 1988; Rajaram, 1993), neurological studies (e.g., Hodges & Graham, 2001) and from functional neuroimaging methods (Cabeza & Nyberg, 2000). For example some forms of brain damage seem to disrupt episodic memory but not generic memory; other damages do the reverse (Schacter, 1996).

One type of episodic memory is autobiographical memory and this is the memory that contains our recollection of events in our lives and is pertinent to our sense of self (Reisberg, 2001). Memory for events in one's personal past occurring in a specific time and place and associated sensory recollections, make up the autobiographical memory (Nelson & Fivush, 2004). According to Tulving (1985), episodic memory depends on the ability to mentally travel back in time. With the term "autonoetic", Tulving referred to the special kind of consciousness that allows humans to be aware of subjective time when an event took place. In contrast, semantic memories reflect the person's world knowledge such as language and facts (Gazzaniga et al., 2002). Autobiographical and semantic memories draw on each other e.g., making an assimilation of the autobiographical memory according to the semantic knowledge of the world. In this way, experiences are linked with earlier knowledge (Nelson & Fivush, 2004). According to Melinder, Fuglestad and Rommetveit (2005) it is important that episodic memories are not just constructions based on what was originally experienced; memories are also affected by external factors at all three stages of memory processing; encoding, storage and retrieval.

The memory taxonomy of episodic and semantic memory also represents distinct neural mechanisms. This distinction has been supported by research using fMRI technology observing increased activity on both sides of the frontal lobes when using the episodic memory, in contrast to a single side activity when performing semantic memory tasks (Gazzaniga et al., 2002). Specifically the medial temporal lobe, including the hippocampus and overlying cortex, is responsible for the consolidations and formation of declarative memories (Squire & Kandel, 2000). In addition to these structures, autobiographical emotional memories rely on the brain

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structure amygdala.

The amygdala is important in all the three stages of encoding, consolidation, and retrieval of emotional autobiographical memories (Buchanan & Adolphs, 2004). According to Gazzaniga and colleagues (2002), the amygdala activation is especially prominent during a fear response in central to fear conditioning, but also important in other types of autobiographical memory of emotional events. One study that illustrates the effect of amygdala is that of Mori and colleagues (1997). They examined the pre-existing individual differences in patients with Alzheimer's disease and their memory of an earthquake (the patients were diagnosed before the earthquake). Results from this study showed that the volume of the amygdala was positively correlated with patients' memories for their experiences during and after the earthquake. Hippocampal volume also had positive correlations, but not as strongly as for the volume of amygdala. This effect was significant also when controlling for such effects as age, education, brain volume and ratings of dementia. The causal relationship between hippocampal volume and PTSD has been investigated by Gibson et al. (2002). Comparing monozygotic twins discordant for trauma exposure the researchers found that smaller hippocampal volume was a risk factor for developing stress-related psychopathology. Disorder severity in PTSD patients who were exposed to trauma was negatively correlated with the hippocampal volume of both the patients and the patients' identical co-twin that were not exposed to trauma. This study strengthens the role of the hippocampus in reactions to highly negative events.

Events differ from one another on various different dimensions that could influence memory, this can be factors such as distinctiveness, personal significance, and whether they are anticipated, involve other people or are discussed (Cordón, Pipe, Sayfan, Melinder, & Goodman, 2004). And how does these factors relate to the memory of highly stressful events? Do we forget them more easily or remember them better?

#### *Definition of stress and trauma*

A state of stress exists when there is a discrepancy between perceived demands and the perceived or felt ability to cope (Lazarus & Folkman, 1984). Kim and Diamond (2002) expanded former definitions of stress when they presented their three-part



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definition: 1. Stress is always accompanied by high levels of physiological arousal, as measured by motor behaviour and/or stress hormones. 2. Stress must be perceived as threatening and something that would be avoided if possible. 3. Stress depends on the perceived control over the stressful experience.

Payne, Nadel, Britton and Jacobs (2004) agree with the first component, but question the two others. They suggest that stress is not always negative but rather a dynamic “strain” or “pressure” exerted on the individual, and this strain could be both pleasant (e.g., exiting experiences) or unpleasant. Concerning the third component the researchers argues that controllability differs to much in its effect on stress to be a required component; sometimes it mitigate the impact of a stressor but on other times has no impact at all. Put differently stressful events can range from pleasant, exiting experiences to highly straining events that put the organism under extreme pressure. This also means that intensely stressful events are not necessarily traumatic.

According to DSM-IV-TR, trauma involves witnessing, experiencing or being confronted with "actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others" (American Psychiatric Association (APA), 2000, p. 463). The exposure leads to a response involving intense fear, helplessness, or horror (APA, 2000). Trauma has been described in different ways, e.g., as an experience that: (1) threatens the health or wellbeing of an individual (Brewin, Dalgleish, & Joseph, 1996); (2) indicates that the world is an uncontrollable and unpredictable place (Foa, Zinbarg, & Rothbaum, 1992); and, is an inescapably stressful event that overwhelms an individual's coping mechanisms (van der Kolk & Fisler, 1995).

Christianson (1992) uses the term *negative emotional event* to refer to events that are new, unexpected, and potentially threatening. He defines emotional stress as “a consequence of a negative emotional event, in which the person experiences a certain degree of stress or distress with concurrent autonomic-hormonal changes” (Christianson, 1992, p. 285). He argues that this state can range from moderate levels of stress to excessive levels of traumatic emotions.

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*Arousal and memory*

William James, American psychologist (1842-1910): “*An impression may be so exciting emotionally as almost to leave a scar upon the cerebral tissues*”.

Important in both stress and trauma is arousal in different degrees and often arousal is used as a variable in memory research. The Yerkes-Dodson (1908) inverted U-curve is often used as an illustration of how memory changes as a function of arousal.

According to this model memory performance is at its peak at some optimal level of emotional arousal, and that performance decreases when arousal moves away from this optimum, in either direction. This understanding of how memory and arousal affects each other have been discussed for years and more recent proposals are more complex. For instance Deffenbacher (1994) applied a model of sports performance made by Fazy and Hardy in 1988 to memory. This model proposes that the relation between arousal and memory performance may depend on other variables, such as level of anxiety – if the level of anxiety gets too high the memory performance drops unless arousal decreases. This model has not been evaluated empirically, but is a reminder that factors other than arousal and memory have to be taken in to consideration when looking for the effect of arousal on memory performance. In addition the Yerkes-Dodson model was developed during research on visual discrimination learning in mice and the generalizability is therefore not necessarily very high.

Our most vivid memories tend to be memories for emotional events that have happened to us. Information or events perceived as relevant to the self is, in general, better remembered due to the self-reference effect (Symons & Johnson, 1997). In addition, at the biological level emotional events trigger a response in the amygdala that helps the memory consolidate. This happens because amygdala activation increase levels of the hormone norepinephrine which in turn increase the level of glucose in the blood and this helps the process of memory consolidation (Cahill et al., 1996, cited in Reisberg, 2001; White, 1991, cited in Reisberg, 2001). Buchanan (2007) reviewed literature on retrieval of emotional memories and concluded that exposure to a reminder of an emotional event elicits brain activity similar to that

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taking place during the original event. This activity is seen in both the amygdale and medial prefrontal cortex. It is important to note that in addition to physiological effects people tend to ruminate and rehearse emotionally significant materials more than they do for neutral material, although this can not account for all of the effect of improved memory of emotional events (Harris & Pasler, 2005).

Easterbrook's cue utilization hypothesis from 1959 also argues that the arousal caused by emotion leads to a focusing of attention to central aspect of the scene, which makes us remember central information in an emotional event better than peripheral information. This leads to a narrowing of memory in the way that other information is excluded. Reisberg and Heuer (2004) argues that emotion promote memory for an event's central materials, but seems to undermine memory for an event's periphery and suggests that this could be due to a third variable which they call "attention magnets", a similar theory to that of "weapon focus". The effect is called "weapon focus" in witness psychology because witnesses to crimes often "zoom in" on some critical detail, e.g., the weapon (Melinder & Magnussen, 2003; Reisberg, 2001).

Memories with extraordinary clarity, often of highly emotional events, are called flashbulb memories and these memories are often retained over many years (Brown & Kulik, 1977, cited in Reisberg, 2001). The first studies on this theme were made on the memory of having the news of President Kennedy's assassination. Brown and Kulik found that participants remembered hearing the news decades later and could recall details such as where they were, whom they were with, and what they were wearing at the time. A debate has been about the accuracy of these memories. Neisser and Harsch (1992) found that three years after the Challenger space shuttle explosion, college students' memory of the event was significantly deteriorated even though the students were highly confident about the accuracy of these memories. Other researchers (McCloskey, Wible, & Cohen, 1988) have found better memory accuracy if the event matters directly to the participant's life it seems it will be well remembered. This effect has for example been shown in relation to an earthquake in

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San Francisco in 1989 – the closer to the epicentre of the earthquake the participants lived, the more accurate memory. Important, however, is that the participants' confidence in their own accuracy and number of details is high across all flashbulb memories.

Improved memory for emotional events is an effect that has been tested in various ways. Cordon, Melinder, Edelstein and Goodman (submitted) showed children and adults pictures varying in different emotional valence and arousal. They found that aversive images were easier recognized than neutral images. In addition, high and moderate arousal images were recognized more accurately than low arousal images. Several factors could affect the findings of increased memory for affective stimuli; for instance these stimuli are more novel, more distinctive, and more personally significant to the perceiver than are neutral stimuli (see Christianson & Loftus, 1991; Howe, 2002). Moreover, emotional stimuli are more likely to activate semantic information, engage interpretive appraisal processes, and be rehearsed than non-emotional stimuli (Cahill & McGaugh, 1995; Howe, 2002).

Emotional valence has also been subject of different empirical studies; both valence and arousal increase vividness of remembered information, with information that is highly negative and highly arousing being retained particularly well (Kensinger & Corkin, 2003). According to Kensinger (2004) emotional experiences are best characterized in a two-dimensional space; low to high *arousal* and positive to negative *valence*. Emotional arousal modulate attentions which in turn affects memory and again the amygdala appears to be critically involved in the memory-enhancing effect of emotionally arousing stimuli (Kensinger & Corkin, 2004).

Parker, Bahrick, Fivush and Johnson (2006) studied the effects of stress on mothers recall for a major hurricane (Hurricane Andrew, Florida, 1992). They included 92 mothers and their children and found surprisingly similar results for adults and children. Results showed a quadratic relationship between storm severity (measured by geographical distance to the centre of the hurricane) and total recall; recall improved when severity went from low to moderate, but there were no differences in

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recall between moderate and high severity. All the participants remembered more actions than descriptions and more descriptions than internal states. The amount of recall was also significantly greater for prompted than free recall, although amount of correct units were greater for free recall.

Distinctiveness is a well established determinant of memory (Cordón et al., 2004, Christianson, 1992) and efforts have been made to check if this is the critical variable in memory of emotional events. Christianson and Loftus (1991) investigated this in relation to central versus peripheral information by comparing memory for an unexpected emotional event – a woman lying in a street beside a bicycle and bleeding from the head – with memory for an unexpected unusual event - a woman walking down a street with a bicycle on her shoulder. The researchers found that peripheral detail information from the background was remembered poorly in both conditions, but detail information associated with the central woman was remembered better in the emotional condition compared to the unusual condition.

The literature reviewed above shows that moderate to high levels of arousal or stress during an event has an enhancing effect on the recollection of the event. How about when the event is experienced as traumatic? Most researchers in memory and trauma agree that people exposed to trauma remember the event almost too well (e.g., review McNally, 2003) and one of the main symptoms of Post Traumatic Stress Disorder is intrusive memory flashbacks of the event (Jakobsen, 2006). Goodman et al. (2003) found that severity of abuse correlated positively with disclosure 13 years after documented child sexual abuse providing evidence for the extreme memory for trauma. However, this does not mean that forgetting of trauma can not occur in the same way as mundane experiences are forgotten over time. People differ in how they react to potentially traumatic experiences – both psychologically and biologically. Brewin (2007) concluded in his review that people with more negative experiences such as trauma and parental abuse extensively use defensive mental processes such as repression and dissociation and that these affect attention and memory. In Brewin's own research from 2003 he proposes a dual representation theory; that there are at

least two different memory systems for overwhelming experiences. The first is the “Verbally Accessible Memory” and consists of memories processed through the hippocampus and transferred to regular autobiographical memory. In the other system, the “Situational Accessible Memory” fear-based memories are processed in basal brain structures and these memories are dissociated from regular memory and activated in intense flash-backs. According to Augusti and Goodman (in press) PTSD is associated with negative effects on memory as compared to memory in both in maltreated adults with no PTSD symptomatology and non-abused controls. In addition, dissociation, repression, and false memories are important in relation to traumatic memories, but as there is no measure of none of these effects in this study they are not reviewed any further.

In his review, Christianson (1992) emphasized that the effects of stress on memory are complex and that interactions between certain characteristics have to be taken into consideration when predicting memory for a negative emotional event: Memory performance is dependant on the type of event (emotional vs. neutral and real-life events vs. simulated), type of information (central information vs. peripheral information), time of test (immediate vs. delayed) and the type of recall (recognition or retrieval cues vs. free recall). All potential combinations of these conditions will affect memory performance differently and this thesis seeks to investigate these combinations closer.

The former sections have focused on different stressful and traumatic events and how this affect memory and the next section will shift back to the current study and how the removal is experienced for the parents.

## 1.4 The removal- stress or trauma?

*“It was like judgement day to us. We didn’t get any notice, it just happened. The CPS came to our house. I can’t remember who was here but have been told later...”* Father (39)

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For the parents the removal ranges from planned and or wanted to completely surprising and accordingly the experience ranges from stressful to traumatic.

*“It is going to kill me, they don’t listen to me. I’ve got diabetes which is worsened with psychological problems. I’ve stopped eating and am afraid I’m going to die. I don’t take my medication anymore; I don’t want to live without my children.”* Mother (37)

Stressful events, such as a removal, are difficult to objectively define; what one person perceives as traumatic, might be a stressful situation for another person. The different removals ranges from highly surprising were police and CPS come knocking on the door to carefully planned moves were both parents and child have met the people the child is going to stay with. For some of the parents the removal day is one of the days in a long and painful process and this will probably be the case for planned removals. Acute removals on the other hand come as a surprise and have higher potential to be perceived as shocking and traumatic. One mother describes it in this way:

*“It was a shock to me; it was as if my heart was twisted out of my body. I used all my energy just to breathe; I experienced it as a trauma and am worrying about the after effect I can get.”* Mother (50)

How the situation is perceived by the parent is often depending on how the child reacts. To the child a forced removal from home may be a traumatic experience and children who have been placed in alternative care tend to feel rejected, unloved, worthless and view the removal as punishment for bad behaviour (Leslie et al., 2000). The parents often express worry about their children, such as this 25 year old mother:

*“It was very though (to say goodbye). Even though it was sad I didn’t want her to see how sad I was. I don’t want her to have nightmares about it. I want her to be safe there (in the foster home)”*

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How the child experiences it depends on developmental and cognitive level; how much they understand of what happens. One mother describes her three year old son in this way:

*“It was very heavy because he didn’t quite understand. I believe I prepared him as much as possible. To me it is crushing, I love my son a lot; he is very attached to me. He thought it was just temporary, a vacation... I’ve tried to tell him that he’s going to stay there for a while, but that he can come visit me. It was heavy. I looked in his eyes and saw despair and confusion, the day I left him over to them.”* Mother (25)

In conclusion the removal fits Christianson’s (1992) description of negative emotional events, and are certain to elicit emotional stress in different degrees, but it is individual for both parent and child whether or not the removal is perceived as traumatic. As such the following predictions of the memory of the removal will be investigated here:

- Memory will in general be good due to the real-life event that in high degree is important to the self. Degree of arousal during the removal will predict more correct units due to narrowing of attention.
- Emotional valence during the removal will affect memory and symptoms after the removal. Especially fear will lead to improved memory due to amygdala activation.
- Acute and planned removals will yield different effects on memory and description of symptoms after the removal. Acute removals are distinct, surprising events with a high negative impact and will as follows be better remembered and yield more symptoms related to shock than planned removals.

Before I turn to the specifics of the present study it is necessary with some reflections about being interviewed after a negative emotional event.



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### *The emotional effect of communication*

A memory interview can in itself be a stressful experience. The conversation is emotionally charged and concerning difficult themes in a difficult period of time. The questions can be provoking or challenging and has the potential to increase the level of stress in the person interviewed. According to Notarius and Herrick (1989) all interpersonal interaction affects us physiologically; the level of activation between two persons communicating is clearly synchronised meaning that the level of activation fluctuates as the conversation happens. Finset (2002) argues that if the conversation partner should have a “shock-absorbing” effect he/she must take the other part seriously. Orth and colleagues (1987) found that two properties of doctor patient communication had a positive effect on the patients’ blood pressure: Frequency of patient statements and frequency of informative statements from the doctor in the beginning of the session (Orth, Stiles, Scherwitz, Hennrikus, & Valbona, 1987). Stewart (1995) reviewed research literature on doctor-patient communications. One of her conclusions was that especially two types of doctor behaviour had a positive effect on the patient’s health: First that the doctor asks many questions about the patients understanding of his/her problem. Second she finds that it is especially important that the doctor asks the patient about the patient’s emotional reactions and showing emotional support.

A research interview is not a regular conversation or a doctor-patient session, but the parallel is clear; it is two people meeting, talking about themes important in the life of one of the persons while the other person holds an information gathering role. Even though there are differences between a conversation with a doctor and a researcher, some of the same guidelines should apply, especially when talking about emotionally charged themes such as a removal situation. Implementing the empirically based effects mentioned above a researcher should be as informative as possible before the interview starts, letting the interviewee settle his/hers insecurities, always take the interviewee seriously and let him/her speak as feely as possible and finally paying attention to emotional signals and not apply to much pressure. Different research paradigms allow different degrees of supportive behaviour but it should be important

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to all researchers that the interview is not re-traumatizing and that the interviewee feels respect and confidence.

One mother stated it like this after a two and half hour long interview: *“Thank you for valuable hours. It (the interview) has helped me think about new elements of our story.”*

## 1.5 Present study

The removal of a child is a severe intervention in a child’s and a family’s life. Today, too little is known about the memory and understanding of the removal and how the parents are doing after they have lost their child. The Norwegian government has emphasized that biological parents should be followed closely after the placement of their child, but this is done in only a minority of the cases (Ministry of Child and Family, 2000; 2003). At focus in this study is the investigation of parent’s memory of the removal of their child and psychological problems before and after this stressful event. An underlying assumption is that it is in the child’s best interests that their parents are taken care of. From the introduction outlined above the following hypotheses will be investigated further:

1. Removal reasons and parental problems will reflect common problems for the group of parents involved with the CPS.
2. Memory will in general be good due to the real-life event that in high degree is important to the self. Degree of arousal during the removal will predict more correct units due to
3. Emotional valence during the removal will affect memory and symptoms after the removal. Especially fear will lead to improved memory due to amygdala activation.
4. Acute and planned removals will yield different effects on memory and description of symptoms after the removal. Acute removals will be better remembered and yield more symptoms related to shock than planned removals.

## 2. Methods

### 2.1 Design

The main study, of which the present thesis is part of, is outlined as a prospective longitudinal study, with a cognitive developmental perspective. The study composes to a 2 (removal condition; acute removal vs. planned removal) x 3 (interview/observation; one week after the removal vs. 3 months after vs. 1 year after) mixed factorial design, with the last factor as a repeated measure. Control over the experimental situation is obtained through the presence of one researcher (always the same) during all of the removals. The child, one or both of the parents and the caseworker are interviewed in each case. The main study is conducted with the focus of maltreated children and their memory for trauma experiences.

The present thesis focuses on the struggles of the biological parents of these children, specifically how biological parents remember the removal of their child and how this recall change over time. This was obtained using a within subject time-serial design with the time delay for interviews one week vs. three months after the removal as the repeated measure. In addition the biological parents' pathology before the removal and their problems one week and three months later are investigated

### 2.2 Participants

Families were recruited through the CPS in 4 counties in Norway which include 29 municipalities. The CPS informed the researchers about cases of acute removal according to the Child Welfare Act (CWA) §§ 4-4, 5.paragraph, 4-6, 1. or 2.paragraph, and cases of planned removal according to the CWA § 4-4, 5.paragraph or cases being prepared for the count committees for social affairs according to the CWA § 4-12.

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The present study includes 20 children and their parents, four of the parents have withdrawn their consent, but one of these permitted that we use the information they had already submitted, although they themselves were not interviewed. Fourteen of the possible 20 parents are interviewed, in two of the remaining cases there was impossible to get an interview with any of the parents due to psychiatric problems, but these parents consented to us interviewing their children. In two of the families the mother and father are interviewed together, in 11 of the cases the mother is the main caretaker and is interviewed alone. In three of the cases other people present in the situation were interviewed. These individuals were important to the child and the child had stayed for longer periods of time in their care.

Thus, the present study is based on interviews of biological parents in 14 different cases. Six of the participants have been interviewed twice. This variation is due to the functioning of the parents and their accessibility for interviews. In 17 of the total 20 cases we have case documents that will be used to describe the sample.

#### *Background information*

The sample included 17 mothers (with the age  $\underline{M}$  = 35.59,  $\underline{SD}$  = 7.23) and 15 fathers (with the age  $\underline{M}$  = 36.93,  $\underline{SD}$  = 8.65). Thirty-eight % of the parents were still together at the time of the removal, while 62 % were not living together. Forty-four % of the parents were Norwegian, 56 % were from other nationalities. At least 19% of the parents had one child that was removed by the CPS at an earlier phase.

Out of the 14 removals 43% (n=6) were planned, and informed consent was obtained prior to participation in these cases. Sixty-two % of the parents were not present during the removal, 31% were present until the child left with the caseworkers and 6 % were participating during the entire move. Forty-seven % were not prepared at all for the removal, 19 % knew it was a possibility, 15% were informed that it could happen and 19% took part in planning (out of these (n=2) parents removed the child from the other parent and (n=4) the rest were involved in voluntary placements).

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## 2.3 Measures

### *Sequential observation scheme*

A detailed sequential step-by-step observation scheme was outlined according to the procedure in removal situations. This was based on the text in the CWA, guidelines given by the Ministry and by experience from two of the researchers after working for years in the CPS. Phases included are; 1. The CPS arrives to remove the child. 2. Information is given to the child/parent. 3. The packing. 4. On the way to the new care facility. 5. Arrival at the new care facility. 6. Information given to the new caregivers. 7. The time when the parent(s) and/or the CPS leave the child. All that happens and who are present in the different phases are registered in a structural protocol. In addition, the affective, verbal and physical state of the child, biological parent(s) and significant others present are registered. To register the person's affective state in each step, valence and arousal dimensions are differentiated in checklist form in the scheme, developed for this study specifically. Arousal is graded from calm to excitement on a five-point scale (Cordon, Melinder, Edelstein, & Goodman, submitted; Lang, Bradley, & Cuthberg, 1997). Valence to be observed, is based on primary emotions; joy, disgust, anger, fear, sadness, contempt and surprise (Ekman, 1973; 1992) graded from 1 – 5 (not present – to a strong degree). The registration of verbal state includes verbal expressions, degree of acceptance, aggression and verbal resistance, all graded from 1 – 5 (not present – to a strong degree). Degree of aggression, flight reaction, physical resistance and withdrawal/apathy, all graded from 1 – 5 (not present – to a strong degree) are registrations made to measure physical acts/handling strategies. The researcher is primarily paying attention to the child in the removal situation, but the parent (s) responses are also registered and the information that will be used in the present study is that concerning the biological parents. Analysis has focused on the primary emotions of sadness, anger and fear in addition to the physical state of apathy or withdrawal. In addition the verbal states have been split into an accepting/cooperative scale and a resistance/non cooperative scale consisting of aggression and resistance that also have been subject for further analysis. The scores from each phase

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are summarized and the mean is found. In total nine of the 14 interviewed mothers were present at the removal and has been scored on arousal and affect.

### *Memory interviews*

To make comparison possible the same structured memory interview is used across all subjects and time delays (i.e. children, parents, and caseworkers, see Appendix A for parent interview). Exception was non-relevant questions, which were not asked. For example, if the parent(s) did not come along to the new care facility, the questions about this event are not asked in the parent interview. The interview starts with an open-ended question about the removal day followed by three prompts to obtain additional narrative detail, before direct recall questions (n = 54) were asked about the removal step-by-step including questions about emotional reactions, speech, clothing, persons present, and procedure at the removal day. The open ended questions leaves it up to the participant to tell what he/she believes is important while the direct questions on the other hand requires specific information. The structure of the memory protocol followed internationally recognized memory interviews, frequently employed in forensic contexts (Goodman & Melinder, 2007b; Lamb, Orbach, Hershkowitz, Esplind, & Horowitz, 2007; Melinder & Magnussen, 2003). False-memory questions such as "Did the child protective service bring a dog?" (Ghetti, Qin, & Goodman, 2002; Melinder & Gilstrap, 2007; Melinder, Endestad, & Magnussen, 2006) and specific attachment style related questions concerning for example to what degree parents prepared the child for removal, are included (How well prepared was your child for the removal? Would you say that he/she was a) not prepared at all, b) a little prepared, c) well prepared, d) as prepared as he/she could be (Quas, Goodman, Bidrose, Pipe, Craw, & Ablin, 1999). The interviews were outlined in cooperation with experienced researchers within the field of child witness' and memory research.

An interviewer naïve to the removal situation conducted the interviews to avoid a potential reminder effect.

Only parent interviews were coded and analyzed in this pre-study. Of special interest

and object of one of the main analysis was question 62: “How have you been after your child was moved to the foster home/institution? Can you please tell me a little about that experience?” On this question it is left to the parents to decide the quality and quantity of problems or feelings they would report on. The words they reported here were put into 11 categories based on the words they themselves used to describe how they were doing. For most of the analyses the Sum of Symptoms category were used.

Table 1

*Categorization of Symptoms Descriptions after the Removal*

<i>Category</i>	<i>Descriptive Words</i>	<i>Max Value</i>
Physical	hunger +/-, sleep +/-, worse health/disease	3
Emotional	sadness, grief, cries, depressed, helplessness, longing	6
Difficult	difficult, horrible, heavy, serious	4
Anxiety	fear, worry, panic, restless	4
Shock	shock, crisis, judgementday, hell, trauma	5
Anger	anger, aggression	2
Thoughts	Thoughts about death/suicide/going crazy	3
Work related	can't work, concentration -	2
Future	mobilize, fight, understand decision for now/have to get well	3
CPS related	can't reach, misunderstood, ignored	3
Feel ok	feel ok	1
SumSymp	sum of symptoms at T1 or T2	36

*Note.* Max values represent the maximum score on each scale according to the numbers of problems included in each area.

*Coding and Inter-Rater Reliability Testing*

Interviewers questions about the day of removal were coded into 3 question types: (1) open-ended questions ( $n = 4$ ) (e.g., “I know that \_\_\_ and \_\_\_ from the Child Protective

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Services came here and moved your child. I wasn't there, so I would like you to tell me everything that YOU remember from the day that they came and you moved here"); (2) direct or focused questions ( $n = 54$ ) (e.g., "Who was with you when \_\_\_\_ and \_\_\_\_ (CPS) came?"); and, (3) false memory questions ( $n = 4$ ) (e.g., "Did the CPS workers bring a dog when they picked up your child?") were scored. All information provided by the parents in the open-ended questions was scored as units of information (Alexander et al., 2002; Melinder, 2004). The situations asked about, are more diverse than former research procedures using units of information. A modification of former system was therefore taken and a separate coding manual for coding the parent interviews was made. Two categories for each of the conditions correct and incorrect were scored; "hit", "correct rejection", "commission", and "omission". Due to the small sample the false memory category is not included, "hits" and "correct rejections" are collapsed into the category "correct" and "omission" and "commission" are collapsed into the category "incorrect". "Unverifiable" responses were counted according to units of information and "Don't know" responses coded but taken out of the material before further analysis. Answers that were off topic, ambiguous or impossible to code were marked as "Unscoreable". Proportions of "correct", "incorrect" and "unverifiable" were created for each participant for the question categories open-ended and direct questions.

Reliability was established between two independent coders using the scoring of the first four child interviews to reach a common understanding of the concepts for scoring units of information due to four categories of correct and incorrect units of information, plus "don't know" and "unverifiable". Thereafter the two researchers independently scored four transcribed protocols out of a total of 19 (21%) matched according to time delay T1 and T2, corresponding to  $n = 348$  child responses. Agreement ranging from 89% to 100% was attained (see table 2). Disagreement was resolved, and one of the researchers coded the remaining interviews.



Table 2

*Reliability between the two Coders for the four Independently scored Protocols*

Interview number	Correct	Correct-rejection	Correct total	Incorrect omission	Incorect comission	Incorrec t total	Unverifiabl e
Interview 1	96,40 %	100 %	98,20 %		100 %	100 %	86,25 %
Interview 2	96 %	100 %	98 %	100 %	72,20 %	86 %	79 %
Interview 3	98,81 %	100 %	99 %		100 %	100 %	100 %
Interview 4	95,38 %	100 %	97,70 %	100 %	100 %	100 %	90 %
Reliability total	97 %	100 %	98,20 %	100 %	93 %	96,50 %	89 %

*Note.* Percentages represent percent agreement between the two coders.

*Case reports*

Insight into the child's case report at the CPS provides information on former experiences (e.g., reports of concern, earlier assistance provided), family background and main reasons for the current removal according the CPS. This information was used to generate an overview of pathology and problems the parents had before the removal of their child.

## 2.4 Procedure

In this section the procedure for the full study is presented. Sampling procedure differing for the two conditions, planned removals according to the CWA § 4-4, 5.paragraph and § 4-12 and acute removals according to the CWA § 4-4, 5.paragraph and § 4-6 1. and 2.paragraph, are highlighted before the common procedure for both conditions are described.

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*First contact with the family and until removal is followed through*

For the planned removals, the CPS asked biological parent(s) for permission to give us contact information. The parent(s) were contacted and an informed consent was obtained before the actual day of removal. Information was given the researcher as a decision from the county committees for social affairs existed and date for removal was set. Researcher A attained during the removal from the CPS arrived at the family/met the child, until the child was situated in a suitable daycare facility. The researcher filled out the sequential observation scheme.

For the acute removals, the CPS contacted researcher A when an acute removal came up, giving the time and place to meet. Researcher A accompanied the CPS to where the child was, or met them there, participating until removal was conducted and the child was situated in a suitable daycare facility. The researcher filled out the sequential observation scheme. Shortly after the removal day, researcher A contacted the biological parent(s) to obtain informed consent for participating.

In this study the families in both conditions are seen as one group, sharing the experience of having their child removed from their home and thereby sharing the experience of being separated from their child for a shorter or longer period of time.

*One-week Follow-up*

Biological parent(s) were contacted by a researcher naïve to the removal and interviewed about the removal day and "here-and-now" using the same interview guide as for the child (e.g., for comparison reasons). Not all parents were available for interview so shortly after the removal so the time period for this interview had to be stretched ( $\underline{M} = 40$ ,  $\underline{SD} = 4$ )

*Three-month Follow-up*

Three months after the removal, biological parent(s) were asked to consent, and interviewed with the memory interview by the same researcher that interviewed them at the one-week follow up.

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During the first three months after removal, the responsible caseworker in the CPS was contacted and interviewed. In addition the child's case-record was looked through to obtain information like reports of concern, earlier assistance given, earlier removals, and demographic information about the child and its parents. Reasons for the present removal were registered.

## 2.5 Ethical considerations

Conducting research in stressful, acute situations demands thorough considerations. The potential to inflict further distress to already vulnerable people is always present and minimizing such effects is essential. Through thorough discussions with the Ministry of Children and Equality, the Regional Committee for Medical Research Ethics, and the Data Inspectorate ethical considerations have been weighted, and the importance of getting insight into these situations and the knowledge gained are found to be superior and the potentially harming effects minor. As the study has been progressing, the research team has gotten feedback from both parents and children saying that the researcher's presence has not been noticed or that it was positive to have a neutral person present. The research group has continuously discussed ethical dilemmas and the participants are always made aware of their right to withdraw their consent if they feel uncomfortable in any way talking to us.

### *Informed consent*

With the permission from the Ministry of Children and Equality, the Regional Committee for Medical Research Ethics, and the Data Inspectorate we challenged the existing rule for informed consent.

For the planned removals, informed consent is obtained from the biological parents before the day of removal. If one of the parents has parental responsibility but takes no part in the care, the relevance of contacting this parent is considered in each case. The caregiver can have another relation to the child, e.g. grandparent, aunt or uncle, but is accounted to be a significant attachment figure for the child. It will still be the

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biological parent(s) with parental responsibility for the child who will give consent to participation in the project.

For the acute removals, the Ministry of Child and Equality has given the project exception from getting informed consent before or in the removal situation. This allows a researcher to attend the removal and observe what takes place, and then contact the biological parents and/or their lawyer shortly after the removal day to get their informed consent. The biological parents are often in conflict with the CPS when an acute removal is accomplished, reacting with overly cooperativeness or withdrawal and hostility. For these removals researcher A, who has experience from similar situations, participate presenting herself as a researcher from the university being there to observe and register what happens. The parents are told that they and/or their lawyer will be contacted for further information within a week.

Vulnerable children are involved, and a removal often involves one or more unknown adult to the child in the situation and at the new residential home. The researcher having a withdrawn neutral position during the removal is essential not to burden the child and family additionally. If the parents do not want to participate, the information obtained is maculated.

For each step of the research the participants are informed about the aim and the procedure for the project before getting their consent. The procedure of consent is a continuous process characterized by an explanation of the research project to the participant in consent-relevant terms appropriate to the participant's language preferences (e.g. using a translator when necessary) and proficiencies. This ensures valid consents to an optimum. The biological parent(s) give an informed consent according to the general rules (e.g. the Helsinki declaration) and the children give their individual assent to their participation.

### *Confidentiality*

All information was given a serial number only accessible for the project leader. Data about each child and family are coded, and the material was made anonymous. It is

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strictly used for statistical purposes and the material cannot be traced to the individual participant.

## 2.6 Statistics

SPSS for windows (version 15.0) was used to register and analyze data. To examine the outlined predictions, different statistical procedures have been applied such as the Pearson product moment correlation coefficient exploring strength and direction of relationships between the variables and partial correlation to control for relevant third variables. Preliminary analyses for the correlations were made using scatter plots to check for outliers and linearity; findings suggested that correlation analysis would be appropriate.

Standard multiple regression and hierarchical regression have been conducted to check how well a set of variables (displayed emotions during removal) is able to predict a particular outcome (Memory performance or symptoms at T1). This is a technique that is based on correlation, but that provides an exploration of the interrelationship between a set of variables. An adjusted R square is used due to the small sample.

Independent samples t-test were conducted to compare group means for the acute (n=6) versus planned removals (n=8). The t-test is a measure of the statistical significance of an independent variable in explaining the dependent variable. The *t*-statistic measures how many standard errors the coefficient is away from zero. Generally, any *t*-value greater than +2 or less than - 2 is acceptable (Pallant, 2005). The higher the *t*-value, the greater the confidence we have in the coefficient as a predictor. Low *t*-values are indications of low reliability of the predictive power of that coefficient

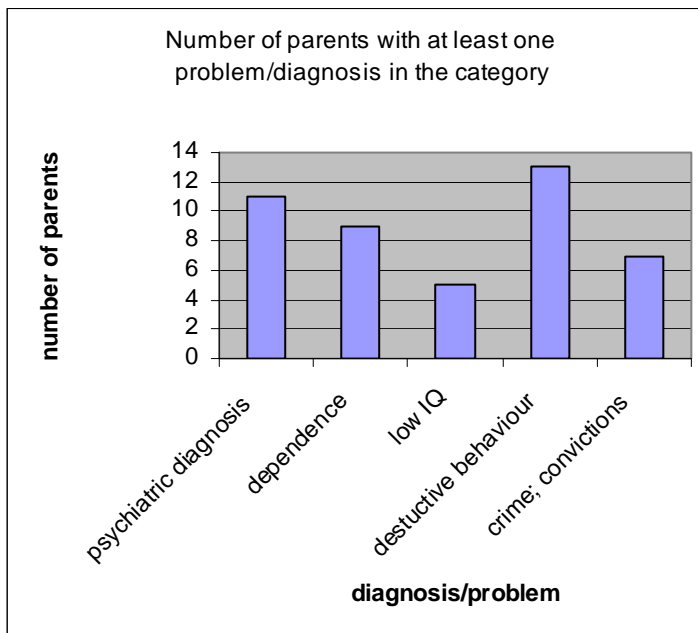
### 3. Results

The following predictions were made in the introduction: First, the sample in this study will reflect common problems of parents that are in contact with the CPS. Second, it was predicted that memory for the removal in general would be good and that degree of arousal would affect memory positively. Third, emotional valence during the removal would affect memory and symptoms after the removal. Fourth, acute and planned removals would have different effects on memory and symptoms after the removal.

#### 3.1 Problems before Removal and Removal Reason

Investigating the first hypothesis of similar problems and removal reason in the present sample as in the society was investigated using information from the case documents and descriptives and frequencies in SPSS. The parents had various diagnosis and problems before the removal of their child as listed in the case documents. Due to the many different problems it was necessary to make categories of different problems. The categories consist of the following diagnoses and problems, depicted in Figure 1: The *Psychiatry Scale* consists of all formal psychiatric diagnoses (diagnosed by medical doctor or psychologist) such as anxiety, depression, schizophrenia, ADHD and PTSD according to ICD-10. The *Dependency Scale* consists of problems with dependency, for instance drug or game addiction. The *low IQ Scale* consists of problems related to daily life activities due to cognitive problems (as assessed by professionals). The *Destructive Scale* consists of various forms of destructive behaviour such as aggression and accusations of sexual abuse, not yet legally convicted. The *Conviction Scale* consists of documented criminal behaviour related to profit, drugs, violence of sexual offences. All of the scores on these scales are summarized into a *Prepathology Scale*. Figure 1 shows the frequency of the different problems in this particular sample.

Figure 1

*Categories of Prepathology*

*Note.* A single parent may show problems in more than one area; many have problems or diagnosis in several of the categories (n= 16), some has no documented diagnoses or problems (n=7) and the rest has one documented diagnosis or problem (n=9)

The diagnosis or problem is not necessarily the direct removal reason. The reasons to remove the child are categorized into seven different areas, shown in Figure 2, together with the frequency of different placement reasons.

Figure 2

*Removal Reasons*

*Note.* The bars represent the number of parents that has their child removed for the reason represented on the x-axis. In addition to the 28 parents (to the 17 participating children) depicted above, four of the fathers were absent in their child's life and another two fathers were deceased.

### 3.2 Memory and Arousal

The first memory interview was on average conducted 40 days after the removal ( $M = 40$ ,  $SD = 4$ ). Table 3 shows the distribution of memory scores at Time 1, expressed as units of information. As can be seen the proportion of incorrect and don't know, these proportions are so small that no further analyses were conducted on these values.



Table 3

*Memory for the Removal, (n=16)*

	<u>M</u>	<u>SD</u>
Total Units of Information	474.07	314.25
Memory; Total Correct	280.50	247.60
Proportion of Correct Units of Information	.61	.25
Proportion of Correct Units - Open Ended Questions	.23	.18
Proportion of Correct Units - Direct Questions	.38	.23
Proportion of Incorrect Units of Information	.06	.04
Proportion of Incorrect Units - Open Ended Questions	.02	.03
Proportion of Incorrect Units - Direct Questions	.04	.04
Proportion of Unverifiable Units	.32	.26
Proportion of Don't Know Answers	.01	.01

*Note.* All proportions are calculated out of total units of information. The proportions of correct units, incorrect units, unverifiable units and don't know sums up to 1 (100%). For the sake of analysis and testing hypotheses proportions for open ended and direct are also calculated. Open ended questions are questions that leave it up to the participant what he/she wants to tell, while direct questions are focused and require specific information. Proportion of units in both categories was calculated for both correct and incorrect units. Proportion of correct on open ended and direct sums up to the correct and the same on the incorrect questions; open ended direct sums up to total proportion of incorrect.

The relationship between memory (as measured by proportion of correct units) and arousal (as measured by general arousal during removal) was investigated using

Pearson product-moment correlation coefficient. There was a significant, *positive* correlation between arousal and proportion of correct units in open ended questions ( $r = .72, p < .05$ ). An unexpected, but significant, *negative* correlation between arousal and proportion of correct units in direct questions ( $r = -.80, p < .01$ ) was further evinced. Table 4 shows the different associations between arousal, memory, and the different emotions expressed during the removal situation.

Table 4

*Correlation between General Arousal and Memory measured as Proportion of Correct Units of Information*

	Arousal	Sadness	Anger	Fear	Withdr awal	Total correct units	Prop. correct units – open ended Q	Prop. correct units – direct Q
Arousal								
Sadness	.69*							
Anger	.93**	.44						
Fear	.90*	.75*	.88**					
Withdrawal	-.63	-.21	-.74*	-.61				
Total correct units	.54	.83**	.22	.42	.14			
Prop. Correct units – open ended Q	.72*	.54	.57	.52	-.06	.73*		
Prop. Correct units – direct Q	-.80**	-.55	-.72*	-.65	.56	-.53	-.55	
Sum of Symptoms T1	.83**	.82**	.77**	.94**	-.51	.49	.41	-.61

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$ , (n=9), all proportions calculated out of total units of Information.

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The effect of different problems or diagnoses before the removal has been tested towards measures on both memory and symptoms after the removal, but no effects were found due to small sample and high variability in the parents' problems. This variable is therefore omitted in further analyses.

### 3.3 The Impact of Emotional Valence

During the removal verbal resistance and verbal cooperation were registered. Verbal resistance turned out to have a perfect positive correlation with anger ( $r = 1.00, p < .01$ ). Verbal cooperation showed a somewhat different pattern and correlated negatively with all measures on emotional display; general arousal ( $r = -.76, p < .05$ ); anger ( $r = -.82, p < .01$ ) and fear ( $r = -.83, p < .01$ ). Sum of symptoms at time 1 also showed a significant negative correlation with verbal cooperation ( $r = -.74, p > .05$ ).

Sadness was significantly correlated with verbal production (e.g., total number of words produced during the interview), ( $n = 9, r = .86, p < .01$ ); total words on topic (as measured by word count total minus off topic units), ( $n = 9, r = .90, p < .01$ ), and; total units of information (as measured by the sum of all scored words), ( $n = 9, r = .85, p < .01$ ). This effect is not found for any other displayed emotions.

*Memory.* The predictive power of emotional display onto correct memory and sum of symptoms at T1 were investigated using linear regression analyses. Because correlations between the variables entered into the model could give somewhat spurious results, a hierarchical multiple regression were conducted to control for such variables that could influence the models. First, the predictive power of the different emotions on total correct units was tested. It was found that anger, fear and sadness significantly affected total correct units and that the model as a whole could predict 92.4% of the variance in correct units ( $p < .01$ ). To see if the significant effect on total correct units could be due to total number of words the participant produced, a hierarchical linear regression was conducted. As can be seen in table 8 below, the

model still was significant ( $p < .01$ ). When controlling for total number of words, the model could explain 60% ( $p < .01$ ) of the variance in total correct units.

Table 5

*Hierarchical Regression on Memory as measured by Total Correct Units onto Predictor Variables of Emotions During the Removal – Controlling for Total Words*

Variables	Adjusted R <sup>2</sup>	B	$\beta$	SE
Word count		.09	.806**	.025
Model 1	.600**			
Anger		409.69	1.85**	79.22
Sadness		237.65	.74	126.62
Fear		-635.76	-2.06**	108.14
Withdrawal		57.18	.152	55.85
Word count		.110	.99	.049
Model 2	.962**			

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$

*Sum of Symptoms.* To see whether the different emotional displays during the removal could predict sum of symptoms at time 1, a linear regression were conducted with sum of symptoms at T1 as the dependent measure. None of the individual emotions could predict sum of symptoms at time 1 alone, however the model was significant ( $p < .05$ ) with an explained variance of 82 %.. Because general arousal and some of the displayed emotions during the removal situation correlated significantly, a second hierarchical linear regression was conducted, controlling for arousal. As can be seen in the table below, both models were significant, but general arousal in itself has a significant effect on sum of symptoms. The model were general arousal is controlled for can explain 64 % of the variance in sum of symptoms at time 1.

Table 6

*Hierarchical Regression on Sum of Symptoms at Time 1 onto Predictor Variables of Emotions during the Removal – Controlling for General Arousal*

Variables	Adjusted R <sup>2</sup>	B	β	SE
Arousal		2.46	.827**	.632
Model 1	.639**			
Anger		13.25	3.83	6.4
Sadness		11.57	2.32	5.00
Fear		.7.07	-1.47	.972
Withdrawal		-.143	-.02	.972
Arousal		-9.036	-3.03	4.27
Model 2	.904*			

\*=  $p < .05$ , \*\*= $p < .01$

### 3.4 Acute versus Planned Removals

Investigating the third hypothesis of differences in memory and sum of symptoms at T1 for planned versus acute removals independent samples t-tests were conducted.

*Sum of Symptoms.* Comparing the Sum of symptoms at time 1 between planned (n=6) and acute (n=8) removals no significant difference between scores for acute ( $\underline{M}$  = 5.75,  $\underline{SD}$  = 3.66) and planned ( $\underline{M}$  = 3.00,  $\underline{SD}$  = 5.75;  $t(12) = \div 1.50$ ,  $p = .16$ ) were found although the difference between the means are quite large.

Independent samples t-test were conducted on all of the different categories of symptoms to check if some of the more specific categories could have significantly different means in the two types of the placements. Such an effect was found for the

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factor “anxiety” that consists of fear, worry, restlessness and panic, with a maximum score of 4. There were significant difference in the scores for acute ( $\underline{M}=.17$ ,  $\underline{SD}=.41$ ) and planned ( $\underline{M}= 1.25$ ,  $\underline{SD}= 1.04$ ;  $(t(12) = \div 2.41, p = .03)$ , indicating that being a parent of a child that was removed acute, implied less anxiety at the time of the first interview. The magnitude of the difference in the means ( $\eta^2 = .33$ ) was large (Cohen, 1988). Expressed in percentage, 33% of the variance in descriptions of anxiety can be explained by type of removal (Pallant, 2005, pp. 208-209,  $\eta^2$  calculated by hand).

Two other categories of symptoms after the removal; “difficult” and “shock” also yielded significant findings. The category of “difficult” consists of descriptions such as horrible, feeling heavy, feeling serious or down, and has a maximum score of 3. There were significant difference in the scores for acute ( $\underline{M}= 0$ ,  $\underline{SD}= 0$ ) and planned ( $\underline{M}= .83$ ,  $\underline{SD}= .98$ ;  $[t(12) = 2.43, p = .03]$ ). None of the parents that had experienced the acute removal used the difficult category to explain how they were doing. The shock category consists of descriptions such as shock, crisis, hell, judgement day and trauma, with a maximum score of 5. There were significant difference in the scores for acute ( $\underline{M}= .88$ ,  $\underline{SD}= .99$ ) and planned ( $\underline{M}= 0$ ,  $\underline{SD}= 0$ ;  $(t(12) = \div 2.49, p = .05)$ ). In this case none of the parents that experienced a planned removal used the category “shock” to describe how they were doing. A preparation phase before the removal might contribute to a somewhat stronger feeling of control, which might decrease the “shock” feeling. Due to the zero scores equal variances was not assumed in these two t-tests and SPSS generated alternative values. According to Pallant (2005), the analyses are reasonably robust to violations of the assumption of homogeneity of variance as long as the groups are reasonably similar, difference larger sample/smaller sample  $< 1.5$  (in this case;  $8/6 = 1.33$ ), and the alternative value generated by SPSS is chosen.

*Memory.* Independent samples t-tests were employed to test differences between the planned and acute removals concerning memory for the removal, for descriptive statistics, see table 11. One significant result emerged. While 81 % of the information provided to the direct questions was correct in planned removals, 45 % of the provided information in the acute removals was correct. This means that when asked direct questions about specific information parents that have been through a planned removal will have more correct answers than if they have experienced an acute removal.

Table 7

*T-tests on Memory in Planned versus Acute Removals*

<i>Variable</i>	<i>Planned</i>		<i>Acute</i>		<i>t-value</i>	<i>P</i>
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Proportion of correct units	.724	.178	.528	.273	1.52	$p > .05$
Proportion of correct units on open ended questions	.136	.096	.296	.196	-1.82	$p > .05$
Proportion of correct units on direct questions	.814	.114	.451	.139	5.19*	$P < .01$
Proportion of incorrect units	.052	.019	.051	.054	.04	$p > .05$
Proportion of words on topic	.775	.270	.730	.269	.31	$p > .05$

\*=significant values,  $p < .01$ . All proportions are calculated out of total units.

## 4. Discussion

Current results show two major trends. First; arousal during the removal, and the specific emotional valence displayed, affect both memory and symptoms described after the removal. Second; there are significant differences between acute and planned removals in regard to memory and described symptoms in the first interview.

### 4.1 Investigating the sample of the study

The first hypothesis sought to investigate removal reasons and parental problems in the current sample as opposed to common problems for the group of parents involved with the CPS. It was found that the main problems in the parent group were destructive behaviour (areas consists of aggressive behaviour and severe accusations of sexual offences as stated in their case reports), different psychiatric diagnoses (depression and psychosis being the main categories) and dependence. Main reasons for removal were psychiatry, drug problems and under-stimulation. It is important to note that this is the main reason for removal and in most of the cases the picture is diverse and several underlying factors coincide to lead to the removal. The reviewed literature in the introduction commented on underlying psychiatry as reasons for dysfunctional parenting (Howe, 2005), and this seems to be the case in this sample as well; 11 of the 32 parents fulfilled at least one psychiatric diagnosis and 9 of the 32 parents had known dependency problems; drugs or game addiction. Of the 32 parents 25 had at least one problem or diagnosis.

### 4.2 The relation between memory and arousal

The second hypothesis concerned memory and arousal and it was predicted that memory in general would be good due to the real-life event that in high degree is important to the self. This was confirmed. Out of the total units, 61% of the units were correct, 32% were unverifiable, only 6% were incorrect, and 1% was don't



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know answers. In other words almost two thirds of the units were correct and the large proportion of correct units yields support for the prediction of good memory for negative emotional events (Buchanan, 2007 & Symons & Johnson, 1997).

### *Degree of arousal*

The second part of this hypothesis concerned that the degree of arousal during the removal would predict more correct units due to narrowing of attention during encoding (Reisberg & Heuer, 2004). The results here indicated a distinction between participants' responses to open ended questions versus direct questions, as measured by proportion of correct units of information. Thus, the degree of arousal correlated positively with proportion of correct units as responses to open ended questions ( $r = .72, p < .05$ ) and negatively with proportion of correct units on direct questions ( $r = -.80, p < .01$ ). More precisely; higher arousal during the removal (encoding) correlates with more correct units of information on open ended questions, but less correct units of information on direct questions. This confirms findings of free recall yielding less units of information, but more correct units as opposed to information following prompts (Parker, Bahrick, Fivush and Johnson (2006) Open ended questions do not provide any retrieval cues and leave it up to the participant to tell what is important to them, direct questions on the other hand require more details and is therefore more likely to be negatively correlated with arousal in the situation. According to Christianson (1992) the more peripheral details are less attended to during stressful situations and therefore weakly encoded and weaker retained in memory. It could be that the direct/focused questions in this study tap into such peripheral details and that this leads to the effect of less correct units on direct questions. .

## 4.3 The impact of emotional valence

In relation to the third hypothesis, it was predicted that emotional valence during the removal would affect memory and symptoms after the removal. Due to the small sample, the findings must be interpreted exploratory, rather than as causal inferences.

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*Emotional Valence and Memory*

As found in the regression analysis, 92 % of the variance in total correct units could be explained by the different emotional displays of; anger, fear, sadness and withdrawal. The directions suggest that anger and sadness have significant effects on memory; more of these feelings were associated with better memory. Contrary, fear contributed negatively; less fear influenced memory positively. The effect of fear is opposite of what could be expected from the literature on emotional memory, in particularly studies on amygdala activation (Buchanan, 2007). Several explanations are possible. First, not all studies have found an enhanced activation for negative, fear inducing stimuli. For example Thomas et al.(2001) found a left sided activation of amygdala after exposure to fearful faces in adults, but children showed more amygdala activation when shown neutral faces. It may be the case that the participants in this study was activated and reacted differently to fear triggers, much in the same way as the developing children in the Thomas et al. (2001) study. A second explanation of this unpredicted result could be related to the scoring of the different emotions during the removal. It is possible that some of the individuals in the sample expressed feelings of fear atypically, i.e. perhaps by expressing more of anger or expressions that were scored as unscorable. A weakness in the scoring of the emotions during the removal situation is that the protocol not yet has been tested for inter-rater reliability. Thus, expressions that are not typical for the particular category (e.g., a smile for happy), might have been random understood and scored.

Interestingly, fear showed a tendency towards the same pattern of correlation as general arousal with positive correlation for open ended questions and negative correlation for direct question. Scoring of fear and arousal are theoretically overlapping since fear inducing stimuli should elicit high arousal and this could account for the effect of fear. Fear also shows high correlations for the other measures of negative emotional valence and it is a possibility that this measure is not completely valid in measuring the distinct emotions.

An appropriate reflection is that the amount of word employed by an individual would influence the total units of information. Because all of the interviews were

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transcribed into word-format, a word count was possible to execute. Thus, when controlling for word count the model is still significant at a level of  $p < .01$  and it can explain 60% of the variance in correct units (when including word count in the model it can explain 96 % of the variance in total units). The reasons for this pattern could be a facilitating effect of negative emotional arousal consistent with the review by Christianson (1992) and findings of Cordon, Melinder, Edelstein and Goodman (submitted). When interpreting these results it is important to note that the beta values are quite high and that this could be due to internal correlations between the variables in the model that could lead to spurious results. However, although the number of list wise cases is quite low, the significance is reasonable high and the models predictive power should therefore not be totally rejected.

#### *Emotional Valence and Sum of Symptoms*

A significant model of the predictive ability of fear, anger, sadness, and withdrawal on sum of symptoms at time 1 was found. However, none of these factors were significant predictors alone. When controlling for general arousal, the models explained variance decreased to 64 %, still significant. The beta values in this model were smaller, which suggests that the reliability of the model can be trusted. When including arousal in the model it increased to explaining 90% of the variance in sum of symptoms at time1. The displayed emotions during the removal affect the reporting of symptoms and problems after the removal. The parents that are both verbally and nonverbally expressive also report more symptoms after the removal. Thus, a third variable (e.g., emotional expressiveness), seems to influence the reporting of symptoms. It is important to note that sum of symptoms is a measure of described symptoms, not actual symptoms and therefore an array of different third variables could lead to differences; willingness and ability to report on struggles, extroversion/introversion, containing, rumination etc. Fortunately, the design and collected data enabled control for some of the relevant third variables.

Interestingly an unexpected finding for sadness were found; display of sadness in the removal situation correlated significantly with enhanced memory reports in the

memory interview. This could be due to a number of reasons. One potential factor is emotional expressiveness. Another is the effect of rumination, which is to over focus on what is difficult. A recent study was conducted by Jefferies, Smilek, Eich, and Enns (2008). They explored the emotion-attention connection by inducing a broad range of emotional states and testing for attentional accuracy. They found sadness to produce the highest levels of performance and anxiety to the lowest levels. All differences were found on the peripheral target. Emotional valence made no differences on central target. Heightened attention when sad can lead to better memory and therefore enhanced recollection capabilities. In addition, emotional events are generally being processed at deeper levels than are neutral ones, thereby increasing the memorability of emotional stimuli (Ochsner, 2000). These factors can lead to improved memory when sad. In the present study, control for total words was possible. This analyse weakened the correlation between total correct units of information and sadness. It is therefore more likely that emotional expressiveness underlies the observed association between sadness and memory enhancement.

Scoring high on verbal cooperation correlated negatively with symptoms at time 1: the more verbally cooperative, the less reported symptoms at time 1. Parents that are verbally cooperative report that they keep calm in order to avoid upsetting their child and are therefore highly able to suppress their own feelings when that is needed. They might be better on hiding their emotions and therefore be less likely to report them to a complete stranger or they could be lower on emotional expressiveness and therefore report fewer problem.

#### 4.4 Acute versus Planned Removals

Several predictions were made in relation to potential differences between acute and planned removals. Specifically it was predicted that central information from the acute removals would be better remembered than the same type of information from the planned removals due to the unexpected and sudden elements that holds the

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potential for being more traumatic. Acute removals would also result in more symptoms at the Time 1 interview, than would planned removals.

#### *Acute versus Planned Removals and Memory*

When looking at the effect on memory, the only significant finding was for proportion of correct units in response to direct questions; 81 % of the units of information were correct after planned removals, whereas only 45 % of the units of information being correct after acute removals. A non-significant trend in the material suggested a reverse effect on open ended questions. As discussed earlier, direct questions in this interview could tap into more specific and peripheral information that would not be sufficiently encoded during removal in the more stressing (acute) removals (eg., Christianson and Loftus, 1991).

#### *Acute versus Planned Removals and Sum of Symptoms*

Acute versus planned removals yielded no significant finding in the sum of symptoms at time 1, but the results show a clear tendency when comparing the two means for planned and acute removals;  $\bar{M}$  = 5.75 for acute;  $\bar{M}$  = 3.00 for planned, with a probability of .16 it is likely that a significant finding would be found when the sample size increases.

Even though no significant findings on sum of symptoms were found, the different categories of symptoms were investigated. A rather complex pattern was found as acute versus planned removal predicted different symptoms in the period after the removal. For acute removals the parents reported words describing shock and panic, but none of them reported more vague feeling about it being difficult. The reverse pattern was shown for planned removals. Parents in the planned removals reported the removal situation being difficult and hard, but none of them reported any word in the shock category. Both groups of parents reported on feelings of anxiety, but surprisingly significantly more parents in the planned removals reported themes of anxiety. To see what these findings mean it is necessary to go back to the categories and see what they consist of. The difficult category consists of words such as “difficult” and “heavy” – vaguer terms of not feeling very well. The shock category

consists of words such as “crisis”, “hell”, and “trauma”; stronger words that express intense emotions. The anxiety category consists of descriptions such as “fear”, “worry”, and “restlessness”. The interpretations can take two different directions here. Either the measurement is skewed, the categories artificial, or it could be that the parents that have been through an acute removal still struggle with the feeling of shock at the time of T1. After the planned removals the parents are most probably not shocked because they have known about the decision for a long time and worrying about getting their child back is more prominent than for the acute group. Comparisons with the interviews at time 2 will yield some answers to these hypotheses.

## 4.5 Caveats and Limitations

This study is conducted with a small sample and this influences the power of the tests in a negative way. Non-significant results can be due to insufficient power (Stevens, 1996), causing type II errors. Significant results could be due to high sensitivity for effects. In order to provide an accurate and reliable indicator of the strength of the relationship between two variables there should be as wide a range of scores on each of the two variables as possible (Pallant, 2005), but in extreme groups and smaller samples this is difficult to obtain. When this is the case caution should be taken considering the generalizability of the findings.

Question 62 yields some measurement issues, most of them are mentioned in the discussion above. The fact that it is a self-report measure that leaves it up to the participant to mention the quantity and quality of words describing how they are feeling, may lead to measurement issues due to the high variability. The design in the main study has focus on the children and therefore no concrete measures on the parents' functioning or well-being is included, to get precise measures on how the parents are doing it will be necessary to incorporate tests and/or clinical assessments to estimate the relevant functioning.

The difference between correlation and causality are important to keep in mind. Other underlying factors such as extroversion or expressiveness can explain the significant findings of displayed emotions or arousal during the removal, and reporting of memories and symptoms after the removal. Correlations are preliminary analyses in the way that they do not say anything about causations and therefore further analyses are needed. In this study the more complex analyses such as regression yielded few significant findings due to the small sample, but as more cases add to the existing body of data, more conclusions can be drawn.

A possible bias in using interview as a method is self representation. Some participants will strive to present themselves in a positive way, a phenomenon called social desirability (Schwarz & Strack, 1991). Especially samples such as the present one, in which the parents often have a desire to present a favourable image in order to prove that they are good care givers. As an interviewer it is important to state the fact that this study is not in any way related to the CPS is important to minimize this effect. Participants can also try to interpret the interviewer and what type of information that is desired, this can lead to biases in the material. The interviewer minimizes these effects as much as possible by stressing that there are no wrong answers and that the questions are about personal experiences before the interview begins.

## 4.6 Conclusion and Future Directions

Variables that could influence memory would be interesting to investigate further. One such variable is attachment. Different styles of attachment has well-known effects on memory (e.g., Cerdón et al., 2004). For example Edelstein and colleagues (2005) found that avoidant attachment styles lead to defensive exclusion of emotional information and thereby impaired memory for the information. The removal situation represent a little investigated but highly attachment-relevant situations and it is likely that the attachment research can lead to improved understanding of how this situation is perceived and remembered.

For the future it would be important to look at the material from the entire study holistically. It would be interesting to compare the children and their parents memory reports to see how the emotional reactions and the level of parental arousal potentially affected the outcome. Parent's reactions after the removal could also be compared to visitation reports to study how the parents' functioning affected the children during and after the visitations. Placements conducted by the CPS are extremely life altering for the people involved and more knowledge should be generated in this field to make the process as humane as possible – for both children and adults.

More studies on *how to help* and *who to help* these parents should also be conducted. As it is today problems are associated with connecting the service of helping the parents to the same service that control parenting issues and that remove children from biological parents - a double role which may be difficult for both caseworkers and parents to understand and execute.

#### *Conclusions According to Hypotheses*

This sample is too small to generalize beyond probable tendencies, but a few of the findings are highly significant and worth replications or analyses with more cases.

Significant findings of the effect of arousal on memory confirmed theory in the field of memory for emotional events; higher degree of arousal led to weakened memory on peripheral or specific questions, while answers on open ended questions yielded a high degree of correct units of information.

Emotional valence seems to affect memory and symptoms after the removal differently from that of arousal alone. Fear, anger, sadness and verbal cooperation all seems to inflict different patterns of the memory of the removal. Future studies should focus on investigating these effects and utilizing them on how to help these parents.

Findings suggest that there are clear differences between acute and planned removals when it comes to both participants' recollection of the stressful event, and to how the



parents are feeling after the removal. After acute removals less peripheral information is retained and parents describe feelings related to shock. The parents that have been through a planned removal have a larger proportion of correct units of information and report on more diffuse struggles. Further investigations with larger samples are needed on this area to understand the potential traumatizing effect of acute removals and how this could be relieved.

As a concluding remark I would like to end this thesis by citing the Norwegian Association for Looked after Children (Ministry of Children and Equality, 2004-2005):

*“Many children have difficult experiences of guilt because they have left their parents behind and many think it is problematic to get help themselves when their parents don’t. Most studies show that these adolescents in one way or another return to their biological family so that any improvement in the parents’ life will also benefit the child.”*

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