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Original Article

Maternal Guilt

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Abstract: The recent emphasis on humans as cooperative breeders invites new research on human family dynamics. In this paper we look at maternal guilt as a consequence of conditional maternal investment. Solicited texts written by Finnish mothers with under school-aged children in 2007 ($n = 63$) described maternal emotions perceived as difficult and forbidden. Content analysis of guilt-inducing situations showed that guilt arose from diverging interest and negotiations between the mother and child (i.e., classic parent-offspring conflict). Also cultural expectations of extensive and perpetual high-quality maternal investment or the “motherhood myth” induced guilt in mothers. We argue that guilt plays an important role in maternal-investment regulation. Maternal guilt is predicted to vary with social and cultural context but also to show universal characteristics due to parent-offspring conflict and allomaternal manipulation. Results are preliminary and intended to stimulate research into the mechanisms, gender differences and cultural variations of guilt and other social emotions in human parenting.

Keywords: motherhood, guilt, cooperative breeding, motherhood myth, human parenting

Introduction

“Altogether /the mother/ was soft, melancholy, and submissive.” (Maksim Gorkii, 1916, *Mother*, ch. II).

“I doubt that genuine maternal feeling ever rids itself, even momentarily, of all hostile feeling.” (Colette, 1941/2000, p. 183).

“Being a mother is all about guilt.” (Finnish mother, 2007).

Every human being has been in the position of a child expecting care from a mother and preferring her to be as devoted as possible. Above, a quotation from the Russian author

and father Maksim Gorkii illustrates this perspective on motherhood, which in feminist critique and lay talk is often referred to as the “motherhood myth.” By contrast, only some of us become mothers and thus become the opposition in the mother-offspring conflict. In the second introductory quote, the female French author and mother Colette describes a more tension-ridden view of maternity. Third, a contemporary Finnish mother indicates that guilt plays a crucial role in determining the boundaries a mother has to draw between the diverging interests of the child and herself.

This article discusses the ultimate and proximate reasons for maternal guilt. We point to some lacunae in existing evolutionary research on motherhood and parenting and analyze guilt-inducing situations based on textual data from contemporary Finnish mothers.

Conditional maternal investment

Humans are cooperative breeders. Extensive maternal investment is almost always supplemented by allomaternal care from others, for instance fathers, grandparents, siblings, aunts, etc., as well as more distant kin and non-relatives. Cooperative breeding is a form of cooperation, but it also extends the range of parent-offspring conflict and of manipulation between various care providers. In species with exclusive maternal care, mothers have fewer strategies for successful childrearing (Hrdy, 2008, 2009; Russell and Lummaa, 2009).

The evolutionary framework in which both mothers’ and offspring’s psychology have developed is well summarized in the formula ‘mothers matter most’ (Campbell, 2002, p. 34). In all known human societies, biological mothers invest in children the most. Mothers are crucial for infant survival (Sear and Mace, 2008) and they continue to influence the reproductive success of their children into adulthood (Kaati, Bygren, and Edvinsson, 2002; Phillips et al., 2001), especially through grandmaternal care (Lahdenperä et al., 2004; Lummaa, 2007; Pavard, Koons, and Heyer, 2007).

While mothers matter most, they are rarely solely responsible for child rearing. Human motherhood is *conditional*, because due to our cooperative breeding system mothers may vary the amount of investment (Hrdy, 2009). Maternal investment would not be adaptive if mothers were not able to vary their investment according to changing circumstances. Not only do mothers decide whether or not to start investing in a newborn, they also make less dramatic decisions about how much and when to invest in a particular child. Environmental resources, offspring viability, the mother’s health and age, and available social support affect the mother’s investment decisions (Hrdy, 1999). One parameter continuously altering the amount of adaptive investment is the child’s age. As the child grows older and becomes more independent it is in the mother’s interest to start directing resources towards other means of attaining inclusive fitness (Trivers, 1985, p. 156). Parent-offspring conflict predicts that the child will often disagree with the mother about how much she should invest elsewhere (Trivers, 1974). Maternal emotions including love, attachment, anger and indifference work as investment regulators in this mother-offspring conflict (Hrdy, 1999, 2009; Campbell, 2007).

The evolutionary importance of maternal and grandmaternal care has been proposed as the ultimate explanation for several gender differences in behavior and emotions. Women on average, to a greater extent than men, avoid situations that may cause physical harm or risk their lives (Campbell, 2002, pp. 90-100). The ability to inhibit aggression and risk behavior is crucial in parenting, which may explain why it has evolved more strongly

in women (Björklund and Kipp, 1996). While men's response to stress is often to either "fight or flight," women are more predisposed to "tend and befriend," that is, to seek comfort and conciliation through intimate social relations (Taylor et al., 2000).

Guilt and parenting

Guilt is an interpersonal moral emotion that aims to repair or inhibit behavior that causes harm to others. It occurs in relationships in which the other's welfare is of interest to the actor, such as reciprocal relationships and kin relations. The distinction between guilt and shame is subtle and the words are used interchangeably in lay talk. Shame is a self-directed emotion in which the subject observes some aspect of his/herself from an external point of view. Guilt focuses on wrongful behavior and is connected to a concern for others and how they are affected by one's behavior. Empathy is a prerequisite for feeling guilt (Jones, Schratte, and Kugler, 2000; Tangney, 1998).

Guilt may serve to inhibit aggression, impulsive actions and neglect in parenting. If so, maternal guilt should be favored by selection to the extent that it reduces aggression and risk of abandonment and promotes adaptive maternal investment and offspring survival. There is evidence that girls and women experience both empathy and guilt to a higher degree than boys and men do (Hoffman, 2000; Kochanska et al., 2002; Korabik and McElwain, 2005; Preston and de Waal, 2002; Silfver and Helkama, 2007). There is, however, little if any research on guilt in the parenting context. Neither Campbell (2002) nor Hrdy (1999) mention guilt in motherhood in their seminal books on women's evolutionary psychology. Also other social emotions, such as, pride, anger and shame, have been little studied in the evolutionary psychology of parenting (Tangney and Fischer, 1995).

Offspring and allomaternal manipulation of mothers

Cooperative breeding and conditional maternal investment have shaped maternal psychology. They have probably also shaped the psychological dispositions of those affected by maternal care: children, as well as allomaternal care providers.

Conditional motherhood should yield counter strategies in offspring to ensure maternal investment. Yet there is scant research on parent-child interactions in the context of parent-offspring conflict and conditional mothering (but see Dickens et al., 2009; Szabo et al., 2008). Sarah Hrdy suggests that the tendency of infants to "be adorable," gain excess weight to signal viability, scream when left alone, and manipulate mothers into care and commitment are such strategies. Children appear to actively monitor their mothers more than their fathers in respect to general behavior (e.g., absences) and sexual behavior (e.g., potential new partners) (Hrdy, 1999, 2009). Also adult children compete with siblings for their parents' economic and care resources. Trying to make the mother feel guilty may be one tool in such manipulations.

Biparental care extends the scope of variations and negotiations in parent-offspring conflict (Parker et al., 2002). Humans have *facultative fatherhood*, meaning that the investment minimum is markedly lower for fathers than for mothers. Fathers in every known society have provided less childcare than mothers. Human family forms range from minimal or no paternal presence in matrilineal households to strong presence and dominance of fathers and/or his kin in patrilineal families (Flinn et al., 2008; Geary, 2008; Therborn, 2004). In preindustrial societies, fathers and paternal kin have been found to

have no or ambivalent impact on child survival and reproductive success (Gibson, 2008; Sear and Mace, 2008), but paternal investment improves offspring quality at least in developed societies (Nettle, 2008).

In contemporary Western societies, children live in monogamous nuclear families where the level of expected parental investment is high. High-quality parenting is a cultural norm that postulates abundant face-to-face interaction and pedagogical activities with the child as well as restrictions on child disciplining. Fathers are expected to invest almost as much as mothers. When biparental care is emphasized in this way, parents can be predicted to try to delegate care to one another. In a recent Dutch study, both mothers and fathers were indeed found to manipulate each other into caring more for the child in everyday social interactions (Szabo et al., 2008).

Care negotiations and manipulations can also take place on the cultural level. The *motherhood myth* is one cultural tool for manipulating mothers into excessive investment. This myth depicts mothers as universally present, nurturing and kind (Douglas and Michaels, 2004; Hare-Mustin and Broderick, 1979). Chimpanzees and other non-human mothers who provide exclusive maternal care conform to this image, but human mothers generally do not. The motherhood myth thus denies the conditional nature of maternal strategies and may induce guilt in real mothers who fail to meet its requirements. This myth of motherhood may serve the interests of men and other allomaternal-care providers. Especially fathers bear few costs of increased maternal investment while their offspring are likely to gain from it and they themselves are free to pursue other interests. By analogy, it is in the interests of mothers to manipulate fathers into more caretaking (e.g., by promoting cultural expectations of committed and caring fathers).

We have briefly outlined the possible effects of conditional maternal investment on maternal, child and allomaternal psychological dispositions. Guilt and other social emotions have been little studied in the context of parenting. Below, we use qualitative textual material to explore this uncharted territory.

Existing research indicates that women are more prone to feeling guilty than men and that this may be related to the evolutionary importance of mothering. Additionally, both children and fathers share an interest in promoting excessive maternal investment. The child does it as part of mother-offspring conflict and the father does it as part of biparental-care negotiations and manipulations. We predict that maternal guilt is a common feeling and related to parent-offspring conflict, possibly also to manipulations between mothers and other caretakers. Next, we analyze the role guilt plays in mother-child interactions.

Materials and Methods

The study uses self-solicited texts in which contemporary Finnish mothers with under school-aged children divulged their feelings of guilt. This type of qualitative material is helpful for describing how guilt is connected to other maternal emotions and to behavior. Qualitative research can falsify a hypothesis but not provide conclusive support for it. It describes “what” and “how” and provides suggestions for theory building and new hypotheses (Silverman, 2005).

Participants

The respondents' ages ranged from around 20 to 40 years. The socio-demographic

distribution was wide. There were respondents with high levels of education in executive positions but also unemployed mothers and mothers with no further education after comprehensive school. The material does not contain systematic information about social and demographic factors, although many women did specify their age, educational level or profession and the number and ages of their children.

Materials

The research data consists of 63 texts written by Finnish mothers with under school-aged children. The data was collected in 2007 by placing open invitations in family and women's magazines. The length of the contributions varied from a couple of sentences to three pages. The primary goal of this research material was to inform interpretations of "forbidden" maternal feelings in contemporary Finland for a Finnish popularized science book (Oulasmaa and Janhunen, 2008). Women were therefore invited to write freely about which emotions they themselves experienced as forbidden. The invitation to write further instructed: "Which emotions make you feel guilty or ashamed? Can you talk to anybody about them? Please describe actual situations..."

The research material is neither large nor representative and we have to rely on the respondents' own descriptions of what they have felt. Self-censorship probably occurred, for instance relating to corporal punishment. The strength of the material lies in the fact that it enabled mothers to write with detail about socially stigmatized emotions and behavior.

Social context of research

Contemporary Finnish mothers typically live in nuclear-family households with one or two adults and one to three children. In 2007, when the material was collected, the average age for becoming a mother was 29 and the fertility rate was 1.83 (Statistics Finland, 2009). Finland is among the world's wealthiest nations and has comparatively low poverty rates and a low degree of social stratification, due to taxation and redistributive social policies. A great majority (85%) of women participate in the labor force, usually working full time when they are not on parental leaves. Young men and women grow up with a sense of many options and entitlements, the idea that it is possible to "have it all," meaning both full-time wage work and several children of their own; the mean ideal number of children is 2.55 for young adults (Miettinen and Rotkirch, 2008, p. 30).

Current Finnish family policies give mothers a 6-month-maternity leave starting from about one month prior to expected date of delivery, and continuing until five months after giving birth. Fathers are entitled to 18 days of paternal leave. Either parent can use an additional five months of parental leave. In the vast majority of cases, the mother continues to stay home after the maternal leave. Policies try to encourage fathers to use more parental leaves. Thus fathers are entitled to an additional 12 days of paternal leave in case they take at least 12 days of the parental leave. Pregnancies and baby and toddler development are monitored by regular visits to the maternity- and child-welfare clinic, which provide free health care and vaccinations (Kela, 2009).

Finnish parents have a subjective right to municipal day care until the child goes to school. Additionally, parents may receive home allowance until the child is three years old if the child is not enrolled in municipal daycare. Parents also have the right to be on care leave from work until the child turns three, and to work part-time until the child turns ten years old (Kela, 2009).

Maternal Guilt

As a result of these family benefits, the absolute majority of Finnish mothers spend the first year at home with the baby, and about every second mother stays at home until the youngest child turns three. The handicap of these comparatively generous family policies is that mothers become isolated. Husbands continue to work full time and wives are left without adult company. Even if many parents live in the same area as their own parents, grandparents rarely contribute to childcare on a daily basis. The long, cold and dark Finnish winters and the restrained amount of neighborhood sociability create frequent situations in which a mother and her young children spend their days “trapped within four walls.” The lack of allomaternal help is likely to create negative emotions and distress in mothers of small children.

Cultural ideals promote extensive care by both biological parents. The amount and quality of parenting is believed to affect all aspects of child development. Corporal punishment of a child has been prohibited in Finnish legislation since 1984; parents have been sentenced in court for slapping their child. None of the respondents admit having resorted to serious physical abuse, although slapping was mentioned.

Obviously, no emotions are officially forbidden in Finland. Nevertheless, maternal anger, rage and violence are not typically connected with maternal behaviour. In recent decades, women’s magazines and health care professionals have encouraged discussion about the challenges of parenthood, especially post-partum depression. Maternal aggression, on the other hand, is rarely discussed (in contrast to paternal aggression). As one respondent put it:

I am probably not the only one who has almost suffocated in her anger, but never have I heard of any others. Negative emotions are not really discussed, only depression, but never rage and hatred towards the child (N10).

Procedure

The 63 texts were numbered in order of submission (the number is rendered after each quotation), coded in Atlas.ti program and analyzed with content analysis. Content analysis is a theory-driven form of qualitative analysis where texts are read systematically in order to identify, count and categorize themes, in our case guilt-inducing situations. All themes should fit into a category and the categories should be mutually exclusive (Weber, 1990). For this article, we revised all entries relating to guilt. We included all direct mentions of guilt and a few descriptions, which appeared to allude to guilt although the respondent used other expressions such as “feel bad” or “have a bad conscience.” We then analyzed the contexts in which guilt was mentioned and classified them into proximate reasons.

Results

The emotions reported by the 63 respondents showed large variation. One educated mother complained that it is forbidden to feel happy and satisfied with motherhood, while another revealed that she gave her autistic twins to foster care since she felt she was unable to feel anything for them. The most frequently mentioned feelings or emotional states were fatigue, love, rage, anger, aggression, and guilt (Table 1).

Table 1. List of emotions reported in material, most frequent mentions in bolded text.

Joy (16)	Anxiety (19)	Fatigue (70)
Happiness (30)	Concern (20)	Exhaustion (4)
Love (68)	Fear (23)	Loneliness (13)
Gratitude (5)	Anger (53)	Stress (13)
Pride (4)	Repulsion (10)	Despair (6)
Surprise (10)	Aggression (36)	Disappointment (7)
Empathy (3)	Sorrow (9)	Feeling of inadequacy (6)
Guilt (34)	Rage (65)	Forgiveness (18)
Shame (24)	Irritation (16)	Depression (28)

Of the negative emotions, anger, aggression and rage form the most frequently mentioned cluster, followed by guilt, shame and depression. We will next analyze the reasons mothers give for feeling guilty.

Proximate reasons for guilt

We found five proximate reasons for guilt in our material. Four reasons were related to situations of *mother-offspring conflict*. These situations were aggression, ‘exit’ or thoughts of ending investment, temporary absences, and preferential treatment of siblings. A fifth reason is related to high expectations of good mothering, what we call the *motherhood myth* (Table 2). As in Table 1, the total number of mentions in Table 2 exceeds the number of texts ($N=63$) since many texts reported more than one emotion and/or situation.

Table 2. Categories of proximate reasons for guilt in the material.

Type of Guilt Inducer	Subtype	n (N=63)
1. Aggression, actual or imagined	Nonphysical (shouting, calling names, being irritated, thoughts of abuse)	25
	Physical (squeezing hard, slapping, pushing)	8
	Suicidal and self-destructive thoughts	5
2. 'Exit'	Thoughts of leaving children	5
	Wishing child had not been born or was dead	7
3. Absence	Mental	3
	Physical	6
4. Preferential treatment	Favoring one child over the other	4
5. Motherhood myth	Not corresponding to own ideas of a good mother	14
	Not corresponding to other's ideas of a good mother	8

Below, we present these five reasons in detail.

1. Aggression

The most common depictions of guilt (25 mentions) were related to thoughts of aggression or actual aggression towards the child. The following two quotes describe verbal and physical aggression and the feelings of remorse and guilt that follow:

Yesterday was really terrible, in the end I called my daughter evil and bad, like the witch in Sleeping Beauty. One CANNOT say anything worse to a child. She has not yet recovered although I have apologized many times (Mother of two children, N52).

The one-year-old sometimes wants to be in my arms all evening. My husband is home from work and I finally try to get for instance some housework done. Then I get irritated over having to carry the child all the time. A few times I have picked up the baby in my arms and cursed at the same time, my grip has probably also been inappropriately tight (not that it hurt, though). After a few minutes I feel shame and self-loathing (Mother with 3-year-old and 1-year-old children, N43).

In these examples guilt appears reflexively after “bad” deeds, leading to excuses and reconciliation. In other examples mothers would contain their rage by counting to ten (or 100...) or by walking away from the difficult situation. The next quote illustrates how a mother strove to contain her rage by looking for something to throw safely:

The older begins to say, “Mummy, I want...” Guess what! I want something too! I want a moment of peace and quiet! I scream before she can finish her sentence. My rage pushes me into action and I look for something I could safely throw into the wall. I can’t find anything and so I lock myself into the bedroom (Mother of three children, N24).

One mother noted that although she is sure she can control herself, she still feels guilty for even thinking of hitting her child. In such cases, guilt has an inhibiting function. Thoughts of “bad” deeds are followed by guilt, leading to inhibiting actions (e.g., going to another room, hitting something else) and preventing aggression.

Several respondents wrote that they had started to understand how someone could hurt a child:

My own feelings scare me the most. The rage that possesses me is scary. And the fact that I treat a small child roughly is scary. I have often cried, when I think that I am a bad mother, or even the only mother in the world who treats her child like this. The feelings of self-loathing and guilt get huge proportions, when it is your own child. I am most afraid of hurting my child mentally and permanently (Mother of 3-year-old and 1-year-old children, N57).

This mother described how talking to other mothers has been the best support, since her husband did not take her fears seriously and she did not dare to mention her aggressive behavior at the child-welfare clinic.

2. “Exit”

After aggression, strong feelings of guilt were frequently mentioned in connection with visions of ending maternal investment, here summarized under the label “exit.” Self-destructive and suicidal thoughts were reported by five mothers. For example:

Nobody, not even my husband understood how tired I was. Having slept too little I thought that I couldn’t manage the responsibility of raising a child, being this unfit me. I never thought of hurting the child, only myself, so I would get some relief (N41).

The other way of ending the relation is by abandoning the child. This was seen by most mothers as the most forbidden thing – something that cannot even be imagined. For instance, several mothers mentioned the regret of having children as the worst thought of all:

Sometimes when I have been tired and irritated, I have regretted having had children. This may be the biggest and most shameful thought I have felt as a mother (Mother with two children, N27).

“I WANT MY LIFE BACK!” The scream ends up coming out as a sigh. I think of all the things I could do without my children. ... These thoughts make me feel guilty. If these wishes would come true, my children would be dead. The thought makes me cry. I want my life back, to be something else than a mother and at the same time I

want to be a mother – the best of mothers. The equation seems impossible (Mother with a 3-year-old child and 1-year-old twins, N24).

On the other hand, several mothers had had thoughts of abandoning children without feeling guilty. One even felt guilty because she did *not* feel guilty when she wrote she is unsuitable to be a mother. It is also interesting to note that the two mothers in our material who had permanently given their children into the care of others did not describe feeling guilty. Although guilt may have featured at some stage of the process of ending maternal investment, it was not among the forbidden feelings they chose to describe now, after the incident.

3. *Absence*

Third, feelings of guilt arose from maternal absences, whether imagined or real:

My child is soon 4 years old and once in a while I still have “forbidden feelings,” like “what if the child went to his granny’s this weekend so that mum could be on her own?” (N17).

After my divorce I have asked for help from the family clinic, but it is really difficult to admit having real problems. That I really don’t have the strength to be the mother of small children right now and would prefer doing something totally different. That I often escape my fears, loneliness, rage and fatigue to the pub and explain to myself, that since the kids are well taken care of by their granny I have the right to have some fun. Although I just fool myself, I can’t leave my problems behind in the bar, on the contrary sometimes I end up with some new ones. And in any case I have been separated from my children, in vain. Feelings of guilt, shame, being powerless (Single mother with two children, N45).

A few respondents felt guilt over being mentally absent, due to being intensely involved in work or studies, or because of marital problems, as in the following case:

You easily snap at your children if things aren’t alright with your spouse. This is followed by enormous guilt, but that’s just how it is. Although I try all I can, I can’t be sufficiently present for my children, if my mind is occupied by our couple relations (N53).

The quote above illustrates the demands of high-quality parenting – it is not enough to be physically present and provide adequate care, the mother should also be mentally preoccupied with her children.

4. *Preferential treatment*

Fourth, guilt in parent-offspring conflict arose from the difficulties of being alone with both a small baby and a toddler. This situation is very common, as most Finnish mothers have at least two children, and the birth interval is on average two years. Mothers typically described feeling more protective of the baby and getting angry with the older child:

When my youngest was less than one year old I became outraged in situations where my older would hit my younger and for instance push him down on his back just as the younger had managed to stand up (23-year-old mother of two, N7).

On some days, after difficult times, I have found myself thinking that I don't really LIKE that child, although I love him/her more than anything. These thoughts and feelings make me more ashamed than anything else, and I could never say them aloud (Mother of toddler and baby, N3; gender of older child not clear since Finnish language does not express gender in pronouns).

In one case, preferential treatment was related to the fact that the children had different fathers:

I am not able to love my children equally. Partly I think this is influenced by the relationship between us parents. The first child is the child of my ex-husband, whom I hate. The second child on the other hand unites me and my present spouse, the love of my life (Mother with two young children, N36).

Also preferences for the older child were mentioned a few times. For instance, one mother did not feel she had become properly attached to the baby and gave it too little attention.

5. Guilt from the motherhood myth

Finally, many mothers depicted guilt that was not linked to conflict situations but related to cultural expectations. More than every fifth mother referred to what we have defined as the motherhood myth. They had confronted expectations of being a good mother, whether their own or others'. The mothers felt they could not correspond to these high standards, such as loving unconditionally, never being angry or being constantly attentive:

I felt guilty for having negative feelings toward my child, and I was not the good mother I had set out to be (Mother who had her first child at 23 after an unplanned pregnancy, N11).

I felt guilty about everything. If the baby was satisfied lying on the play rug, I debated in my conscience whether it was suffering there alone etc. ... I wish somebody would have told me that the baby doesn't suffer even if I don't attend to it ALL the time (Mother of two children, in her early 30s, suffered post-partum depression, N61).

The latter mother quoted above explicitly criticizes prevailing cultural notions of mothering, leading her to believe that the baby would suffer if she did not provide it with exclusive attention.

Maternal guilt was often connected to strong expected or actual social disapproval. A mother should not be disappointed with motherhood or, even worse, the child. As the following mothers complained:

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I feel guilt and shame because I yell at my children and most of all because I haven't formed a proper emotional bond with my youngest ... One can't talk about these issues with one's own face and emotions. If you mention that you find your child irritating, you are seen as mentally ill or plain crazy, you are a bad mother who should never have had children since you can't take care of them or love them (29-year-old mother with 7-year-old, 5-year-old, and 9-month-old children, N60).

I really thought that I would die, because I had slept so little. ... I felt boundless desperation, shame, loneliness and disappointment at myself. I can't get my child to sleep, I'm a bad mother. I also felt guilty for having these feelings. I was supposed to become such a good and happy mother ... I never discussed these issues at the child-welfare clinic, I always said everything was fine. The clinic nurse was certainly the kind of person I could have talked to, but I could not reveal such things there, or say them aloud. At first my fatigue was not to be mentioned at home either or I became angry (27-year-old mother with higher education, a housewife and student with a 2-year-old child, N4).

Contrary to our predictions, mothers did not describe fathers or nurses encouraging them to do even more childcare. However, many mothers felt that their feelings of doubt, guilt and disappointment were ignored or underestimated by their partners or the nurses. They were also afraid of being stigmatized or condemned by them.

Summary of results

We asked Finnish women to describe the emotions they perceived as “forbidden.” The most frequently mentioned feelings in 63 texts were fatigue and love, followed by two clusters of negative emotions: rage, anger, aggression, and guilt, shame, and depression. As we predicted, guilt was among the most frequently mentioned feelings. Content analysis indicated that guilt arose in concrete situations of mother-offspring conflict, where it served to temper and moderate maternal feelings of anger, thoughts of leaving temporarily or for good and preferential treatment of siblings. In other words, guilt emerges reflexively after investment reducing thoughts and behavior. It appears to function as a crucial inhibitory mechanism in relation to aggression and abandonment. Guilt also arose in relation to high expectations of good motherhood. Both the mothers themselves and important others contributed to these high expectations and made it difficult to talk about failures to live up to them.

Discussion

Conditional motherhood means that emotionally, human mothers are equipped both for providing for the offspring and for denying care and delegating it to others. Positive emotions such as love and attachment evidently channel investment. Bursts of anger and indifference, on the other hand, signal that it is time to direct resources elsewhere. Finally, investment may also be increased by “negative” emotions such as guilt and shame, which inhibit or moderate anger and indifference.

Social emotions involved in parenting have been little studied from an evolutionary perspective. Our results suggest that commitment to a particular child can be promoted by

feelings of guilt when that child is neglected, mistreated, or less favored than a sibling.

Mental or physical aggression towards the child was the most frequently mentioned source of guilt in our material. In Western contemporary societies, mothers are generally thought of as not hostile or angry, even though mothers have in fact been found to be angrier than fathers in the family environment (Ross and Willigen, 1996). Guilt following aggression is enhanced in a society where slapping a child is prohibited by law, not to mention more serious child abuse. Cultural expectations due to the motherhood myth were the second most frequent source of guilt.

Other often mentioned guilt-inducing categories were thoughts or plans of abandoning the child, and feelings of not living up to the high expectations of the motherhood myth. By contrast, temporary maternal absences and preferential treatment of children received fewer mentions even if such behavior is fairly common. We can presume that many mothers are often away from their child or care more for the younger and needier child (McHale et al., 1995), without feeling especially guilty about it.

The unrealistically high demands of being a good mother among Finnish mothers may be due to the fact that few adults have hands-on experience of raising children prior to becoming parents themselves, and from the social isolation of many mothers with small children. Current parenting ideals stress high-quality parenting and time spent in face-to-face play and pedagogic activities. These factors contribute to the difference between expectations and actual motherhood our respondents so often described in our material. However, they do not explain the guilt associated with not meeting these expectations. Teenagers do not have hands-on experience of couple relationships before their first girlfriends and boyfriends, nor does the first relationship typically match cultural ideals, yet teenagers do not necessarily feel guilty about unfulfilled expectations.

An interesting question is therefore how much maternal guilt is subject to cultural variation. Proximate reasons for guilt probably vary significantly with cultural and social circumstances. Not all mothers will agree that “being a mother is all about guilt,” as one respondent claimed. For instance, journalist Lakshmi Chaudhry (2006, p. 93) describes US mothers as wrestling with anxiety and guilt, while Indian mothers who can rely on extended help feel more confident and relaxed about mothering. In cultures where physical punishment of children is not forbidden or stigmatizing, mothers might also not feel guilty of mere thoughts of hitting their child, as they did in the Finnish material.

However, cultural variation should have its limits. Take, for instance, the case of physical abuse. Although it can sometimes be adaptive for a mother to reduce or terminate investment, it is against the principle of kin selection for a mother to injure her closest kin. Even verbal punishment can induce stress and possible illness in children (Flinn, 2005, p. 74), and it is of course not in the child’s interest to be the object of aggression. Therefore guilt as a “child’s advocate” in maternal psychology may protect both the mother and the child against impulsive maternal aggression.

We have referred to idealization of high-investing mothers as the motherhood myth. The motherhood myth is not a “myth” in the sense of a set of false assumptions. Rather, it is a biased view that emphasizes maternal devotion but denies the existence of different maternal strategies, conditional maternal investment, and cooperative breeding arrangements. It presents an idealized view of mothers as exclusive caretakers who are universally present, nurturing and kind – not absent, selfish or aggressive. This view has prevailed and dominated Western science and popular psychology of motherhood for over

a century (Hrdy, 1999). The motherhood myth also supports the interests of some individuals more than others. Thus the tendency to idealize mothers can be predicted to vary with age and stage of life course. It can be expected to be weakest among mothers with small children, and stronger the more dependent one is on maternal care and also among fathers, not only because they never become mothers but as part of sexual conflict in biparental care.

Feminist scholars have conducted empirical studies on the motherhood myth. Hare-Mustin and Broderick (1979) measured attitudes towards women's reproductive choices, life goals, and ideal maternal behavior. Men and older people were expected to be more traditional and patriarchal and to accept the motherhood myth. Results showed, however, that not only men but also younger subjects were much more accepting of the motherhood myth than the older age group (p. 120). These results provide tentative support for our theoretical suggestion that the motherhood myth may be involved in both sexual conflict and parent-offspring conflict.

We believe that while cultural variation in the amount and proximate reasons for maternal guilt is to be expected, there will also be some universal ingredients promoting the motherhood myth and making mothers on average feel guilty more easily than fathers.

Limitations of the Study

Our data is relatively small and not representative of the Finnish population. Neither can it highlight the cultural and social variation probably affecting maternal guilt in different countries and social classes. The content analysis cannot provide detailed evidence of the psychological mechanisms involved and does not go beyond respondents' own descriptions of their experiences. Results are preliminary and further research into the specific mechanisms and cultural variation of guilt and other social emotions related to human parenting is needed.

Conclusion

Guilt plays an important role in the maternal-investment-regulating system. It promotes maternal investment in situations of mother-offspring conflict. Together with other social emotions, maternal guilt serves to inhibit or mitigate aggression, desertion and preferential treatment of children. Guilt is also involved in maternal and allomaternal cultural regulations of maternal investment. Maternal guilt is predicted to vary with social and cultural context but also to show universal characteristics due to mother-offspring conflict and allomaternal manipulation.

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References

Björklund, D. F., and Kipp, K. (1996). Parental investment theory and gender differences in Evolutionary Psychology – ISSN 1474-7049 – Volume 8(1). 2009.

- the evolution of inhibition mechanisms. *Psychological Bulletin*, 120, 163-188.
- Campbell, A. (2002). *A mind of her own: The evolutionary psychology of women*. Oxford: Oxford University Press.
- Campbell, A. (2007). Sex differences in aggression. In R. I. M. Dunbar and L. Barrett (Eds.), *The Oxford handbook of evolutionary psychology* (pp. 365-382). Oxford: Oxford University Press.
- Chaudhry, L. (2006). Next stop, motherland. In L. Leibovich (Ed.), *Maybe baby: 28 writers tell the truth about skepticism, infertility, baby lust, childlessness, ambivalence, and how they made the biggest decision of their lives* (pp. 92-99). New York: Harper.
- Colette (1941/2000). *The pure and the impure*. New York: New York Review Books.
- Dickens, M., Szabo, N., Dubas, J. S., and Lessells, C. M. (2009). Biparental care: Do offspring match begging to parental responsiveness? The Netherlands Organization for Scientific Research, Darwin week, September.
- Douglas, S. and Michaels. M. (2004). *The mommy myth: The idealization of motherhood and how it has undermined women*. New York: Free Press.
- Flinn, M. V. (2005). Culture and developmental plasticity: Evolution of the social brain. In R. L. Burgess and K. MacDonald (Eds.), *Evolutionary perspectives on human development* (2nd ed.) (pp. 73-98). London: Sage.
- Flinn, M. V., Quinland, R. J., Coe, K., and Ward, C. W. (2008). Evolution of the human family: Cooperative males, long social childhoods, smart mothers, and extended kin networks. In C. A. Salmon and T. K. Shackelford (Eds.), *Family relationships: An evolutionary perspective* (pp. 16-38). Oxford: Oxford University Press.
- Geary, D. C. (2008). The evolution of fatherhood. In C. A. Salmon and T. K. Shackelford (Eds.), *Family relationships: An evolutionary perspective* (pp. 115-144). Oxford: Oxford University Press.
- Gibson, M. (2008). Does investment in the sexes differ when fathers are absent? *Human Nature*, 19, 263-276.
- Gorkii, Maksim (1916). Mother. ebooks@Adelaide, University of Adelaide. Retrieved August 28, 2009, from <http://ebooks.adelaide.edu.au/g/gorky/maksim/g66m/>.
- Hare-Mustin, R. T., and Broderick, P. C. (1979). The myth of motherhood: A study of attitudes toward motherhood. *Psychology of Women Quarterly*, 4, 114-128.
- Hoffman, M. L. (2000). *Empathy and moral development: Implications for caring and justice*. New York: Cambridge University Press.
- Hrdy, S. B. (1999). *Mother nature. Natural selection and the female of the species*. London: Virago Press.
- Hrdy, S. B. (2008). Evolutionary context of human development: The cooperative breeding model. In C. A. Salmon and T. K. Shackelford (Eds.), *Family relationships: An evolutionary perspective* (pp. 39-68). Oxford: Oxford University Press.
- Hrdy, S. B. (2009). *Mothers and others: The evolutionary origins of mutual understanding*. Harvard: Harvard University Press.
- Jones, W. H., Schratter, A. K., and Kugler, K. (2000). The guilt inventory. *Psychological Reports*, 87, 1039-1042.
- Kaati, G. L., Bygren, O., and Edvinsson, S. (2002). Cardiovascular and diabetes mortality determined by nutrition during parents' and grandparents' slow growth period. *European Journal of Human Genetics*, 10, 682-688.
- Kela, The Social Insurance Institution of Finland (2009). Families.

- <http://www.kela.fi/in/internet/english.nsf>, accessed 12.12.2009.
- Kochanska, G., Gross, J. N., Lin, M., and Nichols, K. E. (2002). Guilt in young children: Development, determinants, and relations with a broader system of standards. *Child Development, 73*, 461-482.
- Korabik, K., and McElwain, A. K. (2005). Work-family guilt. In E. Kossek and M. Pitt-Catsouphes (Eds.), *Work and family encyclopedia*. Chestnut Hill, MA: Sloan Work and Family Research Network. Retrieved February 26, 2009, from http://wfnetwork.bc.edu/encyclopedia_entry.php?id=270&area=All.
- Lahdenperä, M., Lummaa, V., Helle, S., Tremblay, M., and Russell, A. (2004). Fitness benefits of prolonged post-reproductive lifespan in women. *Nature, 428*, 178–181.
- Lummaa, V. (2007). Life history theory, reproduction and longevity in humans. In R. M. I. Dunbar and L. Barrett (Eds.), *The Oxford handbook of evolutionary psychology* (pp. 397-414). Oxford: Oxford University Press.
- McHale, S. M., Crouter, A. C., McGuire, S. A., and Updegraff, K. A. (1995). Congruence between mothers' and fathers' differential treatment of siblings: Links with family relations and children's well-being. *Child Development, 66*, 116-128.
- Miettinen, A., and Rotkirch, A. (2008). *Milloin on lapsen aika? Lastenhankinnan ihanteet ja esteet*. Helsinki: Väestöliitto.
- Nettle, D. (2008). Why do some dads get more involved than others? Evidence from a large British cohort. *Evolution and Human Behavior, 29*, 416-23.
- Oulasmaa, M., and Janhunen, K. (2008). *Äidin kielletyt tunteet*. Helsinki: Väestöliitto.
- Pavard, S., Koons, D. N., and Heyer, E. (2007). The influence of maternal care in shaping human survival and fertility. *Evolution, 61*, 2801-2810.
- Parker, G. A., Royle, N. J., and Hartley, I. R. (2002). Intrafamilial conflict and parental investment: A synthesis. *Philosophical Transactions of the Royal Society in London B, 357*, 295-307.
- Phillips, D. I. W., Handelsman, D. J., Eriksson, J. G., Forssén, T., Osmond, C., and Barker, D. J. P. (2001). Prenatal growth and subsequent marital status: Longitudinal study. *British Medical Journal, 332*, 771.
- Preston, S. D., and de Waal, F. B. M. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences, 25*, 1-72.
- Ross, C. E., and van Willigen, M. (1996). Gender, parenthood and anger. *Journal of Marriage and the Family, 58*, 572-584.
- Russell, A. F., and Lummaa, V. (2009). Maternal effects in cooperative breeders: From hymenopterans to humans. *Philosophical Transactions of the Royal Society B, 364*, 1143-1167.
- Sear, R., and Mace, R. (2008). Who keeps children alive? A review of the effects of kin on child survival. *Evolution and Human Behavior, 29*, 1-18.
- Silfver, M., and Helkama, K. (2007). Empathy, guilt, and gender: A comparison of two measures of guilt. *Scandinavian Journal of Psychology, 48*, 239-246.
- Silverman, D. (2005). *Doing qualitative research* (2nd ed.). London: Sage.
- Statistics Finland (2009). Number of births increased. http://www.stat.fi/til/synt/2008/synt_2008_2009-04-22_tie_001_en.html, accessed 12.12.2009.

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- Szabo, N., Dubas, J. S., Karreman, A., Van Tujil, C., Dekovic, M., and Van Aken, M. A. G. (2008). Partner manipulation in childcare. Poster presented at the European Human Behaviour and Evolution Conference, Montpellier, 2-4.4.08.
- Tangney, J. P. (1998). How does guilt differ from shame? In J. Bybee (Ed.), *Guilt and children* (pp. 1-19). San Diego: Academic Press.
- Tangney, J. P., and Fischer, K. W. (Eds.) (1995). *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride*. New York: Guildford Press.
- Taylor, S. E., Klein, L. C., Lewis, B. P., Grunewald, T. L., Gurung, R. A. R., and Updegraff, J. A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review*, *107*, 441-429.
- Therborn, G. (2004). *Between sex and power: Family in the world, 1900-2000*. London: Routledge.
- Trivers, R. L. (1974). Parent-offspring conflict. *American Zoologist*, *14*, 249-264.
- Trivers, R. L. (1985). *Social evolution*. Menlo Park: Benjamin/Cummings.
- Weber, R. P. (1990). *Basic content analysis*. Newbury Park: Sage.