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From security to attachment: Mary Ainsworth's contribution to attachment theory

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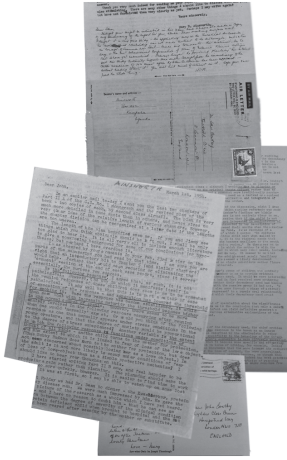


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APPENDIX

OF MONKEYS AND MEN: SPITZ AND HARLOW ON THE CONSEQUENCES OF MATERNAL DEPRIVATION

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ABSTRACT

In this contribution the reciprocal influence of Harlow and Spitz concerning the consequences of maternal deprivation of monkeys and men, respectively, is described. On the basis of recently disclosed correspondence between Harlow and Spitz, it is argued that not only was Spitz's work on hospitalism an inspiration for Harlow to start his cloth and wire surrogate work with rhesus monkeys, but at the same time, Harlow's work was a new impetus for Spitz's work on the sexual development of (deprived) infants. It is described how the two men first established personal contact in the early 1960s, after Harlow had published his first surrogate papers, how they became close friends subsequently, and inspired each other mutually.

INTRODUCTION

In the 1940s, René Spitz started publishing on the “hospitalization effect”. Spitz’s work had great influence on John Bowlby in the UK, and on Harry Harlow in the US. The ways in which Harlow and Bowlby and Spitz and Bowlby influenced each other have been previously described (Van der Horst & Van der Veer, 2008; Van der Horst, Leroy & Van der Veer, 2008), and the importance of Harlow and Spitz for Bowlby’s work is evident when we look at the numerous references to these men in Bowlby’s work - his trilogy on attachment and loss alone counts more than 30 references to Harlow and Spitz (Bowlby 1969/1982, 1973, 1980). Much less, however, is known about the reciprocal relationship between Harlow and Spitz.

The Hungaro-American psychoanalyst René Árpád Spitz (1887-1974) has become well-known for his writings about the dangers of institutional child care. He argued that prolonged separation of the child from his or her mother, in hospitals or foundling homes, for example, was very detrimental to the child’s physical and mental health and he was the first to film children to illustrate this view (Mason, 1967). Partially through these films, his ideas became very influential in the 1940s and 1950s (for an overview, see Van der Horst & Van der Veer, 2008, 2009a). In his early publications, he popularized such terms as ‘hospitalism’ and ‘anaclitic depression’ and drew attention to an underestimated problem which at that time few professionals and laymen had recognized as potentially harmful for the development of young children. In his later writings, Spitz developed a more general view of children’s emotional development and the origin of communication (Spitz, 1957, 1965).

The American psychologist Harry Frederick Harlow (1905-1981) already had a career behind him as an experimental psychologist—examining the formation of learning sets in monkeys (Harlow, 1949), for example—when he shifted his research focus to a study of the origins of love. This shift was the unintended outcome of Harlow wanting to rebuild a colony of rhesus monkeys after he lost a group of monkeys to tuberculosis. He wanted the new group to be in excellent health, so the baby monkeys were taken away from their mothers at birth for hygiene and nutritional reasons. Noticing that the young rhesus monkeys clung to the cloths covering the bottom of the cage, Harlow started experimenting in a laboratory setting and managed to show that rhesus babies prefer a ‘mother’ who provides comfort and warmth to a ‘mother’ who provides food—to the extent that such a choice is possible—and that babies who grow up without their mother develop pathological behavior. His article *The nature of love* (Harlow, 1958), in which he described his first findings, has justifiably become one of the classics of psychology’s history.

In this contribution, on the basis of the recently disclosed correspondence between Spitz and Harlow, we will take a closer look at the influence that these researchers had on each other’s work and thinking. First, we will give a description of Spitz’s contributions in

the field of deprivation up until Harlow's sensational 1958 paper. Then we will describe how Spitz and Harlow got acquainted and began corresponding about, among other things, the relevance of Harlow's empirical findings for Spitz's theory about the origin of child psychopathology in inadequate or absent mother-child interactions. It will be seen that Spitz and Harlow, despite the age difference, developed a productive relationship and became close intellectual friends.

SPITZ'S WORK ON DEPRIVATION OF YOUNG CHILDREN

Spitz (1945a, 1945b, 1946) was not the first to point out the dangers of institutional childcare and extreme isolation (Van der Horst & Van der Veer, 2009a), nor did he coin the term 'hospitalism' (cf. Chapin, 1915a, 1915b). However, particularly in the United States, Spitz's papers quickly gained popularity, possibly because he compared the effects of different forms of institutional childcare and conceptualized them in psychoanalytic terms. In his first articles, Spitz claimed that institutional infants younger than one year old had never been the subject of empirical investigation because of methodological difficulties. However, with the help of the Hetzer-Wolf baby tests and careful, repeated observation, Spitz thought he could gather reliable data. Comparing infants in a foundling home with infants living with their convicted mothers (young prostitutes) in a penal nursery, he found that the infants in the foundling home did much worse. The infants in the foundling home were frequently ill, obtained increasingly low Developmental Quotient (DQ) scores based on the Hetzer-Wolf baby tests, and showed hardly any signs of locomotion. According to Spitz (1945a), the deterioration process set off when the infants were weaned—until the third month they were breastfed by wet nurses—and contact with persons was reduced to a minimum. The infants in the penal nursery, on the contrary, thrived and had good or excellent DQ scores. Spitz acknowledged that the physical circumstances in the foundling home were worse than in the nursery. For example, foundlings had hardly any toys, could only see the ceiling from their cots, from which they were never moved, and shared a nurse with seven other infants, but Spitz felt that much more crucial was the fact that the foundlings' "perceptual world was emptied of human partners" (*ibid.*, p. 68). The infants in the nursery, on the contrary, had their mothers taking full-time care of them. These mothers, unable "to sublimate their sexual drives," lavished love on their babies, who had become a "phallic substitute" to them (*ibid.*, pp. 64-65). Thus, Spitz concluded that it was the destructive effect of the separation from their mothers that caused the foundlings to go to pieces and not the lack of sensory stimulation, and he already feared the effects "caused by the increase of female labor" (*ibid.*, p. 72). In a follow-up article, Spitz (1945b) related that after his initial investigation, a collaborator had continued to visit the foundling home for several years and had noted its disastrous long-term effects. Of the original sample, one-third had already died. Those children of the sample who were still in the foundling home were severely retarded. Although they were between two and four years old, just half of them could eat with a spoon, only one child was able to speak whole

sentences, and all children were small and thin for their age. Spitz noted that, although after 15 months of relative isolation the children were placed in a common room, this did not help them, and he ventured that damage done in the first year could never be repaired (Spitz, 1945b, p. 116). Again, he made a comparison with the children in the nursery, who “ran lustily around” and “played lively social games” (ibid., p. 116). All in all, these first two papers created the impression that infants need their mothers to take care of them and that without care by the mothers, or their substitute, they suffer irreparable damage.

In his next paper, Spitz (1946) described a quasi experimental manipulation that supported his viewpoint. According to his account, a number of children who previously had been happy in the penal nursery suddenly developed symptoms very similar to those of what in adults is called a depression. They showed sad faces, loss of appetite, insomnia and a “weepy behavior that was in marked contrast to their previously happy and outgoing behavior” (ibid., p. 313). After some time, the weepiness gave way to withdrawal and, in some cases, autoerotic activity. It proved increasingly difficult to make contact with the withdrawn infants and, if the adult succeeded in breaking through the child’s apathy, it was hard to leave the child again as he or she would desperately cling to the adult. Spitz (1946, p. 320) noted that the syndrome was “extremely similar” to what had been described by Abraham and Freud as mourning, pathological mourning, and melancholia. Retrospectively, in Spitz’s account one can recognize elements of the first two stages from the sequence of protest, despair, and denial described by Robertson and Bowlby in the late 1940s and early 1950s (Van der Horst & Van der Veer, 2009b).

As Spitz revealed after his description of the symptoms, in all cases they followed a prolonged absence of the mother, i.e., up to four months. Reunion with the mother ensured a quick recovery of the child. All symptoms disappeared and Spitz (1946, p. 330) measured a spectacular rise in DQ within 12 hours. He, consequently, felt justified to conclude that the syndrome was caused by the absence of the “love object for an appreciable period of time during their first year of life” (ibid., p. 320) and that reunion with the mother led to its rapid disappearance. In other words, at this age prolonged separation from the mother should be avoided and, if at all necessary, care should be taken to provide a good substitute mother (ibid., p. 335).

From a methodological viewpoint, Spitz’s papers left much to be desired. Pinneau (1955a, 1955b; cf. Spitz, 1955) carefully analyzed Spitz’s papers and showed a large number of inaccuracies, errors, and inconsistencies. It is probably safest to take all numbers provided by Spitz with a pinch of salt. Also, on the basis of Spitz’s account of the data it is hazardous to draw any causal inferences. Finally, the analysis of behavioral symptoms in terms of oral biting, anal-sadistic manifestations, libidinal cathaxis, and so on, was not very appealing to non-psychoanalysts. However, Spitz’s clinical description of a lonely and

possibly depressed infant was excellent and his subsequent silent film *Grief: A peril in infancy* (Spitz & Wolf, 1947) proved utterly convincing.

THE UPS AND DOWNS OF JANE

In his film, Spitz explained that infants who are left by their mother feel like “a school child suddenly orphaned of both parents, dumped on another continent, in an alien environment where nobody speaks its language and customs and food are foreign.” Next, the film showed baby Jane in her crib, who seemed happy and willing to interact with a strange person (i.e., Spitz himself). The text explained that Jane’s mother was “suddenly forced to leave the baby in the care of strangers”² and the film subsequently showed images of a very unhappy Jane who was crying and didn’t want to interact with strange persons. It was explained that this behavior lasted for the full three months of her mother’s absence. By the end of the film, Spitz stated that reunion with the mother could undo the sadness within a few days and the film showed images of a very happy Jane again.

The images of Jane were clear enough, but they were followed by footage of babies who were in a much sadder state. Spitz explained that, if separation would last much longer than three months, the child would assume a “frozen, passive, apathetic attitude” and contact with such children would become “impossible.” The film then showed six infants from “a foundling home,” who displayed clear signs of pathology. The infants showed an empty gaze, made strange finger movements, rocked their bodies, shook their heads rhythmically, paid no attention to adults, and so on. Spitz made it very clear how the audience had to interpret the silent images. According to the explanatory text plates of the film, adequate physical care was not the issue: all foundlings grew up in an “institution, where excellent hygiene, ample medical attention and varied food in adequate quantity was offered the children.” What the infants needed, according to Spitz, was motherly love, because

it is the emotional climate created by the mother which enables the child’s mind to develop normally. Where this emotional climate is lacking, the baby’s mind cannot develop properly. If it grows up it may become mentally impaired, asocial, criminal, or insane. Where the emotional climate is good it will produce happy, active, intelligent children. (Spitz & Wolf, 1947, film text)

It was a simple and powerful message that must have convinced many people of the dangers of both short-term and long-term separation from the mother or mother substitute. Children who are left by their mother for a short period become unhappy and depressed.

² It is likely that Jane belonged to the infants who lived with their mothers in the penal nursery. One may wonder how ‘sudden’ her mother’s mysterious forced absence was, given that Spitz and his team were in time to film Jane before her mother left.

Children who grow up without a mother figure run the risk of becoming permanently emotionally damaged. Hence, institutional care is dangerous for children and, ultimately, for society, for it produces adults who will display asocial behavior and, perhaps, commit criminal acts.

IMPACT OF SPITZ'S EARLY PAPERS AND FILMS

There seems little doubt that Spitz's articles and films³ fueled the debate in the United States about the possible dangers of institutional childcare. In that respect, they fulfilled the same function as Bowlby's and Robertson's papers and films in the United Kingdom (Van der Horst & Van der Veer, 2009a, 2009b). In an interview, Bowlby expressed his conviction that Spitz's role in the US was very prominent:

I may have said this before—I think one can't place too much emphasis on the importance of geography. You know, traditions which are immensely important in the States are of no consequence over here; traditions which are immensely important over here are of no consequence in the States. And it's fair to say as regards maternal deprivation and all that sort of thing, in this country it's associated with my name and in the States it's associated mostly with Spitz's name. (Smuts, 1977, pp. 25-26)

Bowlby himself knew Spitz's writings quite well. Bowlby had consulted Spitz personally in March 1950 while traveling to the US for his WHO assignment, and in his concluding report he discussed Spitz's work—as well as the work of, for example, Bakwin and Goldfarb—as the latest word on the effects of deprivation on infants (Van der Horst, 2011). Spitz's 'direct observations', as Bowlby labeled them, led Bowlby to conclude that "the evidence is now such that it leaves no room for doubt... that the prolonged deprivation of the young child of maternal care may have grave and far-reaching effects on his character and so on the whole of his future life" (Bowlby, 1952, p. 46). So, arguably, through the WHO report, Spitz's work had an effect outside the US as well and directly influenced Bowlby's thinking. Also, Spitz's cinematic presentation of Jane was remarkably similar to that of the later little Laura in Robertson's (1952) film *A two-year-old goes to hospital*.

Spitz's belief that children separated from their mothers, or maltreated by their mothers, would grow up "mentally impaired, asocial, criminal, or insane" was also widely accepted in the 1930s and 1940s. Bowlby's (1944, 1946) early empirical study on the origins of juvenile delinquency essentially shared the same view. The leading expert in investigating the psychological causes of delinquency, Cyril Burt, professed the idea that the causes of delinquency often lie in the family and argued that it was the parents,

³ After "Grief: A peril in infancy" Spitz produced two more films on the subject of maternal deprivation: *Somatic Consequences of Emotional Starvation in Infants* (1948) and *Psychogenic diseases in infancy: An attempt at their classification* (1952) Both proved less influential, possibly because to a large extent they showed the same sequences as the 1947 film.

more than the children, who required treatment (e.g., Burt, 1925). The Child Guidance Clinics in both the UK and the US used a multidisciplinary approach and explicitly looked at parental attitudes and actions as factors potentially contributing to children's 'difficult' or criminal behavior (Van der Horst, 2011; Van der Horst & Van der Veer, 2010). Thus, one may conclude that Spitz's observations and findings confirmed an explanatory model that was supported by leading experts, such as Burt and Bowlby, and lay at the basis of much clinical work.

MONKEYS AND SEX: WHY WIRE MOTHERS WILL NOT DO

In 1949, Spitz and Wolf published a sequel to Spitz's first two papers on the hospitalism syndrome that was somewhat peculiar. It now turned out that not all was well in the penal nursery and that many children were not 'running lustily around' and 'playing lively social games' but, on the contrary, showed signs of severe pathology. The authors reported that they had observed 170 infants up to 15 months old in the penal nursery for four hours per week during one year. As psychoanalysts, they were interested in what they called 'autoerotic activities', which included rocking, genital play, and fecal games. Genital play and fecal games were rarely observed however, which left rocking as the main autoerotic activity. This was observed in some 100 infants.

But why did some infants rock while others did not? The authors preferred to focus on the infants' mothers as the distinguishing factor, and decided to compare the nursery infants' behavior with that of infants living in private homes and in a foundling home. Spitz and Wolf found that 16 of 17 infants from private homes and only 1 of 61 foundlings manifested genital play, which suggested that autoerotic behavior co-varies with "the patterns of emotional relations between mother and child" and that a satisfactory mother-child interaction is necessary for autoerotism to occur (Spitz & Wolf, 1949, p. 97). What about the mother-child interaction in the penal nursery? They explained that the mothers had been penalized for motherhood and separated from their partners. So, as distinct from normal mothers, the nursery mothers possibly blamed their infants for being in the penal institution and for not having sexual partners on whom to discharge their libidinal and aggressive drives in healthy sexual activity (*ibid.*, p. 98). This led the mothers in the penal nursery to show both hostility and overprotection, often in alternation, which was highly damaging to their infants. Thus, rocking was caused by inconsistent and ambivalent mothers who became so unpredictable for the child as to preclude a normal mother-child relationship. Why normal, close mother-child relationships lead to genital play in infants remained unclear (Spitz and Wolf, *ibid.*, pp. 102-103).

However, from the clinical perspective, we may conclude that Spitz and Wolf provided a picture of ambivalent motherhood and its alleged effects on what was called autoerotic behavior. Much later, attachment researchers would put the investigation of

ambivalent mother behavior on more solid ground and investigate its general effects on the child's development, for example in the work of Mary Ainsworth and colleagues (Ainsworth et al., 1978).

In 1962 Spitz published a paper in which he re-examined his earlier findings on autoerotism in light of Harlow's findings in, amongst other studies, the *Nature of love* (1958) and attempted to draw some conclusions as to this phenomenon in normal development. After a brief summary of his 1949 paper with Wolf, he observed that Harlow's rhesus monkeys showed deviant sexual behavior, which was "strikingly parallel" (Spitz, 1962, p. 286) to his own published and unpublished findings about human infants. Referring to various manuscripts and published papers by Harlow (1959, 1960a, 1960b, 1960c, 1960d, 1960e, 1962) and his own findings, Spitz (1962) argued that he could now "throw additional light on the problems surrounding masturbation and its role in the development of man" (p. 286). What followed was an account of Harlow's experiments with wire surrogates and the inability of rhesus babies thus raised to achieve normal sexual behavior as adults. Spitz then argued that Harlow's findings, in a way, complemented his own and that, perhaps, non-autoerotic human foundlings grow up to become sexual failures as well. The fact that Harlow never mentioned masturbation suggested to him that in surrogate-raised monkeys it was not very prevalent either (*ibid.*, pp. 290-291). The problem then became: what is it in a normal mother's behavior that promotes early autoerotic behavior in her child and why is early autoerotic activity important? Here Spitz developed an interesting hypothesis about the need for reciprocity in the mother-child relationship. In contradistinction to a surrogate wire mother, a real mother offers comfort, warmth, and body contact but also frustrates her infant regularly because she has other things to do or disapproves of the child's actions (*ibid.*, pp. 293-294).⁴ This enables the infant to overcome its narcissistic tendencies and to develop the distinction between self and non-self, between ego and id, and to create a superego. In other words, mother-child conflicts are essential for normal child development to occur and unrestricted gratification probably hinders personality development (*ibid.*, pp. 299-300). Spitz admitted that he still did not understand why motherless infants display no autoerotic activity—"where in this picture the implementation of the sexual drive starts, is something we can only guess"—but suggested that it had something to do with licking and grooming (*ibid.*, p. 294). He was convinced, however, that mild frustration of the sexual drive was benevolent for personality development. The absence of such a drive thus precluded normal development and Spitz submitted that genital behavior was both an indicator of preceding object relations and a predictor of future personality (*ibid.*, p. 300). As a

⁴ Referring to Harlow's experiments with two wire mother-raised monkeys in the same cage, who would cling together but end up as helpless in the sexual domain as single wire mother-raised monkeys, Spitz (1962, pp. 292-293) speculated that there is something special about the mother-child relationship which distinguishes it from a relationship with peers.

consequence he advised to both accept masturbation as part of normal child development and to restrict it.

Spitz's article was full of wild speculations and/or psychoanalytic reasoning and he had no sound data to go by. He knew nothing of the early erotic behavior of Harlow's wire mother-raised monkeys, nor of the adult sexual behavior of human children raised in foundling homes. But the allegedly absent autoerotic behavior in foundlings and the inability to mate in adult wire mother-raised rhesus monkeys were grist to his psychoanalytic mill and he showed no hesitation in positing that the animal and human data could complement each other. However, his idea that a mother-child relationship requires reciprocity, i.e., that a good mother provides both warmth and comfort and frustration was interesting. Also, his guess that mother-child relations are qualitatively different from peer relationships proved valid (cf. Suomi, Van der Horst & Van der Veer, 2008; Suomi, personal communication, September 27, 2006).

SPITZ AND HARLOW MEET

The fact that the inveterate psychoanalyst Spitz referred to the experimental psychologist Harlow may seem odd but, in fact, after a brief meeting with Harlow at a symposium of the American Association for the Advancement of Science on the Expression of Emotions in Animal and Man in New York on December 29-30, 1960 and the reading of a popular article on his work in the *New York Times Magazine* (Engel, 1961), Spitz had taken great interest in Harlow's investigations (Spitz in a letter to Harlow, dated February 13, 1961). Harlow's findings may have been particularly welcome after Pinneau's (1955a, 1955b) severe criticism of the validity of Spitz's own studies (see above). As Spitz wrote to Harlow before he published his re-examination of autoerotism:

I am not sure whether you are aware of my work on emotionally deprived infants. If you are, you probably realize that your work comes as extraordinarily welcome confirmation of everything which I have found in the human infant, when placed in similar circumstances. That applies to the monkeys' asocial behavior, to their apathy, their strangely contorted position, their incapacity to play, or to form relationships. It interestingly also applies, though in somewhat modified form, to the surrogate-raised monkey's incapacity to breed. (Spitz in a letter to Harlow, dated February 13, 1961)

Spitz then told about his research on autoerotic behavior and once again wondered whether Harlow knew his work of the "last 16 years," which was devoted to identifying the origin of mental illness in young children.

In his reply, Harlow answered that he had at least "a general knowledge" of Spitz's work and that it formed one of his "strong motivations to attempt to attack this problem." Harlow too, he wrote, had time and again been "struck by the basic similarity

of our monkey ‘syndromes’ and the syndromes described by you for affectionally deprived human infants” (Harlow in a letter to Spitz, dated February 20, 1961). Several years later, in another letter, Harlow once more confirmed the importance of Spitz’s contributions for his own thinking:

[L]et me assure you that your research has been a great inspiration and that your friendship has been a relationship of great meaning. I have vast faith in the research area that you have established and I will do my very best to forward it. (Harlow in a letter to Spitz, dated January 22, 1963)

These statements seem to point to more than simple courtesy; they imply the acknowledgement by Harlow of a genuine influence of Spitz’s work on his own research. Others, such as Bowlby, were indeed convinced that Harlow was inspired by Spitz’s work (cf. Karen, 1994; Rudnitsky, 1997; Smuts, 1977; Zazzo, 1979). However, even though Harlow clearly appeared to be familiar with Spitz’s hospitalism during a discussion at the CIBA-symposium in 1961 (Foss, 1963), actual references to Spitz’s work in Harlow’s published papers appeared only much later. In the 1970s, he increasingly began referring to Spitz’s work, mainly to the 1946 paper *Anaclitic depression* (e.g., Suomi, Harlow & Domek, 1970; Harlow & McKinney, 1971; Harlow & Suomi, 1971; Harlow, Gluck & Suomi, 1972; Suomi & Harlow, 1972; Gluck, Harlow & Schiltz, 1973; Harlow, Plubell & Baysinger, 1973; Suomi, Collins & Harlow, 1973; Harlow & Novak, 1973; Harlow & Suomi, 1974). Other studies refer to Spitz’s 1945 paper *Hospitalism* (e.g. Gluck, Harlow & Schiltz, 1973) or to his 1950 paper “Anxiety in infancy” (e.g. Suomi, Collins & Harlow, 1973). Maybe this delay in referring to Spitz’s work finds its cause in the fact that Harlow’s initial isolation studies were motivated by studying learning in an uncontaminated environment, and only later, when John Bowlby had pointed out to Harlow that the isolated monkeys suffered from social and emotional problems, did Harlow start studying those aspects of isolation systematically (Suomi, Van der Horst & Van der Veer, 2008)

SCIENTIFIC INTERACTION AND MORE

Those first personal letters formed the beginning of a genuine intellectual friendship. The two researchers corresponded about scientific issues, exchanged mimeographed articles and drafts, and repeatedly met each other in the years that followed.

The topic of sexual behavior was, of course, crucial for Spitz and the first reason why he turned to Harlow. The latter confessed that they had made “only the barest beginning in this area—insofar as sexual behavior is concerned—and our experimental data are limited.” Harlow mentioned, however, that he was constructing an experimental setup to measure the sex behavior of all the wire mother-raised babies,

which he hoped would yield interesting data within three months or so (Harlow in letters to Spitz, dated February 20 and March 10, 1961).

The first opportunity to discuss these data in person was during Harlow's visit to the University of Colorado Medical School, where he was scheduled to speak on May 22-25, 1961. Spitz was stationed in Denver at that time, attended Harlow's talks, and talked to him in person (cf. Spitz in a letter to Harlow, dated July 15, 1961). Thus, after a brief personal meeting late 1960 and a couple of tentative letters, the stage was set for a more comprehensive exchange of ideas. Within a couple of months, the earlier formal salutations and closings had given way to informal ones (e.g., "Dear Harry, dear René") and the foundation had been laid for further cooperation and friendship.

Given the new friendly relationship between the two men, it comes as no surprise that Harlow informally updated Spitz on the latest, unpublished findings of his ongoing 'motherless mothers' project:

The oldest of the three babies of our 'motherless mothers' is now less than a month of age and the youngest a little more than a week. So there will be some time before formal publication, indeed, we don't yet have enough data to start drawing up graphs, but I will keep you up to date as the data come along and if you wish to cite these data as a personal communication, I would be delighted. The two oldest mothers have, for all practical purposes, have [sic] become completely indifferent to their babies, and an extremely interesting pattern has developed between the third mother and baby. All of the babies struggled desperately to obtain maternal contact, and the heroic efforts of the third baby were such that it has been able to make breast contact with the mother and we are hopeful it will survive without recourse to artificial feeding. From time to time we see the baby attached to one breast and the mother sucking from the other, and we have seen self-sucking in at least one other mother. During the time that the baby is attached to the breast, the mother shows some weak defensive reflexes against human beings and possibly some interest in the baby. However, when the baby attempts to make contact, the mother is just as likely to be violently abusive as to be acceptant. Thus, one may see the mother sitting down or hanging from the top of the cage by her feet and beating this baby with her hands—this is not very good maternal behavior—and this mother, which is the most acceptant is also the most cruel. Actually, some of the vicious behavior of the mother is so bad that it is hard for human observers to sit, watch, and take it.

We have every reason to think now that we can build a population of babies of motherless mothers since our cloth surrogate raised females—at least some of them—are willing to accept rape as a fact of life and one has learned to enjoy it. (Harlow in a letter to Spitz, July 20, 1961)

Harlow and Spitz now corresponded on a regular basis, exchanged manuscripts and films, and Spitz made every effort to invite Harlow to Switzerland, where he now lived, to give a presentation about his latest research. After failures to interest the psychoanalytic group in Zurich (with Jacques Berna and others), and an unsuccessful conversation with Jean Piaget (“...who will be completely unreachable, sitting somewhere lost in the mountains and writing”; Spitz in a letter to Harlow, dated June 24, 1964), Spitz finally managed to organize a meeting at Julian de Ajuriaguerra’s *Clinique de Bel-Air* (nowadays *Clinique de Belle-Idée*) in Geneva. With the help of Spitz, who served as his interpreter, Harlow there presented his research findings to an audience of psychoanalysts and neurologists. With his wife Peggy (Margaret), he also spent an evening with Spitz and judging by the correspondence (Spitz in a letter to Harlow, dated September 2, 1964; Harlow in a letter to Spitz, dated September 23, 1964), both the formal and informal part of the Harlows’ stay in Switzerland were a complete success.

Rather surprisingly, Harlow’s stay in Geneva and his friendship with Spitz had still other consequences. In one of his subsequent letters, Harlow mentioned to Spitz that his wife had

had time to go back and read some of Freud in the original. This has been a very illuminating experience for both of us. If one reads psychiatric literature without bias it is often an educational experience. I am sure this discovery causes you no surprise! (Harlow in a letter to Spitz, dated January 29, 1965)

Naturally, Spitz was extremely pleased that he made Harlow (or rather, his wife, Harlow himself read no foreign languages) read Freud’s original writings. In his reply, he wrote

I am delighted that I could have been instrumental in getting you and Peggy acquainted with Freud in the original. You have discovered that we psychiatrists and even we psychoanalysts are not as black as we are painted! And what is happening here is what I have worked at in the last 30-40 years, namely interdisciplinary communication between the branches of science occupied with mental functioning, that is, psychology, animal psychology, etiology, psychiatry, psycho-analysis, and so on and so forth. A major synthesis is bound to come about sooner or later. (Spitz in a letter to Harlow, dated February 2, 1965)

In hindsight, we can conclude that it would be Bowlby who, at least in the domain of theory, contributed most to this “major synthesis.” However, Spitz with his preference for empirical observation, filmed testimonies, and his interest in animal

research⁵ certainly made his contribution and in that quality seems to have been highly valued by Harlow.

Perhaps the greatest tribute that Harlow paid to Spitz was the fact that he published a chapter, co-authored with his wife, in the *Festschrift* that was published in honor of Spitz's 80th birthday (De Saussure & Spitz, 1967). In that chapter, Harlow argued—referring to publications by both Spitz and Bowlby—that the expression of fear and aggression in rhesus monkeys is abnormal in monkeys who have been separated from their mothers for longer periods during infancy. The letter in which Spitz thanked the Harlows for their “lovely gift” formed the end of their correspondence as we know it (Spitz in a letter to Harlow, March 13, 1967).

CONCLUSION

The fact that René Spitz and Harry Harlow each strongly inspired, and were inspired by John Bowlby is well-known (Van der Horst & Van der Veer, 2008; Van der Horst, Leroy & Van der Veer, 2008). In this contribution, however, we have looked at the reciprocal influence of Harlow and Spitz concerning the consequences of maternal deprivation of monkeys and men. The recently disclosed correspondence between Harlow and Spitz shows that from the early 1960s on the two researchers corresponded about scientific issues, exchanged publications, met repeatedly and developed a close intellectual friendship. In spite of their age difference and seemingly incompatible backgrounds (Spitz a psychoanalyst and Harlow an experimental psychologist) they clearly held each other in high regard. Apart from Harlow and Spitz inspiring each other, Harlow's empirical findings supported Spitz's theory about the origin of child psychopathology in inadequate or absent mother-child interactions, and Spitz's observational studies supported the “translation” of Harlow's findings from monkeys to men. Despite coming from totally different directions, they managed to reinforce each other in conveying the clear message that maternal deprivation can cause serious damage to the child involved.

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⁵ It is curious that Spitz in his list of disciplines contributing to the ‘major synthesis’ does not mention ethology, given that, according to Emde (1992, p. 355), Konrad Lorenz, the founder of ethology, belonged to his personal friends.