

John Bowlby and ethology: a study of cross-fertilization Horst, F.C.P. van der

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CHAPTER 2.

LONELINESS IN INFANCY: JOHN BOWLBY AND ISSUES OF SEPARATION

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Introduction

In attachment theory, John Bowlby attributed potentially harmful effects to separation of a child from its mother or mother-substitute. Bowlby stated that "young children, who for any reason are deprived of the continuous care and attention of a mother or a substitute-mother, are not only temporarily disturbed by such deprivation, but may in some cases suffer long-term effects which persist" (Bowlby, Ainsworth, Boston & Rosenbluth, 1956, p. 211) and that a "rupture leads to separation anxiety and grief and sets in train processes of mourning" (Bowlby, 1961b, p. 317). Bowlby's whole career was focused around the theme of separation and its consequences and he was fairly single-minded in that sense. The roots of Bowlby's interest in issues of separation have been extensively documented by Van Dijken (1997, 1998; cf. Van Dijken et al., 1998) and lie in his own early childhood and in clinical experiences when training as a psychoanalyst shortly before the Second World War.

Although the importance of different observations of the consequences of separation for Bowlby's thinking and for the development of attachment theory is selfevident, so far little attempt has been made to give a complete overview of the different studies on the effect of separation and deprivation that drew the attention of many in the 1940s and 1950s and to which Bowlby was exposed. This chapter is an attempt to do so. What exactly was known or believed about separation effects shortly before, during and after the Second World War, when Bowlby wrote his first letters to scientific journals and published his first articles? Here we may distinguish between findings from several different but interconnected areas. Attention will be paid to observations made during wartime evacuations and in residential nurseries, to the discussion concerning visiting of children in hospital, to results of clinical studies by the so-called 'English school' of psychoanalytically oriented psychiatrists and psychologists, and, finally, to results of studies on the 'hospitalization' effect. It will be argued that Bowlby met with and was heavily influenced by leading researchers in the field of psychology and psychiatry while working on his report for the World Health Organization (WHO). Finally, we will also take a closer look at films by Spitz (1947) and Robertson (1952, 1958c) that supported these new ideas on the effects of maternal deprivation and greatly influenced public opinion – at least in Britain.

From a discussion of these different 'issues of separation' it will become clear how, in the 1940s and 1950s, Bowlby gathered (retrospective) evidence for his views on the early mother-child relationship that would refute classic psychoanalytic views. Shortly before he first came across ethology in 1951, Bowlby (1951) summarized his findings on separation and deprivation in a report for the WHO. He eventually turned to the ethological perspective to explain his observations on the influence of early environment on the development of children.

Issues of separation: Evacuation of children

Sadly enough, the Second World War supplied psychologists and psychiatrists with many opportunities to observe the effects of parent-child separations. As early as 1924 a committee chaired by John Anderson started to lay out plans for the evacuation of children in case of aerial bombing by a 'belligerent' force. These evacuations were part of the so-called Air Raid Precautions (ARP) and were necessary because at that time there was no

efficient way of stopping air attacks. The official evacuations started on E-day, September 1, 1939 – the day of the German invasion of Poland and two days before the British declaration of war. Within days, 734.883 unaccompanied children were evacuated from the London area to the countryside (Editorial, 1940). Immediately, details of this operation and its effects on the children started to fill the editorial and correspondence columns of the leading medical journals – the *British Medical Journal* and *The Lancet*. On September 9, an editorial (1939a) hailed the "successful exodus" of the evacuated children. On November 1, a discussion in the House of Lords led to the conclusion that "the evacuated children were happy and were gaining in health. Very often the hosts, too, were happy" (Editorial, 1939b, p. 977).

Not everyone was satisfied though. General practitioners warned against the dangers (spreading of vermin, uncleanliness) and undesirable social effects (Carling, 1939; Evans, 1939; Prance, 1939; Thursfield, 1939). In reception areas, people felt that "the scum of the town ha[d] been poured into the clean countryside" (Keir, 1939, p. 745). Also, it soon turned out that from a psychological viewpoint the evacuation of children was not a complete success. Frequent bed-wetting and other nervous symptoms were often observed in evacuated children. Feelings of concern about the emotional well-being of the children were expressed. Rickman (1939, p. 1192), in a letter to *The Lancet*, expressed his doubts about the plan to separate a child from two to five from its mother, because "at a time when his need for security, and the comforting assurance of familiar faces, is great, his removal from his parents will tax him severely... [and] may show [itself] in unsatisfactory or unhappy social relationships later in life". In the *British Medical Journal* psychoanalysts Donald Winnicott, Emmanuel Miller, and John Bowlby protested against the evacuations for similar reasons:

It is quite possible for a child of any age to feel sad or upset at having to leave home, but... such an experience in the case of a little child can mean far more than the actual experience of sadness. It can in fact amount to an emotional 'black-out' and can easily lead to a severe disturbance of the development of the personality which may persist throughout life. [E]vacuation of small children without their mothers can lead to very serious and widespread psychological disorder. For instance, it can lead to a big increase in juvenile delinquency in the next decade. (Bowlby, Miller, & Winnicott, 1939, pp. 1202-1203)

Clearly, here Bowlby and his colleagues referred to Bowlby's (1944, 1946) early work on the 'forty-four juvenile thieves'. They may have somewhat overstated their case, but for many children the sudden evacuation was indeed traumatic (cf. Wolf, 1945, for an attempt to summarize the findings). Many years later, Wicks (1988) gathered the often moving memories of persons who spent part of their childhood as an evacuee.

Issues of separation: Observations in residential nurseries

While many children during the Second World War were billeted with private persons, others ended up in residential nurseries, for example, because they lost their parents in an air raid. The great authority in this area became Sigmund's daughter Anna Freud, who together with Dorothy Burlingham published various books on her experiences with young children in the

Hampstead Nurseries (Burlingham & Freud, 1942, 1944; cf. Freud, 1973). Their often moving accounts "describe the wholly admirable administration of a group of three nurseries (two residential and one for day children)" and include "– with an endearing lack of technical terms – an account of child development and psychopathology so simple and yet so profound that the unlearned in psychology and the experienced psychiatrist alike may read it with enjoyment and profit" (Editorial, 1942b). An example of such a moving account is their description of Dell, a little girl of two-and-a-half years old:

Dell was a beautiful little girl, ... sparkling with life and gaiety... Dell was taken to the nursery where she was deep in play after a few minutes. She said good-bye to her mother in a friendly way, but hardly noticed when her mother left her. Only half an hour [later]... Dell suddenly realized what had happened. She interrupted her play, rushed out of the nursery, and opened every single door... to look for her mother... This lasted a few minutes and then she rejoined the play group. These attacks of frantic search repeated themselves with ever greater frequency. Dell's expression changed, her brightness disappeared, her smile gave way to a... frown which changed the whole aspect of the child. (Freud, 1973, pp. 36-37)

In their studies, Burlingham and Freud posited that it is of the utmost importance for the child's personality formation and the development of consciousness to develop attachments with (substitute) adult persons. The logical people to play this role in the life of residential children are the grown-ups of the nursery. If these grown-ups remain remote and impersonal figures, or if they change so often that no permanent attachment can be formed, there is great danger that the children will show defects in their character development and inadequate adaptation to society, Burlingham and Freud (1944, pp. 105-6) argued. They concluded:

Residential Nurseries offer excellent opportunities for detailed and unbroken observation of child-development. If these opportunities were made use of widely, much valuable material about emotional and educational response at these early ages might be collected and applied to the upbringing of other children who are lucky enough to live under more normal circumstances. (Burlingham & Freud, 1944, p. 108)

To the editors of the *British Medical Journal* it was clear "that these [Hampstead] nurseries are run with an efficiency, devotion, and human understanding that should serve as a model for others, whether in time of peace or of war" (Editorial, 1942b). In subsequent years, Freud would repeatedly intervene in a debate concerning visits to children in hospital, warning against the psychological dangers of separations (cf. Editorial, 1944, 1949; Robertson, 1956). We will now turn to this debate.

Issues of separation: Visits to children in hospital

In January 1940, The Lancet published an editorial in which it was announced that Ayr County Hospital had decided to no longer admit visitors to its children's wards. The editor argued that the danger of infection indeed made forbidding access logical and added the then very common argument that parental visits only upset the child. He was sure that children quickly settle in the hospital and "cheerfully adopt the... staff in loco parentis" (Editorial, 1940, p. 179). It was not the children who needed parental visits, the editor argued, but the "over-anxious mother" (ibid.). However, parental stress could be alleviated by interviews with staff and an occasional peep when the child was asleep. The editor concluded his account by stating that in these matters sentiment was not a weighty enough argument. It was Bowlby (1940b) who first reacted to this editorial note. In a letter to the editor he argued that, although more research was needed, there was reason to assume that visiting was essential, especially for younger children. He suspected that non-visiting might lead to chronic delinquency in children and mentioned an antisocial boy of six and a pilfering girl of eight from his practice, both with a history of unvisited hospital stay. Referring to Rickman (1939), he suggested that the younger the child, the more visits are needed. Two weeks later, Edelston (1940), one of Bowlby's colleagues at the London Child Guidance Clinic, supported his argument and stated that, he too, had seen children in the Child Guidance Clinic who suffered from prolonged hospital stays (see below). Edelston added that children's quiet attitude may be deceptive, because they may repress their feelings until they come home. Edelston would several times intervene in debates in The Lancet about visiting times in children hospitals, stating the possible harmful effects of separation experiences but at the same time emphasizing that they are not inevitable (Edelston, 1941, 1946, 1953, 1955, 1958).

These letters by two child psychiatrists seem to have had no effect whatsoever on hospital practice. The majority of hospitals vehemently opposed (frequent) visiting by parents for a variety of reasons. Parents brought filthy germs into the wards and only upset their children, who would be crying for hours after they left causing the nursing staff much trouble. Parents only wished to visit their children for egocentric reasons; they were being over-anxious and neurotic. The children themselves certainly did not need the visits; they quickly felt at home in the hospital. Besides, even if a child was not happy - and some doctors and nurses admitted that these children existed – it was always better to have a sad child than a dead child. Taking the viewpoints of the parents, it was also suggested that many parents had no wish or time to visit their children, for example, because they had to travel a long time to the hospital, or there were other children to take care of. And who would make father's tea when he got home from work? (Herzog, 1958a, 1958b; Meadow, 1964; Schoo, 1954) Apparently, parents were seen as ignorant and noisy intruders who only criticized the staff and disturbed the quiet and disciplined course of events in the ward. Meanwhile, the parents themselves had few possibilities to change the existing situation. Even if they had been eloquent and knowledgeable enough and realized that something was awry, there was little that they could do to oppose the medical doctors who had allegedly introduced all those rules to the benefit of their child. In sum, the emotional problems of isolated children in hospital were not appreciated or considered serious enough. And even if the problems were acknowledged there were always weighty grounds to oppose any change of the existing regulations.



Figure 1. A child in hospital.

What many British people did not know at the time was that both in Britain and abroad other models of child care in hospital were being practiced with considerable success. In 1945, the readers of the British Medical Journal first heard of an experiment that had been going on for quite some time in New Zealand. In that year, Henry and Cecile Pickerill, plastic surgeons in Wellington, first described their new method of dealing with the dangers of cross-infection, a method they had already introduced in 1927. Over the next decade, the Pickerills would repeatedly discuss their approach in both the British Medical Journal and The Lancet, claiming its unprecedented success, and actively participate in the debate about child care (e.g., visiting regulations) in hospital (Pickerill, 1955a, 1955b; Pickerill & Pickerill, 1945, 1946, 1947, 1954, 1954a, 1954b, 1954c, 1954d). Other writers in these journals regularly referred to the Pickerills' approach and were obviously well acquainted with it. What was that approach? As the Pickerills (Pickerill & Pickerill, 1945) explained, they sought to create an environment where the child would be protected against the danger of cross-infection. To this goal, a separate surgical unit was built with accommodation for 12 mother-child pairs. For, contrary to other approaches, the Pickerills wished to isolate the infant or young child with its mother. The rationale of that idea was their

belief that "a baby is born with a certain degree of passive immunity to its mother's organisms, and that it acquires further immunity in the next few months... [and that it should be exposed] to no other organisms whatever". After surgery, the contact between the medical staff and the baby was minimal and mothers took care of the lion's share of the care of their children. Although the Pickerills stressed the importance of isolation (or rather insulation), they did mention other factors relevant for our account. In 1946, they expressed their opinion that mothers should be happy when taking care of their babies and not "reduced to a nervous wreck by an autocratic ward sister" (Pickerill & Pickerill, 1946). One year later, in their reaction to Spence's paper (see below), they added that "babies want constant attention and 'mothering'; to break the bond between mother and baby is to introduce an unnecessary hurdle into treatment" (Pickerill & Pickerill, 1947). From their articles and letters, it also transpires that they wished to create a healthy and happy environment for mothers and children with plenty of sunshine and good food. Later researchers, e.g. Mac Keith (1953), would dismiss the insulation idea as irrelevant and claim that it was the continuous presence of the mother that accounted for the success of their approach. However, it may have been exactly the 'unsentimental' aspect of their approach that made it acceptable in medical circles.

In May 1945, the readers of *The Lancet* were able to take note of a letter that was unusual in two respects. First, it was written by a parent. Second, it addressed the issue of social class. The letter was written by Lady Patricia Russell, the third wife of the philosopher Bertrand Russell. She related that she had just returned from America when her 7-year old son Conrad, the later historian and politician, suddenly developed a high fever and had to be admitted to the local hospital. Russell wished to stay with her son but was told to leave at once. This she refused to do. When the doctors arrived after 12 hours, they accused her of bringing "filthy germs" from the United States. Russell left for the night but when she returned the next day her son told her that when he asked for his mother, the nurse "threatened to smack him and removed his teddy-bear". What made Lady Russell's letter even more shocking was her observation that as soon as the medical staff realized who she was, she was immediately treated with the utmost courtesy. Apparently, she suggested, "the gross neglect, rudeness, and enforced separation" were reserved for the members of the lower social classes. Russell opposed the existing visiting rules with the following words:

I feel very strongly that when children are patients in hospitals some member of their family should be allowed to remain with them whenever this is possible... to restrict parental visits to two days a week, as in this hospital, is inhuman. (Russell, 1945a)

Russell's letter elicited rather vehement reactions. Nicholson (1945) and Foster (1945) claimed her story could not be true. Batten (1945) expressed as his opinion that "everybody would deplore the continual presence of a mother at the bedside of a sick child", and Bliss (1945) wondered whether she was a socialist. However, she also received support from correspondents (Cantab, 1945; Hardy, 1945; Nicholls, 1945) and, most importantly, from the editors of *The Lancet*, who claimed her account was not unique. According to the editors

(Editorial, 1945), removing the teddy-bear was to deprive the boy of his last link with the security of home. Doctors should place themselves in the shoes of the child and its mother. The hospital should always be able to arrange for the mother to stay in comfort if she is needed, and the existing rule should become much more flexible. Kindness, comfort, and attention were the keywords, according to the editors. In her follow-up letter, Russell told she had received many letters with similar stories and once more argued that visiting rules should be relaxed. One of her arguments was that "studies of evacuated children have abundantly proved that young children may be gravely harmed by enforced separation from their parents" (Russell, 1945b).

Russell's letter was important, because it pointed out a social evil – private patients and their relatives were treated much better and could arrange flexible visiting times – and because her plea for more humane regulations was supported by the editors of one of the most important medical journals of Britain. Of course, much of the problems in this period could be excused by saying that there was a war going on. The nursing staff was underpaid, overburdened, and often unqualified. No wonder they were rude to parents and did not wish to see hordes of parents rushing into the hospital. Such excuses were valid to a degree, but there was more to it. By training and tradition doctors and nurses had never learned to take the viewpoint of the child patients and their parents. It would need very forceful descriptions and eventually films to open their eyes to the feelings of bewildered and frightened young patients. A veritable milestone in this respect was Spence's (1947) famous lecture on the care of children in hospital. Spence's description of children's wards is worth quoting at some length.

The room is vast... The roof is... terrifyingly remote to the eyes of a child who lies many hours gazing at it. Some of the beds are three feet from the ground... to the discomfort of the child who has not slept so far from the ground before... The beds stink just a little... [He conceals] his personal treasures under his pillow until they are again put out of his reach... A plaintive 2-year-old standing behind the bars of his cot clad in a shapeless night-gown with a loose napkin sunk to his ankles below... Night comes on, but there is no bedtime story, no last moment of intimacy, no friendly cuddle before sleep. The nurse is too busy for that... This daily rhythm of anxiety, wonder, apprehension, and sleep is better than it sounds, because it is made tolerable by the extraordinary resilience and gaiety of the children... But it is a deceptive cheerfulness. (Spence, 1947, pp. 127-128)

Spence followed up on his description with a number of practical recommendations. Among other things, he proposed that a number of rooms in each hospital should be special mother-child suites where the mother could live with, nurse, and care for her own child. Thus, he suggested "admit[ting] the mothers to the hospital to nurse their own children. This is no theoretical proposal. I have worked under this arrangement for many years... the majority of all children under the age of 3 derive benefit from it. The mother lives in the same room with her child" (Spence, 1947, p. 128). Spence argued that having such suites would bring many

advantages: the mothers would gain confidence, nurses would learn how to handle children, students would learn courtesy, nurses would have more time for other duties, and so on.

What Spence for some reason did not do in his lecture was to spell out his own experiences with mother-child suites. But the fact of the matter was that he had been practicing this arrangement since he founded the *Babies' Hospital* in Newcastle upon Tyne in 1925. Spence's masterly description of a children's ward and his recommendations for improvement would serve as a model for those who championed a more humane child care in hospitals in the decades to come. Judging by the many references to his work, he came to be seen as one of the principal figures in the debate about child care in hospital.

Meanwhile, the few immediate reactions to the published version of his lecture were not altogether positive. Crosbie (1947) suggested mothers were to busy to take care of their sick child in the hospital and Lorber (1947) claimed he tried Spence's suggestion only to find out that mothers had other children to take care of, or were ill themselves. The Pickerills came to Spence's rescue and suggested that in "extreme cases" a granny could replace the mother. And, of course, they could not help to note that Spence "approves what we did as much as possible for the last 20 years and exclusively for the past 6 years" (Pickerill & Pickerill, 1947).

Spence's lecture was followed by an article by Maclennan (1949) two years later. In that article, she argued that discipline was too harsh in hospitals, that there was an undue emphasis on cleanliness that thwarted the child's natural instincts. Maclennan complained that nurses knew little about child psychology and that the child's emotional needs were ignored when he was "perhaps for the first time in his life, [separated] from the people he loves and from the familiar home atmosphere". Maclennan then proposed a number of very sensible measures: the children should not be left alone too much; ideally, one nurse should take care of one child; children should have the possibility to play; nurses should know something about developmental psychology; children's fears and worries about going home should be discussed with them; the staff should cooperate with parents. Finally, "the parents should be encouraged... to visit their children as often as possible. They should always be given the choice of remaining with their children when they are acutely ill". Maclennan's paper showed once again that there were many people in the 1940s who saw the shortcomings of the existing regulations and advocated radical changes.

The early writings of the Pickerills, Spence, Maclennan, and others were important and influential in the sense that they inspired others and showed that other arrangements of child care in hospital were possible. But massive practical changes in hospital conditions were very slow to come (cf. Monro Davies, 1949). Experiments with living in, such as practiced by Spence, were still the exception. Meanwhile, the editors of *The Lancet* were already convinced that visiting times should be more flexible and argued so repeatedly in no mean words, e.g. "no savage needs to be told that separation from the mother damages young children" (Editorial, 1953a), and "advantages to the child in maintaining real contact with its parents outweigh any of the objections" (Editorial, 1953b). They deplored the fact that so many hospitals had ignored repeated advices by the Ministry of Health to allow daily visiting. In 1952, of 1300 hospitals only 300 allowed daily visiting (Editorial, 1953b; 1953d). But considerable numbers of the readers of *The Lancet* and the *British Medical Journal* were

still unimpressed by their arguments. For example, a certain prof. Moir, consulting surgeon to the *United Leeds Hospitals*, maintained there was "a lot of sloppy sentiment talked about this. If children are left alone for a day or two they forget their parents. The hours in hospital after the visit of parents are chaotic. The children all cry and shriek and will not go to sleep" (Editorial, 1953c; cf. Neville, 1953; Penfold, 1953). In fact, it would take decades before Britain had essentially reached the present system of open visiting of hospitalized children (see Van der Horst & Van der Veer, in press).

Issues of separation: Clinical studies

The first systematic indications that separations from the parents might be potentially harmful came from the observation and investigation of children who visited a Child Guidance Clinic. Psychoanalytically oriented psychiatrists and psychologists working at such clinics often found that problem children were basically insecure and had no fundamental trust in the love of their parents. The so-called 'English school' of Tavistock psychiatrists emphasized the importance of a primitive need for security. Adherents to this view thought "that a child begins life completely helpless and dependent, and that it responds with every expression of terror to... loss of mother" and therefore has "a tendency to seek love and security as such" (Dicks, 1939, pp. 20/90). As early as 1935, Suttie wondered whether the "attachment-to-mother is merely the sum of the infantile bodily needs and satisfactions which refer to her [i.e. secondary drive], or whether the need for a mother is primarily presented to the child mind as a need for company and as a discomfort in isolation". He emphasized that "love of mother is primal in so far as it is the first formed and directed emotional relationship" (Suttie, 1935/1988, pp. 16/31; original italics). According to Edelston (1943, p. 74), "even the strict psycho-analytical school" had at that time "been compelled... to recognize the importance of this earliest of human needs". Obviously, this fact did not escape Bowlby's attention and interest.

Bowlby (1944, 1946) himself actually was one of many who contributed to the weight of clinical evidence with a paper on juvenile thieves, who had been seen and treated between 1936 and 1939 at the London Child Guidance Clinic. In this study, Bowlby compared the case histories of 44 thieves with a control group of 44 non-thieves. Goal of the paper was "a systematic investigation of possible adverse effects in the young child's environment... and in particular that part of it comprised by the parents" (Bowlby, 1944, p. 125). Bowlby distinguished three different factors that might lead to maladjusted behavior: 1) genetic factors, 2) early home environment, and 3) contemporary environment. To no surprise, Bowlby particularly emphasized the adverse effects in the early environment when a child is "separated from his mother or mother-substitute for long periods or permanently during his first five years of life" (ibid., p. 109). He concluded "that the socially satisfactory behaviour of most adults is dependent on their having been brought up in circumstances... which have permitted... satisfactory development of... object-relationships" (ibid., p. 125).



Figure 2. Photograph of a child therapy session with Bowlby, titled "Just child's play". "The docter and Joan discuss the drawing and after a time, Joan tells him all about it. From the drawing and the things she said, he realized that her trouble was loneliness. The father was in the army, a railway journey from home, and the mother missed her husband too acutely to pay enough attention to the child." Picture courtesy of the Wellcome Library, London (AMWL: PP/BOW/L.4, nr. 11).

In another study, Edelston (1943) suspected that children's feelings of insecurity and various forms of misbehavior might be partially caused by earlier hospital stays. In 1938 and 1939, Edelston investigated 42 clinical cases of problem children who had experienced repeated admissions to hospital without the parents being allowed to visit. Edelston found that many of the children afterwards suffered from feelings of being abandoned or unwanted and that they were very anxious, clung to their mother, and, in general, showed disturbed behavior. According to Edelston, the "separation from home (i.e., from the mother) form[ed] the essentially traumatic element in the experience" (p. 14) and "the younger and more helpless the child the greater the separation anxiety" (p. 83). In all, "the determining factor seem[ed] to be the degree of rejection or insecurity *felt by the child*" (p. 85, original italics). Unfortunately, these findings seem to have escaped the attention of experts owing to the outbreak of the war in Britain (cf. Edelston, 1940). Other such studies on hospitalized children did not. To these studies on 'hospitalization' we will turn our attention.

Issues of separation: Studies on the 'hospitalization effect'

Shortly before and during the Second World War the first studies started to appear concerning the ill-effects of hospitalization of children (e.g., Beverly, 1936; Lowrey, 1940; Dennis, 1941; Bakwin, 1942; Edelston, 1943; Goldfarb, 1943b; Spitz, 1945). One of the first to address the issue of hospitalization was psychiatrist Lawson Lowrey (1940). He observed "the development and integration of personality" (ibid., p. 576) of 28 children who were placed in foster homes and of whom nine were described in detail. The children showed very high percentages of "hostile aggressiveness, temper tantrums, enuresis [bedwetting], speech defects, attention demanding behavior, shyness and sensitiveness, difficulties about food, stubbornness and negativism, selfishness, finger sucking and excessive crying" (p. 579). According to Lowrey, "[t]he conclusion seems inescapable that infants reared in institutions undergo an isolation type of experience" and that children "should not be reared in institutions" (p. 585).

More influential though was the work of pediatrician Harry Bakwin (1942), who described the care of small children in New York's Bellevue Hospital. The high mortality rate in this hospital was first attributed to malnutrition and then to cross-infection. In an attempt to lessen the danger of cross-infections, "the open ward... ha[d] been replaced by small, cubicled rooms in which masked, hooded and scrubbed nurses and physicians move[d] about cautiously so as to not stir up bacteria" (Bakwin, 1942, p. 31). Visiting parents were strictly excluded and the infants received a minimum of handling by the staff. Surprisingly enough to people involved at the time, these measures had no effect whatsoever on mortality. Rather by accident, Bakwin noted that infants slowly withered away and, despite their high caloric diets, would only gain in weight after they had returned home. He presumed that the "psychologic neglect" (p. 32) they endured, the total lack of mothering, and the sterile environment in the wards were damaging the children. Following a change in hospital policy, nurses were encouraged to mother and cuddle the children, to pick them up and play with them, and parents were invited to visit. The results of this change in policy were dramatic: despite the increased possibility of infection, the mortality rate for infants under one year of age fell sharply from 30-35 per cent to less than 10 per cent. Bakwin's paper was noticed by experts all over the world, including Britain. The impact of Bakwin's paper in Britain was amplified by the editors of the British Medical Journal, who discussed and supported Bakwin's ideas, and stated that "in infancy the loneliness involved in separation may be not only undesirable but lethal" (Editorial, 1942a, p. 345). The editors also noted that Bakwin's descriptions of children's symptoms "correspond disturbingly with those of some observers in our wartime nurseries" and suggested that "the biological unity of mother and little child cannot be disregarded with impunity". Different correspondents (Hutton, 1942; Macdonald, 1942; Salaman, 1942) sided with the editors and enthusiastically welcomed Bakwin's contribution. Bowlby's psychoanalytic colleague Donald Winnicott (1942, p. 465) considered the review of Bakwin's paper "the most important you have published over a long period" and warned that "we cannot take mothers from infants without seriously increasing the psychological burdens which the next generation will have to bear". As we have already seen, at the time Bakwin made his observations in the USA, Edelston

(1943) did a similar (though retrospective) study on separation anxiety in young children in Britain (see above).

In nine publications on the care of (Jewish) children in foster homes in New York, psychologist William Goldfarb (1943a, 1943b, 1943c, 1943d, 1944, 1945a, 1945b, 1947, 1949) compared the prevalence of "aggressive behavior disorders" (Goldfarb, 1943a, p. 250) in foster children with experience in institutions in the first three years of life to the behavior of foster children without such experiences. Goldfarb hypothesized that in the 'institution group' these behavior disorders were more likely to be found than in the 'foster home group'. The conditions in the institutions were similar to those described by Bakwin:

The children... had... been cared for in an institution with... an outstanding programme of medical prevention. Babies... were each kept in their own little cubicles to prevent the spread of epidemic infection. Their only contacts with adults occurred during those few hurried moments when they were dressed, changed, or fed by the nurses. These nurses had neither training nor time and resources to offer love and attention to a large group of babies... [A]Imost complete social isolation during th[e] first year of life, ... and [an] only slight enrichment of experiences that followed in the next two years. (Goldfarb, 1947, p. 456)

Goldfarb (1943b, p. 127) noted that the institutionalized children had "an exceedingly impoverished, meagre, undifferentiated personality with related deficiency in inhibition and control" and a "passivity or apathy of personality". In the explanation of his findings, Goldfarb laid special emphasis on three main features in the institutions: 1) absence of stimulation, 2) absence of psychological interaction and reciprocal relation with adults, and 3) absence of normal identifications. The sterile climate in which the children lived, apparently had major consequences for later social interaction and Goldfarb concluded that a healthy interaction between children and their caregivers was of the utmost importance.

Psychoanalytically oriented psychiatrist René Spitz had worked on the issue of sterile children's wards with Katherine Wolf in Austria, before he fled the European continent to New York with hope of joining Bakwin and Goldfarb in their work on deprivation (Blum, 2002). Spitz's main interest was in the relationship between mother and child and he was the first to coin the terms of 'hospitalism' and 'anaclitic depression' in children (Spitz, 1945, 1946, 1951; Spitz & Wolf, 1946, 1949). "The term hospitalism designates a vitiated condition of the body to long confinement in a hospital, or the morbid condition of the atmosphere of a hospital" (Spitz, 1945, p. 53). In Spitz's psychoanalytic jargon, an anaclitic depression was a "psychiatric syndrome of a depressive nature... related to a loss of the love object, combined with a total inhibition of attempts at restitution through help of the body ego acting on anaclitic lines" (Spitz & Wolf, 1946, p. 339). Spitz studied the effect of continuous institutional care of infants under one year of age by comparing children in a nursery to children in a foundling home - as did Goldfarb before him. From his observations, Spitz concluded that 1) affective interchange is necessary for a healthy physical and behavioral development of infants; 2) this interaction is provided by reciprocity between mother (or mother substitute) and child; and 3) deprivation of this reciprocity is dangerous for the development of the personality of the child. Of the studies on hospitalization discussed here, Spitz's work on the effects of hospitalization was the most influential if we go by the number of citations, but it also came under heavy criticism.¹

Spitz was attacked by psychologist Samuel Pinneau (1955a, 1955); cf. Karen, 1994; Spitz, 1955), who essentially pointed his arrows at four different aspects of Spitz's studies: 1) Spitz's refusal to identify the dates and locations of his observations (cf. Anonymous, 1952); 2) the inconsistency of the alleged number of children involved in the observations, which suggested a cross-sectional approach instead of the longitudinal study that Spitz presented; 3) Spitz's failure to account for the different cultural and racial background and socioeconomic status of the groups that were compared; and 4) the doubtful validity of the developmental scale, which jeopardized the interpretation of the test data. Despite this severe criticism, Spitz's work would be highly influential for several decades.

Bowlby and the WHO report on deprivation

After the Second World War, Bowlby became involved in the reorganization of the Tavistock Clinic known as *Operation Phoenix* (Van Dijken, 1998). In January 1946 he was appointed head of the new Children's Department; in July 1947 he was elected deputy director to John Sutherland. His first priority was to recruit staff and organize clinical service, which started in the autumn of 1946. From 1948 Bowlby also planned a research unit, to which James Robertson was the first to be appointed as a research assistant. In line with senior analyst John Rickman's ideas, the Tavistock doctrine at that time was that "there should be no therapy without research and no research without therapy" – a creed that Bowlby fully supported in thought, word and deed (Van Dijken, 1998).

In 1949, Ronald Hargreaves, Bowlby's former colleague at the Tavistock Clinic and during the Second World War, by now Chief of the Mental Health Section at the WHO in Geneva, asked him to do a report on mental health problems of homeless children (Van der Horst et al., 2007). Bowlby read extensively into the early work on deprivation while working on this report in an effort to "draw the strands together into one coherent argument" (Rutter, 1972a, p. 121). To gather information for his report, in the first half of 1950, Bowlby visited various European countries and the United States and consulted experts in the field of psychiatric care. During a five week stay in the USA in March and April, he visited both Spitz and Goldfarb. In a letter to his wife Ursula he discussed his schedule:

As a result of my days [sic] activities I've made a huge number of appointments. On the whole I've been lucky in finding people available. Tomorrow, I'm busy morning [and] afternoon [and] in the evening have dinner with the Goldfarbs... Monday I'm busy all day [and] dine with Spitz... This means I get off to a flying start [and] don't

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¹ A search in the Web of Science® shows that Spitz's (1945) paper alone has more citations [858] than the other studies discussed here combined (Lowrey, 1940 [54 citations]; Bakwin, 1942 [95]; Edelston, 1943 [37]; Goldfarb, 1943a [93], 1943b [135], 1943c [28], 1943d [1], 1944 [25], 1945a [156], 1945b [113], 1947 [55], 1949 [30]).

waste time at the beginning which I'm pleased about. (Bowlby in a letter to Ursula, March 10, 1950; AMWL: PP/BOW/B.1/12)²

After meeting with them both, Bowlby was particularly impressed by the work of Goldfarb and wrote about his discussions with him:

All goes exceedingly well here – to the point where time for letter writing is hard to come by. Saturday was busy [and] fruitful, especially coffee with Goldfarb [and] his wife. I [wi]ll be writing a full description of this to Noel [Hunnybun]³ so will only tell you now that he is a most attractive young man of [thirty-five], American born [and] not the least Jewish⁴, he has been doing no research for [four] years but has now nearly completed his medical studies. He dines with me tomorrow night [and] the possibility of him coming to the Tavi[stock Clinic] for a year will be discussed. That would be a great acquisition. (Bowlby in a letter to Ursula, March 13, 1950; AMWL: PP/BOW/B.1/12)

After his meetings with Goldfarb, Bowlby indeed reported to Noel Hunnybun about Goldfarb's work:

Goldfarb is the real bright spot here, though for the past four years he has been in 'retirement' studying medicine. He is a delightful young man of 35, modest, sensitive and intelligent... His work is not widely known, but is highly regarded in discriminating quarters. Personally he seems to be liked and respected. His studies seem to have been carried out between 1940-1946 off his own bat, and in his spare time... He has done nothing for the past four years, though he has a great deal of interesting material... still unpublished. I raised with him the possibility of his coming to the Tavi[stock Clinic] for 12 months... to write his stuff up into a coherent monograph. He was greatly attracted by the idea and is thinking it over seriously. October 1951 is the earliest he could make as he has to complete a medical internship. He wants to become a psychiatrist and is already training in psychoanalysis. Though it is impossible to judge his ultimate ceiling, there is no doubt about his quality. (Bowlby in a letter to Noel Hunnybun, March 19, 1950; AMWL: PP/BOW/B.1/12)

In a staff meeting on May 11, after Bowlby had returned to England, he would add that Goldfarb would "get a senior job there [at Columbia University]... because I think there is little doubt that he is pretty well the best chap they have got" (Travelogue given by Bowlby,

² AMWL stands for Archives and Manuscripts, Wellcome Library for the History and Understanding of Medicine, 183 Euston Road, London NW1 2BE. The letters PP/BOW stand for Personal Papers Bowlby.

³ Noel Hunnybun was a senior social worker at the Tavistock Clinic

⁴ Perhaps Bowlby expected someone with the name Goldfarb to be Jewish.

May 11, 1950; AMWL: PP/BOW/F.1/1). Goldfarb's move to the Tavistock Clinic was never realized.

Bowlby's travels and research ultimately led to his monograph *Maternal care and mental health* (Bowlby, 1951, 1952), in which he discussed the state of the art and most recent advances in studies on deprivation. He discussed the work of Bakwin, Goldfarb, and Spitz under the heading of 'direct' studies on evidence of effects of deprivation in which observations are made in institutions and in foster homes. Bowlby's own early study of forty-four thieves and the work of Lowrey and Edelston were categorized as 'retrospective' and 'follow-up' studies. These "[r]elatively few studies taken by themselves are more than suggestive, [b]ut when all the evidence is fitted together it is seen to be remarkably consistent", Bowlby (1952, p. 46) argued. And he reached the conclusion that:

the evidence is now such that it leaves no room for doubt regarding the general propositions – 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. (ibid., p. 46)

Bowlby's report was immediately and very favorably discussed by the editors of *The Lancet* (Editorial, 1951a). The editors considered his report "extremely impressive" and summarized Bowlby's discussion of the findings by Bakwin, Goldfarb, Spitz, and others. They concurred with Bowlby that the evidence in favor of the damaging effects of mother-child separations was remarkably consistent and impressive. Quoting Bowlby's words that "knowledge of truth is always partial, and that to await certainty is to await eternity", they concluded that "in this case, to await certainty may well be to await a spreading of our present social sickness until it is beyond all cure" (ibid., p. 1166). The editors of the *British Medical Journal* followed suit and praised the "remarkably interesting and valuable report". They, too, fully accepted Bowlby's findings and conclusions, and remarked that

happily in children's wards and children's hospitals there is now a tendency to allow daily visiting. Admittedly this presents great difficulties to the nurses, but even the small amount of carefully controlled work which Bowlby is able to report on this limited aspect of the subject shows how worthwhile the extra trouble is. (Editorial, 1951b, p. 1374)

The reception of Bowlby's monograph in the medical journals at the time was very positive, but later his views were critiqued. Though Michael Rutter (1972a, 1972b, 1979) stressed the importance of Bowlby work in the early 1950s as it "stimulated a wealth of research and led to a reconsideration of the care provided for children being reared in institutions" (Rutter, 1972a, p. 120) and stated that "the concept of 'maternal deprivation' has undoubtedly been useful in focusing attention on the sometimes grave consequences of deficient or disturbed care in early life" (ibid., p. 128), he also argued that "the term... has served its purpose and should now be abandoned" (ibid., 128). Rutter's main argument is that the experiences included under the term 'maternal deprivation' are too heterogeneous

and that the effects vary too much from child to child. Here we only emphasize the importance of Bowlby's work for the WHO for the development of his ideas on the consequences of early deprivation of maternal care. Much later, Bowlby himself would say that he had been greatly influenced by the work on maternal deprivation, because it resulted in him focusing more on separation and institutionalization (Senn, 1977).

A picture speaks a thousand words: films to support new views

Both in the UK and in the USA the field of psychology was stirred in a similar way. In the USA, Spitz shook the ground with his silent, black-and-white film *Grief: A Peril in Infancy* (Spitz, 1947). Spitz filmed, amongst other children, a baby named Jane who within weeks after placement in a foundling home developed from a happy and approachable child into a distant and withdrawn one. Spitz himself described the cure for this child on one of the film's title cards: "Give mother back to baby". Jane is shown again, after her mother has returned after a three month separation, playing, clapping, and laughing. Reactions to Spitz's film were quite similar to the reactions Robertson would later receive for his film: those of shock and disbelieve. Karen (1994, p. 25) described how after the film was shown to physicians and psychoanalysts at the New York Academy of Medicine, a "prominent New York analyst approached Spitz with tears in his eyes. 'How could you do this to us?' he said". Apparently, people were shocked by the sight of babies pining away from grief. It was something that they had not seen or been willing to see before.

In the UK, James Robertson, social worker with Bowlby at the Tavistock Clinic, made a similar film called A Two-Year-Old Goes to Hospital (Robertson, 1952) - black-andwhite and silent, but with spoken commentary. In this film, an unusually controlled toddler named Laura leaves home for a period of nine days to be admitted at Central Middlesex Hospital for the operation of an umbilical hernia. She changes from a "ravishing little girl" (Hinde, in Van der Horst et al., 2007) to a silent and unresponsive one. Robertson's film was first shown at the Section of Paediatrics of the Royal Society of Medicine on November 28, 1952, before a large audience of doctors and nurses. The accounts of that meeting differ somewhat in their description of the way the film was received by the audience. The proceedings of the meeting (Bowlby & Robertson, 1952) just related that Bowlby and Robertson introduced the film, provided a synopsis of the film, and then added that the president of the pediatric section, Winnicott, spoke of a "highly successful first effort" that dealt with "a real problem". Winnicott continued that he himself had seen "irreversible change" as a result of "separation of small children from their mothers" and argued that "every time a child is to be taken into hospital there ought to be a careful weighing up of the value on the physical side against the danger on the psychiatric side". Both the editors of the British Medical Journal and The Lancet favorably discussed the meeting in their issues of December 6. The editors of the British Medical Journal agreed that "the 2-year-old girl depicted was unhappy and that possibly her unhappiness might have been prevented" (Editorial, 1952a, p. 1249). They mentioned that this was in line with the findings in Bowlby's (1951) report and that it would be a great risk to continue to neglect these matters. The editors believed that more "friendliness and consideration" would do the children much good, but added that "the part the mother should play, and how often parents should visit, may be

more controversial subjects" (Editorial, 1952a, p. 1250). The editors of The Lancet were equally positive but more detailed in their rendering of the reactions to the film by the audience (Editorial, 1952b). They stated that at first the audience frankly refused to admit the child was distressed at all and those who accepted that Laura was distressed were reluctant to believe it might cause long-term or even permanent emotional disturbances. These discussants argued one would need to film emotional upsets at home and hospital stays without an operation as a control. Robertson and Bowlby are said to have agreed that more research was needed but remained convinced that the child was upset, that such operations at this age should be avoided if possible, and that the isolation and lack of physical comfort in hospitals were positively bad. Interestingly, these contemporary accounts were rather more neutral than Robertson's memory of the meeting. Robertson remembered that "the film encountered much resistance" and that various speakers said hotly that he had filmed "an atypical child of atypical parents in an atypical ward" (Robertson & Robertson, 1989. p. 44)⁵. The speakers supposedly also said that Robertson "had slandered paediatrics" and that the film should be withdrawn. We have no way to decide which account of the meeting is most correct, but according to Dr. Mary Lindsay (personal communication, April 7, 2008) "the film had a very hostile reception" and "the editor toned down the anger in the proceedings of the meeting". The fact of the matter is that Bowlby and Robertson eventually decided to temporarily withhold the film from general release due to the massive resistance among the medical staff (Robertson & Robertson, 1989, p. 45).

Between parentheses, it should be said that the value of films as an argument in scientific debates is limited. Strictly speaking, they can only show that a certain phenomenon may take place, not that it generally takes place, and under which specific circumstances. Thus, Robertson's opponents could always argue that Laura, her parents, or the hospital were somehow exceptional and that other children in (other) hospitals were perfectly fine. At any rate, they could argue with some justification that it remained far from proven that her distress was caused by the separation per se (cf. Bowlby, 1958a, 1958b; Edelston, 1955, 1958; Howells, 1958; Howells & Layng, 1955; Kräupl Taylor, 1958; Librach, 1956). Over the years, the opponents of flexible visiting in hospitals would exploit these possibilities to the utmost, with sometimes vehement debates as a result (cf. Herzog, 1958a, 1958b; Kidd, 1958; Robertson, 1958a, 1958b; Stephen & Whatley, 1958a, 1958b). Robertson and Bowlby's adversaries would go to great length to disprove them: for example child psychiatrist Fred Stone was offered research money to "prove this Bowlby stuff to be nonsense" (Hinde, 1982a, p. 60). Such reservations about the methodological merits of films notwithstanding, Robertson campaigned the cause of better care of children in hospital throughout the 1950s and 1960s, showing his film to many audiences, and eventually managed to persuade many people that something needed be done. Mary Lindsay

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⁵ This statement strangely contradicted what Robertson wrote in a letter to *The Lancet* in 1958. There he wrote that "when the film was shown to the paediatric section of the Royal Society of Medicine in November, 1952, it seemed generally agreed that (…) the behavior shown was common" (Robertson, 1958a).

remembers how Dr. MacCarthy, who would become a key figure in the debate, became converted:

Dr. MacCarthy went to this meeting [the first showing of *A two-year-old*] with his Ward Sister. Coming back in the car afterwards he went on at some length on how wrong Robertson was. However, Sister Morris said that Mr. Robertson was quite right and that these babies and young children did need their mothers; and that she used to let them stay in the ward with their children when he was not there. Dr. MacCarthy was startled by this idea, but he had great respect for Sister Morris. The next day he found that he could not walk down his children's ward without seeing Laura and her brothers and sisters. From then on, the mothers of children under five in his wards at Amersham and Aylesbury were routinely asked if they wanted to stay in the hospital with their children; most of them did, and visiting became unrestricted. (Mary Lindsay, personal communication, April 7, 2008)

In 1958 Robertson first showed his second film *Going to hospital with mother*, which followed the twenty-months-old Sally who was admitted to *Amersham General Hospital* for an umbilical hernia operation together with her mother. The film showed how mothers took care of their sick children and how Sally managed the hospital stay and operation without much anxiety thanks to the presence of her mother. As would be expected, the editors of *The Lancet* (Editorial, 1958) reviewed Robertson's favorably, noting that "even the most sceptical audience could hardly fail to be impressed by this second film". In sum, the evidence supporting the idea that the mother-child relationship was crucial to a healthy development of children was piling up.

Conclusion: Unexplained observations

Taken together, the observations made in Child Guidance Clinics, during the evacuations, and in residential nurseries, the discussions surrounding visits to children in hospital, the hospitalization studies, and the films supporting these views yielded a consistent picture that was highly relevant for the proper way to deal with young children. The findings pointed out that separation from the parent is traumatic and potentially harmful, that children need strong emotional ties with a grown-up, and that they should be given a chance to form a new bond with a substitute parent in case they (temporarily) lose their own parents. In sum, children need to be loved, and when they lose this love, or believe they have lost it (e.g., in the case of separations they cannot comprehend), they feel very unhappy and may develop serious mental and physical problems. A growing group of psychiatrists and physicians was aware of these findings.

In all, slowly but surely, people – in hospitals, foundling homes, nurseries – were beginning to see the effects of separation and deprivation on young children. The evidence gathered led people to believe that the physical and emotional separation from a familiar environment was detrimental to the child's well-being. These new views were supported by films such as those by Spitz and Robertson (for a full overview of films on children's hospitalization and maternal deprivation, see Mason, 1967). Their cinematic contributions

were a way of conveying the message to a more general public. Unfortunately, because of the retrospective nature of the reported findings, there could only be speculation about the underlying mechanisms of the distress shown though. It was up to others to lead the way to a theoretical and experimental validation of the consequences of maternal deprivation – and this is where Bowlby entered the stage. The findings Bowlby had gathered for his WHO report were suggestive but not conclusive. What was missing were rigorous experimental investigations and, above all, a comprehensive theoretical framework from which to explain the findings (cf. Smuts, 1977). Firm experimental proof of his ideas Bowlby would eventually find in Harlow's experiments (see Chapter 4). For a theoretical framework for the explanation of the nature of the mother-child relationship he turned to ethology, the new science of animal behavior, eventually resulting in his *magnum opus*: the attachment trilogy (Bowlby, 1969/1982, 1973, 1980a).

Although Bowlby's acquaintance with ethology was rather coincidental, he had had an interest in nature from a very early age. As a child Bowlby had learned to value the life in the countryside during family holidays and he always remained a passionate naturalist. During long vacations in the Scottish highlands, it was Bowlby's mother May who "tried to pass on her love for nature to her children" (Van Dijken, 1998, p. 24) and who learned them "to identify flowers, birds and butterflies, to fish, ride and shoot" (Holmes, 1993, p. 17). As a naval cadet at Dartmouth, Bowlby was an enthusiastic bird-watcher and photographer (Van Dijken, 1998) – like many of the ethologist were (Roëll, 2000; Burkhardt, 2005). In one of his early publications, Bowlby (Durbin & Bowlby, 1939) already extensively cited studies on the social life of monkeys and apes. Another remarkable example of his interest in animal behavior and ethology comes from a travelogue in which Bowlby reported on his 1950 trip to the USA for the WHO:

I came across one [of Freud's] book[s] on the development of mind by Romanes which is all about animals and ethology which was carefully marked... by Freud, which rather pleased me, but I unfortunately have not yet confirmed that all the markings in this book were Freud's. That I am trying to do. But I was rather pleased. (Travelogue given by Bowlby, May 11, 1950; AMWL: PP/BOW/F.1/1)

Thus, Bowlby's choice for ethology as a framework was preceded by a life-long interest in nature: "His love for the out-doors and his keen eye for observation made him naturally responsive to the basic tenets of classical ethological theory and methodology" (Suomi, 1995, p. 185; cf. Van Dijken, 1998). Bowlby devoted the last years of his life to a substantial biography of Charles Darwin, which was published just three months before Bowlby's death. According to Ursula "the publication of the Darwin book... made the end of his life full of interest and enjoyment" (Ursula in a letter to Joan Stevenson-Hinde, September 24, 1990; private archive Stevenson-Hinde). In it, Bowlby put forward the thesis that "Darwin's long lasting troubles... can be understood as responses to stressful events... [and] as a result of a childhood shadowed by an invalid and dying mother" (Bowlby, 1990, pp. 1-2). By writing this biography, Bowlby completed the circle: he started with a passion for nature, turned to

clinical practice and mental health studies and finished with a clinically inspired work on "the most influential biologist to have lived" (ibid., p. 1).

In this chapter we have described how Bowlby found inspiration to follow up on the findings from early studies on deprivation by Bakwin, Goldfarb, and Spitz. To do so, Bowlby cast his net wide to get answers, for example from Dutch animal psychologist Adriaan Kortlandt⁶:

We are very happy to send you our reprints. Although hitherto they have not referred to ethological work we are shaping our studies increasingly in that direction, and we shall be very glad therefore to have reprints of your own work, which we already know from many references. (Bowlby in a letter to Kortlandt, dated April 28, 1954; private archive Kortlandt)

So, in the early 1950s, Bowlby and his colleagues were shaping their studies increasingly in the direction of ethology. For Bowlby it was clear that "the time [wa]s already ripe for a unification of psycho-analytic concepts with those of ethology" (Bowlby, 1953, p. 32). In the next chapter we shall describe how Bowlby was influenced by ethology, the new approach to the study of animal behavior that he would apply to human behavior and which he used as a theoretical basis for what later would be called 'attachment theory'.

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⁶ The corresponce between Kortlandt and Bowlby was very brief and consists of only nine letters. They stopped writing in 1957 and this may have had something to do with the fact that Hinde (1957) was very critical of Kortlandt's (1955) publication on "aspects and prospect of the concept of instinct" (cf. A. Kortlandt, personal communication, April 8, 2006).