

University of Groningen

Solitary Persons?

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DOI:
[10.33612/diss.198178158](https://doi.org/10.33612/diss.198178158)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2022

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Boven, F. (2022). *Solitary Persons? the Conceptualisation of Autism as a Contact Disorder by Frankl, Asperger, and Kanner*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.198178158>

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CHAPTER 5 / Leo Kanner's theory of early infantile autism (2): an emotional inability that affects the whole personality

In the previous chapter, I have shown that Leo Kanner defined early infantile autism as an inability to form affective contact and as a desire for aloneness and sameness. In this chapter, I will add that in his view autism not only affects a child's emotions but ultimately the personality as a whole.

In the first section, I will review the idea that Kanner advocated a 'refrigerator mother' theory of autism. In 1948, *Time* ran a report on a speech Kanner delivered at the annual meeting of the *American Orthopsychiatric association*. The report, entitled *Frosted Children*, quoted him saying that children with autism were "kept neatly in a refrigerator which didn't defrost".⁶⁵⁹ This has been taken to mean that in Kanner's view parents, especially mothers, of autistic children are refrigerators, which cause autism by their cold and loveless parenting style. In the first section, I will show that this view of Kanner's theory of autism is imprecise at best. The second section will then detail what Kanner *did* say about the influence of parents.

In the third section, I will discuss the history of Kanner's conception of affective contact. I will maintain that Kanner's ideas about affective contact were influenced by George Frankl, as is now increasingly recognized. However, I will add to this emerging narrative that there is another influence to consider: Kanner's ideas about the interaction of the emotional factor with other factors of the personality was influenced by Adolf Meyer's psychobiology. This connection has rarely been explored.

Section four will discuss Kanner's relationship to Hans Asperger's work. I will argue that there is a significant similarity between their work that hitherto has gone unnoticed: they both took up Frankl's concept of contact disorders, but extended it into *an autistic disorder that affects the entire personality*. Against the background of this similarity, the difference between their theories

⁶⁵⁹ "Frosted Children" (1948), no author specified.

will stand out more clearly. In section four, I will also show that Kanner did not ignore Asperger's work, as is often believed, but was actually instrumental in its recognition.

The final section will discuss the contemporary significance of Kanner's theory. I will show that in current diagnostic conceptualisations of autism the symptoms that Kanner described are still recognizable, while his idea that autism is an emotional disorder that affects the whole personality has been discarded.

5.1. The myth of refrigerator mothers

The reception of Kanner's work is bifurcated. On the one hand, Kanner is praised for recognizing that autism is an innate condition present from birth. Indeed, Kanner sometimes emphasized that infantile autism involves an innate inability to form affective contact. On the other hand, Kanner has been accused of blaming the autism of children on their parents, what has been referred to as the 'refrigerator mother' theory. This also sounds plausible, as Kanner at other times stressed that a child's post-natal social experiences with 'cold' parenting may impede the development of affective contact.

Social experience was the factor of the personality that received most attention in Kanner's work and that has been most controversial in its reception. Today, some scholars defend Kanner, saying that he "did not [...] believe that parents were the sole cause of autism".⁶⁶⁰ I believe that this claim is correct. Others claim that he assumed "parental causation" and was one of the authors who "identified aberrant parenting as the cause of autism".⁶⁶¹ On this view, he blamed parents for "inadvertently causing autism".⁶⁶²

In *A history of autism*, Adam Feinstein claims that Kanner "coined the term 'refrigerator mother'".⁶⁶³ I believe that these last two claims are imprecise at best: Kanner never used the term 'refrigerator mother(s)' or 'refrigerator parents' and did not defend parental causation.

⁶⁶⁰ Adam Feinstein, *A history of autism: Conversations with the pioneers* (2010), p. 59.

⁶⁶¹ Mitzi M. Waltz, "Mothers and autism: the evolution of a discourse of blame" (2015), p. 354.

⁶⁶² Silberman, *Neurotribes: The legacy of autism and how to think smarter about people who think differently* (2016), p. 202.

⁶⁶³ Adam Feinstein, *A history of autism: Conversations with the pioneers* (2010), p. 33.

The precise term ‘refrigerator mother’ was an invention by later authors, most of whom apparently had not read what Kanner actually said. The term was mistakenly attributed to Kanner as a shorthand for what he had indeed said from the start: that the “fathers and mothers’ of children with autism were rarely “warmhearted”.⁶⁶⁴

The ‘refrigerator mother theory’, then, is a *triple myth*: first, it is not true that autism is caused by ‘cold’ child rearing, second, it is not true that Kanner claimed that it was, although his own lack of clarity on this point contributed to the confusion; third, Kanner did not propose the precise term ‘refrigerator mothers’ and certainly did not present a theory with that name.

The first myth, that autism was caused by parents, is now completely refuted.⁶⁶⁵ No serious scholar today claims that autism is caused by parents. We now know that not all autistic children come from intelligent or highly educated parents, that the same parents have autistic and non-autistic children and that not all parents of autistic children are distant and cold. Even outside of the academic community, speculations about environmental causes of autism today rather focus on the influence of non-social agents, such as vaccines, toxins and substances, rather than on parental attitudes.

The second myth, that Kanner did propose that parents were to blame for the autism of their child, has somewhat more truth to it, but misrepresents what Kanner actually wrote about parental attitudes.

In 1968, Kanner already complained that people had overlooked his claim that autism is an innate condition. He wrote: “[a]t no time have I pointed to the parents as the primary, postnatal sources of pathogenicity” – suggesting that parents are only a secondary influence.⁶⁶⁶ He complained that people referred to him “erroneously an advocate of post-natal ‘psychogenicity’”.⁶⁶⁷ Kanner publicly distanced himself from the idea that parents were to blame for the autism of their children in his key note speech at the inaugural meeting of the *National Society for Autistic Children* in July 1969, saying that he “was misquoted often

⁶⁶⁴ Kanner, "Autistic disturbances of affective contact" (1943), p. 250

⁶⁶⁵ For a recent review, see Matthew Bennett et al., "Establishing contexts for support: undoing the legacy of the “refrigerator mother” myth" (2018).

⁶⁶⁶ Kanner, "Early infantile autism revisited" (1968), p. 1.

⁶⁶⁷ Kanner, “Follow-up study of eleven autistic children originally reported in 1943” (1971), p. 141.

as having said that ‘it is all the parents’ fault.’”⁶⁶⁸ After Kanner died, in 1981, Eric Schopler wrote in his memorial that Kanner’s statement “came as no surprise to those of us who knew him”.⁶⁶⁹

Kanner was right that his views are misrepresented when people ascribe to him the view that parental attitudes are the cause of autism. He was adamant that what he said about the influence of parents of autistic children cannot be translated into a direct cause-and-effect relation.⁶⁷⁰ However, his unclarity about the role of parental attitudes in the development of early infantile autism opened the door to this kind of erroneous reference.

What *did* Kanner write about the parents of autistic children? It all started with his finding that autistic children “*all come of highly intelligent families*”, a finding that Kanner found “not easy to evaluate”.⁶⁷¹ Kanner considered it a fact and he later backed up his initial finding with statistical evidence.⁶⁷² Retrospective analysis of his case files suggests that he had a confirmation bias: as more autistic children were referred to Kanner’s clinic he did encounter parents who did not fit the ‘cold and intelligent’ stereotype, but he neglected to publish their cases and continued to rely on his original cases.⁶⁷³

A more subjective finding, reported by Kanner, was that the descriptions these parents gave of their children’s behaviour, often years after the fact, were obsessively detailed.⁶⁷⁴ Subjective was also his observation that among the parents of autistic children there were very few “warmhearted fathers and mothers”, in the sense that they were “strongly preoccupied with abstractions of a scientific, literary, or artistic nature, and limited in genuine interest in people”.⁶⁷⁵ Kanner maintained until the end of his career that ‘cold’ attitudes in parents of autistic children are an “undeniable and repeatedly confirmed

⁶⁶⁸ Cited in Adam Feinstein, *A history of autism: Conversations with the pioneers* (2010), pp. 33-34.

⁶⁶⁹ Eric, Schopler, Stella Chess and Leon Eisenberg, "Our memorial to Leo Kanner" (1981), p. 258.

⁶⁷⁰ Kanner, “Early infantile autism revisited”, p. 25.

⁶⁷¹ Kanner, “Autistic disturbances of affective contact”, pp. 248, 250.

⁶⁷² Kanner, "To what extent is early infantile autism determined by constitutional inadequacies?" (1954)"Symposium on childhood schizophrenia" (1955), p. 561.

⁶⁷³ Christopher Sterwald and Jeffrey Baker, "Frosted intellectuals: how dr. Leo Kanner constructed the autistic family" (2019), p. 693.

⁶⁷⁴ Kanner, “Autistic disturbances”, p. 248, 250; Kanner, *Infantile autism and the schizophrenias* (1965), p 419; idem, “Early infantile autism revisited”, p. 18.

⁶⁷⁵ Kanner, “Autistic disturbances of affective contact” (1943), p. 250.

phenomenon".⁶⁷⁶ He did not believe that this was a response to the autism of their children, he rather thought that these parents were formal and 'cold' in general.⁶⁷⁷ Kanner described their care for their children as 'mechanized' and believed that these parents offered their children little opportunity to develop an affective relationship to them.⁶⁷⁸

Kanner did claim that such overly mechanical and rational parental attitudes had a negative effect on autistic children. To understand why he made these claims, readers would need to understand his theory of the personality, and the interaction between what he called the emotional factor and the environmental factor, but Kanner did not clearly present these ideas in his papers on autism. I will present these ideas in the next section.

The third myth, that Kanner proposed the term 'refrigerator mothers', also must be refuted. Kanner never used the term 'refrigerator mothers' in any of his writings. I have found only one instance in which he seems to have applied the refrigerator metaphor to parents directly, rather than to their homes: in what appears to be the transcript of an interview, Kanner described the parents of a boy he knew as "a pair of emotional refrigerators".⁶⁷⁹ However, in this interview, Kanner was apparently not talking about autistic children (he did not mention the words 'autism' and 'autistic'), he was not talking about mothers only, and the interview is not cited in the secondary literature on Kanner. I also can't be entirely sure whether Kanner is quoted verbatim here. This exception can't possibly be the source of the term 'refrigerator mothers'.

There were, in the 1950's and 1960's, people who partly or entirely blamed the parents for their children's infantile autism, but no scholar ever defended the term 'refrigerator mother'. Rather, this term was projected back onto this period by later authors who criticized theories of parental influence.

⁶⁷⁶ Kanner, "Follow-up study of Eleven Autistic Children Originally Reported in 1943" (1971), p. 141.

⁶⁷⁷ Kanner, "To what extent is early infantile autism determined by constitutional inadequacies?" (1954), p. 382-3.

⁶⁷⁸ "Problems of nosology and psychodynamics of early infantile autism" (1949), p. 242; idem, "Symposium on childhood schizophrenia" (1955).

⁶⁷⁹ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Johns Hopkins Magazine, June 1963: What's wrong with children?

I have found nine scientific publications from before 1970 that used the term ‘refrigerator mother(s)’ or ‘refrigerator parent(s)’.⁶⁸⁰ These publications all appeared in the 1960’s, they did not elaborate on the term, and they certainly did not defend it: they rather mentioned it in passing as a “pejorative” or “unfortunate” term, suggesting that it was introduced by Kanner, but not providing any evidence to that effect.

When in the 1960’s, the term ‘refrigerator mother’ began to increasingly surface in American newspapers, it was already projected onto an imagined past. For example, a newspaper article on autism from 1966 claimed that while in the past doctors working on autism “had tended to blame ‘refrigerator mothers [...] these days [...] the refrigerator-mother concept is largely out of fashion’”.⁶⁸¹ Actually, it was the other way around. The ‘refrigerator mother’ concept first seems to have become current in the 1970’s and 1980’s. For example, Eric Schopler and his co-authors used the term in 8 publications between 1969 and 1990, and Frances Tustin used the term in 3 writings from this period. These were still incidental and critical remarks, however, a far cry from a positive and elaborate theory. Indeed, they stem from after the heyday of the theory that parental attitudes might cause autism or childhood schizophrenia.⁶⁸²

In 1985, the first book using the term “refrigerator mother theory” appeared in the United States, claiming that Leo Kanner’s “psychoanalytical” explanation of autism had “often been referred to” in this way.⁶⁸³ Four years later, the *New Scientist*, a London based popular scientific magazine presented the “refrigerator mother theory” as “one popular view of autism”.⁶⁸⁴ However, the

⁶⁸⁰ Mildred Creak and Sylvia Ini, "Families of psychotic children" (1960); Ian S. Berg, "A case study of developmental auditory imperception: some theoretical implications" (1961); Helen Horning Foster, Expression of emotion by parents of autistic children (1964), P. Mittler, "Education of Psychotic Children" (1965); Benjamin B. Wolman, "Family dynamics and schizophrenia" (1965); Gordon-Russell, J. "Infantile autism" (1965); Patrick Tudor Burt Weston, "Some approaches to teaching autistic children." (1965); Margaret Walsh, "Autistic children—a summary of theories of aetiology; and some problems facing their parents" (1967); Valerie A. Savage, "Childhood autism: A review of the literature with particular reference to the speech and language structure of the autistic child" (1968); Eric Schopler, and Julie Loftin, "Thought disorders in parents of psychotic children: A function of test anxiety" (1969).

⁶⁸¹ Nancy Griffin, "The tormented and Jig-saw puzzle world..." (1966), p. 164.

⁶⁸² In a widely cited paper from that time, Michael Rutter claimed that, in addition to Kanner, the proponents of this theory were Despert, Goldfarb, Kaufman and Bettelheim. Cf. Michael Rutter, "Concepts of autism: a review of research" (1968), p. 1.

⁶⁸³ Lisa K. Barclay, *Infant development* (1985), p. 458.

⁶⁸⁴ John Morton, "The origins of autism" (1989), p. 45.

term did not emerge in academic publications before then, was rarely used in writing in the 1990's⁶⁸⁵ and did not become popular in written academic discourse until the 21st century.⁶⁸⁶

We must be careful, then, to distinguish between later terms used by critics of Kanner, often without consulting his actual writings, and his actual idea, namely that 'mechanized' parenting may contribute to children's autism. In the next section, I will discuss this idea and situate it within his theory of the personality.

5.2. Kanner's concept of personality

In the previous chapter, we have seen that Kanner believed that autism is at its core an emotional disorder. Even so, Kanner did not think that autism just affects and is affected by a child's emotions. To the contrary, he believed that even though autism enters the personality, so to speak, through the emotional factor, it ultimately affects and is affected by the person as a whole.

In the first edition of his textbook, Kanner used the term "whole functioning" for those functions involving the whole person, but in the second edition he settled on the term *personality*:

Any one who deals with human beings is confronted with something that is not just a summation of body, I.Q. and affective response. These – and many other things – are integrated in each person in a unique manner which distinguishes him from any of the billions of people existing in the past, present and future. This uniqueness, symbolized by a distinctive name to which a person answers, is spoken of as his personality.⁶⁸⁷

⁶⁸⁵ Gallagher III, Bernard J., Brian J. Jones, and Meaghan M. Byrne, "A national survey of mental health professionals concerning the causes of early infantile autism", p. 934, 935; Harris L. Coulter, *Vaccination, social violence, and criminality: The medical assault on the American brain* (1990) p. 8; Sue Fletcher-Watson and Francesca Happé, *Autism: A new introduction to psychological theory and current debate*, p. 27; Alexander Durig, *Autism and the Crisis of Meaning* (1996), p. 68; Bryna Siegel, *The world of the autistic child: Understanding and treating autistic spectrum disorders* (1997), p. 134; Donald J. Cohen and Fred R. Volkmar, *Handbook of autism and pervasive developmental disorders* (1997), p. 746.

⁶⁸⁶ It is possible that it was used in verbal communication by scholars and/or professionals before that time.

⁶⁸⁷ Kanner, *Child psychiatry* (1948), p. 89.

Kanner emphasized the uniqueness of the personality, pointing out that “each child presents an individual pattern of growth” resulting in a unique personality.⁶⁸⁸ Kanner therefore believed that it is “imperative to study personalities instead of being content with [...] static, nosologically fixated psychiatry”.⁶⁸⁹

Kanner also endorsed Allport’s definition of the personality as “the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustment to his environment”.⁶⁹⁰ In his view, everything a person thinks or does is an adjustment to the environment in which the whole person is involved. He conceived all “[b]ehavior, in its overt, observable, motor manifestations as well as its implicit, ‘subjective’ preparatory components (thinking, feeling) [...] as an activity of the total personality”.⁶⁹¹ Thus, instead of separating cognition from behaviour, Kanner emphasized that they are both performances. He did not deem it possible to neatly separate “overt performances” such as “gestures, emotional expressions, and (verbal) spoken or written utterances” from “implicit, not so directly accessible” performances, such as “thinking, feeling, remembering, being unable to recall, silent reading, etc.”⁶⁹² By using the same term for both processes, Kanner emphasized that all performance belongs to an ongoing process of adaptation to the environment, which always involves the entire organism.

Because Kanner believed that mental problems always involve all factors of the personality, he did not believe that it is possible to single out one cause:

Some people believe that the intelligence quotient explains all personality deviations of children. Some blame the environment for everything that goes wrong. To some, heredity and constitution serve as all-valid formulae. Others again are satisfied to lay all difficulties at the door of repressed sexuality or an inferiority complex. Insistence on any ‘one and only’ cause, however, fails to do justice to the wide variety of factors that may, and really

⁶⁸⁸ Kanner, "Some pediatric problems of behavior in infancy and early childhood" (1938), p. 418.

⁶⁸⁹ Kanner, "The significance of a pluralistic attitude in the study of human behavior" (1933), p. 35.

⁶⁹⁰ G. W. Allport and Gordon Willard, *Personality: a psychological interpretation* (1937), p. 48; cited in Kanner, *Child psychiatry* (1948), p. 89.

⁶⁹¹ Leo Kanner and Sander E. Lachman, "The contribution of physical illness to the development of behavior disorders in children" (1933), p. 606.

⁶⁹² Kanner, *Child Psychiatry* (1935), p. 14.

do, combine themselves to produce the multitude of personality disorders which we find in different children.⁶⁹³

In Kanner's view, the main factors involved in personality problems in children were age, constitution, physical condition, intelligence, emotion and the environment. What was important to Kanner, however, was not the precise kind or number of factors that play a role. Sometimes he mentioned three, sometimes five or six. In the second edition of his textbook, he discussed sex as one of the factors, but he didn't do so in the first edition. Most important was the idea that all these various factors, whatever they may be, are integrated in a unique manner by each person. He argued that the factors of the personality are always "fused in a particular manner" and "melt into a oneness, the child under consideration".⁶⁹⁴ Hence, in any child the same factors, such as emotion and environment, can be identified, but their integration into a whole is unique for each individual.

In the remainder of this section, I will discuss these personality factors. I will start with the environmental factor, showing that Kanner did indeed believe that the parents of autistic children could influence how autistic the performances of their child turned out. I will then discuss the other factors, to show that the environmental factor in his view was not the only or even the most important cause of autistic performance but was one factor among others.

5.2.1 The environmental factor

By the environmental factor, Kanner meant the physical and, more importantly, the social environment. He often discussed the influence of parents and teachers, and the neighbourhood, school and society, all of whom contribute to the development of the unique personality of a child.

Kanner is infamous for introducing the image of the refrigerator to colourfully describe the social environment in which autistic children grew up. In the previous section I have shown that Kanner did not introduce the exact phrase 'refrigerator mother'. I will now review what Kanner did say on this

⁶⁹³ Kanner, "Psychopathological problems of childhood" (1935), p. 588.

⁶⁹⁴ Kanner, "Behavior disorders in childhood" (1944), p. 776.

topic, paying careful attention to his choice of words and the context in which he used them.

What Kanner did introduce was the image of *home climate* as a metaphor for the emotional attitudes of parents towards their child. Anticipating this metaphor, Kanner wrote in 1938: “[a]s the temperature of baths should be neither too hot nor too cold, so should parental affection normally steer clear of the extremes of explosive demonstrativeness and chilly rebuff”.⁶⁹⁵ In 1947, he developed this image into an extended climate metaphor:

Close observation of parent-child relationship in our culture leads to the conclusion that parents much too often bend and overbend, overheat and overfreeze, to serve their own complex emotional needs. Children can be comfortably warm, swelter, or freeze in the emotional climate maintained by parental attitudes. The homes in which they grow up can be pleasantly air-conditioned places, ovens, or refrigerators. [...] The pediatrician’s [...] principal function may be compared loosely to that of a thermostat, a regulator of the emotional climate in which the child is brought up. But while the thermostat functions automatically, the pediatrician’s function requires a great deal of sensitiveness, orientation and experience.⁶⁹⁶

Thus, although Kanner did use the image of the refrigerator, he used it as a metaphor for the pedagogical environment in which the child grows up. If there is not enough love the pedagogical environment is like a refrigerator, if there is too much love the pedagogical environment is like an oven, and a pedagogical environment in which the amount of love is just right is like an air-conditioned place. The underlying metaphor is: the attention within a family for emotional needs is like the temperature within kitchen appliances. It is, then, the entire home that he described as a refrigerator, not the mother (or father) per se. I suspect that Kanner also considered the siblings of autistic children to be part of this home climate, but he never wrote about them.

⁶⁹⁵ "Some pediatric problems of behaviour in infant and early childhood" (1938), p. 430.

⁶⁹⁶ Kanner, Round Table Discussion: Psychiatric Problems of Adolescence" (1948), p. 672.

Kanner did certainly not confine this idea to autistic children. In fact, Kanner introduced the home climate metaphor at the 1947 annual meeting of the *American Academy of Pediatrics*, during a Round Table Discussion that was not at all about children with autism, but about psychiatric problems in adolescents.⁶⁹⁷ (There was also a round table discussion at this meeting that was about early childhood, but Kanner did not participate in it.⁶⁹⁸)

It was not until a year later that Kanner applied this idea to autistic children.⁶⁹⁹ He did so in passing, in a paper about mentally handicapped children, where he wrote that the children with autism he had seen, had almost invariably “been brought up in emotional refrigerators, in which there was

⁶⁹⁷ Kanner, "Round table discussion: psychiatric problems of adolescence" (1948). It seems that Kanner contribution to the discussion formed the basis for his later paper “Problems of Adolescence” (1959).

Kanner introduced his climate metaphor to convey the idea that a lack or excess of paternal love can contribute to psychiatric problems in childhood and adolescence. He based this idea on the work of William Goldfarb on *contact deprivation*.

In a series of nine articles, published between 1943 and 1949, Goldfarb compared two groups of children and adolescents in foster care: first, a group of 15 orphans who had in the first three years of their life been raised in orphanage and who subsequently had been in foster care; second, a group who had already been in foster care in the first three years of their life. Kanner read at least four of Goldfarb articles and described them as “one of the major contributions made to psychiatry in the 1940’s”.

In “Problems of Adolescence” (1959), Goldfarb showed that adolescents who during the first three years of their life had been raised in an orphanage and thus had minimal contact with adults showed diminished social and emotional adjustment. He inferred that these adolescents were “more isolated from other people and less capable of entering into meaningful human relationships (p.106). While acknowledging that children have an “inner potentiality” Goldfarb emphasized the impact of “external stimulation” on the development of this inner potentiality, arguing that because children in orphanages had only “minimal contact” with adults during the first three years of their life, they grew up to become adolescents showing primitive and passive behaviour (p. 126) Kanner’s own term for this minimal form of contact was “mechanical”: in his view, the relations between children and professionals within orphanages were mechanical rather than loving.⁶⁹⁷ Kanner concluded from Goldfarb’s article that adolescents who were not raised by a family from the start were “seriously injured by [...] early emotional deprivation”. Kanner, Round Table Discussion: Psychiatric Problems of Adolescence" (1948), p. 669-70.

⁶⁹⁸ Arnold Gesell and Catherine S. Amatruda, "Round table discussion: behavior problems of infancy and early childhood" (1948).

⁶⁹⁹ Kanner’s climate metaphor seems to have been inspired by Goldfarb’s idea of “warm, loving contact”. If this is so, Kanner, in developing this idea, departed from Goldfarb in three ways. First, whereas Goldfarb had found deprivation in children raised within institutions, the children Kanner talked about had almost all been raised by their own parents; hence, Kanner contrasted three ways in which *parents* may relate to their children: with overprotective attitudes, loving attitudes or mechanical attitudes. Second, where Goldfarb was concerned with the reciprocity of the relationship and its effect on the ability of the child to respond consciously and actively to its environment, Kanner was concerned with the degree of obsessiveness of parents’ and the child’s response to it. Third, Kanner further developed Goldfarb’s warmth metaphor into a broader climate metaphor, involving not only a warm climate, but also a cold climate and one that is comfortable.

extremely little fondling and cuddling”.⁷⁰⁰ A year later, Kanner returned to this idea a paper presented at the annual meeting of the *American Orthopsychiatric association*.⁷⁰¹ On this occasion, Kanner contributed to a section on psychopathological conditions in childhood, and read a paper focussing on the psychodynamics of infantile autism.⁷⁰² He said about children with autism:

Most of the patients were exposed from the beginning to parental coldness, obsessiveness, and a mechanical type of attention to material needs only. They were the objects of observation and experiment conducted with an eye on fractional performance rather than with genuine warmth and enjoyment. They were kept neatly in refrigerators which did not defrost. Their withdrawal seems to be an act of turning away from such a situation to seek comfort in solitude.⁷⁰³

Kanner also said that the *parents* of autistic children had been raised in “emotional refrigerators”.⁷⁰⁴ He was suggesting a familial pattern in which ‘cold’ attitudes towards children, now in the sense of being mechanical, had taken the place of loving attitudes towards each other. Indeed, Kanner explicitly spoke, in a later paper of “a familial trend towards detached, obsessive, mechanical, living”.⁷⁰⁵ This can be seen as an early recognition of the broad autism phenotype: the idea that family members of autistic persons are

⁷⁰⁰ Kanner, "Feeble-mindedness: absolute, relative, and apparent" (1948), p. 391.

⁷⁰¹ Kanner, "Problems of nosology and psychodynamics of early infantile autism" (1949); "Psychiatrist Grills Inefficient Parents: (1948); "Psychiatrist has hard look at parents" (1948).

On this occasion, Kanner referred to a second paper by Goldfarb, about the effects of contact deprivation on younger children. In this article, Goldfarb argued that children who were deprived of the normal “warm, loving contact” with a parent person, developed, already in childhood, a “quasi-constitutional fixation on the most primitive levels of conceptual and emotional behaviour”. Kanner took the cue and said that he found it “very tempting to ponder about the psychodynamic relationship between early infantile autism [...] and the ‘hospitalism’ studied by Goldfarb”. Kanner, "Problems of nosology and psychodynamics of early infantile autism" (1949); William Goldfarb, "Effects of psychological deprivation in infancy and subsequent stimulation" (1945), p. 32.

⁷⁰² Leo Kanner, "Problems of nosology and psychodynamics of early infantile autism" (1949).

⁷⁰³ "Problems of nosology and psychodynamics of early infantile autism" (1949), p. 425.

⁷⁰⁴ Kanner, "Problems of nosology and psychodynamics of early infantile autism" (1949), p. 423.

⁷⁰⁵ Kanner, "To what extent is early infantile autism determined by constitutional inadequacies?" (1954), p. 384; see also Kanner and Eisenberg, “childhood problems in relation to the family” (1957), p. 156.

likely to have some autistic traits.⁷⁰⁶ This phenotype is what Kanner tried to conceptualize by comparing the homes in which these families lived to refrigerators, representing both the parents and their children passively as being “emotionally refrigerated”.⁷⁰⁷ He suggested that the mild autistic traits of these parents show that there are “milder degrees of detachment and obsessiveness which enable a person to function” rather than impeding this functioning.⁷⁰⁸

The whole metaphor was quite extended: Kanner described the home climates as the temperature in kitchen appliances, paediatricians as “thermostats” tasked with regulating that temperature and children as “barometers” sensitive to it.⁷⁰⁹ I have found only one occasion where Kanner slipped into applying the kitchen appliances metaphor directly to parents, when he described exceptional children as being “frozen out in impersonal chill created by loveless, rigid, mechanized emotional refrigerators” or heat from “human emotional furnaces”.⁷¹⁰

It is interesting that Hans Asperger, who believed that autism is an inborn and unchanging personality type, also noticed autistic-like traits in parents. For example, he found that the father of Fritz had a similar “increased personal distance” as his son.⁷¹¹ He described the father of Harro as a “clearly intellectual type” and “a loner, who was known as an eccentric”.⁷¹²

The concept of attitudes

The extended home climate metaphor was a colourful image for what Kanner in literal terms described as attitudes:

⁷⁰⁶ James Harris and Joseph Piven. "Correcting the record: Leo Kanner and the broad autism phenotype." *Spectrum News* (2016).

⁷⁰⁷ Kanner, "Emotional interference with Intellectual functioning" (1952), p. 702.

⁷⁰⁸ Kanner, "Problems of nosology and psychodynamics of early infantile autism" (1949), p. 426.

⁷⁰⁹ Kanner, "The emotional quandaries of exceptional children" (1952), p. 25.

⁷¹⁰ Kanner, "The emotional quandaries of exceptional children" (1952), p. 23.

⁷¹¹ Hans Asperger, "Die 'Autistischen Psychopathen'" (1944), p. 87: “von verstärkter persönlicher Distanz”.

⁷¹² Hans Asperger, "Die 'Autistischen Psychopathen'" (1944), p. 97: “ein ausgesprochen intellektueller Typ”; “mit niemandem verkehrt und als Sonderling gilt”.

In general, a person's feeling about himself and the world in general will depend on the attitudes of people who constitute this world. Certain attitudes provide an emotional climate that is ideal for the growing child and likely to provide for emotional stability.⁷¹³

Kanner believed that such attitudes can influence the development of the personality, in any child. He stressed the possibility of environmental influence on the personality to avoid the fallacy that children are born with ready-made personalities that do not develop under influence of their life experiences.⁷¹⁴

In the previous chapter, we have seen that Kanner borrowed the term 'reaction' from Adolf Meyer, to describe the tendency to respond in a certain way to a certain environment. On the side of children, Kanner focussed on such reactions. With regard to parents and other adults, Kanner instead focussed on what Adolf Meyer described as 'attitudes': "a dynamic readiness to be set off in a certain way", that is, "the readiness or preparedness for functioning".⁷¹⁵ I do not know why Kanner had this different emphasis when talking about children or parents, but it is typical for his unsystematic use of concepts that he did not describe the reactions and the attitudes on both sides.

As Meyer used the term, 'attitudes' are not actions, but are rather subtle *states* that are presumably expressed through things that are inconspicuous, such as posture and intonation:

We are quick to grasp not only the outspoken more readily observable reactions and actions, but also the attitudes of a person, those passing and protracted states, apparently undifferentiated because of being relatively short of action, or more quietly active, but by no means necessarily indifferent, and though preeminently implicit by no means wholly so.⁷¹⁶

⁷¹³ Leo Kanner and Leon Eisenberg, "Childhood problems in relation to the family: summary of a seminar" (1956), p. 155.

⁷¹⁴ Kanner, "Psychiatry: its significance in pediatrics" (1943), p. 55.

⁷¹⁵ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Series XII Scientific notes and records: Baltimore, Unit XII/1: Working Notes, Folder 30: Attitudes, p. 1.

⁷¹⁶ *Ibid.*, p. 2.

Kanner emphasized that the term attitude derives from ‘aptus’, the Latin word for “apt, suited, prone” and he used the term for emotional states that can be positive or negative, are subject to change and that impact other people. Here is how he used to introduce this idea to medical students:⁷¹⁷

“[W]e like to tell them that they have learned in medical school about various sets of agents which may be normally necessary for the proper body economy, may, on some occasions, be pathogenic, and may, under different circumstances, be remedial. Chemical substances, for example, are vitally important as foodstuffs, detrimental as toxins, and remedial as drugs. We have come to recognize that there is one other set of agents that is just as important and can have similar effects. These agents we choose to refer to as attitudes.⁷¹⁸

Kanner emphasized that unfavourable parental attitudes may lead to a disruption of the optimal development of the personality.⁷¹⁹ A case in point is his belief that the development of a child’s self-dependence and security depends most of all on parental attitudes that are neither too ‘warm’ nor too ‘cold’.⁷²⁰ They are too warm when a parent is overprotective, and too cold when a parent shows little affection.⁷²¹ Hence, parental attitudes can deviate from the ideal in two directions. In one direction is rejection, and in the other direction is overprotection.⁷²² In the 1950’s, Kanner introduced the idea of the three A’s (affection, acceptance and approval) to remind parents that children need a good emotional climate as much as they need nutrition and housing.⁷²³ He pointed out that all children have an inherent desire to be loved, accepted and approved.

⁷¹⁷ *Child psychiatry* (1948), pp. 114-16.

⁷¹⁸ Leo Kanner and Leon Eisenberg, "Childhood problems in relation to the family: summary of a seminar" (1957), p. 155; see also Kanner, "Centripetal forces in personality development" (1959), p. 129.

⁷¹⁹ Kanner, "What’s wrong with children" (1965).

⁷²⁰ Kanner, "Mental hygiene during the first two years of life" (1938), pp. 233-234.

⁷²¹ Kanner, *Child psychiatry* (1935), p. 44; idem, "Behaviour disorders in childhood" (1944), p. 774.

⁷²² Leo Kanner and Leon Eisenberg, "Childhood problems in relation to the family: summary of a seminar" (1956), p. 155.

⁷²³ Kanner, "Childhood problems in relation to the family: summary of a seminar" (1957), p. 155; idem, "The emotional quandaries of exceptional children" (1952), p. 23; idem, "Centripetal forces in personality development" (1959), p. 130.

Kanner's concern with 'genuine' affection instead of formal parenting was part of a general trend in American society and science to worry about the role of emotions in a technological world.⁷²⁴ His focus on emotional reactions and attitudes was part of a wider scientific interest in human relationships.

Kanner clearly believed that formal and detached parental attitudes were "a dynamic experiential factor in the genesis of the [autistic] disorder".⁷²⁵ In other words, he believed that by rewarding "preoccupation with autistic interests" the parents of autistic children contributed to their personality and conduct problems.⁷²⁶ Then again, being a pluralist, Kanner maintained that this experiential and environmental factor was "superimposed on whatever predisposition has come from inheritance".⁷²⁷ While he considered parental attitudes an important contributing factor to the development of autism, he believed that "it is not sufficient in itself to result in its appearance".⁷²⁸ In Kanner's view, autism was there from the start, but was exacerbated by parental attitudes which shared essential characteristics with the autism of their children. He stated that "the children's aloneness from the beginning of life makes it difficult to attribute the whole picture exclusively to the type of the early parental relations". The term 'exclusively' suggests that there is some influence by parents, but that this is not the only or decisive factor.⁷²⁹

The scope of attitudes

The final aspect of the environmental factor that I want to discuss is its scope. For Kanner's concern with attitudes was much broader than the 'home climate' provided by a child's parents. Kanner would often focus on the role of parents, as they are a child's primary care givers, but he did also take into account, in

⁷²⁴ Marga Vicedo, *Intelligent Love: The Story of Clara Park, Her Autistic Daughter, and the Myth of the Refrigerator Mother* (2021), p. 52

⁷²⁵ Kanner, "To what extent is early infantile autism determined by constitutional inadequacies?" (1954), p. 384.

⁷²⁶ Kanner, "Symposium on childhood schizophrenia" (1955), p. 562.

⁷²⁷ Kanner, "To what extent is early infantile autism determined by constitutional inadequacies?" (1954), p. 384.

⁷²⁸ Kanner, "Symposium on childhood schizophrenia" (1955), p. 563; idem, "Early infantile autism, 1943-1955" (1956), p. 99.

⁷²⁹ Kanner, "early infantile autism" (1944), p. 217.

ever wider circles, other adults than parents, such as teachers at school, child psychiatrists and even society as a whole.

Kanner observed, and applauded, a growing interest in the attitudes of teachers and their potential contribution to the emotional problems in children.⁷³⁰ School is often the first group beyond the family in which a child participates and because of that teachers have a formative influence, not as fundamental as that of the parents, but still very significant.⁷³¹ Just like parents, teachers can be cold or warm-hearted and the school climate can depart in two ways from the ideal just as the home climate can.

As a child psychiatrist working at a major paediatric clinic, Kanner was also concerned with the attitudes of physicians.⁷³²

Finally, casting the net even wider, Kanner considered group attitudes, by which he meant the whole of the experiences and culture that shape adult attitudes towards children.⁷³³ Like Asperger, Kanner believed that diagnosing the condition of autistic children required a *change of group attitude* in mental health professionals. As long as their only concern was with the intelligence of children, the unique emotional needs and wants of autistic children would go unnoticed. He criticized the group attitude that reduces the mind to intelligence alone and suggested that the emotional problems of autistic children could not have been properly understood without a “significant departure from this attitude”.⁷³⁴

To sum up, Kanner believed that the emotional desire of autistic children to protect a state of aloneness and sameness was partly, but certainly not exclusively, a response to a state of detached, obsessive, mechanical living that they sensed in their parents. He believed that such parental attitudes can interfere with the natural unfolding of a child’s personality.⁷³⁵ Finally, he believed that a group attitude in American society at large that reduced the mind to

⁷³⁰ Kanner, *Child psychiatry* (1948), p. 12.

⁷³¹ Kanner, *Child psychiatry* (1948), pp. 132, 141.

⁷³² Kanner, *Child psychiatry* (1948), pp. 144-153. See the previous chapter (§4.2.2.), where I have discussed Kanner’s requirements with regard to the attitudes of paediatricians.

Kanner, ⁷³³ *Child psychiatry* (1948), pp. 153-157.

⁷³⁴ Kanner, "Co-editor's Introduction" (1943), p. 216

⁷³⁵ Kanner, "Causes and results of parental perfectionism" (1957), p. 382.

intelligence was not conducive to the recognition of emotional disorders such as early infantile autism

5.2.2 *The emotional factor*

The inability to form affective contact and the desires for aloneness and sameness all belong to the emotional factor. By the emotional factor, Kanner meant “visceral changes, alterations of muscle tone, body posture and physiognomy” that are *reactions* “to various types of life situations”.⁷³⁶ Subjectively, such physical reactions are experienced as feelings of joy, sadness, anger, fear, love and so on. Importantly, Kanner did not think of emotion as an isolated function, but as one factor among others, which together determine how a child’s personality develops:

Our pluralist approach to the study of the mentally integrated personality contains in itself an invitation to view the emotional factor from the angle of its close interrelations with the other factors entering into the formation of personality. In order to prevent misunderstanding, we hasten to emphasize that the term interrelations is not in the least intended to imply the notion of different functional entities working side by side or influencing each other in the sense of one function doing something to another. What we propose to consider is the interesting and practically important question [...] in what manner age, constitution, the physical condition, the degree of intelligence and the environment, chime with the child’s affective reactivity. It is hardly necessary to state that sharp lines cannot be drawn, since all of these features are held together as the questions, more or less fixed or changeable, of a developing individual.⁷³⁷

Thus, using a musical metaphor similar to Asperger’s ‘harmony’, Kanner posed the question how the environmental factor ‘rings together’ – like church bells – with the emotional factor in the actual performance of a child. Because he believed that the emotional factor is interrelated with other factors determining the personality, he ended the chapter on the emotional factor in the first

⁷³⁶ Kanner, "Psychopathology of childhood: basic considerations " (1944), p. 5.

⁷³⁷ Kanner, *Child psychiatry* (1935), p. 71.

edition of his textbook with a discussion of its interrelation to some of these other factors. Kanner discussed how the emotional factor related to the intelligence factor, how the emotional factor related to the environment, etc. I have discussed Kanner's claim that that the attitudes of their parents can influence the emotions of their children and therefore their autism; this influence can be positive or negative, depending on the nature of the attitude. Now this is a specific form of the more general claim that the emotional factor is influenced by the environmental factor. His insistence on the influence of parents on autistic behaviour was his way to resist the artificial separation of the emotional factor from the other factors of the personality.

5.2.3. The age factor

By the age factor, Kanner meant the influence of a child's age and developmental stage on the child's personality. He emphasized that the growing individual is in a different state than in an individual who has reached maturity. Hence, he warned that insights from adult psychiatry cannot be simply extended to children.⁷³⁸ Whereas adult psychiatrists work with individuals who have matured, and are interested in childhood only as a source of adult problems, child psychiatrists should be attuned to "the mentally integrated individual during the natural process of maturation":⁷³⁹

Instead of speculating about how the soul or the vital spark might possibly behave itself in the years between birth and adolescence, it is more scientific to observe carefully the performances of the developing child during the successive stages or levels of mental integration or personality formation.⁷⁴⁰

In other words, Kanner called for the objective and concrete study of "the performances of the developing child during the successive stages or levels of mental integration or personality formation", taking into account the difference

⁷³⁸ Kanner, "Psychopathology of childhood: basic considerations" (1944).

⁷³⁹ Kanner, "Work with psychobiological children's personality difficulties" (1934), p. 407-8.

⁷⁴⁰ *Ibid.*, p. 408.

between each stage and its interaction with the other factors of the personality.⁷⁴¹

Kanner emphasized that the emotional factor is not isolated from the age factor but interacts with it continuously. Thus, in the chapter on the age factor in the first edition of his textbook, Kanner wrote that new-borns show only basic anger, fear, and love reactions to basic life situations, which become more differentiated as the child develops. At two months the child learns to smile, and affective reactions such as embarrassment begin to develop after a year.⁷⁴² With increasing participation in the environment, the child develops more shades and kinds of emotional reaction. Through “early training and example in the home” emotional habits are formed that lay the foundation for “emotional stability or instability in later life”.⁷⁴³

Kanner found that the functions acquired in the first 18 months of life “arise almost entirely from *within*” and are hindered only in rare cases of physical illness or gross mismanagement.⁷⁴⁴ Under average circumstances a child adapts to the physical and social environment by developing a more active and complex level of functioning. The child’s inborn potential for cognition, affection and conation automatically begins to unfold. Thus, at 18 months, healthy children will have acquired “the sensory, motor, linguistic, emotive, orientative and adaptive equipment” they need to adapt to their physical environment and the most basic familial social environment.⁷⁴⁵

After two years or so, children go through a period of negativism, the handling of which is essential to their later affective adaptations. At around four or five years of age, there is “a branching out of the child’s contacts into the community texture”. The four-year-old must learn “to regulate his relations to playmates, schoolmates, teachers and people with whom he forms more casual contact”.⁷⁴⁶ In pre-puberty there is another stage of increased sensitiveness and irritability that again requires careful handling.

⁷⁴¹ Ibid.

⁷⁴² Kanner, *Child psychiatry* (1935), p. 33.

⁷⁴³ Ibid., p. 35.

⁷⁴⁴ Ibid., p. 33; idem, *Child psychiatry* (1948), p. 31.

⁷⁴⁵ Ibid.,

⁷⁴⁶ Ibid., p. 37

Although Kanner thought of autism as foremost an inborn ‘handicap’, he was not oblivious to the effect of these different developmental stages on the actual overt and implicit performance of autistic children. He did not see the inability to form affective contact as unchanging.

Kanner believed that early infantile autism manifests from birth and already develops in the first 18 months of life (hence the term ‘early’). He found that whereas other children spontaneously developed good contact with their parents during that early period, autistic children seem unresponsive and focussed on objects rather than on people. Kanner concluded that autistic children have poor inborn emotional abilities, but a good intellectual and conative endowment. On the one hand, their emotional difficulties could interfere with and block the unfolding of their good intellectual and conative endowment. On the other hand, their intellect and will could compensate for their poor emotional endowment.

Unlike Asperger, Kanner emphasized the capacity of autistic children to develop and improve. He believed that as autistic children develop, their autism would manifest differently. While he described autistic children as isolated at first, he observed major improvements over time. For example, Donald showed improvements between October 1938, when he was first brought to Kanner’s clinic as a five-year-old, and April 1941, when he was brought in for a follow-up as seven-year-old.”⁷⁴⁷ At his check-up in May 1939, Donald “in better contact with his environment, and there were some direct reactions to people and situations.”⁷⁴⁸ Half a year later his play was “definitely improving” and when he went to school he was “very quiet and calm and listened to what the teacher was saying about half the time”.⁷⁴⁹ In April 1941 he “used pronouns adequately” and had learned to address other people when he needed something from them or wanted to know something.⁷⁵⁰

Kanner observed similar improvements in other children. When Jay was twelve, he had emerged from his initial isolation and developed reasonably good relationships with his mother, sister, and teachers. Similarly, George at nine,

⁷⁴⁷ Kanner, "Autistic disturbances of affective contact" (1943), p. 221.

⁷⁴⁸ Ibid.

⁷⁴⁹ Ibid., p. 220

⁷⁵⁰ Ibid, p. 222.

was “still shy and a bit lonely” but “pleasant and communicative”.⁷⁵¹ In 1971, Kanner published a follow-up study of the original 11 children he had described in 1942. In this follow-up, he concluded that as they grew up, some of the 11 children continued to have severe limitations, but others showed marked improvement in their early teens.⁷⁵² For example, Donald had gone to a junior college⁷⁵³ and had become a “regularly employed bank teller who takes part in a variety of community activities and has the respect of his fellow townspeople”.⁷⁵⁴

5.2.4 *The somatic factor*

I can be short about the somatic factor. Kanner did not believe that autism was itself a physical or organic illness or the result thereof. This is significant as the children who were described by Frankl, and first gave him the idea of a contact disorder, had a post-encephalitic condition. The children described by Kanner did not. As medical doctor, he always did a physical examination of autistic children. After twenty years this had “furnished no clues that might point to specific acquired or constitutional organic anomalies”.⁷⁵⁵ Kanner wrote about children in general that may often react to physical discomfort emotionally: “Somatic discomfort, due to illness or fatigue or lack of adequate recreational outlets, may, as any discomfort, serve as an unpleasant situation in response to which the child may develop emotional difficulties.”⁷⁵⁶ Although he described autistic children who had been to a hospital or had a physical disease, in none of these cases their autism was an emotional reaction to that discomfort.

5.2.5 *The intelligence factor*

In the previous chapter (§4.2.3), I reported that autistic children were often suspected of having an intellectual disability and often scored low on

⁷⁵¹ Ibid.

⁷⁵² Kanner, "Follow-up study of eleven autistic children originally reported in 1943" (1971) p. 144-5.

⁷⁵³ John Joseph Donovan and Caren Brenda Zucker, *In a different key: The story of autism* (2016), p. 3.

⁷⁵⁴ Kanner, Leo, Alejandro Rodriguez, and Barbara Ashenden, "How far can autistic children go in matters of social adaptation?" (1972), p. 9.

⁷⁵⁵ Leo Kanner and Leonard I. Lesser, "Early infantile autism" (1958), p. 722.

⁷⁵⁶ Kanner, *Child Psychiatry* (1935), p. 72.

intelligence tests. I have also pointed out, in the previous chapter, that the framing of Kanner's first paper on autistic children reveals that he was especially concerned with the effect of emotional problems on children's intellectual performance. The interrelation of the emotional factor to the intelligence factor, then, was often singled out by Kanner as the most important interrelationship within the personality to consider.

Kanner believed that most autistic children have good intellectual potential.⁷⁵⁷ Their excellent memory, obsessive interests and general intelligence commanded admiration and respect in other people:

Thomas G. joined the Boy Scouts and found recognition by teaching astronomy and playing the piano; he also joined a swimming and athletic club. Sally S. utilized her good memory, of which she was fully aware, to merit acceptance in high school and college; when she failed as a student nurse because the maintenance of a genuine relationship with the patients was beyond her capacity, she became a laboratory technician and has made a reputation for "excelling in chemistry." Edward F. enjoys an active social life belonging to hiking clubs, and his knowledge of plants and wild life brings him respect. [...] Bernard S. is a member of a street car museum where he lays tracks, paints cars, and goes on trips. Fred G. is respected by his schoolmates because of his academic prowess.⁷⁵⁸

Kanner found that autistic children would often use their intelligence to compensate for their emotional difficulties. Kanner observed such compensatory behaviour in about 10% of the autistic children he saw. He found that some autistic children in their early to middle teens "became uneasily aware of their peculiarities and began to make a conscious effort to do something about them"; in so doing, they displayed a "felt need to grope for ways to compensate for the lack of inherent sociability".⁷⁵⁹

⁷⁵⁷ Kanner, "Autistic disturbances of affective contact" (1943), p. 247; idem, *Early infantile autism: 1943-1955* ((1956), p. 217; Leo Kanner and Leonard I. Lesser, "Early infantile autism" (1958), p. 720.

⁷⁵⁸ Kanner, Leo, Alejandro Rodriguez, and Barbara Ashenden, "How far can autistic children go in matters of social adaptation?" (1972), p. 30

⁷⁵⁹ *Ibid.*, p. 30.

The influence also went in the other direction, when the emotional problems of autistic children masked their intelligence, so that they performed on a much lower intellectual level than they were capable of. I have already discussed this idea in the previous chapter, where I quoted Kanner's claim that a child's potential for intellectual development "is guided, fostered or restricted by the emotional development which takes place".⁷⁶⁰

5.2.6 *The constitutional factor*

Kanner defined the constitutional factor as "that which a child has inherited from his parents plus that which he brings with him into the world" – a synonym he often used was 'endowment', especially paired with the adjective 'intellectual'.⁷⁶¹ He pointed out that whereas the other factors can be observed in concrete facts, the constitutional factor remains more abstract.⁷⁶² That any child brings with it into the world a unique constitution must be inferred from the fact that different children react differently to the same environment.⁷⁶³ Kanner believed that a child's endowment itself could not be altered, but he would agree that a child's present performance depends on the other factors as well and therefore can be altered.

In both the first and the second edition of *Child psychiatry*, Kanner argued that the direction of a child's growth depends not only the quality but also on the *composition* of their endowment. A child with a good overall endowment, i.e. a good cognitive, affective *and* conative potential, will develop differently from a child in which the potential for one or more of these factors is impaired.

Kanner clearly believed that the principal cause of autism was a poor emotional endowment. Before Kanner published his first paper on autism, he discussed it with his colleagues at *The Henry Phipps Psychiatric Clinic* during two staff meetings.⁷⁶⁴ Because Donald and the other children showed emotional problems *from an early age*, Kanner argued that they had an *innate* inability to form affective contact that could not be (entirely) explained as dynamic

⁷⁶⁰ Kanner, *Child Psychiatry* (1948), p. 67; idem, "Feeble-mindedness: absolute, relative, and apparent" (1948), p. 388; idem, "The emotional quandaries of exceptional children" (1952), p. 28.

⁷⁶¹ Kanner, "Psychopathological problems of childhood" (1935), p. 592.

⁷⁶² Kanner, "Behavior disorders in childhood" (1944), p. 776.

⁷⁶³ Ibid.; Kanner, "Modern Trends in Psychiatry" (1937), p. 479.

⁷⁶⁴ Marga Vicedo and Juan Ilerbaig, "Autism in Baltimore, 1938–1943" (2021), p. 1165-1167.

reactions to the environment experienced after birth. Instead, he proposed that their inability had a constitutional component that was there from birth.

His colleagues were critical of this view, suggesting instead that these children were “exhibiting an oversensitive reaction to ‘lack of warm emotional responsiveness’ on the part of their parents” and pointing out that they did seem to be able to form affective contact at certain occasions.⁷⁶⁵ This response reflected a general interest in dynamic explanations in the circle around Adolf Meyer. Following the new emphasis on emotional reactions in 20th century psychiatry, personality and behaviour disorders were commonly explained as reactions to life events experienced after birth, rather than as inborn abilities or disabilities.

Kanner conceded that autistic disturbances did not involve an “absolute and total and irretrievable absence of any sort of contact” but merely an inability “to form contact in the ordinarily accepted way”.⁷⁶⁶ But he held his ground where it mattered: he insisted that environmental explanations were speculative and he maintained that the inability to form ordinary affective contacts must be inborn.

In the co-editor’s introduction preceding Kanner’s first paper on autism, he posed the question: “Can we then assume that all people are ‘born alike’ with regard to their ability to form affective contact?”⁷⁶⁷ Kanner’s answer was negative: he believed that children come into the world with a different potential for congruent affective reactions to life situations.⁷⁶⁸ In the paper itself, he concluded that there must be “*inborn autistic disturbances of affective contact*”.⁷⁶⁹

⁷⁶⁵ Ibid., p. 1166.

⁷⁶⁶ Ibid., p. 1166-1167.

⁷⁶⁷ Kanner, "Co-editor’s introduction" (1943), p. 216.

⁷⁶⁸ The idea that emotional reactions may have a constitutional component was not altogether new to Kanner. In the 1935 edition of his textbook, he had already discussed experiments with the emotional reactions of infants, conducted by John Watson at the Harriet Lane Home. Kanner, *Child Psychiatry* (1935), chapter 8, pp. 63-65.

Watson showed that infants, during the first months of life, did already react with fear, rage or love to such environmental triggers as loud sounds, sudden removal of support, rocking, or head holding. Without conditioning they did not react with fear to animals or the presence of strangers. Watson, "Psychology from the stand-point of the Behaviourist" (1919); John B. Watson and Rosalie Rayner, "Conditioned emotional reactions" (1920).

Kanner concluded from Watson’s work that “there are certain relatively simple life situations [...] which from the very beginning of life evoke characteristic reaction patterns” while other settings “failed to elicit any such response”. In other words, certain reactions are present from the start and must therefore have a constitutional component. *Child psychiatry* (1935), p. 65.

⁷⁶⁹ Kanner, "Autistic disturbances of affective contact", pp. 250; emphasis original.

Kanner later clarified what led him to this conclusion: the observation of “extreme aloneness *present from the beginning of life*”⁷⁷⁰ convinced him that there are “constitutional components of emotional reactivity”.⁷⁷¹

Looking back at his first papers, Kanner said that “the early development of the 11 children left no other choice than the assumption that they had ‘come into the world with an *innate* disability to form the usual, biologically provided contact with people.”⁷⁷²

All in all, we have seen that parental influences were one among several factors shaping the developing personality of children. Similarly, we have seen that autism, being an emotional disorder, interacts with all factors of the personality.

This means that to understand the history of Kanner’s conception of affective contact, we must consider not only his conception of *contact*, but also the role of *affect* in the personality as a whole. The history of these two ideas will be the focus of the next section.

5.3. The history of Kanner’s conception of affective contact

It was not until after the French and American revolutions, in the late 18th century, that humanitarian reforms brought an interest in emotional disorders; before, they were not mentioned in the medical literature.⁷⁷³ After that, the interest was only in the emotional problems of *adults*.

In the 19th century, following Sigmund Freud, there emerged a retrospective interest in the childhood personality of adult patients and an interest in the personality of children as the start of future tendencies.⁷⁷⁴ Like Freud had in Europe, Adolf Meyer pioneered a dynamic approach to psychiatry in the USA, and he shared with Freud a retrospective interest in children. On the one hand, Kanner applauded their dynamic approach to psychiatry, with its interest in the role of life experiences, but on the other hand he was critical of the

⁷⁷⁰ Leon Eisenberg and Leo Kanner, "Childhood schizophrenia: symposium, 1955: early infantile autism, 1943–55" (1956), p. 557.

⁷⁷¹ Kanner, "Infantile autism and the schizophrenias" (1965), p. 412

⁷⁷² Kanner, "Follow-up study of eleven autistic children originally reported in 1943" (1971), p. 141; emphasis original.

⁷⁷³ Kanner, "Emotionally disturbed children: a historical review" (1962), p. 97.

⁷⁷⁴ Kanner, "Problem children growing up" (1937), p. 691.

fact that they did not see children and based their ideas about childhood on the memories and dreams of adults.⁷⁷⁵

It was not until the 1930's that the emotional problems of children were recognized as an interest in its own right. Even then, their problems were often dismissed as laziness or disobedience, rather than seeing the whole child, as Kanner would have it, "as a maladjusted human being who, for reasons to be carefully investigated, has failed to respond to the demands that his environment has placed upon him".⁷⁷⁶ His ideas about the ability to form affective ties and the emotional reactivity of children were at the forefront of this new recognition of the emotional problems of children.

In the remainder of this section, I will discuss the history of Kanner's understanding of affective contact. First, I will discuss the use of the concept of contact at *Phipps* before 1938. Second, I will review the influence (or lack thereof) of Benjamin and Frankl, two Jewish refugees who became Kanner's colleagues at *Phipps* in 1938. Finally, I will discuss the influence of Adolf Meyer, Leo Kanner's teacher, who shaped not so much his ideas about autism per se, but his theory of the personality and the interaction between the emotional and the other factors of the personality.

5.3.1 Use of the concept of contact at *Phipps*

Kanner wrote in 1935, three years before he met Donald, that "[p]sychopathology is to a large extent the pathology of interpersonal relationships".⁷⁷⁷ In the 1920's, the term 'contact' was one of the concepts used at *Phipps* to describe such atypical behaviour. The term was used by Adolf Meyer and others, years before Kanner even joined the staff.⁷⁷⁸

⁷⁷⁵ Kanner, "The scope and goal of psychotherapy with children" (1963) pp. 367-8.

⁷⁷⁶ Kanner, "Behind bad grades and behaviour" (1935), p. 20.

⁷⁷⁷ Kanner, "Psychopathological problems of childhood" (1935), p. 91; idem, "Psychiatric problems in children" (1944), p. 577.

⁷⁷⁸ Kanner spoke about professional contact with patients, colleagues and agencies. In a paper on the new psychiatric consultation service established under his leadership in the Harriet Lane Home, Kanner wrote about the "first hand contact with patients", "contact between psychiatry and paediatrics", "contact with the patient" and the "close contact" with other child-rearing agencies. Kanner, "Supplying the psychiatric needs of a pediatric clinic" (1932), pp. 400,401, 403, 405. Elsewhere, Kanner described his work as "daily professional contacts with human beings". Kanner, "The application of psychiatry" (1937), p. 556.

Kanner also wrote about the contact the children that were brought to him had with their parents, peers and educators. He mentioned in a methodological paper that "there are people of

In 1921, seven years before Kanner started his fellowship there, a mother came to the clinic.⁷⁷⁹ She felt that her four-year-old daughter, Jane, did not develop properly. For example, she noticed that Jane did not look at persons the way her other children did, made unexpected rhythmical movements, was frightened by lights and did not fully learn to speak. Jane was initially diagnosed with “feble-mindedness”, but at her mother’s request she was seen by Adolf Meyer himself. In a letter Meyer offered the following reflections on the case:

The patient presents a very interesting problem. At about the age of one, she became rather shy and switched out of contact with her environment. In consequence, she is backwards in her contacts, but a very sweet-tempered child with probably very good assets, she can be drawn into a current of ease in play and activity free of too many comparisons. She does not show any difficult habits, but requires a natural, direct and affectionate handling without any pushing or undue demands”.⁷⁸⁰

The everyday term ‘contact’ at that time already suggested itself to Meyer to describe certain ‘pathological’ forms of behaviour in childhood.

In his (unrelated) research notes, Meyer pointed to the concept of ‘attitudes’ to conceptualize contact. He explained the rapport between two persons in terms of *attitudinal contact*: they make contact when they both have “a fundamental readiness for being set off in the same way”, in other words, a matching attitude.⁷⁸¹ This explained, in Meyer’s view, why physicians have

different [...] inter-individual contact-tendencies”. Kanner, "The significance of a pluralistic attitude in the study of human behavior" (1933), p. 39 Most of these tendencies were healthy, but some led to complaints.

⁷⁷⁹ George C. Darr and Frederic G. Worden, "Case report twenty-eight years after an infantile autistic disorder" (1951).

⁷⁸⁰ Cited in George C. Darr and Frederic G. Worden, "Case report twenty-eight years after an infantile autistic disorder" (1951), p. 563.

⁷⁸¹ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Series XII Scientific notes and records: Baltimore, Unit XII/1: Working Notes, Folder 30: Attitude, p. 1.

better contact with certain patients.⁷⁸² He stated that “there is always some degree of attitudinal contact”, because the experience of a human being is never entirely unfamiliar to another human being.⁷⁸³ He did point out, however, that someone who “cannot sense and appreciate the dynamics of simple human intercourse with its unspoken attitudes” would not be a good physician.⁷⁸⁴

Decades later, in 1950, Jane’s case was presented at the annual meeting of the *American Orthopsychiatric association*.⁷⁸⁵ The chairman at that occasion was Kanner. In reaction to the case report, he noted that it was “[n]o wonder that psychiatrists of the calibre of Dr. Meyer [...] felt that they were dealing with something unique [...] for which they had no frame of diagnostic reference.”⁷⁸⁶ With hindsight, Kanner was struck by the similarity of Meyer’s description of Jane with his own description of eleven similar cases in 1943.⁷⁸⁷ Kanner later wrote that her behaviour “corresponded in every detail to the typical findings in early infantile autism”.⁷⁸⁸

When Kanner met Donald, he must also have felt that he was dealing with a unique case for which there was no ready frame of diagnostic reference. As we have seen, Kanner could already describe interpersonal problems in terms of congruent or incongruent emotional reactions to the environment, especially to the attitudes of the child’s parents and other adults. This was not

⁷⁸² In the second edition of his textbook, Kanner made similar remarks about the contact between physician and patients. He emphasized that in child psychiatry, “a physician is confronted initially by an adult and by a child” as a child “never comes to a physician alone”. Kanner, *Child Psychiatry* (1948), p. 181.

Like his teacher, Kanner maintained that the child’s response “is determined by the doctor’s attitude” and that physicians are “confronted with the need to treat attitudes as well as bodies”. Kanner, *Child Psychiatry* (1948), p. 187, 142

However, Kanner’s main concern was to describe the attitudes of physicians, not the attitudes of children. I am not sure then, if and when Kanner considered the possibility that some children do not spontaneously make attitudinal contact in the way typical children do.

⁷⁸³ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Series XII Scientific notes and records: Baltimore, Unit XII/1: Working Notes, Folder 161: Integration, III.

⁷⁸⁴ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Series XII Scientific notes and records: Baltimore, Unit XII/1: Working Notes, Folder 161: Integration, III.

⁷⁸⁵ "Proceedings of the Twenty-Seventh Annual Meeting of the American Orthopsychiatric association" (1950), p. 866

⁷⁸⁶ George C. Darr and Frederic G. Worden. "Case report twenty-eight years after an infantile autistic disorder" (1951), p. 569

⁷⁸⁷ Leo Kanner "Autistic disturbances of affective contact" (1943).

⁷⁸⁸ Leo Kanner and Leonard I. Lesser, "Early infantile autism" (1958), p. 724.

enough to conceptualize Donald's case, but he had just discovered the conceptual tools he needed, as we will see next.

5.3.2 European influences? Two Jewish refugees

In 1938, Kanner helped a large number of Jewish physicians come to the United States to escape the Nazis. Of these refugees Kanner took “a few qualified” paediatricians into his clinic, including George Frankl and Erich Benjamin.⁷⁸⁹ Both men were working on children who refrained from contact with other people, and could have offered Kanner the tools to conceptualize what was distinctive about Donald and the other autistic children. It is significant that even though Kanner held the ideas of Benjamin in high regard, he turned to Frankl's work to conceptualize the contact disturbances of autistic children.

Kanner seems to have learned about Erich Benjamin's work first. In a paper published in September 1937⁷⁹⁰, Kanner discussed Benjamin's book *Grundlagen und Entwicklungsgeschichte der kindlichen Neurose* (1930). Kanner hailed the book as one of the best of its kind, “a serious effort to formulate children's behavior difficulties in a manner that tries to do justice to dynamic factors”.⁷⁹¹

In the summer of 1938, just before Kanner began developing the idea of an autistic disorder, he started corresponding with Erich Benjamin.⁷⁹² The latter had been looking to leave Germany since January 1938 and had come into contact with Kanner via the Swiss child psychiatrist Jakob Lutz. In a paper published in September 1938, Kanner discussed Benjamin's view that neurosis in children involves “social contact disturbances”, defined as difficulties “adjusting to the task of growing into relationships with other people”.⁷⁹³ In October 1938, Kanner offered Benjamin a position as Research associate at his

⁷⁸⁹ American Psychiatric association Foundation, Melvin Sabshin, M.D., Library & Archives, Leo Kanner, M.D. papers, Archives Box 100695, folder 7: Autobiography (2) typed copy, pp. 210-392, at p. 381.

⁷⁹⁰ Leo Kanner, "The development and present status of psychiatry in pediatrics" (1937), p. 425.

⁷⁹¹ Kanner, "Some pediatric problems of behavior in infancy and early childhood" (1938), p. 425

⁷⁹² Oegele, *Leben und Werk des jüdischen Wissenschaftlers und Kinderarztes Erich Benjamin* (2003), p. 161

⁷⁹³ Kanner, "Some pediatric problems of behavior in infancy and early childhood" (1938), p. 427

child psychiatry department.⁷⁹⁴ We can be certain, then, that Kanner knew of Benjamin's idea of contact disorders before he started developing his theory of autism.

In *Grundlagen und Entwicklungsgeschichte der kindlichen Neurose*, Benjamin made several remarks that Kanner could have taken as starting point in developing a theory of autistic contact disorders. The book described Benjamin's developmental theory, which was influenced by Charlotte Bühler. He maintained that while children in the first years of their life strive to develop positive social contact with other people, this initial development is interrupted by a stage of resistance (*Trotzphase*). In this second stage, children begin to distance themselves from other people and start to "refuse to make contact".⁷⁹⁵ Starting around the second year of life, children develop an "urge to temporarily break off contact with the environment, to isolate oneself, and to withdraw into oneself".⁷⁹⁶ Benjamin believed that in most children this stage would last for about two years, and in these cases he considered resistance a typical part of development.⁷⁹⁷ However, he found that in some children the stage of resistance develops into a "disorder of social relations". Such a disorder might take the form of introversion: turning away from reality and losing interest in the external world.⁷⁹⁸ Benjamin believed that such a 'neurosis' was caused by a child's constitution (*Anlage*) rather than being a reaction to their environment (*Umwelt*).

At one point, Benjamin described this withdrawal from contact as an "autistic attitude".⁷⁹⁹ Indeed, it sounds similar to Bleuler's description of autism and even more so to Asperger's suggestion that autistic children are stuck at a stage of differentiation from the world. Why, then, did Kanner not turn to Benjamin's ideas to develop his own theory of autism?

⁷⁹⁴ The department received 2,000 dollars from the *Emergency Committee in Aid of Displaced Foreign Medical Scientists* to provide a stipend for Benjamin. The Johns Hopkins University Circular (1941), p. 553. JScholarship, <https://jscholarship.library.jhu.edu/>. Accessed 20 August 2021.

⁷⁹⁵ Erich Benjamin, *Grundlagen und Entwicklungsgeschichte der kindlichen Neurose* (1930), p. 53

⁷⁹⁶ *Ibid.*, p. 69: "der Drang, vorübergehend den Kontakt mit der Umwelt abzubrechen, sich zu isolieren und sich auf sich selbst zurückzuziehen".

⁷⁹⁷ *Ibid.*, p. 37: "mangelndes soziales Kontaktstreben".

⁷⁹⁸ *Ibid.*, pp. 67-69; alternatively, it may take the form of rebellion or regression.

⁷⁹⁹ *Ibid.*, p. 86: "autistische Einstellung".

Kanner agreed with Benjamin that personality problems often have their basis either in the period of resistance or in puberty – stages in which the child is developing a new degree of autonomy vis-à-vis its parents.⁸⁰⁰ However, Kanner found Benjamin's idea that the period of resistance is “anchored in the Anlage” too fatalistic.⁸⁰¹ Benjamin suggested that the typical period of resistance, and its development, in some children, into a disorder of social relations had a constitutional component, but (like Asperger) he believed that this predisposition would not manifest until the second year of life and would follow a period of good social relations.

Instead, Kanner suggested that personality problems are “the expression of a child's struggle to establish a way of living amidst a confusing and upsetting welter of educational inconsistencies”, such as overly warm or cold parental attitudes.⁸⁰² Kanner on the one hand believed that in autistic children the contact disturbances are there from the start and do not follow an initial period of good contact. But on the other hand, he believed that their fate is not fully determined at birth and also depends on their social environment.

Moreover, Frankl's approach of contact disorder has the advantage that he framed them as *emotional* disorders, the recognition of which contributed to the recognition that the mind is not merely intellectual but also emotional.

I believe these are the reasons that Kanner did not take Benjamin's concept of contact disorders as his starting point but Frankl's. As we have seen in the first chapter, Frankl was the other Jewish refugee Kanner took into his clinic. Like Benjamin, he described contact disorders in children, but he conceptualized them as an emotional disorder that manifests from birth. It was Frankl's idea of *affective* contact disorders that had the most direct influence on Kanner's theory of autism.

⁸⁰⁰ Kanner, "Psychopathological problems of childhood" (1935), p. 91; idem, "Psychiatric problems in children" (1944), p. 577; idem, "Do behavioural symptoms always indicate psychopathology?" (1960).

⁸⁰¹ Kanner, "Psychiatry: its significance in pediatrics" (1943-4), p. 53; see also his "Convenience and convention in rearing children" (1944).

⁸⁰² Kanner, "Psychiatry: its significance in pediatrics" (1943-4), p. 53.

Did Kanner mean the same by *affective* contact as Frankl? Frankl observed in some children a “disorder in the patient’s relationship to other people”; he believed that it was caused by language difficulties, especially impairments of the understanding and expression of emotions by means of non-verbal symbols.⁸⁰³ It is significant that in describing affective contact, Kanner would often use terms like ‘communicative’ and ‘communication’. Thus, Kanner wrote in 1943 that Donald “did not use communicative gestures”, that Charles “never used language as a means of communicating with people”, that John “used language not as a means of communication” and that Eileen, too, showed “no communicative gestures”; he concluded that the 11 children he described did not use language “as a tool for receiving and imparting meaningful messages”.⁸⁰⁴ In the second edition of his textbook, in a new section on initial contact with the child, Kanner wrote that there is “an integration of speech and nonverbal language”⁸⁰⁵ – just as Frankl had suggested. This may seem to suggest that Kanner was using the term ‘affective contact’ in the same way as Frankl (see chapter 1): to denote the communicative exchange of ideas, feelings, and experiences with other persons.

I don’t think that this is the full story, however. Rather, like Asperger, Kanner took up Frankl’s concept of contact disorders and developed it into the direction of a much broader autistic disorder that affects the whole personality. For Kanner, “disturbances of affective contact” involved the absence or limitation of the emotional relationships to other people. In typical children, such relationships would be two-sided and involve mutual adaptation of emotional reactions. In autistic children, relationships would be more one-sided, as they would anxiously seek to maintain their status: the aloneness of the self and the sameness of their environment.

For Kanner, Frankl’s idea of contact disorders was still too limited in scope. Frankl considered language difficulties to be the cause of contact disorders in children. He focussed on conditions such as post-encephalitic parkinsonisms, where a good ability to understand and express emotional language is

⁸⁰³ George Frankl, "Language and affective contact" (1943), p. 256.

⁸⁰⁴ Kanner, "Autistic disturbances of affective contact" (1943), pp. 222, 237, 238, 240, 243.

⁸⁰⁵ Kanner, *Child Psychiatry* (1948), p. 185.

destroyed or diminished after illness. However, Frankl also described the case of Karl K., who showed a “lack of contact with persons” from birth and lacked “a communicative tendency” from the start.⁸⁰⁶ This idea that some children are solitary persons gave Kanner the idea that some children may have an inborn disability to develop affective contact. Frankl emphasized that in such cases the intellectual language is well developed whereas the emotional language is not. Kanner widened this idea beyond emotional language to the entire emotional factor of the personality.

Then again, his idea that autism affects the whole personality went beyond Frankl’s concept of contact disorders and was rather influenced by Adolf Meyer, as we will see next.

5.3.4 Affect as one factor of the personality: the influence of Adolf Meyer

Kanner first met Adolf Meyer in 1928.⁸⁰⁷ In that year, Meyer announced a fellowship in Psychiatry at the *Henry Phipps Psychiatric Clinic* in the May issue of the *American Journal of Psychiatry*. Kanner wrote to Meyer to ask him if he might introduce himself at the convention of the *American Psychiatric association* that would take place in June. The permission was granted and when Kanner did indeed approach Meyer, the professor asked him to come to his room, where they spoke for two hours. This talk was the beginning of a professional relationship that would last until Meyer’s death in 1950.

When Kanner started his fellowship in October 1928, Meyer had already been director of *Phipps* for 20 years, since its foundation in 1908 (the building did not open until 1913).⁸⁰⁸ During that time, Meyer had established a *psychobiological* approach to psychiatry.

Meyer’s psychobiology had as its central idea that human beings integrate their body and mind and all their other functions by forming a personality. He emphasized that the personality is not a sum of its parts, but a

⁸⁰⁶ George Frankl, "Language and affective contact" (1943), p. 259.

⁸⁰⁷ American Psychiatric association Foundation, Melvin Sabshin, M.D., Library & Archives, Leo Kanner, M.D. papers, Archives Box 100695, folder 7: Autobiography (2) typed copy, pp. 210-392, at p. 309.

⁸⁰⁸ Susan D. Lamb, *Pathologist of the Mind: Adolf Meyer, Psychobiology and the Phipps Psychiatric Clinic at the Johns Hopkins Hospital, 1908–1917* (2010), chapter 2.

biological function that integrates its constituent parts into a higher-level of functioning.⁸⁰⁹ Meyer defined integration as “the bringing together of parts within a whole”, that is, “the combining of elements of a lower level into units of a higher level with possible new levels of arrangement”.⁸¹⁰ His idea was that this new whole or unit has characteristics that its constituents parts do not have and that would not exist without the integration process. Such integration occurs on different levels, the highest of which is *mental* integration – another name for subject and personality formation.⁸¹¹ He thought that humans share many of their biological functions with other animals but are unique in blending these lower-level functions with the *meaning function*, or as he also called it, *symbolization*. This higher and uniquely human level of functioning is integrated in a special way, because it uses symbols, language and imagination to go beyond immediate sensory experience and to draw in the past and the future. Mental disorder, in Meyer’s view, occurs on the level of *psychobiological* integration (‘mental’) and occurs in a unique situation to which it is a maladjustment (‘disorder’).

In this psychobiological approach Kanner was immersed during his fellowship with Meyer, from October 1928 until October 1931. Just at that time, *Phipps* received a grant for the investigation of psychiatric problems of children at the *Johns Hopkins* paediatric clinic.⁸¹² Meyer asked Kanner to make this happen and the latter started the work on the first of November. Meyer would continue as director of *Phipps* until his retirement in 1941. In the 1970’s, a portrait of Meyer still hung over Kanner’s desk and like his portrait his ideas were hovering over Kanner until his death.⁸¹³

⁸⁰⁹ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Series XII Scientific notes and records: Baltimore, Unit XII/1: Working Notes, Folder 35: The Biological Integrative Levels and the foundations of psychopathology, p. 15. Meyer sometimes distinguishes between ‘subject-formation’ as a short-term process in the moment, and ‘personality formation’ as forming a stable personality.

⁸¹⁰ *Ibid.*, p. 22.”

⁸¹¹ *Ibid.*, p. 27ff.

⁸¹² American Psychiatric Association Foundation, Melvin Sabshin, M.D., Library & Archives, Leo Kanner, M.D. papers, Archives Box 100695, folder 7: Autobiography (2) typed copy, pp. 210-392, at p. 350.

⁸¹³ Kanner, "Historical perspective on developmental deviations" (1976), p. 187.

I believe that Meyer did not so much influence Kanner's conceptualization of early infantile autism specifically, but had a decisive influence on Kanner's work in two other respects.

First, Meyer influenced the way Kanner examined and diagnosed children with autism. In the first edition of Kanner's textbook on child psychiatry, the second section was devoted to what he described as "examination and diagnosis". Kanner emphasized the different nature and complementarity of *examination* – "an analytical procedure" – and *diagnosis* – "a synthetic procedure". Examination would involve considering as many different factors as possible so as to take all aspects of the person into account. In contrast, diagnosis involved piecing all these different factors together again so as to develop a coherent disease picture. This combination of examination and synthesis is typical for Meyer's approach to psychiatry.

Second, Meyer influenced Kanner's theory of the personality, which is essential to Kanner's theory of autism, as he believed that autism ultimately affects the whole personality. The idea that a disorder affects the whole person was central to Meyer's work.

When Kanner introduced the term emotional reactivity it was clearly in the context of Meyer's psychobiology. Meyer proposed that "[a]ll life is reaction, either to stimuli of the outside world or of the various parts of the organism".⁸¹⁴ He believed that disorders such as "depressions or obsessions" are best "treated as reactions to something"; by using the term reaction he wanted to direct attention to "the whole picture or pattern or set of circumstances and development within which the development complained of has the position of a 'reaction'".⁸¹⁵ On this view, there is no mind-stuff, only the adaptation and adjustment of the whole individual to life situations.⁸¹⁶ This may sound like behaviourism, but by 'reactions' he meant performances that are more complex than the conditioned reflexes discussed in crude behaviourism.⁸¹⁷ He discerned

⁸¹⁴ Adolf Meyer, "A short sketch of the problems of psychiatry" (1897), p. 540.

⁸¹⁵ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Series XII Scientific notes and records: Baltimore, Unit XII/1: Working Notes, Folder 578: Reaction & Responsiveness.

⁸¹⁶ Adolf Meyer, "The role of the mental factors in psychiatry" (1908), p. 41.

⁸¹⁷ Kanner, *Child psychiatry* (1935), p. 37

between “immediate reaction in temporary subject organization” and the more stable reactions of a personality that are mediated by symbols and concepts and go beyond present reality.

Meyer proposed that ‘normal’ and ‘abnormal’ behaviour alike should be treated as “reactions to something”.⁸¹⁸ Whether someone’s reactions are healthy or unhealthy depends on the individual’s success “in working through the conflicts, tangles and temptations of usual and unusual demands” from the environment.⁸¹⁹ If a patient has a “depressive reaction”, for example, his doctors should also look at his “constitutional make-up”, but Meyer believed that the external “precipitating factor” is “of the greater importance because it alone gives us an idea of the actual defect”.⁸²⁰

Meyer grouped similar reactions into reaction set or reaction patterns. Kanner was clearly influenced by this idea of “combinations and constellations of facts which bear sufficient resemblance to each other to be considered together for special well-defined needs, such as an affective reaction”.⁸²¹ Indeed, in the 1930’s, Kanner often used the term ‘reactions’ in Meyer’s sense, to describe the psychopathological problems of children without having to postulate a fixed disease entity.⁸²² Kanner departed from this approach, however, when he proposed that there is a distinct disorder called early infantile autism.

5.4 Leo Kanner’s relationship to Hans Asperger’s work

The most influential claim about the difference between Kanner’s and Asperger’s work is Dutch child psychiatrist Dirk Arnold van Krevelen’s identification of two differences: Kanner “described [...] *processes*, characterized by a *course*” whereas Asperger “represented *traits*, which were *static*”.⁸²³ My own research

⁸¹⁸ Johns Hopkins Medicine, Nursing, and Public Health, Alan Mason Chesney Medical Archives, Series XII Scientific notes and records: Baltimore, Unit XII/1: Working Notes, Folder 578: Reaction & Responsiveness.

⁸¹⁹ Adolf Meyer, "The role of the mental factors in psychiatry" (1908), p. 44

⁸²⁰ Adolf Meyer, "The role of the mental factors in psychiatry" (1908), p. 41

⁸²¹ Kanner, "The significance of a pluralistic attitude in the study of human behavior" (1933), p. 35

⁸²² Kanner, "The significance of a pluralistic attitude in the study of human behavior" (1933), pp. 30-31; idem, "Psychopathological problems of childhood" (1935), pp. 585, 590, p. 597; idem, "Psychiatric clinic" (1937), p. 614; idem, "The invalid reaction in children" (1937).

⁸²³ Dirk Arnold van Krevelen, "early infantile autism and autistic psychopathy" (1971), p. 83.

has affirmed these two differences. We have seen in Kanner's view, the performance of autistic children improves over time, although its core remains in place. In contrast, Asperger believed that autistic children are stuck in the same developmental stage from two or three years of age; he did not seem to see much room for development.

In another respect, Van Krevelen's view is imprecise, however. Van Krevelen also wrote that according to Kanner autistic children are "psychotic" whereas in Asperger's view autistic children have "an abnormal personality".⁸²⁴ This statement is misleading: although Kanner did sometimes describe autism as a childhood psychosis, he did not oppose it to personality problems. To the contrary, he thought of autism as an emotional disorder that affects the whole personality. Both Kanner and Asperger, then, proposed that autism ultimately affects *the whole personality*. Both men stressed that personality formation involves *integration* and both advocated a holistic approach to psychiatry.

In light of this overlooked similarity between their theories, it is surprising that Kanner believed that Asperger's theory of autistic psychopathy "if at all related to infantile autism, is at best a 42nd cousin".⁸²⁵ One reason may be that Kanner was highly critical of the typological approach to the personality, which as we have seen was central to Asperger's idea of autism as a personality type; Kanner felt that typologies are overly simplistic and abstract one segment of the whole that should be seen as integrated with all the other segments.⁸²⁶ There is no evidence, however, that Kanner believed that Asperger's theory was inadequate; to the contrary, he seems to have valued his theory but simply believed that it described a different disorder.

Historians have pondered why Asperger consistently referred to Kanner's work, in all his papers on autism published after 1952, whereas Kanner did not mention Asperger until 1971 and even then, only once and in passing.⁸²⁷

⁸²⁴ Ibid.

⁸²⁵ Kanner, "Book review: The Autistic Child, by I. Newton Kugelmass" (1971). Kanner's colleague Leon Eisenberg wrote something similar in his review of this book: "He contends that Kanner's syndrome was 'confirmed' by Asperger in 1944 although Asperger ... described a different group of children (autistic psychopaths) and could not in any event have read Kanner's paper at the time he wrote his own." Leon Eisenberg, "Book review: The autistic child by I. Newton Kugelmass" (1971), pp. 103-4.

⁸²⁶ Kanner, *Child psychiatry* (1935), p. 93; idem, "Behaviour disorders in childhood" (1944), p. 765

⁸²⁷ Kanner, " 'The Autistic Child'. Book review of Kugelmass, *The Autistic Child*. Thomas, Illinois, 19-70." (1971).

This had led to speculations among historians that Kanner deliberately ignored Asperger's work out of jealousy, embarrassment or spite. Steve Silberman writes in *Neurotribes* that "Kanner himself encouraged the view that Asperger's work was unworthy of serious consideration by maintaining a Sphinxlike silence about his Viennese counterpart" and suggests that it is unlikely that Kanner didn't know about Asperger's theory.⁸²⁸ Michael Fitzgerald goes a step further and claims that since Kanner "did not mention Hans Asperger's name" even though he knew about his work he was guilty of "plagiarism".⁸²⁹

Drawing on not previously reported archive materials, I will show that these explanations are mistaken: Leo Kanner not only appreciated Hans Asperger's work on autism, but actually was instrumental in the recognition of his work in English language countries. He deferred the important task of writing about Asperger's work in English to his Dutch colleague and friend Arn van Krevelen.

Asperger may have first encountered the name Asperger in 1957.⁸³⁰ It is absolutely certain that he knew about Hans Asperger's work on autism in 1970. In that year *Autistic Child* came out, a book written by I. Newton Kugelmass. In the beginning of this book, Kugelmass wrote that while Kanner "was the first among them all to characterize the defective capacity of affective contact in eleven young children as early infantile autism" [...] Kanner's syndrome was [later] confirmed by Asperger [sic] and five other authors, including Van Krevelen.⁸³¹ Now, Kanner was irritated both by Kugelmass' misspelling of Hans Asperger's name and by his misrepresentation of Asperger's idea of autistic psychopathy:

⁸²⁸ p. 152.

⁸²⁹ Michael Fitzgerald, "Autism: Asperger's syndrome—History and first descriptions" (2008).

⁸³⁰ Charlotte Simmonds claims that Kanner learned about Asperger's work in 1958. Specifically, she argues that in that year "Kanner read and quoted van Krevelen's 'Zur Problematik des Autismus', a paper containing a comparison of the two autisms". Simmonds, *G. E. Sukhareva's place in the history of autism research: Context, reception, translation* (2019), p. 252.

Simmonds offers no reference, but I assume she refers to "The Specificity of Early Infantile Autism", which Kanner read in 1957 and published in 1958. It contains references to two Spanish papers by Van Krevelen. (Van Krevelen gave at least 7 lectures in Spain in the 1950's.) The first paper was entitled "Problemática del autismo infantil" and appears to be a Spanish translation of "Zur Problematik des Autismus". The second paper was "Crítica sobre el diagnóstico del autismo infantil precoz" and had an English abstract mentioning Hans Asperger.

⁸³¹ I. Newton Kugelmass, *The Autistic Child* (1970), p. 5

There is repeated mention of Ansperger [sic] who is cited as having “confirmed Kanner’s syndrome” in 1944. The name is Asperger, and the man, at that time, could have no knowledge of Kanner's publication; instead, he independently described what he called “autistic psychopathy” which [...] merits, and has received, serious attention from investigators not confused by klang association.⁸³²

After Kanner read Kugelmass’ book, he wrote to Van Krevelen:

I was rather amazed to find that the name Asperger is unfamiliar even to some of those who have written books on autism and that in a recent book, aside from the fact that his name was misspelled, he has been utterly misquoted. I know that you have given quite a bit of thought to the relationship between early infantile autism and Asperger’ autistic psychopathy. I wonder if you could find the time to present your ideas about the matter in a paper for the new journal. I feel that such a statement would be timely, essentially needed in this country and give Asperger the recognition he deserves.⁸³³

Van Krevelen complied: in 1971 he published an English paper comparing Kanner’s and Asperger’s theory of autism.⁸³⁴ This paper appeared in the first volume of *Journal of autism and childhood schizophrenia*, of which Kanner was the founding editor, alongside a paper by Kanner on childhood psychosis and his review of Kugelmass’ book. Kanner wrote to Van Krevelen about this paper:

Your statement is a masterful, clearly expressed, indisputable juxtaposition of the distinguishing features of early infantile autism and autistic

⁸³² Kanner, " 'The Autistic Child'. Book review of Kugelmass, *The Autistic Child*. Thomas, Illinois, 19-70." (1971). Kanner’s colleague Leon Eisenberg wrote something similar in his review of this book: “He contends that Kanner's syndrome was ‘confirmed’ by Asperger in 1944 although Asperger [...] described a different group of children (autistic psychopaths) and could not in any event have read Kanner's paper at the time he wrote his own.”

⁸³³ American Psychiatric association Foundation, Melvin Sabshin, M.D., Library & Archives, Leo Kanner, M.D. papers, Archives Box 100697, folder 98: Letter from Kanner to Van Krevelen, dated September 12, 1970

⁸³⁴ Dirk Arnold Van Krevelen, "Early infantile autism and autistic psychopathy" (1971)

psychopathy. It had to be brought to the attention of the American reader and – as I anticipated – could not be set down so lucidly and succinctly by anybody else, not even by myself or Asperger.⁸³⁵

This was not the first English paper in which Van Krevelen discussed Asperger's theory: he had already co-authored an English-language paper on his theory in 1962.⁸³⁶ However, it was the later paper that inspired Lorna Wring to write a paper on Asperger's syndrome, which led to wide recognition of Hans Asperger's work in English-language countries.⁸³⁷ In 1981 and 1986 Wing referred to Van Krevelen's 1971 paper as the first English language paper on the subject, not mentioning the 1962 article.⁸³⁸ In this way, the article Kanner commissioned on the comparison of his and Asperger's theories of autism was instrumental in the recognition of Asperger in English-language countries.

That Kanner in 1971 was "amazed" that Asperger's name was still unfamiliar indicates that at that time he must have known about Asperger's work on autistic psychopathy for a while already. Kanner did not make Asperger's work known right away and he did not do this himself. He did not, however, ignore Asperger.

5.5 The contemporary significance of Leo Kanner's theory

Kanner is widely recognized as the first to describe autism as a distinct disorder, even though we have seen that Asperger was a little earlier, not to mention similar ideas in other authors. Whereas Asperger's concept of autistic psychopathy did not become widely known in the USA until after 1981, Kanner's

⁸³⁵ American Psychiatric association Foundation, Melvin Sabshin, M.D., Library & Archives, Leo Kanner, M.D. papers, Archives Box 100697, folder 98, Letter from Kanner to Van Krevelen, dated 26 March 1971; underlining original.

⁸³⁶ Dirk Arnold Van Krevelen and Christine Kuipers, "The psychopathology of autistic psychopathy" (1962).

⁸³⁷ Cf. Silberman, *Neurotribes: The legacy of autism and how to think smarter about people who think differently* (2016), p. 378-379; his source is an interview with Lorna Wing and Judith Gould

⁸³⁸ Lorna Wing, "Asperger's syndrome: a clinical account" (1981), p. 115; idem, "Clarification on Asperger's syndrome" (1986), p. 513

concept of early infantile autism became known much earlier. Kanner's papers on autism were widely cited in English language papers before 1981.

Kanner's relevance to diagnostic conceptualisation today lies in his influence on the *symptoms* of autism in the DSM-5. I have emphasized the term 'symptoms' since Kanner's underlying ideas, especially the idea that autism is an emotional disorder, was increasingly ignored in the development of the DSM.

Initially, Kanner's ideas influenced diagnostic conceptualisation directly, in the USA as well as abroad. To give just one example, Arn van Krevelen in 1952 described, as the first in Europe, a case of early infantile autism, drawing on Kanner's papers.⁸³⁹ Later, the influence of Kanner's ideas on the diagnostic conceptualisation⁸⁴⁰ of autism in psychiatry was mediated by classification manuals, most importantly the DSM.

The DSM-I and DSM-II included the category of 'childhood type' schizophrenia, with an onset "before puberty".⁸⁴¹ They acknowledged that childhood schizophrenia can be manifested by "autism" or "autistic behavior", but these editions did not include autism as a distinct disorder. Clearly, the authors did not follow Kanner's suggestion that autism should be clearly distinguished from other forms of 'psychotic behaviour' in childhood. Kanner would have agreed to make autism a sub category of childhood schizophrenia, as he did in the second edition of his textbook, but would have warned against lumping it together with other forms of schizophrenia.

The DSM-III was the first edition to include autism as a distinct disorder, under the general heading of "pervasive developmental disorders", defined as

⁸³⁹ Dirk Arnold van Krevelen, "Een geval van 'early infantile autism'" (1952).

⁸⁴⁰ Kanner's influence on diagnostic practice was of course also influenced by checklists and rating scales. Between 1959 and 1978, the first of these were devised to aid in the diagnosis of autism and related disorders. These early instruments have in common that they focussed on observable behaviours, including the behaviours that had been described by Kanner. For a comparison, see DeMyer, Marian K., et al., "A comparison of five diagnostic systems for childhood schizophrenia and infantile autism" (1971) and Susan L. Parks, "The assessment of autistic children: A selective review of available instruments" (1983).

After 1981, a newer class of instruments has been developed that looked beyond Kanner's autism to other forms of autism as well. For reviews, see Tony Charman and Katherine Gotham, "Measurement Issues: Screening and diagnostic instruments for autism spectrum disorders—lessons from research and practise" (2013);

⁸⁴¹ American Psychiatric association, Committee on Nomenclature and Statistics, *Diagnostic and statistical manual: mental disorders* (1952); American Psychiatric association, *Diagnostic and statistical manual of mental disorders: DSM-II* (1968).

“distortions in the development of multiple basic psychological functions”.⁸⁴² The DSM-III used the term “infantile autism”; this is Kanner’s term without the word “early”, despite the fact that one of the criteria was an onset before 30 months, which is much earlier than the previous criterion of “before puberty”. At that time, autism was still considered a very rare disorder, affecting 3 in 10.000 children.⁸⁴³

The DSM-III was developed in the late 1970’s, three decades after Kanner’s first paper on autism. The decision to include autism as a distinct diagnostic category was influenced by several developments in psychiatric diagnosis.⁸⁴⁴ There was increasing dissatisfaction with the previous versions of the DSM, which were considered chaotic, overly theoretical and of limited applicability, especially for children. Further, autism was increasingly differentiated from childhood schizophrenia and was more seen as an innate disorder. The DSM-III was further influenced by Michael Rutter’s definition of autism, which emphasized its early onset and its pervasiveness. He was the only author on autism cited in the DSM-III.⁸⁴⁵

In comparison with Kanner’s work, the most important thing to notice about the conceptualisation of autism in the DSM-III is that it did not include any reference to emotions. In keeping with Kanner’s two fundamental features, autism was defined in the DSM-III as a “lack of responsiveness to other people” (Kanner’s aloneness) and “bizarre responses to various aspects of the environment” (Kanner’s sameness); the third feature was “gross impairment in communicative skills”, which was similar to Frankl’s idea of affective contact as the communicative exchange of symbols. None of these features were described as emotional; the only reference to affect was a sidenote that autistic children may have “an indifference or aversion to affection”. Thus, the DSM-III included the symptoms described by Kanner but not the underlying idea that autism is an emotional rather than a cognitive or behavioural disorder.

⁸⁴² American Psychiatric association, *Diagnostic and statistical manual of mental disorders: DSM-III (1980)*.

⁸⁴³ Darold A. Treffert, "Epidemiology of infantile autism" (1970).

⁸⁴⁴ Nicole E. Rosen, Catherine Lord, and Fred R. Volkmar, "The Diagnosis of Autism: From Kanner to DSM-III to DSM-5 and Beyond" (2021), p. 2.

⁸⁴⁵ Cited were Michael Rutter, "The development of infantile autism" (1974) and Michael Rutter and Eric Schopler, *Autism: A reappraisal of concepts and treatment* (1978).

In 1987 the DSM-III Revised was published; it adopted the name “Autistic Disorder”, adding that it was “also known as Infantile Autism and Kanner's syndrome”.⁸⁴⁶ This renaming seems to reflect a wish to have a category that applied to all ages and developmental levels.⁸⁴⁷ In this version the description of the symptoms moved further away from Kanner's.⁸⁴⁸ They were no longer framed as reactions to the environment and emotion/affect was only mentioned in one of six associate features subsumed under (3): “absence of emotional reactions”. The DSM-III R, then, moved further away from Kanner's ideas but maintained the symptoms described by Kanner. The DSM-IV kept more or less the same criteria, but described them in terms of impairments rather than responsiveness or reaction; it also added Asperger's Syndrome as a distinct disorder (see chapter 3).

The DSM-5 has two criteria for what is now called autism spectrum disorder. First, an offshoot of the contact disorder and Kanner's idea of aloneness: “Persistent deficits in social communication and social interaction across multiple contexts”; second, an extensive broadening of Kanner's idea of sameness: “Restricted, repetitive patterns of behavior, interests, or activities”. The symptoms included under these criteria were already described by Kanner, but have been redescribed in more abstract and more general terms. The DSM-5 claims that autism spectrum disorder “encompasses” Kanner's autism. This is only true to some extent, however. Like in previous DSM-editions, autism spectrum disorder is not considered an emotional disorder; it is now framed as a neurodevelopmental disorder “characterized by developmental deficits”.⁸⁴⁹ The symptoms are there, but Kanner's underlying ideas have been eclipsed.

Theoretically, Kanner's theory has most to contribute to the minority view that autism is primarily an *emotional* rather than a cognitive disorder.

⁸⁴⁶ American Psychiatric association, *Diagnostic and statistical manual of mental disorders: DSM-III-R* (1987).

⁸⁴⁷ Nicole E. Rosen, Catherine Lord, and Fred R. Volkmar, "The Diagnosis of Autism: From Kanner to DSM-III to DSM-5 and Beyond" (2021), p. 3.

⁸⁴⁸ The main criteria had become: (1) impairment “in reciprocal social interaction”, (2) impairment “in verbal and nonverbal communication and in imaginative activity”, (3) “restricted repertoire of activities and interests”.

⁸⁴⁹ American Psychiatric association, *Diagnostic and statistical manual of mental disorders: DSM-5* (2013).

The best-known contemporary proponent of this view is Peter Hobson.⁸⁵⁰ He warns against “a bias towards analysing emotional states in cognitive terms”, that is, an “over-intellectualization of emotion”.⁸⁵¹ He criticizes those cognitive psychologists who suggest that experiencing the emotions of others requires a *concept* of self and other. Pace such cognitive approaches to emotions, he points to the developmental continuity between emotional processes, which are acquired earlier in life, and conceptual processes, which emerge later in life. Like Kanner, Hobson warns against being overconfident in drawing boundaries between cognition, emotion and motivation, suggesting instead that thinking often has an emotional basis that is overlooked by cognitive psychologists. Hobson describes this emotional basis as a preconceptual *sense* of self and other that is grounded in personal relatedness. Following Kanner, he describes this as “being in affective contact with someone else”.⁸⁵² Beyond Kanner, he argues that autistic children have “a restricted propensity to identify with other people” and to “assimilate the other person's attitude”.⁸⁵³ In other words, Hobson suggests that if autistic children do not adopt the perspective of other people, this is because they are not *moved* to do so, while typically developing children are so moved, through emotional engagement with the other. Like Kanner then, Hobson believes that autism involves impairments that are specifically emotional but that ultimately also affect cognition and motivation. Hobson has also reviewed empirical studies supporting this idea, which post-date Kanner's work.⁸⁵⁴

Hobson's work points to a limitation of Kanner's theory: he defined affective contact in terms of the *physiological* reactions to situations (the James–Lange theory of emotions), whereas our affective relationship to the world involves a much broader range of feelings. A pre-reflective embodied relationship to others and an attunement with others are such feelings.⁸⁵⁵

⁸⁵⁰ But see also Sarah Bowman, et al. "Gaze aversion and the primacy of emotional dysfunction in autism" (2004).

⁸⁵¹ Peter. Hobson, "Emotion as personal relatedness" (2012), p. 169.

⁸⁵² Peter, "Explaining autism: Ten reasons to focus on the developing self" (2010), pp. 392, 401.

⁸⁵³ Peter Hobson, "Autism and emotion" (2005), p. 419.

⁸⁵⁴ Ibid.

⁸⁵⁵ See Vittorio Gallese, "Intentional attunement: A neurophysiological perspective on social cognition and its disruption in autism" (2006); Thomas Fuchs, "Pathologies of intersubjectivity in autism and schizophrenia" (2015).

All in all, Kanner's theory of autism questions contemporary conceptualisations of autism that have retained the symptoms he described but have left behind his idea that autism is an emotional disorder.

5.6 Conclusion

Kanner's metaphor for autistic children is the barometer: he believed that they were susceptible to the emotional climate in their home. (To my mind, a thermometer would have been more consistent with his other metaphors). The barometer metaphor should not fool us into thinking that he believed autism to be caused by parental attitudes: he clearly thought that autism was an innate disorder that is present from birth. The point is rather that he believed that autism affects the whole personality and that the personality is not ready-made when a child is born but continues to develop in response to post-natal experience.

What autistic children lack at birth, in Kanner's view, is the typical instinctive ability to form affective contact with other people. In this sense, he considered autism a contact disorder. He did believe that in a properly warm and loving climate autistic children can nonetheless develop an ability to form affective contact.

Then again, Kanner did not reduce autism to a disorder of social contact. He believed that autistic children have a desire to maintain a status of aloneness. It is unclear how Kanner viewed the relationship between an inability to form affective contact and the need to maintain a status of aloneness. It would seem that Kanner thought that in autistic children the maintenance of aloneness replaced the ability to form affective contacts in other children, but this is an interpretation. What is clear is that Kanner was not only concerned with *social* contact. He also proposed that autistic children have a need to keep the physical environment the same and to protect the self from interference from moving or noisy objects. In Kanner's view, autism affects a child's relationship to both the social and non-social environment. It is unclear if the thought that both relationships involve affective contact. Be that as it may, we do know that he considered the needs of autistic children for aloneness and sameness to be

emotionally driven, by desire, anxiety and obsession. He did not consider autism a cognitive or learning disorder.

It is an overlooked dimension of Kanner's theory of early infantile autism that he thought that autism affects the whole personality. Because he stressed that each child integrates its emotions into a unique personality, he believed that although autism is primarily emotional, it is not exclusively so. Autism, in his view, affects the whole process of personality integration, in which emotion is the weak link.

Kanner developed a convergence between the term 'autism', all the symptoms ascribed to autism by the DSM-5, and the concept of a disorder of children's emotional responses to their environment that enters the personality, so to speak, through the child's emotions, while ultimately affecting the whole personality.