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Karl Bühler and Neopositivism : Reasons for a Non-Convergence

1. Wiener Kreis and Bühler Kreis

During the 1920s, one of the most significant philosophical orientations of the twentieth century was established in Vienna, alongside a school of psychology that, at the time, was considered one of the most important in the world: they were, respectively, the *Wiener Kreis*, led by Moritz Schlick, and the *Bühler Kreis*. The two approaches coexisted at the University of Vienna for over a decade. Bühler came to the Austrian capital in 1922, the same year as Schlick, to hold a “double professorship” (“Doppelordinariat”), as he was simultaneously professor of philosophy and of psychology. The *Wiener Kreis* and *Bühler Kreis* were established at virtually the same time. The followers of the first movement held their discussions, which were organised by Schlick, on Thursday evenings, while Bühler held a “Psychologisches Colloquium” every Wednesday evening. Bühler’s approach was distinguished by an overwhelming interest in language and philosophy, and his teachings yielded notable authors like Karl Popper, Egon Brunswik and Paul Lazarsfeld. Although it was not on the same level as the neopositivist circle of Berlin, the *Wiener Kreis* was famed for its openness toward all branches of science¹. Mathematics and physics were indubitably the leading fields, but there was also a strong interest in biology, sociology and, above all, psychology². Moreover, starting in the 1930s Bühler and Carnap worked intensely, albeit from different viewpoints, on the common topic of language³. Considering the common interests, importance and coexistence of these two approaches, it is legitimate (and of historical interest) to pose several questions. For example, what was the relationship between Bühler and the

¹ For Schlick “a philosopher who knew nothing except philosophy would be like a knife without blade and handle” (Schlick, 1931 : 112-116). Reprinted in Schlick (1979, vol. II: 171-175).

² On this subject, see R. Haller (1993: 75).

³ Bühler’s interest on the specific subject of language started in the Twenties with the important essay entitled *Kritische Musterung der neuern Theorien des Satzes*, (1918/1920: 1-20. On linguistic topics, see also *Vom Wesen der Syntax* (1922: 54-84); *Über den Begriff der sprachlichen Darstellung* (1923: 282-94) and then in the 1930s *Phonetik und Phonologie* (1931: 22-53) and *Die Axiomatik der Sprachwissenschaften* (1933a: 19-90). See also *Ausdruckstheorie. Das System an der Geschichte aufgezeigt* (1933b). Bühler’s *Sprachtheorie* and Carnap’s *Logische Syntax der Sprache* (*Logische Syntax der Sprache* were published the same year (1934). As can be surmised from one of Neurath’s letters to Carnap, he was already working on *Logische Syntax der Sprache* in 1932 (Carnap-Collection, 029-12-19).

neopositivists? Was there a true confrontation between Bühler, a language theoretician and internationally renowned psychologist, and neopositivists as Schlick, Carnap and Neurath on a theoretical level? This is an issue that is handled in rather general terms in the literature. More often than not, any discussion is limited to acknowledging this coexistence, while in other cases episodes (which are significant and that I will examine here) are mentioned, attesting to contacts between the two circles. To my knowledge, however, no one has investigated these contacts from a philosophical, linguistic or psychological standpoint. Therefore, my discussion here will focus on Bühler's *Sprachtheorie* and, starting with the information that can be gleaned from the *Wiener Kreis Archiv* and from the correspondence between Neurath and Carnap⁴, I will attempt to take a closer look at several aspects that, in my opinion, underscore the difficulties in the relationship between the two approaches and the reasons for the mutual critical distancing that distinguished this rapport.

If we look at the official writings, the first thing we notice is Bühler's scarce reference to his neopositivist colleagues. Moreover, most of these references are negative. Instead, what immediately stands out when we examine the writings of the neopositivists is the almost complete lack of references to Bühler's works and approach. If we then proceed to examine the archives of the neopositivists, we find that, on the one hand (in Schlick's case), there were certainly institutional contacts. At the same time, however (in the case of Neurath and Carnap), we discover that, alongside certain debates, discussions and seminars between the Wiener Kreis and the Bühler Kreis, there was also a certain amount of intolerance toward Bühler on a theoretical level.

First of all, let us examine the relationship between the two circles, based on what is found in the literature on logical empiricism and, above all, on what we can gather from the archives of the latter.

– According to Rudolf Haller, despite the difference in philosophical orientation, Bühler's works on the psychology of language led to his interest in the theories of the logical positivists. According to Haller, Bühler and Schlick had a good relationship from the very beginning (Haller, *op.cit.*: 65).

– As far as Schlick is concerned, there is effectively no reason to state that the relationship was anything but good and quite intense. However, we must also note that in most cases, we are talking about quasi-mandatory institutional relations (Schlick and Bühler worked together as supervisors or co-supervisors for a number of college theses (about 40), including those of authors like Popper and Brunswik; moreover, both Schlick and Bühler were members of the committee that approved Carnap's appointment in Vienna).

– As proof of the good relationship between Bühler and Schlick, Haller also highlights the well-known episode of the meeting between Schlick and Wittgenstein: after following him for years (starting essentially in 1924), Schlick did not actually manage to meet Wittgenstein until 1927, at the house of Wittgenstein's sister and in the presence of Karl and Charlotte Bühler, who had been invited to the meeting with Schlick (Haller, *op.cit.*: 89).

⁴ I could look into Wiener Kreis Archiv (WKA-Wiener Kreis Stichting, Amsterdam) and Carnap's and Neurath's collections (Archives for Scientific Philosophy [ASP], University of Pittsburg Libraries, Special Collections Departement) at the Philosophische Archiv of Konstanz University. I would like to thank Brigitte Uhlemann (University of Konstanz) for her kind collaboration and the Archives for Scientific Philosophy and Wiener Kreis Stichting for permission to copy and use the material which I mention in this paper.

– As to Carnap, it is significant that in 1930, following his arrival in Vienna, the *Verein Ernst Mach* appointed him to organise a study group focusing on scientific collaboration and on bringing the various disciplines closer together. In addition to figures like Herbert Feigl and Ludwig von Bertalanffy, the study group included Egon Brunswik and Paul Lazarsfeld, both of whom were part of the Bühler Kreis, and they held seminars for the workgroup (Carnap-Collection, ASP 028-30-05).

– Carnap, in turn, was invited to the discussion group headed by Bühler. Here, it is significant to mention the conference that Carnap held for Bühler’s group on 28 May 1930, entitled “*Die Psychologie in Rahmen der Einheitswissenschaft*”. As we can gather from a letter that Carnap sent to Schlick in September 1930, *Die Psychologie in physikalischer Sprache* (published in “*Erkenntnis*” in 1932) was essentially the reworking of this conference (Carnap-Collection, ASP 029-30-02; see also 110-03-30 and 110-03-33).

– Another episode is also worth mentioning. The famous *Ueberwindung der Methaphysik durch die logische Analyse der Sprache* (“*Erkenntnis*”, 1932), containing the renowned attack on Heidegger’s ideas, was the outcome of an interpretation of *Sein und Zeit* that seems to have been very attentive and articulate, thanks also Carnap’s participation in a discussion group organised by Heirich Gomperz and Karl Bühler, during which Heidegger’s work was “examined intensely”⁵.

– Lastly, in *Erinnerungen an den Wiener Kreis*, Gustav Bergmann notes that in place of the mathematicians, physicists and original members of the first circle, “growing numbers of Mr. and Mrs. Bühler’s students joined”. But then he adds, “during the classic period, a certain contact with this group consisted solely of Brunswik”⁶.

Getting back to the archives of the logical positivists, several passages from the *Wiener Kreis* sessions and from the correspondence between Neurath and Carnap are especially interesting. Using these passages as a starting point, I would like to focus on certain aspects of the enormous divide between these two schools of thought.

In the minutes from the *Wiener Kreis* session of 26 February 1931, Neurath refers to Bühler in mocking tones, ironically discussing Viennese behaviourism (in his opinion, Bühler was far from understanding the scope and consequences of American psychology). At the end of this session, Carnap sustained that Bühler should be considered as nothing more than a representative of the old introspective psychology (Schlick-Nachlaß, Zirkellprotokolle, WKA 185). In one of the passages from a letter from Neurath to Carnap dated from 22 October 1932, Neurath once again almost makes fun of Bühler. Neurath

⁵ See Friedman (1996: 45-79).

⁶ Bergmann (1988: 175). Egon Brunswik was Karl Bühler’s student and assistant at the Psychologisches Institut in Vienna from 1927 to 1931. At the same time, he was an active collaborator of the *Wiener Kreis*. He emigrated to the United States in 1936 and was chosen by the logical empiricists to draw up the monograph on psychology for the prestigious *International Encyclopedia of Unified Science*. His collaboration with the neopositivistic movement was intense, particularly after he immigrated to the US. He was a frontrunner on the subject of the unity of science starting with the first international congress held in Paris in 1935 and, above all, in later years – until the Berkeley congress in 1953 – he was indubitably the most active and enthusiastic psychologist in the movement for the “Unity of Science”. He was one of the main organisers of the Berkeley Conference for the Unity of Science (1953). From the archives of logical empiricism, we can see that Neurath was mainly the one who promoted his involvement in the neopositivistic movement.

cites the “turmoil” created by a psychology conference he held (evidently) for the *Bühler Kreis*, claiming, “One day I’ll tell you all about it. Oh, Bühler ...”. In the same letter, however, Neurath asks Carnap “how, where and how much” to develop physicalism further and how far he had gotten in writing *Logische Syntax der Sprache*. Also on this subject, Neurath tells Carnap why, according to Bühler, it would be entirely inappropriate to use the term “semantics” in relation to physicalism. Neurath continues, saying that for Bühler, this inevitably involves visual signs (*Seherzeichen*) and, more specifically the interpretation (*Deutung*) of visual signs. Neurath seems to accept Bühler’s statements on the subject (Carnap-Collection, ASP 029-12-19).

At this point, we can start to examine Bühler’s statements on the relationship between semantics and physicalism, according to what Neurath asserted in the above-mentioned letter to Carnap. In order to do this, we must take a brief look at the characteristics of the so-called “syntactical” or “physicalistic” orientation that Neurath gave the Viennese neopositivistic movement of the first half of the Thirties. As we will see, this concentration on the syntactical sphere of language, or on the relationship between sentences – to the detriment of the semantic sphere dealing with their meaning – created an enormous gulf between this phase of the neopositivistic movement (supported by Carnap and opposed by Schlick) and the direction taken by Bühler. From this standpoint, and limited to certain aspects of the theory of language, the common and sharp contrast with the physicalism of Neurath and Carnap created an unquestionable affinity between the viewpoints of Bühler and Schlick.

2. The Physicalism of the Wiener Kreis

It is common knowledge that, in its long history, the neopositivistic movement went through different phases, some of which were often triggered by the radical questioning of the convictions that characterised the preceding phase. In what was known as the phenomenalist phase (which was the circle’s original position), sensation – and thus subjective sense-experience, *private experience* – were indicated as *the basis* of scientific language. In *Logische Aufbau der Welt* (1928), for instance, Carnap described such basic *experiences* in the manner of *Gestalt psychology*. Both within the *Wiener Kreis* and outside it, however, objections and doubts were raised about the solipsistic and psychologistic character of a solution of this kind. To overcome them, in the early Thirties Neurath promoted the transition to the physicalistic or syntactical phase of the *Wiener Kreis*⁷. According to Neurath, instead of basing science on sensory data (determining the basis of scientific language starting with *private experience*, and thus in an essentially psychological and subjective manner), scientific theories had to be based on statements that

⁷ O. Neurath’s first texts on physicalism were *Soziologie im Physikalismus* (1931a: 393-431) and *Physikalismus*, (1931b: 297-303). Carnap’s shift toward Neurath’s viewpoint began with (Carnap, 1931: 432-65) and (1932-33: 107-42). Neurath’s criticism of the conception of protocols put forth by Carnap in *Die physikalische Sprache als Universalsprache der Wissenschaft* can be found in (Neurath, 1932-33: 204-14). For Schlick’s critique of physicalism, see (Schlick: 1934: 79-99). English translation in (Schlick, 1979, vol II: 370-387). Neurath stepped in once again to criticise Schlick in (Neurath, 1934: 346-62). Neurath was backed by C.G. Hempel, for example (Hempel, 1935: 49-59). Schlick again defended his position in (Schlick, 1935: 65-70).

spoke of objects through the language of physics or, in other words, through spatio-temporal determinations (*here, now*) and observational predicates (blue, hot). These statements were called “protocols”. I cannot go into the heated debate over protocols, to which scientific propositions were to be retraced in order to be verified⁸. However, I will mention them very briefly. Initially, protocol sentences were understood (particularly by Carnap) as the summary of an individual’s experience. For example, the law stating “all bodies expand if heated” is confirmed by the particular or singular sentence “At x o’clock of day and year Y, in Paris, body *a* is heated and expands”. This sentence is understood as the result of the protocols drawn up by a subject, observer S, at the indicated time and place. If the law in question is also confirmed by subjects S1, S2, S3 and so on, the proposition can then be considered intersubjective. Neurath claimed that this way of understanding protocols did not solve the issues of solipsism, psychologism and intersubjectivity. Conceived in this way, the protocols always imply the involvement of a subject: they are not presented in the form of “here, now, red” but, for example, as “Neurath, here, now, red”. Consequently, the individual protocol sentences that appear in the protocols of S, S1, and S2, and so on, will always differ in terms of the reference to the subject appearing in them and as a result, they do not satisfy the requirement of intersubjectivity. To overcome this limitation, according to Neurath, the error underlying this way of understanding protocols had to be acknowledged and eliminated definitively. The error was that of attributing to language the function of representing reality, and thus of seeking an empirical basis (chimerical, according to Neurath) that could act as a sure point of reference for comparing the protocols drawn up by different subjects. According to Neurath, we must consider language solely as a physical fact of sounds and signs, “itself a spatio-temporal arrangement”, and conceiving the truth of the sentences as the *coherence* of the sentences with each other, and not as the *correspondence* between language and reality. With the famous principle *We can't get behind language*, Neurath thus rejected each form of semantical relation between language and reality: “within language all transformations take place, not by confrontation of language with a ‘world’, a totality of ‘things’ whose variety language is supposed to reflect. An attempt like that would be metaphysics”⁹.

Neurath’s concept sparked a heated controversy that divided the Circle into two opposing fronts: on the one side was Neurath, with Carnap and Berliner C.G Hempel (the so-called left wing), while on the other were Schlick and V. Kraft (the right wing, with Russell, on the outside, sharing this view).

In effect, this drawn-out controversy did not end until Schlick’s death in 1936. According to Schlick, Neurath’s viewpoint and the conception of truth as coherence of sentences rejected the connection between empiricism and logical analysis that had been the premise of the Viennese group. Thus, Schlick proposed a return to the circle’s original conception (the one tied to the approach of Mach and Wittgenstein), reaffirmed a criterion of significance hinging on the relationship between propositions

⁸ Carnap backs Neurath’s viewpoint in (Carnap, 1931–1932). However, here he conceived the protocols in a way that was immediately and strongly contested by Neurath: this is the conception that is described in the text. In his rebuttal (1932-1933: 215-28), Carnap accentuates his shift toward the syntactical outlook of Neurath’s physicalism.

⁹ See Neurath (1931: 297-303). English translation (2001: 177). Neurath also notes, “Statements are always compared with statements, certainly not with some ‘reality,’ nor with ‘things’”. There is no “pre-linguistic” reality with which to compare our language (*ibid.*: 176). Even the protocols are sentences like any other; they cannot “verify” anything nor uphold any system.

and facts, and staunchly defended the semantic dimension of language against the coherentist option of Neurath and Carnap¹⁰. In this context, it is extremely interesting to take a close look at Schlick's essay *Ueber das Fundament der Erkenntnis* (1935) where, in essential points, it is possible to observe a clear affinity with the arguments that Bühler also brought against physicalism and the syntactical phase of the *Wiener Kreis*. In this essay, Schlick sets "affirmations" (*Konstantierungen*) against Neurath's protocols. The form of the affirmations is always along the lines of "Here now so-and-so" or, for example, "Here now pain...", or "Here now two black spots coincide". According to Schlick, however, the idea of defining these expressions in non-pointing terms must be considered completely implausible. Their unique characteristic lies in the indicative function, their characteristic is to point to a non linguistic situation: "the meaning of the words 'here', 'now', 'this here', etc., cannot be stated by means of general definitions in words, but only through such words assisted by pointings and gesticulations", and thus we have to get out of the language. By virtue of the type of words that appear in them, the *Konstantierungen* thus cannot be physicalised. In fact, "a genuine affirmation cannot be written down, for as soon as I put down the demonstrative terms 'here' and 'now', they lose their meaning"¹¹. Contrary to what Neurath sustained, the conception of language as a pure physical event must thus be considered untenable.

3. Bühler's Criticism of Physicalism: Pointing Words

In *Sprachtheorie*¹², Bühler's attack on physicalism and on a certain way of understanding the role of logic in the context of scientific language starts with the following question: "Is it expedient to unite symbols, symptoms and signals under the one proximate genus 'sign'?" Or, as claimed by "some" (the ones targeted by Bühler), should we consider "that under the most exact logical analysis *symbol* is the uniform superordinate concept that applies to all"? (TL: 42). Obviously, the backdrop to this discussion is Bühler's *Organ Model*, or the triplicity of the sense functions attributed to linguistic signs (and for which they can be *symbols*, *symptoms* or *signals*). In a step in which we can clearly grasp the reference to

¹⁰ As I already pointed out it must be noted that the physicalism sustained by Carnap in (1931) and (1932) differs from the physicalism of Neurath. Carnap does not emphasize the conception of language as a pure physical fact, and thus does not seem to do away with its symbolic-representative function. However, Carnap also used the well-known distinction between "*inhaltliche Redweise*" and "*formale Redweise*", set forth in *Die physikalische Sprache als universal Sprache der Wissenschaft*, to affirm that only the "*formale Redweise*" permits the translatability of the propositions of the various sciences in physicalistic language and that only "*formale Redweise*" makes it possible to avoid metaphysical comparisons between language and reality. This is as if to say: only a formal interpretation (and not a content-based or empiricist one) of physicalism makes it immune to otherwise inevitable metaphysical contaminations. Thus, physicalism must deal with words, not things. In 1934, Carnap's shift toward Neurath's syntactical orientation is even clearer. The distinction between the objective mode and the formal mode of speaking, and between objective problems and logical problems, remains central, but the meaning of symbols is essentially set aside: he deals with them only as pure signs within propositions. Logical analysis of language, structure of languages, formal properties of propositions, and rules for their formation and transformation: for Carnap, these are the true scientific problems.

¹¹ Schlick (1979II: 385-386) Neurath's published his response in *Radikaler Physikalismus und wirkliche Welt* (*Erk.*, 1935), rebutted in turn by (Schlick, 1935: 65-70). (Reprinted in (Schlick, 1979: 400-404).)

¹² English translation: Bühler (1990). (Here referred to as "TL".)

what Neurath and Carnap were doing in Vienna¹³, Bühler states that “the phenomena of language are themselves embedded in ‘reality’” and it is precisely along the lines of this statement that he bases his criticism and distances himself from his Viennese colleagues. In reality, we can highlight the distance between the syntactical-physicalistic viewpoint of the *Wiener Kreis* and Bühler’s viewpoint simply by juxtaposing them: their antithetical character would emerge on its own. In fact, one of the axioms of Bühler’s theory of language is that a sign “is a *symbol* by virtue of its coordination¹⁴ to objects and states of affairs” (TL: 35), that the unique and essential function of symbolic language is *Darstellung* (representation) – or the function of representing objects and states of affairs – and that, following in Plato’s footsteps, language must be considered “an *organum* for the one to inform the other of something about the things” (TL: 30). On the other hand, one of the essential characteristics of the symbolic system of language is its deliverance from the deictic field, so that the elements (words, as parts of the sentence) gain their meaning¹⁵ from the symbolic field (*Symbolfeld*) and its syntactical forms. Thus, within the symbolic system, language’s relationship with the world, or the symbol-world relationship, *can seem* to be severed. Instead, logic – with the exception of the anaphora and deictic instructions – consists exclusively (and legitimately) of sentences lacking a deictic field (TL: 435)¹⁶. It becomes clear that the basic assumptions of this viewpoint are completely antithetical to the position of Neurath, who theorised the metaphysical character of each pretension to establishing a relationship between language and reality. However, I feel that above and beyond the generalised and gross irreconcilability of these two viewpoints, it is interesting to emphasise why, in Bühler’s opinion, the view held by Neurath and Carnap had to be considered implausible (this is also one of the principal intentions pursued by Bühler in these pages of *Sprachtheorie*).

The radical alternative (TL: 43) posed by Bühler with respect to what was affirmed by Neurath, who is not mentioned directly, first of all concerns deictic words (or *pointing words*).

¹³ “The phenomena of language are themselves embedded in ‘reality’; in this decisive point they must not be regarded as being to a greater extent derivative, further removed from reality than the phenomena the physicist has to do with. If this contradicts the purely physicalist view of the world, so much the worse for it, and not for the facts” (TL: 43). On the “scientific mentality of modern logic”, see also: “I bow to this acuity as far as logic is concerned, but must point out that in the province of ‘exact’ symbolic logic a basic epistemological attitude to the facts of language has arisen (and let us hope it will only be with us temporarily) that I hold to be one of the most monstrous misjudgements that have ever been perpetrated on natural language” (*ibid.*).

¹⁴ The issue of the “relationship” between language and reality greatly occupied and afflicted neopositivist debates. In *Sprachtheorie*, Bühler deals with this extensively. I will simply note that with regard to the problem of “coordination” between sound signs and objects, which is the problem of the relationship between linguistic representation and reality, Bühler states: “[...] coordinations [...] always ‘exist’ only by virtue of a contract (a convention in the purely logical sense of the term) and *for* the parties to the contract” (TL: 36-37). By common agreement of the linguistic community, both lexical coordinations and syntactic conventions (TL: 37) come under this heading.

¹⁵ This is the crux of “the dogma of the lexicon and syntax”, first formulated by Bühler in (1931a: 97-122).

¹⁶ In fact, “logical propositions are made about the conceptual content as such and do not go beyond it”, in that logic expresses only ideal, conceptual judgements (TL: 436-37). And Bühler states “that is everything; neither from logic in general nor from some supposedly absolutely deixis-free proposition of the type S→P belonging to logic may more be demanded” (TL: 436).

Everything that involves linguistic deixis is characterised by the fact that “its meaning is fulfilled and made definite in the *deictic field* of language and not in the symbolic field [...] What ‘here’ and ‘there’ is changes with the position of the speaker just as ‘I’ and ‘thou’ jumps from one interlocutor to the other with the exchange of the roles of sender and receiver” (TL: 94)¹⁷.

For a theoretician of language, the functional determination of deictic words in the specific event of speaking poses no problem whatsoever, nor is this a problem for logicians, with the exception of a few, as we will see (120). With regard to deictic words, Bühler emphasises that the ancient grammarians and modern logic reached the same conclusions: according to the first, “deictic words do not state a [...] determinateness of the kind of thing (*ποιῶντα*) as the naming words do”; the second rejects the idea that deictic words can be considered conceptual signs, as opposed to naming words, which are. Bühler fully agrees with this vision, and in fact, this is a central element of his viewpoint. A sign is a “conceptual” sign if, in intersubjective exchange, it can be used by any and all “as a symbol for *the same* object”. And this is obviously not the case with deictic words¹⁸. For Bühler, all this is incontrovertible (TL: 119). Nevertheless, observes Bühler, “there is carping in every art and science”, and it is precisely a “carping” point of view, originating “in the most modern logic”, that Bühler attacks (TL: 120). Based on the distinction between deictic words and naming words, “some logicians of merit” (but not Russell, notes Bühler¹⁹) would be “inclined to declare something like the intention of eradicating the words *I* and *you* (and if they are consistent enough, all other deictic words, too)”. Deictic words should be eliminated from the scientific arena not only because they are “remnants of a phase of the history of humanity that has now been overcome”, but also because they are supposedly some kind of “a hiding-place for metaphysics” (TL: 120)²⁰.

Nonetheless, such a radical proposal must also tackle the problem of explaining what is so convoluted and metaphysical about pointing words. If A has lost sight of B or B is in a position that is not visible to A, who thus asks B where he is, what could be simpler for B than “[saying] *here*, with clear source quality”? (TL: 121; see also 108-110). More than “remnants of a phase of the history of humanity that has now been overcome” and more than the abyss of metaphysics, Bühler feels that, more simply, what must be recognised here is the specific performance of signs consisting essentially of adequately

¹⁷ In other words, deictic words receive the determination of their meaning from the contingent perceptive context. Instead, naming words are symbols that receive fullness and precision of meaning within the symbolic field (TL: 95).

¹⁸ “Everyone can say *I* and everyone who says it indicates a different object from everyone else; as many proper names as speakers are necessary to be able to make the transition from the intersubjective ambiguity of the single word *I* to the sort of unequivocalness of linguistic symbols that logicians demand; and this sort of unequivocalness is proper to the naming words”. The uniqueness of meaning, the constant correspondence between linguistic symbols and the relevant objects required by logic, is given only by naming words. Because of this, notes Bühler, there is no doubt that “modern formal logic is right when first off it strikes deictic words from the list of conceptual signs serviceable in intersubjective contact (and thus from the list of linguistic ‘symbols’)” (TL: 119).

¹⁹ It must be emphasized that the reference here to Russell is not accidental: as I already pointed out Russell was one of Schlick’s main allies against the syntactical changeover of the *Wiener Kreis*.

²⁰ In order to rise to the rank of science, psychology above all should relinquish these words “devoid of sense” (TL: 120). It is superfluous to emphasize that Bühler is also targeting the repercussions of Neurath’s physicalism in the field of psychology, where Neurath (as well as Carnap) adopted a behavioural viewpoint. In *Empirische Soziologie* (1931), for example, Neurath sustained that everything that is expressed not only with the terms *soul* and *spiritual* but also with the terms *I*, *motivation* and *personality* should either be expressible as something spatio-temporal or should disappear from science.

guiding one's partner, or acting as signals (TL: 121). Denying this means implementing a "radical failure to appreciate the multiplicity of practical needs that everyday language has to cope with and in the facts does cope" (TL: 120). An exhaustive approach to the language object "must proceed from the plain fact that ocular and aural demonstration is the simplest and most expedient behaviour that can be used by living creatures who need to consider the details of the situation on a wider and more refined basis, and use deictic words to that end" (TL: 121). As far as the "incurable subjectivity" attributed to terms like *I*, *you*, *here*, *now* is concerned, according to Bühler this stems from an essential misunderstanding and a prejudicial attitude against the terms themselves "I" and "subjectivity". In reality, terms like "I" and "you" are subjective in the same sense in which a "signpost [...] gives 'subjective' information" in relation to its position (TL: 122). We can think of road signs set up near a city that indicate different geographical directions but use the same sign, such as an arrow: "if they could say *here*, this word would indicate just as many different positions as the word *here* does when spoken by a human being. It is exactly the same with the word *I*" (TL: 122). Thus, according to Bühler it is evident that "whoever makes the objection of incurable subjectivity in criticism of words like *here*, *I* and *now* as communicative signs must also demand that the tourist offices remove all old-fashioned signposts; or he must realize that he has been tempted into drawing a hasty conclusion about the sense of these words from an axiom that is too narrow to be tenable" (TL: 122).

Bühler's retort to those supporting the banning of deictic terms may thus be summed up schematically by highlighting two points: the untenableness, within the concrete speech event, of the linguistic axiom by which "all language signs must be *symbols* of the same kind"; the fact that "[...] the same work must not be demanded of a signal as of a (pure) symbol because there is a sematological difference between the two" does not justify considering deictic words as superfluous primitive legacies of human communication or, worse, as language components intrinsically inclined to generate metaphysical drift of our vision of the world (TL: 122)²¹. Bühler's reflections actually touch other important aspects that I cannot linger over in this essay²². However, it is important to manifest the implications of the aforementioned picture with reference to scientific language and the disagreement

²¹ Bühler asks, "Where is it written that only naming words, conceptual signs, language symbols can facilitate the sort of intersubjective communication about things which is necessary in human life?" (TL: 120).

²² I am not able to linger here on two important aspects of Bühler's reflection regarding the relationship between logic and deixis. I will simply mention them. Logic is known to operate on sentences "lacking a deictic field" (TL: 435). Nevertheless, there is a type of deixis which Bühler believes no language can manage without, not even logical language. This is anaphora, whose pointing field is represented by the co-text: "In the system of symbols used in formal logic, which is also a language, there is no ocular demonstration making use of the signs of the to-deixis, but the anaphoric use is provided for. Words such as *hence*, *thus* and other such signs to refer back, which are used in all argumentation, are deictic signs. Optical signs of some kind or other can be introduced to replace them, but that changes nothing about the fact that they are indispensable. It is genuine optical deixis when letters are written in the normal fashion on an illustrative geometrical figure, say at the corners of a polygon. The symbolic value of these letters, which are then used in the text, can only be ascertained with regard to the figure, that is, by perception. Each letter says, 'look here, this is what I mean' (TL: 121). Moreover, also in logic, the relationship with deixis is uneliminable with regard to learning of logical symbology, which occurs through to-deixis. In this respect Bühler states: "Look at this: we use this sign written on the blackboard, on the page of the book before your eyes for this or that'. That is how one goes about granting meaning to all symbols, and without these deictic clues it would in fact be impossible to give intersubjective currency to any symbolic to any symbolic system" (TL: 435). Thus it appears clear to us that "the artificial language of logic cannot get along, that it cannot be 'logically constructed' without deictic signs, any more than any other language can" (TL: 43).

with Neurath's physicalism. Bühler declares without hesitation both phenomenology differentiation between deictic words and naming words, and their essential diversity, as well as that symbolic language cannot be derived from deictic language²³. Nevertheless, in his opinion, to consider language in purely linguistic terms, as a pure physical fact, can only emerge as implausible. Firstly, sematology and its application, the elucidation of the function of signals takes us back to the primary and perceptively founded structure of communication. Deictic words (whose function is to be *signals*) receive the determination of their meaning from concrete situational circumstances, from the contingent perceptive context and therefore not from the linguistic context: to understand them, we have to *get behind language*. For this reason, Bühler believes, as referred in Neurath's letter to Carnap, within the ambit of the physicalism (if this wants to be consistent), it would be substantially mistaken and incoherent to use the term "semantic", since this also deals (precisely as in the case of signals) with the perceptive interpretation of the deictic context. In the second place, within natural language, it is once again the deixis law to draw to the surface the language-world connections and the fact that this relationship cannot be eliminated. This emerges, in particular, even if we reflect on the relevance of the object deixis within the ambit of natural language learning: in fact – states Bühler – it should not be forgotten "that every speaker has gathered the meaning of *all* naming words from things and states of affairs pointed out directly or indirectly and then retained it by practice" (TL: 435). An unprejudiced reflection with regard to the function of signals, the very signals that the physicalistic approach intended to eliminate, and a more general reflection on the deictic field, therefore represent the main route for creating, on one hand, the original sign-perception relationship and, on the other, the fact that the object deixis is "implicitly and uneliminably contained in all statements about reality", that "there is no statement of existence without object deixis", that it "is implicitly contained in all propositions about reality" even when "it does not come to light linguistically" (TL: 437). And it is precisely in this light that the relationship between natural language and scientific language and the impracticability of founding scientific language on a purely logical-linguistic basis should be examined. There is an "umbilical cord" between deixis and scientific language – Bühler states – and it permits the symbolism of scientific language to grow, feeding on the natural language, and it remains even when it may appear "to be cut through" so to speak (TL: 435). Syntax and logical semantics may certainly eliminate pseudo problems, but to use them to cut out the language-world relationship and transform scientific language into a set of propositions lacking a

²³ This is clear, for instance, in Bühler's discussion related to the origin of language and his stand regards the idea of considering deictic words as "the *primal* words human language": the idea proposes that originally there would have been indicating gestures (pointing with the arm or index finger, indicating with head or eyes) that were initially mute, then progressively associated to and strengthened by sound signs that undertake the same function. Finally the gestures would have been fully replaced by the sound signs. According to this theory, therefore, the deictic gesture would then have given rise to the rest. With regard to what could be considered "the myth of the deictic source of representative language", Bühler observes that a theory of "temporal priority of a pointing without naming" is surely acceptable and that "myths need not be false" (for all this, compare *Ausdruckstheorie*). Nevertheless, Bühler is peremptory in his statement that in any case it should be borne in mind that deixis and naming are the result of totally distinct acts, that deictic words and naming words "cannot be derived from each other, and that this difference "cannot be supplanted by any speculation about origins [of the language]" (TL: 101-102). "Pointing – Bühler states – is pointing and never anything more, whether I do it mutely with my finger or doubly with finger and a sound to accompany the gesture. No, the progress is solely subject to the condition that the sound adds something, a new contribution, something specifically its own work" (TL: 102).

deictic field (which is an inherent and legitimate characteristic of logical utterances) is for Bühler “one of the most monstrous misjudgements that have ever been perpetrated on natural language” and, at the same time, an absolute scientific shipwreck, a disastrous science project (TL: 43).

As I stressed before, Bühler’s argumentation against physicalism or the syntactic phase of the *Wiener Kreis* is very similar to that used by Schlick in *Ueber das Fundament der Erkenntnis*: in fact, both hinge on the analysis of deictic words and their implications in the ambit of the scientific topic: this would confirm and make more specific the emphasised accord between the authors, as well as in general terms, by Rudolf Haller. However, we do not know if this converging vision of deictic words was formulated by each author independently or if Schlick, on this point, was influenced by Bühler, who had been preaching this perspective for a number of years and therefore even earlier than the publication of *Sprachtheorie*. Certainly in the correspondence exchanged between Schlick and Bühler there are no traces of shared discussion of the topic. Besides which, Schlick never quotes Bühler. In this respect, I will simply add that I believe the explanation for Schlick’s systematic silence concerning Bühler should be sought in basic philosophical convictions and especially with regard to the effect on the psychology field²⁴. I have dealt with some aspects of this topic in another context (2002a: 203-273 ; 2002b: 199-214), whilst this essay does not deal with a full reconstruction and evaluation of the question, as I preferred to concentrate on *Sprachtheorie*.

4. Bühler’s Criticism of Physicalism : meaning and semantic competence.

The second front of Bühler’s criticisms of physicalism concerns “conceptual signs of language” and are played out against a discussion of the scholastic problem of the universals. With this discussion Bühler intended to demonstrate that “the finale with which modern physicalism ends if it is consistent, namely a *flatus vocis* nominalism, is nothing other than scientific suicide” (TL: 43). In the guise of a nominalistic solution to *flatus vocis* there is an attack, in particular, on Neurath’s conception of language as a physical fact. The scholastic problem is well-known: what was being debated was whether nouns and “their worldly being was something more than and different from mere *flatus vocis* and what knowledge

²⁴ In this respect I will simply mention as follows. Schlick, like Carnap and Neurath, believed that for psychology to be taken seriously as a science, it should be traced back to what was considered the epitome of science: physics. Precisely for this reason, as far as psychology is concerned, Schlick was deeply attached to the Berlin *Gestalt* school perspective and to W. Köhler in particular, a school of thought that was an antagonist of that led by Bühler and which the latter opposed strongly both in Bühler (1927), and in a most polemical intervention in 1926. In Köhler’s isomorphistic theory even physical processes (for instance electric charge transmitted to a conductor with a homogeneous body) may show “Gestaltic peculiarities” and this authorises us to consider *cerebral* physical processes as physiological correlations of Gestaltic phenomenal experience, and no longer have to resort to the explanation of these using hypothetical interventions of psychic, non-sensorial factors. Schlick (1925) had perceived the profound affinity between his own conception and Köhler’s psychophysical isomorphism theory, considering it to be the master route for the physicalisation of psychology, which is to say for translating propositions and psychological concepts in neurophysiological terms. Bühler, however, was one of those who worked hardest to criticise the isomorphistic hypothesis put forward by the Berlin Gestalt school, as in his opinion it emarginated the subject’s active role in the perception process and what he considered to be the fruit of forced standardisation of the psychological investigation with canons, theoretical schemas and explicative models of physics. It was no coincidence that this criticism was picked up by Karl Popper too, in his degree thesis (and how symptomatic the title of chapter two is, “Kritik des Physikalismus”) when he discussed Schlick’s attitude and upheld the reasons of his master Bühler, observing that “it is not in the fullest interests of many sciences to conceive their reduction to physics as their cognitive ideal”. (Compare Popper, 1928.)

content they provide for the user” (TL, 249). The *flatus vocis* is “the sensually perceptible phenomenon in ‘language signs’ such as ‘horse’”. Problems arise if we reflect on “the *representatum* of such a *representans*”. To represent the species “horse”, in fact, is quite different from representing a concrete horse. If we state “‘the horse is not a ruminant’, it is not a *concretum* but an *abstractum*, something general that is represented by the sound of the word ‘horse’ [...]” (TL: 249). In Bühler’s opinion, “the *flatus vocis* answer to the Scholastic question is given because certain thinkers are alarmed by the requirement [...] that they must deal with abstract and general things [precisely as occurs when we represent the species “horse”]” and thus “they take refuge in the seemingly genuine concrete entity [...]” constituted by the sensually perceptible appearance of the language signs, and that is to say, the word horse as such: precisely the *flatus vocis*. (TL: 250). However – observes Bühler – the fact is that even in the *flatus vocis* there is not only concreteness, the pure physical fact constituted by concrete sound material, but much more. For Bühler sematology is the yeast and salt of the linguist’s earth and it is sematology’s tools that act as a theoretical picklock. In fact, it is sematology’s most general and basic principle that it should tell us that all things or processes used as signs are just that (signs) “according to the principle of abstractive relevance”. Which means that it is not actually “the entirety of the concrete sound material (the *flatus vocis*), but only a set of relevant factors in it that is decisive for the naming function of the language sign” (TL: 250). If, for instance, we introduce signal-lights in shipping traffic, railway services or road traffic and we establish the conventions as, for instance, {red = “danger”, green = “the way is free”}, the object that we introduce as the signalling entity will have its own features, such as shape and size. “But it is only the factor red or green as contained in the convention that is relevant for traffic and for the partners in traffic” (TL: 250). The problem is identical for nouns as phonetic phenomena. The same term may be pronounced by one hundred different speakers, whose different accents, and often emotional state, may be recognised. But these differences are irrelevant for the term’s naming function (TL: 276).

Now we should ask ourselves what this all means with reference to Neurath’s physicalism. It means that considering language as a purely physical fact is not good at all for eliminating all references to the subject (which is what Neurath intended to achieve): in fact, as shown by the principle of abstractive relevance, the subject and, therefore, the cognitive dimension of meaning are implicated as soon as the most simple signals are recognised. Thus – Bühler states – “let us cite the axiom of the significative nature of language and ascertain anew that any attempt to construct a sematology purely physicalistically is, in a word, an attempt to theorize with unsuitable means, an attempt which will fail, or at least get bogged down, even in the simplest questions of contact between people using the signs of language” (TL: 251). But the importance and the centrality, within the language, of the subject’s cognitive competence are evident to Bühler above and beyond the principle of abstractive relevance (which can also be noted in the ambit of animal communication). At the basis of our capacity for using, for instance, common nouns, species nouns, individual nouns and proper nouns there is clearly a different type of competence, which is chiefly dealt with in several paragraphs dedicated to the theories of J. S. Mill and Husserl. In Bühler’s opinion, Husserl mainly proposes once again in *Logische Untersuchungen* (1900-1901) the themes that had already been crucial in the scholastic ambit. In particular, via a

meritorious analysis of the “different *acts of meaning*”, Husserl demonstrates how, “sometimes with the same material from the sense data”, “[...] it is an individual A or a species A or something else that a thinker thinks about and about which a speaker speaks” (TL: 256). But if Bühler, in these pages of *Sprachtheorie*, acknowledges Husserl’s *act theory* the merit of having finally drawn attention to the question of the universals “from the point of view of conscious experience” (TL: 259), in other sections he offers very different solutions for illustrating what such experience consists of and for explaining the type of process or competence behind this.

With regard to the first point (what we need to understand is “what the speaker and hearer who use language signs such as ‘horse’ and the like – and that is to say species nouns – have in mind as a meaning” (TL: 246)), Bühler states again what emerged in the experiments conducted by the representatives of *Denkpsychologie* using the *introspective Ausfragemethode* (*systematic experimental introspection*) method²⁵: what we see as a lived experience is something that can be described as a sort of cognitive “sphere” that embraces various aspects of our latent knowledge regarding a specific topic. The horse, for instance, “has its place in my epistemic stock in the sphere ‘animals’ or ‘domestic animals, work animals’” etc. (TL: 246). On the other hand, with regard to the faculty, the competence that allows this consideration, Bühler opts for a reprise of Kant’s Schematism, locating himself (once again in this case) in the furrow of the work undertaken in the ambit of *Denkpsychologie* at the beginning of the twentieth century. In reality, in *Sprachtheorie* this reprise has various dimensions and nuances, which I cannot linger over here. I will limit myself to just a few indications. Having the image of a dog does not explain why we are able to recognise dogs: a specific dog, in fact, might not correspond to the specific image with which we started. Rather, we need a procedure, a method that will allow us to connect the particular image of a dog to the general concept of a dog. The schema – which actually is not an image but is a procedure – makes it possible to disregard the secondary aspects, what – in sensual contents – is contingent and attributable to fluctuating environmental conditions and – at the same time – to catch in it the essential features of an object: in brief, to recognize in the sensual datum a specific object, a specific colour, a specific shape.

For reasons I will later indicate, Bühler’s statements in this regard are especially important. “It is my conviction that the pertinent content of these reflections [and that is to say Kant’s reflections on schematism] on the constitution of unified perception from the material consisting of a myriad of fluctuating sense data will be recharacterized and purged of what is transitory and thus restored in our new and developing theory of perception. The insight in the *constancy factors* in the fluctuation of the circumstances of inner and outer perception is the fulfilment in modern form of what in principle the analyst Kant was already aware of even then, and for which he needed the idea of mediating, ordering schemata” (TL: 282). “The linguistic fixation and formulation of the perceived states of affairs is prepared and rooted in the processes that we usually call perceptions and which we tend to distinguish from the

²⁵ Already at the time of the research undertaken in the ambit of the *Denkpsychologie* (psychology of thinking), Bühler had criticized Husserl’s solution of categorial intuition: in particular, he had seen as substantially metaphorical and unsatisfactory Husserl’s declarations aiming to describe how conceptual objects would appear to us through this type of intuition and had therefore put forward different solutions, which in part are restated in *Sprachtheorie*. Cf. Bühler (1907).

‘following’ formulation in language in a manner that is rather more sharply defined than the facts of the matter permit” (*ibid.*). “[...] we still lack a completely clear non-linguistic model with which the manner of representation found in language can be illustrated” (TL: 286). “It may be that we *overestimate* the liberation from the deictic field, it may be that we *underestimate* the fact that such a verbal representation of a state of affairs is in principle open and in need of completion on the basis of knowledge of a the state of affairs at issue. Or, to say much the same thing differently: all knowledge formulated in language may have access to a supplement from a source that does not flow into the channels of the symbolic system of language but still produces genuine knowledge” (TL: 286).

At least three primary aspects emerge from these steps.

They are extremely emblematic of how far Bühler’s perspective is from that of the *Wiener Kreis*’ syntactic phase and, through the discussion of Husserl’s theory, testify to his attention for linguistic competence overall and, within this, for semantic competence in particular. The phases quoted show a level of interest that tends to deal with a dual nucleus of problems: on one hand it deals with the cognitive construction of meanings of lexical units; on the other, with the ability to apply the lexical units, the words to the world, and therefore the capacity to denominate objects. Bühler is convinced that to explain this dual consideration we must abandon language. If we wish to explain linguistic competence overall, which is to say on one hand we must focus on the relationship between the language and our experience of the world (and therefore on perception) and, on the other, on the cognitive sphere per se. In both cases we leave language (whose analysis, therefore, can be neither self-sufficient nor refer back to itself), but precisely due to the fact that language would lose itself if it were not compared with what it is not. Moreover, precisely for these reasons, Kant’s schematism solution (a cognitive and not a linguistic process) appears a successful way of explaining several salient aspects of linguistic competence: since it refers to the pole of sensitive intuitions, and therefore for explaining the referential dimension of more general linguistic competence, which is to say the ability to connect lexical units to reality; to explain how conceptual meanings are constructed, in what the representation of the meaning of species nouns such as “horse” actually means.

If all this is clear and relevant from one standpoint, it is equally clear and relevant that, in any case, Bühler believes that this perspective alone is not enough. This emerges from a comparison of the perspectives of Husserl and J. S. Mill. In this careful, stimulating comparison, Bühler aims to bring to the fore that an analysis that hinges on acts of consciousness is not in conflict with an analysis aiming to determine “*the conditions of intersubjective verbal contact*”. Such an analysis is represented emblematically by Mill’s perspective, whose fundamental characteristic is precisely “to place the fact of intersubjective communication with signs in the forefront” (TL: 258). These two perspectives not only are not in conflict, but actually integrate: in fact, Bühler states, “if Husserl’s theory culminates in the point that a speaker who uses the word ‘man’ sometimes means the species man as such [...], sometimes an individual as belonging to this species [...] and that the speaker’s acts [of consciousness] determine whether he means the one or the other, then a committed subjectivist can take this to extremes and explain: ‘In the end I can mean everything with everything’” (TL: 258). In other words “such a maxim, if made to a principle, is the best way to make verbal communication impossible; and this is an end in

which even the freest of the free is simply *not interested*" (*ibid.*)²⁶. The recognition that the "soliloquies" of "Diogenes in the Barrel" "do not provide the only, nor even the ideal and sufficient point of departure for analysis, but rather are an artificial product of a reduction of human speech" (TL: 285), leads to two fundamental consequences²⁷. The first, which is extremely important, is an analysis of the symbolic language that makes it possible to explain the communicative and intersubjective value of the synsemantic field of language, which is to day the fact that "in verbal communication, even the smaller margin of individual freedom such as in the cases 'man as a species' or 'man as an individual' are *de facto* entirely eliminated or at least reduced to a harmless dimension by inherent linguistic resources or by the surrounding field of the word at issue" (TL: 258-259)²⁸: I cannot invest further words on this important aspect, which evidently also has to do with that theme of intersubjectivity that was at the origin of countless discussions in the neopositivist ambit. The second aspect I would like you to examine, is the reinstatement of "the isolated speaker" "in the community of fellow speakers", typical of Mill's perspective, which leads us to turn to an "application of the behaviouristic style of thought to the analysis of human language". "Some measure of behaviourism – continues Bühler – is indispensable, and has proved to be quite fruitful in animal psychology" (TL: 259). Obviously, it must be specified that the type of behaviourism that Bühler has in mind is not the Watson radical type, but the more advanced Edward C. Tolman type, in which he began to perceive how the required completion of the classic behaviouristic programme was taking shape: in brief, the perfection of a research programme that was not aimed only at mere segmentation of behaviour and mechanical resolution in the trial and error schema, but also the identification of the overall sense of the behaviour segments, from the overall biological sense to the semantic aspects of behaviour. In this respect, in another part of *Sprachtheorie*, Bühler underscores with some satisfaction the convergence between his own perspective and that of Tolman's so-called molar behaviourism, stating: "In 1927, I offered a simple description of semantic facts under a behaviouristic aspect in my book *Die Krise der Psychologie* (the crisis of psychology), and since then I have had the pleasure of finding that one of the most ingenious experimenters in America has advanced to much the

²⁶ A further problem hinted at in these same pages of *Sprachtheorie* is that whereby for Mill and for Bühler, "for names are not intended only to make the hearer conceive what we conceive, but also to inform him of what we believe. Now, when I use a name for the purpose of expressing a belief, it is a belief concerning the thing itself, not concerning my idea of it" (TL: 257).

²⁷ Bühler recognises and values the change later operated by Husserl (1929) and especially (1931). Bühler actually notices an analysis "free of monadic restrictions", which was, however, typical of *Logische Untersuchungen* (TL: 260). Also compare (TL: 12-13).

²⁸ If we take, for instance, the term "table". The acoustic image "table" may mean a thing or a class (species) of thing. The symbolic field, in which the word is inserted, however, neutralizes the semantic indefiniteness. It is no coincidence that Bühler distinguishes between words understood as intelligible lexical units (such are those found in the dictionary, for instance) and words inserted in the clause. Words achieve the unequivocal meaning that they would not otherwise have from the symbolic field (*Symbolfeld*) and syntactic context. This is what constitutes "the dogma of the lexicon and syntax" that I have already mentioned (compare note 15). The syntactic context, therefore, does not determine only the position of the word within the clause, but attributes them with definiteness and semantic univocity: "it is only the sentence as a semantic construction that confers the highest plenitude and determinateness of meaning to be reached by the word" (TL: 86). In the concrete event of speech, however, syntactic context on one hand and words on the other are correlated moments and may be only distinguished abstractively (TL: 85-86).

same point quite independently of me, namely E. C. Tolman in his book *Purposive Behaviour in Animals and Men* (1932). In both his and my opinion, all forms of learning, ranging from those encountered in the infusoria to human learning, involve, in addition to everything else, objectively detectable reactions to signals” (TL: 45). It is precisely this idea of behaviourism that Bühler refers to when – commenting the necessary integration of Husserl’s theory with an analysis, like that of Mill, aiming to determine “*the conditions of intersubjective verbal contact*” – he states: in fact, “If one also takes the true beginnings of language development into consideration, which is imperative, for example, in the theory of deictic signs, one will, whether one knows it or not”, find oneself in the wake of a “behaviouristic approach” (TL: 259).

4. Conclusions

Let us now make some conclusive considerations, referring back to the chief noticeable negative aspects of Bühler’s perspective in the opinion of Neurath and Carnap. With regard to behaviourism, the aforementioned implications in the discussion of Mill’s theory show how hasty the statements of Carnap and Neurath are regarding Bühler’s perspective (liquidated as introspectionistic) and his preclusions with regard to new American psychology: his attitude was not at all one of preclusion, but of including behaviourism in a richer, more well-constructed framework than that of neopositivism. Regarding introspectionism, to consider Bühler an introspective psychologist is equally reductive. Actually, it is more correct to say that in a psychological and linguistic ambit, Bühler also felt to be essential aspects that were completely extraneous to the physicalist perspective. As far as *Sprachtheorie* is concerned, we have already seen how Bühler’s approach also embraces the cognitive aspects of meaning, which is to say the interest in what is meant by the meaning of an expression, for the characteristics of that semantic competence that on one hand allows us to understand (and represent to us) the meaning of the words and, on the other, to relate them to the outside world. And regarding this it should be noted that the distance between Bühler and neopositivism continued to be such also after the syntactic or physicalistic phase that characterised the *Wiener Kreis* in the early Thirties. After the syntactic phase, Carnap’s approach to semantics and to the problem of meaning actually came to coincide (as had already occurred in the Circle’s early phenomenalist phase and as it had always been for Schlick) with the knowledge of the truth conditions of the sentences. Within this picture, the interest for the meaning of words and, in particular, for the semantic function of nouns, is restricted to the extensional or denominative function of these, according to the paradigm of Frege’s referential semantics, which dominated until the 1970s. After the syntactic phase, the radical semantic-referential reduction of semiosis is, for instance, paradigmatically stated by Carnap in *Introduction to Semantics* (1942)²⁹. For Bühler, on the other hand,

²⁹ Compare R. Carnap (1942). In this respect also compare Morris (1938). As is already known, in the American phase of neopositivism pragmatic aspects of language also became quite important thanks to the influence of Charles Morris. In fact, it is Morris who should be thanked for formulating a “semiotic” of a science of signs articulated in three parts: semantics, syntax and pragmatics (the latter interested only in the study of the relationship that people have with the signs they use). Carnap follows the perspective perfected by Morris in (1938) and then in (1946), substantially from the above-mentioned *Introduction to semantics*. Due to the influence of Tarski semantics on one hand, and Morris’ pragmatism and semiotics on the other, the criterion of significance is thus considered by

semantics should also have covered cognitive aspects, of what concerns the competence of the speaker. Today, as is known, this perspective represents one of the most fertile aspects, not only of semantics or cognitive linguistics, but also of research regarding meaning conducted within the ambit of analytic philosophy. At that time, however, it must have appeared tainted by psychologism (and therefore to be banned).

Before concluding, I would also like to return briefly to Neurath and underline a fact that seems important to me. Compared to what occurred in the years in which a radical syntactical-physicalist turnaround of the *Wiener Kreis* was being suggested, Neurath's correspondence of the late Thirties betray an important change of attitude towards Bühler. By 1934 Neurath had already left Vienna and moved over to Holland. In July 1937, in Paris, the *11^{ième} Congrès International de Psychologie* (25-31 July), in which Bühler presented a paper on linguistic themes (*Das vierte Axiom der Sprachtheorie*), overlapped with the Third International Congress for the Unity of Science (29-31 July). This concomitance allowed Neurath and Bühler to meet again. It was a friendly and fruitful encounter: in a letter dated from 13 August 1937, Neurath does not conceal his satisfaction to Brunswik (Bühler's former pupil who at that time had already left for the United States) in having made Bühler two important proposals and having found him agreeable to both: a participation in the Fourth International Congress for the Unity of Science to be held (as it was) in England, at Cambridge, in July 1938, with a paper on the four axioms of *Sprachtheorie* and, what is more, the writing of a monograph on the same themes for the prestigious *International Encyclopaedia of Unified Science*. In two subsequent letters, Neurath wrote to Bühler to remind him of "the pleasant encounter in Paris" and both the promises made. Bühler, however, did neither. In a letter to Neurath dated 9 March 1938, Bühler, finally, replied to decline the first invitation, with the excuse, as it were, of contingent reasons (holidays, difficulties, given the period, in obtaining the financing needed for getting to Cambridge). With regard to the monograph for the *International Encyclopaedia of Unified Science*, however, Bühler was more optimistic³⁰. But he did not do it after all, and the contact between the two ended. Perhaps because of a theoretical distance that Bühler perceived as too wide (even in the neopositivism phase subsequent to the more radically syntactic one)? Or because of the tragic events that shattered Europe, with the consequent, definitive Diaspora of intellectuals who had animated the Viennese milieu during the Twenties and Thirties? Shortly afterwards, Neurath went from Holland to England, where he died in 1945. Bühler, however, immigrated to the United States. Unlike his pupil Egon Brunswik, who became one of the most active psychologists in the neopositivist project for the Unity of Science, Bühler had no further contact with his former colleagues from Vienna once he went overseas.

I feel that it would be worthwhile for literature to attempt a critical assessment of the question.

Carnap in a dimension that is not just syntactic, but also semantic and pragmatic. Nevertheless, in the Morris and Carnap schema, both the semantic and the pragmatic dimension are embraced by a schema of the behaviourist, observational, empirical-referential type.

³⁰ Cf. WKA, 217: Correspondence Neurath-Brunswik and Neurath-Bühler.

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