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Phenomena and Mental Functions.

Karl Bühler and Stumpf's Program in Psychology¹

Should this book fall into the hands of my philosophical colleagues, many of them are likely to quickly put it down again, shaking their heads in disapproval. It makes no claims in this sense. But the philosopher can after all suck honey from all flowers; I also happen to be certain that the high Queen of the Sciences will never be able to make any genuine progress except by following the path from the particular to the general. C. Stumpf, 1926, p. VII.

1. Bühler and Brentano's legacy in Vienna

In August 1922, Karl Bühler obtained the chair of “Philosophy with special consideration for experimental psychology and pedagogy” at the University of Vienna and began his teaching the same year as Robert Reininger and Moritz Schlick, who inherited Brentano's chair occupied before him by Ernst Mach and Ludwig Boltzmann. In 1922, the situation of philosophy in Vienna and Austria was no longer what it once was. Indeed, in the philosophy department at Vienna there were no more full professor after the death of Adolf Stöhr in 1921, and most of those who made the glory of philosophy in Austria have disappeared: A. Meinong in 1921, four years after Brentano's death, and his student Alois Höfler, who has been largely responsible for the candidature of Bühler in Vienna,² also died in 1922. The Philosophical Society of the University of Vienna, thanks to some students of Meinong and Brentano in Austria, who had perpetuated the legacy of

the latter, now passes into the hands of the neo-Kantian Reininger who will annex it several years later to the Kant-Gesellschaft.³

There is a sense to say that, upon his arrival in Vienna, Bühler assumed Brentano's legacy. Indeed, by obtaining a laboratory in psychology in this university, Bühler has succeeded where many of his Viennese predecessors have failed, starting with Brentano himself who left Vienna in 1895 by evoking among other things the refusal of the Ministry to grant him a laboratory of psychology⁴. Although it was not Bühler but Schlick who inherited officially of Brentano's chair, the hiring of Bühler in Vienna was intended nevertheless to fill this gap vigorously denounced by Brentano in his article "My last wishes for Austria" as confirmed by a report from the Ministry dated 1922:

Since Brentano's departure, the Faculty of philosophy in Vienna and its institute, which specializes itself in experimental psychological research, have been deprived of their representative in this field. We therefore very much welcome the news that Professor Bühler will obtain from the municipality of Vienna a prestigious research chair within the Faculty and a fully equipped experimental psychological research institute with assistants and an extensive library, which will be made available to him. Through the person of Bühler, this institute will maintain a close relationship with the Faculty of philosophy, which will be to the advantage of the research chair's scientific activities (quoted in G. Benetka, 1990, p. 179).

But by granting a laboratory to Bühler, the Ministry wanted to ensure to fill the position and at last to correcting a situation of which it was itself responsible and that lasted since the arrival of Brentano in Vienna. For, let us remember that several unsuccessful attempts have been made in Vienna in order to obtain a laboratory of psychology. This is the case of Franz Hillebrand, another student of Brentano, who, under the recommendation of Ewald Hering, whose assistant he was in Prague, and Carl Stumpf, obtained in 1894 a position of extraordinarius in philosophy "with a specialization in experimental psychology." The following year, Hillebrand resigned from this position in Vienna and accepted a professorship in Innsbruck, which was in fact accompanied by a laboratory of psychology⁵. Many other attempts have been made subsequently by Höfler, Stöhr and Friedrich Jodl to obtain this laboratory in Vienna, but they all failed. Finally, remember

that the father of *Denkpsychologie*, Oswald Külpe, refused the position left vacant by the departure of Jodl for the same reasons, as did later Erich Becher (1921) and finally Erich R. Jaensch (1922).

But the relationship linking Bühler to Brentano and the Austrian tradition in philosophy is not merely institutional. Indeed, in most of his works published before his arrival in Vienna, especially in his books *Die Gestaltwahrnehmung* (1913) and *Die Erscheinungsweisen der Farben* (1922), his main interlocutors are associated with the Austrian tradition and Brentano, whom Bühler called the “Spiritus Rector of a group of psychologists of the old Austria” (Bühler, 1960, p. 15). The theoretical part of his 1913 treatise on the perception of *gestalts* focuses on the discussions triggered by the publication by Christian von Ehrenfels of his classic article “On Gestalt Qualities” and to which participated most of Brentano’s students. Bühler (1913, p. 6) focuses on “the mental character of gestalt perceptions and the conditions of their emergence.” These discussions belong to what is called the first phase in the debate over the perception of *gestalts* whose main protagonists are Ernst Mach, Stumpf, his student Husserl, Alexius Meinong and his students in Graz as well as A. Marty, F. Hillebrand and A. Höfler.⁶ Moreover, it is explained in the first sentence of his treatise on the modes of presentation of colours published in 1922, Bühler’s debt to Stumpf is very important and we shall see that Stumpf’s paper “Die Attribute der Gesichtsempfindungen” is also the subject of another controversy to which Bühler’s book gave rise with David Katz, a former student of Husserl in Göttingen, who made a highly critical account of this work.

Bühler’s works published after his arrival in Vienna show how his thinking is deeply rooted in the Austrian tradition not only in the field of psychology but also in his writings on language and phonology. This is confirmed, among other things, by his polemic with another student of Stumpf, Kurt Koffka, in his article “Die ‘neue Psychologie’ Koffkas,” which is a reaction to the publication in 1925 by the latter of an article entitled “Psychology.” An important issue in this debate, which is likely one of the motivations of Bühler’s writing published the following year under the title “Die Krise der Psychologie,” is precisely the Austrian tradition that criticize Koffka and other members of the Berlin School on behalf of the constancy hypothesis, which will be discussed later. In summary, Bühler’s defence consists in minimizing the bearing of this hypothesis on his main interlocutors in his 1913 book and of presenting his own conception of *gestalt*

against the students of Stumpf, who, as we shall see later, will himself take Bühler's defense against the criticism of his own students. In his later writings on gestalt psychology, Bühler (1961) adopts essentially the same position on the perception of gestalts and the Austrian tradition as a whole. In his theory of language, for example, Bühler (1927, p. 61) sometimes evokes the names of Bolzano, Husserl, Meinong and Marty as his precursors, and we will see that the notion of structural laws, which is the basis of Bühler's structural model of language, has its origin in Stumpf and his student Husserl. Finally, let us emphasize the importance granted to Brentano and Husserl in Bühler's teaching in Vienna as confirmed by several of his students including the philosopher Aurel Kolnai (1999, p. 129).⁷

Some commentators of Bühler discussed several aspects of the close relationship linking Bühler to the Austrian tradition. There are indeed studies dealing specifically with Bühler's relationship to Husserl (D. Münch, 1997; E. Stroker, 1969), A. Meinong (F. Vonk, 1992; S. Cattaruzza, 1996) and more recently to A. Marty (Cesalli L. and J. Friedrich, (eds.), 2014), but Bühler's relationship to Stumpf is barely addressed⁸. Yet, Stumpf's place in Bühler's works in psychology is particularly important as Bühler himself recognizes throughout his writings. Of all the students of Brentano, to whom Bühler refers, Stumpf is undeniably the one to whom Bühler attaches the greatest importance in his work in psychology and whom he knew best. In his latest book published in 1960 under the title *Das Gestaltprinzip im Leben des Menschen und der Tiere*, Bühler also explains why, in the field of visual perception, the influence of Stumpf surpasses that received from Brentano and his other students:

His analysis appeared to me different than the contributions made by Brentano and Husserl, particularly because they were written and tailored for empirical psychology (or experimental psychology to be more precise). But this does not mean that Stumpf spoke as a psychophysicist in the strictest sense of the term, for in his research on acoustics for example, he is concerned *not* with the ear's anatomy, nor with the corresponding cerebral processes at the physiological level, but precisely with the "psychical phenomena or functions", as he himself calls them (K. Bühler, 1960, p. 19).

Founder of the prestigious Institute of Psychology in Berlin, which gave birth to what is now associated with gestalt psychology, Stumpf was also

known then as one of the pioneers in the field of ethnomusicology and the founder of the Berlin Phonogram Archive, now under the protection of UNESCO. We also owe to Stumpf a number of empirical studies in the field of acoustics and psychology of sound, for example, and his book *Tonpsychologie* remains today an important reference in this field. This being said, as Bühler rightly emphasizes in this passage, even in his empirical and experimental works, Stumpf never loses sight of his program and philosophical concerns. In this regard, Stumpf's debt to Brentano's philosophy is significant as evidenced by several of Stumpf's works such as *Tonpsychologie* and *Erkenntnislehre* which are dedicated to Brentano.⁹ In any case, as Bühler also points out in this passage, the philosophical program he attributes to Stumpf is clearly formulated in his 1906 treatise "Phenomena and psychical functions," and we shall see that Bühler attaches great importance to Stumpf's ideas in this programmatic essay. This program, based primarily on phenomenology and descriptive psychology, serves as a guide both in his works in the field of psychology as in that of ethnomusicology, for example. In this regard, this program underlies *a fortiori* the empirical work of Bühler himself.

This study is about Stumpf's influence on the work of Bühler in psychology understood broadly enough to include phenomenology understood as the domain of phenomena. I want to show that most of Bühler's works, particularly those in the field of psychology and visual perception, are indebted to Stumpf's program introduced in both treatises of the Berlin Academy of sciences "Phenomena and Psychical Functions" and "On the Classification of the Sciences," both published initially in 1906. Bühler seems to have defended this program from his very early work in Würzburg in 1907 up to his later works on gestalt psychology in the early 1960s. The program, which originates in Brentano (see D. Fissette, 2011a), is based on the principles developed in Stumpf's two treatises of 1906 of the Berlin Academy. This program covers both descriptive psychology or what we now call philosophy of mind whose task is the analysis and classification of mental states, than what Stumpf calls phenomenology whose domain is formed by sensory phenomena and their properties or attributes. On the distinction in the first treatise between phenomena and mental states is based Stumpf's classification of sciences that he presents in his paper "On the Classification of the Sciences." However, Bühler is less interested in Stumpf's classification as in the distinction emphasized by Stumpf between

the field of descriptive psychology and what he calls in this treatise the three neutral sciences,¹⁰ i.e. phenomenology, eidology and the theory of relations. As a first approximation, the program that Bühler attributes to Stumpf is based on the articulation of these three fields of research, namely the attributes of sensory phenomena (phenomenology), mental formations or content of mental states (eidology) and relations (theory of relation) in the description and analysis of the structure of psychological functions and sensory experience in general.

2. First contact with Stumpf and his influence on Külpe

Let us begin with a biographical remark on Bühler's stay at the Institute of Psychology in Berlin after his dissertation in Straßburg in 1904 and just before his first encounter with Külpe in Würzburg in 1905. My hypothesis is that it was during his stay in Berlin that Bühler became aware of Stumpf's program. Unfortunately, his biographers provide little information on this stay in Berlin. Charlotte Bühler, for example, simply mentions *en passant* her husband's stay in Berlin,¹¹ whereas G. Lebzelter (1969, p. 12), a known biographer of Bühler, merely reproduces the same information. However, some remarks by Bühler himself allow us to establish more precisely the dates and term of this stay. Thus, his *Nachruf* on Külpe informs us that this visit took place before the winter semester of 1905–1906, and it was during this stay that he became aware of the program of Brentano and his school. In the following excerpt from this *Nachruf*, Bühler mentions his stay in Berlin in the context of a description of Külpe's mitigated reaction at that time to Brentano's ideas in psychology and his project to reform logic:

For example, already in 1903 one obligatorily finds the name of Husserl, but still no traces of his new ideas. I still remember very well his hesitations and his resistance when in the winter of 1905 (returning from a stay in Berlin in Carl Stumpf's company) I explained to Külpe the necessity to take into consideration the endeavors [*Bestrebungen*] of Brentano and his school in our experimental research program on thinking and logic (K. Bühler, 1922a, p. 252).

Another important source of information regarding his stay in Berlin is a fragment of Bühler's biography dated March 1907 that he prepared for his candidacy for a position in Würzburg:

His interests in psychology led him from there to Stumpf in Berlin. He worked there at the Institute of Psychology during the winter of 1904–1905. In the summer of 1905, he attended B. Erdmann's lectures in Bonn. He came to Würzburg in the fall of 1905, where Professor Külpe offered him the possibility of realizing his long-cherished project, which consisted in analyzing complex thought processes. On October 1st 1906, he became assistant professor in the place of Dürr at the Institute of Psychology (K. Bühler, in A. Eschbach, 1985, p. 80).

Both passages confirm namely that Bühler went specifically to Berlin to work with Stumpf at his Institute of Psychology and that his stay took place during the winter semester of 1904–1905. Yet, we also know that a first version of Stumpf's essay "Phenomena and psychical functions" has been presented in a session of the Berlin Academy of Sciences in January 1905,¹² and it is more than likely that it was on this occasion that Bühler became aware of Stumpf's ideas. On the other hand, this passage of Bühler's Nachruf clearly demonstrates that it is during this same visit to Berlin that the young Bühler became acquainted with the work of Brentano and Husserl¹³, which he discussed with Külpe during the following semester. This explains that, when he arrived in Würzburg in 1905, even before being initiated to the program of the School of Würzburg, Bühler was already familiar enough with Stumpf's and Brentano's philosophical program to encourage Külpe to integrate it in the research program of his Denkpsychologie.

"Phenomena and Psychical Functions" first appeared in 1906 in the Proceedings of the Berlin Academy of sciences. Bühler (1908b) has published in 1908 a positive review of Stumpf's essay in which he emphasizes at the outset the important contribution of this paper to the psychology of thought. Even before the publication of Bühler's review, Külpe knew Stumpf's treatise as evidenced by his review in 1907 of a book of Narziss Ach in which he refers positively to Stumpf's paper and the distinction between phenomena and mental functions.¹⁴ In this regard, we can see that Külpe's scepticism toward the work of Brentano and his students that

Bühler's mentioned in his Nachruf was rather brief because, as Bühler also points out in this writing, the heart of Külpe's realism during this period was based on a conception of thought by which Külpe "moved closer to Brentano, Stumpf, Meinong and Husserl" (Bühler, 1922a, p. 248). The influence of Husserl and Brentano's students on other major members of the Denkpsychologie is also worth mentioning, namely on August Messer, who, in several passages of his book *Empfindung und Denken*, explicitly recognizes the central contribution of Husserl and Stumpf (especially in his treatise "Phenomena and Psychological Functions")¹⁵ to the psychology of thought. This is not the place to assess the extent of the influence of the school of Brentano's ideas on the research program of the Denkpsychologie. However, it is important to mention that Bühler, upon his arrival in Würzburg in 1905, played a central role in the dissemination of the ideas of Brentano, Stumpf and Husserl and he is therefore partly responsible for the influence of these ideas on Külpe and on several other members of the School of Würzburg.¹⁶

3. Bühler as a reader of Stumpf

A quick look at the work of Bühler shows that his knowledge of Stumpf's work is not limited to his programmatic treatise of 1906. Since his stay in Berlin and even in his later works, not only does Bühler refer frequently to Stumpf's most important works, but he also commented them extensively throughout his writings, and he sometimes takes the defense of Stumpf against his critics. Bühler actually had a thorough knowledge of Stumpf's contributions not only in the field of psychology but also in those of acoustics, phonology, musicology and sense perception, for example. We measure how much the work of Stumpf marked the course of his thinking on the systematic use of concepts taken directly from the vocabulary of Stumpf such as "psychical functions," "formations," "states of affairs," "structural laws," etc., or even more exotic notions such as "eidology," for example. Due to a lack of space, I cannot account exhaustively for Bühler's extensive reading of Stumpf, and I shall therefore restrict my analysis to the aspects of Bühler's comments that have a direct connection with the so-called program of Stumpf.

In his book *Die geistige Entwicklung des Kindes*, which has been originally published in 1918 and which has been widely disseminated at that time as evidenced by its numerous editions (the sixth in 1930), Bühler refers systematically to Stumpf's most important writings on a wide range of topics covered by this book. Among these references, let us mention Stumpf's both essays on child psychology (C. Stumpf, 1900, 1901) to which Bühler refers repeatedly (K. Bühler 1918, p. 65, 233, 241, 243, 417), as Stumpf's article (1899) on emotions and his debate with his friend William James.¹⁷ Other important works of Bühler show that some aspects of Stumpf's philosophy have had a lasting effect on his thinking. For example, the field study referred to by Stumpf as eidology, i.e. the field study of formations of content of thought, is of particular interest in the work of Bühler because, as we shall see later, formations enter in the definition of his Gedanken (K. Bühler, 1908a, p. 113) and gestalts (K. Bühler, 1912, 1913, 1909, p. 116, 1933, p. 59), and it is associated with what might be called Bühler's "structuralism" in linguistics and psychology (see K. Bühler, 1927, p.136–137; 1934, p. 85, 93). But one of Stumpf's centerpieces to which Bühler refers repeatedly is the theory of wholes and parts which is the basis of the formal ontology developed systematically by Husserl in his *Logical Investigations*. Bühler refers to it for the first time in his habilitation thesis (K. Bühler, 1907, p. 329–330) and it serves as the point of departure of his book *Die Erscheinungsweisen der Farben* where he comments section 5 of Stumpf's Raumbuch and the notion of partial content or attribute, which is another central concept in the work of Bühler (Bühler C., 1922, p. 1–3, 1914).

Bühler's interest in Stumpf's research in the field of psychology as in those of acoustics and phonology stands out clearly in his writings where he comments positively the work of Stumpf. Besides his review of "Phenomena and Psychical Functions," let us mention his entry in *Handwörterbuch der Naturwissenschaften* on the subject of attention, in which he relies heavily on the two volumes of Stumpf's *Tonpsychologie* (C. Bühler, 1912), as well as his article "Phonetik und Phonology," in which Bühler claims that Stumpf's book *Die Sprachlaute* (1926) is "the most complete"¹⁸ insofar as it contains the "best and most complete determinations of acoustic vocal phenomena that we possess to this day".¹⁹

Finally, worth mentioning are the works in which Bühler takes the defense of Stumpf,²⁰ first in his article "Die 'neue Psychologie' Koffkas" where he takes a stand against Stumpf's student at the occasion of the publication

in 1925 of Koffka's article "Psychology" (published in a collective work that had a very wide diffusion). As we pointed out above, this debate has a special significance in the context of our study because Stumpf himself, in his posthumous work *Erkenntnislehre*, sides with Bühler in his debate with his students and even adopts the conception of the gestalt that Bühler opposed to that put forward by the Berlin School. Bühler attaches great importance to this debate with gestalt psychologists that he repeatedly commented until his last book on gestalts in 1960. In short, Bühler (1927, p. vi) criticizes the "new psychology" of the Berlin School for its "excessive and dangerous extension of the concept [gestalt] in the field of psychological problems as such, and secondly, for its transposition into the field of physics."

One of the key issues of this debate is what W. Köhler (1913) has called the constancy hypothesis that he considered as a dogma of the old psychology and that he attributes to Stumpf and most psychologists and scientists, whom Bühler's work on gestalts relied upon. Following this hypothesis, which is closely linked to the atomistic conception of sensory phenomena, the inputs entertain a constant relation with the isolated sensations, so that the same *stimuli* constantly produce the same sensations. As Stumpf pointed out, one can challenge, as did Bühler, the atomistic conception of sensations without adhering to Gestalt psychology:

That is why Bühler could also reject the occurrence of sensations devoid of any formal qualities without adhering to the specific doctrine of the new Gestalt psychology (C. Stumpf, 1939–1940, p. 250).

Bühler also accuses Koffka's gestaltism to eliminate altogether the concept of sensation (and with it, that of the founding content) on behalf of the constancy hypothesis. Bühler argues against Koffka that this hypothesis is pure fiction insofar as, strictly speaking, it has never been defended by anyone, much less by Stumpf who is one of the main targets of Köhler (1913). Bühler could not be clearer:

That the whole cannot be achieved without material and that the theory of acoustic perception cannot be understood without the concept of auditory sensations is an axiomatic realization, which 2000 years after Aristotle, does not require any further explanation from philosophers (K. Bühler, 1927, p. 116).

Hence the principle that Bühler opposes to gestaltism: no form (or gestalt) without matter (Bühler, 1927, p. 115).

Bühler (1960, p. 146, 1926, p. 152–153) considers moreover that the Berliner psychologists went too far in their crusade against the old psychology and it would be wrong to throw overboard, on behalf of this hypothesis, the entire philosophical tradition to which belong the works of Lotze, Brentano and Stumpf, for example. One of the criticisms that he addressed to the Berlin School consists precisely in neglecting the contribution of Austrian scientists and philosophers to psychology in general, and to *gestalts* in particular. Thus, in an important passage from his article published in the *Kant-Studien* on the crisis of psychology, a passage that is not included in the book bearing the same name, Bühler takes again the defense of Stumpf and Brentano:

I will not investigate this further here, but I would like to point out that a Lotze and a Brentano lived among and departed from two generations of researchers that we easily condemn today. I would like to see anyone, for example, raise against Stumpf's psychology only one of the objections raised [against the old psychology] (K. Bühler, 1926b, p. 455–456).²¹

Finally, notice that Bühler advocates Lotze's and Stumpf's interactionism against the psychophysical parallelism of the Berliners (and Köhler's thesis of isomorphism) and their naive realism.²²

Stumpf is also at the center of another controversy opposing Bühler to David Katz on colours. Katz, whom we owe an important essay on the modes of presentation of colours published in 1911, has also published a very critical review of Bühler's book of 1922 in the journal of the Berliner psychologists *Psychologische Forschung*, to which Bühler answered in the same issue of this journal. The dispute is over the question of the intensity of colours and both sides accuse themselves mutually to do bad phenomenology and to failing to provide a truly innovative theory of colours. In the context of this study, the discussion on the third section of Bühler's book dealing with "Die Attribute und Modi der Farben" has a special significance because, as confirmed by Bühler's response to Katz, an important issue is precisely the position advocated by Stumpf in his treatise "Die Attribute der Gesichtsempfindungen," upon which Bühler (1924, p. 182) relies in this section, for the definition of the properties of colours as attributes, i.e. as "im-

manent, essential, and primary characteristics” of colours, for example (K. Bühler, 1922b, pp. 142). D. Katz (1924, p. 179) accuses him of having failed in his attempt to overcome the traditional errors on the intensity of colours and refers to a passage of the book where Bühler (1922b, p. 149) expresses reservations toward Stumpf’s definition of brightness as “high intensity above average.” In his response to Katz, Bühler argues that his own definition is instead quite consistent with that of Stumpf (and Hering):

Light is intensification, that is, the intensity exceeds the measure imposed by the threshold of light and I believe that I have simply brought together in a single and clear formulation what Hering and Stumpf have stated about the phenomenon of light (K. Bühler, 1924, p. 183).

In fact, the criticism that Bühler addressed to Stumpf as to Brentano concerns the issue of the saturation of colours, which is the main subject of section 21 of the book. However, this criticism does not target Stumpf’s doctrine of attributes as such since Bühler (1922b, p. 176) agrees with Stumpf that saturation is not an attribute of colours. In his response to Katz, Bühler clearly summarizes the sense of his criticism to Stumpf in this section:

But the section was not written for this reason, but rather because of the very unsettling compromise found in Stumpf’s work; the most astute of the recent advocates of the “doctrine of unity” approves, with regards to the question of saturation, of the “doctrine of multiplicity”. This compromise or this middle position appeared to me untenable and it seemed to me that one had to choose between the two doctrines. And so I investigated the reasons why men such as Mach, Brentano, Hillebrand and partly Stumpf, the keenest of our analysts, had been again and again led away from the path of the doctrine of unity (C. Bühler, 1924, p. 184).

4. Bühler and Stumpf's program

4.1 *The very idea of a program*

Let us now turn to the program that Bühler attributes to Stumpf and whose main source is his treatise “Phenomena and Psychical Functions.”²³ Without describing it in detail, I propose to identify some of the main principles that governed the program. The idea of a program is mentioned for the first time at the end of his review of this work after having exposed the main ideas:

What offers Stumpf's treatise is less a complete theory elucidating the facts than a program that needs to be developed (K. Bühler, 1908b, p. 3).

In this review, the concept of program is closely associated with the field of sensory phenomena and more specifically to the hypothesis attributed to Stumpf and according to which “the entire reality of our consciousness” is based on sensory phenomena (Bühler, 1908b, p. 5). However, Bühler recognizes that sensory phenomena are only the “shell” of our mental life and quotes several times this passage of Stumpf's essay in which he claims that they only represent one of the two aspects of our mental life:

Once we admit that any analysis of the immediately given psychical life remains incomplete when we restrict ourselves only to the elements that we have considered from the beginning as phenomena, all that is required is that what is to be added must stem from a different category and constitute the core of the psychical life, whereas the phenomena constitute in general only its “shell” (C. Stumpf, 1906b, p. 39).

In *Die Krise der Psychologie*, Bühler places particular emphasis on the methodological importance of this starting point in the analysis of sensory phenomena and mentions the contribution of T. Lipps, G. E. Müller, Stumpf and especially Mach whose work *The Analysis of Sensations* is considered “the purest expression of the mentality of this circle of researchers in the 1890s” (Bühler, 1927, p. 4–5).²⁴ In other words:

It was even the conviction of Stumpf's generation that the path should first be followed to the end and then one would be capable of penetrating the core after having gained clear insight into the sensory functions. And his methodological principle was that the theory of sensations should be constituted in relation to the physiology of the senses and through experimental means. Is it possible that they were completely mistaken? (K. Bühler, 1927, p. 2)

His criticism of Koffka and of the Berlin School, which have been discussed above, is an unequivocal answer to this question. In any case, this program is associated in his 1927 book to a new orientation of psychology and Bühler again mentions Stumpf's programmatic essay of 1906 and the influence it exerted on Külpe:

On this subject, one may read Stumpf's Academy treatise "Phenomena and Psychical Functions" published in 1907 as well as very similar ideas put forward the same year by Külpe in the journal *Göttingen gelehrten Anzeigen*. No matter how we think the details today, this program clearly and urgently called for a major conversion in the interests of the psychology of experience (K. Bühler, 1927, p. 13).

Bühler (1960, p. 19–20) also points out that the program was already in place in his early work in Würzburg in 1907 and some passages of his last book confirm that it has never been abandoned since Bühler's stay in Berlin in 1904–1905.

4.2 Phenomena and functions: the basic distinctions

Of course, Stumpf's program is not limited to this methodological aspect as shown in his programmatic essay of 1906 that we shall now consider a little more closely. Let us begin with the main distinction between phenomena and mental functions, which represents the heart of the essay. As a first approximation, phenomena are contents of sensations and their properties or what is called their attributes or moments such as intensity, space, the moments of pleasure or pain, etc. The functions are, on the other hand, mental states such as "noticing phenomena and their relations, the combination of

phenomena into complexes, the formation of concepts, apprehension and judgment, emotions, desire and the will” (Bühler, 1908b, p.1). Mental functions and phenomena are “given in an immediate way”, i.e. in the words of Stumpf, “immediately reveal themselves as facts.”

Stumpf bases this distinction between phenomena and psychical functions on two criteria and Bühler adds a third that he borrowed from Brentano. First, no predicate of the world of phenomena, such as space, does characterize psychical functions and vice versa. Second, Bühler argues that phenomena and functions differ not only conceptually but also *realiter* in the sense that “within certain limits, they vary independently from one another” (Bühler, 1908b, p.1). The third criterion is intentionality through which Brentano separates in his *Psychology of an Empirical Standpoint*, the class of psychical phenomena from that of physical phenomena, i.e. sensations.

Franz Brentano’s lasting achievement is to have so keenly understood on a conceptual level and to have duly acknowledged the trait of intentionality, the “reference to”, the directionality and the relational character [Bezogen-seins] of experience, this trait [...] which remained often unrecognized or veiled was the basis for the most fruitful psychological classification attempts since Aristotle (K. Bühler, 1927, p. 67).

Stumpf rarely uses the notion of intentionality, but as Bühler (1927, p. 13) pointed out, the biological notion of function that he uses in a teleological sense, is akin to intentionality and to the idea of intention (Meinen) that Bühler already used in the first part of his habilitation thesis (1907a, p. 346 f.).²⁵

Stumpf has proposed a classification of psychical functions that deviates significantly from that of Brentano in that it admits only two broad classes of functions, namely the intellectual and emotional functions, but his classification is also more nuanced than that of Brentano, because, according to Bühler (1909, p. 962–963) who adopts Stumpf’s position in his critique of the orthodox position of Marty, it admits a greater number of diversified psychical functions under the two main classes of mental states. However, Stumpf’s classification respects the hierarchy established by Brentano between these different classes of functions in that he considers that the class of emotions is based on that of intellectual functions, more specifically on

judgments, which in turn are based on the more simple functions at the lower level of sensory perception. It is not the place to describe this complex classification, but let us remember that it stands out markedly from the classification of Brentano at the lowest level of sensory perception, which is granted a special status with regard to the class of representations and that of judgments in Brentano's psychology. This difference is particularly significant in the analysis of *gestalts* that we will discuss later.

To each of the main classes of psychical functions corresponds what Stumpf calls psychical formations that represent an intermediary between phenomena and acts. In his discussion with Wundt, Bühler conceives his *Gedanken* as psychical formations and argues against Wundt that "formations of psychical functions are largely independent of (sensory) representations or what Stumpf calls phenomena" (K. Bühler, 1908c, p. 113). For example, the formation of an act of judgment is its propositional content whose objective correlate is what Bühler called, after Stumpf, a state of affairs:

Stumpf shows that among the fundamental concepts of psychology since Locke there is manifestly or latently one, he believes, that is best designated with the name "psychical function". In his revision of psychical functions, he argues that to each of them corresponds a specific "formation" on the side of the object. To an experience of judging [*Urteilerlebnis*] belongs for example the "state of affairs" as a formation and the act of judgment can legitimately have absolutely nothing else as an object but a state of affairs (K. Bühler, 1933, p. 59).

In the class of affects, for example, formations of emotions are values while a concept is considered as the formation of an act of abstraction. In the case of perception, including the perception of relations and *gestalts*, Bühler (1908b, p. 3) was of the opinion in his review of Stumpf's essay of 1906 that it was devoid of formation in that it has a direct relation to these phenomena. But we will see that in his later works, *gestalts* are understood and defined in terms of formations just like concepts and values in that it is the (non-conceptual) content of a specific class of acts or functions.

4.3 *The classification of sciences and the three neutral sciences*

On this distinction between phenomena and psychical functions is based the classification of sciences that Stumpf develops in the other treatise of the Academy of sciences entitled “On the Classification of the Sciences.” In *Sprachtheorie*, for example, Bühler refers to that “very meticulous treatise” and adopts Stumpf’s classification against that of Rickert and Windelband based on the opposition between natural and cultural sciences in which psychology is virtually excluded. It is true that Bühler criticizes Stumpf for neglecting the place of linguistics and phonology in his classification, but he nevertheless recognizes the importance in this classification of the so-called three neutral sciences for his own theory of structures. For, these three neutral sciences contain, wrote Bühler (1934, p. 95), “elements which seem indispensable and insurmountable.” And obviously, several distinctions made by Bühler in his works as well as his use of terms such as “phenomenology” and “eidology,” for example, suggests that he takes up if not the classification itself, at least this class consisting of the three domains of the neutral sciences.

It is the case primarily of the distinction between the field of psychology, understood as the science of psychical functions, and that of phenomenology, understood as the domain of sensory phenomena and their properties or attributes. As Brentano and his students, Bühler distinguishes within psychology the descriptive and the genetic or experimental aspects: one describes and analyzes what the other explains by using the conceptual apparatus of physiology. In his early work in Würzburg, Bühler conceives the task of psychology as a descriptive analysis of the psychological parts of the thought:

We must attempt to describe experiences of thinking [*Denkerlebnisse*] without resorting to any genetic considerations. The ultimate goal of such an analytical description will naturally have to consist in identifying the categories by which thought can be unequivocally determined as experience [*Erlebnis*]. Or in the words of Stumpf, we will have to investigate the psychological parts of thoughts and determine their mutual relations; in the case of thoughts, we could accommodate the use of ordinary language by speaking of its *moments* instead of its psychological parts (K. Bühler, 1907a, p. 329).²⁶

In fact, as shown by Bühler's later work, the task he assigns to descriptive psychology involves the contribution of eidology understood as the field study of mental formations and thoughts as we saw above. According to Stumpf's classification of sciences, descriptive psychology differs both from natural sciences and neutral sciences that Bühler incorporates systematically in his work in psychology and philosophy of language. They are called neutral because they represent, in this classification, research areas common to the natural sciences and the sciences of mind. Stumpf (1906a, p. 39) argues in his treatise on the classification of sciences that they are also a prerequisite for both the sciences of mind and natural sciences and they represent, as such, propaedeutic sciences (*Vorwissenschaften*).

On the other hand, phenomenology, understood in the narrow sense of science of sensory phenomena, has the task of studying the attributes or moments of phenomena. In his 1917 paper "The Attributes of Visual Phenomena" that was discussed earlier, Stumpf points out that phenomenology has its origin in E. Hering and E. Mach, and it was taken over by several of Brentano's students, namely Franz Hillebrand whom Bühler attaches great importance in his works on visual perception, and it stands out clearly from the works of the young Bühler on this issue, including his discussion with David Katz, that many of his important works belong to this field of research.²⁷ Thus, at the beginning of the third part of his book *Erscheinungsweisen* entitled "Attributes and Modes of Colours," Bühler compares different definitions of the concept of colour properties and opts again for the definition of Stumpf in terms of attributes. According to Bühler, the study of these attributes constitutes the main task of phenomenology that Bühler formulates as follows:

Phenomenology strives and sets out to investigate the ultimate determinations in the field of formal logic and in the theory of objects. Following Stumpf, we identify the constitutive and logically essential proprieties of colors as their attributes (K. Bühler, 1922b, p. 142).

Furthermore, phenomenology differs from two other neutral domains of scientific research: the theory of relations, whose domain extends to all other areas of research from logic (inferences) to aesthetics, and the third research field is eidology understood as the domain of formations.²⁸ These three research areas are not separated since the concept of formation, for

example, subsumes both *gestalts* and propositional contents, while relations, especially the class of mereological relations, are involved both in the field of descriptive psychology as in those of phenomenology and eidology.

The domain of relations, to which belong the laws of structure, is particularly important in most of Bühler's works. In his article "Denken," Bühler distinguishes two classes of relations, the first is called the class of "Zusammenhänge" (or connections) under which fall the relations of dependence and independence, while the second is the class of Gleichungsrelationen (or comparative relations) by which Bühler designates the relations of analogy, of differentiation [Verschiedenheit] as well as the relations of fusion, for example. The class of dependence relations between wholes and parts, which Bühler already used in his habilitation thesis of 1907, present a special interest for this study given their importance for Bühler's conception of thoughts, which indeed are defined "as a whole that only contains dependent parts and no more independent parts or fragments" (Bühler, 1908a, p. 329).²⁹ Thoughts are in fact considered "the smallest fragment of the thinking experience [Erlebnis], i.e. the fragment whereby an analysis advances and is determined cannot differentiate any independent fragments, but only dependent parts" (Bühler, 1908a, p. 330).

In the field of phenomenology, there are between attributes and their substrates, between space and visual or tactile field, for example, dependence relations, i.e., to quote Bühler, "there is a unilateral dependence between the two, that space without colour in perception is possible, whereas colour without space is impossible" (K. Bühler, 1922b, p. 143). Bühler also quotes the well-known passage of section 5 from Stumpf's *Rambuch* in which he introduced the notion of partial content (*Teilinhalte*) by which he defines the specific properties of phenomena, and first of all of space:

And indeed, Stumpf should be right and Scholasticism should not be entirely wrong: space and colour "are parts, that is, they cannot according to their nature exist independently from one another in representation [we say: in visual perception] (C. Stumpf, quoted in K. Bühler, 1922b, p. 3).

These dependence relations are also involved in the perception of the effects of a body on another or in the field of logic between the premises and the conclusion of an inference, for example.

All mereological relations of dependence are governed by laws of structure. Bühler repeatedly stresses the importance of the laws of structure in his work in psychology and philosophy of language, and here again he recognizes his debt to Stumpf. There is an important passage in his book *Axiomatik* where he claims that the idea underlying the notion of laws of structure is at the origin of his important concept of the structural model of language:

As far as I know, the expression “structural law,” used to refer to what is evidently known *sub specie totalitatis*, is introduced for the first time in Stumpf’s 1907³⁰ treatise “Phenomena and Psychological Functions”. We should emphasize once more that this expression will be clarified here not in connection with the actual web and reign of “experiences” [Erlebnisse] as in Dilthey, but with formations. However, we can put aside everything that is outside of the explanation put forth by Stumpf because our “structural model” pertains only to formations (K. Bühler, 1933, p. 61).

Bühler is right when he says that the term “law of structure” appears for the first time in Stumpf’s programmatic essays, but the concept itself was already at the heart of the position defended by Stumpf in 1873 in his book on the origin of space perception as Bühler also recognizes at the beginning of his treatise on colours. In Section 10 of *Die Krise der Psychologie*, Bühler also points out that these structural laws have been adequately formulated by Husserl in 1901 in his theory of wholes and parts published in the third *Investigation*:

Indeed, all of logic and all of mathematics are aimed at such elucidations of structures. [...] The structural law determines the relationship between a (ideal) whole and its constitutive moments and it is, like all authentic structural laws, to be elucidated. Wherever there is such an *inner connection* within unities, a clarification of structures is possible, such as for example in the field of aesthetic formations where structural laws underlie works of art. [...] Husserl had sought and had partly captured with his “theory of the pure forms of wholes and parts” a formulation of the most general laws which the particular fields of an eidology must obey, much like the applications in mathematics must follow axioms (K. Bühler, 1927, p. 107–108).

In *Die Axiomatik der Sprachwissenschaften*, Bühler (1933, p. 85) also points out that this theory is central in Husserl's logical grammar that he carries out in his *Logical Investigations* and he refers to this passage of section 10 of the fourth *Investigation* where Husserl emphasizes the importance of his laws of structure in the understanding of complexes of meaning, i.e. dependent and independent meanings:

All connections are in general subordinated to laws, and this applies particularly to all material connections limited to a field whose unity is defined by its object and in which the products of the connection must stem from the same field as the members of the connection. We can never unite in any field any kind of particular with any type of form; rather the field of particulars limits the number of possible forms and determines the laws regarding their fulfillment. But the universality of this fact does not relieve us from the obligation of demonstrating it in each given field and of investigating the determined laws according to which it is developed (Husserl, 1984, p. 307).

Note finally that grammar and semantics are not the only areas of application of laws of structure as Husserl points out at the very beginning of the third *Investigation* (referring again to Stumpf). Indeed, the general theory of structures is applicable in many areas, namely in the area of forms or *gestalts*, which, as evidenced by Stumpf's early work on space perception, remains its original domain.

5. Bühler on the perception of *gestalts*

I shall now add a few brief remarks on the theme of *gestalts* in Bühler in order to show how he uses Stumpf's program in the domain of the perception of forms. Sensory configurations belong to the domain of phenomenology and Bühler conceives them as formations structured by relations obeying to laws of structure. As we saw earlier, Bühler stands out significantly from the Berlin School's views on *gestalt* that, with the sensations, eliminates altogether founding contents. But as he explains in his review of Koffka, Bühler strives at the same time to avoid atomism that he attributes to Titchener among others and which represents the other pitfall in the study of

sensory phenomena. In his paper in response to Koffka, Bühler sums up perfectly the objections that he addresses to the two antagonist positions on that issue, i.e. atomism and gestaltism:

Wasn't it recently that we still had to settle up with unilateral sensualism in psychology, wasn't it for example Titchener who was not able to see the forest behind the trees with respect to the question of forms? At that time, all of our efforts were directed towards rigorously demonstrating the existence of gestalts and we have not taken things lightly. Now it is conversely sensations that are at risk of being eliminated from the list of the data of consciousness. Koffka does not anymore see the trees before the forest (K. Bühler, 1926a, p. 151).

These observations help us to understand why Bühler's main interlocutors in his studies on the perception of forms are Brentano and his students, who were the main protagonists in the first phase of the gestalt debate, the second phase referring to the discussions on the works from the Institute of Berlin and the contribution of Wertheimer, Köhler and Koffka to Gestalt psychology. In his 1961 article on gestalt, Bühler's starting point is again C. von Ehrenfels' classical paper on gestalt qualities and the two distinctive properties that he attributes to forms, namely *Übersummativität*, i.e. the idea that the whole of gestalt is not reducible to its parts, and *Transponierbarkeit*, i.e. a given configuration can be based on different founding contents like a melody, for example, which can be played in different keys and with different notes provided that its relations or chords remain the same (K. Bühler, 1912a, p. 892).

The question now is how to understand the surplus in the perception of forms that reveal these two distinguishing features of a gestalt. Bühler envisages several options including the following three that he rejects. Firstly, that of the young Ehrenfels according to which the gestalt is a *sui generis* quality just like sound and colour.³¹ The second is that proposed by Meinong and the Graz school according to which a form is the product of an act of production (K. Bühler, 1913, p. 28–31). The third is that of A. Marty (1908, p. 109), which boils down to the idea that “the form in the sense of a gestalt is obviously nothing but a kind and a sum of relations.”³²

Unfortunately, I cannot examine in detail Bühler's arguments against these three options. Bühler advocates a fourth option that he introduced

in response to the question raised above concerning the surplus in a gestalt and his solution is here again inspired by Stumpf: gestalts are defined “as a particular group of formations of psychical functions.”³³ There are two important aspects in this definition of forms: the first concerns what is specific to this type of formation, while the second involves a specific psychical function of which this formation is the objective correlate. The first can be formulated as follows: just as any other class of psychical formations, “gestalts are complex of relations of connection [Zusammenhangsrelationen].”³⁴ Let us remember that it is under this class of relation called connections [Zusammenhänge] that fall the mereological relations as confirmed Bühler in his important article “Das Denken:”

We believe that we hear a melody or that we see spatial forms even though evidently the bond [*Band*] here is not “felt”. The unity of elements and their ordering are conscious here in another way. [...] The affinity of Gestalts with relations is evident. And whoever considers that these connections [*Zusammenhänge*] are a special class of relations can easily offer this simple explanation: Gestalts are complexes of relations that belong to the class of connections [*Zusammenhangsrelationen*] (K. Bühler, 1912a, p. 892).

The second aspect concerns the type of function whose formation or content is a gestalt, which is the objective correlate of an act of *Zusammenfassen*, i.e. an act of apprehension.³⁵ In his book *Die Gestaltwahrnehmung*, Bühler clearly explains that this act of *Zusammenfassen*, despite its name, is not a synthetic act in the Kantian sense, or an act of production as in the school of Graz insofar as in this case relations and conceptual structures are not imposed from without to the sensory content. For, in the hierarchy of mental functions that have been discussed above, this act belongs to the most basic and the simplest level of the class of intellectual acts and it therefore involves no conceptual content. As such, it is more akin to what Husserl called after Stumpf an act of apprehension or an act of attention as confirmed by Bühler (1922b, p. 22) in his book: “the formation of a gestalt is considered as a work of attention.”

6. Final remarks

These general remarks on the relationship between Bühler and Stumpf should suffice to convince us of the importance of Stumpf's program in Bühler's work, especially but not exclusively in the fields of psychology and phenomenology. In conclusion, I shall add a few more remarks on the evaluation by Stumpf of the work of Bühler. Although Stumpf rarely refers to the work of Bühler, the little he says in his correspondence and in his posthumous book *Erkenntnislehre* is particularly revealing for our study since it clearly shows his sympathy for the philosopher as well as his affinities with the fundamental positions of Bühler in psychology and phenomenology. My first remark concerns the assessment by Stumpf in his correspondence in the early 1920s of the work of Bühler on the occasion of candidatures for three prestigious chairs in philosophy that were made available in Germany and Austria. Before filling the position at the University of Vienna in 1922, Bühler had been approached to occupy the chair of Lotze in Göttingen, left vacant since the departure of his student G. E. Müller, and ranks second after Köhler on the short list for the Chair of psychology in Berlin, left vacant since the retirement of Stumpf and his nomination in 1921 as professor emeritus. This means that the candidature of Bühler in Berlin was preferred to those of several other students of Stumpf, the best known being M. Wertheimer and K. Koffka, as well as David Katz for whom Stumpf had also great esteem. The correspondence of Stumpf in the early 1920s confirmed that he had participated in the selection process and was consulted, and he is probably not foreign to the appointment of Bühler in Vienna. Indeed, his correspondence with Georg Misch, for example, shows that he had a great respect for his former student. In a letter dated March 10, 1921, at the occasion of the replacement of G. E. Müller at Göttingen, Stumpf heartily recommends the nomination of Bühler in the following terms: "In Bühler, I appreciate particularly the course of his evolution, his independent attitude, and the diversity of his interests" (Stumpf in H. Sprung, 2006, p. 426–427). A second letter dated February, 22, 1921, indicates further that he was acquainted with Bühler's main writings and confirms that conception of the mind that Bühler elaborates in these writings are very close to his:

My esteem for Bühler is much higher than that for Müller, for his entire view of the mental life is closer to mine. In any case, his *Gestaltwahrneh-*

mungen und his *Geistige Entwicklung des Kindes* show that he is actively pursuing his development (Stumpf in H. Sprung, 2006, p. 424).

In a third letter to the Misch dated April 30, 1922, after that Jaensch had refused the position he was offered in Göttingen as in Vienna, Stumpf reiterated his support to Bühler's candidacy and emphasizes once again the value of his work:

That Jaensch had rejected Göttingen's offer is pure foolishness. Besides Katz, shouldn't you clearly propose the candidacy of Bühler? I know very well that Müller is against him much like all of the followers of *Denkpsychologie* who deviate from his dogmas. But his unprejudiced and versatile way of thinking seems to me highly estimable and his work on the perception of *gestalts* much like his books on the intellectual development of children seem excellent to me. He is interested in these books to general psychological problems in an insightful and interesting way. I do not know yet if he has not already been selected in Vienna, but I guess it is still under negotiation (C. Stumpf in H. Sprung, 2006, p. 428).

My two other remarks are drawn mainly from Stumpf's posthumous work in which he takes the defense of Bühler against the criticism of its own students, both on the theme of the *gestalt* as on that of Koffka's historical presuppositions in his conception of the new psychology. Again, it is striking how Stumpf's diagnosis is very close to that of Bühler on these issues.

With regard to *gestalts*, a passage of *Erkenntnislehre* summarizes nicely what is at stake in the dispute with the *gestaltists* and their conception of *gestalts* without founding contents:

On the side of the *gestalt* theorists of strict obedience, all the weight lies on the fact that in the case of *gestalts* we are not dealing with simple relations or totalities of relations. *Gestalts* are something *primarily givens that do not require a foundation*, such as in the case of relations (C. Stumpf, 1939–1940, p. 246).

For Stumpf, when we have a *gestalt* in the sense of a content of consciousness, we always have a complex of sensations structured by relations between the various parts, which relations are themselves perceived to some

degree. As Bühler, Stumpf argues that there is no form without matter and that we cannot perceive a gestalt without founding contents. Hence the objection raised by Bühler in his review of Koffka's paper on psychology that Stumpf quotes in the following passage: "As Bühler has already pointed out, he no longer sees the trees behind the forest" (Stumpf, 1939–1940, p. 253). Elsewhere in this book, Stumpf (1939–1940, p. 254) also indicates that his concept of gestalt is similar to that advocated by Bühler in his book of 1913 and in his article "Denken." He claims that his own theory has been developed in his psychology lectures since 1919 and it is briefly summarised in his book *Die Sprachlaute* as Bühler himself has recognized in his classic book of 1927 (Bühler, 1927, p. 116).

My third and final point is historical and it relates in part to Stumpf's criticism of his students for having neglected the substantial contribution to the history of psychology by philosophers like Brentano, Lotze, and James on behalf of the constancy hypothesis. In a footnote to his book of 1927 on the correspondence of William James, Stumpf (1927, p. 238–239) again emphasizes the decisive contribution of Brentano, Lotze and James to the history of philosophy of mind and he refers this time to Bühler's article "Die Krise der Psychologie."³⁶ It is as if, wrote Stumpf in *Erkenntnislehre*, that the mind was conceived in the entire history of psychology before the Berlin school as simply summative and atomistic, as if the psychical functions, as they are given to consciousness, were conceived as a mere aggregate of isolated sensory impressions. Hence the question of whether a psychologist has ever defined the hearing of a melody in a purely conjunctive manner or in terms of *Undverbindungen*:

Has then a psychologist or someone else really ever defined a melody as the sum of successive notes, as a simple "conjunction" [*Undverbindung*]? (C. Stumpf, 1939–1940, p. 243).

In the final analysis, according to Stumpf, the stakes of the debate with his students rest on the three postulates of his own psychology, which are presupposed in his own conception of gestalts. In this perspective, the cost to adhere to what he calls the native psychology is nothing less than the abandonment of the fundamental principles of descriptive psychology and of its main achievements since Brentano:

All of these disputed issues bring to light the deep differences in the fundamental views of psychology as a whole, and even of metaphysics. The view about the perception of forms that is defended here presupposes:

1. The possibility of perceiving relations;
2. The possibility of unnoticed contents of consciousness;
3. The distinction between phenomena and psychical functions based on heterogeneous contents of consciousness.

If one accepts these three theses, then our theory is justified. If this is denied, then one will definitely be led back to the native account of Gestalt psychology with all of the difficulties it entails (C. Stumpf, 1939–1940, p. 254).

I have tried to show in this study that Bühler opted for the first option and took repeatedly the defense of Stumpf against the partisans of the second.

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Notes

- ¹ I am grateful to Kevin Mulligan, Guillaume Fréchette, and Denis Courville for their helpful comments on an earlier version of this essay. I also thank the Social Sciences and Humanities Council of Canada for its financial support. A French version of this paper has been published under the title « Phénomènes sensibles et fonctions psychiques : Karl Bühler et le programme de Stumpf », in J. Friedrich et L. Cesalli (dir.), *Between Mind and Language – Anton Marty and Karl Bühler*, Basel, Schwabe *Philosophica*, 2014, p. 103–140.
- ² G. Benetka (1990, p. 148 f.) points out that Höfler has supported the candidacy of Bühler against that of Jaensch, who was eventually offered the job, but then declined it. Benetka also reported that Jaensch mentioned in support of his candidacy in Vienna, a letter from Brentano dated from 1914, in which Brentano would have foreseen Jaensch as his successor in Vienna. This letter no longer exists although Brentano Archives at Harvard have three letters from Brentano to Jaensch dated from 1914. In any event, we can see in Jaensch's remark further evidence that even after his departure from Vienna, Brentano was still an important reference.
- ³ On the philosophical Society of the University of Vienna, see D. Fisetete, 2014.
- ⁴ See Franz Brentano, 1895, p. 6, 15, 32 sq.
- ⁵ On Brentano's reaction toward the hiring of his student Hillebrand in Vienna, see Brentano, 1895, p. 15–16.
- ⁶ For a detailed description of the controversy on the reception of Ehrenfels' classical paper of 1890, see. E. Brunswik (1929); D. Fisetete and G. Fréchette (2007).
- ⁷ In his *Political Memoirs*, Kolnai recalls that it is through Bühler's teaching that he was first introduced to phenomenology that he associated with the names of Brentano, Meinong and Husserl: « I did receive from the Faculty itself one powerful stimulus in a phenomenological direction. The man it issued from was a most un-Austrian, pure German, and an experimental psychologist at that: Karl Bühler, who, recently

appointed to a chair in Vienna, in the spring of 1924 gave an excellent special course on Logic and the Theory of Knowledge, largely based on Külpe, Brentano, Meinong and Husserl – ‘Huzawl’ as Bühler called him in his atrocious Saxon accent. » (Aurel Kolnai, 1999. p. 129) We also know that a grand-student of Brentano, Alfred Kastil, gave a presentation in Bühler’s seminar of the summer semester of 1935 on the topic “Franz Brentanos Auffassung von Verhältnis der Psychologie zur Philosophie” and this lecture has been preserved in the Brentano Archives in Graz.

- ⁸ The exception is K. Mulligan who acknowledged Bühler’s debt to Stumpf (see Kevin Mulligan, 1988). His paper is a systematic study of the concept of structure and Mulligan argues that “Karl Bühler, in his work on linguistics, the philosophy of language and psychology actually made extensive use of a quite specific theory of structure and that it is the application of this theory to a variety of different problems and domains that lies at the root of the extraordinary fruitfulness of his writings » (1988, p. 203). According to Mulligan, this theory is in fact the theory of wholes and parts developed by Husserl in his third *Investigation*, but Mulligan recognizes as well the decisive contribution of Stumpf in this chapter. M. El-Safti Kaiser (1988) engages in a comparative study between Stumpf and Külpe, but she barely mentions Stumpf’s relationship to Bühler. See also A.-L. Bennani (2003).
- ⁹ In his “Reminiscences of Franz Brentano,” Stumpf explains straightforwardly his debt to Brentano: “My whole understanding of philosophy—the correct and mistaken methods of philosophizing, the basic and essential doctrines of logic, the theory of knowledge, psychology, ethics, and metaphysics—and which I still maintain today, are his doctrines” (Stumpf 1919, p. 43; see also Stumpf, 1924, p. 27 f).
- ¹⁰ For a description of the three neutral sciences, see C. Stumpf (1906a, p. 26–42).
- ¹¹ See Charlotte Bühler (1984, p. 25). C. Bühler herself has maintained close relationships with Stumpf and his immediate family as she recalls in her autobiography. She says that on her return to Berlin in 1914, not only has Stumpf encouraged her to pursue her experimental work and offer her a position as an assistant at the Institute of Berlin, but he also recommended her in an “extremely friendly way” to Külpe in Munich: “I then spoke with Stumpf about my future projects. Stumpf, who was a very sensitive and kind man, displayed great sympathy for me and showed great interest in my projects. I showed him my thought experiments (*Denkexperimente*), which Professor Martius in Kiel considered suitable for a doctoral thesis. Likewise, Stumpf held a positive view of my research interests, but said that he would have preferred that I take on the topic of “sensory feelings” (*Gefühlsempfindungen*), which he himself had submitted to the Academy of Sciences for consideration for an award. He also promised to appoint me as an assistant in his Institute, which was at the time a remarkable honor, for the

right of women to attend the University of Berlin had just been shortly recognized. [...] But despite this great honor and the future prospects that awaited me, I could not adapt myself to Stumpf's ideas because they did not convince me and because my own research projects were so closely connected to my own personal way of thinking. I wanted to understand human life and thought processes seemed to give me a privileged access to it. When I informed Stumpf of this, he said that it would be preferable in these circumstances for me to go to Munich with Oswald Külpe, the most famous expert in this field, and that he would recommend me to Külpe" (Bühler, 1972. p. 17).

- ¹² This information on Stumpf's presentation in 1905 in the Academy of Sciences in Berlin is recorded in the *Sitzungsberichte der Königlich-Preussischen Akademie der Wissenschaften* (see. C. Stumpf, 1905, p. 103). However, while the latter indicates the date of January 13, 1905, the date of the meeting that figures at the very beginning of this treatise is January 19, 1905 (see C. Stumpf, 1906, p. 2).
- ¹³ A meeting between Bühler and Husserl during this period is not excluded since, as reported by K. Schuhmann (1977, p. 87–88), Husserl went to Berlin in March 1905 to discuss with Dilthey his *Logical Investigations*.
- ¹⁴ See O. Külpe (1907, p. 603). Bühler refers to this discussion in *Die Krise der Psychologie* where he compares Külpe's ideas in this review with those of Stumpf and he again evokes the idea of a program apt to give a new orientation to psychology (see K. Bühler, 1927, p. 13; 1908b, p. 5).
- ¹⁵ Messer wrote about this, referring to Bühler's habilitation thesis: "At the same time, it should be mentioned that Stumpf agrees with us on essential points regarding the distinction previously made between the two fundamental classes, that is, of 'sensations' in the widest sense and of 'acts,' even though he makes use of other terms. He namely distinguishes between 'phenomena' and 'functions'" (A. Messer 1908, p. 43; see. p. 44 for his reference to Bühler).
- ¹⁶ See D. Fisette, 2006, p. 96 f.
- ¹⁷ K. Bühler, 1918, p. 106. G. Lebzelttern reproduces a fragment from Bühler's Nachlass Bühler in which he discusses Stumpf's theory of emotions and his debate with James (G. Lebzelttern, 1969, p. 211–220). Needless to say that the number of Stumpf's books that Bühler refers to in his book of 1918 is not exhausted by this list. He also refers to Stumpf (1906a; 1911; 1919).
- ¹⁸ K. Bühler. *Sprachtheorie. Die Darstellungsfunktion der Sprache*, p. 95.
- ¹⁹ K. Bühler, 1931, p. 95 ; see also K. Bühler, 1920, p. 19. In this paper, Bühler makes a very positive evaluation of Stumpf's treatise "Die Struktur der Vokale :" "We should point out in passing that the classic problem of vocal analysis has recently been resolved in a complete and satisfying way to the extent that it deals with the details of

the components of the sound and of their structure in the vocal sound [*Vokalklang*]” (K. Bühler. « Kritische Musterung der neuem Theorien des Satzes », p. 19). On the interesting rapprochement that one can make of the work of Stumpf on phonology with Troubetzkoy’s classics on that subject, see K. Bühler, 1931, pp. 24–25 ; K. Bühler, 1934, pp. 417, 425.

²⁰ It is worth mentioning in this context another debate opposing this time Bühler to Wilhelm Wundt because it presents many similarities with the controversy, a few years earlier, involving Stumpf and the experimental psychologist of Leipzig on methodological questions in psychology. This debate has its origin in Wundt’s lengthy article “Über Auffrageexperimente und über die Methoden zur Psychologie des Denkens” in which he criticizes the introspective method used in the School of Würzburg. In his reply to Wundt, Bühler defends the introspective method and criticizes Wundt’s associationism (see K. Bühler “Antwort auf die von W. Wundt erhobenen Einwände gegen die Methode der Selbstbeobachtung an experimentell erzeugten Erlebnissen”). He reiterated the position he had adopted in his habilitation thesis and argued for his conception of thoughts. In response to an objection of Wundt regarding the vagueness in the formulation of his concept of Gedanken, Bühler proposes the following definition that he borrows here again from Stumpf: “It appears that the formations of psychical functions are largely independent from (sensory) representations or from what Stumpf calls phenomena” (K. Bühler, 1908c, p. 113). Later in the same review, Bühler criticizes Wundt’s constructivist conception of feelings that he opposes to the phenomenology of Husserl and Stumpf: “However, we can also decompose thoughts. We can in retrospect distinguish parts in them, what we have called moments of thoughts. That is why Husserl, for example, following Riehl and Stumpf, speaks of a moment of unity” (K. Bühler, 1908c, p. 122).

²¹ The reference to Lotze in this passage is significant here because Bühler associates him on several occasions to his student Stumpf. In his latest book, Bühler even says that Stumpf shares Lotze’s worldview: “Stumpfs Weltanschauung paßt, soweit ich sehen kann, und wenn irgendeine Nachbarschaft genannt werden soll, zur Lotzeschen Erkenntnistheorie oder steht ihr wenigstens nahe” (K. Bühler, 1960, p. 20). Bühler also discusses extensively Lotze’s theory of local signs in relation to Stumpf’s Raumbuch on the origin of space perception and criticized its metaphysical presuppositions (K. Bühler. 1914). Bühler also highlights the contribution of Lotze’s theory of relations, and what he calls a “relational knowledge,” i.e. “relations are the most important components of our experiences of thought” (K. Bühler. 1912a, p. 890). Bühler also mentions Lotze’s influence on Stumpf’s version of interactionism (K. Bühler, 1927, p. 119).

- ²² Quoting Goethe's famous maxim: "denn was innen, das ist außen," Bühler argues that this form of naïve parallelism advocated by M. Wertheimer was refuted by Stumpf in his essay "Leib und Seele:" "The epistemologically-oriented psychologist of today will hardly recognize that with this dictum all the doubts, since Stumpf's 1896 famous speech, raised against the most naïve form of the parallelism theory are dispelled" (K. Bühler, 1927, p. 119; see K. Bühler, 1933, p. 59). Karl Popper, Bühler's famous student, is one of the few defenders of interactionism in contemporary philosophy as evidenced by his book written with J. C. Eccles *The Self and Its Brain* in which he refers occasionally to Stumpf.
- ²³ See Bühler. 1918, p. 366; 1933, p. 52, 61; 1927, p. 4–5, 13–14; 1908b, p. 3. In his book of 1960, Bühler comments the well-known work of T. Hermann (1957) on the history of gestalt theory and again emphasizes the contribution of the school of Brentano. He criticized Hermann for failing to mention the fundamental contributions of Stumpf (1906A, 1906b, 1926) to the history of the gestalt: "The emphasis rests on the epithet *functional*, which must be properly understood. It sounds like C. Stumpf whose Academy treatise "Phenomena and Psychical Functions" does not oddly enough appear among Hermann's 309 references. We do find among these however two of Brentano's major publications; and Husserl's absence is justified. But Stumpf's classic contributions in the field of acoustics and his 1906 Academy treatise should not be missing" (K. Bühler. 1960, p. 15).
- ²⁴ However, Mach's contribution to this question is limited to this methodological aspect because of his phenomenalism that Bühler as Stumpf unequivocally reject, although the latter, as Bühler pointed out, has devoted much of his research to the "shell of the soul's life" (K. Bühler. 1927, p. 4–5).
- ²⁵ On the sense of the mental functions in Stumpf, see also K. Bühler. 1908b, p. 6; 1918, pp. 413, 421.
- ²⁶ Compare this definition of psychology with that proposed by Bühler in his essay "Zur Kritik der Denkexperimente" where he claims, after Stumpf and Husserl, that "we must analyse complex contents of consciousness as independent fragments and these in their dependent moments" (K. Bühler, 1909b, p. 110).
- ²⁷ See L. Kardos, 1929.
- ²⁸ In his paper « On the Classification of the Sciences », Stumpf proposes the following explanation of his use of the term "Gebilde:" "The name can and must recall the Platonic doctrine of ideas. The investigations indeed coincide with those that Plato had in mind and had embarked upon, although not with his metaphysical conclusions" (C. Stumpf, 1906b, p. 33). Unlike Husserl, Stumpf does not advocate any kind of Platonism in the field of logic as shown in the radical criticism that he addresses to his

pupil in *Erkenntnislehre* (cf. D. Fisette, 2011a). For as the term “Gebilde” (formation) indicates, these formations are the result of a complex process of formation and are thus dependent on the acts that generate them.

- ²⁹ It is in this context that Bühler examines the classification proposed by the young Meinong in his theory of relations and lays a particular emphasis on what Meinong called ideal relations, i.e. “relations of the act of representing to the represented content, the act of judging what is judged, the act of feeling and what is felt, and the act of willing what is willed, which ideal relations thus have two relata” (K. Bühler, 1908a, p. 10).
- ³⁰ Actually, Stumpf’s treatise has been published for the first time in 1906 and as an off-print in 1907.
- ³¹ In a passage of his article “Das Leben der Menschen im Gestaltprinzip und der Tier,” Bühler emphasizes the importance of the term “quality” in Ehrenfels’ initial doctrine and suggests that it is central in his discussions with the other students of Brentano: “In opposition to Brentano’s students, the psychologist Ehrenfels held the thesis that the grasping of *gestalts* requires neither the use of abstraction as in the case of concept formation, nor that of any other mental operation. This is why in the course of two decades (i.e. until 1910) he sought a way to definitely prove this thesis partly through discussions with colleagues, partly through silent reflection” (K. Bühler, 1961, p. 24).
- ³² In his review of the first volume of Marty’s book of 1908, Bühler is very critical of Marty’s position and of his contribution to the discussions on *gestalt* qualities that he considers “nicht geglückt.” He criticizes his widespread undifferentiated use of the notions of matter and form, and asks him the following question: “What relation must the part have to the whole, which from now on must be opposed as matter and form? Should they be considered as dependent moments of a whole as in the case of a statue, or rather as independent parts such as the container and its content? Could each whole then be analyzed in terms of form and matter? Marty does not provide us with any answers regarding these questions; and when we attempt to obtain such answers in reality we then find that he himself imposes absolutely no restrictions” (K. Bühler, 1909a, p. 954–955).
- ³³ C. Stumpf, 1939–1940, p. 28 f.; see also K. Bühler, 1908b, p. 116.
- ³⁴ K. Bühler, 1912a, p. 892.
- ³⁵ Bühler’s response to the initial question as to what is this extra in a configuration or sensory form, lies, at least in part, in the function of *Zusammenfassen*: “We could call the source (at the moment completely undetermined) underlying the emergence of *gestalt* impressions the function of the act of bringing together [*Zusammenfassen*] and then ask ourselves what it is” (K. Bühler, 1913, p. 21).

- ³⁶ This reference to Bühler's article is in a footnote where Stumpf emphasizes the important results reached by the Denkpsychologie through the introspective method and emphasizes the contribution of Bühler: "See Bühler's significant account of the crisis of psychology in the last volume of this journal, particularly the behaviorism of James' homeland and the state of our 'comprehensive psychology' here in Germany. When I consider above as very modest the role of experiments in the psychology of thinking and of the will on this matter, there should not be any serious divergence with Bühler's views. Indeed, his own first writing, which paved the way for his views, owes its most significant results to interpretations drawn from introspection and the statements given by experimental subjects are also ultimately drawn from no other source than from introspection" (C. Stumpf, 1927, p. 239).

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