

# A Philosopher in the Lab. Carl Stumpf on Philosophy and Experimental Sciences

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**Résumé :** Cet essai traite de la relation entre philosophie et sciences expérimentales au sein de l'épistémologie de Carl Stumpf. Après un exposé des éléments biographiques montrant comment Stumpf est parvenu à acquérir cette double compétence, nous examinons la grande variété des champs disciplinaires sur lesquels portèrent l'ensemble de ses recherches. Cela permettra de mieux saisir le sens de l'affirmation de Stumpf selon laquelle la philosophie devrait toujours être une entreprise menée en étroite collaboration avec la pratique scientifique et de montrer ainsi la place tout à fait singulière qu'il occupe au sein de l'histoire de la pensée allemande au tournant du vingtième siècle.

**Abstract:** This essay addresses the interrelations between philosophy and experimental sciences that lie at the heart of Carl Stumpf's epistemology. Following a biographical exposé demonstrating how Stumpf succeeded in acquiring a dual competence in both philosophical and scientific fields, we examine the vast array of academic disciplines encompassed by his research. Such a biographical treatment aims, indeed, to better promote the thrust of Stumpf's assertion that philosophical enquiries should always be carried out in close connection with scientific practices, and underlines how philosophico-scientific interactions established his work as a central pillar in the history of late nineteenth- and early twentieth-century German thought.

## 1 Introduction

Born in 1848, Carl Stumpf was appointed professor of philosophy in 1873 at the age of 25, in Würzburg. He ended his career as professor of philosophy

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and director of the Institute of Psychology in Berlin. Although he officially retired from teaching in 1923 [Stumpf 1924, 411], at the end of his life in 1936, Stumpf was still at work on his *Erkenntnislehre*, which was published posthumously in 1939-1940. His scientific production is quite notable. Stumpf's interests ranged from philosophy [Stumpf 1891, 1906a,b, 1910, 1939-1940] and history of philosophy [Stumpf 1869, 1919a], to experimental investigation into the field of psychology [Stumpf 1873, 1899a, 1907c, 1916, 1917, 1918], with particular attention to acoustic and musical phenomena [Stumpf 1883, 1890, 1898, 1911b], which he also considered from a historical point of view [Stumpf 1897]. Furthermore, he wrote on many other scientific topics, such as mathematics [Stumpf 1938] (see also [Stumpf 2008]), physical acoustics [Stumpf 1899b], phonetics [Stumpf 1926], ethnomusicology [Stumpf 1901, 1911a], child psychology [Stumpf 1900], animal psychology [Stumpf 1907b], psychology of genius [Stumpf 1909], among others.<sup>1</sup>

This heterogeneous body of writing led to different interpretations of his personality. Early scholars argued that he brought a phenomenological attitude to experimental psychology, stemming from Brentano's philosophy and fostering the development of the Gestalt theory [Spiegelberg 1960, 54]. Historians of psychology sometimes claim that Stumpf progressively abandoned philosophy in favor of experimental psychology [Sprung 2006, 15], while others (more properly) recognize his uninterrupted philosophical commitment [Ash 1995, 30]. In contrast to the tendency to consider him an orthodox follower of Brentano in philosophy [Schuhmann 1996, 128], [Schuhmann 2001, 71], recent interpretations argue for the originality of his thought [Fisette 2006].

Stumpf's lifelong work in experimental psychology is part of an interesting epistemological program. His experimental activity was not accompanied by any loss of interest for philosophical issues. Rather, he aimed at the progressive, harmonic and mutual development of natural sciences, *Geisteswissenschaften*<sup>2</sup> and philosophy. Originally combining phenomenology with experimentation and descriptive psychology with metaphysics, his program still deserves our attention.<sup>3</sup>

In this essay I consider the relationship between philosophy and experimental sciences from the point of view of Stumpf's epistemology. I first introduce Stumpf's own comments concerning his double commitment as an experimentalist and a philosopher (§2). I then proceed to illustrate his classification of sciences (§3) and his definition of phenomenology and philosophy (§4). Finally, I discuss his views concerning the mutual relationship between philosophy and natural science (§5).

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1. For a complete bibliography of Stumpf's writings, see [Fisette 2015a].

2. I shall leave the term *Geisteswissenschaften* in German, because no English translation fully covers its meaning.

3. On Stumpf's philosophy and its present-day importance, see [Fisette 2015], [Fr chet te 2010]. For a criticism, [Rath 1994, 215].

## 2 A philosopher in the lab

In his *Autobiography*, written in 1924, Stumpf retrospectively considers his experimental work. It is worth quoting the passage at length:

I was well aware, of course, that such absorption in all the details of a field of sensation stood in sharp contrast to the general conception of the mission of the philosopher, although Fechner had been a famous example of this type. When I considered the hopeless condition, as it appeared, perhaps, in Überweg's review of recent philosophy—ever new systems without any connection with one another, each bent on originality, at least on a new terminology, none of them with any power of conviction—when I compared this with the evolution of physics, what a vast difference! Might it not be possible for a specialist in philosophy to work together with other specialists, at least in some particular field? If this were done by others in other fields, might there not result finally a beneficial relationship between philosophy and the single sciences?

Thus the time in Würzburg marks for me the beginning of a new line of work to which I have remained faithful to the present day, which, however, has made me an outsider to the great majority of my colleagues. My work of observation and experimentation has absorbed my time and strength even more than is the case with most experimental psychologists. Although I fully appreciate the saying of Aristotle that theory is the sweetest of all, I must confess that it was always a joy and a comfort to pass from theory to observation, from meditation to facts, from my writing-desk to the laboratory; and, thus, in the end, my writing-desk was neglected and has not produced a single textbook or compendium, which indeed ought to have been its first duty, even at the time when I was an instructor. However, I never intended to spend so much of my lifetime on acoustics and musical psychological studies as I did later on. I had counted on a few years. But it was, after all, not musical science but philosophy that always remained mistress of the house, who, it is true, granted most generously great privileges to her helpmate. [Stumpf 1924, 396–397]

This passage contains at least four important statements: Stumpf affirmed that the philosopher should also be a scientist, a specialist in some field (1); he confessed his particular bent to experimental activities as compared to armchair reflection (2); however, he admitted he sometimes exaggerated: experimental work had taken him longer than he had planned (3); finally, he declared that he had never really abandoned philosophy, which remained the “mistress of the house” throughout his whole career (4). I shall now comment on these issues, with respect to their importance for our present concerns.

(1) There is no doubt that to Stumpf, Franz Brentano and Hermann Lotze represented two outstanding teachers of philosophy. Yet, Stumpf went through excellent scientific training as well. During the time he spent in Göttingen, he was deeply influenced by the famous physicist Wilhelm Weber who, “besides Brentano and Lotze, developed and formed” his manner of “scientific thinking” [Stumpf 1924, 392]. Stumpf remarks that at that time a philosopher with a good scientific training was as rare as a “white raven” [Stumpf 1924, 393]. Remarkably, Weber’s name was quoted here along with Brentano and Lotze. Obviously, Brentano’s and Lotze’s influence over Stumpf was further-reaching than Weber’s; nevertheless, this mention must be taken seriously. Weber’s lesson instilled in Stumpf a genuine scientific spirit, which very few philosophers of his time were endowed with. On the one hand, this made him an “outsider”, as he used to say. On the other hand, this double competence paved his way to Berlin, where the Faculty needed a true experimentalist to establish the Institute of Psychology, and at the same time wanted a man with deep philosophical knowledge to direct it. Wilhelm Dilthey was particularly influential in this recruitment [Sprung 2006, 124 ff.]. Incidentally, Brentano never approved of Stumpf’s decision to move to Berlin, and this led to some bitterness between them.<sup>4</sup> In total, Stumpf was by all means an acknowledged specialist in the field of experimental psychology, with particular skills in the study of sound and music perception and in ethnomusicology.<sup>5</sup>

(2) Despite his personal inclination for experimental practice, Stumpf was not merely a technical experimentalist, blind to theory. As the Director of the Institute in Berlin, he let his assistants teach the experimental approach, while he was in charge

[...] of the theoretical meetings, in which psychological problems *a propos* of various recent treatises were discussed, and emphasized, in the spirit of Brentano; not only the need for psychological observation but also the necessity of logical thinking. I laid particular stress on these meetings because I regard the experimental method—at least of the external sort—as by no means the cure-all for psychology. [Stumpf 1924, 404]

In short, Stumpf was not fond of dealing with experimental devices, but appreciated experimentation as a sophisticated intellectual exercise, aiming to discover psychological laws. For him, the experimental method cannot do without inductive reasoning and “logical thinking” about the conditions of the experiment. This approach undoubtedly influenced the Gestaltists. It

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4. See Stumpf’s remarks concerning a planned edition of his correspondence with Brentano and other documents edited by G. Fréchette, in [Fisette & Martinelli 2015, 491–528 (esp. 494 ff., 504–507)].

5. Stumpf says that his choice of music psychology depended on the fact that this topic was less likely than others to raise contrasts with Brentano [Stumpf 1919b, 145]. Nevertheless, the two philosophers ended up contending about the concept of tonal fusion [Martinelli 2013].

is well-known that Wolfgang Köhler, Max Wertheimer, Kurt Koffka, Kurt Lewin, Erich von Hornbostel, Johannes von Allesch, Adhémar Gelb (and also, among others, Robert Musil), were all, at least partially, trained at the Berlin Institute. Scholars have repeatedly investigated the special intellectual atmosphere pervading this scientific institution, the role played by Stumpf in this context and the unusual degree of intellectual independence of his students and assistants who, for the most part, didn't adhere blindly to his doctrines but rather carried out autonomous research.<sup>6</sup> After all, that was perfectly compliant with the intentions of the Director, who never aimed to establish a school of thought:

I have never endeavored to found a school in the strict sense; and have perceived it almost to be more pleasant and certainly more interesting, to have my students reach different conclusions rather than merely to have them corroborate my theorems. I derive all the more joy and gratitude from the loyalty of the young people who, in the same scientific spirit, but by their own independent plans, continue the work of research. [Stumpf 1924, 441]

Perhaps for this reason, the Berlin group respected him, as evidenced by the celebratory writing on Stumpf's 75th birthday, a special issue of the Gestaltists' official review, *Psychologische Forschung* [Wertheimer 1923].

(3) Stumpf undoubtedly invested much more time in experimental activities than he had intended. He originally meant to write four volumes of his *Tonpsychologie*. Only two volumes were ever published [Stumpf 1883, 1890], and the residual topics were dealt with in some other, less monumental, publications [Stumpf 1898, 1911a]. Stumpf probably understood that the whole project, in its complete form, would have required too much time. He was sometimes overwhelmed by the many duties of his intense academic life, especially in Berlin. No surprise then that he completed his major philosophical work, *Erkenntnislehre* [Stumpf 1939-1940], after his retirement, thus compensating for the (relative) lack of philosophical production. Commenting on his studies on vowel sounds in his *Autobiography*, he writes:

[t]he experimental results fascinated me to such an extent that I could not give up the investigation until this important field of phenomenology had been satisfactorily cleared up. [Stumpf 1924, 414]

Once again, the attraction that experimental research exerted over him shows through in his words.

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6. For a comprehensive analysis of the development of the Gestaltists at the Berlin Institute and the role played by Stumpf, see [Ash 1995, 2002]. See also [Toccafondi 2009]. The case of Musil is analyzed in Bonacchi 2008, 2015. As to the Gestaltists' sharp criticism of Stumpf, see, e.g., [Köhler 1913, 78].

Occasionally, Stumpf's work was rather dispersive. When he was asked to investigate the case of "kluge Hans", a horse that was said to perform elementary calculations, he couldn't resist the temptation [Stumpf 1907b].

I fully realized the extraordinary difficulties involved; the excitement aroused in the city and even in foreign countries by the daily reports of the strange case in the newspapers; the curiosity of the crowds who sought admission; the peculiarities of Mr. von Osten; the unfavorable locality; etc. *The irresistible desire to determine the facts induced me to undertake the investigation, and we finally succeeded in revealing the facts [...]*. [Stumpf 1924, 407, emphasis added]

On other occasions he showed the same enthusiasm for the ascertainment of facts, despite fakes and mystifications, almost with a "detective" attitude, see [Stumpf 1904].

(4) All this said, philosophy always remained the "mistress of the house" in Stumpf's laboratory. In other terms, he affirms that experimental work has great importance for philosophy—it is not an alternative to philosophy: it is *instrumental* to it. In the *Preface* to the second volume of *Tonpsychologie*, published seven years after the first, Stumpf explains the reasons for this delay. Even in the late 19th century—he remarked—a professor of philosophy was not allowed to always be busy with "whistles, plates and forks". However, against those who believe that experimental work debases the eternal mission of philosophy, that is, to elevate the human spirit, he argued that experimental work in psychology always "turns to the purposes of metaphysics and ethics", and added: "[t]hese disciplines lie at our heart" [Stumpf 1890, v–vi]. To avoid any misunderstanding, Stumpf makes it clear that even during his long-lasting experimental activities he never actually abandoned or rejected philosophy. Patient and meticulous work in marginal fields of research also contributes to higher scopes.<sup>7</sup> The discovery of factual truths in the field of experimental psychology turns out to be an advance in philosophy. I shall come back on this point in the next section.

Stumpf ascribed the same instrumental value to other fields of his scientific work, including comparative musicology.<sup>8</sup> In 1900, he founded the *Berliner Phonogrammarchiv* (now on the UNESCO World Heritage list), a collection of Edison cylinders whose direction was later taken up by Erich von Hornbostel.

7. Brentano affirms the same principle in one of his writings concerning sensory psychology: "Die Methode verlangt, daß man vom Einfacheren zum Komplizierteren fortschreite. Auch winkt der Arbeit hier der reichste Lohn, da jeder Fortschritt in der Erkenntnis des Elementarsten, selbst wenn klein und unscheinbar in sich selbst, seiner Kraft nach immer ganz unverhältnismäßig groß sein wird" [Brentano 1907, 69].

8. Stumpf also believed that the history of philosophy, which represents another part of his activity [Stumpf 1869, 1919a], is instrumental to philosophy: "only the most exact historical truth can also be at the command of philosophical truth" [Stumpf 1907a, 167].

The study of exotic music traditionally relied upon the amateurish, approximate transcriptions made by missionary fathers or musically-educated travelers. In contrast, phonographic recordings promote objectivity and allow preservation. Stumpf's empirical research in the field of ethnomusicology was therefore part of a consciously pursued scientific programme [Martinelli 2014]. In the first volume of *Tonpsychologie*, the “comparison of peoples and times” is one of the auxiliary methods of psychology [Stumpf 1883, vi]. Two years later, in 1885, in a pioneering study of the music of North American Indians, Stumpf stressed the value of comparative musicology not only for ethnology and the history of humankind, but also for general psychology and philosophy, and particularly for aesthetics [Stumpf 1886, 89]. In a study of the music of a Siamese (Thailand) ensemble, he argued that comparative musicology represents a fruitful task for the psychologist or the philosopher who is ready to abandon the “parlor of scholars” [*Gelehrtenstube*] and the old-fashioned method of self-observation, and wishes to “widen his horizon by means of an objective study of human thinking and feeling in other times and spaces” [Stumpf 1901, 167].<sup>9</sup>

### 3 Natural sciences, *Geisteswissenschaften*, and “neutral” sciences

Stumpf tackled the problem of the classification of sciences on the basis of the fundamental philosophical distinction between *phenomena* and *psychic functions*. He called “phenomena” the sense-data (including when they are remembered rather than actually sensed), together with the relations that hold between them. “Psychic functions” is the name assigned to all mental activities, states and experiences: e.g., perceiving, developing concepts, judging, feeling emotions, desires, and so on [Stumpf 1906a, 105–106]. Although they always occur together, phenomena and functions can and must be carefully distinguished [Stumpf 1906a, 111]. Phenomena and mental functions are always logically separable; each of them may vary independently, i.e., without a corresponding variation of the other. They differ in the utmost degree: no assertion pertaining to phenomena is also applicable to psychic functions. Thus, reality is “double-sided”, i.e., it has an ultimately dualistic aspect that cannot be overcome in any way [Stumpf 1906a, 115].<sup>10</sup>

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9. Stumpf also recorded songs of prisoners of war from all over the world during the First World War [Stumpf 1924, 410], see [Christensen 2000], [Simon 2000].

10. This distinction clearly roots in Brentano's doctrine of internal and external perception. However, starting from 1883 Stumpf ascribed no epistemological preeminence to internal perception [Stumpf 1883, 22], see [Martinelli 2003, 86], thus radically diverging from Brentano. This innovation was soon noticed by Meinong in his review of Stumpf's book [Meinong 1885, 130] and by Brentano himself, who expressed his disappointment in 1885 in a letter to Marty, quoted in [Fisette & Martinelli 2015,

In Stumpf's view, the distinction between natural sciences and *Geisteswissenschaften* originates from the above mentioned dichotomy.

No matter how they are defined, the contraposition of the physical and the mental has always been the basis of the distinction between natural sciences and *Geisteswissenschaften*. [Stumpf 1906b, 10]<sup>11</sup>

Accordingly, all natural sciences are rooted in phenomena, while *Geisteswissenschaften* stem from the study of mental functions.

The separation of natural sciences and mental sciences [*Geisteswissenschaften*] is based on the fundamental differences of sense data [*Erscheinungen*] and psychic functions, or on the respective contents of external (sensuous) and internal (psychological) perception. Phenomena and functions are directly presented in the closest connection, but they are essentially different. Observation of functions is the foundation of the mental sciences, however these latter are no more tied to their departure point than the natural sciences are. Just as the natural sciences proceed to the construction of the material outer world, so functions aim to understand the nature of psychic forces in general and the resulting actions and phenomena in terms of the inner life that alone is given to our observation. Psychology occupies the same place among the mental sciences as physics does among the natural sciences. [Stumpf 1924, 424]

Natural sciences, then, are not *directly* based upon phenomena. This would open the way to Mach's phenomenalism, reducing everything to basic phenomenal data or "sensations" [*Empfindungen*].<sup>12</sup> Stumpf, who totally disagreed with this view, was rather a constructivist. In the first place, one must distinguish between a mere sensation and an "object" [*Gegenstand*], which is the result of a conceptual construction trained by ordinary experience. This is a prerequisite to any kind of scientific construction [Stumpf 1906b, 10]. In the second place, true scientific objects are not *phenomena* as such; rather Stumpf defined them as "bearers" of variations, occurring in space and time

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495]. As late as 1948, i.e., 12 years after Stumpf's death, Alfred Kastil was still engaged in a criticism of this deviation from the Brentanian orthodoxy [Kastil 1948]. A further analysis of this theme would obviously take us too far away from our present concerns. For a discussion of Stumpf's dualism, see, e.g., [Martinelli 2011, 68].

11. Despite his use of the Kantian term *Erscheinung*, Stumpf does not think of a contraposition of phenomena and "things in themselves". Phenomena are not "merely" phenomena, but a part of what is immediately given: "The whole of the immediately given is *real*. Thence we gain the general concept of reality, which we then extend to other things" [Stumpf 1906a, 111].

12. [Mach 1906]. Stumpf often argues against Mach's phenomenalism: see, e.g., [Stumpf 1896, 84–85].

according to the laws of physics [Stumpf 1906b, 16]. Finally, in Stumpf's view, even the external world is a hypothetical structure. Regularities and exceptions in the continuous variation of our sensations and presentations can be explained only by means of this hypothesis, repeatedly confirmed by any act of experience [Stumpf 1906b, 12].

Accordingly, natural sciences ultimately rest upon phenomena, but are the outcome of further elaboration; their objects are merely *inferred* from phenomena. In contrast, *Geisteswissenschaften* deal directly with mental functions, although they also include higher-order constructs. Psychology is the science of elementary mental functions, whereas the other *Geisteswissenschaften* deal with complex mental functions [Stumpf 1906b, 21]. In opposition to Husserl's misunderstanding of psychology as a science of facts [*Tatsachenswissenschaft*] [Husserl 1911, 12–13], Stumpf claimed that psychology fundamentally aims to find the *general laws* of the psychical world, not merely to record mental occurrences [Stumpf 1939-1940, 194].

Stumpf's basic dichotomy between natural sciences and *Geisteswissenschaften* was enriched by many other supplementary factors.<sup>13</sup> In this context, special attention should be paid to a third group of sciences, which he called "neutral sciences". As previously stated, neither natural sciences nor psychology *directly* investigate phenomena; nevertheless, that investigation represents a major scientific task. At this stage, Stumpf introduced three neutral sciences devoted to the study of phenomena: phenomenology, eidology and the theory of relations [Stumpf 1906b, 26, 32, 37]. Their differences lie in their specific subjects. Phenomenology deals with *sensory phenomena*; eidology with what Stumpf called "formations" [*Gebilde*], that is concepts, forms, states of affairs [*Sachverhalte*], namely any content of thought [Stumpf 1906b, 32–33]. The general theory of relations [*allgemeine Verhältnislehre*] deals with relationships such as similarity, sameness, part and whole, etc. [Stumpf 1906b, 37].

## 4 Phenomenology and philosophy

Given its experimental nature, Stumpf's phenomenology is particularly relevant in this context. Radically diverging from Husserl, he attributed to phenomenology the task of investigating sensory phenomena.<sup>14</sup> Colors, sounds, sensory qualities of all kinds are ruled by structural laws. The investigation into mixed sensory qualities or into relations such as similarity, increase, fusion, etc., also belongs to phenomenology [Stumpf 1906b, 27]. Further examples of phenomenological problems are: the existence of basic phenomena,

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13. [Stumpf 1906a, *passim*]. In the present essay I shall not consider all of these factors but rather concentrate upon the consequences of Stumpf's general point of view as to the relationship between philosophy and science.

14. For a comparison with Husserl, see [Rollinger 2008], [Fisette 2009a, 2015b].

the relationship between sensations and judgments [Stumpf 1883], the fundamental “attributes” of sensations (quality, brightness, intensity) [Stumpf 1917], and the difference between sensation and presentation [Stumpf 1918]. Phenomenology is mainly pursued by physicists, physiologists, and psychologists. Effectively, in the past, physicists also used to deal with phenomenological problems. Most remarkably, they all work experimentally: Stumpf’s phenomenology is an experimental discipline. For instance, he considered some work by Ewald Hering and Hermann von Helmholtz, who analytically investigated the fields of optics and acoustics, highly influential in phenomenology [Stumpf 1907a, 186].

In this sense, phenomenology formed the core of many of Stumpf’s own experimental activities:

I have also devoted most of my time to phenomenological preparatory work, but my real aim has always been to understand functions. [Stumpf 1924, 424–425]

Accordingly, in his *Autobiography* Stumpf presents much of his experimental work as pertaining to the field of phenomenology [Stumpf 1924, 425–429]. It is within this context that he introduced his early books on the origin of space perception [Stumpf 1873], his writing on the attributes of visual perception [Stumpf 1917], plus a series of minor articles concerning specific problems of sensory phenomena [Stumpf 1899b], [Stumpf & Meyer 1898], [Stumpf & Schaefer 1901], and many others. Furthermore, he considers his study on vowel sounds a phenomenological field of investigation [Stumpf 1924, 414]. Since they touch upon phenomenological issues, the two volumes of *Tonpsychologie* were also mentioned here [Stumpf 1883, 1890]. However, these were mainly devoted to the theory of sense-judgments concerning sounds (i.e., psychic functions), so they more properly belong to descriptive psychology.<sup>15</sup>

Together with the two other mentioned neutral sciences, phenomenology was considered by Stumpf as a “pre-science” [*Vorwissenschaft*]. This means that phenomenology is the basis for further processing, carried out by all sciences. He also introduced metaphysics as a neutral “post-science” [*Nachwissenschaft*].<sup>16</sup> Metaphysics aims to collect and elaborate the outcomes of all sciences—so that one could even call it *metapsychics* [Stumpf 1906b, 42]. Metaphysics deals with the connection linking the objects of all sciences: psychic functions, phenomena, formations, relations, and physical objects. This acceptance of metaphysics clearly distinguishes Stumpf’s position from coeval positivism. But he advocated a renewed metaphysics, that is not

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15. Stumpf identifies descriptive psychology with Husserl’s first phenomenology, as developed, e.g., in *Logische Untersuchungen*, see [Fisette 2009a].

16. This complex epistemological structure could be simplified introducing the concept of *reality*. If one considers only real objects, the classification of sciences is the following: natural sciences, *Geisteswissenschaften* and metaphysics [Stumpf 1906b, 44].

“built a priori”—a “metaphysics of experience”, based upon scientific results [Stumpf 1906b, 43].

Metaphysics is a part of philosophy. What, then, about philosophy as a whole? Stumpf considered philosophy to be the science of “most universal objects” [*allgemeinste Gegenstände*] [Stumpf 1906b, 86].<sup>17</sup> These objects correspond to the different philosophical disciplines. For instance, “ethics, aesthetics and logic” are “practical sciences”, that “lead to Good, Beauty and Truth—in other words, they teach distinguishing, and realizing in one’s interior the right and wrong as to one’s will, taste and scientific judgment” [Stumpf 1906b, 88]. The heterogeneous nature of the most universal objects raises a supplementary question: what does the unity of philosophy consist of? The answer is quite clear:

That’s for sure; it is neither metaphysics nor theory of knowledge, nor even the universal ideas of the values that keeps these very divergent areas of philosophical research together. Rather, this role is played by psychological research that those disciplines need in an equally strong manner. [Stumpf 1906b, 90]

It is true that some psychological research should be fruitfully pursued by means of experiments—“especially those that pertain not to psychology in a strict sense, but rather to phenomenology” [Stumpf 1906b, 90]. However, this seems to lose all contact with fundamental philosophical questions. Nevertheless, as discussed above, phenomenological research also contributes to philosophy and psychology as a whole provides the link connecting all the philosophical disciplines.

At the same time, psychology and philosophy still differ radically; for instance, while the inquiry into the origin of concepts is a psychological problem, the search for the origin of truth is purely philosophical [Stumpf 1891, 501], [Stumpf 1939-1940, (I), 6–7]. As Stumpf claimed in opposition to the Kantian account of space and time, form and matter, the categories and so on, philosophical ideas should always “pass the exam” of psychology. In fact, nothing can be “*true from the point of view of the theory of knowledge [erkenntnistheoretisch]*” and at the same time “*psychologically false*” [Stumpf 1891, 482].

To meet these requirements, psychology “must not forget, absorbed in experimental detail, the nobler phenomena of mental life that cannot be investigated in this manner and the great general questions” [Stumpf 1924, 414]. For instance, Stumpf devotes his opening lecture at the Third International Congress of Psychology in Munich to a classical metaphysical problem: the relationship between body and mind [Stumpf 1896].<sup>18</sup> Despite the astonishing

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17. In Stumpf’s *Autobiography*, philosophy is defined as “the science of the most common laws of the psychical, and of the real, in general (or conversely)” [Stumpf 1924, 414]. This definition partially overlaps with Stumpf’s own definition of metaphysics.

18. As President of the organizing committee, Stumpf proposed to name the conference “Congress for *experimental* psychology”, since experimentation has an “emi-

number of hypotheses formulated by philosophers and scientists on this theme, progress has been made only recently: “[r]esearch on mind and body have gained extraordinarily in precision since the times of Descartes and Spinoza” [Stumpf 1896, 92]. Among the factors that favored this development, Stumpf listed “the philosophical analysis of the concepts of substance and causality, the discovery of the law of energy, the emergence of psychophysics, the triumphal diffusion of evolutionism, the progress in the anatomy and the physiology of sense-organs and most significantly in the localization of mental activities” [Stumpf 1896, 92–93]. Philosophy (the analysis of categories), physics (the law of conservation of energy), psychology (psychophysics), biology (evolution), anatomy and physiology: the progress of these disciplines is a fundamental condition for the advancement in the matter. Another circumstance shortens the distance between philosophers and psychologists: “[w]hy shouldn’t even philosophy make use of experiments, whenever this is possible?” [Stumpf 1906b, 89].<sup>19</sup> For instance, concepts undergo a real development with time, a continuous adjustment to the advances of scientific knowledge. For this reason, “one can also design experiments with concepts, confronting either the one or the other with phenomena” [Stumpf 1896, 93].

In summary, natural sciences and *Geisteswissenschaften* need a preliminary “phenomenological” work, an experimental analysis of sensory data. This work is carried out by natural scientists and psychologists, who adopt an experimental approach, as Stumpf himself quite often did. Natural sciences and *Geisteswissenschaften*, including psychology, elaborate their materials and deduce laws concerning their own subject matters. On this basis, philosophy proceeds to a general reassessment of knowledge, aiming at the most universal objects and their unity. Internal coherence among the various philosophical disciplines is ultimately granted by psychology. This could suggest that Stumpf supports a close relationship of philosophy with *Geisteswissenschaften*. In the next section, I shall show that this is only partially true. Notwithstanding the close relationship between philosophy and psychology, Stumpf went so far as to give priority to the natural sciences over *Geisteswissenschaften*.

## 5 Natural sciences and philosophy

As described above, Stumpf suggested that the philosopher is perfectly legitimate in carrying out experimental psychology, or experimental phenomenol-

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ment value for the formation of psychological thought—on the condition that it puts together the manual activity with thought” [Stumpf 1896, 68]. The word *experimental* was finally omitted in order to promote interdisciplinarity; however, contributions from cognate disciplines should include the exact ascertainment of some factual truths, since “we want to measure and count whenever it is possible” [Stumpf 1896, 70–71].

19. Stumpf is one of the few philosophers of the nineteenth century to endorse such a position. Although in a different sense, there is nowadays a trend towards “experimental philosophy”, see, e.g., [Knobe & Nichols 2008].

ogy, because such work is also fundamentally useful to ascertain philosophical truths. Moreover, he elaborates a more radical version of this approach. He does not simply concede that the philosopher *is allowed* to practice science; rather, he claims that the philosopher *should* do so. Stumpf counterattacked so to speak and charged his “armchair” colleagues with ignoring or misunderstanding important aspects of their discipline. In this, he did not merely propose a strong connection between philosophy and experimental *psychology*; rather he advocated a cooperation of philosophy with *natural science* in general.

Stumpf devoted his inaugural speech as Rector of the University of Berlin to the *Rebirth of philosophy* [Stumpf 1907a]. His first polemic target was idealism. With their incapacity to understand science and to cope with it, idealists totally missed their goals and ended up causing a materialist, anti-philosophical reaction [Stumpf 1907a, 164]. To overcome all these tendencies, the original obstacle should be removed. First and foremost, philosophy should go hand in hand with natural sciences. Stumpf mentioned Gustav Theodor Fechner and his teacher Rudolph Hermann Lotze as recent examples of this attitude [Stumpf 1907a, 165].<sup>20</sup> These thinkers were philosophers and scientists at the same time; Fechner was a physicist and Lotze a physician. Moreover, Fechner and Lotze took *psychology* seriously, thus going beyond Kant’s notorious doubts about the possibility of a scientific psychology. It might appear surprising that Franz Brentano was not mentioned among the promoters of this renewal of philosophy. However, Brentano, who was not a scientist, failed to meet the requirements of the argumentation under discussion. True, he had won Stumpf over to philosophy with his thesis that this discipline shares its methodology with natural science: “Vera philosophiae methodus nulla alia nisi scientiae naturalis est” [Brentano 1929, 136–137].<sup>21</sup> But later Stumpf developed different ideas about scientific methodology and, furthermore, started a scientific practice of his own.<sup>22</sup> Be that as it may, Stumpf concludes that psychology, “practiced in the spirit of the natural science” [Stumpf 1907a, 166], is one of the sources of the ongoing rebirth of philosophy. Another source is a more rigorous attitude towards the history of philosophy. Whereas the idealists polemically referred to their immediate predecessors, the history of philosophy makes the true thought, e.g., of Leibniz or Aristotle, available to us.

Stumpf notes that philosophy has two main tasks: a theoretical and an ethical one. In the first place, philosophy should unify the most universal concepts, thus granting “a conclusion to our knowledge”; in the second place, philosophy should “elevate us [...] over the terrestrial atmosphere and the

20. Stumpf also mentions Leibniz, whose philosophy appears to him much more current than that of the idealists, see also [Stumpf 1923, xxv].

21. “The true method of philosophy is none other than that of natural science”.

22. Confronting Brentano’s views on scientific psychology and science in general with those of Stumpf would require a separate analysis, see [Rollinger 1999], [Fisette 2009a], [Martinelli 2013].

nothingness of everyday life”, enabling us to recognize our duties [Stumpf 1907a, 168]. There are two main ways of pursuing these goals: “philosophy of experience” [*Erfahrungsphilosophie*] and “a priori philosophy”. There is no doubt that Stumpf’s preference is for *philosophy of experience*, which moves from the outcomes of sciences and endeavors to maintain a close relationship with them. “The philosophy of experience”, he asserts, “grows out of single sciences and attempts to maintain the closest connection with them, to speak their language as far as possible, and to follow their methods [...]” [Stumpf 1907a, 169]. Rather than claiming for absolute systems, this kind of philosophy proceeds step by step and strives for *relative* conclusions. Even if it is provisional, any relative conclusion always represents an important result. In his late years, Stumpf still maintained this point:

Philosophy should get rid of the habit of appearing on the scene while claiming the need for a complete and self-contained system that can answer all questions. Its scientific character is proved by the fact that philosophy always leaves open many more questions than those it provides answers to. [Stumpf 1939-1940, (I), 123]

The philosophy of experience favors collective work, interactive discussion, and respect for the work of others. The execrable habit of starting every time from the very beginning, typical of many philosophers, should be finally overcome. Philosophy should take the best from scientific methodology and incorporate it into its praxis.

Stumpf does not support any kind of fusion (or confusion) between philosophy and science: along with the pseudo-science of the idealists, the positivistic removal of philosophy is his second polemic target. He does maintain that philosophy should be “oriented to the natural sciences and based upon them”.<sup>23</sup> However, he also insists that it would be “the ruin of philosophy” to put it completely into the hands of natural science [Stumpf 1907a, 188]. Philosophy has a distinctive value and autonomy that differentiate it from any science (including psychology). Philosophy should cope with scientific results, but its objectives and aims lie beyond those of the scientific disciplines.

Remarkably, Stumpf has natural sciences in mind. It is true that *Geisteswissenschaften* may also assist the philosopher. Yet he warmly recommends a “comprehensive training in the field of the natural sciences” to all those who aim at “a satisfactory world view” [Stumpf 1907a, 179], rather than at an insight into specific philosophical disciplines like, e.g., philosophy of law, or aesthetics. Stumpf did not insinuate that *Geisteswissenschaften* are inferior to natural sciences in applying a rigorous methodology. Rather, the difference lies in the fact that while *Geisteswissenschaften* have a *formal* value in suggesting methodological rigor and precision to the philosopher, natural sciences, in addition, provide important *material* notions that are enormously valuable for

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<sup>23</sup> He speaks of a “naturwissenschaftlich orientierten und fundamentierten Philosophie” [Stumpf 1907a, 188].

our understanding of the world [Stumpf 1907a, 180–181]. In Stumpf’s view, scientific activity is far from being somehow opposed to philosophy; rather, familiarity with it promotes an attitude of strength and conveys material notions, which are the necessary ingredients for a renewed philosophy.

In short, Stumpf occupied a unique position within the development of German philosophy in the late nineteenth and early twentieth century. While he affirmed a close relationship between philosophy and psychology, he avoided reductionism and psychologism. Philosophy is autonomous with respect to both natural sciences and *Geisteswissenschaften*; nevertheless, it is bound to flourish on condition that it maintains a closer relationship with natural sciences and keeps to their methods whenever possible. It is true that Stumpf did not pursue the goal of a scientific philosophy as strongly as the Viennese Neo-positivists or the “Berlin Group” around Reichenbach did; however, he contributed to shaping the figure of a scientist-philosopher and cultivated this ideal in more than one generation of young scientists, mainly psychologists.<sup>24</sup> Far enough from positivistic reductionism, but also from any form of foundationalism, Stumpf neither aimed to reduce philosophy to science, nor to “ground” science through some privileged form of philosophical insight. He firmly believed that philosophy should learn a lot from natural science (practices, habits, methods), and he always based his work on this principle.

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24. No surprise that, for instance, Wolfgang Köhler and Kurt Lewin took part in the activities of the so-called Berlin Group led by Hans Reichenbach. Together with Lewin, Köhler had cooperated with Reichenbach and planned to start a journal for exact science, see [Ash 1995, 261], [Milkov 2013, 9–10]. As to the Gestaltists’ relationship to the Vienna Circle, see [Kluck 2008].

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