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Stumpf on categories

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STUMPF ON CATEGORIES

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Abstract. Stumpf's doctrine of the categories is of great importance for our understanding of his philosophy. This theme had been widely discussed among German thinkers after Kant; Brentano himself had repeatedly dealt with it since his early works. However, Stumpf considerably diverges from Brentano on this crucial philosophical topic. Although a systematic discussion can be found only in Stumpf's posthumous *Erkenntnislehre*, his core ideas on the categories can be traced to his early work on space of 1873. In fact, Stumpf claims that the peculiar relationship between extension and color is analogous to the relationship that holds between substance and accidents. Thus, like any other category, substance empirically stems from perception. Sensory experience, for Stumpf, is made up of perceptual wholes, whose attributes are typically bound to each other, rather than separately given in bundles, as Hume and other associationists used to assume. Thus, the achievements of Stumpf's (and others') holist psychology effectively contributes a solution to this classic metaphysical problem.

1 The Categories in Stumpf's Philosophy

Stumpf deals with the problem of categories in the first volume of the *Erkenntnislehre*, posthumously published in 1939. Yet, his doctrine does not represent a late philosophical achievement. Rather, Stumpf had been concerned with a crucial problem concerning categories long since. As he notes in his *Autobiography* of 1924:

> I attempted to sketch a critical history of the concept of substance, over which I racked my brain most awfully until I abandoned the problem, and, during Easter of 1872, I took up the psychological theme of the origin of the concept of space. (Stumpf 1930, 395-396, transl. revised)

Although these words may suggest a gap between the two topics, a closer look at the question reveals a different picture. Stumpf notes: "in the relation between color and extension I believed, and still believe, to find a striking example or analogue of the relation which metaphysics assumes to exist among the qualities of a substance. Thus the new problem was connected with my old work". (Stumpf 1924, 396) Later on, in the *Erkenntnislehre* he still insists that the two questions are intimately related to each other by a common "fundamental idea" (*Grundgedanke*). The "inseparable link" of extension and color is a qualified instance of the *part-whole relation* that links together substance and its attributes. (Stumpf 1939, 24) and accounts for many other categories too.

This persistent *Grundgedanke*, ranging from the beginning to the end of Stumpf's philosophical work, also affects many of its intermediary stages. As we shall see, one can identify it within many of Stumpf's works: in his habilitation thesis on the foundations of mathematics (Stumpf 1870), in his first book on the origin of the idea of space (Stumpf 1873a), in the two published volumes of the *Tonpsychologie* (1883 and 1890), in his criticism of Kant and of Neo-Kantian philosophers (Stumpf 1891), in his

ideas on the classification of sciences and of psychic functions (Stumpf 1906a and 1906b), on the relation of body and soul (Stumpf 1896), on perception and its attributes (Stumpf 1917, 1918) and, finally, in his studies on Spinoza. (Stumpf 1919b) In sum, Stumpf's theory of the categories epitomizes his entire work, showing – against any misunderstanding – its common sources, aims and the intimate coherence of his psychological and philosophical writings.

Accordingly, any attempt to understand and interpret Stumpf's thought should take the problem of categories into account. All the more so, since this theme is tremendously helpful in determining Stumpf's place among the philosophers of his time. Actually, a wide-ranging discussion concerning the *Kategorienlehre* had taken place in German philosophy during the whole nineteenth and the early twentieth century. (see e.g. Baumgartner, Gerhardt, Konhardt and Schörich 1976; Ferrari 2003) After an early phase dominated by the discussion of Kant's doctrine, the debate had been animated by the renaissance of Aristotelianism. One of its most preeminent supporters was Friedrich Adolf Trendelenburg, among whose pupils was Stumpf's teacher Franz Brentano, who dedicated to Trendelenburg his early work *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*. However, Brentano was far from simply duplicating his teacher's doctrine, and did not share Trendelenburg's insistence on "movement" as the hidden basis of the categorial process. (Trendelenburg 1846, p. 366 ff.) Rather, Brentano stressed the preeminence of the meaning of Being "according to the figures of the categories" and insisted particularly on the category of substance (Brentano 1862, 72 ff.) With this step, Brentano laid the foundation for his own original approach to philosophy. (see Antonelli 2001; Jacquette 2011)

It is within this context that Stumpf's ideas about the categories should be situated and interpreted. Given the importance of Brentano for Stumpf's thought, one could reasonably expect him to adopt, or at least to re-elaborate in some way, Brentano's views on this crucial question. But even a very superficial glance at the *Erkenntnislehre* reveals an enormous distance from Brentano. True, Stumpf shares Brentano's (and Trendelenburg's) opposition to Kant's apriorism and his inclinations towards Aristotelianism. Yet, as we shall see, they have little else in common. As far as substance is concerned, Stumpf explicitly maintains his independence and claims a closer adherence to Aristotle: "we can subscribe to the results neither of the early, nor of the late Brentano; rather, we adhere to the old Aristotle". (Stumpf 1939, 79) Moreover, Stumpf relies upon many other sources: Hume is most frequently quoted, yet many other classics like Spinoza, Locke, Leibniz and Berkeley are discussed in the *Erkenntnislehre*, together with more contemporary thinkers of the day like Herbart, Lotze and Beneke.

The result is an original approach to categories. Stumpf adopts a "psychological" method in dealing with the problem of categories. No special mention of Brentano's approach to psychology is made here by Stumpf, who rather considers the British empiricists – most notably, Locke and Hume – as forerunners of the psychological approach to categories. (Stumpf 1939, 10) Yet, Stumpf claims, the developments of modern psychology make Hume's skepticism untenable. When compared with the old associationism of empiricism, psychological holism as developed by Stumpf (i.e. with much less radicalism than the Gestaltists) provides new solutions to the problem of categories. This step consciously brings Stumpf back to Aristotle, making Kant's apriorism pointless and Brentano's strong ontological commitment unnecessary. In this sense, Stumpf can legitimately assert that the theory of knowledge (*Erkenntnistheorie*) "comes back to itself via psychology". (Stumpf 1939, 24)

In his 1891 essay *Psychologie und Erkenntnistheorie* Stumpf had already stated:

> The ultimate task of this psychological work (although not exclusively performed by psychologists) would be a genetic analysis of the most elementary relational concepts. It would considerably differ from the table of the categories obtained by the "critical" way. Particularly, one should take into account the manifold relations occurring between the parts of a whole. In fact, we speak of "parts" in many different senses. But we are still rather far from this goal. (Stumpf 1891, 491)

Later on, in the *Erkenntnislehre*, Stumpf came much closer to fulfilling this purpose. However, as we have seen, the book was published posthumously and under historically unfavorable circumstances in 1939-1940. This might explain the limited posterity of his ideas: Stumpf's doctrine of the categories failed to stimulate reactions, reviews and discussions. As to the reasons for this delay in publishing his philosophical theories, Stumpf wrote:

> Although I fully appreciate the Aristotle's saying that theory is the sweetest of all, I must confess that it was always a joy and a comfort to move 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 the mistress of the house, who, it is true, granted most generously great privileges to her helpmate. (Stumpf 1930, 397, transl. revised)

This self-confessed negligence – later redeemed by the *Erkenntnislehre* – cannot be seen as the result of a desertion of philosophy in favor of experimental psychology. (see also Stumpf 1890, V f.) In Stumpf's eyes, this very alternative would sound meaningless and ill-posed. Stumpf permanently considered metaphysics as an *after-science* (*Nachwissenschaft*, Stumpf 1906a, 42) profiting from the many progresses of all sciences, including psychology. Stumpf's development of a theory of categories in the *Erkenntnislehre* puts these permanent claims of his into effect.

In what follows I shall first (§ 2) discuss Stumpf's definition of the categories and his methodology. Secondly (§ 3), I shall illustrate his analysis of the categories, and attempt a general interpretation. Finally, (§ 4) I shall compare his views with Brentano's doctrine.

2 Defining Categories

Stumpf defines categories, i.e. the "fundamental concepts" (*Grundbegriffe*), as follows: "very general concepts, constantly used in all sciences and in common thinking, regardless of the particular matter". (Stumpf 1939, 10) These concepts occur both in the natural sciences and in the *Geisteswissenschaften*, no less than in non-scientific, everyday thinking. After all, Stumpf believes that Aristotle's theory of categories "put for the first time […] natural thinking into a scientific form". (Stumpf 1939, 16) In the *Erkenntnislehre* (and elsewhere) Stumpf insists on the fundamental difference between concepts and knowledge: concepts are a certain kind of mental presentations (*Vorstellungen*); knowledge consists of judgments (*Urteile*) that link concepts together. Accordingly, Stumpf separates the question of the *origin of categories* from that of the origin of knowledge. The former, Stumpf claims, is a psychological issue; the latter is an epistemological (*erkenntnistheoretisch*) one. (Stumpf 1939, 6-7; Stumpf 1891, 470-471) The whole structure of the *Erkenntnislehre* corresponds to this distinction. The

first part of the book deals with the origin of concepts, and especially of categories. The second and largest part is devoted to the problem of the origin of knowledge[1].

On the same basis, Stumpf also introduces a classification regarding his own thought. Philosophers, he notes, are commonly considered "rationalists" or "empiricists" according to the particular weight they assign either to rational or to experiential *knowledge*. Yet rationalism in this sense, i.e. regarding the origin of knowledge, does not necessarily imply a denial of the empirical origin of *concepts*. Locke, for instance, was an empiricist as to the origin of concepts, but not as to the origin of knowledge. (Stumpf 1939, 5-6) In the *Erkenntnislehre* Stumpf provides several proofs of his strong propensity towards this position. As far as the origin of *concepts* – including categories – is concerned, he is rigorously an empiricist. The interesting views expressed in his 1919 essay *Empfindung und Vorstellung* also bear witness to this attitude. (Stumpf 1918; see Martinelli 2003) Nevertheless, "against any extreme empiricism" Stumpf affirms that *knowledge* implies "a priori foundations". (Stumpf 1940, 855) In this sense, then, he is no empiricist. Every concept is taken from perception, yet there can be "a priori knowledge, whose determination does not require further experiences". (Stumpf 1939, 126)[2]

Psychology, Stumpf claims, has no right in determining the nature of concepts: only the problem of their origin is to be a concern of psychology. However, the two problems of the "meaning" and of the "origin" converge in the case of elementary concepts. "When we show […] the origin of a concept in us, arising from our perceptions, we illustrate at the same time its original meaning". (Stumpf 1939, p. 9) How else could one explain what is "red" to someone who can see perfectly but (for some reason) is unable to grasp the chromatic similarity of a red rose and a red apple? Whenever the origin of a concept can be shown in this way, Stumpf suggests, this ought to be done. And, despite any sceptic objection, this *can* be done for all of the categories.

Stumpf's central claim is that all of the categories *stem from perception* (*Wahrnehmung*). This holds, at least in a *negative* form, that perception offers the "unavoidable basis and the material" for the construction of categories. (Stumpf 1939, p. 9) Anyone would concede that concepts like "red" or "color" (no less than "space" for Stumpf) have something to do with visual experience. Yet, as far as categories are concerned, philosophers debate harshly. Sketching the general outlines of the problem, Stumpf notes that Kant's views contrast with the claims of the "psychologists", who indicate perception as the "original site" of categories (also Stumpf 1891, pp. 467-468) Kant's opponents may speak of "impressions" (Hume), or of "*Erlebnisse*" (Dilthey), or finally – in a rather Goethean vein – of primal phenomena (*Urphänomene*). In any case, they share the aim of "resuming the enterprise of the English School" against Kant, who cut the Gordian knot instead of solving the problem. (Stumpf 1939, p. 11) Stumpf repeatedly insists on the inconsistency of Kant's solution as a whole. Unless one has proven that there is a common source for all the categories, the correct methodology is that of investigating each of them separately. It was especially Hume who gave a luminous example of the application of this psychological method to a radical critique of the traditional categories. Nevertheless, in Stumpf's eyes, Hume failed too, because he did not consider the possibility of a successful derivation of many categories from perception (not generally "experience"), and especially from *inner* perception.

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[1] See § 1: *Die Grundbegriffe (Kategorien)* (Stumpf 1939, 1-123); § 2.*: Wege des Erkennens* (Stumpf 1939, 124 ff. and Stumpf 1940). Only the first section will be systematically considered in what follows.

[2] An analysis of these "a priori foundations" cannot be given in this essay. A third meaning was introduced by Helmholtz, who spoke of *empiricism* vs. *nativism* as to the origin of the idea of space. Yet Stumpf explicitly rejects this distinction. (Stumpf 1873b, 363; see also 1873a, 7)

Stumpf's step beyond Hume is made possible by a different and more qualified concept of *perception* (*Wahrnehmung*). Stumpf defines "perception" quite precisely: perceiving means "noticing something" (*das "Bemerken von etwas"*). (Stumpf 1939, 11)[3] For instance, hearing a chord without distinguishing within it the individual notes means perceiving *the chord*; in contrast, the *single notes* are "heard, but not perceived". Given this definition, Stumpf maintains that one should consider on the one side, the dichotomy of *outer* perception (or sense-perception) and *inner* perception; on the other, that of *absolute* and *relative* contents. The former distinction is taken from Brentano. Nevertheless, there is a striking difference: Stumpf does not allow for any special epistemic gap between inner and outer perception. Whereas Brentano insisted over and over again that the "so-called" outer perception is totally deprived of the special evidence of the *innere Wahrnehmung* (e.g. Brentano 1874, 119), Stumpf considers both forms as equally valid – and, under some circumstances, equally suspect – sources of knowledge. (Stumpf 1883, 22, Stumpf 1939, 217) After all, and surely not by chance, Stumpf does not even mention Brentano in this context; rather, he refers to Locke's "reflection" (Locke 1975, 105) Secondly, Stumpf's concept of perception is characterized by the inclusion of relations (*Verhältnisse*). Perceiving is something different than registering collections of isolate or "absolute" contents. Given that perceiving is tantamount to "noticing" (*bemerken*), nothing prevents us from including relations among the "noted" things. Stumpf remarks: "we neither produce these relations, nor do we lay them onto the given sense-material; rather, we can only perceive them within it". (Stumpf 1939, 12)

The above illustrated theory of perception, Stumpf believes, offers "the key" to solving the problem of categories. (Stumpf 1939, 13) Stumpf can now specify his central claim: categories originate in the first place in *inner perception* (although not exclusively, given some significant exceptions) and in the *perception of relations*.

3 Analyzing Categories

In the *Erkenntnislehre* Stumpf discusses the following categories: "thing (substance), cause, necessity (legality), truth, reality, equality, number". (Stumpf 1939, 13) This is, however, neither an ordered "table" of categories, nor even a complete list. Stumpf simply speaks of "seven of the most important fundamental concepts". Moreover, he eventually adds additional categories, as we shall see in § 3.5. Finally, Stumpf warns that the above listed terms are no more than empty words, unless one has determined the "meaning that one can assign them in scientific usage" and shown "whether these meanings can be explained by a reference to some specific perception".

3.1 Substance

Stumpf first deals with *substance* (*Substanz*), a concept which he identifies with "thing" (*Ding*)[4]. Any substance, for Stumpf, has three main features: 1) it accounts for the unity of a plurality of properties, 2) it persists in the course of their changes, and 3) it is the basis on which properties are based. (Stumpf 1939, 19) By contrast, Stumpf considers that it is unnecessary to ascribe "simplicity", another traditional attribute, to substances. In a brief sketch of the history of this category, Stumpf notes that Aristotle's definition of substance remained almost unaltered until Locke, who still allowed for it but thought of it as unknowable. After him, Hume claimed that this concept is always illusory and deceptive: things (substances) are mere "bundles" of properties. As it is well known,

[3] See also Stumpf 1883, 96 and 106 ff.; Stumpf 1906b, 16 regarding the development of this notion within Stumpf's thought.

[4] For an introductory discussion on substance and thing (independent of Stumpf) see Robinson 2009.

Hume's criticism prompted Kant to consider substance as a category in the sense of a "form of thought" (*Denkform*).

However, Stumpf notes that Hume's and Kant's contrasting views share the common assumption that perception offers no evidence of the origin of this category. (Stumpf 1939, 18) The two philosophers draw their opposite conclusions from this allegedly undisputed fact. By contrast, Stumpf claims that we do find within perception all the necessary elements to form the idea of substance:

> there are appearances within perception, whence the first character of the concept of substance can be obtained. Such appearances do not intuitively and concretely exhibit a mere bundle of properties, but rather a unitary whole [*Ganzes*]. (Stumpf 1939, 22)

The experience of perceptual wholes provides us with the idea of a "togetherness" of properties, i.e. with the first of the above listed characters of substance, namely that "substance accounts for the unity of the plurality of properties".

Sense-perception offers several instances of whole-part relations. In each instance of reciprocal inherence of the "attributes" of perception (color and extension, pitch and intensity, etc.), one experiences *a perceptual whole*. The relation of a perceptual whole is thus *transferred* to many other "whole groups of properties, which we are able to connect by virtue of this concept". (Stumpf 1939, 26) This "transfer" (*Übertragung*) means that we do not *always* perceive substance – or any other category – within appearances. Nor anything of this kind is necessary. Once a certain concept is acquired through experience, it can be applied to all further experiences. (Stumpf 1891, 489) With this, the first of the three features of the concept of substance (see above) originates from perception. The same, Stumpf shows, is valid for the other two. (Stumpf 1939, 31-39)

Stumpf's theory of perception, characterized by the idea of "perceptual whole", deploys here its considerable philosophical implications. It is not possible to identify his theory with that of Gestalt psychologists. We should not be misled by Stumpf's anti-associationist commitment and his liberal, non-dogmatic attitude as a teacher. (see Ash 1995; 2001) Rather, one of the most typical features of Stumpf's theory is the idea of the "attributes" (*Attribute*) of sense-perception. Color and extension, for instance, are attributes of visual perception. For Stumpf, these two attributes are inseparably linked together in any visual occurrence. Stumpf had maintained this fundamental principle since his *Raumbuch*, where he used to speak of "psychological parts". (Stumpf 1873a, 106, 109) In the analysis of substance in the *Erkenntnislehre* he simply draws more general conclusions from the same argument. The "attributes" – extension and color – are now considered as *an instance*, among others, of the relation linking any substance to its properties. In the same way, pitch and intensity are interlaced in any perceived tone. One would be totally mistaken, Stumpf explains, to think of these features as the outcome of habit, as if we originally perceived extensionless colors (or colorless extension) and pitchless tonal intensities (or non-intensive pitches). "It is simply false – Stumpf maintains – that our senses always provide us with "scattered members", i.e. mere bunches of impressions without any order and connection». (Stumpf 1939, 23) Remarkably, *inner perception* can also serve as a source for the concept of substance. (Stumpf 1939, 24) The unity of consciousness, or one's "character" as compared with one's single actions, may illustrate this claim.

One of the most remarkable consequences of Stumpf's argument is that substance does not lie "behind" or "beyond" appearances. (Stumpf 1939, 40) Substance lies *within* appearances. Substances, i.e. things, are nothing else or "more" than *wholes of properties*. Thus, Hume was right and wrong at the same time: a substance or thing "actually consists only of its properties (including known and unknown forces and

dispositions), yet they form not a bundle, but rather a whole". (Stumpf 1939, 28) Stumpf discussed many other related questions. No privileged "substantiality" can be allowed to those groups of appearances that one usually calls "soul" and "body". (Stumpf 1939, 29) Rather, modern developments in the "philosophical analysis" of substance and causality are among the factors that make a new solution to this problem possible. (Stumpf 1896, 92) Furthermore, Stumpf's definition accounts for the scientific use of the term "substance", e.g. in chemistry. (Stumpf 1939, 14, 36)

In sum, substance is an "experiential concept" that we abstract from the "appearances" given in sense-perception and from inner reflection upon our "psychical functions". Both of these sources offer abundant material to form the concept of a whole-part relation, which is then transferred and generalized so that we can conceive of a thing or substance as a "whole of properties".

3.2 Causality, Necessity, Possibility

As to *causality* (*Kausalität*), Stumpf initially concedes something more to Hume: "here, of course, sense-perception should be discarded". (Stumpf 1939, 42)[5] Nevertheless, he believes, inner perception compensates for this loss, as it was already noted by many German and French thinkers until Beneke[6], William James and Brentano. Stumpf's argument runs as follows: within inner perception we perceive ourselves as active beings: this activity, together with its outcomes, forms a *whole*. Stumpf's example is the activity of reading a text. The reader pays attention to what he reads. Now, Stumpf argues, the reader's activity, i.e. his attention, is not detached from the read and understood words (or images, or concepts). Stumpf concludes that "deliberate attention does not simply precede, but rather endures during all the process and forms together with its results a unitary whole". (Stumpf 1939, 43) Attention and the understood concepts can be compared with a machine and its products. But there is a considerable difference, since we are conscious of our producing activity and of its connection to its results. Cause and effect form a whole. Consequently, one actually finds within *inner* perception a basic instance of the relation of cause and effect.

Given that the notion of a perceptual whole plays a pivotal role in both cases, the concepts of causality and substance partially coincide. Nevertheless, causality differs from substance, because it arises from the impression of an "oriented" wholeness. The entire process of reading a text is informed by attention and volition, and not *vice versa*. In this sense, Stumpf speaks of "unilateral conditionality" (*einseitige Bedingtheit*) or "being-caused" (*Verursachtsein*).

> The properties and states, whose whole we have called a substance, condition one another *reciprocally*. By contrast, the kind of conditionality that defines the essential character of the concept of causality is one-sided. (Stumpf 1939, 44)

The concept of causality is then transferred to physical phenomena and applied to natural sciences.

Within scientific contexts, causality is often defined as the regular and *necessary* consequence of a consequent from an antecedent. Causal "dependence" (*Bedingtheit*) is thereby analyzed into its two components: temporal sequentiality and regularity, i.e. necessity. For Stumpf, however, temporal consequentiality is no indispensable requisite: mental attention and what results in the act of reading (i.e. understanding the

[5] On Stumpf's treatment of causality see Rollinger 2001.

[6] See Beneke's *Metaphysics* (Beneke 1840, 284), a book considered by Stumpf to be "excellent in many respects". Stumpf also approves of his definition of reality (Stumpf 1906b, p. 10) Moreover, Beneke's treatment of substance (Beneke 1840, 171) and his attitude towards Hume (271-272; 286) resemble Stumpf's ideas on the matter.

text) are not temporally separated. Rather, attention must persist throughout the process in order to achieve its effect. Likewise, Stumpf regards the *necessary* connection of cause and effect as supplementary: strictly speaking, causality does not imply necessity.

Necessity (*Notwendigkeit*), rather, must be considered as another category, mainly independent of causality. Once more, a comparison with Hume serves as a good introduction to the discussion. For Hume, the idea of a necessary relation has no solid foundation: no correspondent impression can be shown to account for it[7]. One experiences a necessary connection only whenever *relations of ideas* are concerned. Stumpf claims, by contrast, that this occurs in the case of sensory perception, too. Given three tones, for instance, one of them is necessarily intermediate (with respect to the pitch) between the other two. (Stumpf 1939, 48)

The category of necessity originates in this way, i.e. from the reflection upon some events within our minds. Both mathematical truths and sensory occurrences of the aforementioned type can offer material for such reflections. Once the concept is made available, Stumpf maintains that we apply it *hypothetically* to natural events. (Stumpf 1939, 50) And rightly so. Although outer perception offers no instances of a necessary relation, we take it from inner perception and think of nature *as if* we were able to grasp fully and adequately the necessity of its laws, thus attaining the real essence of natural things.

The next term on Stumpf's list, *possibility* (*Möglichkeit*), can be easily defined. Possible is anything that is not contrary to any necessary law. Accordingly, this category is twofold: *logically* possible is anything that does not contradict a logical law, *physically* possible is anything that does not contradict a physical law. Interestingly, Stumpf discusses some secondary forms of possibility, including the Aristotelian notion of "disposition" (*hexis*) and the Kantian concept of "problematic judgment". (Stumpf 1939, 55-57) Besides this, this section can be seen as an appendix of the previous one.

3.3 Truth and Reality

The most unusual of Stumpf's categories is *truth* (*Wahrheit*). Strictly speaking, Stumpf admits that truth is a property of judgments. On the basis of the distinction between the origin of categories (concepts) and the origin of knowledge (judgments), truth should not be considered at this stage. Yet, Stumpf suggests the following three aspects to be taken into account: 1) the meaning of the concept of truth; 2) the way truths are acquired, and 3) the enumeration of some reliable truths. (Stumpf 1939, p. 57) The first of these issues, then, can be legitimately considered at this stage. Stumpf criticizes the classical definition of truth as the correspondence of an idea with reality. Rather, truth should be defined in terms of correspondence of the "quality" (affirmation/negation) with the "matter" (the "complex of presentations": *Vorstellungskomplex*) of a judgment. (Stumpf 1939, p. 61)

Stumpf introduces here the concept of "evidence" (*Evidenz*) or "insight" (*Einsichtigkeit*). Formally speaking, evidence is not identical with truth: a "blind" judgment can be true by chance. Nevertheless, evidence represents the proper basis of truth. (Stumpf 1939, 62) Finally, Stumpf makes a wide and interesting comparison between his own definition of truth and the ones given by nominalism, conventionalism and pragmatism. (Stumpf 1939, 67-75) Dealing with the category of truth, Stumpf omits to exhibit its origin within perception. One could expect him to defend the view that the

[7] "We have sought in vain for an idea of power or necessary connexion, in all the sources from which we could suppose it to be derived" (Hume 1748, VII.2, 61)

concept of truth originates from the inner perception of evidence, but this is not explicitly stated.

In the following chapter Stumpf considers the category of *reality* (*Wirklichkeit*, *Realität*) together with that of being, or *existence* (*Existenz*). For Stumpf, reality is essentially distinguished by a capability of acting, as expressed by the renowned German motto "*wirklich ist, was wirkt*" (real is what works). (Stumpf 1939, 75) This classical definition of reality offers many advantages over any other. First and most remarkably, the category of reality is kept distinct from that of substance. The concept of substance is not identical with that of "reality", but merely "equipollent" with it. The capacity to act is a character of all substances; yet, the concept of substance is not exhausted by this (or any other) definition of what is real. (Stumpf 1939, 15)[8] In fact, a substance (thing) can be a mere object of thought, such as for instance a fairy princess with her enchanted manor. But only real things properly act. In a derivative sense, we can say that the fairy princess acts too: for instance, she breaks a curse and marries a prince. Yet this is a derivative use. The *reality* in this respect is always the "thinking individual", i.e. it is he or she who thinks of the acting fairy princess. Moreover, Stumpf argues,

> our definition is in agreement with the fact that, among all things that can be considered and described as real, the psychical life of the thinking individual legitimately reclaims pride of place, as far as knowledge of reality is concerned. (Stumpf 1939, 76)

Like the previous main categories, reality too has to do with the idea of *wholeness*. In a previous essay, Stumpf had established that the ultimate source of our concept of reality is "the whole of what is immediately given". (Stumpf 1906b, 10) The argument is borrowed from Beneke: yet Stumpf does not share Beneke's conclusion that reality coincides accordingly with *psychical* nature. Rather, we are presented with some immediate data of this kind in both inner and outer perception. None is more distinctively related to reality than the other. Thus, it is on the basis of both appearances and psychical functions that we form the notion of reality, which is later generalized and transferred to other domains.

3.4 Equality and Number

The last two categories considered by Stumpf are *equality* and *number*. The section on *equality* (*Gleichheit*) is one of the most difficult of all. Stumpf's argument works somehow recursively: the experience serving as a basis for the construction of this concept is – at its core – that of *the construction of concepts* in general, i.e. abstraction or generalization. (see Stumpf 1902) In other words, one attains the category of equality (in its most general form) by reflecting upon the process of abstraction that occurs within inner perception, by means of which concepts are obtained. According to this recursiveness, Stumpf introduces a lexical distinction: instead of "inner perception" (*innere Wahrnehmung*), one should speak in this case of the "innermost perception" (*innerste Wahrnehmung*). (Stumpf 1939, 93)

As Stumpf had noted sixty years earlier in *Über die Grundsätze der Mathematik* (Stumpf 1870, 20.2), equality cannot be considered in general. Rather, one should always raise the question: equal in respect to what? Accordingly, equality should not be understood in a preeminent sense as *mathematical* equality, i.e. as equality in respect to magnitude. Many instances of equality also occur within sense-perception, where the concept can be defined as the highest degree of similarity. Furthermore, two different states of mind – say, two feelings like my present and past rage – are "equal"

[8] This distinction becomes more intelligible in light of Stumpf's polemic against Brentano: see below, § 4.

insofar as they are instances of rage despite any differences. It is then appropriate, Stumpf claims, "to conceive of the concept of equality in its most general meaning and to search for its source within perception". (Stumpf 1939, 84)

Stumpf's general definition of this category rests on the presence of an *identical class* to which the supposedly equal things belong. This experience is gained through reflection upon one's "innermost perception", in the above illustrated sense. The most appropriate definition of equality is then "identity with respect to the species" (*Identität der Art nach*). (Stumpf 1939, 86; see already Stumpf 1870, p. 20.1) According to Stumpf, this definition comprises mathematical equality, sensory equality, and any other instance. Stumpf stresses the condition upon which "equal objects fall under an *identical* (*identisch*) class-concept, and not under the *same* (*gleich*) class-concept". (Stumpf 1939, 88) When two subjects think of the number *two*, or I myself think of it on different occasions, there are just as many different acts of thought (*Denkakte*) and just as many different objects – or "formations" (*Denkgebilde*) – of thought. This multiplicity corresponds to the psychological aspect of the word "concept". Nevertheless, there is "only one single and always identical concept in the sense of a 'meaning' (*Bedeutung*) or of something 'conceived' (*des Gedachten*)". (Stumpf 1939, 88)

This double-sidedness is quite typical: concepts are subjective and objective entities at once. Objectiveness, however, does not mean that concepts dwell somewhere "outside any thinking subject and independently of him"; rather, concepts are "outside the single thinking subject and independent of his present act of thought".

> As soon as we enter the realm of concepts, we enter another world, an '*allo genos*' in fullest sense, so that a new counting begins. That, which is psychologically a multiplicity, becomes here a unity, unitary in its species (*monoeides*), and, so to speak, an individual. (Stumpf 1939, 88-89)

With this strong anti-ontological limitation, Stumpf can nonetheless maintain the ideality of concepts and appreciate the permanent value of Plato's philosophy, the "true and highly significant core of the theory of ideas", as recently underlined by Lotze and, after him, by Husserl. Yet concepts should never be hypostatized. His overt anti-platonism, in sum, does not prevent Stumpf from recognizing the ideality of mathematical entities.

Finally, Stumpf discusses the concept of *number* (*Zahl*). He begins his exploration with a provocative question: where are Hume's "impressions" in the case of number? In other terms: do we find within perception any trace of its origin? Stumpf's answer is:

> it resides in the impression of *multiplicity* (*Mehrheit*) *or set* (*Menge*); furthermore in the impression of the *relation of increase and decrement* between sets. (Stumpf 1939, 98)[9]

Stumpf identifies the mathematical concept of set, at its core, with that of multiplicity. Now, the impression of multiplicity comes from sense-perception. Outer perception plays here a crucial role: the sense of sight especially is involved in the process. Stumpf explains:

> Multiplicity belongs to the fundamental facts that we perceive with and within sense-contents. These facts are so to speak embedded in them as immanent features. It is not properly a relation between sense-impressions, since any relation, in turn, presupposes a multiplicity. For this reason, however, multiplicity *is the general basis for any relation* (*die allgemeine Verhältnisgrundlage*). Thus, from the point of view of the possibility and of the conditions of its perception, multiplicity can be put on the same level with the relations

[9] See also Stumpf 1870, p. 19.2. Stumpf discusses Cantor's definition of set (Cantor 1895, 481) Stumpf 1939, 107 ff.

> occurring among the sensible contents and, whenever no misunderstanding is to be feared, it can be considered a fundamental relation (Stumpf 1939, 98-99)

Stumpf had already dealt with this problem in the first volume of the *Tonpsychologie*. (Stumpf 1883, 96) Any relation between two given tones (e.g. similarity, or tonal fusion) is perceived "with and within" the sensory content. The same holds for multiplicity. Looking at the night sky we are *compelled* to assume a multiplicity of stars (provided that there is a certain set of primitive skills, common to men and animals)[10]. For this reason, Stumpf notes, Aristotle (and Locke) counted multiplicity among the "common sensibles". Remarkably, it would be mistaken to believe that in order to perceive a multiplicity one needs to perceive each single element of it. This is rather exceptional in ordinary perceptual circumstances. What is actually required is a certain homology among the elements, i.e. some common properties linking them together. (Stumpf 1939, 100)

The concept of multiplicity, however, is only the first step towards a definition of number. The above mentioned relations of *increase* and *decrement* are directly given in sense-perception, too. Once more, Stumpf's *Tonpsychologie* offers an excellent example. We perceive differences in the intensities of sounds, and also differences of differences, e.g. between two musical *crescendo*. No preliminary fixation of a unity of measure is needed at this stage. (Stumpf 1939, 101) Finally, Stumpf introduces the concept of *series* (*Reihe*). A series is "an *ordered* multiplicity": all of its elements, as far as a certain property is concerned, show a similar order. For instance, single notes haphazardly struck on a piano make up a series as to their temporal succession, but not as to their pitch.

With this, Stumpf can proceed to define number. His *preliminary* definition is: a number is a certain member of the "series of sets, ordered according to their magnitude". (Stumpf 1939, 108) Since any ordered multiplicity is in turn a series, this series is a "series of series ('second-order' series), ordered according to magnitude". This second-level series may be called the series of numbers. Yet, this is not enough. Stumpf introduces a further condition: numeral series should be obtained through the addition of unities. (see Stumpf 1870, p. 19.2) Accordingly, numbers are defined as "multiplicities consisting of added unities" (sums), and their series, the series of numbers, is the series of sums.

Stumpf recalls then his theses concerning equality (see above) and applies them to sets. Consequently, mathematical equality is defined as "conceptual identity under the respect of magnitude". (Stumpf 1939, 114) Again, Stumpf warns against any hypostatization of numbers. Furthermore, he insists that each single number is a general concept, not an individual, that the concept of number does not imply any hint at the concept of time; finally, he addresses some question concerning non-natural numbers and infinite sets. (Stumpf 1939, 117 ff.)

3.5 Space, Time and additional Categories

Stumpf considers incomplete any table of categories "that has consideration only for the needs and the sources of natural scientific research (*naturwissenschaftlicher Forschung*)". (Stumpf 1939, 122) No less than natural sciences, both the *Geisteswissenschaften* and everyday thought reveal categories of their own. In all these cases, human thought makes use of a variety of fundamental concepts. Accordingly, in a chapter entitled "Other fundamental concepts", Stumpf insists that the above illustrated discussion does not exhaust the list of categories. This claim has wide-ranging philosophical implications.

[10] Non-human animals can also compare multiplicities: see Stumpf 1939, 103.

Stumpf begins by adding remarks concerning the concepts of *space* and *time*. (Stumpf 1939, 121) As noted above, Stumpf believes that Kant was wrong in denying the perceptual ("intuitive", in Kant's terms) root of categories. Conversely, however, Kant was also wrong in considering space and time as (pure) intuitions.[11] Rather, space and time are categories too, at least in Stumpf's sense. As shown in *Über den psychologischen Ursprung der Raumvorstellung*, the mental presentation of space originates from perception. This presentation occasionally admits a high level of generality, so that it can be included among the categories. The same – perhaps with supplementary difficulties – holds for time. (see Stumpf 1891, 473 ff., 487)

In addition, Stumpf lists the categories of *variation*, *continuity*, *movement*, *limit*, the *infinitely small* and the *infinitely big*. (Stumpf 1939, 121) However, he simply mentions them and indicates the need to provide a psychological account of their origin following his general principles. Furthermore, Stumpf claims that some other categories correspond to the most common grammatical forms. Any grammatical usage of connectives reveals elementary "relational concepts" (*Verhältnisbegriffe*). Connectives used in natural language, Stumpf argues, imply just as many forms of thought: the usual reduction to the few operators currently adopted in formal or mathematical logic (boolean operators) is insufficient from the point of view of a theory of categories. Concepts used in natural language may also include, for instance, such connectives as "partly… partly…; either… or...; neither… nor ..." etc. (Stumpf 1939, 122)

Let us now recapitulate some of Stumpf's central claims. Stumpf first considers seven categories: substance, causality, necessity, possibility, truth, reality, equality, number. Outer perception offers the basis for two of them, namely *substance* and *number* (as well as *sensible* equality); all the others are grounded in inner perception. However, *substance* has a twofold source: its origin can be traced also within inner perception. *Necessity* and *possibility* belong to a closely related pair. Although *truth*, strictly speaking, is no category, it deserves attention as a frequently used concept. *Number* implies a duplicity: specifically with respect to the concept of number as such and each numeral: the former category is related to that of *equality*, the latter, to that of multiplicity. Thus, although *multiplicity* does not appear in the list, it could be considered as an autonomous category, once more grounded in outer perception. *Equality*, in turn, has a double aspect: sensible equality and rational equality. *Causality* is somehow related to necessity, yet – no less than *reality* – it claims independence. Both *causality* and *reality* have their basis in inner perception, under rigorous exclusion of outer perception. Nevertheless, *causality* and *substance* have much in common: they essentially consist in a reciprocal inherence, which is bidirectional in the case of substance and one-sided in that of causality.

At any rate, Stumpf's list of categories should be understood as an open one: many other fundamental concepts occur within both sciences and natural language. In his *Erkenntnislehre*, Stumpf sets the fundamental lines and the "heuristic maxims" of a doctrine of categories. His basic principle is that one should make every effort to "reveal the ultimate foundations of simple concepts, including relational concepts, within outer or inner perception". (Stumpf 1939, 123) Kant's (and many others') allowance for *a priori* "forms of thought" could be admitted only after having fully accomplished this task, and provided that some cases would still remain unexplained. But this condition is far from being fulfilled. Rather, psychological analysis reveals to be the most suitable methodology in dealing with all categories, all the more so in light of the remarkable progress in psychological methods and results that has occurred since Hume's times. Stumpf concludes:

[11] Stumpf was quite explicit on this point since his habilitation thesis (Stumpf 1870, p. 15.4)

> 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, rather, is proved just from the fact that philosophy always leaves open many more questions than those it provides answers for. (Stumpf 1939, 123)

4 Brentano and Stumpf on Categories

Since his works on the several senses of being in Aristotle, Brentano had been deeply concerned with many of the above discussed themes. This fact calls for a comparative analysis of Stumpf's and Brentano's ideas. Two main issues can be distinguished: in the first place, the young Brentano subscribes to a *realistic* interpretation of the categories. (Brentano 1862, 80) Secondly, the principal articulation of being, for him, is that of substance and accident: this establishes a strong asymmetry between substance and all the remaining categories. (Brentano 1862, 148) What did Stumpf maintain concerning these two questions?

Let us begin with the former matter. By the middle of the XIXth century, three main interpretations of the meaning of categories were available. Categories were understood as (1) *forms of thought* i.e., so to speak, empty slots ("*loci*") ready to receive things; (2) concepts occurring in propositions, i.e. *predicates*; (3) characteristic articulations of being, i.e. ultimate *genera*. The first option clearly exemplifies Kant's choice, while both Trendelenburg and Brentano openly reject it. Yet, whereas Trendelenburg favors the second option (Trendelenburg 1846, 20), Brentano definitely adopts the third one (Brentano, 1862, 80)

Needless to say, Stumpf rejects Kant's approach too. We are left, then, with the remaining two possibilities. Though Stumpf does not explicitly put things in this way, he is clearly far from any *realistic* interpretation in the above defined sense. Rather, he offers a moderate version of the second option. As we have seen, categories for Stumpf are essentially *concepts*, not *genera* of being. Although concepts are not "merely" grammatical entities, i.e. propositional predicates, Stumpf rigorously avoids any ontological commitment and rejects any hypostatization. As a consequence, he neither needs a fixed list of categories, nor considers substance as a special and pre-eminent category. Furthermore, Stumpf's insistence on categories corresponding to the connectives of ordinary language also suggests a predicative approach to the whole question.

However, Stumpf develops a strongly modified version of the predicative approach to the categories. As his many quotations reveal, Stumpf is much more receptive than Trendelenburg or Brentano (and most German philosophers of the time) to the methodology developed by Locke – whom he particularly admires –, Berkeley and Hume[12]. Accordingly, though it is undeniable that categories occur within predication, Stumpf urges to investigate the conditions that make this occurrence psychologically possible and epistemologically (*erkenntnistheoretisch*) meaningful.

As to the second point, Stumpf is likewise distant from Brentano in the definition of substance. Firstly, he criticizes Brentano's identification of "thing" (or substance) with "reality" (*Reales*). As a result of this correspondence, Brentano identified substance with the "essence" (*Wesen*) and the "ultimate subject" that is *contained in each accident* as a part of it. (Stumpf 1939, 41)[13] By contrast, as we have seen, Stumpf identifies "substance" with "thing" (generally regardless of reality) and considers accidents to be *contained within substances*. In short, although Brentano and Stumpf

[12] By contrast, Brentano accuses Hume of superficially over-simplifying philosophical problems (Brentano 1933, 141)

[13] See e.g. a text of 1914 in Brentano 1933, 11; also Kraus 1919, 53.

share the idea that the relation of substance and accident has to do with part-whole relations, they interpret this fact quite in opposite ways: for Brentano, substance is a part; for Stumpf, substance is the whole. The criticism of Brentano's "substantial parts" in the *Erkenntnislehre* is rather sharp. Though Stumpf generally allows for some *unperceived* (i.e. *unnoticed*, according to his definition) parts within experience[14], he also clearly states that no abstraction of concepts can ever proceed from these parts. (Stumpf 1939, 41)

Furthermore, Stumpf notes that Brentano in his late years embraces the hypothesis of a unique worldly substance (*Weltsubstanz*). (Stumpf, 1939, 17)[15] Although Brentano avoids a direct identification of this unique substance with God, in Stumpf's eyes this move makes his late philosophy somehow similar to a form of Spinozism. Actually, Brentano as a young man had already been concerned with this problem. In 1862 he explicitly agreed with Plotinus' remark that the sensible and the intelligible substances cannot be assimilated: accordingly, Aristotle's ten categories fail to individuate the most authentic sense of Being, i.e. the intelligible[16]. Brentano approvingly comments: "in any case, there can be no genus in which both God and the corporeal substances fall". (Brentano 1862, 148) Brentano seems to oversee (perhaps deliberately) the potentially serious consequences of this dualism for his own ontology, where substance plays a pivotal role. Be it as it may, Stumpf subscribes neither to the first nor to the second Brentanian doctrines of substance.

All this said, Stumpf's attitude towards Brentano should not be misunderstood. Unsurprisingly, in the *Erkenntnislehre* no less than elsewhere (e.g. Stumpf 1919a), Stumpf declares his intellectual debt towards him. After all, Brentano widely relied upon the testimony of inner perception in dealing with many categories, and credited Aristotle with the thesis that categories have an "empirical origin". (Brentano 1933, 114) As a matter of fact, even though his views radically differ from those of his first teacher in philosophy, Stumpf takes from Brentano's lessons some of the elements upon which he builds his own doctrine. Most notably, Stumpf declares that the "fundamental thought" (*Grundgedanke*) of the inseparable connection of color and extension, similar to that of substance and its properties, came to his mind after some "discussions" (*Unterredungen*) with Brentano, who insisted on the importance of Aristotle's "common sensibles". (Stumpf 1939, 24)[17] However, as early as 1867, Stumpf had begun to develop a different view on Aristotle's common sensibles and on the perception of space. (see Brentano 1989, 4, 6)

Some conclusive remarks concern Stumpf's attitude towards Spinoza, for whom substance consists of nothing else than "the totality of the essential attributes" (*Gesamtheit der wesentlichen Attribute*). (Stumpf 1939, 16; see Martinelli 2011) For this reason, as Stumpf had already noted in his *Spinozastudien*, he should be almost considered a forerunner of Hume. For Spinoza

> substance is not, as for earlier philosophers, something that pervades, affects and dominates the attributes, making up their unity and thereby forcing them to behave coherently, but only the totality [*Gesamtheit*] of the attributes. (Stumpf 1919b, 8)

Most notably, Stumpf notes that the two known attributes of thought and extension have nothing in common with each other. Stumpf's insistence on *this* aspect, rather than on God as unique substance, curiously yet coherently makes Spinozism converge

[14] Stumpf had been criticized by Wolfgang Köhler (1913) for this reason.
[15] Stumpf quotes Kraus 1919, 55. See also a text of 1915 in Brentano 1933, 298-299.
[16] Plotinus, *Enn. VI*, 1.1, 15-30 (Plotinus 1988, 15).
[17] The same thought, Stumpf notes, has a considerable weight in Husserl's *Logical Investigations*, and later in the *Ideas*.

with his own dualistic view of the world. (Stumpf 1896, 91-92) This has remarkable consequences for Stumpf's metaphysics as a whole. Since substance is not paired with being in a special manner, there is no need to think of the remaining categories as merely accidental. In other terms, Stumpf puts all categories, including substance, on the same ontological level: and this fact, in turn, finds its most remarkable expression in the idea that substance is nothing else than the whole of its attributes. In sum, Stumpf's talk of the "attributes" of perception as the basis of his analysis of the categories is perfectly coherent with his interpretation of Spinoza's metaphysics.

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