

Approaching Brentano's Theory of Categories

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*Ist denn die Welt? — Nein, werdend überschreitet.
The world exists? — No! It's becoming, though.
(EG, p. 53)**

1. Introduction

There are many, well-known reasons why Brentano is outside the focus of mainstream discussions in science and philosophy. In his own time, his contemporaries already regarded him as a “medieval remnant” (Tatarkiewicz 1973, 220), and today the situation is even worse. Among the reasons for this state of affairs are the debatable decisions taken by the editors of most books published under Brentano's name, and the lack of a critical edition of his work (or better, the apparent lack of any serious intent to produce a critical edition). I have discussed elsewhere the many sociological and pragmatic reasons that may help explain Brentano's neglect.¹ Here I shall instead consider some of the reasons for this that are internal to the theories developed by Brentano. Three of them seem of particular relevance to an explanation of Brentano's marginalisation:

1. Brentano's thought is obstinately metaphysically-oriented, as opposed to the epistemological orientation prevailing in the philosophical arena since the second edition of Kant's *Critique of Pure Reason*.

2. Brentano arrived at the threshold of theories as advanced as the constructive theory of the continuum, and the general theory of systems. Unfortunately, he presented his theories from a viewpoint that most contemporary philosophers, especially those of an analytic bent, are unable to

* Frequently cited works of Brentano will be abbreviated; full bibliographical details are provided in the references. In order to help the reader to assign the quotations to the correct phase of Brentano's development (the main difference being the so-called reistic turn of 1903 ca) I shall add the year of the dictation, when the information is available. For reasons that will be obvious to the reader, I shall mainly concentrate on dictations from the period 1914–1916.

¹ See Poli 1998.

recognize as any different from psychologism. Here is a quote that illustrates this point: “all judging proceeds according to psychological laws, just as physical events proceed according to the laws of nature. But this doesn’t mean that the course of real events conforms to psychological laws” (EG, 78). If by ‘psychologism’ one understands the position according to which the laws of logic (and, more generally, natural laws) depend on psychological laws, Brentano’s anti-psychologistic attitude is stated as clearly as possible. Furthermore, it is somewhat ironic that it was Husserl – possibly the best of Brentano’s pupils – who demolished psychologism as a viable scientific methodology. This notwithstanding, both Brentano and Husserl have been and still are accused of psychologism.

3. Brentano developed his theories in constant dialogue with Aristotle. This feature may be read in two different ways: either as a sign of a closed mind oriented towards the past, or as a sign of an open mind truly oriented towards the future. Brentano always regarded Aristotle’s theories as the best tools with which to develop science and philosophy. The idea that an Aristotelian-oriented viewpoint can still today play a progressive role is grounded in the hypothesis that we are living in a period characterized by the emergence of a new scientific paradigm. Indeed, the past 150 years have been shaped by the constant development of new scientific paradigms able to supersede the Galileian conception of nature. In some cases this appears to have proceeded by resorting to older theories. Most contemporary scientists are already working beyond the boundaries of modern science.

On the other hand, in many cases, the awareness that those boundaries have been crossed is lacking; the practice is in place but not the ideology. Topics such as complexity; emergence; chaos and turbulence; non-linear dynamics and far-from-equilibrium systems; defects in phase transitions; the far reaching importance of intentionality; emergent properties and emergent objects; forward, upward and downward forms of causation are all facets of a general vision claiming that we are shifting to a new scientific agenda. The topics are undoubtedly new; the tools used for their study are for the most part new as well. However, there is no denying that some of the topics just mentioned have a long history to them (intentionality and causality, for instance), and that Brentano possibly more than anyone else was able to revitalize the best of the philosophical tradition

and merge it with the deepest current of the science of his time, a stream that has continued until the present, and will continue into the future.

These three reasons combine to explain why Brentano is so far from the focus of mainstream discussion.

Some of these claims may appear so bold as to be dismissed out of hand. Let me therefore support at least one of them with some quotations. The claim that many may find most egregious is possibly the idea that Brentano's viewpoint came close to that of general systems theory. There appear to be two main features of a system. The first feature becomes evident if we distinguish between a system and a simple aggregate of parts. The main difference between a system and an aggregate is the following property: interactions within a system are somehow stabilized (repeated). The second feature is that systems display emergent phenomena. What does Brentano say on the matter?

It is primarily in the actualization of forces that the perfection of bodies and other things consists. Without it there would be no development; without it there could well be individual, isolated bodies, but no universe... We must also observe the great variety of forces by means of which the various bodies come to have a reciprocal effect upon one another... The most dissimilar physical forces can produce reciprocal relations between them... Different chemicals can "combine", that is, by operating on each other they mutually transform themselves so that entirely new kinds of matter are produced out of their differences. This mutual transformation of different kinds of matter into one, new, uniform kind seems to reveal the most intimate inter-adaptation (*Aufeinanderberechnetsein*) (EG, 165).

Different materials found in the organic world are capable by reciprocal interaction of turning themselves into new, homogeneous bodies... having entirely different powers and properties. (EG, 168)

It has hardly been established that if two atoms of hydrogen and one atom of oxygen form a molecule of water then they persist as precisely these three atoms. Rather, it is also conceivable that water depends upon an inner *transformation* of oxygen and hydrogen. In any case, it is certain that the mass of the water produced is equal to the sum of the masses of the hydrogen and oxygen, and that these two elements can be produced again from the water in exactly their previous quantities. Thus the water was at least the equivalent of the elements used to produce it. (EG, 270)

All the quotations are from one of the least known (or least quoted), and in my view most interesting, books by Brentano: *On the Existence of God*. This is a book full of philosophical and scientific ideas. Just to illustrate this point, his discussion of Darwinism explicitly defends the thesis of *punctuated evolution*; a thesis today attributed to Eldredge and Gould 1972! I quote:

There would be the mentioned necessity for Darwinism to assume periods of stability between the times of progress, indeed periods of stability so extended that the times of progress become insignificant by comparison (EG, 240).

These considerations suffice to call attention to the need for reconsideration of Brentano's received image. In this paper I shall begin with analysis of the core of Brentano's ontology, namely his theory of categories.

2. Aristotle's reduplicative understanding of ontology

Given his lifelong intimate acquaintance with the works of Aristotle, it should not be surprising that a proper understanding of Brentano requires a prior understanding of Aristotle. From a Brentanian viewpoint, the understanding of Aristotle presents at least two major problem areas: (1) the meaning of his reduplicative definition of ontology and (2) the role of the theory of wholes and parts within his general framework. Let us address these in the order given.

Aristotle's main starting point is the thesis that we can treat the issue of being in different ways. In *Metaphysics* VII, 2 (and in many other places besides) Aristotle claims that "there are several senses in which a thing may be said to 'be'", namely (1) from a categorical viewpoint, (2) from a dynamical viewpoint (actual being and its potentiality), (3) from a logical viewpoint (being as true and not-being as false), and (4) from the viewpoint of being as individual accident.

These various senses of being do not have the same importance. Aristotle's claims that there is no science of the individual, and that true and false pertain to our judgments and not to things, assign a less central role to (3) and (4). Aristotle is rather explicit in this regard, provided that the reduplicative nature of his ontology is properly understood. Let us

collect some data.

Aristotle's definition of ontology at the beginning of the fourth book of *Metaphysics* is universally known: "there is a science which studies being *qua* being..." Why does Aristotle not simply say that ontology is the theory of being? Is there any difference between 'theory of being' and 'theory of being *qua* being'?

The problem is deciding whether the two expressions 'the theory of being' and 'the theory of being *qua* being' are equivalent. If they are, the '*qua*' does not play any interesting role. On the contrary, if the two expressions are different — that is, if there is a difference between the theory of being (*simpliciter*, in itself: *to on to aplos legomenon*) and the theory of being *qua* being (*on he on*) — the role played by the functor '*qua*' should be carefully analyzed. Generally speaking, reduplicative expressions are expressions of the form 'A *qua* B is C'.

It is not irrelevant to point out that the expression '*qua*' is a technical term introduced by the mediaevals. The word is the Latin translation of the Greek '*he*' in the expression '*on he on*' which, in the 17th century, gave origin to the term 'ontology'.

Aristotle's reduplicative understanding of ontology is based on the thesis that only the first two senses of being (being in the sense of the categories and the dynamics) should be considered. The argument for this is as follows. Science, for Aristotle, concerns what always is or is for the most part. On the other hand, since accidental being is neither always nor for the most part, it follows that "there can be no scientific treatment" of the accidental (*Metaphysics*, 1026 b 3). As to being as truth and not-being as false, these must be excluded from the study of being *qua* being because, as already said, they "are not in things ... but in thought" (*Metaphysics*, 1027 b 26f). To sum up, both "that which *is* accidentally and that which *is* in the sense of being true must be dismissed" (*Metaphysics*, 1027 b 33–4). The conclusion is that there can only be a science of being according to the categories and in the sense of actuality and potentiality. It can therefore be taken as proven that Aristotle firmly distinguishes the analysis of being *simpliciter* from the analysis of being *qua* being.

Before continuing, it should be noted that a proper acquaintance with reduplication is mandatory for understanding not only of Aristotle's metaphysics but also his philosophy of mathematics. Chapters XIII and

XIV of *Metaphysics* prove that reduplication is the main tool used by Aristotle to elaborate the basic theses of his philosophy of mathematics.²

To return to my main subject, in what follows for simplicity's sake I shall consider only the case of the category of substance.

The main reason for distinguishing between being *simpliciter* and being *qua* being is that the instances of the former do not pertain to a unique genus. Given the Aristotelian thesis that subsumption under a common genus is mandatory for establishing a science, the lack of a common genus for the instances of being *simpliciter* means that those instances do not fall within the range of one single science. Reduplication provides the genus that is lacking: “and so, just as there is one science of all healthy things, so it is true of everything else. For it is not only in the case of terms which express one common notion that the investigation belongs to one science, but also in the case of terms which relate to one particular characteristic. The latter too, in a sense, express one common notion. Clearly then, the study of things which *are, qua* being, also belongs to one science” (*Metaphysics*, 1003 b 11). The passage from being to being *qua* being provides the common nature required. From this point on, and *only* from this point on, we are within the sphere of the science called ontology.

The next question is: what problems does ontology deal with? Aristotle again provides a clear answer. Towards the end of his analysis, he first claims: “Obviously then it is the work of one science to examine being *qua* being, and the attributes which belong to it *qua* being”, and then concludes: “and the same science will examine not only substances but also their attributes, both those above named and the concepts ‘prior’ and ‘posterior’, ‘genus’ and ‘species’, ‘whole’ and ‘part’, and others of this sort” (*Metaphysics*, 1005 a 14–8). The “above named” attributes are those of contrariety, completeness, unity, being, same and other (*Metaphysics*, 1005 a 12). However, more relevant to my reconstruction here are the three couples prior/posterior, genus/species and whole/part. The first pair concerns what today is usually called theory of dependence. The second pair concerns the internal structure of categories. Finally, as construed by Brentano, the third pair subsumes the two former oppositions within a unified framework and becomes the tool with which to recast the entire metaphysical edifice from

² See Annas 1976.

its foundations up.³

3. Aristotle's theory of wholes

Aristotle developed a rather sophisticated theory of wholes and parts, and this is an aspect of the Aristotelian framework that deserves close scrutiny. The theory was historically successful: as a matter of fact, its influence lasted for more than twenty centuries (Henry 1991). On the other hand, the theory of wholes and parts was a constant source of conceptual tension and great difficulty. Aristotle was unable to properly integrate the theory of wholes and parts with neither his theory of the continuum nor with the other theories making up his general conceptual framework.

I will explain the connections between wholes and continua shortly. Before doing so, I must stress that Aristotle was never able to find the proper connections between the theory of categories, the dynamics of actuality and potentiality, the role of the principles (the principle of the 'one' being the main source of trouble), the theory of wholes and parts, and the theory of the continuum. In the end, Aristotle decided to subordinate both wholes and continua to the dialectics of actuality and potentiality. He therefore claimed that whenever the whole is actual, its parts can only be potential. Similarly, whenever the continuum is actual its points are potential. And *vice versa* in both cases. The resulting picture has an apparent coherence: everything seems to play its intended role. But the overall structure is highly unstable: as soon as the slightest change is made to either the theory of the continua or the theory of wholes and parts, the entire framework collapses. It therefore comes as no surprise to find that Brentano's substantial innovations to both theories gave rise to a genuinely new vision. Before I continue, I must provide some basic information. (What follows is an abridged version of the first part of Chapter 7 of Poli 2001a).

The fundamental distinction for Aristotle was between *pan* (aggregate) and *holon* (whole). Both belong to the category of quantity, and both are distinguished by the position (*thesis*) of the parts. *Pan* is a quantity in which the positions of the parts (within the whole) do not produce diffe-

³ For a more detailed analysis of reduplication see Poli 1998b.

rence (*Metaphysics*, 1024 a 1), which is to say that the positions of the parts can be modified without changing the ontological *nature* of the aggregate. *Holon*, by contrast, is a quantity in which the positions of the parts help characterize the whole: if the positions of the parts are altered, the ontological nature of the whole changes. Two cases can be distinguished here: in the first, only the position of *some* parts is important; in the second, the positions of *all* parts are important for the whole. In later scholastic terminology, these two cases were called the integral whole and the essential whole. The latter was exemplified at the formal level by definitions and at the material level by the second substances or natural kinds.

Subsequent medieval discussion also produced a classification based on the concept of *separability*, rather than of *position*. In this case we have the situation shown in Table 1.

Table 1

aggregate:	a quantity in which all the parts are separable
integral whole:	a quantity in which some parts are separable while others are not
essential whole:	a quantity in which none of the parts is separable

Although the classifications are similar, analysis by position and analysis by separation are obviously different. Note that the principles of composition used by modern mereologies partially reflect the Aristotelian distinction between *pan* and *holon*. Extensional mereologies, in fact, typically adopt a non-restricted form of the sum principle distinctive of aggregates, while intensional mereologies adopt principles of dependence or foundation which prove especially applicable to integral and essential wholes.

I said that modern mereologies partly reflect the Aristotelian distinction between *pan* and *holon*. Among the differences worth noting, let me at least point out that for Aristotle the parts of an aggregate must be contiguous with each other, whereas for contemporary extensional mereology an aggregate may be composed of non-contiguous parts.

Aristotle defines a whole (*holon*) as something which:

- does not lack any of the parts that *by nature* it should possess;
- contains things in a manner such that they constitute a *unity* (*Metaphysics*, 1023 b 26–8).

Clarification is therefore required of the concepts of 'by nature' and 'unity'. The former concept refers primarily to the living world: for Aristotle, the objects that are 'by nature' are the organisms of the biological world. Corresponding to them are the natural kinds codified in particular manner by essential wholes. Here I shall confine myself only to this aspect of the concept of 'by nature'.

What is meant by saying that wholes are unities, or that they contain things in a manner such that they constitute a unity? In order to grasp the sense of unity relative to the concept of integral whole, it is helpful to start from the concept of 'one *per se*', and in particular from the notion that an object is one *per se* when it is a *continuum* (*Metaphysics*, 1015 b 37; 1052 a 18ff).

The Aristotelian concept of continuum is the result of a process of construction which moves through various stages, beginning with the concept of *consecutive*, continuing with *contiguous*, and only in the third stage arriving at *continuous*. These are the definitions:

- *consecutive*: whatever does not display any intermediate of the same kind between itself and that of which it is consecutive (*Physics*, 226 b 35, 227 a 1)
- *contiguous*: the consecutive in contact (*Physics*, 227 a 6)
- *continuous*: "when the limits of two things, whereby they touch each other, become one alone" (*Physics*, 227 a 11f).

Note that for Aristotle, in the case of two contiguous objects which become a continuous object, the limit between the initial objects *belongs to both of them*. This is something that we shall find again in Brentano.

Besides the three stages just discussed (consecutiveness, contiguity, and continuity), Aristotle adds a further characteristic, that of solidarity: an object has solidarity when the parts move in the same instant and in the same direction as the whole.

From this it follows that, for Aristotle, a body whose parts have perfect solidarity is more continuous than a body whose parts do not have (perfect) solidarity. Consequently, he conceives the continuum and the whole as one because their movements are indivisible (*Metaphysics*, 1052 a 35).

What has been described so far is only a minimal part of the network of

concepts which Aristotle uses to delineate his theory of wholes; a network which, as we have seen, comprises concepts like ‘by nature’, ‘unity’, and ‘continuum’ (a less cursory presentation of the theory should also include the concepts ‘limited’, ‘perfect’, ‘containing’, ‘contained’, and ‘infinite’).

4. Brentano's starting point

In strictly Aristotelian terms, the first step is to distinguish what comes first in itself from what comes first for us (TC, 15 – 1914). The difference between the two cases is crucial, and the danger of blurring them is so potentially damaging for correct analysis that it should be averted by adopting two clearly different terms. I will therefore say that what comes first in itself *exists*, whereas what comes first for us *is* (TE, 24). We will say that transcendent things *exist* and we ourselves, as far as we are first rate entities, *exist*. On the other hand, we will say that whatever appears to us, *is*.

Unfortunately, Brentano himself is often less clear than he could be. It would nevertheless be unfair to overstress the point: dictations cannot be as precise as fully revised texts.

The two parts of the above sentence on the range of what exists are both needed. Not just for the trivial reason that we are part of the world's furniture, but for the more important one that mental phenomena are passivities. Once again, thorough acquaintance with Aristotle is mandatory (see below, Section 10).

5. Apropos what exists

As said, the charge may be brought against Brentano that he set out his ideas less than perfectly. Obscurities and occasional slips aside, some philosophical positions are nevertheless so distant from his thought that no scholar can seriously accuse him of flirting with them. Brentano never considered skepticism and idealism to be acceptable positions for a true philosopher. Analysis of Brentano's concept of existence is greatly simplified if one bears in mind his distaste for skeptical and idealistic positions as a firmly established piece of evidence.

Brentano's theory of "what exists" can only be properly understood if we recall that, for him, everything that exists is an individual: "And we also say, of things that exist in the strict sense, that they are individuals" (TC, 26 – 1916). We will see in the section devoted to wholes and parts that "individual" does not mean "one". Brentano rejected the Aristotelian identification between individual and one as the source of numerous errors. He retained the concept of "individual", but with the meaning of "determined". This is a major departure from the mainstream understanding of the concept of an individual. If 'individual' means determined, then both collectives and parts can be taken as real individuals. As far as I know, Brentano does not explicitly address the entities referred to by mass terms, but obviously nothing precludes their inclusion in the set of individuals, understood as (fully) determinate reality.

On the other hand, what in itself is fully determined can be thought by us without all its determinations.

Brentano's analysis of what exists can be distinguished into two sections, which I term intrinsic and semiotic analysis. Intrinsic analysis concerns the a priori, axiomatic, description of the general features that whatever exists should exhibit if it is to be taken as something that truly exists. Semiotic analysis concerns the connection between what exists in itself and the effects that existing realities have on us. In other words, it concerns the following problem: how can we ever know that something exists? Let us first consider the intrinsic theory of what exists. The main theses advanced by Brentano are the following:

(1) Everything that exists is temporally extended. Quote: "It must hold of the real as real that it is temporally extended" (STC, 89 – 1914); "It is impossible for something to begin and end abruptly in the same instant... we always find an interval which, however small it is imagined to be, is a continuum of indefinitely small distinct moments which have been or will be the instants of merely infinitesimal change" (EG, 288). In other words, "there cannot be anything which does not exist in time" (EG, 308 – 1915).

(2) "If a thing actually exists, then it is present" (EG, 308 – 1915).

This second thesis asks for a moment's reflection, for the concept of "present" requires clarification. The details will be given in Section 8. For the

time being, suffice it to recall that for Brentano “the present is a boundary within a continual process” (EG, 308 – 1915). What may provoke surprise is the subsequent addition that a boundary “is nothing in itself”.

A couple of BARBARAs therefore give: “what actually exists is a nothing in itself.” Let me present the incriminated inference step by step:

1. What exists is temporally extended (thesis)
2. What actually exists is present (thesis)
3. The present is a boundary
4. The boundary is nothing in itself
5. What actually exists is a nothing in itself

The inference from line 2 to line 5 is straightforward. We therefore remain with

1. What exists is temporally extended (thesis)
2. What actually exists is a nothing in itself (inferred thesis)

As will be seen, there is much to consider in order to gain proper understanding of the concept of boundary. In any case, it seems clear that the burden for eliminating the apparent paradoxicality of the latter conclusion falls mainly on Thesis 1. Brentano’s reasoning proceeds as follows:

1. What is extended falls under the category of quantity.
2. Quantities are wholes composed of parts.
3. Parts are kept together within the whole by relations of causality.
4. Causality grounds continuity (see Section 8 below).
5. Therefore what is extended is a continuum.

Hence, continua have solidarity: their parts are kept together by some active force.

Brentano takes seriously what can be called the metaphysical principium of continuity, the main consequence of which is that continuous quantities (i.e., wholes) do not *facit saltus* (make jumps). As far as temporal continua are concerned, it follows that what is now actually given is the same as it was in the immediately previous moment, or at most has undergone only an infinitesimal change. In Brentano’s words: “everything

which exists must, for a time, persist unaltered, or else succumb only to an infinitesimal alteration" (EG, 308 – 1915).

The semiotic analysis of what exists is best summarized by the following quotation from the *Psychology*:

The phenomena of light, sound, heat, spatial location and locomotion which he [*i.e. the natural scientist*] studies are not things which really and truly exist. They are signs of something real, which, through its causal activity, produces presentations of them. (PES, 19)

The same position characterizes Brentano's reistic phase as well:

When we see something red or feel something warm, we cannot take it for granted that there actually is something that is red or warm. We do have good grounds for the assumption that a set of vibrations or some other physical process, of which we have no intuitive concrete idea, acts upon our sense organs and causes our sensations. Such a process could be said to underlie what is red or warm in appearance by being its precondition (TC, 110 – 1912–1913).

In short: "The sensible qualities do not correspond in their structure to external objects" (TC, 208 – 1915). Therefore, what we see, hear, touch, smell and taste is at most a sign of something else.

Before concluding, it is instructive to conduct a short analysis of Brentano's harsh criticisms of Bolzano's idea that "*exists* signifies a specification of *is*" (TC, 32 – 1916). The positions defended by Bolzano can be traced back to Suarez and are today accepted by what is probably the vast majority of scientists and mathematicians. The essential idea is that possibility precedes actuality: what is actually given is but a tiny fragment of what is possible. The space of possibility comes first; what exists is just one of its sections. Brentano does not deny the utility of this way of thinking; but he most decidedly denies its metaphysical correctness. Put boldly: the methodology of the spaces of states (or phases or, as a logician would say, possible worlds) may be ontologically (and therefore scientifically) fruitful, but it is definitively wrong from a metaphysical viewpoint. As a true Aristotelian, Brentano maintained that metaphysics starts from what exists, not from the fiction of what can or may eventually exist. And there is only one way to approach what exists, namely through what is in the strict sense.

6. *Apropos what is*

The following passage draws the boundaries of *that which is*:

A metaphysical theory may begin with the following explication of words: By *that which is*, when the expression is used in *the strict sense*, we understand a thing; for example, a body, a mind, or a topoid of more or fewer than 3 dimensions. A part of a body or of a topoid may also be called a thing. And so a number of things taken together may also be called a thing (TC, 15 – 1914)

The term “thing” will be used to denote anything that is. “Thing” is therefore the most general noun. Everything that is, is a thing. We saw in the previous section that what is, as opposed to what exists, can be only partially determined. Things that are partially determined are general and may refer to more than one fully determined thing (individual). This is the natural source of the theory of universals. Understood in this way, universality or, as Brentano prefers to say, generality, does not require any kind of hypostatization.

“That which is” is therefore divided into what is in a proper sense and what is in an extended sense. The former comprises fully determined beings, the latter comprises partially determined beings.

Read carefully the following quotation. It explains what pertains to the realm of being in the strict sense, as opposed to the realm of what ‘is’ in an extended sense:

Consider first that which is in the strict sense. Here we should include every individual thing, every multiplicity [*Mehrheit*], and every part of a thing. Every multiplicity of things is a thing and every part of an individual thing is a thing. If one conceives something in individual terms, then one conceives a *thing*. Both fully determined and partially determined things are things in the proper sense. And if one conceives something in general terms, then one is also conceiving a thing. Among things in the strict sense, then, are every substance, every multiplicity of substances, every part of a substance, and also every accident (TC, 19 – 1914).

Brentano’s theory of substance and accidents will be analyzed in Section 9 below. For the time being, I confine myself to the problem of what ‘is’ in

the strict sense. Here Brentano affirms that things in the proper sense can be seen from two different but intertwined perspectives.

Firstly, individual things, multiplicities of individual things and parts of individual things are things in the proper sense. Otherwise stated, fully determined things, multiplicities of fully determined things and parts of fully determined things are things in the proper sense. This translation helps one keep in mind Brentano's understanding of individual.

Secondly, both substances and accidents are things in the proper sense. Again, "the concept of being is one and the same for substance, for all accidents, and even also for all accidents of accidents" (TC, 99 – 1914). Moreover, *concreta* and *abstracta* are both beings in the strict sense. The latter is again the difference between substance and accident: "substance, then does not mean the same as *being in general*... The contrary is true of the concept of accident" (TC, p. 99 – 1914).

These two dimensions of analysis overlap, but they are not entirely coincident. I will analyze them in turn in subsequent sections.

Given the many misunderstandings of Brentano's theory of being in the strict sense, one further quotation will be of help: "Perhaps we can say that the concept of being in the proper sense coincides with the concept of that which is now or present. But every thing that is now or present is a temporally extended thing which is now or present with respect to one moment after another" (TC, 20 – 1914). It follows that what 'is' in the proper sense can be taken as what is present, as long as we do not forget that everything that is present pertains to a temporally extended thing.

In opposition to 'being' in the proper sense, there are many different forms of 'being' in the extended sense. The main cases of 'being' in the extended sense are the following:

- Being in the logical sense. I have already said (§ 2 above) that Aristotle himself expelled being as true and non-being as false from the sphere of being *qua* being (= being in the strict sense) because the true and the false are in the judgments and not in the things. Brentano adds something new, namely the idea that axioms are negative judgments. Being negative, they trace the boundaries of what can be accepted.
- Being in the sense of what is thought. "Things which exist as object

of thought do not constitute a subspecies of genuine being” (TC, 18 – 1914).

- Being in the sense of what is past or future.
- Being in the sense of matter and form.
- Being in the sense of the modalities (non-being, possibility, impossibility, necessity).
- Being in the sense of what is nominalized (and iterations thereof). Tongue-twisters like “the being of the non-being of the non being of the being of” and variations are simply dismissed without further ado.

Most ‘beings’ in the extended sense are abstracta. The general criterion adopted by Brentano in claiming that they are not acceptable as beings in the strict sense is that they are not parts of the respective wholes: “If abstracta were in fact thus parts of concreta there would be no objection to including abstracta among those things which are in the proper sense” (TC, 17 – 1914). Therefore, a thorough understanding of the theory of wholes and their parts and of what can and cannot properly be a part is mandatory.

It may be interesting to note that all the forms of being can be modelled by resorting to reduplicative forms, the main difference being the opposition between reflexive (being in the proper sense) and non reflexive forms of reduplication (being in the extended sense). Reflexive forms of reduplication are characterized by the occurrence of the same term on both sides of the functor of reduplication, as in “A *qua* A is B”; non reflexive forms on the other hand have different terms (details from Poli 1998b).

One of the above cases warrants consideration. Among the many cases of being in the extended sense, the one concerning the opposition between matter and form is particularly important, for both historical and systematic reasons. Brentano observes that “a division of the concretum into two parts one of which is the form corresponding to the abstractum is plainly impossible. This division is purely fictive: it amounts to saying that a thing has as many parts as there are predicates that apply to it” (TC, 17 – 1914). Let us accept this reading of the matter/form opposition. A problem nevertheless remains. Brentano himself recognizes that Aristotle uses the matter/form opposition interchangeably with the opposition between potentiality and actuality. This side of the problem is not considered by the

last quotation from Brentano. An interesting way out is nevertheless available. I have not found any positive evidence for it in the writings of Brentano I have been able to consult, and I therefore cannot claim that he would have endorsed it, but the solution I shall propose seems very close to his mature views.⁴

It is common knowledge that, for Aristotle, individual substances have a basically twofold structure: they are composed of matter and form. Form in its turn has a number of different meanings, principal among which is its interpretation as essence. Now, what is essence?

Aristotle's expression for what is today termed essence was *to ti en einai*, rendered in Latin by *quod quid erat esse*: "what was (considered) to be". That is, "the essence of x is what x was considered to be". This definition raises a number of interpretive problems, the most relevant being the meaning of the past sense. Why did Aristotle formulate his definition of (what we call) essence in the past?

My understanding is as follows: The form of the actually existing x depends on what x was before. In contemporary terminology: the form of the actual x is *the result* of iteratively applying a number of transformation rules to the original x .

The definition advanced by Aristotle can therefore be explicated as follows: (1) x is a temporally extended entity; (2) the actual nature of x depends on x 's previous nature. Aristotle's definition can be further improved by adding a third clause not explicitly contained in his original wording: (3) there *are rules of transformation* connecting the actual nature of x to its previous nature(s). In one sentence, the concept of essence carries temporal information.

Aristotle's definition of matter seems much more difficult to decipher. Matter for Aristotle is the indeterminate, the unknowable, what offers resistance to the understanding. This does not explain very much until a further aspect is taken into account, namely that the above features of matter (indeterminability, unknowability, etc.) depend on its role as substratum of the becoming, of changes. I have found that the best way to understand Aristotle's definition of matter is to apply the same criterion as used to decipher form, but shifting from the past to the future. That is to

⁴ Cf. Poli 2003.

say: The matter of the actual x is what x will become. Otherwise stated: the matter of x is the bearer of the future developments of x . Matter is therefore a *principle of openness*. This explains why matter is indeterminate and unknowable. If my reading is acceptable, all the features classically ascribed to matter become immediately transparent.

The actuality of a given individual substance comprises form and matter. On my reading, this amounts to saying that any entity has a given past (form) and a potential future (matter). The past is what is maximally informative: the actual (internal or external) configuration of the entity presents traces of its past history (better: the entity's past history is retrievable as far as it has left traces in the entity's actual configuration). The future is minimally informative: its actual configuration excludes some of the possible choices, but for the rest almost everything is open.

As far as I can tell, Brentano would have found this reading of the matter/form opposition congenial to his mature views.

7. Brentano's theory of wholes and parts

The theory of wholes and parts is the most comprehensive of Brentano's theories. The theory of substance and accident, the theory of categories, the theory of universals, the theory of the continua all depend on the theory of wholes and parts as particular specifications thereof.

Brentano accepts the Aristotelian idea that "a substance together with its accidents forms a certain whole" (TC, 82 – 1914; see the beginning of *Metaphysics* XII). On the other hand, he rejects the dialectics of actuality and potentiality for parts and whole. Brentano sees nothing wrong in accepting that a part can be actual if the whole is actual: among other reasons, because otherwise there "could be no such thing as a spatial continuum" (TC, 84 – 1914).

The theory of wholes and parts is articulated into two main moves, one going, figuratively, upwards, and the other going in the opposite direction, downwards. The former move goes from the parts to the whole; the latter from the given whole (or proper segments thereof) to its boundaries.

Wholes are things that have parts. This is axiomatic: there cannot be any whole without at least one part: "wholes are things that need to *have*

parts" (TC, 10 – Introduction). Some wholes have only one part; others have several parts. I will consider one-part wholes in Section 9.

On the other hand, as Brentano explicitly states, boundaries are not parts: "the boundary differs from ... the part: the boundary is nothing by itself and therefore it cannot exist prior to the continuum" (TC, 56 – 1915). Parts can exist before the continuum ("any finite part of the continuum could exist prior to the continuum"; TC, 56 – 1915) but boundaries cannot. Boundaries therefore depend on the continuum they bound.

The two main rules governing the part/whole connection are the following:

- The existence, or being, of the whole implies the existence/being of its part(s) (a kind of downward monotonicity).
- The existence, or being, of the part does not imply the existence, or being, of the whole.

These two rules determine the difference between "being a part" and "having a part". As Kastil remarks, "*to have a part* is a real determination, but *to be a part* is not" (TC, 247). *To have a part* is a real determination for the former rule: if the whole exists, its part(s) exist(s) as well. *To be a part* is not a real determination because the existence of the whole cannot be inferred from the existence of the part.

Different kinds of wholes are distinguishable from the different relations linking the parts to the whole and the parts among themselves. We can therefore distinguish:

- One-sided separability (as in the accident-substance connection, the red-color connection, and the connection between "one who thinks of a friend and who longs for a friend. If the longing were to cease the thinking of the friend could continue unchanged, but if the latter were to cease then the longing would cease as well"; TC, 190 – 1916).
- Mutual-separability (as in collections and bodies, where "each of their parts are separable from the others, and this separability is reciprocal"; TC, 116 – Undated).

A body is a whole composed of many mutually separable parts. This provides one way to analyze bodies. “Every one of the parts distinguished in such a decomposition has nothing in common with the others; it is thus adjoined to the others in true summation as something totally new” (STC, 32 – 1914). On the other hand, bodies are continua. Continua have the following structural properties: if the continuum is divided, say, into two parts, and then the whole continuum is again divided into two different parts, then the parts resulting from the first division and those resulting from the second division overlap: “It is true that every half-apple *is* a real half-apple, no matter in which direction the apple may be cut, but – and this is the point – it is not *wholly* different from an half obtained by cutting the apple in another direction” (TC, 46 – 1908).

Brentano distinguishes different kinds of part. Here are the main cases:

- Material part: the element of a collective; “the part of a collective may be called a material part or element of the collective” (TC, 190 – 1916).
- Logical part: the genus within the species; “a logical part is a concept of a species (red-thing) which includes the concept of a genus (coloured-thing) as a part” (EG, 101); “a universal may be called a logical part of the individual idea” (TC, 190 – 1916).
- Metaphysical part: the substance within an accident; “a metaphysical whole is an accident (e.g. one-who-thinks), which includes the substance (the I) as a part” (EG, 101).

Let us now move to boundaries. Since these play a major role in Brentano’s mature theories, they must be analyzed carefully.

The connection between whole and boundary is governed by the following rule:

- The existence, or being, of the boundary implies the existence, or being, of any suitable fragment of the whole.

We have already seen that, strictly speaking, boundaries are neither wholes nor parts. That they are not wholes is rather straightforward: “The boundaries do not exist in and for themselves and therefore no boundary

can itself be an actual thing [*ein Reales*]” (TC, 56 – 1915). The opposite claim, that they are not parts, is less straightforward, because it may seem that as Chisholm, among others, sometimes states, “boundaries are things that need to *be* parts” (TC, 10 – Introduction). I wish to clarify the issue by distinguishing first-rate parts, those that constitute the whole (as in the bricks-house case), from second-rate parts, those that intervene after the whole has been constituted (as in the division of the house into kitchen, bedroom, etc).

This reading is confirmed by Brentano himself: the case of the “boundary differs from that of the part: the boundary is nothing by itself and therefore it cannot exist prior to the continuum; and any finite part of the continuum could exist prior to the continuum” (TC, 56 – 1915). It is clear that Brentano is relying here on the Aristotelian difference between prior and posterior, one of the topics pertaining to metaphysics (see § 2 above). It can be added that “boundaries stand in continuous relation to other boundaries and are real to the extent that they truly contribute to the reality of the continuum” (TC, 55 – 1915).

All this amounts to saying that boundaries are emergent things. The further claim that “the boundary contributes to the existence of the continuum” (TC, 56 – 1915) makes sense only if we admit some form of downward causation, according to which what emerges can influence its basis. Only a theory of the levels of reality can provide the framework for a detailed analysis of the many intriguing aspects of upward and downward forms of causation.⁵

To gain a firmer grasp of the theory of boundaries, comparison with the mathematical interpretation of boundary may be instructive. Two major options at least are available: boundary as limit, i.e. as the result of a converging series, and boundary as a topological concept. Since space precludes careful analysis of both, and since the former is more deeply ingrained in the basic machinery of contemporary mathematics, I shall restrict discussion to the boundary as limit of a series case. In this regard, it is easy to be led astray by Brentano himself. His claims against Dedekind (and many other beside) are well known.

For simplicity's sake, let us consider only the case of the real line (in

⁵ See Poli 2001b.

the mathematical sense). In this case we say that a series has a limit (a boundary) when the series is convergent. Convergent series can approach their limit from one side alone or from both sides (alternatively from ‘left’ and ‘right’, or following more complex patterns). From a Brentanian viewpoint, the latter patently has no meaning and is therefore to be dismissed as not pertinent. Furthermore, a one-side converging series may or may not converge uniformly. A uniformly converging series is a series where any n th-term is closer to the limit than any previous term in the series. Let us assume that what concerns us are one-way uniformly converging series (to be referred to by the word “series” in what follows).

The next step is interesting. It is well known that any given limit can be approached by an indefinite (well, infinite) amount of different series. Brentano acknowledges as much: “Since it cannot be said of any definite continuum that *it* is a condition of the boundary, only a universal can be designated as a condition of the boundary” (TC, 56 – 1915). What is therefore needed for the existence of the boundary is not the actuality of this or that series; any series of the appropriate kind suffices. To be precise, what is needed is only “an indefinitely small part of the continuum” (TC, 56 – 1915).

Let me restate the idea in the following terms: what is needed is only any indefinitely small *terminal* part of the series. Now comes the main question: is this part, indefinitely close to the limit, the same for all the converging series?

As trivial as it may seem, mathematically speaking the answer is no. Consider the following two series, both converging to 1:

- $1/2 + 1/4 + 1/8 + \dots$
- $1/2 + 1/6 + 1/12 + \dots$

The two series can be synthesized in the two formulas $1/(2^n)$ and $1/n(n + 1)$. The two formulas make the difference between the two series clear: the former series converges with exponential velocity, whereas the latter is much slower. Cutting the series towards the end, we get their infinitesimal tails, but the two infinitesimals are of a different order. To say the least, they are different because they converge towards their limit with a different ‘velocity’. In this sense, we may claim that the series converge

towards overlapping limits.

This conclusion fits perfectly well with Brentano's concepts of *teleiosis* and *plerosis*. According to Brentano, "distinctions with respect to the speed of the variation of the continuum yield differences in the *teleiosis* of the boundary (TC, 129 – 1915). On the other hand, "the boundary can be a boundary in more or in less directions. I refer to this distinction as one of *plerosis*" (TC, 128 – 1915). It may be added that "the distinctions of *plerosis* pertain strictly to parts" (TC, 61 – 1907).

My analysis shows that Brentano is less naive than was expected, even from a formal viewpoint. Two more observations are required. The above quoted thesis according to which the boundary requires only "an indefinitely small part of the continuum" shows that in the dialectics between locality and globality – possibly the main novelty of nineteenth-century geometry – Brentano is on the side of the locality issue. This is not the whole story, however. Locality issues prevail as far as experience is concerned. On the other hand, formal dependences given by the axioms provide the global constraints governing the field of analysis. I cannot but acknowledge the surprising modernity of his methodology.

Let me conclude this section with the claim that calling Brentano's theory of wholes and parts a "mereology" seems utterly improper because mereology is a theory of parts, not a theory of wholes. Since Brentano explicitly states that "the whole is the standard of the part" (EG, 205), his theory should instead be termed *holology*.

8. *Continua*

Continua are things whose parts are united in nature:

An ens reale may have parts which are united only in our thinking. And it may have parts which are united in nature. We are here concerned only with parts of the latter type. We find such parts in continua, wherein smaller and smaller parts can be distinguished ad indefinitum (TC, 115 – Undated).

Brentano's theory of continua depends crucially on the correct answer to the following question: what is a part of a continuum? Many details aside, the crux of the matter is that points are definitely not parts of the continua

to which they pertain. In this respect, Brentano is crystal-clear: “no continuum can be built up by adding one individual point to another” (TC, 20 – 1914).

Continua do not depend on points; on the other hand, points depend on their continua. This is true for both what exists and what is. A quote may suffice: “no point can *be* anything detached from the continuum; indeed, no point can be thought of apart from a continuum” (TC, 20 – 1914).

Returning to existing continua: the truth is that “a point exists only in so far as it belongs to what is continuous” (TC, 20 – 1914). The question is particularly important as far as temporal continua are concerned: “No point in time can exist separately, detached from any earlier or later point. And instead of saying that there is a temporally unextended point, it might be more accurate to say that a temporally extended thing exists with respect to a point” (TC, 20 – 1914).

What, then, is a point? A point is something that depends on the whole: the point exists as a boundary, as a limit. To simplify matters, “we will permit ourselves the fiction of a material point which exists in itself” (TC, 58 – 1907), without forgetting that it is a fiction.

Brentano rejects not only the idea that points are parts of continua but also the idea that a three-dimensional volume is reducible to two-dimensional surfaces, and two-dimensional surfaces to one dimensional lines, and the latter to zero-dimensional points. In other terms, points, lines, surfaces and volumes are all ontological primitives. It is interesting to note that the assumption of reduction from one figure to the next is one of the main outcomes of the set-theoretic reading of mathematics. The many counter-intuitive consequences that follow are well known – witness, to mention but one case, the Banach-Tarski paradox. More interesting is that in the same years as Brentano, the geometer Volterra – one of the leading figures of the then renowned Italian school of geometry – proposed a geometry in which points, lines, surfaces and volumes filled space as formally irreducible figures. Bill Lawvere has recently reconstructed Volterra’s ideas from a categorical point of view (Lawvere 1998).

The main difference between the “reductionist” and the “non-reductionist” viewpoints lies precisely in the theory of the continua. Put briefly, the reductionist claims that a continuum is composed of points, whereas the anti-reductionist denies that it is. A different but equivalent and perhaps

more intriguing way to state the difference between the reductionist and the anti-reductionist positions is the following. According to the former, the elements of the continuum are separated from one another and exist in themselves. The anti-reductionist, on the contrary, claims that the lower-order entities of a continuum are neither separated nor exist in themselves.

These two positions are plainly opposites. An analogy may help: for the reductionist, nothing keeps the points together. This explains why discontinuous functions are admissible. With Brentano, the anti-reductionist claims instead that a point is a boundary and that boundaries bound something. In other terms, points (as boundaries) are glued to their "body". Mathematically speaking, this means that functions are all continuous. It should furthermore be noted that continuity, for the mathematician, is a local property, i.e. a property of points, as opposed to a property of the whole, global, figure. The reader with a little knowledge of the debate on the foundations of mathematics will certainly recognize the closeness between anti-reductionism and intuitionism. Brentano never suspected that the logical bearer of the fictitious concept of a continuum was the principle of the excluded middle (on the other hand, both Leibniz and Peirce did; see Bell 2000 for a readable introduction to the astonishing novelties arising from changing the idea of the continuum).

Let me conclude by noting that, even if the claim that Brentano was a full-fledged intuitionist were historically ridiculous, the proximity between the viewpoints of Brentano and Brouwer is nevertheless astonishingly closer than expected.

One more question has to be considered before passing to the next section. I started by saying that continua are united in nature. The subsequent discussion of the differences between reductionists and anti-reductionists stressed the latter claim that the parts of a continuum are somehow kept together. It is now time to ask: what unifies continua?

The answer provided by Brentano is that (real) continua are causal wholes. When dealing with continua, "it is to be maintained with physical certainty that there can be no continuity without a causal relation" (EG, 103).

Brentano distinguishes a number of different kinds of causal relations: the basic distinction is between "empirical causal laws (which are valid for the domain of experience), and causal laws of strict, universal validity such

as is attributed to fundamental laws and to the theorems derived from them” (EG, 112).

9. *Substance, accidents and boundaries*

What is substance? The answer is less straightforward than expected. For some historical reason, philosophers have provided an endless series of inconsistent ideas of substance. Some of the main misunderstandings of the originally Aristotelian concept of substance are explicitly discussed by Brentano. Not by chance, his severest criticisms are directed against the Kantian twisting of substance. Here I consider a different and more widespread misunderstanding, namely the idea that a substance is what remains unchanged beneath the changes of an entity. This is obviously “not what Aristotle had in mind” (TC, 88 – 1914). If substances are what remain unchanged, how could there ever be substantial changes in bodies? No further evidence is needed to conclude that the idea of substance as that which remains unchanged is not the Aristotelian idea of substance.

A properly Aristotelian understanding of substance takes it to be “the bearer of accidents”. The difference between *being a bearer* and *being unchangeable* has far-reaching consequences. The latter interpretation does not exclude that a substance may change, and in fact substances usually do change. Brentano takes the Aristotelian concept of substance as much more correct than any other alternative concept. He is nevertheless dissatisfied with some of the subsequent details of the original theory, and finds two different reasons for modifying the Aristotelian idea of substance. Firstly, substances are not the only things that have accidents; some accidents can be bearers of other accidents. “Contrary to Aristotle and to the opinion that has prevailed since his time, it can be shown that just as a substance may be the subject of an accident, one accident may also be the subject of another accident” (TC, 56 – 1915). Brentano therefore accepts that accidents can be predicated of other accidents, whereas for Aristotle an accident is always predicated of a substance. It is well known that the problem of the predication between accidents has been the subject of animated discussion for centuries (in this regard, Angelelli 1967 is still helpful). Secondly, the idea that some substances may not have any accidents is not

contradictory. For these reasons, “the term substance is applicable to a thing only to the extent that the thing is not an accident” (TC, 111 – Undated).

Other apparently slight modifications of the Aristotelian framework follow. I have already mentioned that for Aristotle “a substance together with its accidents forms a certain whole” (§ 7 above). According to Brentano, accidents are wholes and substances are parts of the accidental wholes. The substance, in particular, is that part of the accidental whole that individuates the accident.

The claim that accidents are wholes and substances are parts requires careful analysis. Remember that wholes are continua and that continua are governed by causal relations. The connection between a substance and its accident is therefore a causal connection. This point was already made in the previous section, but it is worth repeating.

It is now time to focus our attention on substances:

Among the things that have parts, there are certain wholes which are not composed of a multiplicity of parts. Such a whole would seem to be a thing which is such that one of its parts has been enriched but not as a result of the whole acquiring a second part. One example of such an entity is a thinking soul. When it ceases to think it remains the same soul. But when it starts to think again no second thing has been added to that entity which is the soul (TC, 47 – 1908).

The apparent boldness of the quotation may be diluted by resorting to a processualistic framework. Consider the whole as an ongoing process. Its substantial and accidental parts can then be distinguished as follows: substantial parts are those constituting the temporal stretch of the process; accidental parts are the variations in direction and velocity (not by chance, Brentano's plerosis and teleiosis). Consider now the process from the viewpoint of one of its boundaries (say, the actual present). Properly speaking, this is the only correct way to consider substance. What results from this mental experiment is the expected outcome: the substance is the bearer of the variations in direction and velocity. Otherwise stated, substance bears its accidents. The process-thing may end its variations – i.e. it may proceed uniformly – or it may start to vary without becoming a different process-thing.

The substance is “the ultimate subsisting part, the part that subsists

without itself containing any part that subsists” (TC, 114 – Undated).

Brentano repeatedly claims that substances can be distinguished by contrasting them with accidents: “The term substance is applicable to a thing only to the extent that the thing is not an accident (TC, 111 – Undated). Let us accept this suggestion. What can we then say of substances which have no accident? Brentano explicitly used this case as one of the reasons for rejecting the Aristotelian theory of substance. Furthermore, the case of substances without accidents may be much more relevant than initially expected as soon as one realizes how common they are.

Two main situations are relevant. The first case is historically well known as one of the aspects of analogical predication. Brentano’s presentation is as follows: “When we compare “red thing” and “colored thing” we find that the latter is contained in the former, but we cannot specify a second thing that could be added to the first as an entirely new element (TC, 112 – Undated). The real novelty comes with the second case, namely the case of bodies. I quote: “Bodies are also substances which are not known to have accidents. The things we see, hear, smell are bodies, things that fill space” (TC, 115 – Undated).

The idea that bodies do not have accidents is striking. Either Brentano is utterly wrong or our commonsensical ideas of substances and accident are in need of deep revision. Most misunderstandings of Brentano are likely to have arisen from a failure to grasp his idea of substance.

First of all, it should be mentioned that for Brentano, “The concept of substance is derived from experience and is by no means given to us *a priori*” (TC, 118f – Undated). Experience should therefore provide us with all the evidence needed. Let us start at the beginning.

What are bodies? The least we can say is that bodies are “things that fill space”. Two questions follow:

- If everything that fills space is a body – i.e. a substance without accidents – what are accidents? A first answer seems straightforward: accidents are things that do not fill space.
- Are there other substances besides bodies? The answer for Brentano is clearly yes: “I would say that a body, a mind, and a God are substances. But I would also say that a multiplicity composed of bodies, or of minds, or of a mind with a body fall under the concept

of a substance” (TC, 111 – Undated).

Leaving God aside, I distinguish between substances that fill space (bodies) and substances that do not fill space (minds).

I quote again: “There is a non-spatial substance within ourselves. It is contained in us as the substantial part of the one-who-is-thinking, of the one-who-is-willing, of the one-who-is-seeing... This substantial part distinguishes our own hearing from the similar hearing of another person, and for each of us it unifies the one-who-hears, the one-who-thinks and so on. This part is called the soul [*Seele*]” (TC, 116 – Undated). More precisely stated: these non-spatial substances are perceived “as that which is without any dimensions [*ein Nulldimensionales*] but which, unlike a point, is not a mere boundary: it is perceived as something which exists as a thing for itself [*ein Ding für sich*] without any dependence upon any other thing (TC, 119f – Undated). The latter conclusion does not imply that there may be – and in fact there are – dependences that are non perceivable! The distinction between descriptive and genetic psychology resides precisely in this difference.

The substances that are bodies “are such that each of their parts are separable from the others, and this separability is reciprocal” (TC, 116 – Undated).

Bodies are substances, but they are not ultimate substance. “A continuous substance cannot be an ultimate [*letzteinheitlich*] subject”. The least we can say is that bodies, being continuous, have multiplicities of causally connected parts. Brentano therefore rejects Aristotle’s “view according to which even extended substances are ultimate substances” (TC, 158 – 1916). Moreover: “only a punctiform boundary of a continuum could be such a substance” (TC, 192 – 1916). These last quotations explain why the study of the most basic properties of what is spatial may be conducted by assuming the fiction of a single point in isolation from the continua to which it pertains.

Substances can be distinguished between one-dimensional or simple substances and multi-dimensional or complex substances. My “dimension” corresponds to what Brentano calls “substantial determination”. Brentano introduces a criterion for analyzing substantial determinations:

- The existence of the thing requires that when a substantial determination passes away, another substantial determination of the same nature is born (call it the substitution principle).

Let me give an example that may help clarify the issue. Consider a material body, e.g. a table (I mean a real, existing table). The table may be here or there, but it must be somewhere. If it is moved from one position to another, the former position “passes away” and the latter is “born”. Moreover, all the positions between the former and the latter positions pass away and are born following the table’s progressive changes of position. A modal version of the substitution principle is useful: “among substantial determination is every one without which a thing absolutely could not exist” (EG, 327 – 1915). Spatial and temporal determinations are substantial because no material substance can exist without them. What else? Let us continue with our example of the table. The same reasoning just followed for the table’s spatial and temporal location may be repeated for other kinds of determination as well. The table should have a form, a color, and who knows how many other kinds of substantial determinations. This last conclusion is not explicitly drawn by Brentano. His claims notwithstanding, we have arrived quite naturally at what Husserl called the scheme of the object whereby what is substantial does not amount to this or that specific determination. Any determination of the proper genus fits (eventually within limits to be established).

A cursory reading of Brentano’s dictations may give the impression that Brentano widely wavered in distinguishing those determinations that are substantial, or absolute, from those that are only relative. Relative determinations “may hold of a thing and then no longer hold of it without the thing itself undergoing the slightest alteration” (TC, 88 – 1914); an example would be a predicate like “taller than”. It is true that Brentano changed his ideas, but the changes are much less frequent than some critics claim.

More serious is the case of substantial determinations. To clarify the problem, as clear a distinction as possible must be drawn between (1) the problem of existence, and (2) the problem of substantial change. The principle of substitution stated above governs the first problem: the existence of something requires the actuality of instances of all its substantial genera.

The second problem states that, within the proper genera, any change amounts to a substantial change: “A determination belongs to the unity of a substance provided the determination is of such a sort that, if it were to fall away or be varied in any respect, then the substance would become another individual” (TC, 178 – 1916). Furthermore, “where such changes are involved, no entity can be specified which would permanently underlie the change” (TC, 186 – 1916).

As soon as the two problems are made separate, Brentano's dictations lose their apparent obscurity.

My analysis of substances has been rather lengthy. Since discussion of the problem of substance is often attended by much confusion, I have presented some of its many subtleties in detail. It is now time to say something about accidents. What are they?

In his Introduction to the English translation of Brentano's *Theory of Categories*, Chisholm writes “When Brentano wants to illustrate what he means by ‘accident’, he often appeals to the example of an atom having psychological attributes – an atom that can think and see and hear. There may not *be* such atoms, he says, but if there were, then they would provide us with an illustration of the concept of an accident” (TC, 6). Brentano himself would add that “every cognition is an accident”. On the other hand, “whatever has a cognition is a substance” (TC, 116 – Undated). In sum, it seems that we cannot say much more than “conceptually, the accident necessarily contains the substance” (TC, 83 – 1914).

The lack of information is due to the fact that “so far as our experience goes, we never encounter any absolute accident in the realm of *physical* phenomena” (TC, 95 – 1914). On the other hand, “The psychological domain provides us with many examples of absolute accidents which exist in other absolute accidents” (TC, 96 – 1914).

It is difficult to accept these quotations as a full-fledged description of the theory of accidents. Some light is nevertheless shed on the matter as soon as we realize that the accidents that concern us are the main subject of the theory of categories.

Before concluding, it is worth mentioning that the opposition between substance and accident is not exhaustive. For Brentano, in fact, there are things that are neither substances nor accidents, namely boundaries. This conclusion supports the idea that his theory of wholes and parts is more

general than his theory of substances and accidents. This is not the whole story, however. Something more interesting follows as well. As we have seen, boundaries can be taken to be emergent things. They open a new dimension of the whole. Boundaries are things that enrich the whole, even if they are not parts of the whole. The further claim that at least some boundary as the starting point of a new series of determinations is not to be dismissed as obviously contradictory.

10. Categories

We should now be able to approach Brentano's theory of categories correctly. The theory – not surprisingly – is based on his theory of wholes and their parts. Before considering the details of the new theory, it is helpful to establish its context. A couple of quotes will suffice.

The theory of categories, one of the most important branches of ontology, is today in a state of great confusion. This fact may be traced back to the unfinished state in which the theory had been left by its founder, Aristotle (TC, 81 – 1914).

The task of the theory of categories is to ascertain all the classes of accidents and the distinctive properties of each class (TC, 82 – 1914).

Before considering the various classes of accidents, it should be remembered that, according to Brentano, the Aristotelian list of categories contains a number of serious gaps. To mention the most important ones, no room is provided for either “any predicate whose ultimate subject is a multiplicity of substances” (TC, 87 – 1914) or that “special relation which holds between a boundary and the continuum which it bounds” (TC, 128 – 1915).

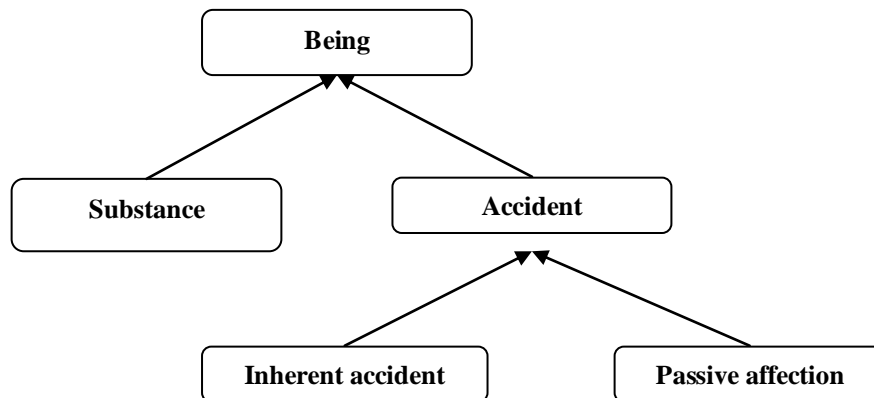
Brentano himself offers only the beginnings of a table of categories. He recognizes that his own proposal does not consider accidents predicated of multiplicities of substances. This forces him to omit a consideration of some of the categories already included by Aristotle: “we have totally omitted some of his categories, e.g., those of possession, position and quantity. This is understandable because we do not regard that which is spatially extended as an ultimate individual substance” (TC, 176 – 1916).

I shall therefore discuss his proposal in two parts: firstly, the core

structure will be considered; secondly I shall add a few words on the categories lacking.

The core of the theory of categories developed by Brentano analyses only the possible accidents of an ultimate substance. Collectiva, as said, are not part of the analysis. The first distinctions are illustrated by Figure 1.

Figure 1



After the obvious distinction between (ultimate) substance and accident, accidents are further subdivided into inherent accidents and passive affections. The distinction between the two cases is absolutely crucial. As Kastil puts it, inherent accidents (also called qualities or properties) “do not need the constant activity of a causal principle in order to remain there”; on the other hand, passive affections (or undergoings) “require the constant activity of a causal principle in order to remain in their subject” (TC, 148). As Kraus puts it: “The act of sensation itself does not outlast the stimulus and therefore it is to be called a passive affection, not a property” (TC, 148).

It should be noted that it is impossible to understand Brentano’s psychology without the idea of passive affections. I quote once more: “many psychologists today fail to realize that nothing in our thinking is a transformation. Aristotle realized it and emphasized it. He viewed our mental life as a continuous passive affection, like sensation” (TC, 183 – 1916).

Both cases can be specified further. Inherent accidents can be distinguished into properties belonging to different ultimate genera and properties belonging to the same ultimate genus. The distinction makes sense only if we keep in mind that we are considering ultimate substances. In this case, the former type of properties regards the difference between, say,

color and temperature. There is no way to change from the one to the other, but they can both pertain to an ultimate substance. The latter type of properties concerns the difference between, say, red and blue: any of them can be changed into the other, but they cannot together pertain to the same ultimate substance.

Passive affections, in their turn, present a number of subdivisions. The main distinction is between (1) affections that are transformations, and (2) affections that are not transformations. The former “are such that the effect that is involved is nothing in addition to the undergoing itself” (consider perceiving, thinking, and desiring), the latter “involve a further result which is distinct from the undergoing itself but which is brought about in the causing of the undergoing” (consider movement, acceleration, and any kind of ‘acquired virtue’) (TC, 196 – 1916). They come into being and pass away without any transformation.

It is worth mentioning that the passive *qua* passive “can remain the same when its active correlative is replaced by another” (TC, 156 – 1916). In other words, bearers of supervening accidents may change without affecting the accidents.

Brentano stresses more than once that the features of passive affections are “not inferred analytically from our ideas of them”. On the contrary, they are “ascertained by experience” (TC, 156 – 1916). A couple of further quotations may help:

Every thought is the reverse side of a physiological phenomenon, it has as its basis a psycho-physical movement. A thought however simple it may seem to be, is thus actually something very complicated or, to speak more precisely, it is something which presupposes very complicated relations (EG, 58).

The spiritualists ... imagine every conscious occurrence as something passively accepted, an effect of a physical influence on the soul. And on the other hand they see physical events (e.g. the movement of a limb at will) as caused by psychic influence. Here it would be plausible that there is constant interaction (EG, 57)

In sum, Brentano’s theory of categories can be read as possibly the most forceful case for placing the long-neglected Aristotelian categories of activity and passivity at the top of the scientific and philosophical agenda. Further brief discussion is needed to explain what they mean.

Brentano carefully distinguishes the case of activity and passivity between physical phenomena from the case in which the connections between physical and psychical phenomena are concerned. Activity and passivity among physical phenomena are

- “always co-temporal in the sense of persisting together” (TC, 141 – 1914)
- “subject to the law of the equality of action and reaction” (TC, 141 – 1914)
- temporally extended. In the words of Kraus “In the physical sphere it is also impossible for the process of causation to be momentary – that is to say, it cannot begin and end in the same moment, but must continue for some finite period of time” (TC, 249).

On the contrary, activity and passivity between physical phenomena and psychical phenomena are:

- Always co-temporal.
- Do not have to follow the rule of equality of action and reaction.
- May be temporally punctiform.

As soon as the analysis moves from ultimate substances to collectives of substances, a new field of research opens up and many new categories are needed: “Let us now consider the predications in which the ultimate subject is not an individual substance but a finite plurality or – as in the case of the continuous – an indefinite plurality of substances. Here we must take into account number, spatial extension, shape, and various other determinations which belong to the whole in respect of its parts and their interrelations, and which had to be excluded from the foregoing discussion” (TC, 176 – 1916).

11. Conclusion

Most details of the theory of categories have still to be discovered; I have only approached the theory and scratched its surface. The long tour that we have undertaken has followed the classical idea that categories are part and

parcel of ontology. We have therefore accumulated all the ontological tools needed to deepen our understanding of categories. Brentano would have accepted our methodological approach, on the proviso that the ontological side of categories is complemented by their epistemological (psychological or cognitive, in the widest sense of the term) side. This is something that has not been considered at all here. As soon as this second aspect has been reconstructed as well, the problem of the mutual dependences and interactions among categories will arise.

Summing up, one main conclusion is apparent. Brentano used the theory of wholes and parts as the main component of his conceptual framework. This choice runs counter to deeply ingrained beliefs of the mainstream twentieth-century scientific ideology. To provide but one example: a theory of wholes and parts grounds the thesis that wholes govern parts. This entails acknowledging the ontological difference between the relations of part to whole and those going the other way round from the whole to its parts. These relations are not symmetric. Moreover, the latter family of relations may proceed not only from wholes to parts, but from whole to “something else” (e.g. boundaries) as well. All this amounts to paving the way for systems and levels of reality.

It is fair to conclude by saying that Brentano performed an enormous amount of preparatory work, recovering and furthering the best philosophical theories, and lighting many blind allies. It is our task to take a step forward.

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