

THE TIME OF PRESENTNESS.
A CHAPTER IN POSITIVISTIC AND DESCRIPTIVE PSYCHOLOGY

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1. *Architectonic*

The expression *time of presentness* was coined by Stern, who used it for the first time in an article of 1897 on *the temporally extended acts of consciousness*: the article, in fact, bore the title *Psychische Präsenzzeit*.¹ Stern was well aware that terms like ‘unitary act of consciousness,’ ‘whole of consciousness,’ ‘harmonic act of consciousness,’ ‘psychic configuration,’ etc., were difficult to determine conceptually. The principal danger was that something that was naturally unitary, and which we *naturally* experience as such, would be transformed into an artificial abstraction.

Reading Stern’s article is like having an index of all subsequent developments of the problem in one’s hand. Listed, in fact, are the following fundamental *concepts* of a scientific analysis of the time of presentness:

- (i) the relationship between the *punctiform instant* and temporal *extensity*;
- (ii) the concept of ‘present’ or of *time of presentness*;
- (iii) the concept of temporal *perception*;
- (iv) the concept of temporal *sign*;
- (v) the concept of primary or *immediate memory*;
- (vi) the concept of *duration*;
- (vii) the experimental concept of *reaction times*;
- (viii) the concept of *fusion* (*Verschmelzung*).

And set out within this framework are the classic *themes* for exemplification of the problem, namely:

¹ Cf. [Stern 1897].

- (i) phenomenal temporal *perception* (and specifically the difference between *perceived succession* and the *perception of succession*);²
- (ii) the *location* in space, place and time of phenomena;
- (iii) the nature of *functional wholes*, like melodies, apparent movement, etc.

At first sight, Stern's essay seems to be an excellent example of applied positivistic psychology. And in effect it belongs in a scientific context already prepared, amongst others, by Wundt, Neumann, Fechner, Exner, Meumann, and Clay – that is by the late nineteenth-century positivists.³ Moreover, it addresses a topic from the psychology *laboratory*, in the sense that it is analysed and verified by means of tachistoscopes, chronographs, and the like.

However, the background to Stern's observations and experimental investigations is *theoretical*, as evidenced by the terminology that he employs to describe temporal phenomena. Among the others:

- (i) presentation;
- (ii) fact;
- (iii) configuration;
- (iv) property;
- (v) object;
- (vi) temporal signs;
- (vii) identity;
- (viii) similarity;
- (ix) sameness;
- (x) difference.

If this list is not enough, suffice it to cite the names which Stern mentions in passing. Besides experimental psychologists, the names of several philosophers occur: James (should we wish to regard him as a philosopher as well), Mach, Külpe, and Brentanists like Meinong and Ehrenfels, as well as Cornelius. At that time, in fact, the chairs of *philosophy* in Germany were occupied by psychologists, which testifies to the close relationships between philosophy and psychology, and *a fortiori* between philosophy and the exact sciences, at the end of the last century.⁴

With specific regard to the theme of temporal presentation, consider for

² These are not the same things, as demonstrated by the phenomena of melody or stroboscopic movement. The question is an important one, because it has a close bearing on the nature of Gestalt wholes.

³ Cf. [Albertazzi 1993a] and [1993b].

⁴ Cf. [Kusch 1996].

example the ramifications of Wundt's and Lotze's researches. Wundt was in contact with Münsterberg, Dürr, Meumann, Wirth, Marbe, Müller and Schumann; Lotze, besides Müller and Schumann, with Brentano, Stumpf, Meinong, Witasek and Benussi, but also with Cornelius and Stern.

And then mention should be made of Brentano's manifold influence on the psychological schools of Florence, Graz, Vienna, Berlin, Frankfurt and Leipzig. The Italian Gestalt school of Padua and Trieste, too, was influenced by Brentano's descriptive psychology *via* Benussi, a pupil of Meinong.

The conclusions of Stern's experimental work on the unity and duration of the time of presentness can be summarized as follows:

1. An act of perception has a *temporal estensity*; it is a lapse of time not a punctiform instant.
2. This estensity has *optimal* durations.
3. The duration comprises a content-bearing *nucleus* of presentness and a marginal *fringe* apparently oriented in two directions, towards the past and towards the future.
4. The duration expresses the *permanence* of consciousness in the variation of its contents. The latter are limited (a few elements in a single act of apprehension), and there is a limit on the complexity of an object that the attention can keep within its focus: usually three or four elements in 3/4 of a second.

Stern's experimental results, however, raise more problems than his analysis of them solves. From the point of view of *experimentation*, in fact, the following issues are left unresolved:

- (i) the *psychophysical* problem, i.e. the relationship between the physical continuum of the stimuli, and the mental and perceptive phenomenal continuum;
- (ii) the problem of the nature and role of the temporal *intervals*;
- (iii) the problem of the *filling* with content of the duration;
- (iv) the relationship between *subjective* time and *objective* time;
- (v) more in general, the relationship between the *qualitative* and *quantitative* aspects of experience, including the problem of measurement in psychology.

It should be pointed out that these are themes still studied by cognitivists, often in the conviction that they have discovered 'facts' which were already known and discussed at the end of the nineteenth century, and even more

frequently in the absence of a theoretical framework in which these facts can be inserted.⁵

From the point of view of *philosophical theory*, Stern's investigations fail to resolve the fundamental issue of the nature of the psychic *act*. They do not explain what constitutes a seeing, a hearing, a feeling, a desiring, and so on, whether these are functions, facts or something else, whether they rest on some substratum; and this was a question which, at the end of the last century, was integral to experimental research, given the close relationship, already mentioned, between psychology and philosophy at the time.

I have briefly discussed the architectonic of Stern's article in order to stress a number of issues, namely whether:

1. Those who set out to study the time of presentness must simultaneously concern themselves with (i) strictly *experimental* aspects, and (ii) strictly *theoretical* ones (viz. philosophical theory).

The time of presentness is therefore a topic on the borderline between psychology and philosophy.

2. Specifically, whether its *boundaries* are situated *à la* Meinong between *ontology*, *metaphysics* and *theory of knowledge*.

The question of the time of presentness, in fact, closely concerns other philosophical problems, namely:

- (i) the problem of the actual *presentation* (mental and perceptive) and the *representation* (not the same thing) of objects in Meinong;⁶
- (ii) the problem of defining the concepts of *object*, *identity*, *similarity*, *difference* in objects in time;
- (iii) the more general problem of the nature of *abstraction*.

3. The question is further complicated by the *terminology* used to circumscribe the topic. The time of presentness is varyingly defined by authors, from time to time as:

- (i) inner time;
- (ii) psychological time;
- (iii) psychic time;
- (iv) subjective time;
- (v) time of presentness;
- (vi) time of contemporaneity;

⁵ Cf. [Michon and Jackson 1985]. On the topic cf. [Albertazzi 1999a].

⁶ Cf. [Albertazzi 1999b].

- (vii) apparent or specious present;
- (viii) experienced time;
- (ix) duration;
- (x) interval of indifference.

Moreover, certain particularly sophisticated analyses – like Meinong’s, for instance – distinguish among the time of the *act*, time of the *content*, and time of the *object*. Some distinctions are synonyms, others assume particular connotations according to the context – more or less philosophical, more or less psychological. However, in their use of this variegated terminology, all authors *have an opposition in mind*: that between ‘subjective’ time and the time denoted as – again with terminological excess and some imprecision – ‘physical,’ ‘objective,’ ‘chronological,’ ‘numerical,’ etc.

From this point of view, subjective time borders on physics and cosmology, and thus obliges us to rethink the relationship between the psychic and the physical, between mind and matter. That some of the questions typically related to the time of presentness today reappear in studies on quantum mechanics, for example those by Bohm, or that they are of central concern for cognitivist research, should therefore come as no surprise.⁷ In the case of the cognitivists, obviously, besides physical time also and principally at issue is its relationship with ‘neurophysiological’ time.⁸

All this is liable to substantial and enduring misunderstandings. One operation which imposes at least some order on the question is to use *precise* distinctions, by which I mean not solely morphological or classificatory distinctions, but *distinctions* of an *ontological nature*.

On this basis I shall now seek to define and restrict the present object of analysis as ‘*natural*’ time.

What do I mean by ‘*natural time*’? *Natural time* is that of everyday phenomenic experience, and it has *two* aspects, *both* subjective and objective:

- (i) *subjective duration*;
- (ii) the *chronological* aspect based on measurement with instruments.

In short, we say that an hour of interesting conversation passes quickly, while an hour spent waiting at the station is interminable. In both cases, however, whether we lose track of time or whether we restlessly glance at our watch every five minutes, *an hour is an hour* – that is, it lasts sixty seconds. *Both* aspects are part of quotidian experience, of the world of the objects of experience. The bus ride from home to university lasts twenty minutes, but if I

⁷ Cf. [Bohm 1980].

⁸ Cf. [Edelman 1989].

am thinking about the lecture that I am about to give I may miss my stop, because chronological time in this case has ‘passed too quickly,’ so to speak.

Unlike the above definitions of the time of presentness, my definition of natural time stresses the fact that there are always *two connected aspects* in the temporal continuum, an *outer* and *inner* boundary of the continuum itself. I would term it ‘psychophysical’ time, if such a refined psychophysics existed. These two aspects cannot be made to coincide, even if the information process consists of a form of *tuning* between the two aspects.

All my subsequent arguments will be based on this *borderline situation of natural experience* which *unfolds* in the actual present or in the time of presentness.

2. *Ontology*

As said, the topic of the time of presentness is a theoretical issue situated on the one hand among ontology, metaphysics and theory of knowledge, and on the other among psychology, physics, cosmology and biology.

Here I shall be concerned with topics that relate only to the first four areas. I shall therefore omit discussion of the time of physics, of cosmology, of biology, and everything connected with them. In other words, I shall ignore the time which, to use a somewhat rash expression, defines the time of ‘epistemological’ models, confining my treatment to what I have called *natural* time, in its twofold aspect.

To do so, however, I shall need a theory of the layers of reality of the kind developed by Nicolai Hartmann. Otherwise it is impossible to resolve the problem of the ontological and/or of the logical *priority* of one type of time over the other, or of the *reduction* of one time to another (usually that of physics).

Since the argument that I shall develop mainly concerns the Meinongians, as far as the distinction between metaphysics and ontology is concerned, I shall use Meinong’s distinction.

- (i) *Metaphysics* is the science of what is real, of what exists.
- (ii) *Ontology* is the science of the possible, or the theory of all possible objects, whether real, unreal, imaginable, fictitious, etc.

By way of a banal example, *objects* like tables, chairs, cars, but also clouds and meteorological phenomena, *exist*; so to do apparently simpler ‘objects’ like colours and sounds. But *acts* of presentation like seeing, hearing or imagining something, exist as well. Vice versa, *objects* like the centaur, Othello, Cinde-

rella, the theory of models, etc., *subsist* – that is they have a mediated, solely ontological existence. They are objects of some kind, connected together and dependent on assumptions, hypotheses, fictions, etc., or ones that are simply *founded* by other *founding* objects which act as their basis, like a melody with respect to its constituent notes.

Hence, starting from the *description*, from the morphology of objects, ontology is broader than metaphysics, because it comprises more; conversely, starting from the real or effective *existence* of objects, metaphysics is more restricted than ontology, because it comprises less.

Metaphysics, however, is *founding* with respect to ontology, in the sense that at least some objects of ontology depend, ontologically, on an actual *bearer*: for example, the Shakespeare who imagines and writes Othello, we who read him and imagine him in our minds.

Brentano's theory of intentionality therefore assumes a specific connotation in Meinong, who claims that *every thought* may be *assumed* as an *object*. In other words, in Meinong there is an extension of the thesis of intentional reference from metaphysics to ontology.

The fact that every presentation is intentional – in that it has an object – means in Meinong that an *object*, any type whatever of object, is assumed as the *transcendent* pole of direction of psychic *acts*. By objectuality or factuality, therefore, Meinong means *cognitive transcendence* towards an entity to be defined further. It is this that constitutes the theory of *objectivism*.⁹

In the light of Meinong's first fundamental distinctions, it is evident how close the nexus is between psychology and theory of knowledge in metaphysical and ontological questions; indeed, much more evident than appears at first sight in Brentano's *Psychology* in 1874.

I therefore propose to adopt an ontological scheme broadly based on Hartmann's model and which at least initially permits differentiated analysis of the relationship among metaphysics, ontology and theory of knowledge.¹⁰

Hartmann's idea is relatively straightforward, although it can be complicated, for example, by distinguishing among material layer (where categories like space, time, cause, situation, dynamic structure, etc., operate), living structure (organic structure, adaptation, ends, etc.), psychological layer (act, content, object, unconscious, etc.), social layer (social system, community, class, institution, etc.) and ideal layer (art, knowledge, etc.).

It is important to bear in mind that there are categories that pervade the

⁹ Intended objects are not immanent objects as in Brentano, but they are nevertheless some sort of cognitive extension of reality. After 1910, Benussi also envisaged non-positional acts – that is, putatively object-less acts – like 'terror,' a type of act which is not present in Meinong's ontology. The matter was made explicit in the 1925 text.

¹⁰ Cf. [Hartmann 1935].

entire stratification, but that each level has its own specific features. Moreover, the categories that reappear in the next layer are supraconstructed or supraformed by the upper level.¹¹

The importance of a conception of this kind is that it also ‘figurally’ resolves a number of questions: for example, against one of the main tenets of analytic philosophy, it shows that ontology is not solely a *classificatory list* of objects, things, events, or categories; nor is it a problem of *linguistic description à la Wittgenstein*. An ontology is a *general structure* of the world in which, *at a later stage*, classifications, dictionaries, morphologies, lexicons, etc., can be inserted.

Nor, moreover, is an ontology immediately identifiable with a *cognitive analysis* or with an epistemology, however closely the two may be connected. In the final analysis, in order to know and handle the objects of experience, we always need a *navigator* – to use the language of artificial intelligence. Of this the Meinongians (philosophers and psychologists as well) were well aware, as we shall see, as soon as they distinguished between the *psychological foundation* of ontology and *ontology*, between psychological objects and ontological ones.

3. *Theory of knowledge*

The problem of the time of presentness is therefore also a cognitive problem, as demonstrated by the interest in it shown first by the positivists and latterly by the cognitivists, and by the experimental results of their analyses. That it was also a cognitive problem was already realized by the descriptive psychologists, by Meinong and Benussi in particular, who gave a psychological foundation to the theory of objects and who consequently analysed the mental and perceptive structure of presentation, and the forms produced by cognitive completion, like the cases of formal plurivocity and those of assimilative and additive phenomena later so well exemplified by Kanizsa too.

The connection among metaphysics, ontology, theory of knowledge and psychology is provided by Ameseder’, Höfler’, Witasek’ and Benussi’s *theory of production*, which is complementary to the *theory of objects* or ontology.

The theory of production of the Graz psychologists seeks to classify the objects of psychological experience, and, as Meinong puts it, deals with *the psychological side of the foundation* of objects.¹²

¹¹ On this topic cf. [Poli 1998].

¹² Cf. [Meinong 1904]. Besides Meinong and Benussi, the theory of production was developed in particular by Höfler, Witasek and Mally.

The theory of production states that presentation begins with the 'elementary' *perceptive* perceptions.¹³ Among these latter, however, there are also presentations of a particular type which apparently comprise not only elementary objects but also 'complex' ones: in fact, one *hears* a melody, one *sees* a form, one perceptively *presents a melody or a form to oneself*. Melodies and forms are objects *founded* on elementary objects like notes, colours, etc. For Meinong and for Benussi, *temporal presentations*, too, are presentations of form.

A first issue to be addressed is what type of objects these are. A second one is how they are formed in actual perceptions. Consider Meinong's example of four walnuts and the different patterns that can be made from them (square, cross, etc.).

For the Grazer psychologists, *seeing* a colour or *hearing* a sound are perceptive presentations, but the *sound heard* or the *colour seen* involved in the formation of melodies and of visual Gestalten (that is, of *founded* objects) are not.¹⁴

There is, however, *co-determination* between the elementary and founding objects distinguished by the theory of objects in abstract, in the sense that both objects are formed in the *duration of the actual presentation*, that is, in the time of presentness. Consequently, the higher-order objects are already present even when the inferior objects are not, and sometimes functional co-determination occurs among more or less extensive items in temporal successions, as happens in the case of melodies. Consider, for example the phenomenal predominance of tonal distance over pauses in stretches of melody.¹⁵

This amounts to saying that the foundation relation between inferiora and superiora, from the point of view of *production*, is *functional* among the various moments that constitute of objects. In the time of presentness, in fact, there are not notes in succession *and* the relations among them. Indeed, because of qualitative saliences, the same succession may undergo shifts, as demonstrated by the phenomena of temporal dislocation.¹⁶ In short, the phenomena of temporal dislocation show that a *physical sequence* of *distinct* stimuli is perceived as a perceptive whole, and that the different phenomenal saliences of the stimuli in the sequence may even cause their temporal rearrangement within the *perceived succession*. This also means that altering the *time window* of the perception will also alter its conceptual *correlates* – that is, the *way* in which the object is perceived.

Consider also what happens in the classical case of Gestalt, namely strobo-

¹³ Cf. [Ameseder 1904], § 1.

¹⁴ Cf. [Benussi 1913] and on this [Albertazzi 1995].

¹⁵ Cf. [Bozzi 1996].

¹⁶ Cf. [Wundt 1879]; [Benussi 1913]; [Vicario 1973]. The same happens in the case of a-temporal 'objects' with the self-segregation of points in some Gestalten.

scopic movement: at certain conditions, the movement of a luminous point from A to B is *only* seen *if* B is illuminated. In this case the distinction between ‘before’ and ‘after’ in standard temporal continua no longer exists, and it consequently becomes extremely important to understand what constitutes the *structure* of the time of presentness and of the *presentation* in general.¹⁷

Consideration of these phenomena gives rise to an important conclusion of which the Meinongians, too (Benussi in particular), were well aware: namely, that in the time of presentness it is necessary to distinguish among:

1. the *act* of presentation;
2. the *object* of presentation;
3. but also,
4. the *time of the act* of presentation;
5. the *time of the object* of presentation;

and, internally to the structure of the presentation, a *stratification of phases* (of the kind: hearing a sound, *sound heard*, melody).

Moreover, from the point of view of the *act*,

(i) besides perceptive aspects, internally to the actual presentation – even in the brief duration of its estensivity – almost always acting in the constitution of the objects presented are cognitive aspects, like assimilative forms of *completion* among the contents perceived.¹⁸

Instead, from the point of view of the *object*,

(ii) both the perceptive perceptions and the mental perceptions comprise as much *elementary* objects as *founded* one.

Perceptive and mental presentations may therefore be *the same* with respect to objects but *different* with respect to the typicality of the act (perceiving – that is, seeing, feeling, etc. – and imagining, producing, etc.).

Now, as said, the perceptive presentations also comprise *presentations of form*.

While the Meinongians, in general, called these ‘*produced presentations*,’ Benussi preferred to term them ‘*a-sensory presentations*’ in order to avoid the (ontological) pitfalls of ideal objects.¹⁹ Examples of a-sensory presentations are

¹⁷ On the temporal primitives of presentation cf. [Albertazzi 1999c].

¹⁸ Cf. [Albertazzi 1996b].

¹⁹ Cf. [Albertazzi 1996c].

presentations of movement (of translation, rotation, etc., but also stroboscopic movement), of melody, of diversity, of distance, of rhythmic forms, as well as presentations of *temporal intervals*. Examples of this type abound in music perception, from the grace note to the *rubato*, *legato*, etc. movements.

If one shows that the structure of the act of presentation is essentially *temporal*, then the aspects that concern the structure of the act are fundamental to ontological inquiry, in that they are the basis of *actual objects* or of metaphysics.

4. *Metaphysics*

As I mentioned, for the Meinongians, *metaphysics* is the science of *what exists* and is given in evident manner in an actual presentation. Let us try to understand what this statement means.²⁰

There are at least three irreducible primitive categories of the moment-now:

1. the notion of *observable*;²¹
2. the notion of *event*;²²
3. the notion of *invariant*.²³

Since observables, events and invariants are the essential features of what exists here and now in the actual presentation, hence it follows that, in metaphysics, the structure of the time of presentness is fundamental too.

In various respects this was the approach adopted by Brentano, Stumpf, Meinong and his pupils (with some specific differences it was also the route followed by Husserl): the metaphysics of descriptive psychology in any event involves phenomenological *and* experimental analysis.

That Brentano's metaphysics centres on the problem of *temporal presentations* is also demonstrated by the fact that his theory of the inner time underwent at least four changes, to which corresponded at least four distinct phases in his theory of intentionality, which was modified as a consequence.

Let us therefore briefly recall Brentano's theory of intentional reference, as presented in his 1874 *Psychology*.

- (A) Every psychic phenomenon is an *act* characterized by *being directed towards something* (some sort of 'object' or 'objectuality' to be

²⁰ For the development of this aspect cf. [Albertazzi 1998b].

²¹ Cf. [Brunswick 1935]; [Kanizsa 1991].

²² Cf. [Vicario 1973].

²³ On the concept of invariant see [Koffka 1935], ch. 6; [Zimmer 1989].

defined). There are no psychic phenomena without objects or unconscious psychic phenomena.

- (B) The psychic act operates in *two directions*: primarily towards the object, secondarily towards itself.
- (C) Psychic phenomena are of three types:
 1. Presentations or *acts* of presenting. A presentative psychic phenomenon occurs when, in general, we make something appear in the consciousness: for example, when we see something, we present a colour to ourselves; when we hear something, we present a sound to ourselves; even when we fantasize, we present a fantastic image to ourselves.
 2. Judgments or *acts* of judging. We judge when we *accept* something as true or *reject* it as false. When we judge, therefore, the same object of the presentation is considered in *qualitatively different ways*. In other words, in the passage from presentation to judgment some sort of *embedding* of the primary object of presentation takes place.²⁴
 3. Affective phenomena or *acts* of sentiment and will. In the classical formulation of Brentano's theory, judgments and affective phenomena ontologically depend on acts of presentation. That is, as said, they are embedded in them: there are no sentiments without the presentation of an object which we present to ourselves as good or bad, desirable or otherwise, and so on.

All psychic phenomena, moreover, are *actual* in the moment-now (in an actual time of presentness) and therefore have a *temporal connotation*. We say, in fact, that *now* I see a colour, that *yesterday* I heard a sound, that *tomorrow* I shall think about something else. One of the problems to be defined for a metaphysics of this kind is the following: does connoting the object of a psychic phenomenon as *present*, *past* or *future* concern the *object* presented, the *act* of *presentation*, or the act of *judgment*? (Here I shall leave aside the problem of the emotions, which is beyond the scope of this paper).

In other words, is the characteristic note of present, past or future *part* of the object, part of the act of presentation, or part of the act of judgment? Moreover, is the object that I have in mind immediately temporally connoted, or must some form of ontologically subsequent temporal *recognition* intervene? Finally, are 'present,' 'past' and 'future' modifying attributes of objects or are they not? Is a melody heard yesterday a real object or is it not?

To give an idea of the complexity of the problem, I shall now briefly present Brentano's theses and the difficulties that arise when the problem of temporal

²⁴ Brentano subsequently developed this point in his theory of the double judgment.

presentations is addressed from a merely theoretical point of view. As I have said, the most important problems to deal with are the following:

- (i) the relationship between the *continuity* of the flow of perceptions and the *discreteness* of perceptions taken individually;
- (ii) the relationship between the *actuality* of the perceptions that we experience as directly existent and their inexorable *receding* into the past and into non-existence.

Brentano, as said, gave four different answers to the problem of whether time is given by differences in the object or in its modes of presentation, and he did so in four phases:

1ST PHASE: 1898-70

This idea was proposed by Mill who, in his *System of Logic*, had explained the origin of temporal differences in linguistic terms. At first sight, it does indeed seem that matters stand thus, as shown by the forms of verbs and of the copula.²⁵ We may say in fact that presenting a colour *will be*, presenting a colour *is*, presenting a colour *was*. Brentano's first thesis, therefore, was that temporal differences do not concern objects but are due to *acts* of *judging* expressed linguistically by verbs.

If temporal differences are connected to the tenses of the verb, however, present, past and future are disconnected moments characterized by abrupt passages and due entirely to the act of judgment, which judges that a thing 'is,' 'was' or 'will be.' But this explanation conflicts with our effective *experience* of natural time, which is continuous.

2ND PHASE: 1873-1894

While he was teaching at Würzburg, Brentano became aware of the difficulties of the problem and began to examine it more closely.

According to Stumpf, who was his pupil at that time, Brentano devoted at least twenty hours of lectures to the theme of the *original association*.²⁶ What was he concerned to show?

Brentano started from a very simple observation: the object of an inner perception remains in the consciousness for a certain amount of time, even after the stimulus has ceased – as shown by the example of the melody.²⁷

Contrary to what Brentano previously thought, therefore, it is not possible to speak of *only one mode of the past* (or of only one mode of the future). What

²⁵ Cf. [Mill 1843]; cf. also Marty in [Kraus 1930], 9 and [Marty 1910].

²⁶ Cf. [Stumpf 1919], 36.

²⁷ For criticism of this thesis see [Husserl 1996].

instead happens is a *constant flow of many modes of the past* (or of the future) in sequence. These temporal moments of the past (or of the future), however, are not given in actual perception, since they are *elements* added by the *fantasy* to the sensations. Only present is *intuitively given*.

The effect of the original association, moreover, is very short-lived, since it lasts only the time required to recite a phrase or listen to a melody, therefore the original association does not concern phenomena that require a much longer time of presentness.²⁸

In short, in this second phase, Brentano argued that temporal differences are due not to acts of judging, but to *acts of presenting* with the intervention of the fantasy. Moreover, these are *differences within the object*, not the act (given that two presentations are only differentiated by means of the primary object of the presentation). In particular, *the continually changing temporal moment* is a part of the object.

This second thesis, too, raises difficulties:

1. One usually says that every object is temporally characterized by a *temporal point* that does not change in *objective time*. Pertaining to the object is a temporal point on the calendar, so to speak, and not a constantly changing characterization in objective time. That which is now in a point has never been nor ever will be in the same point: *first* there is an object in a past point, *then* an object in a present point, *subsequently* an object in a future point. To give an example, there was a ball at 12:35 yesterday, the same ball is at 11:50 today, and it will be at 2:17 tomorrow.

The continuum is given by the *temporal modes* of presenting, which constitute a *further temporal moment* of the object.

It must be said that this question has always been a source of serious *aporias*: for example, is an ashtray that loses a piece in time the same ashtray? Is the chair that exists now the same chair as two centuries ago? And what happens to eminently temporal objects like a trill or a siren blaring in the street?

To understand these matters, one must bear in mind the concept of 'point in a continuum' in Brentano. Brentano refers to the experience of *perceptive continua*, and his conception is substantially Aristotelian. First of all, then, when Brentano speaks of points in the continuum, he is not referring to dimensionless discrete points, like the points in a mathematical continuum, but to *parts* of the perceptive continuum, and points of perceptual continua are *dick* points.²⁹

Moreover, for Aristotle the parts of the continuum are only *potential*. They are therefore not real, and they have no existence independently of the continuum to which they belong. But for Brentano the parts of a continuum are

²⁸ Cf. Marty in [Kraus 1930], 13.

²⁹ Cf. [Brentano 1976].

real too: a horse is real even independently of the herd, a blade of grass also independently of the lawn, and so on. Furthermore, both the parts of a continuum (the two parts of a segment cut in half, that is) and its limits exist, so that *there is coincidence of boundaries*. Indeed, in the case of the temporal continuum, the *now* is the foundation of a temporal continuative relation.

It should be pointed out that some of these aspects of Brentano's theory, cryptic as they may be, were later exemplified by Benussi's experiments on *temporal location*, as we shall see.

These observations by Brentano, in fact, raise the problem of the relation between objective time and time of presentness; and this too is a fundamental aspect of Benussi's analysis of *temporal apprehension*.³⁰

By way of summary, in this second phase, for Brentano:

1. Temporal moments are apprehended as *moments* of the object; in effect, they cannot modify the object itself.
2. Unlike in the first phase, an abrupt passage between past, present and future is not hypothesised. Instead, Brentano envisages a *continuous modification of the object*, which from the present is modified into the past, from real into unreal.

This hypothesis, however, gives rise to contradictions, because the real (present) cannot constitute a continuum together with something non-real (past, future).³¹

3RD PHASE: 1894-1904

The difficulties raised by his second thesis prompted Brentano to find a third solution to the problem of temporal differences whereby they are conceived as differences in the *mode* of judgment.³²

The object is still the primary object; what differs is the *mode of judging it*. This third phase therefore resumes arguments already formulated in the first (temporal differences pertain to *judging*, not to presenting). But from the second phase it retains the idea of the original association (now called by Brentano *proteresthesis*): in consciousness, added to the *present object* is a series of psychic phenomena which are directed towards the *past object*.

This third thesis, too, raises problems: for instance, it does not explain negative judgments (of the type 'I do not hear the crow singing'), which should

³⁰ This point, too, was severely criticised by Husserl, who claimed that (i) the time of presentness has nothing to do with objective time, and that (ii) the time of presentness is not a punctiform instant.

³¹ Cf. [Kraus 1930], 7.

³² Cf. manuscript T65, [1899]; [Stumpf 1939], 284; [Marty 1895].

also have a present mode, and it does not explain the phenomena of the melody, which has *past temporal modes* present in an *actual presentation* (consider what I said earlier: (i) sound, (ii) *past* sound and (iii) melody are *contemporaneous* in the time of presentness).

Moreover, as in the second phase, Brentano considers every object to have a temporal mode, which is not a mode that continually changes but a temporal *point*. Consequently, only present objects can be real. In this third phase too, in fact, Brentano considers every object that is *real* now, or that will be or has been real, occupies an *objective temporal place* which is either prior to, contemporaneous with, or subsequent to other temporal places.

However, we present the temporal continuum to ourselves as *a continuum of modes of recognizing* the object directed towards the real and the non-real.

4TH PHASE: 1904-1917

The problem, as we have seen, arises from the fact that we are also able *fantasticate* temporal objects. Consequently, temporal differences also reside in the presenting, and they are prior to judging: which is therefore a partial return to the theses of the second phase. Moreover, we *desire* something in the present or in the future, and neither in this case are judgments involved.

The fourth phase therefore concerns the *primary objects* of the presentation and the *modes* of presentations, but with a variant: the role played by the *whole of consciousness*.

The successive presentations of the present, past and future object are not *individual acts* that exist individually and separately. They are instead parts of a *whole*.³³

In the temporal estensivity – that is, in the time of presentness – we apprehend *being before* and *being after*: we have a presentation of the temporal extension.

Moreover, the *temporal modes* are first considered to be modes of presenting together with the direct and indirect modes; but they are then considered to be *indirect* modes, so that the only *direct* mode is the *present* mode.

Thus, Brentano's theory of time becomes a particular case of the theory of the modes of presentation.

A number of standard issues can be extrapolated from Brentano's painstaking *metaphysical analyses*, viz.:

1. The coexistence of and difference between the time of presentness and objective time; in other words, the two aspects of what I have called natural time. The problem is defining their *laws of dependence*.
2. The problem of whether temporal differences are differences in *objects*

³³This topic was developed by the *Ganzheitspsychologie* in Leipzig. Cf. [Sander and Volkelt 1962].

or differences in the *modes* of presentation of objects. If they are differences in objects, the problem arises of *modification*: a past object is no longer a real object: it is unreal, etc. Hence the problem also arises of the consistency of continua.

3. The problem of whether temporal differences are differences of *presentation* or of *judgment*. And then, if they are given in the presentation, is or is not the presentation punctiform? If it is not, do the differences come about subsequently? Finally, as Marty pointed out, if temporal differences are given in the judgment, are they given simultaneously?
4. The problem of whether time exists outside and independently of us, or whether it is a product of cognitive acts.
5. The problem of whether the sequence of a perception coincides with the perception of a sequence.

Brentano's metaphysical analysis alone is *not* enough to settle these questions. The remedy adopted by the Brentanists and specifically, in this case, by the Meinongians was to *resort to laboratory experiments*.

5. *Psychology*

In point of fact also Brentano intended to set up a twofold seminar of psychology and philosophy, like those later established by Meinong at Graz, Stumpf at Berlin and Twardowski at Lvov. Husserl was prevented from doing so at Göttingen by the hostility of G. E. Müller, and Brentano's project was likewise thwarted by academic hostility.

What accounts for so much interest in the laboratory by scholars concerned with ontology and metaphysics? What was the purpose of these experiments on the act, content and object of presentation, temporal duration, time of presentness, and so on?

The laboratory offered an opportunity for closer analysis of the *structure* of the presentation – for example, its components, its laws, relations with 'stimuli' – also because experiments allow repetition of the events under observation, eliminating complicating factors and interference from them, standardizing conditions, limiting their duration, and so on. Of course, there was then the problem of re-integrating this information into natural experience.

Obviously, different uses may be made of the laboratory, as evidenced by the cases, among the others, of Wundt, Köhler, Koffka, Metzger and Benussi who, more than differences in methods or objects of research, represent three different types of *subjective stance* and, ultimately, of *theory*.

What do I mean by this? That Wundt's experiments were based on a positivistic metaphysical position, those of the Berlin school on a phenomenological and isomorphist position, and those of the Graz school on a more cognitivist and constructivist one. Köhler was essentially an experimentalist, although matters are less straightforward as regards Benussi. In any event, the experiments conducted and the results obtained were very often the same for these various experimenters; it was their *interpretations* of the data that differed.

Meinong's school comprised a number of outstanding experimentalists, and likewise did De Sarlo's school at Florence. These were scholars with diverse specializations, but they had all received philosophical training or were working on a base ontological theory, and they had all simultaneously been trained in laboratory methods.

Benussi, for example, a student of philosophy at Graz from 1896, was trained in both philosophy and psychology. He spent a large part of his time conducting laboratory experiments with Witasek, mainly on perceptive illusions, and dedicated his dissertation to him.

Benussi is noted in the history of psychology for his analysis of the nature of *a-sensory presentations* (a derivative from the theory of production), for his analysis of the *temporal* presentations (although this was not wholly distinctive of his work, given that also Wundt, Meumann, Stern, Schumann, and others, studied these matters), and particularly for his polemic with Koffka, which from a certain point of view highlights the differences in theory (but not experimentation) between the two branches of Gestalt.³⁴

The original features of Benussi's analysis of temporal presentations and of the time of presentness can be specified as follows:

1. His theory of *three-phase* presentation;
2. His distinction between *objective* time and *subjective* time;
3. His analysis of the phenomena of *internal temporal location*.

As to the first two points, put very briefly, firstly Benussi demonstrated that (i) the presentation is *stratified into phases*; ii) there is a *time of development of form*; (iii) *presentation* and *representation* are distinct. Secondly, that objective time is the time in which real events happen, and that its delimitation acts as the (sometimes plurivocal) *foundation* for the apprehension of temporal properties. If we apply Hartmann's ontological scheme, objective time belongs to the physical layer, on which the psychic layer is ontologically *dependent* although *not reducible* to it. Benussi's analysis lies at this level in its search for dependence laws between the two layers of reality. Successively, in his book of

³⁴ Cf. [Benussi 1914].

1925 on suggestive states, his analysis concentrated more closely on physiological aspects, i.e. on another level of reality.³⁵

Since I already dealt at large with point 1 and point 2 in other occasions, here I shall recall mainly point 3.³⁶

The third point concerns one of the central themes of *positivist* as well as *philosophical* investigation at the end of the last century, from Lotze to Fechner: the *external* and *internal* (spatial and temporal) location of phenomena, according to *psychophysical laws*.³⁷

Benussi observed that, when apprehending the passage from light to dark, or from low to high in the case of sounds, and vice versa – in other words, when apprehending a difference of brightness or intensity in colours or sounds – we do *not* necessarily have to *compare* the two extremes of the phenomenal occurrence; nor do we have to compare the two sounds or the two colours, nor perform the imaginary completion (*phantasiemessig*) of the tonal variety or of the variety of colour. Comparison and completion can in these cases be performed voluntarily; they are not necessary conditions for the apprehension of diversity in brightness or saturation within the continuum of sounds or of colours.

Matter are different, however, in the case of the apprehension of *distances* or of *temporal intervals*.

Consider the case when the attention focuses on a particular temporal place after it has been identified: for example, it may be ‘today,’ ‘tomorrow,’ ‘now,’ ‘a moment before,’ etc. and then the same procedure is then applied to a new temporal place. In the case of temporal continua, some form of *completion* by a cognitive *act* is a necessary and inevitable condition for the apprehension of a temporal differentiation.

This completion may be performed in two ways: in the imagination or *de facto*. If it is performed only in an imaginative act, we apprehend a temporal qualitative *diversity* (*Verschiedenheit*) of subjective type (between a ‘before’ and an ‘after’: for example, between ‘yesterday’ and ‘tomorrow,’ between ‘ten years ago’ and ‘today’). By repeating the procedure with the attention directed to new temporal places, we are able to distinguish two different temporal places, but we are unable to apprehend the *distance* between them (and therefore also the magnitude of their individual *differences* (*Differenz*)).³⁸

Vice versa, if the completion comes about *de facto*, immediately after a past time *internally to the time of presentness*, we apprehend a temporal *distance* or an interval (and therefore not simply a temporal *diversity*, as happens with the continua of colours or sounds). Conceiving temporal distance therefore requires

³⁵ [Benussi 1925].

³⁶ Cf. [Albertazzi 1995], [1996a], [1996b], [1996c].

³⁷ Cf. [Lotze 1852]; [Fechner 1860].

³⁸ For the different terminology Cf. Meinong 1896.

detailed individuation of the temporal places themselves. And the differentiation only takes place if the temporal places are apprehended as *proceeding one after the other continuously*, and therefore with a *presentification* of the temporal intervals and a constant *fusion* of the various phases in the time of presentness.³⁹

There are two further components of Benussi's theory of inner temporal location that should be noted:

1. First, temporal intervals are apprehended not by virtue of the constant on-set of new acts, but on the basis of the *character of pastness* which progressively (and constantly) develops from *one* original act of temporal location which constitutes the time of presentness. This is intuitively evident in the perception of a melody, to the temporal form of which pertain both the overall duration and the durations of the individual sounds and of the pauses between them.

The character of 'pastness' of some of the notes in a melody that we are listening to is therefore a *temporal characteristic note* experienced in gestaltic correlation with another characteristic note, namely a characteristic note of 'presentness.'⁴⁰ The temporal '*points*' in the continuum of consciousness are therefore *acts of temporary location*; and acts of location, once aroused, are *modified* in the sense that their 'character of pastness' is heightened, so confirming the Brentano's intuition. Temporal acts, moreover, are *invariant structures* of a certain *estensity*.

2. Second, Benussi points out that the 'character of pastness' arises only from the apprehension of the *object which bears* it, in relation to its position *vis-à-vis* a moment-now. In other words, the character of pastness, which pertains to the modification of the act of presentation, only arises relatively to a presentative content (for example, of notes in succession).

3. Obviously, impressions which follow one another must display the characteristic temporal notes that *individualize* them. On the basis of these characteristic notes we apprehend also the configuration or object that we call 'time' or temporal interval. Here Benussi is talking (*à la Meinong*), of *produced objectivities*. From time to time, in fact, different forms of mental

³⁹ According to Benussi (in 1913), we are unable to understand what an act of temporal presentification is because it differs from an act directed at apprehending a distance between colour or a tonal distance between sounds. They are certainly experienced as similar but not yet explained.

⁴⁰ Cf. [Benussi 1913], 498-9. The characteristic note of 'pastness' is a note of the content, not of the act, even though it is based on the relationship established by the act of intentional presentation in the moment-now.

direction arise, some of which merge with objects of the 'delimitation of an interval' type, others with objects of the 'pause' type, yet others with objects of the 'duration' type.

Finally, Benussi explains the complexity of these phenomena connected with both the invariant structure of the act and the modifying content of the act itself by distinguishing between *time of presentness* and *time of contemporaneity*:

1. The *time of presentness* is the time grasped by means of an attentive act; put otherwise, it is the temporal extensity of the psychic present.
2. The *time of contemporaneity* characterizes the element endowed with the greatest phenomenal salience of the entire time of presentness and which acts as the bearer of the temporal character.

These considerations obviously only apply in the case of the immediate and direct apprehension of intuitive times. As said, the apprehension of arbitrarily large times is an *indirect mode* of apprehension which implies the assumption of a non-intuitive relationship between two temporal 'points', which, in this case, are instant-like. The same thing happens when we think of one point lying ten kilometers away from another, or of one sound which is ten octaves higher than another sound.

6. *Conclusions*

Which conclusion? There is a *relation of foundation* between subjective time and objective time of measurement, but this is not a relation whereby the one can be reduced to the other.

The relative independence of subjective time from objective time has been amply demonstrated, and not only by the *subjective attitudes* tied to everyday experience whereby, according to one's mood, 'time flies' or 'time drags by.'

Also *objective phenomena* analysed in the laboratory – like those of temporal displacement in the auditory or visual fields, or stroboscopic movement – demonstrate that in the time of presentness there occur perceptual events that are at least partially *independent* from those of the time of objective sequences. Subjective and objective time *do not flow in unison*, and the continuum of physical sequences has *modalities of existence* that differ from those of the continuum of perceptive sequences.

What does this imply? It implies that the table at which I am sitting exists independently of the fact that I present it to myself and that it exists now, for

example at 10:30 by my watch. The *object* 'table' has an *objective punctiform time*, so to speak, instant after instant. Moreover, the fact that I present it to myself at 10:32, at 10:33 or at 11:02, and so on, does not alter the temporal characteristic note of the object 'table.'

But the object table as *correlate* of my act of *actual presentation* has a different, qualitative time even though its duration is objectively measurable and comparable (let us say ca 700 msec), but its *outlines are fringed* and depend on numerous other factors, like attention, mood, the complexity of the perceptive field, the design, the beauty of the table, and so on.

In short, what differs is the *unit of representation* of the object 'table' and of the table actually presented. Both are *measured* in milliseconds, but the unit of representation for objective time is the instant, whereas for subjective time it is the temporal, elastic moment of variable duration (from 50/100 msec to one or two seconds) according to the phenomenon concerned – according, for example, to whether it is a stroboscopic movement, a tunnel effect, a perception of causality, etc.

Overall, the contribution of the Graz school, and of Benussi in particular, to what one may call a question of knowledge engineering resides in their distinction of *moments internal to presenting* which correspond to *objectual moments*, relative to the construction of the scene by means of different *profiles*.⁴¹

The enormous quantity of experimental data on time perception produced by the cognitive sciences, and for which there does not seem to be any cogent theoretical framework, may also be incorporated into a broader philosophical theory, namely the theory of the time of presentness pioneered by Stern, successively developed by the Brentanians, and to which Benussi gave an experimental support.

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⁴¹ See, for example, the 'rediscovery' by the cognitivists of the phenomena of *Zeitverschiebung* that Benussi studied. Cf. [Fraisse 1963]; [Michon and Jackson 1985].

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