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Type and Experience. An Inquiry Into the Role and Function  
of Type and Typifying-Apperception in Experience and  
Cognition.

The Origin of Ideality in Husserl's Early Phenomenology.  
A Critical Exposition of Husserl's Early Works in Halle and Göttingen

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## Introduction.

### *General Thematic*

The problem of the nature of ideality is decisive for the whole phenomenological philosophy. Not only because it was the proper sense of this ideality, and its role in the definition of phenomenology, in question at the beginning of the phenomenological schism and the following accusation of alleged “idealism” around 1908, but also because, even though it represents the task which defines phenomenology the most, remains an issue under many aspects still not completely settled<sup>1</sup>. Ideality assumes in fact different characteristics and features in the development of Husserl's thought. By presenting a distinct nature at the edge of the genetic analysis with the introduction of history and intersubjectivity in the analysis of experience and cognition<sup>2</sup>, in comparison with the approach to mathematical and logical objects in the early years of his work, Husserl's understanding of ideality even seems to show features, *prima facie*, irreconcilable.

In fact, while the problem of the nature of ideality and more specifically of the ideal

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- 1 Looking briefly into this complex issue, by example, if Husserl defines in his 1921 *Formale und transzendente Logik* his philosophy as «phenomenological idealism», in 1913 he also notably states in *Ideas I* that phenomenology should not be intended as a idealismus in the traditional sense of the word. E. Husserl, *Formale und transzendente Logik*, in *Husserliana XVII*, ed. P. Janssen (Martinus Nijhoff, Den Haag, 1974), p. 178 sgg. See also, K. Schuhmann, *Die Dialektik der Phänomenologie II: reine Phänomenologie und phänomenologischen Philosophie*, in *Phaenomenologica*, 57 (Martinus Nijhoff, Den Haag, 1973), p. 191. More recently, V. De Palma, “Ist Husserl Phänomenologie ein transzendentaler Idealismus“, in *Husserl Studies*, 21, 2005, pp. 183 – 206, and also D. Zahavi, “Husserl and the 'absolute'“, in *Philosophy, Phenomenology, Sciences*, *Phaenomenologica*, 200, ed. C. Ierna, H. Jacobs, F. Mattens (Springer, Dordrecht, Heidelberg, London, New York, 2010), pp. 71 – 92. On the question of a possible refutation of idealism in Husserl writings were presented many hypothesis: S. Bachelard identifies for example a Husserlian “refutation of idealism” in *Formal and Transcendental Logic* - S. Bachelard, *La Logique de Husserl*, (épiméthée, Paris, 1957), while L. Alweiss and N. De Warren (2009) locate it in the *Cartesian Meditations*; see L. Alweiss, *The World Unclaimed: A Challenge to Heidegger's Critique of Husserl* (Ohio University Press, Ohio, 2003) and N. De Warren, *Husserl and the promise of time: subjectivity in transcendental phenomenology* (Modern European philosophy, Cambridge University Press, New York, 2009).
- 2 See the classical, L. Landgrebe, *Phänomenologie und Geschichte* (Mohn, Gütersloh, 1967), A. Pazanin, *Wissenschaft und Geschichte in der Phänomenologie E. Husserls*, in *Phaenomenologica*, 46 (Martinus Nijhoff, Den Haag, 1972) and *Lebenswelt und Wissenschaften in der Philosophie E. Husserls*, ed. E. Ströker (Vittorio Klostermann, Frankfurt a. M., 1979).



objects is «not a problem among others in phenomenology, by determining the possibility itself of a phenomenological philosophy», it appears still not a easy task to define and emphasize the nature of Husserl's account of ideality in a coherent way, even considering the key role just recalled<sup>1</sup>. If he has offered and very convincingly argued in favor of the necessity to recognize something like “essences”, and even indicated in the entire extent of his work lots of different expressions for ideality (*Wesen, Essenz, Eidos, Idealität*, etc.) and the “grasping” of essences or «universal objects», their explicit determination is more often negative than positive. For example, essences are said not to be spatiotemporal realities, nor reducible to mere psychological data or to the mental status of the subject of knowing. They are also not involved, at least directly, with a metaphysical statement about their ontological status, like in the case of some sort of Platonic hypostatizations<sup>2</sup>. Husserl even stressed the distinction of his «universal concept of (either formal or material) essence» from other philosophical or scientific tradition, as for example in the case of the still «supremely important Kantian concept of idea»<sup>3</sup>, but the negative features are still much easier to discern than the traits of a positive solution.

In his early years Husserl tried in many ways to argue about the existence and status of an ideal dimension irreducible to factuality. In his *Prolegomena zur reinen Logik* in 1900 he constructs, for example, an argument for the existence of this ideal dimension around the concept of truth: as long as there is something like truth, there must be an ideal dimension irreducible to facts. This argument bases its cogency on the fact that every possible judgment needs to refer to something which preserves its unity and identity in order to obtain «general contents», on the basis of which we can formulate and share verifiable judgments and knowledge.

Husserl was at this time pushed to claim on the existence of this ideal dimension due to his purpose to avoid any kind of psychological or anthropological skepticism, as it is already well know. The conditions for such judgment and truth could in fact be mere psychological facts of a particular species or, even worst, an individual, but this would

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- 1 S. Rinofner-Kreidl, *Edmund Husserl. Zeitlichkeit und Intentionalität* (Karl Alber, Freiburg, München, 2000), p. 682.
  - 2 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch: Allgemeine Einführung in die reine Phänomenologie*, in *Husserliana III/1*, ed. W. Biemel (Martinus Nijhoff, Den Haag, 1950), p. 40. For a recent discussion on this topic, see also, A. Zohk, “The Ontological Status of Essences in Husserl’s Thought”, in *New Yearbook for Phenomenology and Phenomenological Philosophy*, XI, 2012, pp. 99 – 130.
  - 3 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 6.

reduce general contents to facts belonging to the psychological and factual state of a particular being<sup>1</sup>. Judgments claiming to be truthful become mere couplings of facts, which belong to two different dimensions respectively, but since facts are individual determinations also their coupling would represent therefore just an individual determination. The reduction of truth to an individual determination does destroy the truth claim to lead to stable and valid knowledge:

«The constitution of a species is a fact: from fact it is only possible to derive other facts. To base facts relativistically on the constitution of the species therefore means to give it a factual character. This is absurd. Every fact is individually and therefore temporally determinate. In the case of truth, talk of temporal determination only makes sense in regard to a fact posited by a truth (provided, that is, that it is a truth about facts): it make no sense in regard to the truth itself. (...) If someone wished to argue from the fact that a true judgment, like any judgment, must spring from the constitution of the judging subject in virtue of appropriate natural laws, we should warn him not to confuse the “judgment”, *qua* content of judgment, i. e. as a ideal unity, with the individual, real act of judgment. It is the former that we mean when we speak of the judgment  $2 \times 2 = 4$ , which is the same whoever passes it. (...) My act of judging that  $2 \times 2 = 4$  is no doubt causally determined, but this not true of the truth  $2 \times 2 = 4$ »<sup>2</sup>.

Truth as knowledge of reality requires a stable grasp of something endowed with universal validity, otherwise, conceived as just an individual fact among other individual facts, truths and ideas as facts implies the assertion that it does not exist any proper truth, which is, of course, radical skepticism and even contradictory. We are therefore forced to grant the existence of ideas, or essences, not reducible to factuality<sup>3</sup>.

This assert leads hereafter also to account the issue of the nature of the relationship between truth and reality. The fact that, if there must be truth there must be entities which are more than individual, does not explain for itself the relation between essence

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1 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana XVIII*, cit., p. 118f.

2 *Ibid.*, p. 126.

3 See, B.C Hopkins, “Phenomenological Cognition of the A Priori: Husserl's method of “Seeing Essences” (*Wesenserschauung*)”, in *Husserl in Contemporary Context. Prospects and Projects for Phenomenology*, Contributions to Phenomenology, 26, ed B.C. Hopkins (Kluwer Academic Publishers, Dordrecht, Boston, London, 1997), p. 151.

and reality. Essences are in fact primarily accounted by opposition to the factual. Essence is not individual and immutable, and that enables factuality to be grasped, which is individual and mutable, temporal and empirical, where again ideal must be by result non-temporal<sup>1</sup> and metempirical<sup>2</sup>. All this features can be only understood if related properly to each other, their non-individuality to their non-temporal and metempirical nature. Essences must be non-temporal in the sense that they must not be labile and changeable, in fact only on their ground is allowed the stable identification across the volatile flow of facts. However, this argument does not lead to the assertion regarding their existence in a dimension of “eternity” parallel and foreign to the worldly existence, so that this eternity only means «that every judgment is bound by the pure laws of logic without regard to time and circumstances, or to individual and species», where this being bound is mean «in the ideal sense of a norm and not psychologically as a thought-compulsion»<sup>3</sup>.

If essences and ideal objects are in fact metempirical because of the impossibility of their been understood as something fully dependent on the peculiarities and individuality of factual experiencing, this doesn't mean that they are dimension completely separated and foreign to the dimension of experience. Obviously, the relation of the two spheres have been interpreted by Husserl's in many ways and explained by taking different explicative strategies which has also led to interpretative misunderstandings<sup>4</sup>.

If to each science corresponds an object-province as domain of its investigations, and if to all its correct statements correspond, as ground of legitimacy, intuitions in which their objects become themselves given as existing and «given originally», we can distinguish, on the one side, natural cognition and all the sciences belonging to this sphere, to which is proper *presentive* intuition articulated as natural experience and perception and, on the other side, the science of pure essences, to which is proper a radical change in

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1 See E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. , p. 85, 136.

2 See, for example, *Ibid.*, p. 76, 108, 134.

3 *Ibid.*, p. 147.

4 Husserl sums very concisely in his 1921 preface to the second edition of the VI *Logical Investigation* the history of one major misunderstanding: «I remain of the opinion that the chapter on “Sensuous and Categorical Intuition”, together with the preparatory arguments of the preceding chapters, has opened the way for a phenomenological clarification of *logical* self-evidence (and *eo ipso* of its parallels in the axiological and practical sphere). Many misunderstandings of my *Ideas towards a Pure Phenomenology* would not have been possible had these chapters been attended to», E. Husserl, *Logische Untersuchungen, zweiter Band, zweiter Teil*, in Husserliana XIX/2, ed. U. Panzer (Martinus Nijhoff Publishers, The Hague, Boston, Lancaster, 1984), p. 534. See also, S. Rinofner-Kreidl, *Edmund Husserl. Zeitlichkeit und Intentionalität*, cit., p. 627 – 30.

methodology and objects of investigation. «Experiential sciences are science of “matter of facts”», where their cognitional act as experience posits something real individually, factually and existing spatiotemporally, as something with its duration, position in space and time, and that, with respect to its essence, could just as well have been at any other spatiotemporal locus, with any other shape and changeable nature<sup>1</sup>. This defines in fact the *contingent* nature of every sort of individual existence: it is thus, but in respect of its essence it could be otherwise. The ideal dimension could therefore on the contrary be indicated as counterpart of this contingency. As Husserl points out:

«The sense of this contingency, which is called factualness, is limited in that it is correlative to a *necessity* which does not signify the mere *de facto* existence of an obtaining rule of coordination among spatiotemporal matters of fact but rather has the character of *eidetic necessity* and with this a relation to *eidetic universality*. When we said that any matter of fact, “in respect of its own essence,” could be otherwise, we were already saying that *it belongs to the sense of anything contingent to have an essence and therefore an Eidos which can be apprehended purely; and this Eidos comes under eidetic truths belonging to different levels of universality*»<sup>2</sup>.

That defines therefore also the status of the natural laws and hereafter part of natural knowledge and of the scientific thought grounding on it. Even if they express definite laws of nature, i.e. the fact that for example, something in real circumstances must exist as consequence of another fact, these laws «express only *de facto* rules which themselves could read quite otherwise»; they even presuppose in fact, that the object of experience which is governed by such rules is, considered for itself, contingent. It poses a very complex issue the relation between science and its respective objects and rules, considering the differences within the definition of both. Here, it must suffice only a brief statement on the essential connection of phenomenology as «rigorous eidetic science» and the ideal dimension to which it refers, a statement that seems to take shapes by opposition with science and its definition as dependent from the factual status

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1 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 8.

2 *Ibid.*, p. 9.

of its objects<sup>1</sup>. Phenomenology, then, will be satisfied only with a cognition that is absolutely certain, and in this sense it will be concerned only with an object that is absolutely necessary, in no way contingent, which is but another way of saying that it is the object of an absolutely certain and ultimately “rational” cognition. This sort of philosophy will refuse therefore any conclusion that has not been absolutely valid; thus it wants to be a science in direct contact with absolute being, which can only be for Husserl, however, “essential being”, and the whole orientation of his phenomenology therefore will be to achieve a knowledge of the essential. He will not deny the existence of a world and as well not all the others kind of existence, he will yet simply deny that such an existence can have much of significance for philosophy, since this kind of existence can only be contingent.

But already the very few words above show the importance for phenomenology of the problem concerning the complex articulation of the ideal dimension of knowledge, and, from the very beginning, the peculiar position of phenomenology with respect to science and to the epistemological explication of how objective knowledge must be possible. All of those questions involve radically in phenomenology the question of its proper methodology as a guarantee for its claim to be scientific and, by aiming to build up a rigorous theory of knowledge, a *Wissenschaftslehre* in its own sense. Husserl wrote in fact in the introduction to *Ideas I* that

*«pure or transcendental phenomenology will become established, not as a science of matters of fact, but as a science of essences (as an “eidetic” science), (...) which exclusively seeks to ascertain “cognitions of essences” and no “matter of fact” whatever. The relevant reduction which leads over from the psychological phenomena to the pure “essence” or, in the case of judgmental thinking, from matter-of-fact (“empirical”) universality to “eidetic” universality, is the eidetic reduction».*<sup>2</sup>

An important aspect of the question concerning Husserl's approach to the ideal dimension of experience refers to the peculiar methodological claim of the

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1 See E. Husserl, “Philosophie als strenge Wissenschaft”, in *Logos*, I, pp. 289 – 341. Now in E. Husserl, *Aufsätze und Vorträge (1911 – 1921)*, in *Husserliana XXV*, ed. T. Nenon and H. R. Sepp (Martinus Nijhoff Publishers, Dordrecht, Boston, Lancaster, 1987), pp. 3 – 62.

2 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 4.

phenomenological investigation, which, having been labeled as “eidetic”, defines the very nature of phenomenology itself as intended by Husserl in the form of «a science of essence – as an “a priori” or (...) as an eidetic science»<sup>1</sup>, and hereafter, specifies phenomenology in its relation to philosophy and science in general. The question on the nature of ideality isn't in fact only fundamental for the definition of phenomenology as philosophy, but also for its relation to other philosophical and scientific thoughts. Considering for example the fact that logic and mathematics are both forms of cognition that relate to ideal and universal objects, it seems that it must have been the stated goal of phenomenology, at least clear in the *Prolegomena* and the *Logical Investigations*, but already present at the time of the *Philosophie der Arithmetik*, to provide an epistemological foundation for the apprehension of ideal objects and, consequently, also a foundation for the possibility of science.

It is also well-known, that by the insistence on the ideal and irreducible meaning of logical objects, Husserl tried to move from, and to argue against, various forms of psychologism, especially, logical psychologism<sup>2</sup>. But his struggle moves also in the same direction of other approaches in the field of philosophy of mathematics and logic. If the way in which phenomenology and the earlier Husserlian approach describes the apprehension of ideal objects does have therefore an impact on the definition of these objects for itself and in their relations, that puts at the same time the phenomenological description in relation with other perspectives which are dealing with the same philosophical problem: a coherent explanation of the conditions and possibility of valid knowledge originated in cognition and experience.

For Husserl, any account of how knowledge is possible and how knowledge in general can be possible, must provide a solid description of how consciousness can apprehend objects of higher-order and ideal objects, that are the kind of objects that do “transcend”

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1 Ibid., p. 5.

2 According to Husserl, psychologism and logical psychologism are not to be identified. If the first indicates a research concerning the psychical acts of cognition in their full dimension, an inquiry with seems to be to some extent legitimate, even representing phenomenology itself a philosophical refined and methodological-grounded version, logical psychologism represents an illicit extension of such a research by reducing the validity of logical objects and laws to factual events occurrences of human psyche. He writes in fact in the *Formal and Transcendental Logic*: «It is noteworthy that readers regarded the “*Prolegomena zur reinen Logik*” as an unqualified overcoming of psychologism and failed to take notice that nowhere in that volume was psychologism pure and simple (as a universal epistemological aberration) the theme. Rather the discussion concerned a psychologism with a quite particular sense, namely the psychologizing of the irreal signification formations that are the theme of logic». E. Husserl, *Formale und transzendente Logik*, in *Husserliana XVII*, cit., p. 160.

the immanent content and acts of intentional consciousness<sup>1</sup>. It could be hereafter stressed that, beyond the fact that the first Husserlian works are primarily interested in a philosophical inquiry into the abstract functions which leads to the formation of the logical- and mathematical-grounding concepts, while in the late works he appeared more focused on the question of the proper epistemological relevance of human experience and *praxis*, one of the central theme always present from the *Philosophy of Arithmetic* up to the *Crisis* is the description of the kind of experience within which concepts, judgments, till up to even higher forms of cognition are deployed.

Under this point of view, phenomenology distinguishes itself as philosophy from science *tout court*, and that is already before the late meditations of the *Krisis*. In fact, in 1896, and that is before the phenomenological turn of its philosophy, by stating the efficacy of scientific knowledge, Husserl already outlines this very aspect of his understanding of philosophy. He writes in his lecture on *Logic* held in Halle a few years before the *Prolegomena zur reinen Logic*:

«The mathematicians, the physicist and the astronomer, do not need any proper insight into the very last principles of their scientific doing in order to operate scientific processes. And even if the results obtained by the latter possess for him the strength of rational certainty, he can not claim to demonstrate in general the last principles on which the cogency of his method is grounded, and therefore, to have guaranteed for his science the higher theoretical status»<sup>2</sup>.

The question of the validity of objective knowledge and the claim connected to its foundation is, as well-known, retaken also in the very late *Krisis*, which is in fact, a “critic” of scientific knowledge in the sense of an “analysis” of its reasons, birth and history. Even if this analysis comes after a deep methodological development and self-understanding of Husserl's principles of investigation, still here, scientific knowledge is intended as a “transformation” in the sense of a «idealization» of what is already present previously to science, in the *Lebenswelt*, which must be investigated in order to understand the «functioning activity» of the transcendental ego as the source of sense,

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1 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 389.

2 E. Husserl, *Logic. Vorlesung 1896*, in Husserliana, Materialienbände, I, ed E. Schuhmann (Springer Science and Business, Dordrecht, 2001), p. 3.

and thereby accomplishing the scope of phenomenology as philosophy<sup>1</sup>.

However, it must be already stressed out that the proper understanding of phenomenology should not reduce its entire enterprise and scope to the mere critic of scientific knowledge, a view that will be far from a proper understanding of Husserl's entire project. Husserl's enterprise and especially in its full range of interest, does raise many questions, which can even be understood as problems belonging to some traditional areas of philosophical inquiry into the relation between experience and abstract knowledge. There could be first a straightforward metaphysical question, namely the question as to whether there are abstract or ideal entities, a question that has occupied philosophy since its birth and has assumed different shapes and definition throughout its entire history. Especially with the development after the first half of the 19<sup>th</sup> century of logical and mathematical studies with a strong formal and symbolic orientation, the problem concerning ideal objects and their role in scientific thought had risen, secondly, a *semantical* question, which concerns whether there are utterances whose truth commits or not commits one to the existence of abstract objects. There are therefore *epistemological* issues, namely the questions as to whether there is knowledge about abstract objects and how this knowledge has to be properly described, say for example, in terms of direct grasp or intuition, as a form of abstraction, or if there is only an inductive way leading to the ideal contents.

Phenomenology in its questioning ideal objects seems to take part and to show its peculiarity with respect to all the questions mentioned above; but its major contribution is to be found in its attempt to clarify the problem of access to ideal and valid content of knowledge without reducing the investigation to only one aspect of the general inquiry, like the semantical one, for example, nor to a specific field (mathematics, logic etc.), and moreover, the peculiarity of the investigation seems to be define by the methodology itself applied and its own development.

The method undergoes in fact during the long journey of the Husserlian phenomenology under many adjustments and changes, from the *Logical Investigations* throughout the 1925 lecture *Phenomenological Psychology* and the very later stages. And even if phenomenology has been yet differently defined, the transition from its more “descriptive” nature to the “transcendental”, in no way constitutes a break in Husserl's

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<sup>1</sup> E. Husserl, *Die Krisis der europäischen Wissenschaftem und die transzendente Phänomenologie*, in *Husserliana*, VI, ed. W. Biemel (artinus Nijhoff, Haag, 1976), p. XIX.



thought. It is in fact but the logical explicitation of what was implicit or already present in the earlier period.

Besides the confrontation with the scientific thought in general and with its own method, the aim posed by Husserl to his phenomenology leads also to a confrontation with the history of philosophy, logic and mathematics in his attempt to clarify the nature of the ideal dimension. It is well-known the major interest in the early years for the mathematical and logical thought, interest which led Husserl to confront the main theories in logic and the more straightforward mathematics of logic of its time. This ground interest is easy to show as one of the more consistent in Husserl's thought, by referring to the methodological evolution that the statements in the fourth and sixth of the *Logical Investigation* on the theory of forms and validity in the logical field will undergo in the late *Formal and Transcendental Logic* and with the delineation in this work of the “formal logic”<sup>1</sup>. The latter precedes yet the analysis of constitution which with its «subjective inquiries» aims to discover the origin of validity for the objective formations and poses the early investigations into the frame of a transcendental logic and the genetic methodology, continuing to claim for this logic the role of a theory of science<sup>2</sup>.

Also the confrontation with the philosophical tradition has surely represented a starting point for Husserl in his inquiry into ideal. For example, Husserl seems to adopt Plato's terminology for his own theory of essences, like in the case of *idea*, *eidos* and *methexis*, conducting therefore with such a terminological choice even to misleading interpretations. Moreover, Plato becomes in the early years of Husserl's teaching in Freiburg even more present. He recognized for example the Athenian philosopher as «the founder of philosophy as rigorous science»<sup>3</sup> and, in his lecture *Einleitung in die Philosophie* from 1919 – 20, the «discoverer of the idea» and even «of the Apriori»<sup>4</sup>. Under this point of view, Husserl saw in Plato the proper germ of logic, and even more

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1 E. Husserl, *Formale und transzendente Logik*, cit. p. 53f.

2 Ibid., cit. p. 256f. This structure comes in clear presentation in a letter to Ingarden dated 23<sup>th</sup> of December 1928, during the preliminary works for *Formal and Transcendental Logic*. So Husserl: «I'm working hard on a writing – the development of the idea of logic as theory of science. First in connection with the *Logical Investigation*. 1. Formal logic and formal ontology, all withing a deep phenomenological analysis; therefore, the transition to the psychological and transcendental, and also the extension to the idea of a real and universal ontology and phenomenology».

3 E. Husserl, *Natur und Geist. Vorlesung Sommersemester 1919*, p. 4. and E. Husserl, *Erste Philosophie (1923/24), Erster Teil: Kritische Ideengeschichte*, in Husserliana VII, ed. R. Boehm (Martinus Nijhoff, Den Haag, 1956), p. 327.

4 E. Husserl, *Einleitung in die Philosophie, Vorlesungen 1916 – 1920*, in Husserliana, Materialien, IX, ed. H. Jacobs, (Springer, Dordrecht, Heidelberg, New York, London, 2012), p. 36, 44.

in the direction of his own interpretation, of the «universal logic»: «We must therefore state in general, within his dialectic Plato has already foreseen with clarity a universal theory of science, and that, by inquiring into all correlations proper to the essence of knowledge»<sup>1</sup>. It will come therefore as no surprise to see Husserl a few years later, in his famous *Kaizo-Artikel* from 1924, accounting his «inquiry into essence» as «the pure and resulting application of the method of “seeing ideas” already introduced in science by Socrates and Plato»<sup>2</sup>.

Notoriously, it was Husserl's encounter with Hermann Lotze's *Logik*<sup>3</sup> and especially with his interpretation of the platonic theory of ideas in the sense of a “logic of validity” in the third book of his 1874 work, that pushed Husserl to acquire his “Platonismus”, which is however to be correctly evaluated, considering the fact that «the epistemological and metaphysical traits» of such a Platonismus have been always rejected by Husserl<sup>4</sup>. Lotze's theory of knowledge has been even taken by Husserl as the «origin» of a Platonic way in the epistemology of his time, and therefore considered worthy of attention and of critic in his *Prolegomena*<sup>5</sup>.

Husserl seems therefore to have delineated his theory of essence or *Eidetics* through a long meditation which comprehend nearly his entire production. What we have seen are in fact only the main directions of development followed by Husserl in his continuous meditation on ideality. The aim of our work is instead trying to trace back the origin of the question governing Husserl's eidetics.

### *Aim and Structure of The Work*

Justify the title of a work means in many cases already justify at the same time the aim of the work itself and in certain sense also part of its contents. Nevertheless, by putting two concepts such as “origin” and “ideality” may surely cause some confusion and even generate misinterpretations. In order to avoid errors and introduce the work, a few

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1 Ibid., p. 86.

2 E. Husserl, “Die Methode der Wesensforschung”, in *Aufsätze und Vorträge (1922 – 1937)*, Husserliana XXVII, ed. T. Nenon, H. R. Sepp (Kluwer Academic Publishers, Dordrecht, Boston, London, 1989), p. 13.

3 H. Lotze, *Logik. Drei Bücher vom Denken, vom Untersuchen und vom Erkennen*, 2<sup>nd</sup> edition (Hirzel, Leipzig, 1880), in particular, §313–321, p. 31–49.

4 From a 1933 letter to Parl Welch. E. Husserl, *Briefwechsel. Philosophenbriefe*, in Husserliana Dokumente III, VI, ed E. Schuhmann and K. Schuhmann (Kluwer Academic Publishers, Dordrecht, Boston, London, 1994), p. 460.

5 K. Schuhmann, *Husserl-Chronik. Denk- und Lebensweg Husserls*, Husserliana Dokumente I, (Martinus Nijhoff, Dordrecht, 1981), p. 26.

clarifying words are mandatory. The early term “Origin” [Ursprung], introduced around the time of his first important philosophical work, i.e., Husserl's 1887 *Habilitationsschrift* “*Über den Begriff der Zahl. Psychologische Analysen*“, has in fact a specific Husserlian connotation, which, on the one side, does characterize Husserl's approach to concept analysis in its early development, on the other side, reveals some common traits with other investigations. The sense of “Origin” must not be directly understood in a simply psychological or historical way, but in our interpretation as exposed in Section 1, will be clearly traced back to its development within descriptive psychology. This leading back to the scientific kind of approach within which it originally developed, shares some light on the two fundamental aspects belonging to a descriptive analysis of the origin of concepts. On the one side, the need to indicate which are the very basic act components and their corresponding structure, involved by the deploying of a concept. On the other side, the peculiar strategy of concept analysis performed by “bringing directly” to experience the acts involved in possessing or deploying a concept, making therefore analysis possible.

This connotation is also to be distinguished within Husserl's work from “Genesis” [*Genesis*], which better integrate into the later genetic approach to the inquiry into fundamental aspects of cognition. But speaking of an inquiry into the “origin” of ideality means in our understanding and within the framework of the work also: searching for the historical origin and for the fundamental *étapes* in Husserl's investigation into the ideal aspects of knowledge. In this sense, the work concentrates on the early works and production of Edmund Husserl, and especially, on the time we consider fundamental for the development of Husserl's later phenomenology. That will also cover a period normally less taken into consideration by the critic. This will not prevent us to refer, when necessary or illustrative, also to the late production of the '20s. Ideality, on the other hand, is in our understanding linked as label-term to the Husserlian «eidetics», which is for its part explicitly derived in the first Book of *Ideas* from *eidos*, a term introduced in reality years earlier by Husserl, in connection with essence [*Wesen*]. It is in fact only around the time of the works belonging to this *fundamental* introduction to phenomenology that the concept of *eidos* is assumed as an equivalent for «pure essence» and phenomenology is established for its part as “eidetics” or “eidetic science”. Around the time of the *Logical Investigations* indeed, the term essence comprehends a large variety of concepts less distinguished in comparison with to later

Husserlian works, for example, for what concern the concept of *eidōs*. Among the different definitions and functions showed by essence and idea in the 1900 work and in the course on logic and epistemology before the *Ideas*, we will try to stress one peculiar aspect of such overly complex thematic, which is the partial definition of essence in terms of conceptual universality. With respect to this characterization, we will therefore try to indicate the kind of definition given to it by Husserl, which partially recalls the traditional interpretation of the Universal in the sense of an ideal terms, or a common element, over against the multiplicity. This latter is therefore interpreted in the sense of a universal object. Our aim will be consequently, to analyze a series of manuscripts on the period prior to the *Logical Investigations*, where, according to our interpretation, all the features assigned to the same concept are present. That will be basically, show the “origin” of one important aspect of the future doctrine of essence, even besides the later interpretation *via* Lotze and Bolzano of Ideality.

Consequently, one of the main point this work aim to, at least, stress the fact that according to the author view, Husserl's inquiry into ideality, starting from the early inquiries into concepts (mainly mathematical) and abstract and ideal object up to the first investigations into essences, can be understood in its birth also from the point of view of the early works on mathematics and logic. Obviously, the fact that Husserl manifestly connects the inquiry into the logical, and even mathematical fields with a theory of experience and perception on the one side, and a theory of intentional act, with a deep insight and constant investigations into the structure and articulation of the lived-experiences and, especially, the acts of knowledge, force the investigations to take into account Husserl's descriptive strategy for such a sphere.

The work is articulated into three main sections. In the first one, we will give the very fundamental traits of Husserl descriptive strategy into concept analysis. That will give us the opportunity to stress on the one side, the structure of acts involved in the actual deploying of such logical entities concepts are; on the other, to trace back to the field of descriptive psychology the individuation of the elements involved in the “complex presentation” that partially defines concepts as properly given in acts of cognition. In this sense, we will see, the role of Brentano but especially Stumpf. Also a characterization of the validity of such an inquiry, with respect to Husserl's early field of influences, will be given. Besides some well established insights on the Husserl-Frege debate, we will try to share some light into a specific aspect of this certainly already

well know period of Husserl's development, that is the issue into the definition of concept, and especially, the concept of number with respect of the sense of a descriptive approach, and the consequence of such a position in Husserl's general understand of logic. We will then try to trace back to Stumpf and its debate with the *Kritizismus* one of the fundamental principle which lays as the basis for the descriptive concept analysis, and which may have influenced also Husserl's approach before the proper phenomenological turn. Referring to material recently published, we will finally approach two aspects of Husserl's confrontation with Brentano in the middle '90s, which may have influenced the first analysis on concepts conducted within the *Philosophie der Arithmetik* and whose later clarification may have helped Husserl in overcoming his early position.

The second section takes therefore directly the analysis of concepts offered by Husserl in the works before 1896, especially focusing on the formal concepts, also called *categories*. In this sense, we will systematically follow Husserl's exposition in the first part of the 1891 work on arithmetic and other works correlated. This will give us the opportunity to indicate the structure of the cognitive act, the three-tier act structure, to which Husserl traces back the origin of concept as properly given in lived-experiences. We will therefore concentrate on the specif question of the relations and the kind of relations on which the intuition of concepts bases, the process of abstraction involved, and finally the role of reflection in the “process”. Our aim will be here to offer a possible alternative interpretation of the direction of reflection as exposed by Husserl for the proper arising of concepts, trying to comment a specific point in Husserl exposition. That, under the perspective of: its relevance for Husserl's later theory of the content of reflection, and the consequences the still unclear position may have for the definition of concepts; the historical encounter with theories explicitly commented by Husserl. Abstraction will be object of attention among the two main chapter of the section. It will be analyzed in its function and it will be stressed the limit of its early formulation. Abstraction will be also directly compared with the more proper “formal abstraction” which will make its appearance, in our interpretation, before the *Logical Investigations*, that is, in the 1896 Lecture on *Logik*, where it also already shows its relevance for the position assigned to the logical content of acts and its reference. The proper concept of number will be briefly analyzed and the basic characteristics of Husserl's “definition” stressed, where the result of the chapter may be resumed in the

unstable ontological definition of number as ideal object. This will be linked to the specific framework of Husserl's investigation and interpreted as a consequence of the characteristics of the analysis emerged in the chapter. Also two different approaches (Frege and Cantor) will be taken into consideration in order to evaluate on the one side, the reasons of Husserl's veiled definition, on the other, a recent meditation on Cantor's number concept which, by starting from an approach close to Husserl's one, actually reached an explicit definition of the concept of number in the sense of ideality. A definition this latter which will be also assumed, under a different perspective, also by Husserl, but which seems to be still absent, at least in a clear formulation, in the works taken into account.

In the third section, we will finally follow Husserl's 1896 investigation into conceptual universality, from which, even if in a still non-explicit definition, he will develop its conception on the one side, of universal objects, later on interpreted as proper ideal objects, on the other side, one of the main trait of his theory of essence as developed starting from the *Logical Investigations*. In this sense, a short introduction on the problem of conceptual universality will be offered at the beginning of the section. This actually has the only aim to offer some theoretical insights in order to access the problematic which may have originated Husserl's endorsement of the "traditional" definition of the Universal as common element among different entities. This definition, we hope to be able to show, will find its Husserlian formulation at the end of a long aporetic analysis, where Husserl will establish, on the one side, the identity of the Universal, and on the other the existence of universal objects. The universal is in fact defined as the identical element in the multiplicity of connection; an identity which also possesses unity. The exposition of this long analysis will follow after a prior and essential overview of the function assigned by Husserl to the conceptual universality, which is the formulation of the concept of essence that most will follow from this early statements. We will also expose, prior to look directly to the Husserlian meditations, Lotze's analysis of the conceptual universal, defined by him in his *Logik* as the "first universal", a work this latter which was well known by Husserl and even deeply influential according to his later statement in 1903 and the works related to the new edition of the *Logical Investigations*. We will try in this sense, to stress some common element within the two interpretations. The thesis of a possible influence is anyway to be ruled out; Husserl first investigations develop in fact taking theoretical elements from its earlier

works actually, especially from the his works on the *Elements of Logic*. We will therefore try to briefly offer some insights, without any claim of completeness, on some early yet important developments which follow the 1896 works.

## Section 1)

The Role of Description in Husserl's Analysis of Concepts and the Definition of Descriptive Psychology on The Long Road to Phenomenology. The early years 1891 – 1900.

### *1.0) Introduction*

Description and phenomenology are essential counterparts, the latter supposes the first and the first assumes its own sense within phenomenology: «to say phenomenology implicates description, and who describes, proceed therefore phenomenologically»<sup>1</sup>. Phenomenology can be taken as the description referred to a particular field or set of objects, which entails a theory for its descriptive proceeding that sets such a description in a peculiar framework. Even if historically starts from the field of psychology, it soon assumes in fact its own shape and its peculiar role in the phenomenological method, in its aiming to become «the true method for the critic of knowledge»<sup>2</sup>. Furthermore, against the easy association of ideas arising from the term, description is not simply an “image-theory” which only doubles the reality without analyzing anything. On the contrary, it performs an analysis in a peculiar sense. Moreover, as a science with a descriptive character does not simply «want to gain by cognition anything more than a mere “image” of the objects», risking, this way of undergoing Rickert's criticism of representing nothing more than «mere constructions» with «radically empirical tendencies»<sup>3</sup>, but rather to establish itself even against descriptive psychology with empirical ancestry.

The attitude proper to the phenomenological description is in fact first of all essentially different from the ones belonging to psychology and to science of facts in general. Even

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- 1 E. W. Orth, “Beschreibung in der Phänomenologie“, in *Phänomenologische Forschungen*, 24/25, (Felix Meiner Verlag, 1991), p. 8. Orth even proposes the possibility to translate “phenomenologically” with “descriptively”.
  - 2 Husserl's 1905 letter to H. Gomperz, in E. Husserl, *Briefwechsel*, VI, cit., p. 148.
  - 3 H. Rickert, *Kulturwissenschaft und Naturwissenschaft*, (J.C.B. Mohr, Tübingen, 1926), p. 30. The same above cited E. W. Orth, stressed in a earlier article on reduction that, in reality, «the Husserlian concept of description turns against construction which conceals the elementary views of a theme», See, *Philosophy and Science in Phenomenological Perspective*, in *Phaenomenologica* 95, ed. R. Chisholm, K.K. Cho (Martinus Nijhoff Publishers, Dordrecht, Boston, London, 1984), p. 156.



if the concept of description has its source in Husserl's philosophy from the traditional distinction between genetic and descriptive psychology, a distinction introduced by Brentano<sup>1</sup>, Husserl tried in the years after but even prior to the *Logical Investigations* to distinguish phenomenology *tout court* from descriptive psychology, perceiving the unclear distinction between the two methods, and later on, to underline the fundamental difference which characterizes the phenomenological approach from the other forms of psychological investigation<sup>2</sup>.

But nevertheless, the fact that Husserl approached at first «descriptive psychology» positively, is recognized by Husserl himself by remembering its first encounter with the «fundamental parts of a descriptive psychology of the intellect», and with the «descriptive and fundamental analysis on the essence of phantasy representations» and «continua» during the Brentano's lectures in 1868 – 70<sup>3</sup>. In a sense related to the ones applied by Husserl also in his later works, the methodological framework characterizing the first attempts to indicate how the origin of such initially *undefined* class of logical entities, which are concepts, was meant to be grasped, is in fact indicated by Husserl as “descriptive-psychological”.

This general kind of approach, however, and even with respect to the first specific concept chosen by Husserl for such a psychological account, i.e., the concept of number, was not an unusual topic in the field of researchers from which he took his first lectures in the late '70s of the 19<sup>th</sup> Century. The mathematician Weierstrass himself, for example, in one of his lecture attended by Husserl, observes in a certain programmatic way:

«We best attain the concept of number by proceeding with the operation of counting. We consider a given aggregate of objects; among these we look for the ones that have a certain feature apprehended in the presentation by going through them sequentially; we comprehend the single objects with the feature together in an encompassing presentation, and thus a multiplicity of unities is made, and this is the number»<sup>4</sup>.

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- 1 Franz Brentano, for example, introduced with nearly the same sense nuance “phenomenology” and “descriptive psychology” in his *Psychologie vom empirischen Standpunkte*. See, F. Brentano, *Psychologie vom empirischen Standpunkte*, Erster Band (Duncker & Humblot Verlag, Leipzig, 1874), p. 27, 124.
  - 2 E. Husserl, *Phänomenologische Psychologie. Vorlesung Sommersemester 1925*, in *Husserliana IX*, cit., p. 46f.
  - 3 E. Husserl, “Erinnerungen an Franz Brentano” (1919), in *Aufsätze und Vorträge (1911 – 1921)*, in *Husserliana XXV*, cit., p. 304f.
  - 4 K. Weierstrass, *Einleitung in die Theorie der analytischen Funktionen*, 1878. From the translation by Carlo Ierna, in C. Ierna, “The beginnings of Husserl’s philosophy, Part 2: Philosophical and mathematical

But the task to indicate the proper descriptive character of Husserl approach in the early works, its later reshaping and relation to phenomenology, also indicated in fact as «descriptive theory»<sup>1</sup>, seems to represent a complex problem, which has led to different interpretations<sup>2</sup>, considering the changes under which the methodological but even the theoretical framework has undergone before and after the *Logical Investigations*.

Anyway, it seems useful for our intent, first to expose the descriptive character of Husserl's inquiry essentially with respect to the task assigned to early phenomenology, i.e., the relation to the ideal content of experience. If it easy to understand the early critical confrontation and the lacking of endorsement of the genetic character of the psychological investigation due to Husserl's aim to avoid any kind of psychologism, the descriptive ones represents a more comprehensive character which does even influence the very first Husserlian work and even the definition of phenomenology<sup>3</sup>. But first of all, we must start with accounting the descriptive character of Husserl's investigations before the point «we are forced to definitively abandon the ground of psychology, even the ones belonging to descriptive psychology», as he states with conviction in 1907<sup>4</sup>.

Therefore, the question may be generally formulated as such: What does it mean to perform a descriptive analysis of the origin of concept, i.e., what are the descriptive

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background”, in *The new yearbook for phenomenology and phenomenological philosophy*, VI. (Noesis Press, Seattle, 2006), p. 36. Weierstrass in the following pages of the lecture does not follows any “psychological” investigation anyway, but what is for some interest here, is that such a theme was not a completely rejected one even among mathematicians. One of the main theme, or at least one of the main key for interpreting the evolution and the history of the mathematical and logical thought around the time of the first Husserlian works, is in fact the role and possibility among the different perspective on the foundation of mathematics (constructivist, intuitionist, “platonist” etc.) of a previous investigation into «the epistemological and cognitive requirement assumed in such kind of foundations». If, in other words, «the exclusion of these issue does represent a *manco* in a theory even if, at the end of the day, its foundation results consistent». On the base of such a thematic limitation may in fact the foundation not pretend to be «foundation from last principle», by lying «the last basis of the science outside science itself, yet in a theory of knowledge». See, R. Schmit, *Husserl's Philosophie der Mathematik* (H. Grundmann Verlag, Bonn, 1981), p. 20.

- 1 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 156f.
- 2 See, for example, F. Fisette, “Descriptive Psychology and Natural Sciences: Husserl's early Criticism of Brentano”, in *Philosophy, Phenomenology, Sciences*, in *Phaenomenologica*, 200, ed. C. Ierna, H. Jacons, F. Mattens (Springer, Dordrecht, Heidelberg, London, New York, 2010), p. 221f. P. Hofmann, *Phänomen und Beschreibung: zu Edmund Husserls Logischen Untersuchungen*, (Fink, München, 2004), p. 207f. R.J. Walton, *Intencionalidad y Horizonticidad*, (Aula, Cali, 2015), esp. p. 25f. See also, under many of the themes taken here in account, T. De Boer, *The development of Husserl's Thought*, in *Phaenomenologica* 76 (Martinus Nijhoff, The Hague, Boston, London, 1978).
- 3 In the First Edition of the *Logical Investigations*, “Phenomenology” is still explicitly linked to descriptive psychology, See, E. Husserl, *Logische Untersuchungen, zweiter Theil*, First Edition (Max Niemeyer, Halle, 1901), p. 18. And here, 1.2.
- 4 E. Husserl, *Die Idee der Phänomenologie. Fünf Vorlesungen*, in *Husserliana II*, ed. W. Biemel (Martinus Nijhoff, Haag, 1973), p. 7.

elements in such a descriptive inquiry?

The descriptive characteristic in Husserl psychological investigations on the origin of concepts is to be found, in our interpretation, in two elements. First, in the structure of the inquiry conducted into the psychical phenomena, which conducts to a description of the psychological complex in which concepts are to be found. Psychical phenomena are in fact described in order to obtain a “psychological analysis” of such a nature for concepts. These are posed in relation to founding presentations, where a theory of abstraction seems to be in charge in order to explain the relation between both:

«(...) The concrete phenomena, to which we refer certain numerical utterances, are concrete multiplicities, i.e., multitude of certainly given things, which are exactly the same phenomena, which fall even under the universal concept of multiplicity. Exactly for that reason it is necessarily to start from such phenomena, and observe how the less determined and more general concept, which grounds the group of names such multiplicity, plurality, set, etc. but even the precise concepts of number, are abstracted from them»<sup>1</sup>.

The sense of this analysis takes therefore its peculiar role and shape within descriptive psychology and it represents the aspect of Husserl's psychological-descriptive inquiry into concepts on which we have first to concentrate in order to start the exposition of his account of the concept. The latter will be in fact partially linked and developed from elements as well as from issues related to such analysis. (1.1) If the descriptive-psychological framework for investigating concepts was at the time not completely unusual, both in logical and mathematical field, its peculiar claim and right was challenged but at the same time influenced by other insights<sup>2</sup>. Obviously, the main challenge was to avoid *logical psychologism* and therefore, to asset a proper sense to the *psychological* trait of the inquiry. (1.2)

Second, the main work for the preparation of the *Philosophie der Arithmetik*, if we

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1 E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in *Husserliana* XII, cit., p. 298.

2 See, for example, Sigwart's 1878 *Logik*, remembered by Husserl in the *Philosophie der Arithmetik* (in *Husserliana* XII, cit., p. 33, 61f). In the 2<sup>nd</sup> Volume of his *Logic* dedicated to the theory of method, writes in the shape of a program: «The general problem of methodology is to show how we may apply our natural mental activities in such a way that, starting from a given state of thought and knowledge, we may attain the object of human thought by an ideally perfect process; a process, that is, in which none but fully determined concepts and adequately grounded judgments are employed». C. Sigwart, *Logik, zweiter Band*, (H. Laupp, Tübingen, 1878), p. 3.

believe in Husserl's own words, started «essentially around the years 1886 – 87», and therefore in the middle of his reflections on Brentano's interpretation of descriptive psychology and under the influence of Stumpf's *Theorie der psychologischen Theile* and the famous *Tonpsychologie*<sup>1</sup>. His interest in descriptive psychology, as he writes in a later personal note from 1906, pushed him to a deeper study of psychological works, among which James's *Psychology*<sup>2</sup>, and even to give a lecture in Halle on psychology<sup>3</sup>. This occurrence is of course to be interpreted as the origin of Husserl's first endorsement of its investigation under the label of descriptive psychology, but also source of an intense confrontation with the definition of the proper sphere of investigation belonging to psychology, differently understood. Husserl's interest in this sense is not to be reduced only to a mere classification of phenomena, but to gain a deeper insight into relations, a task which requires, according to Husserl, a look into «this very dark chapter of descriptive psychology»<sup>4</sup>.(1.3).

*1.1) Description and analysis. Some remarks on Husserl's early approach to the investigations into concepts.*

The main trait of the descriptive psychology elaborated in the intellectual and scientific environment in the early years of Husserl's works, at least till the first edition of the *Logical Investigations*, can be indicated in the «psychological analysis»<sup>5</sup>, whose aim is to be sketched in the proper indication of the conditions under which it could be said a concept is possessed<sup>6</sup>, and which, along *with* the more strictly «logical», compose the

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- 1 The *Tonpsychologie* is cited in many occasions in the *Philosophie der Arithmetik*, see E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 42, 63, 71. See also, for a reconstruction of the historical background of the first period of Husserl's phenomenology, H. Spiegelber, E. Ave-Lallemant, *Pfänder-Studien*, in *Phaenomenologica*, 84 (Martinus Nijhoff, The Hague, Boston, London, 1982).
  - 2 W. James, *Principles of Psychology*, (Holt, New York, 1890). Another fundamental work «against which» Husserl will be forced to react and come to clarity with respect of the nature of presentation, as he stated in a letter to Meinong in 1902, is Twardowsky *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen. Eine psychologische Untersuchung*, (Alfred Hölder, Wien, 1894). See, for the letter, A. Meinong, *Philosophenbriefe. Aus der wissenschaftlichen Korrespondenz von Alexius Meinong*, ed. R. Kindinger, (Akademische Druck- und Verlagsanstalt, Graz, 1965), p. 107.
  - 3 So Husserl in the personal note: «Later on was the time of my 1891/92 lecture on psychology, which led me to look deeper into descriptive psychology». E. Husserl, “Beilage IX: Persönliche Aufzeichnungen vom 25.9.1906 und 6.3.1908“, in *Einleitung in die Logik und Erkenntnistheorie. Vorlesungen 1906/07*, in Husserliana XXIV, cit., p. 443.
  - 4 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 66.
  - 5 E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in Husserliana XII, cit., p. 289.
  - 6 This definition, generally endorsed by many commentators, is close to Willard's one. As he puts it, «to give the genesis of a concept (...) is to describe the essential course of experiences through which one comes to

«sequence of investigation» conducted in the complex of his early works<sup>1</sup>. Under this point of view, such an analysis differs radically from a mere inquiry into the conditions under which it is recognized only the competence in using a concept in a judgmental act; but also differs from stating the nature of concepts as abstract objects acquired through only «sense intuition» on the basis of object perception. The first attempt could in fact only conduct to establish the psychological-subjective condition involved in the mere use of the concept, i.e., the description of a mere *praxis*; the second one, would for its part represent only a refined version of a psychological-empirical investigation, which would undergo the same criticism Husserl notoriously exposed in the *Prolegomena*.

Husserl poses in fact rather the question about how is to understand the relationship between acts of thinking and the kind of abstract (i.e. non particular) or logical objects, even complex one<sup>2</sup>, as for example in the case of the “categorical objects” of mathematics, which present their self in those acts but are given in a substantially different manner than objects of perception<sup>3</sup>. When objects of thought are to be found, that we represent as being in itself, i.e., recognizable as independent from our actual cognitive grasp and which remains in over-temporal identity, «all the even trivial or remarkable sense-moment of such a presentation must be exhibited in its possibility and legitimacy in the effecting of our consciousness [*Bewusstseinsleistung*]». It must be showed, in other words, «how and that we can legitimately think about such objects»<sup>4</sup>. A psychological analysis of such a kind would therefore try to exhibit the necessary articulation of acts of the “effecting consciousness” by describing what we, nearly literally, found in possessing a concept.

In the lecture *Phänomenologische Psychologie*, even 25 years after the *Logical Investigations*, Husserl looks back to his early works to recognize indeed how basically

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posses the concept». See, D. Willard, “Concerning Husserl's view of number”, *Southwest Journal of Philosophy*, V, 1974, p. 106.

1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 5. On the importance of underlying the logical component of this investigations among the psychological, see, B.C. Hopkins, *The Origin of the Logic of Symbolic Mathematics. Edmund Husserl and Jacob Klein* (Indiana University Press, Bloomington, Indianapolis, 2011), p. 107.

2 Like in the case of state of affairs.

3 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana* XVIII, cit., p. 7. E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 64f.

4 D. Lohmar, *Phänomenologie der Mathematik*, *Phaenomenologica*, 114 (Kluwer Academic Publishers, Dordrecht, Boston, London, 1989), p. 42.

«the main theme of the *Logical Investigations* was the psychical element, correlative to each objectivities intended, (especially the logical ideal ones), i.e., the variety of the psychical modes, in which concepts, judgments, theories as ideal and identical unity of meaning do take shape, purely in the immanence of the psychical life (...)»<sup>1</sup>.

After having emphasized the insufficiency of simply recognizing the «manner» of experienced self-evidence of what he calls here «ideas» and «pure laws of logic» and the necessity of a «epistemological» clarification of such logical objects, Husserl defines in fact in the *Logical Investigations* the function and aim of the «phenomenological analysis»:

«The phenomenology of the logical experiences aims at giving us a sufficiently wide descriptive (thought not empirically-psychological) understanding of the psychical lived-experiences and their indwelling sense, as will enable us to give fixed meanings to all the fundamental concepts of logic. Such meanings will be clarified both by going back to the analytically explored connections between meanings-intentions and meanings-fulfilments, and also by making their possible function in cognition intelligible and certain»<sup>2</sup>.

In the same quote, Husserl offers us also a general yet rich definition of logical concepts and of the articulated way by which we come to possess them:

«Logical concepts, as valid thought-unities, must have their origin in intuition; they must arise out of an ideational intuition founded on certain experiences, and must admit of infinite reconfirmation, and of recognition of their self-identity, on the performance of such abstraction».

Therefore, what it is here at issue is basically the initial securing of access to non-particular yet unitary meaning formations, such as concepts, and essentially connected with this, access to an experiential domain that transcends atomistic sensations. Husserl's

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1 E. Husserl, *Phänomenologische Psychologie. Vorlesung Sommersemester 1925*, in *Husserliana IX*, cit., p. 37.

2 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 9 – 11.

meditations, even if critical with respect to the solution of most of their versions, start therefore from the same epistemological problem which historically found its formulation in the different theories of abstraction<sup>1</sup>, i.e., how we come to possess the terms that function in thinking to represent more than one particular and how we can make reason of its function in such a way in higher-order lived-experiences, such as meanings-intentions. Concepts on their side, are logically relevant entities. With respect to a concept in fact, we can investigate its extension [*Umfang*], its content [*Inhalt*], and, indeed, its origin, where preliminary speaking, what he means with “extension” is basically the class of objects that fall under the concept, while by “content” he means mainly the intentional correlate of the concept, or the essential properties of the objects that fall under that concept.

Now, the strategy to indicate the psychological origin of concepts, and especially the peculiar concepts which are the formal ones in the *Philosophie der Arithmetik*, is based on showing the essential course of experiences through which one comes to possess the concept. In this sense, to put someone in front of the necessary path of experience which leads to concepts means to show at the same time how the concepts generate in the structuring of acts, and therefore, to literally «falling back on the spontaneous activities of», in the case of the formal concepts of mathematics, «collecting and counting in which collections (“aggregates”, “sets”) and numbers are given»<sup>2</sup>. Even if with essential changes, especially for what concern the function of abstraction and ideation, as well as for the introduction of a different interpretation of intuition, Husserl's strategy to go back to the sequence of “process” involved in the arising of a concept and to the structure of the cognitive act (in the *Logical Investigations*: meaning-intention/fulfillment), will remain the fundamental emerging framework.

To analyze a certain concept requires that we discern what is of necessity thought of or meant whenever that concept is deployed. In order to obtain such an analysis, assuming the complex nature of concepts, we must resolve the composed consciousness which possesses the concept into the composing element. In this sense, the analysis should give answer to the question about the origin. But that is only possible by means of the “leading back” already seen. With analysis Husserl indicates here therefore also a «non-natural direction of thought», within which we are not «lost in the performance of acts

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1 Ibid., p. 172.

2 E. Husserl, *Formale und transzendente Logik*, in *Husserliana XVII*, cit., p. 76.

built intricately on one another», rather we «practice “reflection”, we make this acts themselves, and their immanent meaning-content, our object»<sup>1</sup>.

Such an analysis is yet conducted in the early works within the methodological framework of the descriptive psychology, whose very basic and common assumptions can be indicated as laying on these three principal items: 1) descriptive psychology methodologically involves a form of cognition obtained by “internal experience”; 2) concepts are based on presentations [*Vorstellungen*] or intuitions [*Anschauungen*]; a certain process of abstraction is here involved; and finally, 3) concepts are psychologically complex, i.e., they are founded upon complexions of presentations. Psychological analysis shows its clarifying [*aufklären*] function especially with respect to the third item, which is even the most related to the task assigned by Husserl to the inquiry. By historically lying in such a descriptive framework, some of Husserl very early positions are therefore shared by others thinkers belonging to the common, even slightly misleading label “descriptive psychology”.

#### *1.1.1) Three features of the descriptive analysis of concept.*

For what concerns the first item (1), even if we do not accept two of the main characters indicated by Brentano as reasons to prefer internal experience as explanatory field for cognition<sup>2</sup> (i. e., its certainty and the possible bestowing to other subjects due to analogy with the proper), internal experience results immediate and infallible self-evidence, considering the easy access to reflection on ones own experience and the not adumbration in the mode of givenness of internal experience, as explained even some twenty years later in *Ideen I* and even after a radical methodological change:

«(...) it is evident and drawn from the essence of spatial physical things (even in the widest sense, which includes “sight things”) that, necessarily a being of that kind can be given in perception only through an adumbration; and in like manner it is evident from the essence of cogitationes, from the essence of lived-

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1 Ibid., p. 14.

2 Regarding the epistemic function of internal perception, Brentano speaks in his *Psychologie vom empirischen Standpunkte* about «its immediate, infallible self-evidence. Of all the types of knowledge of the objects of experience, inner perception alone possesses this characteristic. Consequently, when we say that mental phenomena are those which are apprehended by means of inner perception, we say that their perception is immediately evident». F. Brentano, *Psychologie vom empirischen Standpunkte*, cit., p. 119.



experiences of any kind, that they exclude anything like that»<sup>1</sup>.

This would offer and guarantee an accessible field of evidence within which intentional lived-experiences, along with their objects, may result stable object of description.

The second item indicated above (2) is well showed in the 1891 *Philosophie der Arithmetik*, where Husserl clearly indicates the inner connection between concepts and founding intuitions:

«No concept can be thought without the foundation within a concrete intuition. Therefore, we have always the intuition of an concrete multiplicity whatever in consciousness, when we represent the general concept of multiplicity; an intuition in fact, from which we abstract the universal concept»<sup>2</sup>.

Therefore, there are classes of experiences, whose contents is determined independently from any kind of conceptual mediation, and such acts are posed as ground for the conceptual capacity which leads and allows cognition. According to Husserl, such acts are intuitions [*Anschauungen*] indeed and, referring to the above cited concrete intuitions, they seem to be closely related to what Stumpf indicated in his 1873 *Über den psychologischen Ursprung der Raumvorstellung* as concrete representations:

«The most original [*Das Ursprünglichste*] is the sensation or actual [*wirklich*] representation (...). When I play a sound to someone or when show a color, and he takes notice of that, we call therefore what he's actually experiencing a sensation or actual representation. Of phantasy-presentation we speak yet, when he becomes aware of the sound, without the sound being played. A phantasy-representation with the awareness of the being already presented of the very content, that is a thought-representation.

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1 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 77. The same insight is retaken even later in the 1925 lecture on phenomenological psychology: «The connection [within the psychical life] is not something hypothetical excogitate, something thought up, but, as something lived-experienced, is accessible in internal experience to immediate and articulating analysis and description». In E. Husserl, *Phänomenologische Psychologie. Vorlesung Sommersemester 1925*, in *Husserliana IX*, cit., p. 14.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 79. The quote above remembers Hume's *Teatrise* statement «That all our simple ideas in their first appearance are derived from simple impressions». See, D. Hume, *Teatrise of Human Nature*, ed L. A Selby-Bigge (Oxford University Press, Oxford, 1978), p. 33.

All the above exposed are concrete representations. If many sounds are therefore heard of, and it is spoken about a sound in general, that is, what it is meant with an abstract representation or a concept»<sup>1</sup>.

Concrete presentations are therefore a large and mostly various class of experiences. Even Brentano, whose analysis regarding the field of conceptual thought are notoriously pretty pondered, seems to call for some sort of basis-function for intuitions. For example, according to his analysis in the 1889 *Vom Ursprung sittlicher Erkenntnis*, what he calls «abstract representations, i.e., concepts» are in all cases derived from concrete representations (i.e., intuitions). By no means however, it is claimed that mere *sensations* are the origins of all concepts, even for concepts such as “willing” and “inferring”, whose peculiar psychological “availability” would surely conduct to such a position. Rather,

«They stem from intuitions of psychical content [i.e., inner intuitions]. This is where the concepts “purpose”, “cause” (we notice, for instance, a causal connection between our belief in the premises and our belief in the conclusion), “impossibility” and “necessity” (we obtain them from judgments which affirm or reject something not simply assertorically, but rather - as one likes to express oneself-apodictically) and many others which some moderns, having failed in fathoming their true origin, wanted to regard as categories given from the outset»<sup>2</sup>.

Thus, it is of no surprise that concrete intuitions are the kind of psychological phenomena which come to play a role in the very first Husserlian attempt to indicate the origin of concepts; in fact, concrete intuitions are the kind of intuitions, which concepts are in first instance led back to by Husserl, which means, with respect of which Husserl inquiry into their origin starts. In this sense the first part of Husserl's *Habilitationsschrift* “*Über den Begriff der Zahl: psychologische Analysen*“ represents a study on the fundamental concepts of mathematics like multiplicity, (cardinal) number [*Anzahl*], unity, in so far as they are presented properly, which means, intuitively given.

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1 C. Stumpf, *Über den psychologischen Ursprung der Raumvorstellung* (Hirzel, Leipzig, 1873), p. 3.

2 F. Brentano, *Vom Ursprung sittlicher Erkenntnis* (Duncker & Humblot, Leipzig, 1889), p. 51.

Husserl writes similarly in the *Philosophie der Arithmetik*:

«In the first of its two parts, the Volume I before us deals with the questions, chiefly psychological, involved in the analysis of the concepts multiplicity, unity, and number, insofar as they are given to us properly [*eigentlich*] and not through indirect symbolization»<sup>1</sup>.

This interpretative strategy will later on develop and already around 1892 and 1894, which means, in the works followed after the *Philosophie der Arithmetik*, i.e., the series of the psychological studies on logic, the works on the “philosophy of space” and the various confrontation with the logical works of his time, some fundamental relations involved in the conceptual analysis will undergo a deeper understanding. Those studies represented in fact, on the one side, both theoretically in historically «a first project for the *Logical Investigations*»<sup>2</sup>, i.e., a first draft of what will be therefore part of the explicative strategy of the later work, on the other side, the first attempts to extent his psychological-logical inquiry beyond mathematics to logic in a more comprehensive sense, an attempt already indicated in the lecture on *Psychology* in 1891 as *desideratum*<sup>3</sup>. The majority of the studies are in fact directed to clarify the kind of presentation (representation) and abstraction relevant for logic<sup>4</sup>. In 1893 Husserl composes a manuscript on «intuitive and representative presentations»<sup>5</sup>, which followed another earlier work on «abstract and concrete presentation»<sup>6</sup>, which represent Husserl's psychological analysis of the relationship between presentations and representations, between contents, and of the kind of «representation [*Räpresentation*] in the sense of concept»<sup>7</sup>.

In third and final place (3), we have stressed that concepts are psychologically complex,

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1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 6 – 7.

2 E. Husserl, *Einleitung in die Logik und Erkenntnistheorie. Vorlesungen 1906/07*, in *Husserliana* XXIV, cit., p. 443.

3 *Ibid.*, p. 440.

4 *Ibidem.*

5 E. Husserl, “Vorstellung und Repräsentation”, in *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana* XXII, cit., p. 283f.

6 K. Schumann, *Husserl-Chronik*, cit., p. 39.

7 E. Husserl, “Vorstellung und Repräsentation”, in *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana* XXII, cit., p. 285. These works are in fact, as Husserl in 1897 in a self-review does comment, «part of purely descriptive psychology», even if the not published manuscripts shows more the character of a «genetic» inquiry. In “Bericht über deutsche Schriften zur Logik aus dem Jahre 1894“, in *ibid.*, p. 133, and p. 451.

and that's because they are founded on connections [*Zusammenhänge*] of presentations. The inquiry into the composition of a concept represents, as clearly exposed in Husserl's 1887 *Habilitationsschrift*, «the first question» to which a «psychological analysis» should give answer, i.e., «the question about the *origin* of concepts [multiplicity, set, numbers]»<sup>1</sup>. Even this kind of analysis is already well delineated in the psychological field of study to which Husserl refers at the time of the writing process of the *Habilitationsschrift*, where in fact a clear example of what is understood under “psychological analysis” in an appropriate sense is well showed by Stumpf's *Über den psychologischen Ursprung der Raumvorstellung*:

«Under the inquiry into the psychological origin of a representation we understand the inquiry into the representations, from which the same representation is formed of, and the vein, in which it has being formed (...). In order to do that, is to be figured out a resolution of the composed representation into the more simple ones and the most simple (...). But, among this case, others are still thinkable, for example, where a representation is originated by separation of a representation-content and not by composition, and such a separation is, anyway, to be define more close and differently. Other, in the case a representation is aroused by others, and not because it was really oft connected to, but immediately and necessarily, like in the case of a physical effect with its cause. Or even, when a third representation origins from two others, where the former is not the mere sum of the earlier representations, exactly like in the case of a chemical solution, to which does not belong the sum of characteristics of the elements, but new ones. (...)

*This kind of inquiry described should be named psychological analysis, in analogy with the chemical analysis. Even the latter is all about lead back composed materials, with which we always deal, to their elements, and equally in this case, there are different way in which the composed materials are made of, mixture, composition etc.»<sup>2</sup>.*

According to this kind of analysis, the consciousness content is resolved into its composing elements in order to face the problem of defining the dependence among the composing representations.

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1 E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in *Husserliana* XII, cit., p. 298.

2 C. Stumpf, *Über den psychologischen Ursprung der Raumvorstellung*, cit., p. 4 – 5. Italics mine.

What is here investigated is nothing else than the relationship between the grounding concrete intuitions and what can, even according to a law, emerge from it in full consciousness, which is, in other words, the question about the possible or necessary founding relation between the concrete intuitions and the concept. Obviously, this relation must be yet correctly understood in its very peculiar nature. Such relationships in fact, allows the emerge of different concepts from different compositions of presentations and thus, the concepts itself should not be reduced to the presentations *simpliciter*.

*1.2) The peculiarity of Husserl's descriptive approach to the inquiry into concepts origin. The role of Frege and Stumpf.*

If the concept of number is the first concept on which all the mathematical analysis develops, Husserl tried therefore in its first logical-mathematical work to sketch a psychological inquiry into its origin, which poses its investigation logically and epistemologically prior to others inquiries. For that very reason Husserl defines, at this time, «psychology as indispensable for the analysis of the concept of number»:

«The analysis of elemental concepts, which are the concepts presenting their self only in a low level of complication (like the case of the concept of number), must be actually counted with the most fundamental aims of psychology. (...) The comprehension of the first and most simple form of connection of presentations is the key to the comprehension of higher levels of complication, with which our consciousness constantly operate as with uniformly and stable formations»<sup>1</sup>.

The psychological analysis should lead in fact to the point that we can determine the origin of a concept, which is, to describe the «essential course» of experience through which we come to posses the concept. This, of course, raises in first and general instance the question about the nature and universal uniformity of the complex articulation of acts by which the abstract concept is consciously obtained. With respect to this methodological question Husserl looks back for example in his later *Formale und transzendente Logik* to the positive aspects of the inquiry framework into

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<sup>1</sup> Ibid., p. 295.

concepts as present in the *Philosophie der Arithmetik*:

«I had already acquired a determined view of the formal and a first understanding of its sense already by my *Philosophie der Arithmetik*, which even if immature as first book, represents a first attempt to obtain clarity on the proper and original sense of the fundamental concepts of set- and number-theory, by falling back on the spontaneous activities of collecting and counting in which collections (“aggregates”, “sets”) and numbers are given. (...) It can be recognized a priori that each time the form of this spontaneous activities remains the same, correlatively, the form of their constructions remains the same»<sup>1</sup>.

Here we find Husserl fundamentally stressing two points which characterize his first descriptive approach: in order to obtain the original sense, which means, the very first meaning function of concepts (in this case of set and number), we must “fall back” to the stratification of the consciousness activities involved in its formation, even in case of higher order concepts such as numbers; the recurring structure guarantee for the recurring formations, i.e., if we find the recurring articulation of the acts involved in concepts formation, this applies for every case.

This kind of investigation on the fundamental concepts presents Husserl's approach as essentially different from the ones which limit the inquiry into such concepts by offering a definition:

«Mathematicians have followed the principle of not regarding mathematical concepts as fully legitimized until they are well distinguished by means of rigorous definitions. But this principle, undoubtedly quite useful, has not infrequently and without justification been carried too far. In over-zealousness for a presumed rigor, attempts were also made to define concepts that, because of their elemental character, are neither capable of definition nor in need of it»<sup>2</sup>.

For example, the concept of set is elementary, which means, it cannot be defined, considering the fact that for Husserl a definition can only be given in the case of

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1 E. Husserl, *Formale und transzendente Logik*, in *Husserliana* XVII, cit., p. 90 – 1.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 96.

complex concepts by offering the components which compose the concept. Husserl's criticism concerns the status of definitions: «One can define only that which is logically compound», as he states in his work on arithmetic, assuming that there are no possible definitions of «the last and elementary concepts»<sup>1</sup>. Definitions should in fact satisfy the condition according to which the *definiendum* must be explainable in terms of the *definiens*, where the converse won't be valid.

Among the critics moved also to other theories, in the *Philosophie der Arithmetik* are to be found in fact remarks against the attempt to provide a definition of such an elementary concept as number by logical abstraction, as presented for example by Frege in his 1884 *Grundlagen der Arithmetik*, and against the insight according to which, it suffices for the definition of a concept to define its extension<sup>2</sup>. Both criticisms link to Husserl asserts against the possibility to define the concept of number by equivalence [*Äquivalenz*], which is the attempt to define the concept of natural number through equality<sup>3</sup>.

Assuming in fact that the concept of equality is also elementary, if conceived as the standing in the one-to-one correspondence relation, as well as in the case of the equality of two sets, which is the equinumerosity [*Gleichzahligkeit*] of two sets, it cannot be in both cases defined. Frege recalls Leibniz's definition of equality as «substitutivity *salva veritate*»<sup>4</sup>, but already this theoretical move leads to, at least, three problems: Leibniz's definition define identity and not equality<sup>5</sup>; the fact that two contents can be substituted *salva veritate* is not the reason of their equality, but instead their equality is the reason of their substitutivity *salva veritate*, and, finally, it does not provide a suitable criterion for equality: for proving the substitutivity *salva veritate* of two contents we are leaded back to prove an infinite number of equalities in which the two contents appear.

Therefore, Husserl assumes as object of analysis the definition of equality in terms of the ones of two multiplicities with respect to their number, i.e., equinumerosity. He recalls notoriously Stolz's definition of equality in terms of the equinumerosity of sets:

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1 Ibid, p. 119.

2 See, C. Ortiz Hill, “Tackling three of Frege’s problems: Edmund Husserl on sets and manifolds”, in *Axiomathes*, 13, Issue 1, (Springer, 2002), p. 95 – 6.

3 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 111f.

4 G.W. Leibniz, “Non inelegans specimen demonstrandi in abstractis”, in *Akademieausgabe*, VI, A, 4, N. 178, (Akademie-Verlag, Berlin, 1999). G. Frege, *Die Grundlagen der Arithmetik. Eine logisch mathematische Untersuchung*, (Wilhelm Koebner, Breslau, 1884), p. 76.

5 Husserl notes in fact: «So long as there is a remainder of difference, there will be judgments in which the things under consideration cannot be substituted *salva veritate*». E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 97.

«two multiplicities are said to be equal to each other (or more correctly: equally many, equinumerous) if each thing of the first can be correlated with one thing of the second, and none of these remain unconnected»<sup>1</sup>. Besides its circularity, such a statement does not represent, nominally speaking, a definition of equinumerosity, because *definiens* and *definiendum* are not conceptually equivalent: “being two equal multiplicities” and “being two multiplicities in one-to-one correspondence”. The one-to-one correspondence can only warrant for the equinumerosity of two sets, but it is not the reason for and it is not what determines equinumerosity; putting them in a one-to-one correspondence can only have practical value:

«It may well happen that, in order to verify *in concreto* the equality of two sets with respect to their multiplicities, we place pairs of elements alongside one another or connect them in some other way; but neither can we consider this operation necessary everywhere, nor, where this happens, the essence of the act of comparison resides only in this»<sup>2</sup>.

Thus, the fact that two sets can be putted in the one-to-one correspondence is not the reason for their having the same cardinality, by which we know, by counting the elements of the two sets, if they have the same number, which was the kind of definition of equality token in object by Husserl. “Having the same cardinality” and “being in a one-to-one correspondence” are not concept with the same content, but only with the same extension, and, as long giving a definition means to univocally fixing a concept, not a definition of equality.

The theory of equivalence is based on a misapplication of the concept of one-to-one correspondence, which is, in the correct application, only a practical criterion to establish equinumerosity, but «what equivalent sets have in common is not merely the ‘equinumerosity’ or, more clearly, equivalence, but rather the same cardinal number in the true and proper sense of the word»<sup>3</sup>. Such a theory defines nominally number through its belonging to a class, while, secondly, leads the establishment of the number of elements belonging to a set by inserting the set in a class of equivalent sets. Two sets

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1 O. Stolz, *Vorslesungen über allgemeine Arithmetik. Nach den neueren Ansichten*, erster Theil, (B.G. Trubner, Leipzig, 1885), p. 9.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 99.

3 *Ibid.*, p. 116.



have the same cardinality only if they are equivalent, which leads to establish equality as the origin of the concept of number, but this cannot be assumed as a definition, in Husserl terms, because having the same cardinality and being equivalent poses an identification only in the sense of the extension of the two concept, but not of their contents.

Even if Frege's theory of number cannot be completely labeled under a theory of equivalence, Husserl criticized Frege's view on natural number as a sort of appendix to its general critic against such an approach to mathematical concepts. But we can also see, that Husserl's criticism links more generally to the profound difference between his approach to mathematical problems and Frege's war against every spurious attempt to grounding arithmetic on any kind of psychological framework<sup>1</sup>. Remarks in fact Husserl: «a foundation of arithmetic on a series of formal definitions out of which all the theorems of that science could be deduced purely syllogistically is Frege's ideal»<sup>2</sup>. In fact, even if Husserl's and Frege's natural numbers answer theoretically to the same question, “how many?”, already the fact that for Frege numbers are not presentation stresses the distance between the two approaches and exactly this point represent one of the main core of Frege's critic to Husserl.

As «principles of [his] investigation» in the *Grundlagen* Frege «sharply distinguishes the psychological from the logical, the subjective from the objective», and thus, «following» this principle, «he always used the word “representation” [*Vorstellung*] in psychological sense and distinguished representations from concepts and objects»<sup>3</sup>. Such a principle does exclude from the realm of arithmetic psychology, in the attempt to states the objective nature of numbers by, on the one side, stressing their independence from sensation, intuition, presentation e.g., on the other, underestimating the description of the internal experience connected to the process leading to abstract concepts for the

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1 For that, see also, R. Tieszen, *Phenomenology, logic and the philosophy of mathematics*, cit., p. 318.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 118.

3 G. Frege, *Die Grundlagen der Arithmetik. Eine logisch mathematische Untersuchung*, cit., p. X. Frege moved a similar critic also against Richard Dedekind in the sense of an alleged psychological foundation of the concept of “system” pursued in his *Was sind und was sollen die Zahlen* (F. Vieweg und Sohn, Braunschweig, 1893). Writes Frege in the *Grundgesetze der Arithmetik*, first quoting Dedekind: «“it very often happens that different things a, b, c . . . regarded for some reason from a common point of view, are put together in the mind, and it is then said that they form a system S.” A hint of the truth is indeed contained in talk of the “common point of view”; but “regarding”, “putting together in the mind” is no objective characteristic. I ask: in whose mind? If they are put together in one mind, but not in another, do they then form a system? What may be put together in my mind must certainly be in my mind. Do things outside me, then, not form systems? Is the system a subjective construction in the individual mind? Is the constellation Orion therefore a system? And what are its elements? The stars, the molecules or the atoms?» G. Frege, *Grundgesetze der Arithmetik, begriffsschriftlich abgeleitet*, Band 1, (Pohle, Jena, 1893), p. 1 – 4.

understanding of the nature of such elements like numbers:

«such a [psychological] description of the internal processes which precede the occurring of a numerical judgment can never, even if it is the more appropriate, substitute a proper concept definition. (...) Thus, the number is even less an object of psychology or the result of psychical processes, as it is, for example, the North Sea»<sup>1</sup>.

That leads and had notoriously led to a long debate among the Fregean and Husserlian commentators. Obviously the main issues concern the role of Frege's accusation of psychologism directed to Husserl, which is already to find in the quote above and should have led Husserl to abandon his psychologism in the *Prolegomena*<sup>2</sup>. Much work is therefore done to explain the real extent of Frege's influences on Husserl later development<sup>3</sup>, a work which led to a refutation of such an influence, by showing, for example, that the concept of «ideal objective meaning», which is contrasted against the mere subjective presentation and compose the central concept of the pure logic exposed in the *Prolegomena*, was already present in 1891 review of Schröder's *Vorlesung über die Algebra der Logik* and “Der Folgerungskalkül und die Inhaltslogik“ of the same year<sup>4</sup>. Husserl finds in fact that Schröder

«lacks the true concept of the meaning of a name. That requirement of univocity is also expressed in the form: The name shall be of a ... constant meaning”. However (...) he identifies the meaning of the name with the representation of the object named by the name, from which the striking consequence follows, to be sure, that all common names are equivocal. It is not as if the author had overlooked the distinction between equivocal and common names – and besides, who could overlook it! (...) Moreover, he uses the term “meaning” itself equivocally, and that in an already intolerable degree. In the above quotation (...)

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1 Ibid., p. 34.

2 A thesis notoriously introduced by Dagfinn Føllesdal in his 1958 *Husserl und Frege. Ein Beitrag zur Beleuchtung der Entstehung der phänomenologischen Philosophie* (H. Aschehoug und Co., Oslo, 1958), p. 25. A thesis shared at the time also by R.C. Solomon, “Sense and Essence: Frege and Husserl”, in *International Philosophical Quarterly*, 10, 1970, p. 380.

3 See, the fundamental work by J. N. Mohanty, *Husserl and Frege*, (Indiana University Press, Bloomington, 1982), p. 1 – 42.

4 E. Husserl, *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana XXII*, cit., p. 3f and p. 44f.

what is intended is the ordinary sense; in other occasion, however, what is actually meant is the object named by the name. (...) And even that is not enough; the class corresponding to the common name is also called its meaning»<sup>1</sup>.

This paragraph shows, as Mohanty already stressed out, that Husserl does distinguish already in 1891 between sense (or meaning) of a term, the object to which it refers and the presentation of the latter, even if thereby there is no clear assert in respect to «the thesis of the ideal objectivity of meanings», which is much more to be derived from such distinctions<sup>2</sup>. In this sense, Frege's critic about the lack of distinction in Husserl early work between concept, presentation and object, or the collapse of all those distinction into the only concept of presentation, does not strike properly Husserl's position<sup>3</sup>.

Husserl even does take under critic Frege's definition by logical abstraction of the concept of natural number as exposed in the *Grundlagen*. Frege exemplifies his definitional method starting by giving the definition of the concept “direction of a line” and then applies the same procedure to the concept of number. Starting from the consideration that, if line (a) is parallel to line (b), then the extension of the concept “line parallel to line (a)” is equally extended of the second concept, says, “line parallel to line (b)”, therefore the definition of “direction of a line (a)” is the extension of the concept “parallel to the line (a)”. Thus, to define the concept of number he analogously substitutes concepts for lines and one-to-one correspondence, and makes correspond the objects which falls under one concept and the objects which falls under the other: «the concept F is equinumerous to the concept G whenever there is the possibility» to put the objects that fall under G and those that fall under F in one-to-one correspondence. «Consequently I define: the number that belongs to the concept F is the extension of the concept “equinumerous to the concept F”»<sup>4</sup>.

Number is defined as the concept to which an object belongs if it is the number of F for some concept F. Thus, Frege is also able to prove Hume's principle in paragraph 63 of his *Grundlagen* which asserts that, for any two concepts G and F, the number of Gs is

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1 Ibid., p. 11 – 12.

2 J. N. Mohanty, *Husserl and Frege*, cit., p. 3. The explicit assertion regarding the ideal objectivity of meaning is to be found in the *Second Logical Investigation*.

3 Frege writes: «First of all, everything becomes presentation. The references of words are presentations (...) Objects are presentations (...) concepts, too, are presentations». In G. Frege, “Rezension von E. Husserl, *Philosophie der Arithmetik*”, in *Zeitschrift für Philosophie und philosophische Kritik*, 103, 1894, p. 327.

4 G. Frege, *Die Grundlagen der Arithmetik. Eine logisch mathematische Untersuchung*, cit., p. 79 – 80.

identical to the number of Fs if, and only if, G and F stand in a one-to-one correspondence relation<sup>1</sup>. Husserl's critic of Frege's definition is consequently directed to the same point already seen in the case of equinumerosity. Such a definition does not define the contents of concepts like “direction of a line” and, by parallel, “number”, and that is by defining exclusively their extension, which, in Husserl's view, is not a definition *stricto sensu*: «We note, however, that all the definitions become correct statements if the concepts to be defined are replaced by their extensions. Correct, but certainly entirely obvious and worthless statements as well»<sup>2</sup>.

Husserl even notices that «Frege himself seems to have sensed the questionable status of this definition, since he says in a note to it: “I think that we could simply say 'concept' instead of 'extension of the concept'»<sup>3</sup>. This could have led Husserl also to refuse the idea of an autonomous extensional logic of classes, and that's because «in reality, every extensional judgment is an intensional judgment», and to a definition of “class” which comprehends the concepts of “conceptual content” and “object of content”<sup>4</sup>. Even, as showed already in Schröder's review, there is for Husserl no substantial

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- 1 Ibid., p. 73. «When two numbers are so combined that the one has always a unity which corresponds to the unity of the other, therefore, we state them as equal». Hume's principle is, together with the so called “Context principle”, which states that one should «never ask for the meaning of a word in isolation, but only in the context of a proposition» (Ibid., p. XXII), are the two principles on which is based Frege's theory of abstraction.
  - 2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 122.
  - 3 Ibidem., note 1. Frege defended his position of the *Grundlagen* a year later, in *Über den Begriff und Object*, while responding to Benno Kerry's similar critic. But, as Frege assumes, to identify “concept” and “extension of a concept” means to have misunderstood the content of the work done in the *Grundlagen*: «I simply have expressed my view that, in the expression ‘the number that belongs to the concept F is the extension of the concept equinumerous to the concept F’, the words ‘extension of the concept’ could be replaced by ‘concept’», G. Frege, “Über Begriff und Gegenstand”, in *Zeitschrift für Philosophie und philosophische Kritik*, 16, 1892, p. 199. However, Frege's position is even not easy to assess considering that he agrees with Husserl on the fact that the extension of a concept does presuppose the intension of the concept. He writes in fact: «In reality I hold the view that the concept logically precedes its extension, and I consider it a mistake to attempt to found the class, as extension of a concept, not on the concept itself but on the individual things», but still he asserts in the same occasion that, «nevertheless, [he is] in many respect possibly closer to the author [Schröder] than to those whom one can call logicians of content». See, G. Frege, *Frege's kleine Schriften*, ed. I. Angelelli (Georg Olms, Hildesheim, 1967), p. 209 - 210. In a work between 1892 and 1894 however, Frege states clearly: «the “extension-logicians” are right when, because of their preference for the extension of a concept to its intension, they admit that they regard the reference of words, and not their meaning, to be essential for logic. The contents-logicians only remain too happily with the meaning, for what they call “content” [*Inhalt*], if it is not quite the same as representation [*Vorstellung*], is certainly the meaning [*Sinn*]. They do not consider the fact that in logic it is not a question of how thoughts come from thoughts without regard to truth-value, that, more generally speaking, the progress from meanings to reference [*Bedeutung*], must be made; that the logical laws are first laws in the realm of references and only then mediately relate to meaning». G. Frege, “Ausführungen über Sinn und Bedeutung”, in *Nachgelassene Schriften*, ed. H. Hermes, F. Kanbartel, F. Kaulbach (Felix Meiner, Hamburg, 1969), p. 133.
  - 4 E. Husserl, “Besprechung von E. Schröder, Vorlesung über die Algebra der Logik (Exakte Logik)“, in *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana* XXII, cit., p. 19.

advantage from an extensional logic in respect to an intensional one, which means, «that exactly what an extensional logic does perform, even that logic of ideal contents is able to perform; that every issue solved by the former, even the former can solve, and that even with the same laws, forms and *calcula*»<sup>1</sup>.

«As soon as we hit upon ultimate, elementary concepts, all defining comes to an end», the only resource we have is to provide the psychological analysis:

«What one can do at most in such cases is to determine the concrete phenomena from which or on the basis of which the simple concepts are abstracted and to clarify the nature of this abstraction process (...). What one might reasonably expect from the linguistic description of such a concept (for instance in the presentation of a science which is based on it) ought thus to be fixed as follows: *the description must be such as to put us into the correct disposition to determine the intended abstract moments in inner or outer intuition or to reproduce in ourselves the mental processes which are required for the formation of the concept*»<sup>2</sup>.

Thus, such an analysis should provide, according to Husserl, a description of the concrete phenomena that lay, as intuitive ground, on the basis of the abstracted concepts and the abstraction itself, but also, and as representing the more psychological aspect of the analysis, the description must put the subject performing and understanding it in a position to reproduce in his internal experience the process which leads to the concepts<sup>3</sup>. The road taken by Husserl starting from the works on numbers and arithmetic, which marks his interest in the role of the intentional life of consciousness in contrast with the framework of Frege's *Begriffsschrift* and that will be fully developed in and from the *Logische Untersuchungen*, leaves already for us much issues open. Even if, as recently stressed, «the objectivity» of the concepts taken into account by Husserl, and in the case of number, «the objectivity proper to the logical unity of the concepts of (...) collections, for example», is «never in question for him», although in need to be

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1 Ibid., p. 47.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 119. Italics mine.

3 Such a description marks eventually the difference of a descriptive-psychological inquiry from other descriptions which may appear acceptable, as the case of a neuro-physiological description of the process: grasping an abstract concept is basically different from understanding the physiological and neural processes by which a biological entity does implements the process leading to the concept.

accounted, that does not solve *ipso facto* the issue of psychologism<sup>1</sup>. As issue directly connected to the descriptive nature of Husserl's early works and early phenomenology, it is already worth of few other words here.

If in the *Philosophie der Arithmetik* a great role in the account of the concept of number is played by the totalities formed by the relation of collective combination, as we will see in the following section<sup>2</sup>, such an account seems refer only to a psychic relation, pushing numbers to become, apparently, nothing more than mere, even subjective, presentations. One of the main point of criticism against psychologism but also against psychological description, as we have indicated above in our brief exposition of the famous Frege-Husserl debate, is that everything seems to become presentation, especially if such a interpretation remove all the differences between presentations, objects and concepts. That such a distinction was present in Husserl's early works has already be indicated. In Husserl *Philosophie der Arithmetik* can only be found now a sort of “weak” logical psychologism probably originated, in our opinion, by Stumpf, which states the inquiry into the psychical sphere as necessary but not sufficient condition for any investigation in logic.

#### 1.2..1) Weak Psychologism and Stumpf.

In his 1891 work *Psychologie und Erkenntnistheorie* Stumpf comes to speak about the scientific relation between the psychological inquiry and the epistemological ones, where a position very close to Husserl's one is exposed with some clarity<sup>3</sup>. Where it is assigned to epistemology and the theory of knowledge the task of an inquiry into the conditions of knowledge, especially, the origin and truth of our representations, it is affirmed as necessary for such an investigation on logic and «logical elements» to proceed essentially «in connection with psychology»<sup>4</sup>. In this sense, Stumpf distinguishes between *Kriticismus* and *Psychologismus* as the two “views” in opposition in respect to the proper evaluation of the role for logic of a psychological inquiry<sup>5</sup>.

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1 B. C. Hopkins, “Husserl's Psychologism, and Critique of Psychologism, Revisited”, in *Husserl Studies*, 2006, Issue 2, (Springer, 2006), p. 92.

2 See, section 2.

3 C. Stumpf, “Psychologie und Erkenntnistheorie”, in *Abhandlungen der philosophisch-philologischen Classe der königlich bayerischen Akademie der Wissenschaften*, Band 19 (Akademie, München, 1982).

4 Stumpf recalls Eduard Zeller's work *Ueber Bedeutung und aufgabe der Erkenntnistheorie* (Karl Groos, Heidelberg, 1862).

5 Of Kantian and Neokantian origin the first, while the second is said to be originated by Benno Erdmann.

Consequently, Stumpf in comparing the two interpretations raises the question about the «need of a combined effort and psychological, preparatory work in the question about the origin of our concepts»<sup>1</sup>. Obviously, the limit of such a connection between the two spheres is indicated in the notorious non-deducible validity of the categories from the single psychological fact. On the other side, after having stressed the difficulty in justifying the relationship between «kantian categories» and phenomena<sup>2</sup>, from which it would follow that «the application would lay only on an arbitrary law or an incomprehensible psychological constraint», Stumpf indicates the possible degeneration of such an epistemology into «the worst psychologism»<sup>3</sup>.

Stumpf criticizes now the exclusion of psychology from epistemology operated by the *Kriticismus* on the base of the leading position of the “reason” as origin of every law. In fact, even if it is possible within a Kantian framework to operate fundamental distinctions in perception, for example between *Form* and *Materie*, without reference to any «psychological considerations» but only by «metaphysical expositions»,<sup>4</sup> «what it is thereby found must pass the test of psychology anyway», according to Stumpf. «*Something which is epistemologically true*», he continues now, «*cannot be at the same time psychologically false*»<sup>5</sup>. Moreover, among others distinctions exactly the one indicated is one of the main topic with respect of which psychology could bring insight on the correct interpretation of the relationships between contents of consciousness<sup>6</sup>. For example, from the fact that color qualities do order in space and that the same qualities

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1 C. Stumpf, “Psychologie und Erkenntnistheorie”, in *Abhandlungen der philosophisch-philologischen Classe der königlich bayerischen Akademie der Wissenschaften*, cit., p. 470.

2 For example, by means of the «obscure» schematism.

3 Ibid. p. 477. According to Stumpf, a step forward is already represented by Natorp and his distinction in consciousness of the “being conscious” [*Bewusstheit*] and the content of consciousness: «In being conscious as such there is no such a unity, on which the unity of law, and thereby the ones of the object, can be based (...). The being conscious is determined only to some extent by the content definiteness. Thus, it is the content only, and that is with reference to its connection with every consciousness, which gives to the psychical or the fact of consciousness their proper positive sense (...). Thereby, the fundamentally determinative element are exactly the objective (contents-) unities». P. Natorp, *Einleitung in die Psychologie nach kritischer Methode* (J.C.B. Mohr, Freiburg im Breisgau, 1888), p. 112 – 113.

4 See, I. Kant, KrV, AA 03, p. 51f.

5 C. Stumpf, “Psychologie und Erkenntnistheorie”, in *Abhandlungen der philosophisch-philologischen Classe der königlich bayerischen Akademie der Wissenschaften*, cit., p. 482.

6 Stumpf refers to his *querelle* with Hermann Cohen exactly about the correct interpretation of the following quote from Kant first *Kritik*: «if I take away from our representation of a body all that the understanding thinks as belonging to it, as substance, force, divisibility, etc., and also whatever belongs to sensation, as impenetrability, hardness, colour, etc.; yet there is still something left us from this empirical intuition, namely, extension and shape. These belong to pure intuition, which exists a priori in the mind, as a mere form of sensibility, and without any real object of the senses or any sensation». (I. Kant, KrV, AA 03, p. 50). Stumpf stresses the psychologically untenable thesis about the possibility to think an extension without color.

can manifest itself in different spatial order, does not give reason for the distinction between space as form of sensibility and the whole of sensible contents. Instead, «principles for order of the most different kind can be drawn in general from the content of sensations», and different kinds of sensible qualities even do constitute «multiplicities of one or more dimensions» that allow the application of a mathematical approach without meaning the latter a mere transposition of spatial analogies<sup>1</sup>. According to Stumpf, even the order of the sensations must be immediately co-given [*mitgegeben*] with the sensations as immanent property, «and even in the case of the so called pure concepts of relation, like unity and plurality, holds that the plurality is not something added to the perceived sounds or colors, but must be something somehow already given itself in them»<sup>2</sup>.

In this sense, the scope of psychology with reference to epistemology is to interpret the origin of the representation of space, time and relations, where for the latter, an inquiry into the contents of internal or external perception would come in question. By articulating the given contents it results possible the abstraction of the relations from the rest of the perceptual contents, even if it is previously necessary to reduce the concept of a relation into its composing parts. It results the aim of this psychological work in the «genetic classification of the simplest relation concepts»<sup>3</sup>. Thus, the following psychological question would be about the origin of its necessity, which in the light of the Kantism, is guaranteed against the skepticism by the immanent lawfulness of reason, on which the laws of the experienced objects is settled. If we refuse to lead back to such a solution to follow a descriptive-psychological framework, we must anyway recognize the limits imposed by the nature of the logical elements we aim to analyze. «In the case of the identity», for example, «we do not call a judgment necessary as psychological process, but with respect to what it is meant by that». It is in fact such a *Materie* that, according to its own internal nature, cannot be judged otherwise; necessity is therefore primarily a property of certain judgment contents. It is abstracted not from the external world, and also not from the psychical condition as such, as much as it is not an a priori form added to the “matter”, but results immanent to certain contents and it is distinguished by «conceptual abstraction»<sup>4</sup>.

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1 C. Stumpf, “Psychologie und Erkenntnistheorie”, in *Abhandlungen der philosophisch-philologischen Classe der königlich bayerischen Akademie der Wissenschaften*, cit., p. 485.

2 Ibid., p. 488.

3 Ibid., p. 491.

4 Ibid., p. 495.



Every science is oriented through its very core of questions, which do not develop together with other, on the contrary, produces the division in specific sciences. But what belongs to the formulation of such questions, does not for the dealing and response with such issues. For that reason, we must seek help from every source, only without breaking the laws of the «universally logical prescriptions». In this sense, confronting the aim of psychology and theory of knowledge, proper to the first is the «inquiry into the origin of the concept, the ones of absolute content as well as the ones of relative»<sup>1</sup>. If it is true that a concept is not thinkable for itself but only within a concrete presentation, therefore such a psychological task coincides with determining the relative concrete presentation and of the moments belonging to their mode of changing, which makes possible the concept abstraction.

But what we eventually obtain by that, the concept, is not a judgment or knowledge already. If we assume that concepts appearing together in a judgment belong to us a priori, even so, it could be always possible that an experience or a perception do legitimize their connection in judgment, as well as a judgment can be a priori and true a priori. The two questions should not be confused, exactly like in the case of the nature of the geometrical axioms in respect to the psychological inquiry into the genesis of the space-presentation: «the two questions have been mixed together, effecting both psychology and epistemology». But the sciences have been separated while the questions mixed, instead of the other way around. «In this sense», in Stumpf's eyes:

«the completely different complex of tasks of both sciences seems to differ, but we must therefore even more get back to the fact that a successful solution of such tasks results unthinkable without a plural and mutual support. Who deals with theory of knowledge cannot pass the question about the origin of concepts, he must have penetrated in the deep and difficulties of such a problem, while the psychologist must act, for his part, as such theorist. Not merely because cognitive judgment constitute a special class of phenomena of judgment, that will be described exactly as the other psychical phenomena, but firstly because like everyone, who does not take his science as mere technique, must come in clear about the foundations of all knowledge. It arises yet, like in the case of the “internal perception”, also real boundary issues, which both scientists can easily

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1 Ibid., p. 501.

well attribute to himself without prejudice to the difference of their aims whatsoever»<sup>1</sup>.

Stumpf, from what emerges from this few observations, aims to a mediation between descriptive psychology and theory of knowledge aware of the limits imposed by logical necessity, and which must have, at least, partially influenced Husserl in the first years of work. At least and besides the profound differences, with respect to Husserl's initial attempts to describe the arising of elemental logical formations. The kind of psychologism present in the early Husserlian works does not evidently claim to be a foundation of logic or mathematics (at least not in the sense of Frege's logicism), but to clarify the sense of the concepts by tracing them back to their origin in intuitive presentations, combinations, abstraction and reflexion.

### *1.2.2) A Shaking Ground.*

Still, a critical point with respect of an alleged logical psychologism can be traced at least, in the two thesis that Husserl expose in the *Habilitationsschrift* but more extensively in the *Philosophie der Arithmetik*: that of the role of collective combination by the arising of wholes and totalities, and the role of reflection upon acts in the formation of formal categories. Assuming in fact the extreme variability of the elements comprehended in the collective combination, and the variability of the kind of the relationship between the elements combined (that for its part differs from the physical relations that can be found among the elements related), this two assumption lead to the definition of the collective combination in terms very close to the act-object relation, which must be therefore “psychical”:

«The collective combination plays a very important role in the totality of our psychical life. Every complex phenomena which supposes parts noticed for itself, every high-order psychical and mental activities supposes, in order to generally exist, the collective combination of partial phenomena. It can never be reached even the presentation of a more simple relation (...), if a unitary interest and, therefore, at the same time an act of notice, would not single out together and hold

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<sup>1</sup> Ibid., p. 508.

unified the fundamentals. This psychical relation is even an indispensable psychological precondition for every relation and connection whatsoever»<sup>1</sup>.

Such an attribution of a “psychical” nature to the act of collective combination have been linked by many commentators<sup>2</sup> and by Husserl himself to Brentano's «explicative model», according to which, if «all real is “physical” or “psychical”», such a collection can only be something “psychical”, and thereby, «the idea of collection originates by “reflection” on psychical form of unity»<sup>3</sup>. The objectivity of sets and multiplicities must be even different from that of ordinary things, because it arises entirely from subjective mental activity: a set does not exist *qua* set, for it is formed by a psychic act of collecting, which is, as expressed by Sokolowsky, «a certain paradox (...), the paradox of something objective which exists only by virtue of subjective mental activity»<sup>4</sup>.

Again, by the exposition in the *Philosophie der Arithmetik* of the origin of the «fundamental abstract concept of “one”», Husserl expresses very clearly the connection of a certain class of acts and the related «contents of the concept» on one side, and the concept itself, when he says: «The abstract concept of unity cannot arise without a bearing act of thought – namely, a certain act which belongs to its contents»<sup>5</sup>. Here, besides the affirmation of the explicit function of acts, in this case of collection, in the first «bearing together» of the most different element composing the intuitive collection - even the arising of fundamental concepts under which the elements fall supposes a peculiar kind of act. In the *Philosophie der Arithmetik* in fact, the «concepts of something, one, multiplicity and number, those concepts which are the most general and the most content-independent, as concept of form», and which are called hereafter «*categories*», find «their easy explanation» for their arising «in the reflection on

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1 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 75.

2 See, E. Holenstein, “Einleitung des Herausgebers”, in E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. XXI.

3 E. Husserl, “Zwei Fragmente zum Entwurf einer Vorrede zur zweiten Auflage der *Logischen Untersuchungen* (September 1913)”, in E. Husserl, *Logische Untersuchungen, Ergänzungsband, erster Teil*, in Husserliana XX/1, ed U. Melle (Kluwer Academic Publishers, Dordrecht, Bstn, London, 2002), p. 295.

4 R. Sokolowsky, *The Formation of Husserl's Concept of Constitution*, in *Phaenomenologica*, 18 (Martinus Nijhoff, The Hague, 1970), p. 16. In this old but still important study, it is for example stressed how Husserl is, in Sokolowsky interpretation, does not treat explicitly the status of sets and in general of all the psychic relationships, speaking of both their subjective and objective aspects without focusing on the “paradox” of such realities. That condition, i.e. such a «double treatment», if on the one side leaved space for criticism, especially by Frege, is in his interpretation «not due to inconsistency on Husserl's part, but to the nature of [sets] and of all psychic relations», which lead to the paradox indicated even years later in the case of the categorical objects in the *Logische Untersuchungen*. See, *ibid.*, p. 17.

5 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 87.

psychical acts that can be exercised on all contents»<sup>1</sup>.

Letting aside for the moment the difficulties involved in the specific exposition of the process demanded by the arising of such concepts in the *Philosophie der Arithmetik*, which shows various difficulties, what it is only to stress by now is Husserl's call for act analysis as mandatory for showing the origin of those latter. Even in the *Prolegomena* and *Logische Untersuchungen* in fact, much effort is made by Husserl to describe the process that lead to «categorical object, i.e. categorical forms»<sup>2</sup>; for «all these concepts must be fixed, their “origin” must be individually sought out» and by being logical entities constituted in categorical acts, Husserl tries to give a description of their origin by an act analysis, this time, leading to the distinction of simple and categorical acts<sup>3</sup>. But here Husserl has already a more deeper understanding of the demarcation between his descriptive-phenomenological and psychological investigation with respect to the origin of the fundamental elements of logic; a demarcation by means of which he can in fact now remarks:

«Not that psychological questions as to the origin of the conceptual presentations or representational dispositions here in question, have the slightest interest for our discipline [pure logic]. This is not what we are inquiring into: we are concerned with a phenomenological origin or – if we prefer to rule out unsuitable talk of origins, only bred in confusion – we are concerned with insight into the essence of the concepts involved (...). We can achieve such an end only by intuitive presentation of the essence in adequate ideation, or, in the case of complicate concepts, through knowledge of the essentiality of the elementary concepts present in them, and of the concepts of their forms of combination»<sup>4</sup>.

From this point of view it is to understand why Husserl, even by recognizing the positive contribution of his view about the arising of set presentation by collective combination which is, still in the 1913, not rejected, express his «deep dissatisfaction», in the same text, about his «radical analysis of the “psychological origin” of the

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1 Ibid., p. 84 – 5. Even in the *Formal and Transcendental Logic* Husserl refers to the concepts treated in the early works as «categorical objects as formed objects», *Formale und transcendente Logik*, in *Husserliana* XVII, cit., p. 88.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana* XVIII, cit., p. 245.

3 Ibid., p. 246.

4 Ibidem.

mathematical ground-concept belonging to his early philosophy of mathematics», especially regarding the problem of the difference between the «concept of (cardinal) number and of the collecting», and moreover, regarding all the «categorical concepts and (...) all concepts of objectivities of every kind»<sup>1</sup>. Looking back to his work started around 1894, Husserl states in fact that if some problems were solved, like the function of the «mere symbolic thought»,

«still, how symbolic thinking should be “possible”, how the objective mathematical and logical connection constitute in the subjectivity and how is to understand “evidence”, how can be the given mathematical something valid in itself in *medium* of the psychological, all that remained puzzling»<sup>2</sup>.

Already in his 1894 *Psychological Studies in The Elements of Logic* in fact, Husserl is still stressing the importance of the psychological study of the most elemental intuitive and representative processes for a priori sciences, but he has now a more deep insight with respect to the peculiarity of the elements of logic and the impossibility to gain full clearness about their function in knowledge and proper nature within a mere psychological investigation<sup>3</sup>. But still, in the same 1894 work he certainly reaffirm the function of a descriptive analysis, by affirming for example, «that no theory of judgment has the possibility to gain a proper understanding of the matters in question unless it does not rest on a deep study of the descriptive and genetic relationships between intuitions and representations [*Repräsentation*]»<sup>4</sup>. In other words, he certainly not denies that one can considerably advance logical understanding of the soundness of symbolic thought (and above all, of mathematical thought) without a more penetrating insight into the essence of the elementary psychical processes involved. «But without such insight one surely cannot obtain a full and truly satisfactory understanding of (...) any logical

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1 E. Husserl, “Zwei Fragmente zum Entwurf einer Vorrede zur zweiten Auflage der *Logischen Untersuchungen* (September 1913)”, in E. Husserl, *Logische Untersuchungen, Ergänzungsband, erster Teil*, in *Husserliana XX/1*, cit., p. 294 – 296.

2 *Ibid.*, cit. p. 296.

3 Notoriously, an exception on the Husserlian amend from a spurious inquiry into «the foundation of every theory of judgment» is represented by the 1897 “Berichtes über deutsche Schriften zur Logik aus dem Jahre 1894“, where both, the descriptive and genetic psychological inquiry is, by founding the theory of apperception through the inquiries into intuition and presentation, the principal aim for psychology as laying as ground for every such theory. E. Husserl, *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana XXII*, cit., p. 134, note.

4 E. Husserl, “Psychologische Studien zur elementaren Logik”, in *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana XXII*, cit., p. 120.

process»<sup>1</sup>.

Husserl seems therefore to struggle against the proper definition of the boundaries imposed by the matter under investigation to the framework within which concept analysis is conducted. This struggling emerges nearly 10 years later the *Philosophie der Arithmetik* well summarized in the *Foreword* to the first edition of the *Logische Untersuchungen* where Husserl, looking back to the «many years of work» that led to the «new foundation of pure logic and epistemology» exposed there, writes:

«I began work on the prevailing assumption that psychology was the science from which logic in general, and the logic of the deductive sciences, had to hope for philosophical clarification. For this reason psychological research occupy a very large place in the first volume of my *Philosophy of Arithmetic*. There were, however, connections in which such a psychological foundation never came to satisfy me. Where one was concerned with questions as to the origin of mathematical presentations, or with the elaboration of those practical methods which are indeed psychologically determined, psychological analysis seemed to me to promote clearness and instruction. But once one had passed from the psychological connections of thinking, to the logical unity of the thought-content, no true continuity and unity could be established»<sup>2</sup>.

Husserl was certainly disquieted by doubts of principle, as to how to reconcile the objectivity of mathematics, and of all science in general, with a psychological foundation for logic. The first edition of the *Logical Investigations* represented in fact, as well known, even Husserl's own clarification with respect to his «whole method», which means, that «psychological analysis» aiming to illuminate the given science. Surely he was pushed towards general critical reflections on the essence of logic, as it is already partially being documented<sup>3</sup>, and especially, around the time of his 1896 Lecture on *Logik*<sup>4</sup>, for what concerned, for example, the grounding idea of pure logic as inspired

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1 Ibid., p. 122. By symbolic thought, indeed, «into the essence of those elementary process of intuition and the Representation which everywhere make that thought possible», ibidem.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 6 – 7.

3 See, for example, C. Bayer, *Von Bolzano zu Husserl*, in *Phänomenologica*, 139 (Kluwer Academic Publishers, Dordrecht, Boston, London), 1996.

4 E. Husserl, *Logik, Vorlesung 1896*, in Husserliana, Materialienbände, I, cit. The *Prolegomena* do in fact represent a reworked version of part of this lecture, according to the corresponding material composing the two works.

by Lotze's interpretation of Bolzano's *Wissenschaftslehre* and the overcoming of the initially uncleared elements of concealed *Psychologismus*. Much of such critical reflection was therefore basically connected to the proper understanding of the «objectivity of the content known», both, in relation to the «subjectivity of knowing» and in relation to the definition of its *nature* as emerging within the act analysis<sup>1</sup>.

Within this general clarification of the very methodological basis of Husserl's early investigations, also Husserl's surely critical acknowledgment and endorsement of the descriptive characters of the psychological analysis represents a point in need of clarification. In this sense, the confrontation with Brentano, which intensively develops till at least the early years in Göttingen, helped Husserl in his struggles to shed light on different aspects of the descriptive act analysis. Two of such aspects, relevant for us under two connected point of view, will be taken into account in what follows.

The fact that such a clarification was yet not only important under specific theoretical points deserves at least mention. A very informative example of Husserl's struggles for a correct definition of the descriptive aspect of his analysis and of the arising phenomenology, still conceived around 1900 as a form of descriptive psychology, is showed for example by the later refutation of the leveling between phenomenology and descriptive psychology operated in the *First Edition* of the *Logical Investigation*:

«Phenomenology is descriptive psychology. Epistemological criticism is therefore in essence psychology, or at least only capable of being built on a psychological basis. Pure logic therefore also rests on psychology – (...). The necessity of this sort of psychological foundation of pure logic, i.e., a strictly descriptive one, cannot lead us into error regarding the mutual independence of the science, logic and psychology. For pure description is merely a preparatory step towards theory, not theory itself. One and the same sphere of pure description can accordingly serve to prepare for very different theoretical science. *It is not the full science of psychology that serves as a foundation for pure logic*, but certain classes of description which are the step preparatory to the theoretical researches of psychology»<sup>2</sup>.

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1 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana XVIII*, cit., p. 7.

2 E. Husserl, *Logische Untersuchungen, zweiter Theil*, First Edition, cit., p. 18.

Besides the curious resemblance of Husserl's position to Stumpf's own definition of the different sphere of competence assigned to psychology and logic, what must also be mentioned here is the fact that in the Second Edition of the *Logical investigations* (1913)<sup>1</sup>, the above mentioned definition of phenomenology in terms of descriptive psychology changes radically. Husserl writes in fact in the new version of the Note 3 to paragraph 6:

«If *our* sense of phenomenology has been grasped, and if it has not been given the current interpretation of an ordinary “descriptive psychology”, a part of natural science, then an objection, otherwise justifiable, will fall to the ground, an objection to the effect that all theory of knowledge, conceived as a systematic phenomenological clarification of knowledge, is built upon psychology. On this interpretation pure logic, treated by us as an epistemologically clarified, *philosophical discipline*, must in the end likewise rest upon psychology, if only upon its preliminary descriptive researches into intentional experiences. (...) We naturally reply that if psychology is given its old meaning, phenomenology is not descriptive psychology: its peculiar “pure” description, its contemplation of pure essences on a basis of exemplary individual intuitions of experiences (often freely imagined ones), and its descriptive fixation of the contemplated essences into pure concepts, is no empirical, scientific description»<sup>2</sup>.

Phenomenology in its later understanding immediately after the *Logical Investigation* should therefore «not be understood» as descriptive psychology «*simpliciter*». On the one side, because «all the metaphysical or scientific - in the sense of the science of nature – objectivations [*Objectivations*] remain excluded»<sup>3</sup>, and, on the other side, because the phenomenological description gazes upon what is strictly given, i.e., it

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1 In 1911, in the so called “popular piece” of phenomenology as Husserl called at the time the *Philosophie als strenge Wissenschaft*, he also writes «The *Logische Untersuchungen*, which in their fragments of a systematic phenomenology for the first time employ essence analysis (...), have again and again been misunderstood as attempts to rehabilitate the method of introspection [*Selbstbeobachtung*]. Admittedly, part of the blame for this lies in the defective characterization of the method in the “Introduction” to the *First Investigation* in the Second Volume, the indication of phenomenology as descriptive psychology». E. Husserl, “Philosophie als strenge Wissenschaft”, in *Aufsätze und Vorträge (1911 – 1921)*, in *Husserliana XXV*, cit., p. 36.

2 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 23.

3 E. Husserl, “Bericht über deutsche Schriften zur Logik in den Jahren 1895 – 99 (1903/04)“, Dritter Artikel, in *Aufsätze und Rezensionen (1890 – 1910)*, *Husserliana XXII*, ed B. Rang (Martinus Nijhoff Publishers, The Hague, Boston, London, 1979), p. 206



gazes upon the lived-experience in the manner in which it is in itself; it analyzes the “thingly” [*dinglich*] manifestations and not what is manifesting in them. The epistemological clarification based on such analysis is now «nothing more than an intuitive, adequate abstraction, which brings to evident consciousness, through the phenomenologically fixed, the universal essence, the “true and proper content” of the logical concepts and laws, and thereby brings it to “clear and evident” comprehension»<sup>1</sup>. Such an abstraction moves «progressively through reflections on the contents of acts of cognition just performed» and what is phenomenologically fixed and described are therefore essences, but not objects essences, but of the essences of kind of lived-experience, i.e., of kinds of correlation between the experiencing and the experienced. The confrontation with the descriptive aspect of Husserl's task has therefore its counterpart also under the point of view of the later definition of phenomenology itself.

### *1.3) Early Stage of Descriptive Psychology and Brentano.*

Prior to the first edition of the *Logical Investigations* and initially and partially in the same 1900 work, much of Husserl effort is devoted to the proper understanding of the nature of descriptive psychology and the sphere of phenomena under investigation within it, especially in relation to the question of the proper definition of the arising phenomenology. Such task is obviously connected to the problem of delineating the research area of psychology and the natural science (or science of matter of facts), *as possible explicative [erklärend] framework for the theory of knowledge*. The distinction between the explicative and the clearing function of a science aiming to become a theory of knowledge applied to experience, and thus, the “clearing” task assigned later on to phenomenology, is well summarized by Husserl in the introduction to the *Logical Investigations*:

«Its aim is not to *explain* knowledge in the psychological or psycho-physical sense as a *factual* occurrence in objective nature, but to *shed light* on the *idea* of knowledge in its constitutive elements and laws. It does not try to follow up the real connections of coexistence and succession with which actual acts of knowledge are interwoven, but to understand the *ideal* sense of the *specific*

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1 Ibid., p. 207.

connections in which the objectivity of knowledge may be documented. It endeavors to raise to clearness the pure forms and laws of knowledge by tracing knowledge back to the adequate fulfillment in intuition. This “clearing up” takes place in the framework of a phenomenology of knowledge, i.e., a phenomenology oriented (...) to the essential structures of pure experiences and to the structures of sense that belongs to these»<sup>1</sup>

Phenomenology, starting from the *Logical Investigations*, aims therefore to the “pure forms” of knowledge and the fulfilling process in “intuition”, which in fact characterizes Husserl's approach to the permanent core of knowing in general, i.e., «the puzzle represented by the being in itself of the ideal sphere in its relationship to consciousness»<sup>2</sup>. This process includes a complex development, and the assuming of concepts and perspectives from other thinkers, who also, even if influential, still never accomplished - in Husserl's opinion – such a task, mostly for methodological or conceptual reasons<sup>3</sup>.

But first Husserl notoriously recalls with the indication of descriptive psychology Brentano's distinction between descriptive psychology and genetic-physiological psychology, the latter interpreted as causal explanation of the kind of psychical phenomena which descriptive psychology exposes. Descriptive psychology, according to Husserl's notes on Brentano's Lecture on *Descriptive Psychologie* aims in fact

«To give clarity about what inner experience immediately shows, hence not a genesis of facts, but first and foremost a description of the subject-matter. This part is not psycho-physiological, but purely psychological. We must in advance know how things are: and this is shown by an inner glance into the psychical»<sup>4</sup>.

Its exactness differs from probabilistic sciences, by aiming descriptive psychology to «intuitively grasp general laws» in the psychological field using inductive and deductive

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1 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 27.

2 E. Husserl, *Briefwechsel*, I, *Die Brentano Schule*, in *Husserliana Dokumente*, cit., p. 39.

3 Among others, in the time between the *Philosophie der Arithmetik* and the *Logische Untersuchungen*, are surely to be mentioned Bolzano and Lotze. E. Husserl, “Besprechung von M. Palágyi, *Der Streit der Psychologisten und Formalisten in der modernen Logik*, Leipzig 1902”, in *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana XXII*, cit., p. 156.

4 E. Husserl, Q 10/4., Unpublished lectures notes from 1887 Brentano's lecture *Descriptive Psychologie*, Signature Q 10, Husserl Archives Louvain. Cited by E. D. Rollinger, *Husserl's Position in the School of Brentano*, *Phaenomenologica 150* (Springer Science and Business, Dordrecht, 1999), p. 24

methods<sup>1</sup>, while the topic of genetic psychology is, on the other hand, «the laws by which psychological phenomena arise and disappear». But since, according to Brentano, «these phenomena depend undoubtedly on the processes of the nervous system, the conditions of their appearance and disappearance are largely physiological, and the investigation of genetic psychology must be entangled with that of physiology»<sup>2</sup>.

Husserl himself now, still at the time of the *Logische Untersuchungen*, remembers and stresses how basically, «our problem of circumscribing the general concept of “psychical act”, is closely connected with this problem of division [*Sonderung*] <of the psychical and physical phenomena>», since the concept of psychical act arose precisely in this context, as «supposedly marking off the psychological sphere»<sup>3</sup>. Thus, the problem is related to Brentano's distinction between psychical and physical phenomena; the distinction is in fact a possible scientific criteria in order to define the research area of psychology, assumed that this latter is defined as «science of psychical phenomena»<sup>4</sup>. But, according to Husserl, Brentano's distinction does not seem to offer a suitable criterion. Writes in fact Husserl:

«It can be shown that not all “psychical phenomena” in the sense of a possible definition of psychology are psychical phenomena (i.e. psychical acts) in Brentano's sense, and that, on the other hand, many genuine “psychical phenomena” fall under Brentano's ambiguous rubric of “physical phenomena”»<sup>5</sup>.

By Husserl's effort to clarify and define the proper sphere of investigations belonging to descriptive psychology, concurring on the unstable classification of phenomena in Brentano's psychology, is therefore the notion of physical phenomenon, more precisely, the confusion in this notion of contents and objects. In the *Logical Investigations* Husserl recognizes in fact a misunderstanding, or better, a confusion in Brentano's examples of physical phenomena. By remembering how Brentano defines as physical, phenomena such as «a color, a figure, a landscape which I see (...) as well as similar

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1 F. Brentano, *Deskriptive Psychologie*. ed. R. M. Chisholm, W. Baumgartner (Felix Meiner, Hamburg, 1982), p. 3.

2 F. Brentano, *Meine letzte Wünsche für Österreich* (Cotta, Stuttgart, 1895), p. 34 – 5.

3 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 355.

4 «We must consider only mental phenomena in the sense of real states as the proper object of psychology. And it is in reference only to these phenomena that we say that psychology is the science of mental phenomena». F. Brentano, *Psychologie vom empirischen Standpunkte*, Erster Band, cit., p. 130.

5 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 378.

images which appear in the imagination»<sup>1</sup>, Husserl stresses the referring of the physical phenomena in Brentano's sense to both, the object and the «sensed content»; and moreover, the following confusion of these contents and the external objects or even their properties. Thus, according to Husserl, in Brentano

«the division into psychical and physical objects (contents, properties, relations etc.) is confused. He simply opposes physical to psychical phenomena, and defines them unmistakably as a division of *experiences* into acts and non-acts. But he at once mixes up, under the rubric of physical phenomena sensed contents and apparent external objects (or their phenomenal properties), so that the division now becomes a division of *phenomenal* objects into physical and psychical (in an ordinary or near-ordinary sense), in which the latter division furnishes the names»<sup>2</sup>.

Besides the correctness of Husserl's interpretation, what it is more important for us is now to stress some critical points stimulated by the critic against Brentano's erroneous distinction.

In fact, Husserl notoriously stressed out in the *Logical Investigation*, that a positive definition of physical phenomena should more importantly take account and therefore be determined by the «intuitive interconnection» between moments of sensation and the qualities necessarily connected with them. In a manuscript linked to the works on the *Logical Investigations* Husserl firstly affirm the fact that «if we now consider the *phenomena* presented by these various classes of perceptions, they unmistakably constitute *essentially distinct classes*». A purely «*descriptive consideration*» must establish in fact «an unbridgeable gulf between these phenomena».

### 1.3.1) Primary Content and Psychical Acts.

For what concern the phenomena that may fall under the label of “physical phenomena”, for Husserl is now important to stress how by such phenomena we can descriptively find

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1 F. Brentano, *Psychologie vom empirischen Standpunkte*, Erster Band, cit., p. 104.

2 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana* XIX/2, cit, p. 774.

«In first instance (...) the *sensory qualities*, which in themselves form a descriptively closed class, whether there are such things as senses and sense-organs or not. They form a kind in the strict Aristotelian sense of the word»<sup>1</sup>.

And moreover,

«To these are added features necessarily attaching, either to sense-qualities in general, or to single ranges of such qualities (again strict Aristotelian species), or, conversely, features themselves necessarily presupposing qualities, and only able to achieve concrete being in association with them»<sup>2</sup>.

Here, well-known propositions are to be found and come up for treatment, like for example: no intuited spatiality without quality, or the even more notorious, «no color, no tactile quality without something spatial»<sup>3</sup>. In this sense, it has to be understood the doubt about the definition of the physical phenomena, and the relationship between physical and psychical phenomena, already present at the time of the *Philosophie der Arithmetik*. Husserl proposes in fact to avoid the expression «physical phenomenon» for the primary and «absolute contents», which are for Brentano non-relational, while for Husserl are completely and necessarily structured by relations, i.e., fundamental relations, which will represent the task of the *Third* of the *Logical Investigations*. Basically, Husserl in the *Philosophie der Arithmetik* avoids the recurs to the expression “physical phenomenon”, «because it is somewhat awkward to designate a similarity, gradation, and the like as a “physical phenomenon”». In fact, Brentano himself had in mind with that phrase «only the non-relational absolute contents – and, indeed, individual phenomena, not abstract moments in an intuition»<sup>4</sup>.

Husserl even develops in the *Philosophie der Arithmetik* (and will apply with more understanding starting from the *Logical Investigations*) two different kinds of relations, the one belonging to the primary and absolute contents, and the one proper only to psychical acts. The first kind is part of presentations, but not intentionally, and composes therefore a primary content<sup>5</sup>. Such relations are represented, for example, by

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1 Ibid., p. 755

2 Ibidem.

3 Ibidem, and Cfr., E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 229f.

4 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 70.

5 Ibid., p. 68.

the connection between color and spatial extension already seen, but also of higher-order logical connection, like a color Specie and a specific nuance.

The second kind instead, is characterized by the presence and a certain “use” of an act. To this second class do belong in fact «phenomena like presentation, judging, hope etc.», like in the case of the kind of presentation where we find an act that «binds to each other the different elements which are therefore unified into a collection»<sup>1</sup>. Between the two kinds there is a fundamental difference to be found: while in the first class «the relation is immediately given» with the grounding elements, the presentation of a relation requires a reflection on the act establishing the relation, and therefore, represents an higher level of psychical phenomena in respect to the mere presentation of primary contents<sup>2</sup>.

Thus, triggered by the need of clarify the confusion within descriptive psychology between object and content, Husserl seems to concentrate his work around 1891 on the correct distinction between primary or absolute content and psychical acts on the one side, and on the descriptive distinction of the kinds of acts which are intertwined by the arising of elementary formations on the other, which will be the basis of his analysis of concept origin and theory of abstraction as presented in the work on arithmetic.

But the confrontation with Brentano's framework offered to Husserl also another critical point which need to be mentioned here before moving to the just mentioned analysis.

### *1.3.2) The 1893 – 89 Critic and its Function in Husserl's Development.*

Around 1894 in the second part of the *Psychologische Studien zur elementaren Logik* entitled “Anschauung und Repräsentation“, Husserl introduces another important distinction between two different modes of intentional referring of consciousness to its content. This kind of distinction find its clear expression in our being aware of the fundamental difference between merely experiencing a content in first instance, and the perceived object which could result: to the same object can correspond different and even changing sensory contents, while the perceived object remains the same. To this difference corresponds now the distinction, within the main class of presentations, between representation [*Repräsentation*] and intuition. The first class is defined as a

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1 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana* XIX/2, cit, p. 756.

2 *Ibid.*, p. 70.

«psychical lived-experience (...) which does not include its “objects” as immanent contents, but it (...) mere intends», where this latter expression means «to tend through a given content whatever in consciousness, to another one not given»; while the second class is characterized also as a «psychical lived-experience», which does not merely intend its “objects”, «but really comprehend this objects as immanent content in itself»<sup>1</sup>. The distinction between this two classes poses a hierarchy of two modes of consciousness: the ones that is presentation or is based on presentation «acquires an intentional relation to objects», and represents the class, for example, of affirmation, negation e.g.; while the second, is the «genetically earlier and more primitive» mode of consciousness, where there is no intentional relation to objects, like in the case of phenomena such as «sensory pleasure or displeasure»<sup>2</sup>.

To exemplify the two modes of consciousness, Husserl uses the famous example of the perception of arabesques. In this case, the same sensory content is the basis for an intuition and a presentation, where the transition between a mere sensing, or sense intuition, to our perceiving the arabesques as signs, depends on what he calls the “act-character”. This latter in fact

«ensouls sense, and is, in essence, that which make us perceive this or that object. (...) Sensations, and the acts ‘interpreting’ them or apperceiving them, are alike experienced, but they do not appear as objects, they are not seen, heard, or perceived by any sense. Objects on the other hand, appear and are perceived, but they are not experienced»<sup>3</sup>.

Now, according to Husserl, Brentano's lack of distinction between content and objects has its counterpart, assuming the explicative strategy exposed, in his misleading interpretation of the phenomenon of perception. Brentano would tend and even would be forced, according to Husserl, to interpret “sensing” [*Empfinden*] as an act, close to the lived-experience defined by Husserl as presentation, and therefore, would conduct to an interpretation that actually obliterate the psychological evidence according to which sensing is not an act at all.

Around 1898 Husserl expresses in fact very clearly the nature of the mere “sensation”:

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1 E. Husserl, *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana* XXII, cit., pp. 107 - 8.

2 E. Husserl, “Selbstanzeige”, in *ibid.*, p. 135.

3 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana* XIX/1, cit., p. 399.

«we call “sensations” the mere fact that a sense-content and, further, a non-act in general, is present in the experiential complex». In relation to appearing of such sense-content, «the talk of “sensing” only serves to point to the apperceptive function of such contents», which means, «that they function as bearers of an interpretation [*Deutung*] in which the appearance in question is carried out perceptually or imaginatively)»<sup>1</sup>.

On the one side, therefore, this 1898 critic to Brentano interpretation of sensing leads to the introduction of the function of apperception, even if still expressed with a misleading expression “act-character” indicated above, which establishes, in Husserl analysis of experience, the “surplus” granted by that: even by basing on the same sense-content, endows this sensory material with its objective sense and marks perception as perception of a transcendent object<sup>2</sup>. On the other side, refines the interpretation of primary content of the *Philosophie der Arithmetik*, which even if referred by Husserl to «figural moment» and moment of unity and even if already interpreted as «structured complexes» they must now explicitly undergo the «being apperceived» in order to explicate their function in experience<sup>3</sup>. Even if the function of apperception is in fact hardly explicable for its non-intentional but also not active nature, it is now possible to distinguish two functions associated with it and characterizing therefore two kinds of fundamental relations.

The act-character of perception is in fact indicated in 1898 as an appresentative function belonging to the whole perception and which explicates two functions: interprets the sensory contents and orients this interpreted content towards the object of perception. It is in fact the act-character which confers to the contents their presentative function for the perceived object: «The presentative [*präsentierende*] content of an external perception is the experienced content of perception which undergoes the interpretation [*Deutung*], the objective “apprehension”, and therefore, provides the object which the perception intends»<sup>4</sup>. The sensory-content can be endowed not only with this presentative function, but also with different ones (arabesques as piece of art, as words,

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1 E. Husserl, “Abhandlung über Wahrnehmung von 1898“ in *Wahrnehmung und Aufmerksamkeit*, Husserliana XXXVIII, cit., p. 137. Also, E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/2, cit, p. 774.

2 Cfr. The first part of the lecture *Hauptstücke aus der Phänomenologie und Theorie der Erkenntnis. Vorlesungen aus dem Wintersemester 1904/05*, in *Wahrnehmung und Aufmerksamkeit*, Husserliana XXXVIII, cit., p. 8f.

3 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 203f. Cfr. “V. Logical Investigation”, in E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 352f.

4 E. Husserl, “Abhandlung über Wahrnehmung von 1898“ in *Wahrnehmung und Aufmerksamkeit*, Husserliana XXXVIII, cit., p. 140.



as piece of marble, e.g.) and therefore, this function must be granted by the act-character which confers to the sensory-content its determinate sense.

This interpretation of the act-character evidently recalls also the question of the double referring of the act consciousness to both, the immanent content and the object which does not undergo any modification. In 1893 this was the kind of referring in question in different works related to the debate on the collapsing within the Brentano's *Schule* of the difference between the two relations<sup>1</sup>, a «conflation» which will be criticized in 1901 and which

«consists in the confusion of the phenomenological relation (the purely descriptive psychological) between the act-character of the apprehension and the psychical content belonging to the actual subject, whose content functions as substratum of apprehension, with the relation between the act, i.e. the mental experience, which we call presentation, and the represented object»<sup>2</sup>.

Husserl defines the first kind of relation, i.e., the relation between the act-character and the content which function as basis for the apprehension, as “real” and the second, i.e., the ones between presentation and object, is rather defined as «ideal»<sup>3</sup>. But it is only in the later Fifth of the *Logical Investigations* that we find a deeper descriptive comprehension of this act structure, in which we find the expression of the relation to objects, with this now explicitly called *intentional Objects*. We speak about the distinction in the act between its «real» and its «intentional content»<sup>4</sup>. The first content, i.e., the sensory content is in fact defined as the real act element, while the latter, the properly intentional, is now explicitly associated with the ideal or meaning content. In fact, the «primary contents», i.e., “sensory contents” here indicated, will be investigated even in the more articulated definition of the «contents of consciousness» delineated in the *Fifth* of the *Logical Investigations* and here excluded from the intentional ones, which are «the intentional object», «the intentional material» and «intentional essence».

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1 E. Husserl, “Intentionale Gegenstände”, in K. Schuhmann, “Husserl Abhandlung “Intentionale Gegenstände”. Edition der ursprünglichen Druckfassung”, in *Brentano Studien*, 3, 1990/91, p. 142f.

2 1901 letter to A. Marty, in E. Husserl, *Briefwechsel*, I, Die Brentano Schule, in *Husserliana Dokumente*, cit., p. 78.

3 *Ibid.*, p. 82.

4 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 411. By “real” Husserl aims to express not their being «external to consciousness», but rather their being «not merely intended», see, E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/2*, cit, p. 775.

We can now try to briefly indicate some conclusions emerging from this section, before continuing in the following one dedicated to the more specific meditations on concepts emerging from Husserl's early production.

First, the concept analysis conducted within the framework of descriptive psychology basically aims and partially accomplished, at least in Husserl's opinion, to show what it has to be indicated as the *origin* of concepts. The analysis, in this sense, leads back to the origin of this truly elemental meanings-formations which are concepts, by allowing to consciously access to: 1) the intuitive components (concrete intuitions, for example) on which concepts as properly given relay, 2) the psychological articulation and stratification of the acts of cognition which are present when we possess a concept, whose nature and articulation indeed, must still go under investigations.

A descriptive concept analysis aims therefore to stress the impossibility or triviality of a mere definition of concepts, or better to say, the necessity not to underestimate also a preliminary psychological description of the process by which we come to possess of such elementary logical-elements that by nature cannot undergo any definition. If they are in fact logically simple and therefore, according to Husserl, unsuitable for definition (for example, in terms of merely extension), they are surely psychologically complex, both, for being composed elements and being based on complex acts.

The analysis of this chapter seems to indicate a slow but distinct development in Husserl's early philosophy from the *Philosophie der Arithmetik* through the *Logical Investigations*. The main aim of his investigation remains a possible psychological-descriptive understanding of the relation between act of consciousness and the logical content of knowledge. However, exactly the necessity of a better understanding of the ideal nature of such content and the securing of its objectiveness for granting the peculiar evidence of such knowledge does start what has not to be understood as a rejection of the early analysis, but better, as a deeper taking into account of the methodological and ontological effect of such a granting. The framework remains in fact the *descriptive* in the sense indicated, but it develops, partially due to confrontations with the roots of such a framework (Brentano, Stumpf etc.). What does it mean that the framework remain the same, is to be indicated in the necessity of exposing, or better clarifying, the complex structure of the acts which possess such an ideal component of knowledge.

«For Husserl as for Frege, what is at issue is to understand the type of objectivity of human thinking and its linguistic expression, an objectivity that is public and independent of the contingencies of any particular human subject»<sup>1</sup>. But evidently, for Husserl and to some extent even for Frege, the kind of objectivity here in question reaches a dimension far beyond the actuality of any utterances even if it found its expression within it. In this sense, the history of the complex attempt to reach the proper instrument in order to clarify such objectivity has already been indicated in the Husserlian literature. With the second and third part of this section we have tried to show other aspects of roots of Husserl first investigations, especially underlying Stumpf's position with respect of the question about the boundaries imposed by descriptive-psychological inquiry into the formal aspects of knowledge.

On the other side, hopefully we have also offered some new insights into the complex debate between Husserl and Brentano, that is, by taking into account part of the critic moved by Husserl against his former mentor in the years before the *Logical Investigations* under two theoretical points of view of sure relevance for Husserl later development.

Having said that, Husserl's earliest writings like the *Philosophie der Arithmetik* from 1891 or the *Psychologische Studien zur elementaren Logik*, are still in some terms and to some extent psychological inquiries, still showing Brentanian influences, as we will see, in the definition of the psychical and physical phenomena. But in his long path from this early works to phenomenology, Husserl's aim is already to stress the epistemological importance of descriptive psychology against any possible drift towards a physiological psychology; a need this latter which certainly influenced Husserl by his own methodological clarification:

«Since it is epistemologically of unique importance that we should separate the purely descriptive examination of the knowledge experience, disembarassed of all theoretical psychological interests, from the truly psychological research directed toward empirical explanation and origins, it will be good if we speak rather of 'phenomenology' than of descriptive psychology»<sup>2</sup>.

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1 J. Benoist, "Husserl Theory of Meaning in the First Logical Investigation", in *Husserl's Logical Investigations*, ed. D.O. Dahlstrom (Kluwer Academic Publishers, Netherlands, 2003), p. 17.

2 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 23.

Of course, his logical-mathematical research is also equally important in the early years of the arising phenomenology, leading him, for example, to the idea of pure logic and to the theory of science around the time of the *Prolegomena*. If the very idea of a pure logic is the dealing with the problem of science determination and definition, and that means, with the problem of what defines science as science or science as such, what we can stress with Husserl, is that «(...) what makes science science, is certainly not its psychology, nor any real context into which acts of thought are fitted», but the certain objective or ideal interconnection which gives these acts a unitary objective relevance and an ideal validity<sup>1</sup>. This ideal interconnection as the «interconnection of the things to which our thought-experiences (actual or possible) are intentionally directed», and on the other hand, «as interconnection of truths, in which this unity of things comes to count objectively as being what it is» are stressed to be given, later on, together a priori and as mutually inseparable<sup>2</sup>. But under this point of view, even if problematically, Husserl's investigations in the realm of the mathematical concepts must certainly be evaluated.

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1 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana XVIII*, cit., p. 230.

2 *Ibid.*, p. 231.



## Section 2

### The fundamental Traits of the Investigation into Concepts in The early Works.

#### 2.0) Introduction

Already in its very first work *Über den Begriff der Zahl. Psychologische Analysen* and the following more elaborated *Philosophie der Arithmetik. Logische und psychologische Untersuchungen*<sup>1</sup>, as we have already introduced, the aim carried out by Husserl is a descriptively-oriented psychological clarification of ideal objects, establishing therefore an epistemological investigation and «critique of the foundations of arithmetic and logic» by starting with a psychological inquiry into the «concepts of multiplicity, unity and cardinal number, so long they are properly given to us and not due to symbolization»<sup>2</sup>.

Some thirty-eight years after the publication of the *Philosophy of Arithmetic*, Husserl wrote the following appraisal of it: «Thus it was, expressed in my later way of speaking, a phenomenological-constitutional study. It was also the first that attempted to make “categorical objectivities” (...) understandable out of constituting intentional activity»<sup>3</sup>. The psychological analysis that are to be found in those early works will be in fact later assume a more clear phenomenological methodology and nature, certainly induced, in part by the critical confrontations with other approaches, as we have already seen<sup>4</sup>, in part by the self criticism through which the first philosophical venture went at the time it appeared. Anyway, the self-criticism does not prevent yet to stress immediately how this “subjectively” oriented explanation of ideal and categorical objects (in the case of

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1 The first part of the *Philosophie der Arithmetik* repeats in fact, according to Husserl, the content of *Über den Begriff der Zahl* almost «word for words», E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 8.

2 *Ibid.*, p. 5 – 7.

3 E. Husserl, *Formale und Transzendente Logik*, in *Husserliana*, XVII, cit., p. 90.

4 The most “famous” criticism, already exposed in the pages above, is Frege's 1894. “Rezension von: E. Husserl, *Philosophie der Arithmetik*, Leipzig, 1891”, in *Zeitschrift für Philosophie und Philosophische Kritik* 103, 1894, pp. 313–32. For another reappraisal of this debate, see, for example, C. Ortiz Hill, *Word and Object in Husserl, Frege and Russell, the Roots of Twentieth Century Philosophy*, (Ohio University Press, Ohio, 1991).

this early works, mainly mathematical and logical objects), may have appeared in Husserl's eyes in the years to follow as somehow “psychologistic”, only if the psychologically described acts of cognition, assumed as touchstone in Husserl's exposition, are directly compared with the explicitly eidetical and phenomenological ones designated in later works.

The path of the descriptive psychological analysis is already showed by looking at the methodological statement indicated in the pages of the *Philosophy of Arithmetic*, where Husserl, in first instance, assumes the impossibility or triviality of defining such a categorical concept like the number in terms of a formal-logical definition. Where «all defining comes to an end», affirms Husserl, the investigation is forced to point out the «concrete phenomena from which such basic concepts are abstracted», and by means of which the psychological analysis is therefore performed, clarifying the origin of concept as a result, by showing “how” we possess the concept<sup>1</sup>. In this sense, «a psychological analysis is to Husserl an analysis of an experience of the presentation of a number, and in particular an elucidation of its “origin”», as also recently formulated<sup>2</sup>.

This analysis is set in relation to the general aim of Husserl's work, which is a «philosophical understanding of arithmetic». To such a general scope, such a psychological analysis of the fundamental concepts (number, unity, e.g.) is to be performed, and consequently, also a logical explanation of its symbolic method must be offered. In this sense must be therefore understood the articulation of Husserl's *Philosophie der Arithmetik*. In fact, supposed that the establishment of a complete «system of philosophy of arithmetic» lacks of sure foundation, Husserl felt the necessity of a «psychological inquiry» into its basic concepts before they are given to us in form of symbols, leaving for the second part the explanation of the logical origin of the general arithmetic, starting from the role played in knowledge by the «symbolic presentation of number»<sup>3</sup>.

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1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 199.

2 M. Hartimo, “The Development of Mathematics and The Birth of Phenomenology”, in *Phenomenology and Mathematics*, *Phaenomenologica*, 195, ed. M. Hartimo (Springer, Dordrecht, Heidelberg, London, New York, 2010), p. 112.

3 E. Husserl, “Selbstanzeige” to the *Philosophy of Arithmetic*, in *Vierteljahrsschrift für wissenschaftliche Philosophie*, 15, 1891, p. 360. Regarding Husserl's purpose in approaching mathematical questions, R. Tieszen has correctly pointed out that, under the point of view of mathematics, Husserl can not be taken as an intuitionist, as long as for example, one of the main difference is that even if «entities and mental processes» are sure requested for knowledge, entities like natural numbers for example, those objects itself are not, as object of knowledge, mere mental entities, but «ideal objects». Also in respect to others point of views in mathematics, Husserl strongly posed in respect to other philosophers of mathematics like Frege, Russel, Cantor, e.g., the necessity to «combine an inquiry into the fundamental trait of human

Supposed the limitation of our intellect in fact, we can have an intuitive understanding of only a small part of mathematics, a limitation which is overcome due to our making use of symbols and by means of which the distinction of «authentic and inauthentic presentation of number» is introduced. The necessity to operate with symbolic concepts or graphic signs for number is fact notoriously linked by Husserl to the impossibility to properly count «beyond ten or twelve»<sup>1</sup>. In this sense, after the first fundamental work, the second part of the *Philosophie der Arithmetik* aims to propose a view of arithmetic based on the use of signs.

This second part has yet its roots already in the first one. If we can have intuition of groups of only few elements, in fact, by counting them through enumeration we are already relying on symbolic method. Writes therefore Husserl at the end of the first part:

«Certainly is the determination of the number by means of the easiness of the notorious method of symbolic enumeration the first resource in our disposal. That is a totally-mechanical method; we proceed with that without thinking of the concepts themselves and we are also sure, that the resulting cipher really represent the correct concept-number, if we bring to awareness its meaning. (...) That the mechanical process of enumeration proceed already by sets of relatively small number incomparably faster and surer in comparison with the only in appearance so easy process of one-to-one correspondence, it does not need any proof»<sup>2</sup>.

From here, the problem guiding Husserl in the development of, on the one side, the second part of *Philosophie der Arithmetik* and on the other, the «logical inquiry into the arithmetical algorithm (...) and the justification of utilizing in calculations the quasi-numbers originating out of the inverse operations», aim of the announced *Second Volume* of the same work, is to elucidate how all the remaining parts of the realm of arithmetic is given<sup>3</sup>.

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consciousness, which is intentionality, with the inquiry into the fundamental problems in philosophy of mathematics and logic». This perspective characterized Husserl's works in his linking the subjective and objective aspects of the mathematical problems, connecting yet also the problem of the “superimposition” in both, mathematics and logic, of their very own epistemological and ontological requests. See, R. Tieszen, *Phenomenology, Logic and The Philosophy of Mathematics* (Cambridge University Press, Cambridge, 2005), p. 127f.

1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 339.

2 *Ibid.*, p. 104 – 5.

3 *Ibid.*, p. 7. Husserl answered to this very problem basically establishing a complete parallelism between the system of concepts and the system of signs. The idea is to start from certain concepts, translate them into



Unfortunately yet, the *Second Volume* of the first ground work on the concepts of mathematics was never realized, leaving behind only an history of different approaches and a puzzle of short works on mathematics and geometry. The «logical investigations» have caused him in fact, as he stated already after the *Philosophie der Arithmetik*, «a large amount of problems and underwent several changes», while the psychological one seems to have followed, apparently, a smoother development till the *Logical Investigations* and partially beyond, in the «phenomenological and constitutional investigations» of *Formale und transzendente Logik*<sup>1</sup>.

But however, both, the logical in wider sense and the descriptive psychological will make substantive steps beyond the initial approaches in the mathematical field and which, all together, represents the work, maybe more necessary of what Husserl himself thought, which led to the *Logical Investigations* and which was carried out under both point of view.

Husserl claims there, notoriously, that the work «have arisen out unavoidable problems which have constantly hindered and interrupted the progress of <his> efforts (...) at achieving a philosophical clarification of pure mathematics»<sup>2</sup>. The problems indicated by Husserl were actually methodological questions regarding «the origin of the basic concepts» in mathematics and the deductive logic also applied in science, especially its «formal unity and symbolic methodology»<sup>3</sup>. Certainly, a main problem which played an important yet even thought complex role in Husserl formation through the late '90s, and especially in 1895 and 1896, is the theory of manifolds [*Mannigfaltigkeitslehre*] which, by going beyond all peculiarities regarding special forms of number and extension, gives Husserl a hint as to approach logically the issue of a universal theory of formal deduction and relations, and with that, «a different interpretation of logic, a more comprehensive one, which now encompasses arithmetic»<sup>4</sup>. Obviously, this new approach supposed the «generalization of formal arithmetic» with its method, especially

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signs, and then to operate on the signs in accordance to given rules. The generated signs would in the end interpreted as a concept. This may also let to Husserl's interpretation of the arithmetica universalis as based on computation, and in the belief in the «completeness and soundness of the two parallel systems». Husserl also presupposes therefore, the existence of purely formal concept that correspond to the final result of the computation process.

1 E. Husserl, *Formale und transzendente Logik*, in Husserliana, XVII, cit., p. 91, and *Studien zur Arithmetik und Geometrie*, in Husserliana, XXI, cit., p. 252.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 5.

3 Ibidem.

4 E. Husserl, *Aus der Vorlesung "Über die neueren Forschungen zur deduktiven Logik" (1895)*, in Husserliana, Materialien, I, cit., p. 271.

the calculation<sup>1</sup>, and the release from the boundaries of its application «within the field of quantity» with respect to mathematical and the formal in wider sense<sup>2</sup>.

Also, Husserl's interest was even conduct to confront the works of «mathematicians, (...) who have no less idea than to develop the fundamental parts of formal logic pure-deductively and even in the form of an algebraical discipline»<sup>3</sup>. Here, he thought to be able to find a mathematics free of quantity and methodologically applicable within a much wider realm. Accordingly, he approached for example calculus, which is, with respect of its generality, free from its coupling with number and quantity by arising «higher logical interests than those belonging to the *arithmetica numerosa*»<sup>4</sup>.

The space of inquiry just recalled would and could eventually define Husserl's philosophy of mathematics, by pointing out in fact the epistemological, semantical and ontological aspects of his pre-phenomenological path. However, it was exactly «the philosophical-mathematical investigation» that was led aside by Husserl for good, at least till *Formale und transzendente Logik*, because in need of a deeper understanding of the more basic questions of epistemology and logic. Husserl was in fact fully aware of the decisive and fruitful development under which both, mathematics and logic were undergoing at the time, and their efficacy was in fact never put in question<sup>5</sup>. His interest also in the very last inquiry in both discipline is also well documented by his lectures and in his works, but also is effective “taking part” on the debate among mathematicians over the “imaginary” in arithmetic, over the definiteness (and later on completeness) of an axiom system, as in the case of the encounter with Hilbert<sup>6</sup>. But what seems to remain constant, even though such a *engagement*, is Husserl's recognition of the «lack of investigation» into the strictly «theoretical foundation» of both, which means, in his view, the inquiry into the «presuppositions» whit which they work and that are, traditionally, theme of «metaphysical foundation» and which compose a «science for

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1 According to Husserl, calculation is defined in the *Philosophie der Arithmetik* as «any rule-governed mode of derivation of signs from signs within any algorithmic sign-system according to the “laws” – or better: the conventions – for combination, separation and transformation peculiar to that system», in E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 258.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 6.

3 E. Husserl, *Aus der Vorlesung “Über die neueren Forschungen zur deduktiven Logik” (1895)*, in Husserliana, Materialien, I, cit., p. 268.

4 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 258. See also, S. Centrone, *Logic and Philosophy of Mathematics in the early Husserl*, cit., p. 75f.

5 E. Husserl, *Logik, Vorlesung 1896*, in Husserliana, Materialienbände, I, cit. p. 3.

6 See, for a view on such topics, J.J. Da Silva, “Husserl’s two notions of completeness, Husserl and Hilbert on completeness and imaginary elements in mathematics”, in *Synthese*, 125, 2000, p. 417f. M. Hartimo, “Towards completeness: Husserl on theories of manifolds (1890 – 1901)”, in *Synthese*, 156, 2007, p. 281f. S. Centrone, *Logic and Philosophy of Mathematics in The Early Husserl*, cit., p. 149f.

itself». Such “metaphysical foundation” is anyway not enough, at least, for all sciences «which have to do not with real “things”, but instead with ideas», and where it is rather necessary the apportion of the «science of science»<sup>1</sup>.

Even in the other direction, i.e., the psychological and epistemological side of the logical-mathematical investigations, the work on arithmetic starts to «became shaken», as Husserl affirms in the same *Introduction*. Psychology for itself became in fact a no more theory for explaining logic and all deductive proceeds within sciences. We already know how Husserl starts to pose the question of «the origin of mathematical presentation», i.e., the origin of the mathematical concepts, within a descriptive framework and through «psychological analysis», and we will now see more carefully the fundamental traits of this analysis (2.1)<sup>2</sup>. We will here try to expose Husserl's approach to formal concepts, i.e., categories, in his early work on arithmetic. This aim will carry us to follow the emerging of such concepts by a three-tier act structure which mirrors the concepts analysis already seen in the previous section. An insight into the very problems and limits of Husserl's approach will be given and also, a possible alternative interpretation of the direction of reflection in categorical acts is offered and evaluated. In (2.2) the specific concept of number is investigated under the point of view of his veiled definition, especially with respect to its having been placed within the framework of a theory of formal abstraction and intentionality still in development. Especially taking the problem of abstraction, Frege's and Cantor's basically different approaches will be exposed. The assumption that Cantor's inquiry into the number concept, if takes on the one side common traits with the Husserlian one offers on the other a more ontologically defined concept of number, is evaluated. Some of the main reasons for the still unstable description of the origin of concepts and the following limits of Husserl's approach with respect to the definition of the ontological status of such entities are offered in the last chapter.

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1 E. Husserl, *Logik, Vorlesung 1896*, in Husserliana, Materialienbände, I, cit. p. 6 – 7.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 7.

## 2.1) *Fundamental Traits of Husserl's Analysis of Concepts in the early Works on Arithmetic.*

Husserl's analysis of mathematical elements, in particular of the concept of number, begins assuming the «preconception» regarding the conception of cardinal number, according to which the number is understood «as a complex objectivity», as a «plurality, ensemble, aggregate, collection, set» of unities<sup>1</sup>. The inquiry is in fact directed from the beginning towards the particular kind of multiplicity that makes up the concept of number, that could serve as the “intuitive basis” for the proper presentation of number, i.e., that could offer the basis for the process from which the concept arises. By descriptively analyze that process, and therefore by showing how we come to possess such a concept we may obtain its origin. Hence, the inquiry starts with the concrete phenomena represented by the «concrete multiplicities» to which we refer by determinate number and fall under the general concept of multiplicity, in order to understand: how the more universal and less determinate concept of multiplicity is abstracted from them, and how is even the determinate concept of number is obtained in the same manner.

First, it is anyway possible to ask in general why does number presuppose multiplicity. Husserl claims that both concepts coincide essentially with one another; «the difference consists only in that the concept of number already presupposes discrimination among the abstract forms of multiplicity, whereas the concept of multiplicity does not»<sup>2</sup>. Therefore, Husserl even expressed this way their relation: «numbers are the distinct species of the universal concept of multiplicity»<sup>3</sup>. Numbers arise when we make distinctions, among the various forms of multiplicities that can be given to us, and in fact represent, according to Husserl, a more refined concept, it represents «a considerably deeper level of concept formation»<sup>4</sup>. But in order to understand this formation and even other kind of concept formation, we must start with the lower level

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1 E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in *Husserliana* XII, cit., p. 297. The problem of explaining the reason for the different names used by Husserl for referring to the same conceptual content, and in particular, his referring to the collective or distributive modes of conceiving the whole, is to be found in C. Ortiz Hill, “Tackling three of Frege’s problems: Edmund Husserl on sets and manifolds”, in *Axiomathes*, 13, 2002, p. 80.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 82.

3 *Ibid.*, p. 221. R. Sokolowsky interprets therefore the relation between multiplicity and number in the same sense of the one between genus and species. Cfr., R. Sokolowsky, *The Formation of Husserl's Concept of Constitution*, in *Phaenomenologica*, 18, (Martinus Nijhoff, The Hague, 1970), p. 9f.

4 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 83.

of phenomena.

The starting phenomena, are collections of determinate objects, whose nature is completely indifferent with respect to the mere formation of such collections: to this two series of objects whatever, like (this tree, the moon, Italy) and (this red, love, this window), we assign in fact the same multiplicity, they fall under the same concept. But, how works the transition from a concrete set to a general concept, like the concept of multiplicity? Husserl says:

«Concepts, we assume now, generate through comparison between particular presentations, which fall under the concepts; abstracting from the different characteristics, just the common ones are held, and those are what constitute the general concept»<sup>1</sup>.

In general therefore, concepts arise by means of this articulated process, which immediately recall a long tradition in philosophical explication of concept “generation”. What Husserl stresses immediately is the fact that not the single contents are representing the basis for abstraction, but the concrete collections as wholes in which they are comprehended<sup>2</sup>. If abstraction is preliminarily taken as a «leaving aside» the peculiarities of the constituting elements and their being taken as distinct units<sup>3</sup>, those latter do not constitute for themselves a whole. But what we find as invariant in all collections as wholes, is the fact that we do not simply have a sum of elements, but a single act which holds all the elements together in their distinction<sup>4</sup>. In fact, even if the parts, pieces, fractions etc. constituting the collection are completely heterogeneous, there is at least one characteristic of the whole which is common in every case of collection: the connection of the single elements into a whole. Writes Husserl in his *On the Concept of Number*:

«It is not those particular contents that are, in fact, the basis of the abstraction. Rather, the basis is the concrete collections *as wholes* in which the particular contents are comprised. But even comparison of the collections appears not to

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1 E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in *Husserliana XII*, cit., p. 299.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 15. Cfr., also, C. Ortiz Hill, “Tackling three of Frege’s problems: Edmund Husserl on sets and manifolds”, in *Axiomathes*, 13, 2002, p. 81.

3 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 18.

4 D. Lewis, *Parts of classes*, (Blackwell, Oxford, 1991), p. 3.

offer the desired result. The collections, one might say, consist *merely* of the particular contents. How, then, are the *wholes* to exhibit some common attribute, when the *parts* constituting them may be utterly heterogeneous? However, this specious difficulty is easily resolved. [...] There still is present in them something more than the particular contents: a “something more” which can be noticed, and which is necessarily present in all cases where we speak of “collection”. This is the *connection* [*Verbindung*] of the particular elements into the whole»<sup>1</sup>.

Here, we find the same situation as in different kinds of relations, where, even taking into account the differences between the contents, there is similarity [*Gleichartigkeit*] with respect to the connecting relations. The connections are in fact what can be “noticed” beyond the different contents. Even, we find in different spheres and fields, between psychical or sensuous phenomena, similarities, increment, continuous mediation. In the case of the general concept of multiplicity, we find similar connections as basis for the formation of such a concept. Husserl inquiry moves therefore into the connections peculiar for multiplicity.

For what concern the process of abstraction which should lead to the concept, Husserl recalls first the formations of other concepts of connections (wholes). The case of interconnection between the single points of a line, or the nuances of colors in a continuous series of colors, would lead to the concepts of *continuous connection* and therefore, to the ones of continuum. The latter concept is not a partial content, notable for itself, belonging to the presentation of all the concretely given continua; what we notice in concrete continua are the points or the extensive parts, and the peculiar connections, and those are similarly present in all cases<sup>2</sup>. The same it is now possible, writes Husserl, in the case of the peculiar connection, in objects of the visual field whatever, between the spatial extension and its color, and even between the latter and its peculiar intensity. On such a basis «we can now again build up the concept of a whole, whose parts are unified as seen»; thus, summarizes Husserl: «where we are confronted with a specific class of wholes, here the concept of this latter can only being formed by reflection on the kinds of the similar connections of parts, which are completely characterizing in all the wholes of this classes»<sup>3</sup>.

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1 E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in *Husserliana* XII, cit., p. 299

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 19.

3 E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in *Husserliana* XII, cit., p. 300.

Thus, the fact that the multiplicity is essentially conceived by Husserl «as a whole» poses the concept of multiplicity along with other kinds of wholes which are the basis for the concept of continuum<sup>1</sup>. As basis for such a concept are also to be found either the presentations, and the bestowing of attention, the “noticing”, in particular «on the relations among the points of a line, the moments of a duration, the nuances of colors within a continuous series of colors, or the different qualities of sounds in a “dynamic of tones”»<sup>2</sup>. These presentations are complex ones too, by reason of the composing parts which can be recognized and even the connections as well can be indicated. But, by the continua, are exactly the connections and relations that are of characteristic nature.

If it is in fact easily conceivable that the different nuances of a series of colors presents the parts of a whole, the lack of precise and easily identifiable borders among them makes the unity of the parts and the connections less recognizable. The continuous connection does not arise, by the nuances series but by the duration as well<sup>3</sup>, by summing or adding the different nuances. Rather, it seems to belong as property to the whole itself, and it is not the results of a direct collecting of parts properties. It is also «given to us as connections of many contents», but not due to «a synthetic» or «creative acts» as basis for the «cogency of the contents»<sup>4</sup>. The connection is given, but in a different manner as by the partial presentations which are collectively connected as unities.

The concept of continuum, which for itself is not a partial content of presentation, does arise now according to Husserl, «by reflection on this characterizing connection of contents, as the concept of a whole, whose parts are unified in the form of the continuous connection». The latter does emerge when we abstract from all concrete constituent, and therefore, the concept of «the special class of wholes» which are the continua, «only arises by reflection on the same kind of connection of parts belonging to all wholes of this class»<sup>5</sup>.

Husserl introduces here what we can call the third element by the process or concept arising, which is reflection. This latter for its part, is defined around 1891 normally as the possibility for the consciousness to direct to its own lived-experiences, and in particular to its acts. In this context however, i.e., by continuous connections, it seems more reasonable to think that reflection does direct rather on the content of acts in the

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1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 19.

2 *Ibidem*.

3 Cfr., *Ibid.*, p. 24f.

4 *Ibid.*, p. 41.

5 *Ibid.*, p. 20.

sense of presented intentional object. To the content of such presentations may consequently belong, among the parts, also such connections (i.e., relations) which are in fact directly given and not performed. A basic concept like the continuum does therefore thank its origin to, on the one side, abstraction, on the other reflection.

Anyway, this analysis provides an opportunity to indicate more importantly the structure of the «three kinds of act for the constitution of concept»<sup>1</sup>, especially, the formal concepts or categories. Starting from a presentation or a complex of presentations, we find therefore: a) abstraction b) connection c) reflection

That this schema may and should apply not only in the more notorious case of collective connection and number, but instead, by both kinds of connections (collective and continuous), is justified by the fact that, actually, wholes as such are taken into account here:

«[...] Things stand here as in the case of many other classes of relations: there can be the greatest of differences between the related contents, and yet there be identity of kind with respect to the combining relations. Hence, similarities, gradations [*Steigerungen*], and combinations involving continua are found in wholly heterogeneous domains; and they can occur between sensuous contents as well as between psychological acts. It is, therefore, quite possible for two wholes to be similar *as wholes*, although the parts constituting the one are completely heterogeneous to those constituting the other»<sup>2</sup>.

All kinds of wholes are firstly taken into account, and that allows Husserl to assume collective and continuous connections, multiplicity and continuum within the same framework. Referring to *wholes* as such does not anyway delete the important differences enlightened by the concept analysis itself. But for Husserl it is possible to speak about connection in both cases, the «collective» and the «continuous connection», even if, at least for the former, what it is «treated as a relation is actually a *psychical act*», due to the «*homogeneity of function*» shared by psychological and «primary relation»<sup>3</sup>. «There is *de facto*», writes Husserl in fact, «so much in common between the primary relation and the psychological relation, as to their essential moment [*Hauptmoment*], that I

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1 J. N. Mohanty, *Husserl and Frege*, cit., p. 23

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 18 – 9.

3 See also, S. Centrone, *Logic and Philosophy of Mathematics in The Early Husserl*, cit., p. 10.



fail to see why a common term would not be justified here»<sup>1</sup>. This essential moment could be indicated, generally, in the function of connecting of objects that for themselves would be result unconnected.

But to the analysis of collective connection and multiplicity is reserved special attention anyway, not only because of the aim of the *Philosophie der Arithmetik* with respect of the concept of number, but also because

«Collective combination plays a highly significant role in our mental life as a whole. Every complex phenomenon which presupposes parts that are separately and specifically noticed, every higher mental and emotional activity, requires, in order to be able to arise at all, collective combinations of partial phenomena. There could never even be a representation of one of the more simple relations (e.g., identity, similarity, etc.) if a unitary interest and, simultaneously with it, an act of noticing did not pick out the terms of the relation and hold them together as unified. This “psychical” relation is, thus, an indispensable psychological precondition of every relation and combination whatsoever»<sup>2</sup>.

To collective connection is in fact also to be linked the logical function corresponding to the syncategorematic word “and” in all its practical uses, for instance in its «linking two or more names and indicating therefore the collective combination of the content named»<sup>3</sup>.

But even thought, that does not prevent to recognize the differences between connections, primary, psychical and «metaphysical», and different kind of connections, collective and continuous<sup>4</sup>. This is also indicated by the fact that Husserl's analysis comprehends a critical reading, in the second chapter of the *Philosophie der Arithmetik*,

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1 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 73, note 1.

2 Ibid., p. 75. Cfr., also Dedekind, who in his 1888 *Was sind und was sollen die Zahlen* notes similarly: «If we scrutinize closely what is done in counting an aggregate or number of things, we are led to consider the ability of the mind to relate things to things, to let a thing correspond to a thing, or to represent a thing by a thing, an ability without which no thinking is possible». In R. Dedekind, *Was sind und was sollen die Zahlen*, cit., p. III.

3 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 75. The question of syncategorematic terms will be retaken, for example, also in *Logical Investigations*. Cfr., E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 311.

4 It is in fact notable here that Husserl defines the whole composed by <extension – color>, without referring explicitly to the Brentanian «Metaphysical connection» or to Stumpf's definition in term of «psychological parts», from his well know *Über den psychologischen Ursprung der Raumvorstellung*, cit, p. 9. He refers to both indications only in the footnote.

of different theories that also deal with collective connection, and that consequently, give a different explanation of the origin of the concept of multiplicity and number<sup>1</sup>. Part of them reduces now the collective connection to a «simultaneous presence of the contents of set» in consciousness or to their «temporal succession»<sup>2</sup>. Other deals rather with the presentation and the intuitive form of space or time<sup>3</sup>. Finally, also the relations of identity of every content with itself, and difference, among all contents, are taken into account as possible theories<sup>4</sup>.

Such a critical examination not only provides the historical background of Husserl's investigation or a necessary counterpart for his exposition; rather, «brings into relief the characteristic difference» of collective connection from the continuous one<sup>5</sup>. This may helps to understand the possible relationship between the two kind of phenomena on which the connections are founded; if one represents an higher function with respect to the other, and if this distinction leads to recognize some “less evident” characteristic in the concept-constitutive structure seen above<sup>6</sup>.

In a very general manner, one can already stress with Husserl one first characteristic. One could obviously treat consciousness as a continuum of phenomena, or as composed by continua. But, who would ever or actually represent them as a set? At any time and in any way, we can form various set or collection from there, but by doing this we are conscious of a peculiar «spontaneity»:

«It is important to stress that a collection [*Inbegriff*] (an authentic presentation of a multiplicity) can have as elements only such contents as we are aware of in the manner of things separately and specifically noticed [*für sich bemerkte*]. All other contents, however, which are present only as things incidentally noticed, and which either cannot be separately noticed at all (like the points of continua), or merely are not, for the moment, separately noticed: - all these cannot yield

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1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 22f.

2 Ibid., p. 24 – 5.

3 Ibid., p. 33f. Among them, Lange, Kant, Baumann, Aristotle are named by Husserl.

4 Ibid., p. 49f.

5 Ibid., p. 22.

6 D. Willard notoriously proposed for example, to interpret historically Husserl's position by tracking it back to Lotze, who «[...] presents his general view of how relations come before consciousness in activities of “higher order”. [...] the activity of representing a relation is called “higher” by him in a sense that precisely coincides with what Husserl later meant by the terms ‘founded’ and “higher order” as applied to acts of consciousness». D. Willard, *Logic and the objectivity of knowledge: a study in Husserl's philosophy*, (Ohio University Press, Athens, 1984), p. 30.

elements out of which a collection is constituted»<sup>1</sup>.

Not all the wholes are multiplicity, but all multiplicity are wholes, where it would be therefore «a matter of a unity in an act of representing that both throws contents into relief and gathers them together, or matter of a unity of interest»<sup>2</sup>. This “spontaneity” is represented therefore by what Husserl indicates as the «a unitary interest» with the «unitary noticing» that distinctly picks out and encompasses the very different contents we have just seen and which, in this peculiar sense, «makes the many into one»<sup>3</sup>. Also in the case of collection, it is in fact for Husserl this “phenomenon” «to be explained»: «that the same content appears to us now as “one” and now as “many”»<sup>4</sup>.

Even in the case of collection we can interpret this latter as a whole. It is basically a presentation of given objects as unity, in which the presentations of the single objects are comprehended as partial presentations and that, even if the connection between such parts is far more “loose” than in other cases. The kind of *collective connection* is in fact characterized by such a nature while it represents a connection<sup>5</sup>.

In this sense, collection cannot be reduced to other kinds of connection (coexistence in consciousness, for example)<sup>6</sup>. It cannot also be reduced on the simple «form of difference» among parts or pieces; according to him in fact, difference «is not a presentation content immediately noticeable with the grounding elements», but rather is «negative judgment based on it»<sup>7</sup>. The judgment based on the presentation of an elephant and the moon which characterized the two as different supposes in fact, as more original, that we can have the two as «distinct» in the presentation. Husserl affirms in fact: «the judging function of the differentiation already supposes evidently distinct contents, noticed for themselves, those contents could not just became noticeable by the

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1 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 23.

2 Ibidem.

3 D. Lewis, *Parts of classes*, cit., p. 6.

4 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 155.

5 Notoriously, in the inquiring into the nature of this peculiar connection, Husserl criticizes some interpretations, which have their ancestor in Kant and Aristotle, that indicate in time as form of intuitions the origin of numbers. But in Husserl views, time could only play the role of a «psychological precondition», and that because, on the one side, the presentations of multiplicities are «results of processes, are wholes of elements successively formed», on the other side, it is obvious that the partial presentations unified in the presentation of multiplicity are present at the same time in consciousness. But the simultaneity does not enter in the contents constituting the concept of multiplicity, nor the temporal series. Cfr., E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in Husserliana XII, cit., p. 310.

6 E. Husserl, *Philosophie der Arithmetik*, in Husserliana XII, cit., p. 22f.

7 Ibid., p. 56.

fact that they were differentiated»<sup>1</sup>.

Here we find another aspect of the descriptive inquiry into the origin of concepts. By trying to indicate the kind of lived-experiences which one has in possessing the concept of multiplicity, Husserl indicates also how it is not mandatory the recognition of the difference between objects, i.e., that the presentation of the multiplicity is more original than differentiation, which is a concept based on a «negative judgment». But that means also that as long as for Husserl the concepts of the constant forms of connection do arise through reflection, and as long as a form of connection which is difference cannot be “a presentation content”, reflection can only be directed to an act and not the content.

### *2.1.1) Formal Concepts and Abstraction*

Now, for what concern specifically the formation of multiplicities *in concreto*, is not only question of a passive assuming or noticing a content, but there are even spontaneous functions, which we link to the contents, as we have just noticed.

According to our will or interest, we can comprehend together discrete contents, or from already formed ones, take away or add contents. An unifying interest direct to the totality of contents and, together with it, an act of notice, single out the contents, where the intentional object of such acts results the presentation of the collection of contents. Resumes Husserl very briefly: «this way the contents are at the same time and together present, are *one*, and by reflection on such a unifying of separate contents operated by those psychical acts, originate the general concepts of multiplicity and number»<sup>2</sup>. In fact, the mere being together of objects in space isn't yet the collective unifying in our presentation that is essential for number; such a unifying is first realized by us through that psychical act of interest and notice.

Husserl concentrates therefore only on the kind of act that, on the one side, «sorts outs each of the unities», and on the other and «at the same time holds each together with the others, this unifying all of them»<sup>3</sup>. The phenomenon under consideration here, is in fact the unitary treatment of the different multiplicities of objects and how we connect objects and unify them in a new object. «Those homogeneous connections in all cases of speaking of multiplicities are now the foundations for the formation of the general

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1 Ibid., p. 57.

2 Ibid., p. 317.

3 Ibid., p. 337.

concept of multiplicity»<sup>1</sup>. The justification for this analysis lies, in Husserl's eyes, on the fact that the formation of the concept of number has to be explained due to common element of all «determinate wholes», which is the act of “collecting” implicit in all their formation.

Here the determinate whole forms the intuitive basis and, on its own, it is the result of a comprehensive view of original unities, where a process of attention which exclude or include some of them, establishes which unity is combined into the whole without any reference to the specific determination or nature of the unities combined or their ontological status (object of perception, phantasy, physical or psychological)<sup>2</sup>: apples, trees, but even emotions and Italy can be counted<sup>3</sup>. The unities combined are in fact «contents whatever», which are thought as «something or other» and as «one thing or another», and are according to Husserl, the first «formal concepts or categories»<sup>4</sup>.

At this very point we see how the proper function of abstraction comes in question by the formation of this first “formal concepts” or “categories”. We know in fact that, for Husserl, no concept can be thought without foundation in a concrete intuition. Hence, even when we represent the concept of the multiplicity we always have the intuition of some concrete multiplicity by means of which, indeed, according to Husserl, we «abstract this general concept»:

«In what way, then, does this abstraction proceed? As we have established, total abstraction from the peculiarities of the individual contents colligated [*kolligiert*] must be effected, retaining, however, their connection. (...)

To disregard or abstract from something means merely to give it no special notice. (...))»<sup>5</sup>.

The grasp of the contents, and the collection of them, is of course the precondition of the abstraction. In the abstraction therefore, the «isolating interest» is not directed upon the contents, but rather exclusively upon their connection in thought - and that connection is all that is intended.

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1 Ibid., p. 19.

2 Ibid., p. 298.

3 Ibid., p. 16 – 17.

4 Ibid., p. 84.

5 Ibid., p. 79 – 80.

«The abstraction to be carried out can now be described in the following manner: Determinate individual contents of some sort are given in collective combination. In abstractively passing over, then, to the general concept, we do not attend to them as contents determined thus and so. Rather, the main interest is concentrated upon their collective connection, whereas they themselves are considered and attended to only as some contents in general, each one as a *certain something*, a *certain one*»<sup>1</sup>.

Hence, multiplicity is nothing other than, as Husserl express himself: a certain something and a certain something and a certain something, etc.; or, «some one and some one and some one thing, etc.; or, more briefly, *one and one and one*, etc».

We can see now, how the question raised by Husserl is consequently not much the ones concerning the definition of the concepts, even of certain formal concepts, which is, even if possible, less informative and “original” as we have already seen; but rather the ones about the psychological characterization of the phenomena on which the abstraction of this concept rests, this representing the phenomena which are to be indicated instead of the definition, making possible the «psychological-descriptive» clarification aimed.

The function of abstraction seems to lead from “concrete” presentations to the concept of “something” and “one”, where therefore the so abstracted elements are considered by means of the «selective interest» in their «connection in thought». The concrete presentations, i.e., object presentations, give the basis for the concept of “something” by abstracting from all their single components, and it finds logical application, as formal concept, with all presented objects.

In order to understand now, what Husserl means with such “formal concepts”, it is first to stress that what Husserl calls an «abstract name» such as “something” or “one”, can refer to the «abstract concept as such» or to «an object whatever which fall under this concept»<sup>2</sup>. The formal concept of “something”, for example, refers therefore to the “unities” fully emptied of content and which come in play in the collective combination<sup>3</sup>. But the descriptive investigation into its origin does presents a more complicated scenario.

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1 Ibidem.

2 Ibid., p. 136.

3 Ibid., p. 84.

According to Husserl its origin must be found, like the collective unification, in reflection:

«Something is a name which fits every possible content. Every real thing or every thing of thought is a “something”. (...) Obviously the concept of the “something” owes its emergence to reflection upon the psychical act of presenting, every determinate object being given precisely as the content of this act. Naturally, the concept “something” can never come to be thought except if some content be present in respect of which the reflection may be performed»<sup>1</sup>.

In fact, by looking closely to how Husserl characterizes the process involved in the grasping of the concept of “something”, what seems to emerge is the fact that any partial content of any objects could actually correspond to the “content” something. That means also, the concept “something” could not be gained due to a sort of “empirical abstraction” which would suppose a common element among all objects. Writes in fact Husserl in his *Über den Begriff der Zahl*:

«Naturally, the concept of something is not grasped due to any kind of contents-matching [*Inhaltsvergleichung*] of all objects of physical and psychical art. Such a matching would results in nothing. The “something” isn't in fact any partial content. That wherein all objects – real and possible, actual and not actual, physical and psychical, etc. - agree, is just in being contents of a presentation or they can stand for contents of a presentation in consciousness»<sup>2</sup>.

Taking in consideration such statements regarding the nature of the formal concept of “something”, “one”, its origin presents many explanatory difficulties. Two aspects of Husserl's argument seem to deserve some more attention. On the one side, the role played by the “psychical act” of presenting: it could be in fact questioned, if it is the reflection upon the act of presentation which must be necessarily present in order to obtain the abstract concept of something, or if it is rather the determined intentional object itself that serve as ground for abstraction. On the other, the nature of the object of

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1 Ibid., p. 335 – 6.

2 Ibid., p. 336.

presentation, whether it is a simple object or, eventually, a “categorical” one, «a thing of thought»<sup>1</sup>. Surely, reflection does not direct on the intuitive objects, but rather on the acts themselves that are directed to the objects. This these is to be deduced from Husserl's analysis of Sigwart's and Wundt's *Logics*<sup>2</sup>.

### 2.1.2) Sigwart and Wundt and the Origin of the Formal Concepts in Reflection on Acts.

For what concern Sigwart, he already stressed in his 1878 *Logik* the peculiar «position of the presentative life» within which, through «*the sensuous impressions originated by the countable things*, the presentation of the number is obtained», and «by the simple way of *abstraction* are obtained from different groups of object, which the number corresponds to, the presentations of the number 2, 3, 4 etc.»<sup>3</sup>. This, according to Sigwart, is the common opinion shared by many philosophers. Among them, Mill's opinion in the *System of deductive and inductive Logic* (criticized by Husserl), according to which, supposed the nonexistence of the number *in abstracto*, there must be supposed identity between «the properties of numbers and the properties of things»<sup>4</sup>; or even much more clear in Bain's *Logic*, where «the number» is «a series of discrete sensuous impressions, colored extensions, sounds» and «unit the abstraction of countable and concrete things»<sup>5</sup>. However, for Sigwart, «the one cannot for sure lay on the sensuous impressions» and in the same sense, «the mere abstraction from concrete things is not be indicated as the path for gain unit and the more simple concept of numbers»<sup>6</sup>. Eve if we can indicate one or two presentations,

«with that we are not already saying, that here and there the presentations of one and two are already given with the objects, and that we can abstract for instance, without any subsequent work, the presentation of the color Red from a number of red things, and in the same manner the presentation One from so and so many things, or the presentation Two from so and so many couples. Therefore, when we

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1 Ibid., p. 335.

2 The «critical study of Sigwart's investigation leaded» Husserl to the development of the theory exposed, Cfr., Ibid., p. 86. Hereafter, Wundt's insights on the concept of number follows the path of Sigwart's work. Husserl refers to: C. Sigwart, *Logik*, Voll. II, cit., p. 39f..

3 C. Sigwart, *Logik*, Voll. II, cit., p. 39. Sigwart's Italics.

4 J. S. Mill, *System of deductive and inductive Logic*, Voll. I, 2<sup>nd</sup> Book, (Harper Brothers, New York, 1882), p. 319.

5 A. Bain, *Logic*, Part II, (Longmans, Green Reader, Dyer, London, 1870), p. 200.

6 C. Sigwart, *Logik*, Voll. II, cit., p. 40.



ask then, in what all the things that we pose within the natural flow of our thought as One are identical – the sun, the moon and stars, animals, trees, strokes of the clock etc., hence, they are with respect to their sensuously perceptive content in an absolute way so different, that absolutely nothing common is to be found in there».<sup>1</sup>

To hear tree strokes is not have a presentation of a series, nor the presentation of the number tree. Sigwart stresses therefore the role and the function of the act and, especially, the becoming aware of this act itself. Writes in fact in his *Logik*:

«only by comprehending them together thanks to recollection and by newly becoming aware of the transition of consciousness itself, the presentation of the *multiplicity* can arise. In the same way, the presentation of unit supposes that we differently become aware of the closed off and delimited act of perception of an object in the difference with its repeated perception. Every thing we pose as One in the sensuous realm is sorted out through such a closing-off and comprehending act from the continuum. [...] The changing of sensation is the precondition of this function, but such a passive changing is not the function itself»<sup>2</sup>.

Therefore, for Sigwart would be impossible to understand how we consider the same as one or as many if here we do not become aware of the act-delimiting and of the proceeding involved, and we do not even suppose the «*purely formal nature*» of the functions here involved<sup>3</sup>. This awareness, which seems to assume the traits of a reflection, summed with the critic against the interpretation of the possible content of the presentation on which number presentation would be based, must have represented a point of interest for Husserl, and even for his interpretation of Wundt.

Now, in his 1880 *Logik* Wundt starts by stressing that «the point of departure for the development of the concept of number is the *unit*», and its origin «seems» to must be reconnected, within the function of counting, to the «abstraction from the single object»<sup>4</sup>. The number would be in this sense only an «after image» [*Nachbildung*] of the

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1 Ibidem.

2 Ibid., p. 41. Italics mine.

3 Ibid., p. 42. Sigwart's Italics.

4 W. M. Wundt, *Logik*, (Ferdinand Enke, Stuttgart, 1880), p. 468.

single things, whose distinguishing properties are «disregarded». But, according to Wundt, «it is clear, however, that the things can only become *enumerable* by thought by means of grasping them as units»<sup>1</sup>. For sure, the presentation of things that could offer the basis for an abstraction leading to the concept of unit does actually give cause for such a characterization, as for instance, by their being «closed off and independent», but now

«it would be completely unintelligible how this motivation is to become effective if our thinking did not have the ability to grasp the individual object as a unit. *So the genuine bearer of the concept of unit is the individual act of thinking. Therefore that alone is enumerable which can always be separated into individual acts of thinking bound up with one another*»<sup>2</sup>.

What seems to emerge from Wundt's quote, is the fact that the content of presentations and even their properties do not suffice in order to obtain the concept of unit, where in fact the thought already grasp them as such. Then, the function of counting must be linked to the connection of the single acts of thought:

«The counting function is always constituted by a connection of the single acts of thought in *composed unities*, whatever this function would be even directed to. Under this respect, the counting function is just a special expression of the logical function of thought itself. It arises in the connection with subsequent acts of thought when it is completely abstracted from the content of those latter»<sup>3</sup>.

Now, according to Husserl, Wundt indicates the «bearer» of the concept of unit in the «single act of thought», where therefore, an abstracting act is necessary for the arising of the concept of unit and where this act composes therefore the «content» of the same concept<sup>4</sup>. But where the first instance, the abstracting act, is common to the “origin” of all concepts, the second poses the problem of its interpretation. The “content” composing the concept of unit seems to must be interpreted in the sense of the extension

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1 Ibidem.

2 Ibidem. Italics mine.

3 Ibidem. Wundt's Italics.

4 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 87.

of the concept, which would be, in the case of the concept unit, Wundt's «bearer», the single act of thought. This interpretation should in fact be linked to the famous principle from the following quote of the *Philosophie der Arithmetik*:

«It is impossible to explain the origination of the number concepts in the same way as, say, that of the concepts *color*, *shape*, etc., which, as positive Moments in the primary content, are isolated through mere analysis thereof. Therefore it was not only *Aristotle* who was in error, when he attributed the numbers and the *one* to the ἀισθητὰ κοινὰ, to the objects common to all the senses, but also *Locke*, when he assigned the *one* to the concepts that have their source simultaneously in the domain of sensation and in that of reflexion. The enumerated contents certainly can be physical as well as psychical, but the number concepts and the *one* belong exclusively to the domain of reflexion. And accordingly it is also absurd from the outset when *Locke* (like so many after him) considers the represented numbers to be “primary qualities”, as perfect copies of original qualities, which have their subsistence in the things themselves and independently of our mind»<sup>1</sup>.

What Husserl seems in fact to affirm, is that to the concept of “one”, “number” or “unit” cannot be linked any “primary qualities” of any presentations, i.e., the concept of unit cannot arise from the mere presentations of the objects where reflection cannot find any abstractive basis in there.

Another argument in order to clarify if formal concepts do arise by reflecting on acts and not their content, may be deduced from the fact that, for Husserl, «the origin of the two concepts of unit and multiplicity correlates». He writes in fact, surely pretty convoluted, that «the concept of unit stands in the relation of correlative to the concept of the multiplicity. But this latter is nothing other than the concept of the collective whole. Thus the concept of the unit is nothing other than the concept *collective part*»<sup>2</sup>. Therefore, if we may establish the origin of multiplicity, i.e., collective whole, from reflection on act and not on content, relatively also unit would be establish in this sense. Multiplicity does not basically differ yet from the concept of “collective wholes”, where the unit would represent therefore collective part.

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1 Ibid., p. 85.

2 Ibid., p. 152.

The presentation of a multiplicity represents surely a whole composed of parts, whose connections do not yet belong to the presentation content for itself anyway. In fact, with respect to the famous example of the presentation of a rose, Husserl stresses that, if we are dealing for example, with the representational whole which we call “a rose”, we can arrive at its various parts successively by analyzing the whole. So we find the leaves, the stem, in general, the physical parts. Then we can also find the color, its intensity, the scent, etc., which means, the properties. Each part is picked out by a distinct act of noticing, and is held together with those parts already segregated. As the immediate consequence of the analysis there results a totality, i.e., the totality composed by the separately and specifically noticed parts of the whole. Moreover, Husserl continues, «with regard to the unification of the parts in the intuitive whole, there are still to be added the combining relations - as distinct and specifically determinate primary contents that are relational». In the rose example, we would find, for instance, the continuous combinations among the leaves, or even the combinations of the properties such as redness and spatial extension. This kind of combining relations are therefore to be found in the content of the presentation; but, they differs essentially from the kind of connection which collectively combine the parts of the whole. Writes in fact Husserl:

«Thus these combining relations present themselves as, so to speak, a certain “more” in contrast to the mere totality, which appears merely to hold its parts together, but not (really) to combine them.

What, then, distinguishes the case of these primary combinations from that of the collective combinations? Obviously it is this: that in the first case a unification is intuitively noticeable *among* the representational contents, while this is not so in the latter case»<sup>1</sup>.

The collective connections are not “primary relations”, which means, they are essentially different from the continuous connection and the metaphysical ones (extension – color), or to other form of relation like similarity, increment or «logical implication», which, as «physical phenomena» in a Brentanian sense, «belong under this respect to the same class»<sup>2</sup>. Collective connections are in fact psychological relations, i.e., intentional one, where the existence of one of the terms in the relations is not

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1 Ibid., p. 72.

2 Ibid., p. 330. F. Brentano, *Psychologie vom empirischen Standpunkte*, Erster Band, cit., p. 101f.

mandatory<sup>1</sup> and the relation does not determine the nature of the elements connected<sup>2</sup>. Psychological relations do not even suppose the physical one, and that means also, among the parts of the whole by a collective connection is not to be supposed any “primary relation”.

We have in fact already saw how also spontaneous functions are involved in the formation of numbers and multiplicities *in concreto*, and how therefore «the contents are, in this case, unified precisely by the act alone». Multiplicity arises as concept from reflection on the psychological relation of collective connection indeed. Collective connection is therefore a pure formal relations, independent from any primary relation, and multiplicity, and if we accept Husserl's established “correspondence” also unit, represent a formal concept, or, as he express himself, a category<sup>3</sup>:

«We can with full justification designate the concepts *something* and *one*, *multiplicity* and *cardinal number* - these most general of all concepts, and most empty of content - as form concepts or *categories*. (...) The all-encompassing character of these concepts finds its simple explanation in the fact that they are concepts of attributes which originate in reflexion upon psychological acts. And such acts can be brought to bear upon all contents without exception».<sup>4</sup>

What characterizes them as such is the circumstance that «they are not concepts of contents of a determinate genus, but rather in a certain manner take in any and every content». If they originates from reflection upon psychological acts, and if such acts “can be brought to bear upon all contents without exception” as seen, may guarantee for the fact that they take in any kind of content and any case whatsoever.

But by speaking about the difference between the two classes of relations, Husserl goes now further in characterizing the psychological relations. The characteristic difference between the two classes of relations can in fact also be marked by saying that primary relations belong in a certain sense among the representational contents of the same level as their fundamental elements [*Fundamente*], which cannot, however, be said of the

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1 An angel can be putted in relation to the moon, where instead, the non-existence of the extension implies the non-existence of the color.

2 While the relation of similarity, for instance, already determines the nature of the terms in similarity, as “similar” indeed.

3 Cfr., D. Willard, *Logic and the Objectivity of Knowledge: A Study in Husserl's Philosophy*, cit., p. 54.

4 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 84 – 5.

psychical relations. In the first case, the relation is immediately given along with representing the elements, as a moment of the same representational content. Instead, in the second case of the psychical relation, «in order to represent the relation there is first required a reflective act of representing bearing upon the relating act». The immediate content of this latter is the act instituting the relation, and only through that, so Husserl, «does the representation bear upon elements. The related contents and the relation thus form, as it were, contents of distinct levels»<sup>1</sup>.

Here we see the first traits of Husserl's insight into the articulation among the acts involved in cognition, where the intentional act of higher order are founded on the lower ones. At the time of the *Philosophie der Arithmetik*, such an articulation not only originates other questions and problems, but basically starts to define some traits of Husserl's view on the concepts of relations.

### 2.1.3) *An Alternative Interpretation*

In relation to the origin of the formal concepts of “something” and “multiplicity” Husserl stresses in fact the role of abstraction in this sense, and in particular, one of the aspect belonging to abstraction as characterized by Husserl, which is the function of «the unitary interest and the noticing». In the case of the concept of multiplicity for example, we see Husserl calling in place the function of an act of «higher order», the interest indeed, which «lets arise and comprehend different contents for themselves»<sup>2</sup>.

Now, in the formation of “totalities”, which are basically composed unities (unities of unities, sets, etc.), a concrete presentation must be present as basis for the abstraction. In the case of totalities, a whole is in fact present, whose parts are connected by means of a relation<sup>3</sup>. The parts, already conceived as whole for themselves, must be comprehended as parts of the higher whole in order to establish a relation among them and the whole itself, where there must also be yet, stresses Husserl, no identity established among the parts. In this sense, we see how also in the case of complex formations the function of abstraction mentioned above is called explicitly in question. Therefore, the more complex concept would in this sense arise due to reflection, in this case, on the act establishing the relationship.

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1 Ibid., p. 69.

2 Ibid., p. 92.

3 Like, for instance, in the case of two sets, the one bigger than the other.

But now, according to Husserl, the concept of the more complex relationship would not be possible to establish only due to reflection on the founding act. Writes in fact Husserl:

«As to the psychological foundation of these more intricate modes of formation, one recognizes that there are here present *psychical acts of higher order*, i.e., psychical acts which are directed in turn upon psychical acts and bear upon primary contents only through mediation of these latter. If in one act we represent several totalities, there is required for the formation of each particular totality a unifying act of the type described above. And if each of them is to be consciously held fast in its unity, and thought as unified with the others, then a psychical act of *second order* must be directed onto the acts of *first order* - upon which the specific unification of the partial totalities rest - and only through them onto the primary contents».<sup>1</sup>

What it is now interesting here, is the fact that, according to Husserl, the “psychical act” of higher order is directed through the acts of first order to their contents. That would be in fact the only way one could held fast several totalities in unity. But Husserl here also importantly stresses, that «already by the most simple sets», i.e., by sets to which belong elemental contents, «acts of the second order are present, to the extent, that is, that the particular contents are thrown into relief by special acts and only then are encompassed by a common act which unites them all»<sup>2</sup>.

That slightly unclear formulation could lead to interpret in a different way the direction of reflection by the arising of formal concepts, which would, on the one side, see Husserl's position in the *Philosophie der Arithmetik* as more close to the one of the *Logical Investigations*, where in fact the formation of the “universal concept” do not lead to a reflection only on the categorial act, but on the corresponding peculiar object of this latter<sup>3</sup>; on the other side, to see abstraction as a categorial act in more wide sense, by being directed also to primary contents.

The act which “thrown into relief” is obviously an act of interest which, at the time of the *Philosophie der Arithmetik*, is also a form of attention or noticing, which is direct

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1 Ibid., p. 92.

2 Ibid., p. 93.

3 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/2, cit, p. 670.

through act of first order to their “primary content”. This «unitary act of interest» and along with it the unitary noticing, distinctly picks out and encompasses various contents. Then, a reflection let arise the concept of collective connection by directing upon the psychical act which originates the totality. Writes in fact Husserl:

«collective unification is not intuitively given in the presentation content, but instead has its subsistence only in certain psychical acts that embrace the contents in a unifying manner. [...] And obviously these acts can only be those elemental acts that are capable of taking in any and all contents, however unlike they may be. So, then, a careful examination of the phenomena teaches the following: *A set originates in that a unitary interest - and, simultaneously with and in it, a unitary noticing - distinctly picks out and encompasses various contents.* Hence, the collective connection also can only be grasped by means of reflection upon the psychical act through which the totality comes about»<sup>1</sup>.

In this sense indeed, the concept of collective connection seems to be closely related to the one of “something”, “one” and “multiplicity”, i.e., bestows a formal-categorial function on a given content. Such a concept, as all concept of wholes, does arise due to reflection on the connections among its parts or pieces, but while in the case of the continuous connection, the relations were to be found in the content of the presentation on which reflection must anyway be based, by the collective connection that is not possible, as we have seen. There is no characteristic of a group of object which can make them “collectively connected”.

Here reflection seems therefore to be directed on this psychical act of first order, which can be probably identified with abstraction, which, according to its definition, represents the best candidate in order to function as such an act. Husserl describes in fact as follow abstraction:

«It is easy to characterize the abstraction which must be exercised upon a concretely given multiplicity in order to attain the number concept under which it falls. One considers each of the particular objects merely insofar as it is a “something” or “one”, simultaneously retaining the collective combination; and,

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1 Ibid., p. 73 – 4.



in this manner, there is obtained the corresponding general form of multiplicity, one and one and ... and one, with which a determinate number name is associated. In this process there is total *abstraction from* the specific characters of the particular objects. But this neither means nor implies that the concrete objects have to disappear from our consciousness. To “abstract” from something merely means to pay no special attention to it. Thus, also in our case at hand, no special interest is directed upon the peculiarities of content in the separate individuals, while those peculiarities, nonetheless, do constitute the pre-condition of the acts of reflection which yield the “units” of the respective number, and are the ground of the distinctness of those units»<sup>1</sup>.

Therefore, we will characterize closer the function of abstraction in the following section. But some preliminary remarks are here mandatory in order to understand the role abstraction may play, in our understanding, by the analysis of concept.

The fact that the clarification of the sense of the formal concepts of «multiplicity and number» seems to recall the function of a «psychical act of second order»<sup>2</sup>, first introduces in fact the question about the relationship between formal concepts of such a kind and the sensuous, since for such object there is no equivalent in the realm of the sensuous of the empirical experience. Indeed, at the very base of multiplicity and its givenness must be supposed a categorial activity that synthetically unifies objects already present as “something in general”.

The concept of number as determinate multiplicity would originate therefore by reflection on the act of collectively connecting. The collective connection is in fact the common characteristic belonging to all concrete wholes; upon the proper act of such connecting from which originates collective connections could be operate abstractive attention, which is a sort of reflection directly linked to the act of collectively connecting. This latter act consists essentially in discerning discrete contents already given in consciousness and, at the same time, comprehending them in a unity<sup>3</sup>. The act of collectively connecting is therefore intended as an act of second order which, while collectively unifies them, refers to the psychical act in which the corresponding discrete contents are discerned for themselves, i.e., proper abstraction.

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1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 337.

2 *Ibid.*, p. 74.

3 *Ibid.*, p. 337.

Collecting is indeed, according to Husserl, a founded act which bestows for its part categorial formations over an already given content, which is understood, at the time of the *Philosophy of Arithmetic*, in terms of the act selective attention, an act of selective interest and discernment:

«In reflection upon that elementary act of selective interest and discernment, an act which possesses as its content the presentation of the whole, we acquire the abstract presentation of collective connection. It is by means of this notion that we form the general concept of multiplicity as a whole which combines parts in a merely collective manner»<sup>1</sup>.

Only then, by means of the reflection upon the act of combining that we acquire first the presentation of the collective combination and therefore form the general concept of multiplicity and number.

Besides the difficult formulation of the function of abstraction, which seems to represent a complex function not immediately reducible only to the “not pay special attention”, and that, even if we set aside the interpretation mentioned above, the proper definition of the content of such acts seems to pay the higher price, at least in the *Philosophie der Arithmetik*. The question about the proper definition of the nature and role of the “logical content” of the presentation in its relation to abstraction and reflection seems in fact not clearly settled. And since the role of the content seems to be likely predominant, the question how a formal concept like “something in general” can emerge from the reflection upon a determinate object of presentation, takes the shape of the question, unsolved at least at the time of the *Philosophie der Arithmetik*, about the proper understanding of the categorially formative activity.

It is in fact only in the *Logical Investigation* that Husserl tries to deeply understand such an activity. By an inquiry upon the relation between the categorial act of intuitional nature and the intentional objectivity, he stresses in fact that the formation of what he calls now «universal concepts» does not lead to an explicit reflection upon the corresponding categorial act. He writes in fact in the *Sixth* of the *Logische Untersuchungen*:

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1 Ibid., p. 335.

«Not in these *acts as objects*, but in *the objects of these acts*, do we have the abstractive basis which enables us to realize the concepts in question. (...) It is in fact obvious from the start that, just as any other concept (or Idea, Specific Unity) can only “arise”, i.e. become *self-given* to us, if based on an act which at least sets some individual instance of it imaginatively before our eyes, so the concept of Being can arise only when *some being, actual or imaginary, is set before our eyes*»<sup>1</sup>.

This assumption and this fundamental changing in Husserl interpretation with respect to the necessity of a reflection directed only on the categorial act in order to obtain the “universal concept” holds, according to Husserl, for all kinds of universal concept, and among them, «holds of all *categorial forms* (or of all *categories*)»<sup>2</sup>. In fact, by looking closely to how Husserl explain now, even if in a less articulated way, how we reach the formal concept of *set* and the kind of conceptually universal consciousness connected with its peculiar givenness, we still find the formative activity leading to the peculiar content. But now, Husserl explicitly asserts that the reflection does not direct on the acts, but rather, we perform directly a peculiar grasp of the special kind of corresponding object the act presents. Writes in fact Husserl pretty explicitly in the *Logical Investigations*:

«An aggregate, e.g., is given, and can only be given, in an actual act of assembly, in an act, that is, expressed in the conjunctive form of connection *A and B and C ...* But the concept of *set* does not arise through reflection on this act: instead of paying heed to the act which presents a set, we have rather to pay heed to what it presents, to the *set* it renders apparent *in concreto*, and then to lift the universal form of our set to conceptually universal consciousness»<sup>3</sup>.

The «categorial object», how Husserl now explicitly calls the objective correlate of a categorial act, seems to be therefore given as a stable acquisition, at least in his identity and «ideal validity», in an act which gives it in an “analogue way”, i.e., as «the

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1 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/2, cit, p. 670.

2 Ibidem.

3 Ibid., p. 671.

*analogon*», as Husserl says, of a common sensuous intuition<sup>1</sup>. That is of course, only the very beginning of the complex of problems represented by the, slightly misleading in Husserl choice of words, categorial intuition and even its specification as ideal intuition. Also the concept of abstraction come to a redefinition within the *Logical Investigations*. While in the 1891 work on arithmetic that was problematically interpreted as selective attention, in 1900 Husserl speaks already of ideational abstraction, with which «I do not naturally mean here “abstraction” merely in the sense of a setting-in-relief of some non-independent moment in a sensible object, but proper ideational abstraction, where no such non-independent moment, but its Idea, its Universal, is brought to consciousness, and achieves *actual givenness*»<sup>2</sup>. Even more important for what concern the kind of formal concept represented by the categories as exposed in the *Philosophie der Arithmetik*, is the introduction or better definition, between the time of the 1891 work and the *Logical Investigations*, of the “formalizing” function of abstraction, which is introduced indeed around the *Logik Vorlesung* in 1896. In this latter lecture on logic in fact, we already find consciously applied what in the 1900 work is already more surely defined and accurately distinguished, from other kind of empirical abstraction on the one side, and even from the kind of abstracting process leading to the Specie or even the Genus of, for instance, empirical qualities. Writes in fact Husserl trying to briefly formulate the proper function of the “formalizing abstraction”:

«We rise, in the case of any type of whole, to its pure form, its categorial type, by abstracting from the specificity of the sorts of content in question. More clearly expressed, this formalizing abstraction is something quite different from what is usually aimed at under the title of “abstraction”: it is a quite different performance from the one which sets in relief the universal Redness in a concrete visual datum, or the generic “moment” of Colour in the Redness previously abstracted»<sup>3</sup>.

In formalization we basically replace the names standing for the sort of content in question by indefinite expressions such as a «certain sort of content, a certain other sort of content etc». At the same time, on the side of the meaning, corresponding substitutions of purely categorial for material thoughts take place.

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1 Ibidem.

2 Ibid., p. 290.

3 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 291 – 2.

Husserl analysis in the early years fall short in interpreting the objective correlate of the categorial act and its function as basis for further categorial acts like the formation of universal concepts. For example, the concepts “collective connection” or “something” are later on not grasped by reflecting on the act of collecting, but by the view toward the formal combination of contents or an arbitrary object of thinking established by the act. Even if he maintains the necessity of reflection upon the psychological act in order to obtain the concepts however, the formal concept of collective combination is not identified with the psychological act of higher order which is the foundation of abstraction for the concept. Therefore, such concepts must result from an abstractive consideration of their corresponding presentations, those latter not considered as psychic phenomena, but by referring to what Husserl call already in the 1891 work «the logical content [*logischer Gehalt*] of the presentation»<sup>1</sup>.

## 2.2) *The Specific Inquiry into the Concept of Number.*

We already seen how Husserl defines and applies abstraction by formal concepts. Now, from this definition is much to be taken in order to try to briefly make clear what could represent a way for interpreting the consciousness of a “simple” set or group of elements, this time in numerical determination.

Suppose in fact we have objects in a given field of consciousness, such as  $\langle a, b, c, d, e \rangle$ . Already at the first glance, we are considering each object as “something *a*”, “something *b*” etc., and already we could be aware of different groups of these objects, of small ones perhaps, in one complex act as presentation. There is in fact no need of a succession of explicit acts of counting to determinate their number for such small group. We are somehow already intuiting a totality all at once, otherwise we would need to properly or authentically “counting” the elements, but that soon will reach a limit<sup>2</sup>. Obviously, we can yet also look at them without such a grouping. Therefore, «to intuit them as a “number” of things, one must perform a characteristic, complex type of act, which we might describe as the *intuitive enumeration* of the objects in the group»<sup>3</sup>.

1 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 218.

2 *Ibid.*, p. 105f, 141f, 247.

3 D. Willard, “Translator's Introduction”, in E. Husserl, *Philosophy of Arithmetic, Psychological and Logical Investigations with Supplementary Texts from 1887-1901*, (Springer Science and Business Media, Dordrecht, 2003), p. xviii.

Part of the complex act does actually direct to  $a, b, c$  in such a manner that, this way, the objects which properly correspond to the “something  $a$ ”, “something  $b$ ” are noticed within the kind of attention or noticing that “extract” the singularities composing the totality. What seems to be necessary here then, is basically the progressive continuing of awareness into the subsequent partial, and for that, also the retention of the awareness of one thing to the other, i.e., «the act of reflection on the collection constituted by running through the items in which we have the construction of the set  $(a, b, c)$ »<sup>1</sup>. The kind of complex act, this simple and direct “taking together” of the objects extracted, does not in fact already constitute the “one” object of higher order that is the totality enumerable; it is in fact necessary also the directing of the awareness toward the collective connection, which is performed by reflection, as we have seen. This latter is mandatory, also for in normal perception we do perceive distinct objects without directly taking them as part of a totality, while the “collective connection” also exclude, at the same time, other objects from the field of consciousness under consideration.

By this latter reflection we would obtain therefore the «abstract multiplicity form belonging to the small group», by “diminishing” each of its elements to a mere “one” or “something” and «collectively grasping together the units thus originating» indeed. How we then obtain the corresponding specific number is, according to Husserl, «by classifying the multiplicity form thus constructed as a two, a three, etc.»<sup>2</sup>. To put it simply, to grasp a number of things means to grasp certain objects as, or better to say, «under the character of mere “somethings”», united by the psychical relation expressed by the verbal expression “and”. In this sense, multiplicity is a still unspecified or undetermined abstract form of “something and something and something etc.”, where instead, a particular number, say 4, suppresses exactly this “etc.” at a specific point. A specific number is then conceivable as, essentially, a defining structural property, obviously non directly perceived, of similar groups when conceived as numerable, i.e., as “somethings” connected by “ands”.

Obviously, this basically represents the «original [*ursprünglich*]» or proper number concept as definition by enumeration of the “how much” of a group. In this sense, is not the concept of number used in mathematics. Already by Husserl analysis of, for

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1 See, for example, R. Tieszen, *Mathematical Intuition, Phenomenology and Mathematical Knowledge*, (Kluwer Academic Publishers, Dordrecht, Boston, London, 1989), p. 151. Or, D. Willard, *Logic and the Objectivity of Knowledge*, cit., p. 54.

2 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 109.

example, “Zero” is in fact to see how such number can be embedded in the series only due symbolic-operation, for «they are no proper [*eigentlich*] number», i.e., «correlate of collecting act»<sup>1</sup>. Even more, the function of the symbolic numerical system is well showed, under the same point of view, by such numerical formations such imaginary or transfinite number<sup>2</sup>. But for our interest is exactly this concept of number and its possible definition by Husserl in question. The number as «a multiplicity of units»<sup>3</sup>, while a (cardinal) number is given in the enumeration of objects grasped together in *Kollektiva*, whose elements a thought by abstraction as mere “something and something etc” and where their collective connection, expressed by “and”, is a formal, content-independent “think together”<sup>4</sup>.

If we think this presentation as underlying the cardinal concept of number, we can already stress how Husserl leaves out consideration the ordering, or at least, he does not explicitly consider it in the *Philosophie der Arithmetik* for choosing, and justify «a posteriori», the cardinal number «as constitutive». He considers the choice between ordinal and cardinal as irrelevant for the constitution of the concept of number<sup>5</sup>. We

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1 Ibid., p. 129.

2 See, E. Husserl, *Aufsätze und Rezensionen (1890 – 1910)*, in *Husserliana XXII*, cit., p. 7.

3 E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 297.

4 Ibid., p. 335.

5 S. Centrone, *Logic and Philosophy of Mathematics in the early Husserl*, cit., p. 28. Husserl's accorded prevalence to cardinal number with respect to ordinal derives basically from his critic, shared also with Frege, against Helmholtz's and Kronecker's choice of the ordinal number as the fundamental concept for arithmetic, a critic which has its roots into the misleading interpretation of both mathematicians of the symbolical character of the numerical system and of calculation by posing the origin of the concept of number in the process of computation. For Husserl, calculation is a symbolic activity which deal with signs and not with concepts, where therefore, the symbolic results must be, nevertheless, be “interpreted” at the end of the process as «sign for a numerical concept». Writes in fact Husserl in the *Philosophie der Arithmetik*: «Let us abstract from the signification of the designations “1,” “2,” . . . , “X,” as well as from the designations of the operations of addition, multiplication, and exponentiation, and take them as totally arbitrary symbols without signification (as, for example, the counters in a game). Let us replace number definitions and operation rules which are the regular medium of systematic procedure, with corresponding, conventionally fixed formulas expressing the equivalences of sign combinations. One will then recognize that, in this way, there actually originates an independent system of symbols which permits the derivation of sign after sign in a uniform pattern without there ever turning up – nor could there ever, as such, turn up – other sign formations that appear in other circumstances, accompanying a conceptual process, as designations of the concepts here formed» (E. Husserl, *Philosophie der Arithmetik*, in *Husserliana XII*, cit., p. 237-8). Which means that this «systematics of signs» works mechanically producing symbols through laws, where both, symbols and laws of the systematics became independent with respect to the concepts intended by the signs and their constituting laws (See, M. Hartimo, “Towards completeness: Husserl on theories of manifolds 1890–1901”, in *Synthese*, 156, 2007, p. 288). This process guarantees of course, the mechanical functioning of the construction of numbers by operations which lead also mechanically to a solution, and that means also that calculating is not an activity with concepts, but with signs. On the other side, for Helmholtz and similarly for Kronecker, «every number is determined only by its position in the series of natural numbers», where the series is a concatenation of arbitrarily and conventional signs. The meaning of each sign function therefore to denote the certain position in the natural ordering of the series and from which therefore is to be deduced that ordinal numbers are the fundamental numerical concept (See, H. v. Helmholtz, “Zählen und Messen erkenntnistheoretisch betrachtet“, in ed F. Vischer,

have also already abstracted from what the particular objects of consciousness are and that, all together, represents the “formal abstraction” at work in having “something *a* and something *b*...”. As we have indicated in the previous chapter, Husserl achieves a better formulation of the formal abstraction around 1896, how seems to demonstrate this passage from the Lecture on *Logik* held by Husserl in Halle the same year:

«A single presentation can have multiple, i.e. not identical objects, together as its proper object, for example, “Plato, and Aristotle, and Epicurus”. In this example are the objects composing the plurality [*Mehrheit*] given in independent and direct presentations, as well as the whole plurality presentation is a composite ones, which eventually comprehend in itself as its removable constituting components those individual presentations. One must anyway be wary of mistaking the sequence [*Aneinanderreihung*] of these individual presentations for the presentation of the being-together of its belonging objects, and therefore think, it may be here given not *a single* presentation but a mere multiplicity. The presentations of Plato, Aristotle etc., individually taken for themselves and even merely thought together in a subjective way, are certainly not the unity meant by us as soon as we perform or understand the composed linguistic expression “Plato

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*Philosophische Aufsätze, Eduard Zeller zu seinem fünfzigjährigen Doktor-Jubiläum*, Fuc's Verlag, Leipzig, 1887, p. 21). According to Husserl, we find here the confusion between ordinal and cardinal numbers and an unacceptable nominalistic interpretation of the concept of number which interpret it as only signs. Behind his not taking explicitly start from the ordinal number or the ordered sets nor from the cardinal number in order to describe the number concept, seems to find explication, according to what emerge from Husserl's parallelism between the “systematics of signs” and the “number concepts”, as we can call it, from the necessity to recognize one kind of number as fundamental for arithmetic, to stress how the ordering of a series is determined by the nature of the numerical concepts and it is not reducible to a sequence of signs and to guarantee with the presence of “referential concepts” some meaningfulness to the “systematics of signs” even if, by operating, one does not refer explicitly to it or the former is not the explicit object of consideration by calculating (E. Husserl, “Über den Begriff der Zahl. Psychologische Analysen“, in *Husserliana* XII, cit., p. 296f, and *Philosophie der Arithmetik*, in *ibidem*, cit., p. 181f.).

In the same sense, Frege in his 1903 second part of the *Grundlagen der Arithmetik*, refers explicitly to what he ironically calls «a magic power gained by the signs for the disappearing of their references from the eyes». He also explicitly recalls Helmholtz's quote from the *Philosophische Aufsätze* where clearly programmatic, the (also) mathematician from Postdam expresses his desire to develop a «formal theory»: «I consider arithmetic or the theory of the pure numbers as a method grounded on purely psychological facts, which is ruled by the sequential application of a system of signs (of the number indeed) of limitless extension and possibility of improvement. Arithmetic search in fact which different forms of connection of such signs (operations of computation) lead to the same resultate» (H. v. Helmholtz, “Zählen und Messen erkenntnistheoretisch betrachtet“, in ed F. Vischer, *Philosophische Aufsätze, Eduard Zeller zu seinem fünfzigjährigen Doktor-Jubiläum*, cit. p. 20). Besides the misleading application and «mixing up» of the two perspective, the formal and the empirical, Frege stress the futility of constructing a system of signs which does not even reflect any kind of mathematical reality, «as if the two questions about the truth of a thought and about its applicability may not be completely different! I can surely recognize the mere truth of a utterance without knowing if I will generally make some use of it» (G. Frege, *Grundgesetze der Arithmetik. Begriffsschriftlich abgeleitet*, II Voll., Verlag von Hermann Pohle, Jena, 1903, p. 139-140).



and Aristotle and Epicurus»<sup>1</sup>.

Besides the still briefly and problematic formulation, we see here a first more refined insight into the function of a “formal abstraction”. Husserl makes use of a presentation which, structure as “something *a*, and something *b*, etc.”, comprehends an unitary object as intentionally meant in its logical and meaning function. As unitary meaning-formation is also the identity meant through the single presentation and beyond the actual and different subjective act of cognition or, in this case, linguistic expression; but, besides the reference to some kind of subjective acts in the process, we also find here the possibly clashing account of mathematical “entities” seen as anchored to a intuitive realm.

The ontological status traditionally accorded to numbers for example, prevents such an embedding. By virtue of their abstract nature, mathematical objects like numbers, sets or operations and functions, cannot be in fact for example ostensively indicated in some sort of intuition similar to the one relating to other perceptual objects, they cannot be causally related to our senses, are not objects in space or time and are even not individually identifiable. This latter condition would even lead to prevent considering numbers as individual objects, but, for example in structuralism, as structure<sup>2</sup>. We find a first example of such a definition by Dedekind<sup>3</sup>, who actually starts from a general position regarding the inquiry structure into number concept not that far away from the one belonging to Husserl.

Dedekind in his *Was sind und was sollen die Zahlen*, a work at the time studied and even criticized from Husserl and Frege as well, by speaking of arithmetic (algebra, analysis) as a part of logic, states in fact how he also implies by that to

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1 E. Husserl, *Logik, Vorlesung 1896*, in *Husserliana, Materialienbände, I*, cit. p. 86.

2 A recent formulation of mathematical structuralism intends the «use of the term “structuralism” to the form that acknowledges that abstract structures exist, that the pure objects of mathematics are in some sense elements of, or places in, those structures, and that there is nothing more to the pure objects of mathematics than can be described by the basic relations of their corresponding structure », U. Nodelman, E. N. Zalta, “Foundations for Mathematical Structuralism”, in *Mind*, 2014, 123, p. 40. A traditional definition of the position of structuralism about mathematical objects is, rather, to be found, in Hellman, «mathematics is concerned principally with the investigation of structures (...), in complete abstraction from the nature of individual objects making up those structure», G. Hellman, *Mathematics Without Numbers*, (Clarendon, Oxford, 1989), p. vii.

3 «A direct forerunner of *ante rem* structuralism is another logicist, Dedekind. His development of the notion of continuity and the real numbers, in *Stetigkeit und irrationale Zahlen*, his presentation of the natural numbers via the notion of Dedekind infinity, in *Was sind und was sollen die Zahlen*, and some of his correspondence constitute a structuralist manifesto, as illustrated by the passage from §73 [of the same work]», S. Shapiro, *Philosophy of Mathematics: Structure and Ontology* (Oxford University Press, New York, 1997), p. 14.

«(...) consider the number concept entirely independent of the notions or intuitions of space and time, that I consider it an immediate result from the laws of thought. (...) Numbers are free creations of the human mind; they serve as a means of apprehending more easily and more sharply the difference of things. It is only through the purely logical process of building up the science of numbers and by thus acquiring the continuous number-domain that we are prepared accurately to investigate our notions of space and time by bringing them into relation with this number-domain created in our mind. If we scrutinise closely what is done in counting an aggregate or number of things, we are led to consider the ability of the mind to relate things to things, to let a thing correspond to a thing, or to represent a thing by a thing, an ability without which no thinking is possible. Upon this unique and therefore absolutely indispensable foundation, (...) it must, in my judgment, the whole science of numbers be established»<sup>1</sup>.

By starting from such a framework for the explication of the origin of the more fundamental “ability” of consciousness in relating things, Dedekind examines first the “structure of number concepts”, which means, the preliminary investigation starting with the question about,

«In what way the gradual extension of the number-concept, the creation of zero, negative, fractional, irrational and complex numbers are to be accomplished by reduction to the earlier notions and that without any introduction of foreign conceptions»<sup>2</sup>.

And in the famous § 73 of his 1888 work, he exposes as following the determining relationship between the system and the relations of its composing element, which appears as the element truly in question in the determination of the numbers as mathematical entities within a theory:

«If in the consideration of a simply infinite system (...) set in order by a

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1 R. Dedekind, *Was sind und was sollen die Zahlen*, cit., p. vii – viii.

2 Ibid., p. xi.

transformation (...) we entirely neglect the special character of the elements; simply retaining their distinguishability and taking into account only the relations to one another in which they are placed by the order-setting transformation (...), then are these elements called *natural numbers* or *ordinal numbers* or simply *numbers*»<sup>1</sup>.

According to such theories, what it is basically instituted is a strong connection between theory or system and elements in there, mathematical objects are «always in the context of some background structure», where accordingly, «the objects have no more to them than can be expressed in terms of the basic relations of the structure»<sup>2</sup>.

A kind of «eliminative» theory could even, on the other hand, avoiding any commitment to the existence of mathematical structures and their structural elements<sup>3</sup>. It could be in fact even argued that numbers, and among them, other mathematical objects are no objects at all, no abstract, no ideal objects whatsoever<sup>4</sup>. Hence, the structures by which one characterizes mathematical objects like, in Dedekind's case, natural numbers or ordinal numbers, but also sets, spaces, and so on, determine all that there is to be determined about the objects in question. The properties show by the structure characterize also the objects, which have no properties independently of those, and therefore relating them to all other objects and entities of the structure.

To assert mathematical and logical objects as objects, does not solve all the problems either. Even if we suppose the possibility of their individual identification, the problem of how to characterize such entities remains open. It can be in fact argued that abstract objects, such as numbers, are constituted by the characteristics and properties through which we conceive them, from which would follow that they are connected to those characteristics in a different way from the way “perceptual objects” bear their characteristics. In this direction, it has been argued for example, that abstract objects such the mathematical ones «encode the constitutive properties», though they «exemplify», or instantiate (in a more traditional-fashioned way of speaking) and even necessarily exemplify also other properties independently from the encoded ones, while

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1 Ibid., p. 21.

2 C. Parsons, “The Structuralist View of Mathematical Objects”, in *Synthese*, 84, 1990, p. 303.

3 Cfr., for instance, H. Putnam, “Mathematics Without Foundations”, in *Journal of Philosophy*, 64, 1967, p. 5f. “Eliminative” is Parsons' terminology.

4 P. Benacerraf, “What Numbers Could Not Be”, in ed. P. Benacerraf, H. Putnam, *Philosophy of Mathematics: Selected Readings*, (Cambridge University Press, Cambridge, 1983), p. 7.

on the contrary, perceptual or “ordinary” objects only exemplify their properties<sup>1</sup>.

Taking for example empirical triangular objects, such as some road signs or the faces of some physical pyramid, these objects exemplify properties like “having side with a particular length”, or “being made of this substance” etc. By contrast, the Euclidean triangle does not exemplify any of these properties. It exemplifies their negations indeed, by encoding only the geometrical characteristics implied by being triangular (i.e., being trilateral, having interior angles summing to  $180^\circ$ ). Every object whatsoever, including perceptual triangular objects and the the Euclidean triangle, is complete with reference to the properties it exemplifies, while the Euclidean triangle encodes only the properties which are implied by “being triangular”<sup>2</sup>. In classical logic, such an incomplete object would be excluded on the basis of the «exemplification mode of predication», while by the «encoding mode of predication» the existence of the abstract objects, whose properties are defined accordingly to a mathematical theory, is granted by satisfying the conditions on properties of a given formula<sup>3</sup>.

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1 E. Mally, *Gegenstandstheoretische Grundlagen der Logik und Logistik*, in *Zeitschrift für Philosophie und philosophische Kritik*, Supplement to n. 148, 1912, p. 14. Such a kind of distinction was presented, among others, by Saul Kripke in his *Locke's Lectures*. See, S.A. Kripke, *Reference and Existence, The John Locke Lectures* (Oxford University Press, Oxford, New York, 2013), p. 55f, esp. 73-4.

2 E. Mally, *Gegenstandstheoretische Grundlagen der Logik und Logistik*, p. 4f.

3 The distinction recalled was introduced by Ernst Mally, a Meinong's former scholar, who develops a theory, recently further developed, about abstract objects of the kind of fictional but also mathematical ones. The theory is grounded, as we have only briefly sketched out, on the distinction between exemplifying and encoding a property. This reflects also on a distinction between two fundamental kinds of predication, the exemplifying and the encoding, and it is formally represented in the theory as the distinction between the atomic formulas “Fx” (*x* exemplifies F) and “x $\mathcal{F}$ ” (*x* encodes [*determiniert*] F). The formula “Fx” represents the classical kind of predication and it is used, as we know, to logically analyze simple sentences such as “Paul is hungry” or “Jack is a dog”. In essence, the idea behind this position, introduced by Meinong, who regarded things such as the fountain of youth or the round square as genuine objects despite their non-existence or lack of being (See, A. Meinong, “Über Gegenstandstheorie”, in *Gesamtausgabe Voll II, Abhandlungen Zur Erkenntnistheorie Und Gegenstandstheorie*. Akademische Druck- und Verlagsanstalt, Graz, 1971, p. 486 – 88), was that we should *not* represent sentences about fictional objects of the kind “Zeus lived on the Olympus” in terms of the notation “Fx”, for only real, concrete objects can exemplify the properties of being living on the Olympus. Nevertheless, it can be reasoned in effect that there must be some mode of predication, some sense of the words “is” and “has” according to which it is true to say “Zeus lived on the Olympus”. Otherwise, we wouldn't understand Greek mythology properly if we didn't imagine objects that, in some sense, were instances of the properties in question. An answer was proposed indeed by Mally, and recently retaken and even interpreted in a Platonic framework (See, for example, C.C. Meinwald, “Good-bye to the Third Man”, in ed R. Kraut, *The Cambridge Companion to Plato*, Cambridge University Press, Cambridge, New York, 1992, p. 378), who introduced the notion “x encodes F” as a “mode of predication” that is more appropriate for a logical analysis of kind of sentences about fictions or abstract objects. For example, whereas the real detective Pinkerton exemplifies detectivehood - “Dp”, Sherlock Holmes encodes this property - “hD” (following S. Kripke work cited above). This idea can be extended to other objects, to what can be indicated as abstract object, such as numbers, sets, etc. While one can identify and individuate concrete objects in terms of their being located spatiotemporally, we face the problem of identifying and individuating abstract objects in some other way, being abstract objects not the kind of thing that could have a location in space and time. The properties that an abstract object encodes, according to this position, are part of its intrinsic nature and even more essential to it than the characteristic or properties that those objects as such necessarily exemplify.

Surely, not only «from <the> phenomenological point of view», but even in the pre-phenomenological, «mathematical objects are recognized to be of a different type from physical objects»<sup>1</sup>. Husserl own analysis and illustrations are in fact mainly concerned with the phenomenology of perceptual intuition of ordinary physical objects. Surely he also partial developed what could be taken as an «account of mathematical intuition», even considered the fact that other authors later one have retaken and carried even farther in mathematics some aspects of Husserl theory, such as Becker, Weyl or even Gödel<sup>2</sup>. But what Husserl tried to develop since the *Philosophie der Arithmetik* and explicitly in the Sixth of the *Logische Untersuchungen*, for therefore continuing to develop in a different methodological framework in works such as *Erfahrung und Urteil* and – especially for the logical-mathematical objects – *Formale und transzendente Logik*, is a *broader* account for the intuition of numbers and other abstract objects. In this sense, much of Husserl efforts will concentrate on the problem of the evidence [*Evidenz*] suitable for such kind of objects like the mathematical and the logical ones, stating for example in the late '20s how:

«The evidence of irreal objects, i.e., ideal objects in the broadest sense, is, in its effect, quite analogous to the evidence of ordinary so-called internal and external experience, which alone – on no other grounds than prejudice – is commonly thought capable of effecting an original Objectivation. The identity and, therefore, the *objectivity* of something ideal can be directly “seen” (and, if we wished to give the word a suitably amplified sense, directly experienced) with the same originality as the identity of an object of experience in the usual sense – for example, an experienced object belonging to nature or an experienced immanent object (any psychic datum)»<sup>3</sup>.

On the basis of repeated experience and the possibility of the modification of «the momentary perception» and «recollection» with their synthesis comes about the consciousness of the Same as experience of the «sameness». It belongs, according to Husserl, to the sense of *every* object, as its essential correlate, the possibility of such an original identification, where the sense is determined to the effect that experience is an

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1 R. Tieszen, *Mathematical Intuition, Phenomenology and Mathematical Knowledge*, cit., p. 66.

2 Ibid., p. 21.

3 E. Husserl, *Formale und transzendente Logik*, in *Husserliana*, XVII, cit., p. 163 – 4.

«evident grasping [*Erfassung*] and having» of an individual datum itself, and now, «in just the same fashion, we say, there belongs to the sense of an irreal object the possibility of its identification on the basis of its own manners of being itself grasped and had». Actually the effect of this “identification” is, according to Husserl, very like that of an “experience”, except that an irreal object «*is not individuated in consequence of a temporality belonging to it originally*», which means in Husserl later terminology, is the individuation of the «ideal»<sup>1</sup>.

This interpretation is obviously embedded in an explicit intentional analysis and even within a transcendental framework, which has for itself called attention considered the need for clarification about the intuitionistic view regarding our access to the «mental constructions that make up the subject matter of mathematics»<sup>2</sup>. But even Husserl's remarks on «acts of abstractions» and reflection, and in general the idea of hierarchies of acts or the view on complex acts prefigure such a position. This later explicitly phenomenological position can recall the notion of «intentional object» and, in order to carry out a phenomenological analysis of the consciousness linked to objects of

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1 Ibid., p. 164. Husserl's italics

2 Even Gödel has argued that we can cultivate the intuition or “perception” of abstract concepts in mathematics and logic. In 1944, by commenting Russell general position about logical proof, he comments for example: «The analogy between mathematics and a natural science is enlarged upon by Russell also in another respect (in one of his earlier writings). He compares the axioms of logic and mathematics with the laws of nature and logical evidence with sense perception, so that the axioms need not necessarily be evident in themselves, but rather their justification lies (exactly as in physics) in the fact that they make it possible for these "sense perceptions" to be deduced; which of course would not exclude that they also have a kind of intrinsic plausibility similar to that in physics. I think that (provided "evidence" is understood in a sufficiently strict sense) this view has been largely justified by subsequent developments, and it is to be expected that it will be still more so in the future. It has turned out that (under the | assumption that modern mathematics is consistent) the solution of certain arithmetical problems requires the use of assumptions essentially transcending arithmetic, i.e., the domain of the kind of elementary indisputable evidence that may be most fittingly compared with sense perception», ed. S. Feferman, *Kurt Gödel Collected Works*, Voll. II, (Oxford University Press, Oxford, New York, 1990), p. 121. Gödel, as recently pointed out (See, R. Tieszen, *Phenomenology, Logic, and the Philosophy of Mathematics*, cit., p. 149f.), has developed his position with respect to the problem of intuition of abstract and ideal objects, and especially, the question about «what kind of account could be given of the intuition of abstract concepts», especially with respect of his aim to elucidate the meaning of mathematical concepts (ibid.). And in this sense, around 1961, he notoriously recalled Husserl's phenomenology as offering a possible account for overcoming the view which confine intuition in mathematics and logic into «reflection on the combinatorial properties of concrete symbols», while instead the «reflection» on meaning or intuition of concepts is a intuitive function of higher level. Writes in fact Gödel with respect of Husserl's phenomenology that: «Here clarification of meaning consists in concentrating more intensely on the concepts in question by directing our attention in a certain way, namely, onto our own acts in the use of those concepts, onto our own powers in carrying out those acts, etc. In so doing, one must keep clearly in mind that this phenomenology is not a science in the same sense as the other sciences. Rather it is [or in any case should be] a procedure or technique that should produce in us a new state of consciousness in which we describe in detail the basic concepts we use in our thought, or grasp other, hitherto unknown, basic concepts», K. Gödel, “The Modern Development of the Foundations of Mathematics in the Light of Philosophy”, in ed. S. Feferman, *Kurt Gödel Collected Works*, Voll. III, Oxford University Press, Oxford, New York, 1995, p. 383).

knowledge we have to consider the acts in which objects are intended and the how of this intention, without making any naïve metaphysical assumption about the objects.

Still, at the time of the *Philosophie der Arithmetik*, much of this kind of address is not yet present. What it is rather present, is the idea that by reflectively living through the experiences that constitute the «psychological origin of a concept», in this case of number, we are led to the properties essential to any object falling or that falls under that concept. Hence, those latter properties, i.e., the properties or characteristics of all the objects originally belonging to a concept, make up the *content* of the concept, which at this stage of Husserl's philosophy it is essentially the concept content as still no further specified object, i.e., «what the concept is» originally «of» or «about», as recently formulated<sup>1</sup>. In this sense, a concept is in Husserl's understanding a repeatable thought, which on the one side, presents aspect of a universal of a certain type that also belongs to some extent to a lived-experienced, but it is also, on the other side and in the same extent, shareable. To comprehend and to analyze a concept is therefore not only the concept analysis in the terms already seen, i.e., its “psychological origin” mandatory, but as its necessary and connected counterpart, to discern what is necessarily meant when it is deployed. This involves the intentionalities involved and descriptively revealing the origin of the concept brings eventually in an “experience” at least the concept content before our eyes when it is possessed and deployed.

At the time of the *Philosophie der Arithmetik* anyway, we find also other positions dealing with the problem of connecting a theory of abstraction with a more clear statement and definition of the conceptual element resulting from it. Especially in the field of logic and mathematics we find in fact two approaches which are worth of attention.

### 2.2.1 Frege, Cantor and Husserl On The Role Of Abstraction.

At the time of his *querelle* with Frege, one of the most diffused theory of abstraction was certainly what it has been called “logical abstraction”<sup>2</sup>. Logical abstraction is essentially a procedure by which it is possible to single out what is in common among

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1 D. Willard, “Translator's Introduction”, in E. Husserl, *Philosophy of Arithmetic*, in E. Husserl, collected Works, X (Springer Science and Business Media, Dordrecht, 2003), p. XV.

2 G. E. Rosado Haddock, C. Ortiz Hill, *Husserl or Frege? Meaning, Objectivity and Mathematics*, (Open Court, Chicago, 2000), p. 68.

the members of a given set, and therefore, to isolate a property on the base of which an identity is established among the objects belonging to the set possessing the property. What characterizes logical abstraction is now, the fact that the common predicate related to the property is interpreted as a common relation to the class of terms which are equal under the property indicated by the predicate. This class replaces therefore the property, while all the other properties which distinguish the objects from each other or from other objects equal under the respect of the same property are now “abstracted”, i.e., deleted<sup>1</sup>. Logical abstraction does help in the cases where it is necessary to translate expressions, which would not lend for themselves to extensional treatment, into an extensional language. The use of predicates is in fact “translated” into the use of classes as extensions, i.e., the class composed by the objects of which the predicate is true. The other important aspect is the leaving out of unwanted properties in the definition of the predicate and the class.

As we have already seen, part of Frege's project of founding arithmetic was grounded on the establishment of a relation for define number as independent objects in identity statements, where on both side of an identity, based on the one-to-one correspondence, a number is to be found<sup>2</sup>. In order to do so, we already know, Frege recalls for defining identity Leibniz's “substitutivity *salva veritate*” principle, i.e., that «things are the same as each other, of which one can be substituted for the other without loss of truth»<sup>3</sup>. By doing so, Frege also “freely interpreted” Leibniz's relation between identity and equality, as seen.

Now, Frege comes to use in a certain extent a form of logical abstraction in order to accomplished his aim, in other words, for transforming statements in which objects are posed as equivalent with respect of a property predicated of them into equality statements of objects formed out of those properties. In this manner, he thought to accomplishing the task of translating statements about objects equal under a specific property into statements expressing identity. This leaded, as recognized by Frege himself, also to nonsensical statements<sup>4</sup>. Erasing the difference between identity and

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1 Quine defines it in such terms: «given a condition '---' upon  $x$ , we form the class  $\hat{x}$ --- whose members are just those objects  $x$  which satisfy the condition. The operator ' $\hat{x}$ ' may be read “the class of all objects  $x$  such that”. The class  $\hat{x}$ --- is definable, by description, as the class  $y$  to which any object  $x$  will belong if and only if--- ». W. Quine, *From a Logical Point of View*, 2<sup>nd</sup> ed. (Harvard University Press, Cambridge, 1961), p. 87.

2 G. Frege, *Grundlagen der Arithmetik*, cit., p. 73.

3 Ibid., p. 76.

4 Ibid., p. 77 – 8.



equality means in fact to affirm that “being the same in any one way” is equivalent to being the “same in all ways”.

«All identities would then amount simply to this, that whatever is given to us in the same way is to be reckoned as the same. This is, however, a principle so obvious and sterile as not to be worth stating. We could not, in fact, draw from it any conclusion which was not the same as one of our premisses. The multiple and significant applicability of identities lays instead much more on the fact that we are able to recognize something as the same again even although it is given in a different way»<sup>1</sup>.

It is also been recently stressed and investigated, how Cantor's definition of cardinal number was close to Husserl's account of number, where both see a process of abstraction involved in the “arising” of the concept of number<sup>2</sup>. In fact, Cantor saw not only the possibility for the «ordinary finite whole numbers» to be «produced by abstraction from the reality», but also «for his transfinite numbers», and both «both with the same necessity», even being the first class of numbers the possible basis for «all other mathematical concept-formations»<sup>3</sup>.

In his 1884 *Principien* indeed, Cantor briefly exposes the two aspects of abstraction which have been indicated as the «double» abstracting process<sup>4</sup>:

«The *power* of a set  $M$  is hereupon defined as the *presentation* of what is *common* to *all* of the sets  $M$  of *equivalent* sets and *only those* and hence also of the set  $M$  itself; it is the *representatio generalis*... for all sets *of the same class* as  $M$ . It therefore seems to me to be the most *primitive, psychologically*, as well as *methodologically simplest root concept*, arisen through *abstraction*, from all *particular characteristics* which a set of a *specific class* may display, both with respect to the *nature* of its *elements*, as well as with regard to the *relations* and *order* in which the *elements are to each other* or can stand to *things lying outside*

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1 Ibid., p. 79.

2 See, especially for this chapter, C. Ortiz Hill, “Abstraction and Idealization in Georg Cantor and Edmund Husserl Prior to 1895”, in G. E. Rosado Haddock, C. Ortiz Hill, *Husserl or Frege? Meaning, Objectivity and Mathematics*, cit., p. 109f; K. Fine, “Cantorian abstraction: a reconstruction and defence”, in *Journal of Philosophy*, 95, 1998, p. 599f.

3 G. Cantor, *Briefe*, ed. H. Meschkowski, W. Nilson, (Springer, New York, 1991), p. 135 – 6.

4 K. Fine, “Cantorian abstraction: a reconstruction and defence”, cit., p. 602.

the set. The concept of *power* originates in reflecting only upon *what is in common to all of one and the same class of member sets*»<sup>1</sup>.

An a year later, in his *Beiträge zur Begründung der transfiniten Mengenlehre*, Cantor comes to define more closely the meaning of the “power” of a set, which is its cardinality, and the function or “result” of the “double abstraction”:

«We will call by the name “power” or “cardinal number” of  $M$  the general concept which, by means of our active faculty of thought, arises from the aggregate  $M$  when we make abstraction of the nature of its various elements  $m$  and of the order in which they are given.

We denote the result of this double act of abstraction, the cardinal number or power of  $M$ , by

$$\overline{\overline{M}}.$$

Since every single element  $m$ , if we abstract from its nature, becomes a “unit”, the cardinal number

$$\overline{\overline{M}}.$$

is a definite aggregate composed of units, and this number has existence in our mind as an intellectual image or projection of the given aggregate  $M$ »<sup>2</sup>.

One main difference with respect to Husserl's account, we can already see, is the Cantorian abstraction from the order of the element of a set, while Husserl, as stressed by Fine, «would start off with an unordered set  $M$ »; the common element would be instead, generally considered, the process «of freeing an object of its peculiar features» assigned by both to abstraction<sup>3</sup>.

Even in his famous 1887 *Mitteilungen zur Lehre vom Transfiniten* Cantor's efforts are also directed to show how the concept of «actual infinite number» is formed due to «natural abstraction» in the same manner of the finite number from finite sets. Here we

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- 1 G. Cantor, “Principien einer Theorie der Ordnungstypen”, in *Acta Mathematica*, 124, 1970, p. 86. Quoted according to C. Ortiz Hill, “Abstraction and Idealization in Georg Cantor and Edmund Husserl Prior to 1895”, cit.
  - 2 G. Cantor, *Contributions to The Founding of the Theory of Transfinite Numbers*, ed. P. E. B. Jourdain (Dover Publications, New York, 1955), p. 86. English translation of the 1895 article edition in the *Mathematische Annalen*, n. 46, pp. 481 – 512.
  - 3 K. Fine, “Cantorian abstraction: a reconstruction and defence”, cit., 600 – 2.

find in fact a summary of the «forms of comprehension of the *totality of numbers and types of order* as *Universalien* [*Universalien*], which refer to *sets* and are formed from them when it is abstracted from the *properties of the elements*». In such an abstraction, every set of «completely different thing can be seen as a unitary thing for itself», where every element become therefore «constituting elements» of this set<sup>1</sup>.

Even considered Cantor's recalling of a “natural abstraction”, his idea of abstraction and the process leading from sets to their “power” must be considered rationalist. The proper *cifra* of this rationalism is to be found in the idea of Unit which is, from the time of his *Mannigfaltigkeitslehre* till the *Beiträge*, the “Ones” [*Einsen*] comprehended in the set, and have its existence «in our mind». By arising from «the nature» of all possible *m* composing the set, can be linked to the «*propertyless thing*» [*eigenschaftslos Ding*], which is «at first nothing other than a name or a sign *A*», and to which «infinitely many distinct predicates» are given «whose meaning is generally known through already existing ideas and which may not contradict each other»<sup>2</sup>.

We find here therefore, the idea of an abstraction operated on set and not directly on the sensuous, by recognizing the “unit” as not perceptual content but as a «*form*» of object-thinking<sup>3</sup>. «The concept of cardinal number» obtains in fact only a «immediate objective [*gegenständlich*] representation» in what Cantor defines, in the *Mannigfaltigkeitslehre*, «our internal intuition»<sup>4</sup>.

Cantor conceived therefore abstraction as linking to an «abstract realm of ideal mathematical objects which could not be directly perceived or intuited», and consequently, to his conception of numbers as *arithmoi eidetikoï* and sets as Platonic *eidos*. But the basis of his theory is anyway to be interpreted, as he affirms too, within a realist framework<sup>5</sup>, while the platonic element is to be found in the “awaking” of

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1 G. Cantor, “Mitteilungen zur Lehre vom Transfiniten”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind*, ed. E. Zermelo (Springer, Berlin, Heidelberg, 1932) p. 379. Husserl even explicitly approved in the *Philosophie der Arithmetik* Cantor's definition of number in the *Mitteilungen*, Cfr. E. Husserl, *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 115, note 2.

2 G. Cantor, “Grundlagen einer allgemeinen Mannigfaltigkeitslehre. Ein mathematisch-philosophischer Versuch in der Lehre des Unendlichen”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind*, cit., p. 207.

3 G. Cantor, *Briefe*, cit., p. 365.

4 G. Cantor, “Grundlagen einer allgemeinen Mannigfaltigkeitslehre. Ein mathematisch-philosophischer Versuch in der Lehre des Unendlichen”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind*, cit., p. 168.

5 *Ibid.*, p. 204. Cfr. “Prinzipien einer Theorie der Ordnungstypen”, cit., p. 84.

“concepts” and “ideas” interpreted as fundamental element of all knowledge:

«only be obtained through concepts and ideas which, at most stimulated by external experience, are on the whole formed through inner induction and deduction as something which in a way already lay within us and was only awakened and brought to consciousness»<sup>1</sup>.

Cantor did not make a secret of his idea to unite a metaphysical interpretation of mathematical objects with its epistemological framework in order to base his insight on numbers with philosophical foundation<sup>2</sup>. And now, is also not a secret that his “awaking” process and the view on that «ideal realm» represented by the transfinite numbers as *arithmoi eidetikoi*, are nothing but a interpretation of Plato's theories in the *Phaedo* and *Philebus*, as has already been said - but even remembered by Cantor himself<sup>3</sup>:

«Under a “manifold” or “set” I understand in general every multiplicity indeed, which is conceivable as One, which means, every collection of determinate element, which can be connected by law to a whole. And I think with that to define something closely related with the Platonic εἶδος or ἰδέα, and also with what Plato calls in his dialog *Philebos* or *the higher Good*, μικτόν»<sup>4</sup>.

In this sense is also to understand his attempt to harmonize mathematics and metaphysics in his «Platonic thought», by curiously understanding the relationship between both with a considerable insight on the founding relations among them:

«He [Cantor] has always interpreted the results of his investigations not only as

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1 G. Cantor, “Grundlagen einer allgemeinen Mannigfaltigkeitslehre. Ein mathematisch-philosophischer Versuch in der Lehre des Unendlichen”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind*, cit., p. 207.

2 Cfr., *Ibid.*, p. 100.

3 C. Ortiz Hill, “Abstraction and Idealization in Georg Cantor and Edmund Husserl Prior to 1895”, cit., p. 117f. Cfr. *Phaedo*, 75E – 76A.

4 G. Cantor, “Grundlagen einer allgemeinen Mannigfaltigkeitslehre. Ein mathematisch-philosophischer Versuch in der Lehre des Unendlichen”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind*, cit., p. 204.

contributions for a “science of the formal systems”; he was also in search of bigger connections. [...] He considered mathematics as a primary stage for metaphysics, and the progress in the realm of the set theory were for him also and at the same time, important steps in the understanding of God and World»<sup>1</sup>.

Cantor notoriously recalls for his interpretation of Plato the exposition offered by the professor for history of philosophy Eduard Zeller in his monumental *Die Philosophie der Griechen*<sup>2</sup>. His referring to Plato seems to serve the purpose of guarantee for the ontological status of mathematical objects. In particular, their condition of existence bounded to their non-contradiction, their free development and «ordered relationship» ruled and started by «previously formed and already existing concepts»<sup>3</sup>.

Whole numbers have, exactly as all other ideas, a form of immanent reality by their position in our understand and their “definite” relation to all other components of our understanding; an immanence which does not prevent anyway, to recognize a position also in the external world to the mathematical objects: they are in fact, as such, «representatives of powers which are actually present in corporeal and intellectual nature»<sup>4</sup>. Then, not only Cantor stresses a parallelism between the two kind of reality assigned to concepts, but he also tried to established a “Plato-inspired” interpretation of, on the one side, the truthfulness and Being of the «object of knowledge» which are concepts and ideas; on the other, the connection between the knowable nature of such objects and their Being<sup>5</sup>. Mathematical knowledge can anyway concentrate on the immanent nature of its objects and guarantee for their existence, as seen, by defining their non-contradiction, definiteness and reciprocal relations.

### 2.2.2 Cantor's Definition of Number

Cantor defines each number as, by essence, a simple concept, in which a manifold of Unities are combined into a whole and in which the relations among the Unities are

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1 H. Meschkowski, *Probleme des Unendlichen* (Springer Fachmedien Verlag, Wiesbaden, 1967), p. III.

2 Cfr. G. Cantor, “Grundlagen einer allgemeinen Mannigfaltigkeitslehre. Ein mathematisch-philosophischer Versuch in der Lehre des Unendlichen”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind*, cit., p. 206.

3 Ibid., p. 182.

4 Ibid., p. 181.

5 «What is knowable, is; what is not knowable, is not, and to the same extent something is, it is also knowable», in *ibid.*, p. 206.

defined. In the *Mitteilungen* Cantor clarifies briefly that:

«every finite (and exactly in the same way, every transfinite) cardinal number has for itself a *totally independent* ideal existence and position with respect to all other cardinal numbers. For the formation of the universal concept “five” *only one* set is needed [...] and to this set corresponds the cardinal number; the abstraction act directed to the characteristic and the order, in which I encounter this totally different things, causes – or better – awakes in my spirit the concept “five”. The five is therefore independent in and for itself from the “four” or “three” and from every other number whatsoever. Every number is, according to its essence [*Wesen*], a *simple* concept, in which a manifold of Ones is organically-uniformly comprehended together in a *special manner*, so that this way the different Ones and the numbers which proceed from their partial comprehension as well, are *virtual composing parts*»<sup>1</sup>.

Here we find Cantor substantially dealing with the problem of the One-Multiplicity, or one over against the many. He starts stating:  $5 = 2+3$

This equality should not be interpreted, according to Cantor, as if the concept 5 does *really* comprehend the concept 2 and 3 as parts. Certainly yet, 1, 2, 3, 4 are to be indicated as virtual composing parts of 5, which means only that, in every concrete sets of the cardinal number 5 are to be found partial sets, to which correspond 1, 2, 3, and 4. Every equality represents therefore a determinate ideal relationship of the three independent cardinal number 2, 3 and 5, and, as correlate, to every concrete set 5, correspond two partial set that can be really composed (2 and 3). Analogously, other equalities base on cardinal numbers, represent «fixed ideal relations and laws among number concepts which have their correlate, accordingly to our human form of knowledge, their fundament, in certain relations of concrete sets»<sup>2</sup>. Among the lawful relations which connects and “organizes” the realm of finite cardinal number in an ideal and organic whole, is the determining definition, according to which, given 2 cardinal numbers  $a$  and  $b$ , one is bigger than the other, and therefore, with a third  $c$ , is verified

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1 G. Cantor, “Mitteilungen zur Lehre vom Transfiniten”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind.*, p. 418.

2 *Ibid.*, p. 419.

that:

$a < b, b < c \Rightarrow a < c$ .

The totality of all finite cardinals constitute, with such order, a «simply ordinate set».

«Hence, we have here, *according to the rank, a lowest element*, the the smallest cardinal number 1 and, with respect to every finite cardinal number  $v$ , *according to the rank*, i.e., here according to dimension, the subsequent finite cardinal number  $v + 1$ . Therefore, we obtain *the totality of all finite cardinal numbers* in what is called *natural infinite series*: 1, 2, 3, ... $v$ , ..., in such a series they represent *a completely ordinate set of the order-type  $\omega$* »<sup>1</sup>.

This infinite totality of finite numbers, as taken as a thing for itself, is an actually infinite set, or what Cantor calls a *Transfinitum*. To conduct the theory of cardinal number in the realm of the transfinite, and there «to bring it to rigorous formation», we are instructed to the «introduction of the *transfinite ordinal numbers*, which are themselves only the special forms of the *order-types or ideal number (arithmoi eideitikoï)*»<sup>2</sup>. The transfinite ordinal number are in fact nothing more than types of the infinite and ordinate sets which are the completely ordered ones.

We understand here, even if we are not able to enter in the complex mathematical questions involved, how for Cantor «the whole real numbers are related to Plato's *arithmoi eideitikoï* with which they probably even fully coincide» and how the transfinite ones are only special forms of the same<sup>3</sup>. With that he calls Plato's interpretation, which he borrowed from Zeller, of ideas as numbers, an interpretation which distinguishes between the “empirical” and the pure and “ideal” treatment of numbers. This latter, the *arithmoi eideitikoï*, are detached from the sensuous things and stay in a ordered relationship among them, i.e., the before-after relationship. But in the same interpretation we also find the Platonic principle according to which, in what is real [*das Wirkliche*], the One and the multiplicity must be organically combined, i.e., «the principle on which every theory of number is based»<sup>4</sup>. Mathematics first deals not with the ideal numbers, but rather with the “mathematical” ones, which do not coincide

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1 Ibidem.

2 Ibid., p. 420.

3 G. Cantor, “Principien einer Theorie der Ordnungstypen”, cit., p. 84.

4 E. Zeller, *Die Philosophie der Griechen*, Zweiter Teil, Erste Abtheilung, 3<sup>rd</sup> (Fues's Verlag, Leipzig, 1875), p. 574.

with ideas and lay «between» them and the sensuous things. Zeller explains in fact how in the *Philebus* Plato does actually

«clarify the Pythagorean theory of the complete connection of unity and multiplicity, of the limits and the infinity, as a pillar of dialectic. He clarifies also the same definitions on the concepts which the Pythagorean demonstrated by the numbers. Therefore, Plato does recognize by numbers and mathematical relations the connecting elements between Idea and appearance, numbers present us the Ideas as the measure of the corporeal and spatial; primarily they unify themselves hereby, into the schema of ideas (...)»<sup>1</sup>.

Now, for Cantor, «if the abstracting act» is bestowed on a given set which is ordered by one or more relations (dimensions), «but only with respect of the *characteristics* of the elements», such that the order is maintained also in the universal concept, a «primarily-arising, unitary and organic formation» is obtained. By that we have, in other words, «such an *universale*» called by Cantor ideal number or order-type, and in the special case of the ordered set, ordinal number<sup>2</sup>. If it abstracted from the «*characteristics of the elements*» - we already know, in a set composed by elements whatever and seen as a «unitary thing for itself» - «*as well* from the order of their [of such elements] being-given, we obtain the *cardinal number* or *power* of the set», which is a universal concept within which the elements as Ones are bond together as a «unitary whole» without any rank-order<sup>3</sup>. To two sets correspond the same cardinal number when they are equivalent, while to two ordered sets does correspond now one and the same order-type when they are in a relationship of conformity.

Those are the «roots» from which Cantor developed then his transfinite theory of types, because if «by finite sets the two moments, “power” and “ordinal number”, to a certain extent coincide», for a finite set by every elements order as a “completely-ordered set” posses the one and the same ordinal number, «by the infinite sets the difference between “power” and “ordinal numbers” does evidently appear»<sup>4</sup>. Cardinal as well as the order-

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1 Ibid., p. 568.

2 G. Cantor, “Mitteilungen zur Lehre vom Transfiniten”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind.*, p. 379.

3 Ibidem. Cantor's italics.

4 G. Cantor, “Die Grundlagen der Arithmetik”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel*



types are «simple concepts-formations», where hereafter, «every of them is a *true unity* ( $\mu\omicron\nu\acute{\alpha}\varsigma$ ), because in them a multiplicity and manifold of *Ones* are connected in a *unitary way*». The elements of the set M in front of us are to be «separately presented», in the «intellectual image» that is the order-type, the Ones are unified into an *Organismus*, which is a composite of *matter and form*: the conceptually distinguished Ones are the matter, while to those correspond, where they are to be found under a order, the form<sup>1</sup>. Both concept of number are essential in order to understand his manifold theory and even the true nature of them which appears in its full range when the two analysis are confronted. Writes in fact Cantor in his *Abhandlungen zur Mengenlehre*:

«If I interpret the infinite this way, [...] then it follows a great pleasure for me to see, how the entire number concept, which by the finite only has the backdrop of the *ordinal number*, when we proceed up to the infinite it *splits* into *two* concepts: the one power, which is independent from the order possessed by a set, and in the *ordinal number*, which is necessarily connected with an law-ruled order of the set, by means of which this latter became a *completely-ordered set*. And when I go back down from the infinite to the finite I also see clearly and beautifully, how the two concepts became Ones again and how they flow together into the concept of whole finite number»<sup>2</sup>.

In the *Philebus* we find in the same manner, Socrates' solution to the problem of the relationship between the unitary concept and the multiplicity of appearance by the Platonic principle of the unifying real and the being One of the many, where this holds even for concepts<sup>3</sup>.

Without the need to go deeper in Cantor's account of number and especially his major achievement, i.e., the basis of the set-theory, we can briefly say and stress that the similarity in Husserl's and Cantor's account of the first fundamental steps necessary in order to gain clarity on the very basic phenomena called in question on the “lower” or

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*Cantor-Dedekind*, cit., p. 440.

1 G. Cantor, “Mitteilungen zur Lehre vom Transfiniten”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind.*, p. 380.

2 G. Cantor, “Abhandlungen zur Mengenlehre”, in *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts. Mit erläuternden Anmerkungen sowie mit Ergänzungen aus dem Briefwechsel Cantor-Dedekind*, cit., p. 181.

3 E. Zeller, *Die Philosophie der Griechen*, cit., p. 565.

“fundamental” analysis of the mathematical concepts, have been noticed and even with respect of the topic here in question, already at the time of the encounter of the two men in Halle<sup>1</sup>. It was in fact Frege that, in his famous but even too critical reviews of both, Cantor's “*Mitteilungen*”<sup>2</sup> and Husserl's “*Philosophie der Arithmetik*”, charged both men with attempting to achieve magical effects by using abstraction to destroy and detaching the properties things have in order to obtain the “something” whatsoever that represents the One collected in a multiplicity or in a set.

Frege writes in fact in his hilarious review of Cantor's *Gesammelte Abhandlungen zur Lehre vom Transfiniten*, but which also recalls some of the aspects Husserl claimed for his basic formal function:

«If, for instance, you find that some property of a thing bothers you, you abstract from it. But if you want to call a halt to this process of destruction so that properties you want to see retained should not be obliterated in the process, you reflect upon these properties. If, finally, you feel sorely the lack of certain properties in the thing, you bestow them on it by definition. (...) The significance this would have is practically beyond measure»<sup>3</sup>.

And more specifically with respect of the process involved in the formation of number, he writes in the same review:

«Faced with a cage of mice, mathematicians react differently when the number [*Anzahl*] of them is in question. Some (...) include in the number the mice just as they are, down to the last hair; others – and I may surely count Cantor among them – find it out of place that hairs should form part of the number and so abstract from them. They find in mice a whole host of other things besides which are out of place in number and are unworthy to be included in it. (...)

Cantor demand even more: to arrive at cardinal numbers, we are required to

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- 1 Cantor was in fact in Husserl's *Habilitation* committee and a friendship relation developed after this first encounter. Cfr. ed. H. Garlach, H.R. Sepp, *Husserl in Halle*, (Peter Lang, Bern, 1994) p. 146f.
  - 2 For what concern Frege's review of Cantor's work, see G. Frege “Review of Georg Cantor, *Zur Lehre vom Transfiniten*. *Gesammelte Abhandlungen aus der Zeitschrift für Philosophie und philosophische Kritik*”, in *Collected Papers on Mathematics, Logic, and Philosophy*, ed B. Mc Guinness (Basil Blackwell, Oxford, 1984), p. 178f.
  - 3 G. Frege, “Draft towards a Review of Cantor's *Gesammelte Abhandlungen zur Lehre vom Transfiniten*”, in *Posthumous Writings*, ed H. Hermes, F. Kambartel, F. Kaulbach (Basil Blackwell, Oxford, 1979), p. 69.

abstract from the order in which they are given. What is to be understood by this? Well, if at a certain moment we compare the positions of the mice, we see that of any two one is further to the north than the other, or that both are the same distance to the north. (...) But this is not all: if we compare the mice in respect of their ages, we find likewise that of any two one is older than the other or that both have the same age. (...) All these relations generate an order. (...) So we are meant to abstract from this order too»<sup>1</sup>.

Hence, abstraction, according to Frege, would endow mathematicians with the miraculous and even supernatural ability to change things in “the wash-tub of the mind”. This ability assigned by Cantor, but much more by Husserl, to consciousness, is what demonstrates for Frege the psychologistic approach to mathematical problems. It was in fact the «psychological and hence empirical turn» he believed Cantor and Husserl had given the matter that particularly irked him, a turn derived, in the case of Husserl, from Brentano's approach to science and, for Cantor, from his necessity to harmonize his metaphysical perspective with the straight logical-mathematical<sup>2</sup>. Summarizes in fact Frege in his *Rezension von E. Husserl, Philosophie der Arithmetik*:

«The most naive view is the one on which a number is something like a heap or swarm in which things are contained with all their peculiarities. Then comes the conception of a number as a property of a heap, aggregate, or whatever else it may be called. Here one feels the need to cleanse things of their peculiarities. The present attempt belongs to those that carry out the cleansing operation in the wash-tub of the mind. The advantage this offers is that the things in it assume a quite peculiar pliancy; they no longer knock so hard against each other in space and shed many of their bothersome peculiarities and differences. The mixture of psychology and logic, which is so popular nowadays, yields a strong lye for this purpose»<sup>3</sup>.

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1 Ibid., p. 70.

2 G. Frege “Review of Georg Cantor, *Zur Lehre vom Transfiniten*. Gesammelte Abhandlungen aus der *Zeitschrift für Philosophie und philosophische Kritik*”, in *Collected Papers on Mathematics, Logic, and Philosophy*, cit., p. 181.

3 G. Frege, “Rezension von E. Husserl, *Philosophie der Arithmetik*”, in *Zeitschrift für Philosophie und philosophische Kritik*, p. 316.

But now, Frege himself held, as we have briefly seen above, that the «properties which serve to distinguish things from one another are, when we are considering their Number, immaterial and beside the point»; therefore, something «we want to keep them out of it»<sup>1</sup>. According to his position, one is following “pure logic” by disregarding the particular characteristics of objects, and he believed that the propositions of this same pure logic could not reach consciousness in a “human mind” without any activity of the senses, since «without sensory experience no mental development is possible in the beings known to us». Those are words from the *Begriffsschrift*, the work where he mostly tried to demarcate the distinctions among the different kind of scientific propositions and their origin by trying «to prevent anything intuitive [*Anschauliches*] from penetrating here unnoticed». He writes yet anyway:

«The most reliable way of carrying out a proof, obviously, is to follow pure logic, a way that, disregarding the particular characteristics of objects, depends solely on those laws upon which all knowledge rests. Accordingly, we divide all truths that require justification into two kinds, those for which the proof can be carried out purely by means of logic and those for which it must be supported by facts of experience. But, the fact that a proposition is of the first kind is surely compatible with the fact that it could nevertheless not have come to consciousness in a human mind without any activity of the senses. Hence it is not the psychological genesis but the best method of proof that is at the basis of the classification»<sup>2</sup>.

Frege's aim in his criticizing Cantor's and Husserl's recall for an abstraction process was surely stressing the unclear nature of its function, which is, at least taking Husserl's account, justified even if not completely to the point. What animated Husserl and Cantor as well in approaching mathematical and even logical problems starting with a sort of abstraction-process supposed as its very basis, was certainly the need of guarantee for a sort of “intuitive” referring of such higher-level functions of consciousness; but the search for a kind of intuition is surely not to be understood in the sense of the mere sense intuition. «With respect to the starting point and the germinal core of our

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1 G. Frege, *Die Grundlagen der Arithmetik*, cit., p. 45.

2 G. Frege, “Begriffsschrift, a Formula Language, Modeled upon that of Arithmetic, For Pure Thought”, in ed P. Geach, M. Black, *Translations from the Philosophical Writings of Gottlob Frege*, (Basil Blackwell, Oxford, 1960), p. 1.

developments toward the construction of a general arithmetic», writes for example Husserl in 1890, «we are in agreement with mathematicians that are among the most important and progressive ones of our times: above all with *Weierstass*, but not less with *Dedekind*, *Georg Cantor* and many others»<sup>1</sup>. The “untold” part of this general affinity of intent, refers basically to the already more developed need for metaphysical framework in Cantor's approach, which is somehow alien to the Husserl of the *On the Concept of Number* and *The Philosophy of Arithmetic*. If the Aristotelian assumption of abstraction was in fact curiously directed to a more Platonic statement regarding the nature of mathematical concepts in Cantor, as we have seen, Husserl was prevented by such a direct statement by the Brentanian warn against the «traits of Platonism» belonging, «in addition to [his] brand of formalism», to Cantor's approach<sup>2</sup>.

### 2.2.3 The Search of The Ontological Status of Mathematical Objects in The Philosophy of Arithmetic.

Husserl is in fact still “on the way” for the «wholly unique kind of “platonism” about mathematics» which, explicitly developed starting from around 1907, represents, as recently formulated, «a Platonism embedded within transcendental idealism»<sup>3</sup>. In this latter interpretation, we look in fact to the transcendental ego as the source of Platonism about logic and mathematics. Even in this later development and even if differently interpreted, still logic and mathematics are built up non-arbitrarily through acts of abstraction, idealization, reflection, and so on. Those can be seen as the characteristics which Husserl maintains after the *Philosophie der Arithmetik* up to *Formale und transzendente Logik*, but where now transcendental constitution play a pivotal role in the sense constitution.

What is to be stressed is in fact rather that, if some aspects of a “platonic” or “idealistic” approach to mathematics, such as the one developed by Cantor and others, can have find some reverberation in Husserl works also, some others prevent to assign to the objects of mathematics as assumed in the *Philosophie der Arithmetik* such a clear and definite

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- 1 E. Husserl. “Begriff der allgemeinen Arithmetik”, in *Philosophie der Arithmetik*, in *Husserliana* XII, cit., p. 374.
  - 2 I. Grattan – Guinnes, *The Search for Mathematical Roots 1870 – 1940*, (Princeton University Press, Princeton and Oxford, 2000), p. 119.
  - 3 R. Tieszen, “Mathematical Realism and Transcendental Phenomenological Idealism”, in *Phenomenology and Mathematics*, cit., p. 14.

status. Surely in this sense should be considered the not always clear distinction between the characteristics and properties of numbers and the ones belonging to the presentations of the same, or the distinction not always clear or, even more radically interpreted, the completely absent explicit distinction between the numbers as, supposedly, “ideal objects” from the “real” mental acts within which they are accessible. Even the articulated process in which «we come to know about them», and that we have already extensively exposed, somehow prevent to consider ideal objects already part of his ontology<sup>1</sup>.

That we have to focus on the mathematical objects is to be justified not only because, as already seen above, logic does actually develop largely after and starting from the works on arithmetic, but also because Husserl's constant view on the relationship between mathematics and logic, even among the methodological changes in his philosophy, constantly tended to interpret both as «intimately related»<sup>2</sup>; therefore to shed light on the one means to bring clarity also on part of the second realm. In fact, differently from, for example Frege, mathematics is not an extension of logic but much more its ontological correlate; both are “analytical” in Husserl sense of the words<sup>3</sup>, with the following exclusion of geometry as synthetic a priori.

«The idea of a *formal ontology* as an *a priori* discipline that investigates *all* truths belonging to the essence of objectivity in general in formal universality is, however, more far-reaching, at any rate very much more far-reaching than might be expected from the propositions of the area accorded priority in our examples, therefore, more far-reaching than the sphere of traditional formal logic. Rather, this most universal theory of objects of all, this formal ontology, embraces the *whole of formal mathematics*. To be noted in this regard, is that this term formal mathematics excludes geometry. It embraces the pure theory of cardinal and ordinal numbers, theory of combinations and all disciplines of what is called analysis, number theory, function theory, algebra, the differential and integral calculus, <the> theories of Euclidean and non-Euclidean manifolds and any theory

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1 Ed. Dov M. Gabbay, J. Woods, *Handbook of The History of Logic*, Voll. 3, The Rise of Modern Logic: From Leibniz to Frege, (Elsevier, Amsterdam, Boston, Heidelberg, London, New York, Oxford, Paris, 2004), p. 209.

2 G. E. Rosado Haddock, “To be a Fregean or to be a Husserlian: that is the Question for Platonists”, in *Husserl or Frege? Meaning, Objectivity and Mathematics*, cit., p. 202.

3 To define a statement or a complex of statements as analytic, it must maintain its mandatory true-value also after complete formalization.

of manifolds in general: the whole of “arithmetized” mathematics (...)»<sup>1</sup>.

We have seen above how Husserl describes the process leading to the concept of multiplicity arising, problematically as seen, through first abstraction and then reflection on the collection of contents of a concrete whole, and where therefore a “psychical act of second order” gives the awareness of the multiplicity. Husserl's account, by concentrating yet in fact on the proper presentation of numbers as still different from the merely symbolic, applies well to small finite cardinals. We have already seen that no concept can be thought without being founded on a concrete intuition, and in fact the more general concept of multiplicity depends on the intuitive presentation of concrete multiplicity from which it is abstracted. Abstraction comes therefore in question by the abstraction, i.e., the “not paying attention on” the peculiar nature of the multiplicity contents and by retaining instead their collective connection. Multiplicity, as general and formal concept, is therefore defined by “something and something...”, or, which is basically equivalent, “one and one and one...”. This general concept presents therefore the peculiar indeterminateness represented by the “content whatever” and by the possible “*und so weiter*” of the process. It is when this indeterminateness is removed that the concept of multiplicity breaks up into a variety of “distinct” concepts of numbers. An original presentation of a concept such as “one and one”, or “one and one and one” arises which are named, respectively, “two”, “three” etc.

Number concepts can however arise also not directly from the general concept of multiplicity, but for the small cardinal, also directly from the concrete multiplicity. The concept of multiplicity and of number have therefore the same essential content, but in the case of the number concept a distinction of the abstract forms of multiplicity from one another is eventually involved, which “refines” the number concept in respect to multiplicity. The concept of number takes shape out of comparison of distinct forms of multiplicities.

This remarks and the expositions of the formal abstraction and reflection leads to the question if the fact that the collective connection is mental does imply that multiplicity or numbers are also therefore mental entities. Somehow, much of Frege's raised questions about Husserl's work in the *Philosophie der Arithmetik* were exactly directed

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<sup>1</sup> E. Husserl, *Einleitung in die Logik und Erkenntnistheorie. Vorlesungem 1906/07*, in Husserliana XXIV, cit., p. 55

to this point: arithmetic appears as concerned with formal properties of multiplicities and, in the case of the concept “something”, of objects, formed by the mind. Husserl's analysis framework would eventually lead to believe that numbers themselves are purely formal and objective: the fact that Husserl aims to describe the subjective experience in having awareness of such mathematical and logical objects does not imply *eo ipso* their subjective nature. Even the sense of the analysis on the “origin” of concepts recalled guarantees that, what it is here in question is not much the existence in a subjective experience of such entities and not even a “possible” genealogical explication of them all, but only of the way of their being given to consciousness.

On the other hand, Husserl's recalling of a kind of acts and of a language inevitably linked to the psychological-subjective realm does suggest that the formal properties of multiplicities are “formed” by the mind. Moreover, Husserl's ontology at this point seems to include only the physical and the psychical, but not ideal object. And this appear even more clashing if related to the later account of mathematics and logic. But, of course, the fact that their ideal objectivity is not stated in the same sense does not mean they are not objective at all. Husserl, unlike Frege, did not find it objectionable for mathematicians to describe the way in which one comes to awareness of a concept instead of starting with a logical definition, which offer a extensive or a logical definition, but does not arrive at what we *mean or intend* in thinking the number<sup>1</sup>.

On the other side, it could be argued that a descriptive analysis of the origin of the concept of number may justify to see, already in the *Philosophie der Arithmetik*, numbers at least as abstract objects in the sense of invariants in our mathematical experience, or more broadly, in mathematical phenomena. When we possess or display the concept of number, we can at least say, under the perspective of a descriptive analysis, that numbers are identities through the different kind of acts and the complex process we carry out in order to let them arise. And that, even in different times and place. On the other hand, this same descriptive framework kept Husserl from stating the nature of the number concept clearly, if confronted with later assumptions in his works after the *Logical Investigations*. In part that is surely to be linked, as we have already seen above, to Husserl's descriptive act structure and the role assigned within it to reflection and abstraction, this latter even still not yet conceived as a proper formal

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1 In his 1918 *The Thought* curiously enough, we find Frege trying to answer exactly the same questions about «timeless and immutable “thoughts”». G. Frege, “The Thought”, in *Mind*, New Series, Vol. 65, No. 259. (Jul., 1956), p. 297.



abstraction. Moreover, Husserl is still influenced and under many points of views by Brentano. In this sense, a more clear understanding on the one side, of the nature of the relations involved in the psychical and physical phenomena, and of the intentional structure of acts with their objective correlate on the other, could have helped Husserl in his coming in clear about the status of mathematical, but even more in general, cognitive entities. Surely it is also to be considered that it is also with respect to the later more explicit assumption of the ideal nature of those latter, that Husserl's position appears more veiled, and that even if one refuse their definition in the sense of the ideality.

What it is already well known is in fact that Husserl only later on will label his phenomenology within a peculiar form of Platonism for mathematics and logic. Notoriously, he even reached the point to define himself in a 1918 letter to Julius Stenzel a «phenomenological Platonist»<sup>1</sup>. He also claims that instead of Aristotle, Plato is the one who establishes the ideal of rationality and logic. In the historical part of the 1923 *Vorlesung Erste Philosophie* it is in fact through the Platonic nature of Euclid's «pure mathematics» that Husserl take the chance to resume part of the history of the acquisition by the Greek philosophy and mathematics of its rational essence «through the Platonic view on the ideal nature of objects of knowledge», especially mathematical ones:

«the first deep insights on the *subjective form of true knowledge* led wit itself, as the greatest and earliest achievement, the discovery of the ideal knowledge in the form of a cognition of the apodictic true. There is an originally evident gaining – even a complete – of pure ideal-concept, and within there lay now some ideal-laws, which are laws of visible apodictic universality and necessity. This gaining immediately bore on the clarification and accomplishment in principle of the already existing mathematics, on its transformation in a pure mathematics as pure ideal science.

It must be here stressed that the history of the rigorous sciences, and especially, the history of the exact sciences, in its the narrowest comprehension, is brought back much earlier than the Platonic era, and that's for good reasons, but now, to the pre-platonic formations of such sciences only the character of scientific

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1 E. Husserl, “Brief an Julius Stenzel”, in *Briefwechsel*, VI, cit., p. 427.

preforms is to be allowed. This way, mathematics acquired in first place its specifically scientific status only through the subjectively-methodological work performed by the platonic dialectic. Only due to such dialectic could mathematics firstly become a *pure* geometry and arithmetic that has to do with *ideally possible* spatial and numerical formation, thought also in normative relation to limiting ideas to grasp intuitively and with respect which the possibilities, as such, approximate. And to these pure ideals of approximation (“pure” Unities, “pure” line etc.) are now referred the immediate ideal-concepts and ideal-laws, which, for themselves, as “axioms”, sustain the entire construction of pure deduction»<sup>1</sup>.

The fact that Husserl not only historically and interpretively assumes later on such a platonic interpretation of mathematical objects and of part of the logical objects, could already be showed in this passage from the important 1910 lecture on *Logik und allgemeine Wissenschaftstheorie*, which was also repeated by Husserl years later basically unmodified. Recalling the problem of explaining not the genetic origin of the phenomena connected with the mathematical entities, but much more setting the topic in the givennes of the mathematical phenomena, and assuming therefore what “mathematicians brought” for describe then how such objects could come to consciousness, he already makes clear statements indeed on how must be understood the nature of such objects:

«one cannot describe the given phenomena like the natural number series or the species of the tone series if one regards them as objectivities in any other words than with which Plato described his ideas: as eternal, self-identical, untemporal, unspatial, unchanging, immutable etc. But immediately swirls around in the head of the acquainted with the traditional philosophy: Platonic ideas are nothing more than hypostatizations of abstractions. *Platonic* realism would mean at the same time mysticism»<sup>2</sup>.

From both quotes is much to be derived, not only the assumption regarding the nature of

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1 E. Husserl, *Erste Philosophie*, in Husserliana, VII, cit., p. 34.

2 E. Husserl, *Logik und allgemeine Wissenschaftstheorie. Vorlesungen 1917/18 mit ergänzenden Texten aus der ersten Fassung von 1910*, in Husserliana, XXX, ed U. Panzer (Kluwer Academic Publishers, Dordrecht, 1996), p. 34

ideal objects, especially mathematical, interpreted indeed as possessing an ontological status close to Plato's ideas, but also their “metaphysical neutrality” in a double sense. In the first place, by their not supposing to build up a «*topos ouranios*» as Husserl refers in the *Logical Investigations* and, by avoiding any kind of hypostatizations<sup>1</sup>. In second place, it is metaphysically neutral by only describing (i.e., not postulate), in the same sense which dominate this earlier production, how consciousness relate to such objects and to the structure mathematics reveals as “given itself” with such and such characteristics in a definite and categorical theory. A theory this latter, «in which mathematical objects have an objective existence independently from our activities of judging» and indeed do exist «under the point of view of the theory»<sup>2</sup>.

This latter observation also stresses what is only touched upon in the quote from the 1923 *Lecture* and where is to be found the scientific *ethos* Husserl claims to have owed from his teacher Weirstrass: the aim to put single inquiry and what emerge from a single research as acquiring its true sense in a encompassing theory<sup>3</sup>. This holds eventually also for what concern the role played by the most original ideal realities within the theory that gives and gains throughout its status. We find in fact the later results of such a conviction, evaluated and grown through Husserl's philosophical evolution in the “Introduction” to *Formale und transzendente Logik*, where the weight of the platonic insight into logic does actually led to what can be call “science” without any kind of naivete:

«Science in a new sense arises in the first instance from *Plato's establishing of logic*, as a place for exploring the essential requirements of “genuine” knowledge and “genuine” science and thus discovering norms, in conformity with which a science consciously aiming at through justness, a science consciously justifying its method and theory by norms, might be built. In intention this logical justification is a justification deriving entirely from pure principles. (...) Thus the original sense here is that logical insight into principles, the insight drawn from the pure idea of any possible cognition and method of cognition whatever, precedes the method factually employed and the factual shaping of science, and guides them in

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1 E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 106.

2 J. Benoist, “Husserl “Platonismus”, originally a talk delivered at the University of Cologne, in 1.8.2003, quoted in in *Phenomenology and Mathematics*, cit., p. 118.

3 K. Schuhmann, *Husserl-Chronik*, cit., p. 7.

practice»<sup>1</sup>.

This theoretical and metaphysical framework was meant by Plato against the sophistic skepticism regarding the denial of science, and in this way, «Plato was set on the path to the pure idea»: «not gathered from the facts of science but formative of pure norms, his dialectic of pure ideas – as we say, his logic or his theory of science – was called on to make genuine science possible now for the first time». Precisely by fulfilling this “vocation”, according to Husserl, Plato's dialectic helped create sciences in the strict sense, i.e., the ones sustained by the idea of logical science and of *reflection* on its own foundation, which means, «the strict mathematics and the natural science, which both develop at higher stage in our modern sciences»<sup>2</sup>.

All those new perspectives briefly sketched here start anyway taking shape soon after the *Philosophie der Arithmetik*, where, for example, in its “Part II” logic is still conceived largely as a theory of calculation involving concrete and sensible signs, while already before the *Prolegomena* but extensively exposed in this latter, logic obtains a much more articulated definition. As *Wissenschaftslehre*, its task is «to deal with the sciences as systematic unities of this or that sort»<sup>3</sup>. As pure logic, theory of science deals in fact with relations between certain abstract entities, intended as non-linguistic formations, which are concepts and propositions that delineate an «internally closed and basically independent field» of a priori truths. Logic recognizes hereafter the objectivity of the contents of thinking and their properties and logical relationships<sup>4</sup>. For what concerns logical relationships, pure logic takes the shape of a theory of the deductive mechanism. That means, broadly speaking, it becomes a theory concerned with the logical mechanism dominating all formal sciences. Pure logic deals therefore with «a sphere of laws that in formal universality span all possible meanings and objects, under which every particular theory or science is ranged and must obey, if it has to be valid», and moreover, which every formal theory must comply. Through such laws, meanings and object, «a theory can be validated by its form and can be ultimately justified»<sup>5</sup>.

Surely, according to Husserl, the essential impulse on the path of this reinterpretation of the role of logic and of the objective and abstract object is to be linked to his

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1 E. Husserl, *Formale und Transzendente Logik*, in *Husserliana*, XVII, cit., p. 5.

2 *Ibid.*, p. 6.

3 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana* XVIII, cit., p. 70.

4 *Ibid.*, p. 76.

5 *Ibid.*, p. 239.

«encounter», among others, with Lotze's *Logik*, and especially Lotze's reading of Plato's ideas and the following lecture of Bolzano's *Wissenschaftslehre* «through» Lotze<sup>1</sup>. Years later, in 1933, Husserl writes in fact retrospectively to a – at the time - young Paul Welch:

«My entire development was determined by the departing from F. Brentano (my academic teacher) – and from his psychology, which judged “intentionality” to be the main character of what is psychic. But by better penetrating the correlation between the logical idealities and their intentional correlates (*2<sup>nd</sup> Logical Investigation*), the sense of an intentional psychology and its analytical method changed entirely shape in me. (...)

The extent of the role played in my development by my “Platonism”, my resolute arguing for a universal ontology and also for the development of essential insight (for the true Apriori) in all sphere of knowledge, and what kind of new significance that Platonism did acquired in the late transcendental phenomenology, [it is clearly] to be explicated in my “Formale und transcendente Logik” (esp. II part), even if however here only the “formal ontology” is in question. For that “Platonism” I am thank to the famous chapter in Lotze's *Logik*, how much continuously his epistemology and metaphysics pushed me off»<sup>2</sup>.

In Husserl's eyes, Lotze's interpretation of concepts must have represented, a hint with his interpretation of ideas as selfsame, eternal, *concepts*, which are objective and valid «within a web of logical theory», and where therefore, «from this point of view the entire structure of our concepts rises like a mountain-chain, beginning in a broad base and ending in several sharply defined peaks»<sup>3</sup>.

For Lotze it was this image of a conceptual world building itself up without a break, upon which the vision of Plato dwelt. Being this latter «the first to recognize the eternal self-identity of every concept and its significance as against the variableness of the real world», he might well feel the charm of tracing out all the simple elements of thought,

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1 C. Beyer, *Von Bolzano zu Husserl. Eine Untersuchung über den Ursprung der phänomenologischen Bedeutungslehre*, in *Phaenomenologica*, 139, (Kluwer Academic Publishers, Dordrecht, Boston, London, 1996), p. 6. See, *ibid.*, p. 131f.

2 E. Husserl, “Briefe and Welch” (6.17/21.1933), in *Briefwechsel*, VI, cit., p. 460.

3 H. Lotze, *Logik. Drei Bücher vom Denken, vom Untersuchen und vom Erkennen*, cit., p. 54.

of combining all that could be combined, and of setting up in the organic whole of a world of ideas, i.e., what Plato interpreted as the eternal pattern of which the created world is an imperfect imitation. Even by the admitted impossibility to achieve the impossible task to reconnecting all real to all the real, according to Lotze,

«the utmost that we could attain by such means, would be merely the image of a fixed order, in which simple and composite concepts stood side by side, each unchangeably self-identical and each bound to its place in the system by invariable relations to all the rest»<sup>1</sup>.

Accordingly Husserl explains his plan to have been to take Lotze's view of the ideal domain and place all the mathematical and a good part of the traditional logic into it, trying to avoid anyway, on the one side, the most of its metaphysical engagement, and on the other, Lotze's occasional psychologism as well, trying this time to interpret this way part of the new mathematical logic of the late eighteenth century, for example, for what concern a possible categorical theory. Husserl writes in fact during the works of the planned new edition of the *Logical Investigations* in 1912:

«That little Lotze himself could go beyond contradictory inconsequences [*Inkonsequenzen*] and beyond psychologism, so on the other, [his] ingenious interpretation of the platonic theory of Ideas shed some first bright light for me and defined all the following studies. Already Lotze spoke of truths in itself and therefore, the thought seemed likely to place all the mathematical and a good part of the traditional logic in the realm of ideality»<sup>2</sup>.

Surely Lotze represented for Husserl, besides the differences and the late critical evaluation of the true value of his work, the opportunity to look into a new series of problem, starting from the relations between the sciences and the role and nature of logic as realm of validity. This already find its roots in the 1896 Lecture on *Logik*, and the appearing within this lecture of the *in nuce* concept of pure logic in the sense of pure theory of science. It is moreover well know and it is in fact already been deeply

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1 Ibid., p. 55.

2 E. Husserl, "Entwurf einer Vorrede. Zweites Fragment", in *Logische Untersuchungen, Ergänzungsband, erster Teil*, in *Husserliana*, XX/1, cit., p. 297.

investigated<sup>1</sup>, how Husserl may be approached *via* Lotze certain fundamental distinctions introduced by Bolzano in his *Wissenschaftslehre*, such as the concept of “proposition in itself”, for interpreting later, after the *Logical Investigations*, such notions in the sense of its theory of logical objects as ideal objects. A clear statement of such an interpretation is to be found, for example, in the 1903 review of Melchior Palagyi's work on the crisis among the psychological and the formalistic approach in logic. Husserl writes in fact extensively there:

«I saw that under <Bolzano's> “proposition in itself” is to be understood what is designated in ordinary discourse - which always objectifies the Ideal - as the “sense”[“*Sinn*”] of a statement. It is that which is explained as one and the same where, for example, different persons are said to have asserted the same thing. (...). And it further became clear to me that this identical sense could be nothing other than the universal, the species, which belongs to a certain *Moment* present in all actual assertions with the same sense, and which makes possible the identification just mentioned, even where the descriptive content of the individual lived experiences [*Erlebnisse*] of asserting varies considerably in other respects. The proposition thus relates to those acts of judgment to which it belongs as their identical meaning [*Meinung*] in the same way, for example, as the species *redness* relates to individuals of “the same” red color»<sup>2</sup>.

Now with this view of things as a basis, Bolzano's theory according to which propositions are objects which have, according to him, nonetheless than «no “existence”», appears to Husserl to have a pretty clear and intelligible signification: they have, importantly, an “Ideal” being [*Sein*] or they possess the form of being of the pure validity [*Gelten*] of objects which are universals, or, as Husserl says, of universal objects [*allgemeine Gegenstände*]. This kind of being is of the same kind of the one, «which is established, for example, in the “existence proofs” of mathematics»<sup>3</sup>. Therefore, in this sense, to mathematical entities it is explicitly conferred the ontological status of ideality, and even more, of ideal objects. All this kind of idealities do not have

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1 C. Beyer, *Von Bolzano zu Husserl*, cit., p. 153f.

2E. Husserl, “Besprechung von M. Palagyi, Der Streit der Psychologisten und Formalisten in der modernen Logik, Leipzig 1902”, in *Aufsätze und Rezensionen*, in *Husserliana*, XXII, p. 157.

3 *Ibid.*, p. 158.

in fact «the real being of things», or of dependent thinglike [*sachlich*] *Moments* which is, for example, the form of being recognized to temporal particulars in general.

It will be not our aim in the following section, to establish how exactly is to be understood the influence of Lotze's interpretation of the validity of ideal objects on Husserl, and at the same time, we will not deal with the role played by Bolzano in the definition of the kind of Being possessed by such objects. We will try instead to trace back Husserl's meditations on the Universal and the already mentioned universal objects, later on indicated also as ideal objects, to their first taking shape in 1896. That will offer us the opportunity to show the origin of Husserl's interpretation of universal and ideal objects conceived in a still “old fashioned” way as “unity over against the multiplicity”, and moreover, the effect of such an interpretation of one of the aspect of his *Wesenslehre*, which is the conceptual universal.





3)

## The Universal and The Ideal.

### *3.0) Introduction*

The traditional problem of the universal goes way through the entire history of philosophy and it appears also in Husserl's work, representing in fact one of the latest interpretation of the logical and epistemological question about universality. It is in fact of no doubt that Husserl, even if not by explicitly recalling himself to a specific tradition, on the one side does assume in his investigations some of the very problems and issues in logic that has their roots in the Aristotelian and even Scholastic tradition, on the other side, assumes and shows, as recently mentioned, some controversial and interpretative traits of Platonism. Husserl conceives his doctrine of the universal and the intuition of the universal, which has acquired a problematic notoriousness as his doctrine of essence, by basically assuming a deeply elaborated version of a «traditional conception», ending up in consequence with the conception of the universal as an “ideal entity in common”.

Without any claim of drawing any kind of exhaustive statement about the different aspects of the issue, under the logical and predicative point of view the proper question of the universal and of universality involves of course the role it plays within a certain theory of conceptualization. Its role comprehends of course a large variety of aspects. The relationship between classes of words and the class of universality to which they refer is, for example, what Husserl will indicate in his late works as the topic of a «pure analytic» geared towards a general «theory of syntaxes», explicitly referring here to «conceptual universalities» and to their kind of existence explained in terms of «ideal “existence”»<sup>1</sup>. This relationship comes in fact in question for what concern different grammatical entities, such as nouns or verbs, but evidently not in the same token for all classes (see, the case of proper names) and even for what concern propositions. Those latter can be obviously universal - affirmative or negative universal sentences are in fact objects of logical investigations and have been called “universal” since Aristotle's *Prior Analytics* - but are universal in a different sense and in a different way in comparison

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1 E. Husserl, *Formale und transzendente Logik*, cit., p. 330.

with the universality *per se* belonging to concepts<sup>1</sup>. What it is in fact at issue here, summarily represents the semantic aspect of the inquiries into universality and universal, which means, clarify the fundamental «predicable» character connected and «corresponding to their nature». It is in fact according to their universal nature, opposed to the one of the particulars, that an universal determination belonging to the essence “triangle” can be extended, i.e., «predicate» of all triangle<sup>2</sup>.

Moreover, the semantic aspect is deeply connected and strictly linked to the knowable and the “accessibility” in experience, of such common nature. If we accept the thesis affirming its existence, than we have to explain the fundamental aspect of experience or perception which is represented by the apprehension of “objects” provided with a certain universal signification. This very question is, even beyond all the differences among “realisms” or “idealisms”, determining for what belongs to the interpretation of a theory for what concern its ontological framework. Affirming that the universal is “something” which is «by its nature» capable «of being in several things», as formulated by the Scholastic in one of its later yet deeply influential logical work, does in fact already express a peculiar interpretation (to be found even in later traditions) of: 1) the ontological nature of the universal of “Aristotelian” or “Platonic” traits; 2) the following explanation of the way human beings access to the «something common to several things»<sup>3</sup>.

Especially the first aspect of the “ontological” nature of the universal problematic actually does marks the following logical tradition, in at least three aspects that can be summarized: under the partition and more precise definition of the universal into the more basic forms of genus and species<sup>4</sup>; the thesis of the truthful assertability and the

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1 «A proposition, then, is a statement affirming or denying something of something; and this is either universal or particular or indefinite. By universal I mean a statement that something belongs to all or none of something; by particular that it belongs to some or not to some or not to all; by indefinite that it does or does not belong, without any mark of being universal or particular, e.g. ‘contraries are subjects of the same science’, or ‘pleasure is not good’», Aristotle, *Prior Analytics*, Book I, 24a16 - 24b16, in *The Complete Works of Aristotle*, Vol. I, ed J. Barnes (Princeton University Press, Princeton, 1991)

2 Aristotle, *Posterior Analytics*, I, 73b25 – 31, in *ibid.*, eg. «I call universal whatever belongs to something both of every case and in itself and as such. It is evident, therefore, that whatever is universal belongs from necessity to its objects». See also, *De Interpretatione*, where Aristotle explicitly affirm: «Now of actual things some are universal, others particular (I call universal that which is by its nature predicated of a number of things, and particular that which is not; man, for instance, is a universal, Callias a particular). So it must sometimes be of a universal that one states that something holds or does not, sometimes of a particular», 17a 37 – 41.

3 Petri Hispani, *Summulae Logicales cum Versorii Parisiensis Clarissima Expositione* (Petrum Mariam Bertanum, 1622), p. 22.

4 See, Porphyry, “Of the Nature of Genus and Species”, in Introduction (or *Isagoge*) to the logical Categories of Aristotle, *The Organon, or logical treatises of Aristotle, with the introduction of Porphyry*, Voll. II (Henry G. Bohn, London, 1853), p. 611. With this chapter compare chapter 5 of Aristotle's *Categories*,

conditions of truthfully predication of the universal, e.g. in the form of a general term, for each one of an indefinite number of objects<sup>1</sup>; the interpretation of the “conceptual universal” by means of “essence”, “idea”, etc., which represents several objects by representing *the* common element belonging to the whole of such objects.

For what concern the second point above, different traditions have thought up different strategies in order to secure and rationally explain the experiential access to the common element. In this sense, the use or recurs of a more or less sensible- or intellectual intuition. Concepts appearing identified and deeply determined in their nature with universality are therefore contrasted with sensible intuition but to some extent also related to a kind of intuition. In this sense, a problematic yet fundamental *étape* is certainly Kant's interpretation of concept as «universal representation [*allgemeine Vorstellung*]», i.e., a representation of the something in common in or to various objects, insofar it also plays as possible predicate in judgment. Kant, for example, expressed such a position in the *Erste Abschnitt* of his universal theory of logical elements [*Elementarlehre*] in his *Logic* lecture:

«All cognitions, that is, all representations related with consciousness to an object, are either intuitions or concepts. An intuition is a singular representation (*repraesentatio singularis*), a concept a universal (*repraesentatio per notas communes*) or reflected representation (*repraesentatio discursiva*).

Cognition through concepts is called thought (*cognitio discursiva*).

Note 1. A concept is opposed to intuition, for it is a universal representation, or a representation of what is common to several objects, hence a representation insofar as it can be contained in various ones.

2. It is a mere tautology to speak of universal or common concepts - a mistake that is grounded in an incorrect division of concepts into universal, particular, and singular. Concepts themselves cannot be so divided, but only their use<sup>2</sup>.

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where the discrepancies between the account of the predicables given by Aristotle and by Porphyry clearly appear; See, Aristotle, *Categories*, 2a13 – 4b20.

1 See, for example, Mill's *System of Logic. Racionative and Inductive*, 8<sup>th</sup> (Harper & Brothers, New York, 1882), p. 34.

2 I. Kant, AA IX, 91, 06 – 20. Eng. Trans., I. Kant, *Lectures on Logic*, ed J. Michael Young, in The Cambridge Edition of The Works of Immanuel Kant (Cambridge University Press, Cambridge, 1992), p. 589.

Obviously we don't need here to offer a detailed exposition of the universality issue, nor an historical exposition of the different interpretations and traditions which take or have taken a position regarding this complex yet fundamental question and its various form and aspects. We will instead first try to (briefly) offer some interpretative “tools” for certain aspects of the universal issue (3.1). A “traditional analysis” will therefore follow as sort of *exemplum* in order to show how an important part of the philosophical tradition has approached the issue. Moreover, we will expose Lotze's introduction in his *Logik* of the concept of “first Universal” or “conceptual Universal”, whose exposition, beyond the historical or biographical interest, presents some interesting element in common with Husserl's one. The possibility of an influence must anyway be excluded, due to the more refined (even if still problematic and obscure) nature of the Husserlian analysis, which, moreover, already employes the instruments of his *Elements of Logic*. In (3.2.) we will first introduce the aspect of the Universal issue generally more prominent in Husserl's works and which also will be the topic of the final chapter. Then, we will deeply analyze some manuscripts from the time around 1896, which will offer Husserl's basic or formal definition of the Universal previous to the *Logical Investigations* and a statement regarding “universal objects”. Finally we will follow some of the fundamental directions taken by Husserl starting from such a definition, even if necessarily in brief and schematic way.

### *3.1) Some Short Insights Into The Question of the Universal.*

The question of universal objects, which means, absolutely universal entities to count among realities and which are to be thought as numerically identical even if instantiated in the plurality of individual objects, if it represents, on the one side, an old metaphysical problem, especially Aristotelian, surely does not appear solved, on the other side, with medieval philosophy and still does not disappear with Russel, but assumes instead new forms. The very basic question paradoxically remains pretty much close to the one formulated after Plotinus, if, in other words, it does make sense and, in this case, how, «to speak about genera and species, as to whether they subsist (in the nature of things) or in mere conceptions only; whether also if subsistent, they are bodies

or incorporeal, and whether they are separate from, or in, sensibles, and subsist about these»<sup>1</sup>. Certainly, the question about nature and ontological status of such an universality like the “Redness” among red things does assume different characterizations and actually open a number of questions related to different topic in philosophy and logic. To make an example, the correlation between Universals and predicates of a language and the possible extension of such a correlation – if, in other words, it does actually correspond a “universal object” to every predicate, or only for the positive ones (wise – not wise), or if a Universal actually corresponds or may correspond to a proper noun or not. This complex epistemological and logical problem did actually led to various and frequently antithetical positions<sup>2</sup>.

Starting from the most basic predicative structure, for example, as in the case of a attributive predication with a noun, the exemplification of a predicate belonging to an *Individuum* with its existential assumption can be interpreted by a realist in the sense of a generalization of the attribution of *P* with respect of an *S*, to the existence assumption of an object which is *P*. This would lead to recognize the fact that not only *S* is an entity, but also what is predicated is an entity. This kind of interpretation can for itself be integrated in an ontological framework of different kind, which oft forces to leave the metaphysical neutrality of a simple linguistic analysis. The relation between *S* and *P* can be interpreted, for example, as the instantiation of a universal entity, but also, as the mere belonging of an (abstract) part to the “objects”, the belonging to a set composed by other objects etc.

Especially the first these regarding the existence of an universal entity appears supported by the predication of the identity of a particular characteristic among different objects: the same color belongs to different objects etc. In this case, the, lets say, “realist position” does assume the strict identity of an entity which, in the form of a characteristic, belong to different objects and appears numerically identical in all those latter, even if two or more of them have no concrete common parts<sup>3</sup>. This last argument leads to the supposed referring of individual abstract noun, like “green”, to a universal entity, similarly to proper nouns; and even that such an entity is, for its part,

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1 Porphyry, Introduction (or *Isagoge*) to the logical Categories of Aristotle, in *The Organon, or logical treatises of Aristotle, with the introduction of Porphyry*, cit., p. 610.

2 See, P. F. Strawson, A. Chakrabarti (eds.), *Universals, concepts and qualities: new essays on the meaning of predicates*, (Ashgate Publishing, Aldershot, 2006).

3 The traditional formulation *Ps* takes therefore the shape of exemplification of “-ness” formulas, such like «*S* exemplifies *P*-ness».

instantiation of an higher universal entity, “color”.

Consequently, the relation between universal entities of different order is also differently understood, especially if interpreted as the instantiation of an higher universal in objects: a thing is green and is at the same time colored, so it is actually instantiation of the “being-colored”, and many colors do actually exemplify in a different manner such “being-colored”. Here it can be spoken of an “exemplification” of an higher universal, where the universal “green” is interpreted as exemplification of the universal “color”; or of “inclusion”, where the universal “green” includes the universal “color”<sup>1</sup>. We find even example of this different interpretations already in Aristotle and Plato, with obvious differences for what concern the interpretation of the Universal nature<sup>2</sup>.

With the introduction of intentionality in the philosophical interpretation of the problem of the Universal, it has been also proven necessary to deduce from the mere existence of the mental grasping of an – even imaginative – object to the existence of the characteristic expressed by “-ness” formulation, and consequently to the universal characteristic, even if by non-existing objectualities<sup>3</sup>. In this case, the presence of the universal entity is referred to its having been grasped within an intentional relationship. This presence could also be interpreted in a form of Platonism by affirming the existence of the corresponding Universal for the predicate. Hence, to such universal entity corresponds a single and abstract noun which can even be generated by suffixing a predicable part of an utterance<sup>4</sup>. A realistic position, on the other hand, could anyway refuse the existence of non-exemplified Universal, by affirming the only possible existence of such entities in the individuals or in, at least, one example. Within such a theoretical framework, one is forced to distinguish between instantiated Universalities and the conceptual formations which would eventually (or not properly) comprehend them; this position is obviously in need of a further clarification regarding the proper nature of concepts.

Traditionally, nominalism does refuse the existence of Universal entities in a even more radical way. A common feature belonging to such a theoretical position is the refutation of the existence of universal objects as the objective correlate of an entity numerically identical among various individuals. Nominalism, in one of its more general

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1 R. Chisholm, *On Metaphysics* (University of Minnesota Press, Minneapolis, 1989), p. 143f.

2 See, Aristotle, *Prior Analytics*, and Plato, *Phaedo*.

3 See again R. Chisholm, *The first Person. An Essay on Reference and Intentionality* (University of Minnesota Press, Minneapolis, 1981).

4 Corresponding to the English “-ness” or German “-heit”, for example.

formulation, may affirm the possibility to consider in some way the existence of a certain correlate for *P*, but would refuse to define it as an universal entity in order, for instance, to guarantee for predication.

Husserl himself, does actually criticize in this sense plenty of forms and versions of nominalism, and his criticism may be interpreted - within the general reaffirmation of the nature of the logical inquiry in contrast with the psychological - also as a defense of a more articulated interpretation of the Universal, especially with respect to its function in his theory of meaning<sup>1</sup>. Against a kind of nominalism which «even for the logical and arithmetical axioms pretends», «as for example in a Mill», «an inductive» origin, Husserl affirms exactly the lack of acknowledgment of the «general essential-insights», according to which such entities that are not psychologically inducted, but rather formed from «pure general induction» as «originally self-given Universalities». With the same aim, Husserl criticized even more in general the extreme version of nominalism:

«the extreme Nominalism, which found a new life in the Humean empiricism, is completely blind with respect to the universal intuition, (...) moreover, by this blindness, it tries to spin into elimination [*wegskamotieren*] all the universal thinking, and that, by distinguishing of the natural relations from singular individuals – relations that appear obviously within universal utterances, but one must forget about asking for the right of such utterances»<sup>2</sup>.

Even in recent time, under the common label of the *tropus*-theory<sup>3</sup>, we find a position that generally affirms that in predication we find, corresponding to the very simple elements constituting this latter, the reference to two entities, and even accept the existence of a correlate for *P*. But on the other side, refuses to define such correlate in terms of a universal object by, for example, opening to the postulation of a correlate “whatsoever”.

If we affirm that “S is p” we are for example also affirming that it exists in a certain sense, for example in a mere psychological one, an entity owned by S; this entity cannot yet being owned by two disjuncted individuals. This has to be mereologically

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1 See, for example, E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana XVIII*, cit., p. 88f, and especially E. Husserl, *Logische Untersuchungen, zweiter Band*, in *Husserliana XIX/1*, cit., p. 147f.

2 E. Husserl, *Erste Philosophie, erster Teil*, cit., p. 172.

3 Starting from the works of Donald Williams, for example, “The Elements of Being I”, in *Review of Metaphysics*, 7, 1953, p. 3 – 18.



understood, in the sense according to which the two individuals do not have any parts in common, otherwise two individuals could have an individually identical attribute by owning the same part to which the characteristic belongs<sup>1</sup>. Between the two correlates it never exists *identity*. Still, this position does not exclude the multiple exemplification of *p*; an exclusion which is on the other side proposed by an even extremer interpretation of the ontological connection between an individual *S* with its individual *p*, that directly excludes the existence of *p* in case of non existence of the *S* to which it actually belongs. This extreme position, which historically seems to recall the opposition between Plato and Antisthenes about the particular nature of the “mental images” and the following «inconceivable nature» of the universal<sup>2</sup>, bases now its *natural* cogency, paradoxically enough, on the interpretation of abstraction as the process of «not-paying-attention» to the characteristics of an individual: from such an abstraction we would in fact only obtain the revealing of a singular abstract moment or part belonging to a determinate singular object<sup>3</sup>.

If we consider such skeptical positions under the point of view of their mere aim, we may formulate it as follow: to see the characteristics belonging to the individuals as individual entities in themselves and therefore “evaluate” how much such characteristics do actually account for the nature and conceptual definition of the individual. Under this point of view, they can even have a sense from an Husserlian perspective, as we will see by speaking of the “object defining universal”. We can in fact assume the role played in such theories by the abstraction as defined in the following sense: what we obtain in letting by side aspects of the individual for the good of only one characteristic, is not the universal or particular as objects, but instead the characteristic *p* in the whole structure proper to the individual. By means of such abstraction it is revealed how this latter process was already oriented to the revealing of the characteristic interpreted as essentially belonging to the ontological status of the individual, and as possible reference for a meaningful concept. Moreover, in the case of some version of the less skeptical theory, which only affirms the individuality of the entity corresponding to the characteristic, by means of the *principle of identity of indiscernibles* can be connected to an Universal.

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1 Like in the example: a piece of paper and its surface have the individually identical white.

2 Plato, *Sophist*, 251b.

3 See, D. C. Williams, “The Elements of Being I”, cit., p. 9f.

### 3.1.1) Some Fundamental Traits of Aristotle's Conception of the Universal

Notoriously, Aristotle defines the universal (τὸ καθόλου) as something which is common to every objects of a certain kind, as he stated for example in *On the Parts of Animals*, where he affirms explicitly that

«Since the ultimate species are substances and individuals which do not differ in species are found in them (e.g. Socrates, Coriscus), we must either describe the universal attributes first or else say the same thing many time over, as I said. (The universal attributes are common; for we call universal those which belong to more than one subject)»<sup>1</sup>.

The universal plays a determinating role in Aristotle's philosophy by essentially define his concepts of «substance [οὐσία]», as it emerges clearly from the Z book of *The Metaphysics*:

«the universal is common, since that is called universal which naturally belongs to more than one thing. Of which individual then will this be the substance? Either of all or of none. But it cannot be the substance of all; and if it is to be the substance of one, this one will be the others also; for things whose substance is one and whose essence is one are themselves also one.

Further, substance means that which is not predicable of a subject, but the universal is predicable of some subject always»<sup>2</sup>.

Hence, Aristotle does interpret the universal as what is in common «in respect of the whole» - a universal is in fact said in respect of some whole - and defines it in consequence as «one over many»:

«Therefore the Forms will be substance; and the same terms indicate substance in this and in the ideal world (or what will be the meaning of saying that there is

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1 Aristotle, *On The Parts of Animals*, Book I, 644a 27, in *The Complete Works of Aristotle*, cit.

2 Aristotle, *The Metaphysics*, Book Z, 1038b10 – 1038b16, in *The Complete Works of Aristotle*, Vol. II, ed J. Barnes (Princeton University Press, Princeton, 1991).

something apart from the particulars - the one over many?). And if the Ideas and the particulars that share them have the same Form, there will be something common to these (...)»<sup>1</sup>.

For the limit of our interest, we can consider the theory of the τὸ καθόλου as derived by Aristotle from a later interpretation of the Socratic maieutics way of investigation, i.e., in the sense of an “induction” which, assuming the form of «perception»<sup>2</sup>, develops through the abstraction of the something in common among things. This links already the interpretation of the universal as non-existing “outside” the things, as an universal *in re*, as their essence to call in question an appealing word. Induction is a kind of abstraction, typically moving from the perceived individuals to universals. In an interpretative way, the universals are in fact already present “in” or are constituents “of” the individuals being perceived but in a “scattered way”. *Noûs* is moreover the ability to see universal patterns in what is being perceived. From such a kind of examination of things, we acquire the knowledge of what it is common in them by the following judgment; as a consequence, for him there is no *science* if not of the universal<sup>3</sup>.

Notoriously, Aristotle's recall for a theory of abstraction in order to explain the grasping of universal were probably conceived as an alternative to Platonism<sup>4</sup>. This sets the fundamental traits of an Aristotelian kind of theoretical enterprise distinguished from the Platonic one, and that essentially by offering moreover a different interpretation of the experiential process and of the ontological status of the universal or singular characteristics of things that are revealed in experience, in respect to the corresponding substance: abstraction aim to explain the way to distinguish the properties of things without yet granting any of these a substantial existence *in re*, such as Plato claimed the forms to have. In these sense, an object is considered “with respect” to one (or more) of its attributes; this latter is than considered for itself, a process that may lead to the “constitution” of a new abstract object consisting in the original object in only the respect(s) considered which may now become subject in its own. We find here yet only

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1 Aristotle, *The Metaphysics*, Book A, 991a8.

2 Aristotle, *On the Soul*, Book II, 424a18 – 24. Aristotle uses very rarely the term “abstraction” [ἀφαίρεσις], and also nearly never in an explicit way.

3 See, for example, Aristotle, *The Metaphysics*, Book Γ, 1003a33 – 1003b18, or E. C. Halper, *One and Many in Aristotle's Metaphysics. The Central Books* (Parmenides Publishing, USA, 2005), p. 8f.

4 W. Wieland, *Die Aristotelische Physik* (Vandenhoeck & Ruprecht, Göttingen, 1962), p. 197, and recently A. Bäck, *Aristotle's Theory of Abstraction* (Springer International, Heidelberg, New York, Dordrecht, London, 2014), p. 8.

one substance, the original one, with its “abstracted” attribute, a situation slightly different from the Platonic affirmation of an object existing independently on the basis of its being subject on its own right<sup>1</sup>.

Aristotle's account of abstraction in relation to the obtaining of the universal starts in his inquiry into perception and from the consideration of how «attributes» are abstracted from «individual substances» and within his account of thought how universals derives from particulars. We start with the individual substances given in perception and then isolate aspects of them, *abstracta*, for study in particular sciences. «The so-called special sciences» in fact, which differ from metaphysics for not dealing with «being as being and with the attributes which belong to this in virtue of its own nature», «they cut off a part of being», so Aristotle expresses a peculiar aspect of abstraction, «and investigate the attributes of this part» by making a science of it<sup>2</sup>. For example, mathematics considers objects «*qua* immovable and *qua* separable from matter»<sup>3</sup>. Therefore, he recognizes different *abstracta* of “scientific” interest: the universals like species and genera of substance (man, plant, animal) but even from other categories (figure, square, redness) – such universal are likely considered as existing and their knowledge as abstracted from individuals<sup>4</sup>; Aristotle might recognize yet also singular *abstracta*, like mathematical objects for example, by speaking, for example, of the particular instance of a number in a formula. We do not judge only on general redness, but also in particular judgments. Those latter universals seems not to be object of sense perception, but still objects and, according to their intelligible matter, we can find and there can be several instance of the same species:

«when we come to the concrete thing, e.g. *this* circle, i.e. one of the individual circles, whether sensible or intelligible (I mean by intelligible circles the mathematical, and by sensible circles those of bronze and of wood), of these there is no definition, but they are known by the aid of thought or perception; and when they go out of our actual consciousness it is not clear whether they exist or not; but they are always stated and cognized by means of the universal formula. But matter is unknowable in itself. And some matter is sensible and some intelligible, sensible

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1 Ibidem.

2 Aristotle, *The Metaphysics*, Book Γ, 1003a22 – 1003a26.

3 Aristotle, *The Metaphysics*, Book E, 1026a10 – 1026a11.

4 Science investigates in fact things which are, for our understanding does seek after «the fact and the reason why» of something, «if it is and what it is». Aristotle, *Posterior Analytics*, 89b23 – 89b24.

matter being for instance bronze and wood and all matter that is changeable, and intelligible matter being that which is present in sensible things not *qua* sensible, i.e, in the objects of mathematics»<sup>1</sup>.

The instances are therefore particulars of a specie, are of matter and form and are singulars, while even the intelligible is stated to be somehow individual, yet in a different manner than sensible individuals. This kind of Universal are the ones mostly difficult to explain within a theory of abstraction, already by thinking to the difficulties involved in the explication of the connection, for example, between mathematical individuals and perceptible ones<sup>2</sup>.

For our interest is here anyway not important to look for a solution in the Aristotelian account. What it is for us of some interest moreover, is the fact that Aristotle thinks also that the things thus abstracted are objects existing *in re* that are in some sense independent from their bases, the things from which they are abstracted. Without interpreting to far this complex question in Aristotelian philosophy, we can still see how, even in the explicit affirmation in the *Categories* regarding the existential connection with the «primary substances»<sup>3</sup>, Aristotle does not deny that universal as abstract objects exist *in re*, only not independently from the individuals. Hence, the *noûs* let arise in thought what separates off from the whole of individuals perception. Moreover, interesting for us is also the fact that, for Aristotle, the *abstracta* are not “mere” concepts, tools limited to human mental process with no correlates whatsoever<sup>4</sup>. By effecting abstraction we presuppose and affirm existing common features of individuals *in re* that we can observe and have a “theory” in proper sense. On the other side however, by abstraction no new objects existing over the individuals in perception are created. For Aristotle, abstract objects are not real and self-subsistent ones<sup>5</sup>, but still real although not independently; while moreover, they seem to include the universal

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1 Aristotle, *The Metaphysics*, Book Z, 1035b32 – 1036a13.

2 For example, in the case of great numbers or complex figures.

3 «All the other things are either said of the primary substances as subjects or in them as subjects. This is clear from an examination of cases. For example, animal is predicated of man and therefore also of the individual man; for were it predicated of none of the individual men it would not be predicated of man at all. Again, colour is in body and therefore also in an individual body; for were it not in some individual body it would not be in body at all. Thus all the other things are either said of the primary substances as subjects or in them as subjects. So if the primary substances did not exist it would be impossible for any of the other things to exist», Aristotle, *Categories*, 2a35 – 2b7.

4 As for instance in, J. Klein, *Greek mathematical Thought and the Development of Algebra* (The M.I.T. Press, Cambridge, 1968), p. 107f.

5 The species man does not exist *in re* over and above the individual human beings.

species and be at the same time objective. Hence, Aristotle would not accept substantial forms as separate, universal objects, but by wanting them, as universal structures, to be objective, “abstract” objects.

Surely, for Aristotle we have acquaintance with singulars through preception, but this is not enough, for we become acquainted with universals through induction on the singulars acquired, and knowledge of them through demonstrations on universal, as clearly expressed in the *Posterior Analytics*<sup>1</sup>.

### 3.1.2) Lotze on the Articulation, Origin and Fundamental Function of Universals for Conceptual Universality.

Husserl does surely studied Lotze's 1874 *Logik*, as we have already noticed<sup>2</sup>. In this influential work, Lotze assumes explicitly the aim to expose the «articulated nature of the Universals» by integrating with such a take on a traditional problem in logic his investigation into the logical elements», but, according to him, «especially with the «theory of the concepts», which would lead moreover to a theory of the different «parts of the speech» and up to judgments<sup>3</sup>.

Universals do articulated by him into a first and a second “level”, but generally for the generation of both, Lotze turn significantly to the definition as the “common element” in the several individuals, as briefly indicated in this quote from the *First Book* of his *Logik*:

«In the actual course of its development, therefore, thought is first directed to those universal concepts which really contain the law for the complete formation of the individuals for which they are required; it is not until it has some special motive in investigation that it frames universals in which things otherwise unlike

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1 «It is evident too that if some perception is wanting, it is necessary for some understanding to be wanting too—which it is impossible to get if we learn either by induction or by demonstration, and demonstration depends on universals and induction on particulars, and it is impossible to consider universals except through induction (since even in the case of what are called abstractions one will be able to make familiar through induction that some things belong to each genus, even if they are not separable, in so far as each thing is *such and such*), and it is impossible to get an induction without perception - for of particulars there is perception; for it is not possible to get understanding of them; for it can be got neither from universals without induction nor through induction without perception», Aristotle, *Posterior Analytics*, 81a38 – 81b9.

2 See the previous section.

3 H. Lotze, *Logik*, cit. p. 14, 54.

are grouped under a fraction of similar elements. Thus when we were speaking of the first formation of concepts, the current instances of subordination, e.g. of Caius and Titus to the concept of man, or of the oak and beech to that of plant, seemed to us quite natural and intelligible; it was as if *the mere direction to grasp the common element in the individuals* was enough to put us upon the track of these really authoritative concepts *M*»<sup>1</sup>.

For the generation of what he calls «first universal», Lotze appeals therefore to a sort of immediate kind of universalisation which is grounded and develop in an experiential givenness. Lotze's starting point is common to the tradition and take shape within what we have indicated above as the semantic framework of the logical investigation into universal, but he immediately connects in a significant way the definition of the first universal as something which is immediately experienced as the common element in several impressions.

Lotze's starting point is in fact the impossibility of connecting a «definite name» for all the impressions we have of single shades of colors or a particular magnitude. Here we find in fact the proper function of the process of universalisation and the assumption of the references of what takes shape in language to the common element immediately experienced:

«Words never denote impressions as they can be experienced; we can only experience or actually perceive a particular shade of red, a specific kind of sweetness, a definite degree of warmth, not the universal red, sweet, and warm, of language. The universalisation [*Verallgemeinerung*] which in these and all similar cases the matter of sensation has undergone, is commonly regarded as an unavoidable inexactness of language, perhaps even of the thought which language serves to express. Unable or not accustomed to make a definite name for every single impression, *language (it is supposed) blurs the slight differences between them, and retains only what is immediately experienced in sensation as common to them all*: by this reduction of its means of expression to a moderate number it certainly makes the communication of ideas possible, but diminishes proportionately the exactness of that which has to be communicated»<sup>2</sup>.

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1 Ibid., p. 150. Italics mine.

2 Ibid., p. 27. Italics mine.

To stress the sort of «falsification» originated by the universalisation and to recall for a originality belonging to impressions, according to Lotze, simply means «to pass too lightly over the very remarkable circumstance, that in a number of different impressions there is something common which can be thought apart from their differences»<sup>1</sup>.

Lotze's first universal is in fact exposed in the *First Book* in the sense of the universal, i.e., common specie belonging to different colors, and the “color as such” as the common genus, i.e., the “something in common” among all colors. The first specie, for example the classical example of the “Redness”, is defined therefore as the element in common “in” or “of” all the different shades of red, and that, even if it may appear to someone as originated through «logical work». According to Lotze, we have it rather in «direct sensation», i.e., we have explicitly the «experience of the existing connection» through out the different colors and single specie<sup>2</sup>.

This very evidence is first of all granted by the “fact” that the «thinkable world itself is so constituted» that every of our impressions cannot be «as incomparably different from every other as sweet actually is from warm, yellow from soft»; that means, we find or, as expressed by Lotze, «there is» this generality which actually grant for the universality of our experience<sup>3</sup>. Moreover, this first universal acquired or «grasped» by such a way, already guarantee also for a level of exactness which suffice for our handling with the world and even grounds the following exactness of science.

The first universal works now also as sort of “points of reference”, as intuitive basis, for the higher functions of thought and language, with respect of which other functions are simple «approximation». To this first universal is in fact essentially the “entity” to which «nouns and other (...) approximate expressions are anchored»<sup>4</sup>. The first universal is therefore, the presentative correlate of the fundamental verbal and predicative formations. The relationship between first universal and concept, in the sense of logic, is yet for its part highly articulated, but the starting point is still the immediate universal which emerges, according to Lotze, «through the simple representations (*ideas*) [*Vorstellungen*]», which are therefore the first element from which and by which the grasping of the first universal does find its “origin”. Therefore

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1 Ibid., p. 28.

2 Ibid., p. 31.

3 Ibid., p. 28.

4 H. Lotze, *Logik*, cit. p. 29.



Lotze writes pretty extensively:

«Such a common element is usually considered by logic only in the form of a universal concept, and in this shape it is a product of more or less numerous acts of thought. It is therefore important to point out that this first universal, which we find here involved in the comparison [*Vergleichung*] of simple representations [*Vorstellungen*], is of an essentially different kind; that it is the expression of an inner experience which thought has merely to recognize, and that just for this reason it is (...) an indispensable presupposition of that other kind of universal which we shall meet with, in the formation of concepts»<sup>1</sup>.

In this long quote, Lotze basically shows how the first universal which emerge by experiential comparison between simple representation, is of a different kind with respect to the universal which is traditionally associated in logic with universal concept *tout court*, which are already products of explicit conceptual formation. The first universal, on the other side, is surely the indispensable presupposition of presentative nature for the universal involved in explicit logical concept-formation.

Methodologically speaking, also another aspect of Lotze's inquiry into the first universal could represent for us a point of interest. According to Lotze in fact, we impart a universal concept such as of a geometrical figure to another person by, basically, inducing him to «execute a precisely definable series of psychical operations» and relating in this manner «simple representations» already given. By this operation we can summon or, in a slightly dangerous way of speaking, «put before his mind» the same «content» we have and want to impart. But this operation cannot explain in the same manner wherein the universal concept consists; which means, it cannot clarify for itself the logical content which is «meant» or «intended» when it is deployed. Besides the closeness to nearly all the methodological points we have seen deployed in the first section by the concept analysis, we see here very clearly expressed what such a original concept analysis is about:

«We can indeed direct another person to think of all single colors or all shades of blue, and by eliminating their differences bring out what is common to his ideas in

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1 Ibidem.

the two cases; but it is only in appearance a logical work which we are here prescribing; all that we really call upon him to do is to see for himself how he executes the task»<sup>1</sup>.

It is in other words impossible to explain to another person the operations leading to the «common element in red and yellow» or how he is supposed to «separate the common element from the different one»; but we can only trust in his having the immediate experience «of the connection which exists between red and yellow» and in a following «recognition [*Anerkennung*]» of the inner experience leading to the first universal, which is therefore «no product of thought, but something which thought finds already in existence»<sup>2</sup>.

We find anyway in our experience only a single definite shade of color, only a tone of definite height, which is the object of sensation; and it is only these definite impressions which present substantial and «perceptible images» to consciousness. But obviously, Lotze stresses the distinction between this latter singular from the objectivity, where in fact «Universal ideas never possess this kind of intuitability [*Anschaulichkeit*]». We find always in perception or in collecting memory a definite color, tone etc., only with the «accessory notion [*Nebengedanken*]» that every other tone and color has an equal right to serve as a perceptible instance of the ever imperceptible universal<sup>3</sup>. The question is of course to rightly understand that representations [*Vorstellungen*] are not simply the consciousness of the «something in common» standing «at rest before the mind». In this sense, a universal may never claim to be indicated as a representation. Even when we are inducted, for example, by words to present in consciousness representations of individual colors for comparing them and grasping this way the common element «which, anyway, our sensation testifies them to contain», we do not detach it by thought from their differences and make an equally perceptible idea.

Probably pushed by the experiential framework of his inquiry into the first universal, Lotze even comes to determine the range reached by the experiential element and the logical ones proper to the investigation. To determine in each particular case what this common element consists in, to decide whether a number of representations are separated merely by differences in degree of one simple universal, or whether

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1 Ibid., p. 30.

2 Ibid., p. 31.

3 Ibid., p. 31.

accordingly those latter form a linear series or in still higher forms, these are not objects or topics for logic. For such a task, and here Lotze clearly marks the boundaries of reflection on the logical work, «it is enough to know that some generally applicable and primarily quantitative determination is the indispensable means for distinguishing between the particular instances of a universal». While a judgment, some of the form  $A > B$ , is indeed, as a judgment, a logical piece of work<sup>1</sup>. This logical work can anyway be based only on something which cannot find its definition in the same logical work: what a judgment expresses, i.e., the general fact that differences of degree do exist in the same matter, as well as the particular fact that the degree of  $a$  exceeds that  $A$  of  $B$ , «can only be experienced, felt, or recognized as part of our inner consciousness»<sup>2</sup>.

Lotze calls here in question the role played by the proper logical work which differs from the mere «shaping the impressions into representations»<sup>3</sup>. The kind of “logical work” involved in this first stage does not imply a regarding of the forms of substantivity, adjectivity, and verbality as modes of apprehension which thought put in practice upon its content before receiving any stimulus from it. But in those forms reasons even does not simply respond to, or simply reproduce the «actual current of representations [*Vorstellungslauf*]», rather, «gives them the shape without which the logical spirit could not accept them»<sup>4</sup>. For Lotze therefore, the independence expressed by means of the substantival form with its article, for example, does not lay in itself on the fact that «this was a permanent element [*Glied*] among changing groups of representations», but rather the first act by which thought expresses its law on the consciousness content. “Logical work” is in consequence the «acknowledgment [*Anerkennung*]» operated on the basis of the first universal «only experienced in immediate sensation», and «verbal expression» for fixing its character, which is to be found originally in the «immediate consciousness of certain characteristics given in the content»<sup>5</sup>.

Logical work and logic in general, does hereafter assume for itself the task of discern the compatibility of representations and the possibility of subordination to universals. But it does so, mainly without directly taking in consideration the fact that the

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1 Ibid., p. 57.

2 Ibid., p. 32 – 3.

3 The work involved, for example, in giving affirmative position to the object-matter or in distinguishing it negatively from all others etc.

4 Ibid., p. 34.

5 Ibid., p. 35.

possibility and even the success of its own procedure in general, depends upon the «original constitution and organization» of what Lotze calls «the whole world of representables». A constitution which is all the more necessary to make thinking possible. Moreover, it is necessary for the formation of the basic universal to trace it in respect to: the unity of consciousness and the synthesis of apprehension, which is basically the combination of manifold elements in the instant unity without spatio-temporal order, the synthesis of perception which ad the representation of space and time, and the synthesis of the value in the determination of the whole coalescence<sup>1</sup>. So long as the logical work of holding the manifold together does not go or goes further the faculty of establishing connection into wholes, it can be already be spoken of «concepts» in Lotze's sense of the word. We can therefore always posses perfect or developed concepts, but «until the vague suggestion of some sort of whole has grown into the pervading thought that there is a definite ground for the co-existence of these particular attributes, in this particular combination and to the exclusion of certain others, and that this ground is an adequate one»<sup>2</sup>.

Lotze even suggest an interesting explanation of how to get to this «definite ground», which seems basically to represent a method in order to reach and to indicate (or let emerge) necessary elements of a conceptual universal. First the “comparation” of different forms of connected elements and parts ( $a,b,c,d$ ) with other slightly different ( $a,b,c,e$ ), in order to let emerge the nuclear form ( $a,b,c$ ); then we can “bring to us”, even for «practical purpose», «what is the line which divides what is inwardly coherent from casual accessions» by «bring the whole in motion», i.e., by performing a sort of “variation”,

«in the belief that the influence of change will show which parts hold firmly together while foreign admixtures fall away, and in what general and constant modes those parts combine while changing their relative positions in particular cases: in this sum of constant elements we find the inner and essential cohesion of the whole, and we expect it to determine the possibility and the manner of variable

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1 Lotze makes such an example: «if, like the figures of geometry, it was something which had no reality out of our consciousness and no growth or development in time, we should here too attempt at any rate to arrange the elements of the whole in a hierarchy in which those that conditioned others should take precedence of those that were conditioned, according to their stages of dependence».

2 Ibid., p. 38 - 9.

accretions»<sup>1</sup>.

The first method would lead to the formation of the logical or conceptual universal, but Lotze stresses the centrality of the second method that of determining the element which maintains itself in the same instance under changed conditions, because it is not only the «common element», I.e, the universal, in several groups of representation which is therefore exposed by, but it is also justified the regard of these elements as coherent and admissible withing the same concept. Both does not actually represent abstraction, which is admittedly «the name given to the method by which the universal is found» and is defined by the process through which what it is different in the particular instances of a universal is leaved out after comparison, and by which it is added what they posses in common. According to Lotze in fact, we do not find in actual thinking such a “procedure”. When we try to trace the universal we find rather that it is produced, not by simply leaving out the different marks  $p'$  and  $p''$ ,  $q'$  and  $q''$  which occur in the individuals compared, but by substituting for those left out the universal marks  $P$  and  $Q$ , of which  $p' p''$  and  $q' q''$  are particular kinds. This interpretation of abstraction, which is called by Lotze «compensation by corresponding universal» for omission of the individual marks, is the fundamental rule of abstraction, which apply in nearly all cases of universal formation and at every logical level<sup>2</sup>. Thus, Lotze briefly resumes the important points regarding this articulated formation of universals as follow, stressing therefore the *fundamental* role of the first universal with respect to conceptual universality:

«We have seen that the universal marks (...) which we require here, the “first universal” (...), come to us without logical effort as simple facts of observation in our mental life; and just for this reason they can be applied in building up this second universal, which we do produce by logical effort. That the yellow of gold, the red of copper, and the white of silver are only variations of a common element which we proceed to call color, this is a matter of immediate sensation; but to a person who could not sense it, it could never be explained by logical work either that these particular impressions are species of this universal, or what is meant by

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1 Ibid., p. 40.

2 Ibid., p. 41.

a universal as such and the relation, of its particular to it. It is just this point to which I would again draw attention here, that the immediate perception of a first universal and the application of some kind of quantitative ideas is the condition of the formation of the second universal in all cases (...)»<sup>1</sup>.

Besides the suggestive argumentation, which surely also clarify also some traits of the general approach to the problem of conceptual universality by Husserl, we must stress before entering the following section, that we do not think, Lotze's *Logik* does actually influenced Husserl's approach. Husserl was surely well acquainted with the *Logik* before the *Logical Investigations*, where in fact Lotze's work is even criticized; but the terminology and the theoretical instruments used by Husserl are to be found in the previous works, such as the distinction between part and piece, of dependent and non-independent moments, etc.

### 3.2) Husserl and The Conceptual Universal.

For Husserl now, the problem of conceptual universality, and strictly related with it, the complicated issue of Husserl's articulated referring and definition of the Universal *stricto sensu*, shows up in an explicit way early in its production, but clearly in 1896<sup>2</sup>. It can be shown, starting from the early analysis Husserl dedicated to formal concepts and to representation in narrow sense, that some insights emerging from the 1896 explanation were already present. But we will try instead to show, how some peculiar aspects emerging from this meditations will then develop in different forms and under different names, like in the case of what Husserl will call, still generally and broadly, “essence” and “*eidos*” in the *Logical Investigations*, but importantly, for what concern his referring to “universal” and “ideal objects”, which is showed or “firmly” stated here<sup>3</sup>.

This central issue of Husserl's early work it appears obviously connected to a plenty of

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1 Ibid., p. 41 – 2.

2 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in *Husserliana*, XL, cit., p. 1f.

3 See, among the studies Husserl conducted within the methodological framework of the eidetical variation, the very late ones on «the ontological universality» and on the «essential universal», in the 1935 Manuscript “Allgemeines über die Methode der Variation. Abgrenzung des individuell eigenschaftlichen Wesens des Exempels vom allgemeinen Wesen”, in *ibid.*, p. 385.

different problems, like the early (critical) theory of abstraction, of meaning and judgment, but even closely linked to the methodological framework and definition of phenomenology. One of the more recurring issue that actually challenged Husserl in reaffirming the nature and role of the Universal, and accordingly the conceptual universal, is notoriously the empirical, and especially strictly “intuitionistic” explicative strategy in logic and epistemology. Starting from the influential works of Hume and Mill, in fact,

«(...) Empiricism, in the form of a degenerated Intuitionism, recognizes as form of givenness of something in itself [*Selbstgebung*] only the experience of the individual or temporal Particulars [*Einzelheiten*], and results therefore totally blind about the fact that something universal [*Allgemeines*], conceptual universalities and universalities of states of affairs [*Sachverhaltsallgemeinheiten*] can be immediately intuited with evidence and even are constantly intuited, so to speak. (...) And therefore ignores also the fact that consciousness is a realm of immediate eidetic-insights of pure universality and necessity»<sup>1</sup>.

This later statement briefly summarizes what Husserl basically develops within his time in Halle and Göttingen. «Contesting the validity» and possibility of «purely eidetic thinking» in fact, as Husserl affirms in the *First Book of Ideas* by retaking what already exposed in the *Prolegomena*<sup>2</sup>, means a bankruptcy of thought and science, and even «cancels out» in return the original Empiricism and Skepticism from which such a criticism originates «by means of a countersense»<sup>3</sup>. Moreover, by recalling for an “intuition” [*Anschauung*] that reaches beyond the limit of «the direct experience which only presents particular singularities and no universalities», we are even allowed to consider science universally and we do not simply identify it with «experiential science»<sup>4</sup>. Induction and mediate inference can in fact surely offer to science tools for obtain «general propositions». The problem arises yet for Husserl, whether we ask for the truth and limit of mediate inference and the principles governing the modes of inference, «like in the case of the syllogistic principles», which cannot be considered

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1 E. Husserl, *Erste Philosophie, erster Teil*, cit., p. 171 - 2.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana XVIII*, cit., p. 118f.

3 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 43.

4 *Ibid.*, p. 44.

mere «empirical universalizations»<sup>1</sup>. Therefore, guarantee for “pure universal thinking” means guarantee for the very form of logical thinking.

The same quote above says us yet already something more, at least two more fundamental points about universalities and their role in the phenomenological approach on the «higher forms of objectification» in experience<sup>2</sup>:

A) The first one is Husserl's complex and articulated use for referring to the Universal. It comprehends in fact in a “narrower” sense the something universal, which is essentially what he calls «the conceptual universal». This latter is the universal that defines and determines the object of experience, i.e., the «object-defining universal», as Husserl expresses himself it in 1906<sup>3</sup>. Basically, it represents what is conceptually graspable in the singular object of experience, i.e., the concept in a more specific and refined sense than the one seen till now, and by means of that, it is actually a «different expression», so Husserl goes further, for what he calls in the years of the arising phenomenology, and especially around the time of the *Logical Investigations*, “essence”. It also refers yet even in broader sense to the «universality of states of affairs».

B) The second one is Husserl referring to the intuitable nature of such a universal, and the mention of the consciousness as the sphere within which the different kinds of universal givenness are to be found, i.e., the role of the modalities and kinds of acts involved by the grasping of the universal, which, for their part, can be described. Therefore, the second point more generally and broadly refers to the fundamentally phenomenological insight into the fact that, universals, as essence or ideas, «can be intended [*gemeint*] and can be given in themselves, by directly showing as such in the intuition of ideas [*Ideenanschauung*]]<sup>4</sup>. This latter expression, which is to be found in a 1913 manuscript, is only a later version of the «eidetic intuition», which also methodologically defines early phenomenology as «eidetics», i.e., as an a priori or eidetical science<sup>5</sup>.

In his 1906 Lecture on *Logic* Husserl comes to express very briefly but at the same time

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1 Ibidem, and especially *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 88f.

2 E. Husserl, *Einleitung in die Logik und Erkenntnistheorie. Vorlesungem 1906/07*, in Husserliana XXIV, cit., 274.

3 Ibid., p. 302.

4 E. Husserl, “Zur Gegebenheit von Ideen”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 89.

5 R. Sowa, “Eidetics and its methodology”, in *The Routledge Companion to Phenomenology*, ed S. Luft and S. Overgaard, (Routledge, New York, 2012), p. 254.



in a very weighty manner what already said now:

*«Authentic consciousness of universality of the kind that constitutes the givenness of the universal is well-founded consciousness. It presupposes consciousness of particularity, namely, when it is actually to be given, an intuitive consciousness. Of special interest here is that, for givenness, it does not matter whether the individual or particular is for its part given <in> the form of perception or in the form of fantasy and other figuration. If we place a red in fantasy and a red in perception (and, if we compare several reds in fantasy, or in the imagination in general, it is then the same thing) in the synthesis of comparison, then, despite the different mode of givenness that they constitute, they ground an intuitive consciousness of equality and possibly of universality. And, the latter gives the universal red. We see it. We see it, whether it is a matter of identification on the basis of perceptions or other intuitions. It is the same universal.*

*Our speaking of essence is just a different form of expression <for the universal>, an expression having a primitive relationship to the particular object that “has” the essence. Everything conceptually graspable about the object, namely specifiable by internal predicates, is its essence or belongs to its essence. Furthermore, then, objectively considered, every universal is called an essence, an essentiality (*ein Wesen, eine Essenz*). The expression “universal object” is shunned, because object is a word preferably used for individual objects, even for things [*Dinge*]»<sup>1</sup>.*

In this long quote we find resumed what it is substantially at issue by the conceptual universal as it developed from the time in Halle and the first years in Göttingen, passing through an already more deep refinement and improvement in the *Logical Investigations*.

Interesting for us is already Husserl's explicit assert on the misleading definition of the universal as “object”, which recall in fact the image and the interpretation of such a logical and epistemological entities in the sense of an erroneous reification, i.e., in the sense of the “thing” which may compromise the comprehension of the essence as

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<sup>1</sup> E. Husserl, *Einleitung in die Logik und Erkenntnistheorie. Vorlesungem 1906/07*, in *Husserliana XXIV*, cit., p. 298 – 9. Italics mine.

interpreted by Husserl. But on the other side, surely Husserl makes abundant use and freely indicates ideal and «universal objects» to refer, for example, to «meanings» in the sense which appears exposed in the *First Logical Investigation*<sup>1</sup>. Therefore, there is a sense in speaking of «objects» not in the sense of the «real objects as objects of nature», but instead in the sense «of the ideal, of the categorial», which we can «glance at» in a judgmental lived-experience, and which «is surely something like the essence», according to Husserl<sup>2</sup>. He writes for example late on, in the *Phänomenologische Psychologie* lecture, looking back to the essential acquisitions of the *Logical Investigations*:

«Same unreal, i.e., ideal objects are in their numerical-identical singularity substrate of true or false judgments, exactly as real objects; on the contrary, object in the most logically general sense means nothing else than “something whatever”, about which it is possible to speak truthfully and meaningfully»<sup>3</sup>.

Equally important, Husserl does refer by the universal with a certain preference in the long quote above to the “conceptual universal”, i.e., to the universal by means of which the object is “defined” and at the same time “determined”, and which moreover may function as significations for certain class of words, when verbally fixed, such as nouns or adjectives. Moreover, these latter appear and are also comprehended, in the form of non-independent parts of state of affairs, as “essence”, which are in fact defined as «universalities of state of affairs». In this sense, «objectively considered», such a universal posits more or less explicitly something factual corresponding in its content. This even emphasize and connect its peculiar role by the «signification of certain verbal expressions»<sup>4</sup> especially after the *Logical Investigations*, like in the case of the reference of predication so briefly exposed in a 1914 manuscript:

«Characteristic is equal to property [*Eigenschaft*] (...). The essence moment (in my <Husserl's> sense) corresponding to the *property*, to the characteristic,

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1 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 106.

2 E. Husserl, “Das Perzeptionale”, in E. Husserl, *Wahrnehmung und Aufmerksamkeit*, in Husserliana, XXXVIII, cit., p. 244.

3 E. Husserl, *Phänomenologische Psychologie*, cit., p. 22.

4 See, R. Sowa, “The Universal as 'What is in Common': Comments on the Proton-Pseudos in Husserl's Doctrine of the Intuition of Essence”, cit., p. 536.

corresponds now to the *core of the predicate meanings*. The whole essence of the individual (and corresponding: the totality, the *whole property* of the constituting own-peculiar-being [*Eigensein*]) has its correlate in a core of a whole and exhaustive predicate»<sup>1</sup>.

The aspects of the conceptual universal saw, define in their interconnection the early traits of the Husserlian «theory of essence» as substantially articulated into the two connected aspect.

First: the indication of the Universal, and especially the conceptual universal, as the term which defines Husserl's referring to “Essence” and (before the refinement in a more specific connotation) *eidōs*. That leads moreover, on the one side, to the need to define what Husserl even before the introduction of the term Essence means with the “universal”; on the other side, the reasons for ascribing the status of “objects”, and in particular, “universal” objects to the universal so defined. These latter two points are especially in question around 1896.

Second: and the indication of phenomenological “method” for the cognition of the essence (broadly called *Wesensschau*). What it is basically at issue with that, is an initial securing of access to non-particular meaning formations and access to an experiential domain that transcends atomistic perception. In fact, the problem *partially* underlying the theory of essence recalls to a certain extent what in modern empiricism was the epistemological problem of abstraction, and moreover, the meditations on the separability of formal meaning from concrete particulars, a separability which normally calls for process of generalization and formalization per se. For our aim, we will only partially refer to the sphere of fundamental questions, which are already for themselves an entire realm of phenomenological investigations.

### *3.2.1) The early Analysis of the Universal and Universal Objects: From the 1896 Aporetic Analysis to the Definition as Unity in the Multiplicity*

The problem of the nature of the universal [*das Allgemeine*] is taken as object of

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<sup>1</sup> E. Husserl, “Auseinandersetzung mit Jean Hering über das Gesamtwesen, das unwandelbare Wesen des Naturdinges und andere Ideen als Einheiten gegenüber Exemplaren als ihren Vereinzelungen” (1914), in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 84.

conceptual analysis explicitly in 1896, as we have said. Husserl tries in a series of manuscripts to affirm by aporetic argumentation «the strictly identity of the universal and the existence of universal objects»<sup>1</sup>. By the aporetic argumentation, Husserl takes different insights on the existence and status of the Universal and try to stress the contradiction of the one against the others in order to affirm (or eventually negate) such an entity and its definition. We can therefore assume the aporetic meditations as a sort of concept analysis.

In the case of the universal, we can examine the basic theories even starting from the most simple and classical example, which will become famous in later works: two objects with the same color. The following basic question takes such a shape: the common color of the two objects is something identical among all the objects with the same color, but without constituting what Husserl calls «an object in itself»? which would consequently be distinguished from its «cases» or, generally speaking, from its «instantiations»<sup>2</sup>? According to the possible answers, we affirm: 1) universal objects do exist, to which correspond a multiplicity of single cases as non-independent moments in the objects; the single case is *actually* not the *specie* of an universal, which is a unity; 2) universal objects do exist, but only insofar they are given as «an identical element in the multiplicity of the single elements», which means, the universal is a «part» in them: two objects have an identical moment in common [*gemeinsam*]. The singularities are not cases of the species, but only the «bearers» of the identical universal, which is a part [*Teil*] in them and not a “piece” [*Stück*]; 3) there are no general or universal objects, and to speak about something universal is a fiction connected to a linguistic use<sup>3</sup>. In the different cases we will find therefore:

In 1) to the same concept presentation do actually corresponds «identical parts» in the objects belonging to the extension of the concept; the Identical is the Universal.

2) to the same concept presentation, on the contrary, do not correspond any identical parts. Therefore, we find here like parts, i.e., they are equal [*gleich*] to each other.

In the traditional ontology, universals were conceived as “hypostatizations” of forms, which are direct results of abstraction from the sensuous, from particulars, and seen

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1 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 21.

2 Speaking now with a later expression, E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 135f.

3 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 2.

therefore as *specie*. As *eide*, for example, those are considered universals of least specific differences under which only individual substances fall, and are to be considered object, i.e., «individuals of higher order»<sup>1</sup>. The first Husserl insights proposed, seems to actually recalling such a theory with respect of the Universal. In this case we have in fact:

a) what Husserl calls «universal presentation» of a property, to which correspond an identical “part” in the manifold of objects.

b) to the property corresponds a «universal object».

According to Husserl, in this case the objects which fall under the same «concept determination [*begriffliche Bestimmung*]» do have the same common part as identical part. They can surely have also a «piece» in common, than we have the case of two objects with a common “concrete part”, like in the case of two shapes with the same color that actually “share” or belong to the same and identical surface, or the same object considered under the same facet in different times. We can consider the two different shapes as «something abstracted», but in this case Husserl seems to refer to “abstracted” in the sense of “extracted”: the common fraction is «individually the same». But if we consider now, for instance, the «geometrical element of different objects», like their form, this «abstract» is not a fraction but the «like» or equal part belonging to different objects. If they have an identical fraction, the form would be identical, otherwise likely the same. Even more complex is the case of the same identical object or even two different objects, in two different moments and under the same respect: in this case, Husserl seems to stress the fact that we must importantly consider the abstract part as «something different» in the sense of different individuals, which are equal but «never truly identical in logical sense»<sup>2</sup>.

When we focus now with Husserl on the different nature of the «abstract parts» we find two different characterization of the, we may say, “factual” counterpart «of what is abstract» in the case of what it is for its part «something individual», and what it is instead «something universal» in the sense of «something specific», both belonging as part to a not-independent moments. On the side of what it is individual we find «individualizing moments», when, on the side of the something universal, we find

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1 Terminology borrowed from G. T. Null and R. A. Simons, “Manifolds, concepts and Moment Abstracta”, in ed. B. Smith, *Parts and Moments. Studies in Logic and Formal Ontology* (Philosophia Verlag, München, Wien, 1981), p. 439f.

2 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in *Husserliana*, XL, cit., p. 3.

rather «not-individualizing moments». To such a distinction now, Husserl lets correspond the traditional classification which have, importantly for connecting such complex exposition to the wider sense of the inquiry, also predicative significance of:

concrete	abstract
subject	predicate
individual	universal

In this sense, for example, when we affirm “Socrates is  $p$ ”, we not merely refer to Socrates (or to the  $S$  in general) as what Husserl calls an «immediate presentation [*direkte Vorstellung*]», but to a «multiplicity of presentations» which can even changes in thought and content, but that, still and only by still «presenting the same object». This distinction is, according to Husserl, the basis for the other fundamental one between the «immediate presentation» which is linked to the «concrete individual», and the «attributive presentation» which is for its part correlate to the «unity of the metaphysical individual». Both guarantee in predication coherence and constancy of attribution in spatial-temporal or attributive changes<sup>1</sup>.

In the sense of the «aporetic analysis» Husserl also try to understand how and if a universal moment can achieve identity, which would directly link to the objectivity of the universal moment, and to the problem of its possible intuitability. This kind of analysis is applied to the identity of the species by means of the analysis of the Universal identity<sup>2</sup>. Husserl's approach is close to the one already seen.

According to a thesis, only the individualizing moment as characterized above can be truly identical, therefore also the specific moment, i.e., the non-individualizing moment is identified through the intuitions of the identical part holding also the specific moment. Hence, this thesis is a version of the skeptical argument seen in the previous section<sup>3</sup>, and it generates difficulties by the explication of the relationship between «moment of

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1 Ibid., p. 4 – 5. Husserl tries to apply this type of distinction of individual and universal to the comprehension of place and point in time as intuitive moment. The actual extension, like a surface, may be in fact an intuitive moment, but if we do not apply the above distinction, the fundamental difference between the same extension and the «absolute place» would not emerge. Moreover, this latter is not a simple multiplicity, but we find order and relations in it, i.e., it represents in fact an «euclidean multiplicity», according to Husserl.

2 Also in the 1913 manuscript “Zum Verhältnis des Begriffs zu seinen Gegenständen. Der Begriff als Spezies ein Identisches, aber kein Individuelles”, in *Zur Lehre vom Wesen und der eidetische Variation*, in *Husserliana*, XL, cit., p. 27 – 8.

3 See, 3.1.

the part and moment of the whole». In the case of color for instance, if we suppose a general and “fixed” connection between its non-independent moment and the extensive fraction as its basis, we deny the evidence of the color shades of the whole in the apprehension of the whole-moment color (white, for example). The whole color is in fact much more the «complexion of the color species which do belong to the particulars (...) to the parts», and in this sense is defined as a «unitary gestalt-quality» and, by means of that, it depends on extension and position of the single colors<sup>1</sup>. The way by which non-independent moments of the fractions belongs to the whole as determining moments, differs from the way by which fractions belong. Moreover, the abstract moments of the whole are “grasped” also independently from certain fraction<sup>2</sup>. The abstract moments of the fractions are grasped by the fractions and as such they belongs to the whole as its parts.

«So, if I call an object white, the abstract moment white is properly a gestalt-quality, formed by the fusion [*Versmelzung*] of all moments “white” that belongs to every single part of the extension. The fusion offers an “uniform” unity because of the lack of delimitation. Delimitation is gained through coloration distinction, and in this case the fusion offers the unity of the multiplicity of what is different, while <in the first case> we have the unity in the multiplicity of what is qualitatively uniform and only local continuously changing»<sup>3</sup>.

After the exclusion of this aporia, which would, in other words, deny the whole quality and mistaking the way fractions belongs to the whole with the way abstract parts do<sup>4</sup>, the inquiry continues, importantly for us, into the identity and the kind of identity of the Specie.

Husserl delineates an analysis which already takes in question an higher conceptual formation, but the very question remains similarly formulated: all color parts have an identical moment in common, the Specie “color”; two triangles have the same [*dieselb*]

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- 1 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 5.
  - 2 Like in the case of fractions too small to be perceived, which are quality-determining anyway. See also, E. Husserl, *Wahrnehmung und Aufmerksamkeit*, in Husserliana, XXXVIII, p. 53f. This part belongs to the text of the 1904 lecture on perception.
  - 3 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 7.
  - 4 This same argument is taken by Husserl nearly 10 years later in his 1906 *Logik* Lecture. See, E. Husserl, *Einleitung in die Logik und Erkenntnistheorie. Vorlesungem 1906/07*, in Husserliana XXIV, cit., 295f.

moment “form”. The question is now about the nature of such a possible “common identical”. By affirming this latter as a «constituting part» in different cases, a part which is identical between, on the one side, the different abstract parts of a whole, and, on the other side, between different individuals which possess an identical moment (different shapes with the same moment “form”), may generate another aporetic inquiry. This analysis importantly aims to elucidate how experientially follows the identity of the specie, i.e., its connection to an intuitive real of experience.

According to Husserl, we face here two possibilities: Or ( $\alpha$ ), we «immediately recognize», which means, we somehow directly grasp the Identical intuitively, or ( $\beta$ ), we are put in front of a whole or different wholes, whose parts are equal, than we refer to the «class» belonging to the Specie. Both positions must undergo for Husserl an examination.

A critical point which strikes both points is the impossibility to start the process of recognition of the «common over against the multiplicity» of parts without a previous recognition of the Identical in the Individual. The previous recognition seems in fact to already assume the possibility to identify the «delimitations» among the parts or, more in general, among the unities, which are mandatory for intuitively develops the «points of view [*Hinsichten*]» in the comparative passing through the elements of the multiplicity<sup>1</sup>. In order to “gain” the one common element over against the multiplicity delimitations among the unities are in fact necessary; otherwise, we would already have a unity.

A possible solution for  $\alpha$  and even more for  $\beta$  calls in question experience in the sense of a repeated encounter with objects, which is yet important for Husserl under two point of views:

- 1) the fact that we find similarities among the element of a set which may establish «class of likeness [*Ähnlichkeitsklasse*]» but also the equally fundamental differences which are also mandatory in order to distinguish and define the common element<sup>2</sup>;
- 2) this process establishes the «unitary thread of likeness» which would help, even in mere experience, to shape the «appearing in likeness of all <the components> which

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1 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in *Husserliana*, XL, cit., p. 9f.

2 Two shapes can be like under the respect of the form, but different under another respect. This kind of experiential-oriented foundation of relationships among individuals may also work among species and genera themselves, like in the case of different forms.



stay in such a unity»<sup>1</sup>. Hence, according to this theory, likeness taken for itself would represent and refer to the *Genus*, the different “forms” of likeness the *Specie* and the individual likeness given the cases or instantiations of this latter.

In spite of the fact that this thesis about the identity of the *Specie* may appear consistent, it lacks in explaining exactly the objectivity of the *Specie*. This objectivity in fact cannot involve a «regress *in infinitum*»<sup>2</sup>. But if we operate with class or groups of likeness and we define a *Specie* or a *Genus* on the basis of a last difference between them, it results impossible to intuitively explain how we reach the last difference which distinguish a *Specie* for itself. If we have objects which all likely have the moment “form”, we should find the difference among them which defines a *Specie* “triangle”, and moreover, which distinguishes it from “square”. This distinction may be possible only following back to the moment “form” in order to establishing the defining difference among the objects, which supposes for its part exactly the moment form from which it generates the distinction. Also to call in an even higher genera (for example, angles) in order to obtain the specific difference would be of no help, for such moments do belong to a even more larger class.

Briefly, the general problem indicated by Husserl in such a description is about the difficulty of intuitively grasp likeness and difference, and that in two peculiar sense: the general issue regarding the intuitable nature of those latter, and, more in general, the difficult starting point of the process by which we become aware of such concepts<sup>3</sup>. Under this point of view, the aporia seems to hit the mark; at least, we can here recognize the problems involved in the early formulation of the intuition issue, i.e., the exclusive lean on mere contents.

In others pages yet, Husserl takes again the identity issue, in particular, the «identity of the Universal». Among the thesis presented and partially criticized by Husserl, we want here briefly expose only the more significant ones. The starting point of the argumentation in this 1896 pages is again the well know example of the «two objects with like parts or moments, for example, two horses likely colored». Now, if affirm that the two objects are likely colored, means that the two objects have their own color-moments and that among both lays «likeness», therefore we may affirm «in both objects

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1 Ibidem.

2 Ibid., p. 11.

3 Hence, we recall here the function of description.

inhere [*einwohnen*] an identical Being, the Genus, or more specifically, the Specie»<sup>1</sup>. Here the Specie identity is linked to the likeness. Therefore, we may here speak about, and distinguish between, the Specie and the «single cases».

But:

- in this case, we cannot speak about a relationship between Specie and cases of the specie. At least, not in the sense of a specie *in re*, which would inhere every single pieces. It is in fact surely an identical part among the different cases and all fractions have the same identical non-independent moment. Important is only to understand that, in this case, «we are not speaking of the same identity which is in question when we say that two objects do share a common fraction, like in the case of two houses which share a wall»<sup>2</sup>.

- the Specie is the «identical something which inherent in [*innewohnen*] all the cases». Therefore, the specie divided whether we have more objects with the same specie. An identical moment would this way belong to the «respective moments» of all objects and, paradoxically, the objects would not be truly distinguished and divided.

- not the moments are identical, but rather what Husserl defines «the significations [*Bedeutungen*]», and now, in the «subjective acts» the significations are «the same thing that the moments».

- moreover, we must distinguish the sense by which we call two or more objects “like” or identical, and when the same formal relationship is applied to moments of objects. «We speak of likeness and identity in different sense»: in the first case, the likeness is established under a respect, in the other case, it is spoken «absolutely»<sup>3</sup>. When we call 2 or more objects, or in general individuals, “equal”, we do so under «a respect», and therefore we establish such a respect<sup>4</sup>. But, «two equal moments, if taken for themselves, are indiscernible [*ununterscheidbar*]»<sup>5</sup>. That also means, discernible and indiscernible moments belong to objects, where the former «are called non-identical moments», while the latter «identical». Where we do not find differences among the moments, therefore «all become one». When we find likeness between objects as wholes we find therefore

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1 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 12. For example, E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 106, 115, 118.

2 E. Husserl, “Das Allgemeine. Eine Studie. Aporien über das Allgemeine”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 12.

3 Ibid., p. 13.

4 Ibid., p. 26.

5 Ibid., p. 14. Husserl's italics.

identical parts among differences, where the differences are qualitative or based in their different way to be connected to the objects (like distances). While among parts, their likeness or equality means identity, they have «internal moments» which are identical with the exclusion of the external moments:

«The White here and the White there are, considered for themselves, identical, they coincide. But they have also external determinations, they belong to different objects, they have different moments connected together. (...) Even if I must yet pay attention to the white per se, so it is also something per se. When I consider the things this way, equality emerges and the equality connects in fact White and White»<sup>1</sup>.

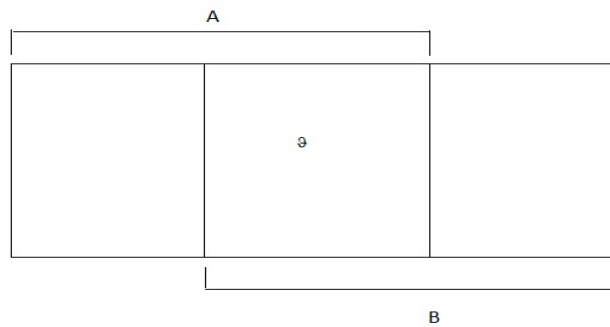
Only when I consider the connection of the parts then differences emerges, but this latter «concern only the connection, and only indirectly the Whites». What this latter is guaranteed for the distinction between the White of the Dog and the White of the piece of paper. But as “law”, Husserl affirms: if a plurality of contents must stay in a likeness relationship, among them at least a difference must be given; otherwise, equality ends up as long as «plurality merge into unity»<sup>2</sup>.

Of course, the question became soon, how is to be conceived the relationships between the identity in the sense of the likeness among the moments and the strictly identity of the one, i.e., «the identity of the one with itself» says Husserl. According to him, this question is «close», or to be related to the one about how is to be distinguished the identity in the sense of the equality among the abstract moments with respect to the identity of a “piece”, like in the case of two different surfaces which share an identical common piece.

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1 Ibid. p. 15.

2 Ibidem



This unclear comparison can be, in our opinion, differently understood. But what seems to generally emerge could be resumed as follow. The piece is an “object” and it is a part in two different “objects”, which means, it is the same element which is shared within a relation, for example, in the case of likeness between two parts which are likely colored.  $A \approx B$  and  $\emptyset$  will be the common element between both by being the bearer – Husserl speaks about being the “subject” - of two different characteristics. Now, in order to identify this proper “piece”, the distinctions between the two parts sharing are fundamental, in the sense that, the much the distinction is marked the easier results to identify the common piece,  $\emptyset$ . The problem arises when we take in consideration the shapes of colors on a surface, which for itself compose in fact a «multiplicity»<sup>1</sup>. This latter is due to the smaller «distance» between the different nuances of the same color, while it results easier by two color of different kind, like in the case of red and blue. Different shapes of green instead do form such a multiplicity because of the «fusion between the shades». In the case of two different kind of color, would be easy to identify the common piece, which is the genus color. Here is in fact important the difference and the distinction between the parts.

But now, Husserl stresses, even by the shapes of green, due to the fusion among them, we reach identity and the kind identity is based in fact on such an identity. Therefore, explaining the identity on the base of equality and likeness with the existence of a difference among the parts, and then apply the same explication for both, the arising identity of kind and genus, seems to generate difficulties due to the role assigned to the difference by the distinction of, exactly, the “piece” identity.

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<sup>1</sup> Ibid., p. 17.

This peculiar difficulty leads Husserl to recognize first that «by the concept formation, it is not in question, whether it exists real [*wirklich*] equality, but instead, that we distinguish, that something is taken for equality or difference»<sup>1</sup>. And second, that the difficulty falls back to the impossibility to form a class on which a kind could be based on: in the case of two, suppose, identical Reds, we find everything indistinct; by two shapes of red instead, equality increases continuously, generating the same indistinctness. We have to assume therefore, «*equality in narrow sense as “identity” of the infima specie*», for instance, this determinate shade of red; and likeness, where we find different shades of red continuously changing and with certain «distances» among them, that constitute a class of order. But the kind of relations, for example, the difference in intensity among the shades, do not allow to form the kind or even the genus with which we could establish such a class, as we have seen. Are we forced to say that the contents in itself do contain now specie and genus? But this way we will still face the difficulty already seen, concerning how to find the last difference among them which could lead to the distinction that defines and distinguish a specie for itself in identity.

A solution could be: the different abstract moments of an object are different and distinguished only «within the connection»; which means, assuming that the same moment does enter in different connections, in this way it assumes within them the «external determinations» which distinguish it, but, for itself, remains everywhere the same: «*The same moment appears in a variety of connections, and acquires in them different external determinations, for itself remains yet everywhere the same*». But Husserl continues, «can I this way still speak about a plurality of cases of White? Is the moment White here and there twofold? It is identically the same Specie, but in another relationship?» But actually, the connection does not mean here in fact to “decompose” [*Zerfallung*]? By means of which also intuitively we can say, the White here and the White there, are distinct things but are identical as white. By the fall of connection, it results merely a multiplication [*Vervielfältigung*] of the presentations, while by the latter fall also the identical multiplies, distinguishes itself in different cases, but the mean of the identity among the two relations is the same: the lived-experience of the identification does not differ and it is indistinguishable in both case, as long as we recognize a certain determination as the same, which means, as long as the first White

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1 Ibid., p. 18.

and the second one are indistinguishable due our having abstracted from the connections. Here, abstraction is a form of attention bestowed on the identity, while this identity is called by Husserl «the Universal» by representing the «unity in the multiplicity of the connections»<sup>1</sup>.

The connections only confers to the identical its external determinations, but they do not divide it, it preserves its own identity and unity, and when I bestow attention on the White, I am not actually grasping the identity of the single case, but of the specie. The specie in fact is not a part in the whole, but the whole object owns now the White in the form of a case of the specie. Moreover, the different cases have all this element as common in themselves, and that means, in return, every Species belong a class of abstract parts and objects. Husserl comes to state, he will keep to the «strictly identity of the Universal and to the existence of universal objects»<sup>2</sup>.

The existence of this “universal objects” is derived by Husserl by starting from the definition of the universal objects as «abstract object». These latter are basically defined as «objects which have the same identical content as other objects»<sup>3</sup>. They are therefore, it could be argued, unities which share the content with other objects, where the content of the abstract object is the one identical among the latter ones. In this sense in fact Husserl seems to arguing for the existence of abstract objects with the same argumentation taken for the existence of a unity in the connection. Abstract objects are in fact define as «cases» of a class of universality, as non-independent entities, whose individuality is granted by its not corresponding to any other object whatsoever. And now, also their difference with respect to «concrete objects» is defined in terms of connection: an object which, as taken for itself, «can exists in only one connection», is a concrete object; on the other hand, «an object which exists and can exist in more then one connection is an abstract object»<sup>4</sup>.

By such a long and complex argumentation that aims to exclude possible hypothesis in order to gain a stable insights on the question about the nature of the Universal, some basics point emerge more clearly than others but are all of some basic importance. The specie is substantially defined as a unity in the multiplicity, where this latter is

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1 Ibid., p. 21.

2 Ibidem.

3 E. Husserl, “Innere und äußere Gleichheit bzw. Identität. Inwiefern individuelle und abstrakte Gegenstände sich darin unterscheiden, ob es ein ihnen innerlich Identisches geben kann. Gegenstände als Exemplare einer Allgemeinheit und singuläre Gegenstände”, in *Zur Lehre vom Wesen und der eidetische Variation*, in *Husserliana*, XL, cit., p. 25.

4 Ibid., p. 26.

conceived in a large sense; it can be the multiplicity of objects or a variety. The Universal (Specie) is the identical moment which is to be found among the parts and find its actual instantiation due to the connections; but when abstracted, it emerge also in identity and unity. The Specie for itself maintains in fact its identity and unity, even when it is actually grasped as a part. Abstraction is for its part, now differently defined, which means, in the sense of an attention close to a “meaning” the unity. The part corresponding to the Universal, defines the whole. In this sense in fact, the moment or the parts are also predicatively relevant. Not only because to them do correspond in the act a possible signification, but also because, when conceived as the identical, are also the reference established for a relation. Under the same respect are equally important Husserl's meditations on the concept determination, under which objects with defining parts (as the universal) fall, but also due to the basic predicative structure which Husserl recognizes in his analysis, as we have seen by speaking of individualizing and not-individualizing moment. To these Husserl links also peculiar form of presentations and the distinctions among subject and predicate, with the corresponding elements, saw within the sphere of attribution. With this latter reflections are in fact already present, besides the sense of Universal as Specie, the very fundamental traits of the conceptual universal which we have see at the beginning of the section and which we will find again later on.

### 3.2.2) *The Logical Investigations.*

Later on, i.e., starting from the first edition of the *Logical Investigations*, Husserl takes and explicitly apply this peculiar conception of the Universal as Specie and as “universal objects”, using the term Specie for example, connected to the term Eidos, which for its part still does not hold the more specif sense used in the first Book of *Ideas* for «distinguishing the absolutely important Kantian concept of Idea from the universal concept of (formal or material Essence)»<sup>1</sup>. In this sense, Husserl uses here the term Specie and universal objects in the sense emerged, which means, with a meaning

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<sup>1</sup> E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 8.

so wide that comprehends basically all kind of idealities. Species are for example conceptual universalities in the form of the traditional *Universalia* (“White”, “Man”) under which objects fall, but also every kind of abstract objects and meanings of every kinds, among them, also meanings of entire propositions. The specie or universal object takes here in fact the sense already seen: every unity which individualizes itself as the same identical one in a multiplicity (of individuals) and which is grasped or can be grasped as the identical element or moment in common among objects.

This kind of conception lays the very basis for Husserl's *general* or “formal” definition of ideality, which also conducts him in a slightly mistaking way, later on modified, to identify the form of ideality which belongs to the conceptual universal and to essence which can have an extension, like in the case of the concepts in the earlier works, to the one belonging to meanings. Those latter are in fact also conceived as ideal unities that individually singularize in real objects (like characters) and in *real* [*reell*] moments of intentional lived-experiences, but not in the same way of universals. Meanings ideality is a «special case» of the ideality in general, but it is not a special case of the ideality of the specie absolutely. Husserl writes in fact in the 1908 Lecture on *Bedeutungslehre*:

«Meanings as such can be an identical of many positing acts, they are an ideal, as long as they are not *real* [*reell*] pieces of such acts, which means, as long as they do not come and go with them, for new and new acts can identically comprehend the same meaning. (...) Now, this ideality is yet not ideality in my original sense <*Logical Investigations*> (which I have mistaken with), the ideality of the Eidos, of the Essence as a “Universality”. Universal objects in the sense of meanings and universal objects in the sense of Specie are clearly to be distinguished»<sup>1</sup>.

Anyway, the *Spezie* conception of ideality and meanings is surely defining in the *Logical Investigations*. In fact, along the pages of the 1900 influential work, we find different statements and even within different contexts leading to the comprehension of the role played here by this interpretation of the Universal in the sense of “the unity in a multiplicity”.

The first articulated reference is for example to be found already in the *Prolegomena*,

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<sup>1</sup> E. Husserl, *Vorlesung über Bedeutungslehre. Sommersemester 1908*, in *Husserliana XXVI*, ed . U. Panzer, (Martinus Nijhof, Dordrecht, Boston, Lancaster, 1987), p. 217.



and more precisely in the part dedicated to the critic against Sigwart's alleged anthropologism in the explanation of logical validity. In this context, Husserl speaks explicitly «of the Universal, i.e., the idea», in this case the idea of truth, in the sense of an identical unity arising from a multiplicity of «concrete individual cases»<sup>1</sup>. It could be of some interest to briefly expose the main points of Husserl's argument in this pages; we find here in fact some of the main traits of his conception clearly exposed.

Husserl's starting point is in fact already the description of the «lived-experience» which defines the experience, the consciousness of the Universal, i.e., the kind of «lived-experience in that totally different sense in which a Universal, an Idea, is a lived-experience». Already by speaking of «experiencing and “coming to consciousness”», we refer to such expressions, as Husserl remarks, «in quite a different sense in relation to *ideal being*, from what they have when in relation to *empirical, individualized being*»<sup>2</sup>. We do not «”grasp” [*erfassen*]» in fact the Universal, from now on called by Husserl «idea» or «ideal being», in experience in the same manner we have «an empirical content», which for its ontological status «comes up for vanishes again in the stream of the psychological experience»<sup>3</sup>. Already we are in fact in what he will call in the following years also the «disposition» or «attitude in essential-intuition»<sup>4</sup>. Obviously, the starting point could and may be still «a red object which stands before us», but the particular red object in our actual perception «is not the Species “Red”» nor the object does contains this latter in the form of a “psychological” or “metaphysical” part. In this context we find Husserl speaking about the difference between the particular and individual moment belonging to the Specie and which we found equal or “like” in all the objects where it find «instantiation», where the Specie is for its part defined notoriously now, as the identical unity «over against» the multiplicity of concrete cases:

«The part, the non-independent moment of red, is, like the concrete whole object, something individual, something here and now, something which arises and vanishes with the concrete whole object, and which is *like, but not identical*, in different objects. Redness, however, *is an ideal unity*, in regard to which it is

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1 E. Husserl, *Logische Untersuchungen, erster Band*, in *Husserliana XVIII*, cit., p. 135.

2 *Ibid.*, p. 134.

3 *Ibid.*, p. 134 - 5.

4 E. Husserl, “Der Wesensunterschied in den Wesensbegriffen und ihrer Bildung. Anschauungsbegriffe als Typenbegriffe gegenüber exakten Begriffen als Ideen” (1912), in *Zur Lehre vom Wesen und der eidetische Variation*, in *Husserliana*, XL, cit., p. 65.

absurd to speak of coming into being or passing away. The part (moment) red is not Redness, but an instance of Redness»<sup>1</sup>.

Hence, as such a unity the Specie is defined by Husserl again, and now in a significant way, «a universal object», which differs from singular ones even if undergoes to the same «objective consideration»<sup>2</sup>.

The same distinction is now to be found and has in fact its counterpart in the kind and form of acts that «grasp» or «apprehend the two kind of objects», according to the general framework of intentional description of the acts of consciousness; in fact,

«we do something completely different if, by looking at a concretum intuitively given, we refer to its sensed redness [*empfundene Röte*], i.e., the individual feature it has here and now, and if, on the other hand, we refer to the Species Redness, as when we say that “Redness is a Colour”»<sup>3</sup>.

Therefore, by regarding to the concrete case, especially more concrete cases, we refer not to the concrete, but to «its universal, its Idea», and in the same manner, by regarding several acts of such a “process” which Husserl calls now «Ideation», we may rise to the inwardly recognition «of the identity of these ideal unities» which are, continues Husserl, «meant [*gemeint*] in our single acts»<sup>4</sup>. To these meant “ideal unities” belongs *identity* in the strictest sense, which means, the identity granted by being identical species, or species of the same *genus*. Any Idea is consequently given in such an act of Ideation «based upon», according to Husserl, «an intuition» in the form of an act of «insight [*Einsicht*]» and they maintain, more important now, «unity and identity over against the dispersed multitude of concrete», like in the case of compared cases of an evident judgment, act of meaning etc<sup>5</sup>.

We find therefore this theory very concisely newly exposed within the *Logical Investigations*, i.e., in the notorious quote from the *First* of the *Logical Investigations*. Husserl writes in fact extensively but also with a certain clearness now:

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1 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 135.

2 E. Husserl, *Einleitung in die Logik und Erkenntnistheorie. Vorlesungem 1906/07*, in Husserliana XXIV, cit., p. 299.

3 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 135.

4 Ibidem.

5 Ibidem.

«The genuine identity that we here assert is non other than the *identity of the species*. As a species and only as a species, can it embrace in unity (ξυμβάλλειν εἰς ἓν), and as an ideal unity, the dispersed multiplicity of individual singulars. The manifold singulars for the ideal unity Meaning are naturally the corresponding act-moment of meaning, the *meaning-intentions*. Meaning is related to varied acts of meaning – Logical Presentation to presentative acts, Logical Judgment to acts of judging, Logical Syllogism to acts of syllogism – just as Redness in specie is to the slips of papers which lie here, and which all “have” the same redness. Each slip has, in addition to other constitutive aspects (extension, form etc.), its own individual redness, i.e., its instance of this color-species, though this neither exists in the slip nor anywhere else in the whole world, and particularly not “in our thought”, in so far as this latter is part of the domain of real being, the sphere of temporality»<sup>1</sup>.

The fact of being or holding of something general amounts already now for Husserl to an «ideal possibility», which would guarantee for the extensive falling of empirical cases under the Idea or the equivalency of statements, for instance. As such possibilities, their meaning intentions could even remain without actual fulfillment, the «apprehension or bringing to consciousness» could not even be realized, but the ideal being retains its peculiar existence and validity «in the timeless», and of Lotzean memory, «realm of Ideas»<sup>2</sup>.

Obviously, the definition of the universal within the first pages of the 1900 work, like for example the one in the first of the six logical inquiries, refers directly to Husserl's interpretation of the Specie in the sense of the Universal we have seen, which is now «the class of “universal objects”» constituted by «meanings», and where the specie is one of the first expressions of Husserl's conception for the *Eidos*<sup>3</sup>. By defining now the ideality proper to this species which are meanings, Husserl refers from now on explicitly to the necessity of conceive it in the sense of the ἐν ἐπὶ πολλῶν, and interprets them, indeed, as universal objects. This has at least partially its reason in the sense assigned by Husserl to the inquiry into meaning in the *Logical Investigations*.

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1 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 105 – 6.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 136.

3 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 108.

The *Logical Investigation* were in fact notoriously thought by Husserl as his attempt to «establish a theory of the formal deductive systems»<sup>1</sup>, which is the task of a not psychologically interpreted and not merely normative logic, i.e., a logic as theory of science in its try to comprehend what makes science, science<sup>2</sup>. This kind of logic investigates therefore into the unity of a theory, which exists on the basis of «certain relation of founding»<sup>3</sup>. These is, at least, partially composed by the «deductive connection of given propositions»<sup>4</sup>, where an example of such a connection is represented by the logical relationship between premise and consequence of syllogisms<sup>5</sup>. Even if judgments «can barely being realized without verbal expression», the objects which pure logic seeks to examine are only «in the first instance, given to it in grammatical clothing». Pure logic is in fact in Husserl understanding not science of language. Thus, logical objects «come before us embedded in concrete mental states which further function either as the meaning-intention or meaning-fulfillment or certain verbal expressions (...) and form a phenomenological unity with such expressions»<sup>6</sup>. Object of investigation is yet not the «psychological judgment, i.e., the concrete psychical phenomenon» either, but rather the logical judgment, the «identical assertion-meaning, which is one over against the manifold of (...) judgmental lived-experiences»<sup>7</sup>.

The identical meaning of assertions is therefore a logical object. The meaning can be maybe comprehended or grasped, but not *stricto sensu* perceived. A subject matter for discussion was in fact, for example in Brentano, such kind of intuitions, in order to limit the appeal to the existence of such meanings- and logical-entities. Obviously, on the other side, «who advocates for ideal objects» can normally barely escape the accusation of metaphysically hypostatise such entities. But such an interpretation would fail in understand the proper «meaning of [Husserl's] theory of ideal essentialities», which represents his Platonismus as the «direct reference to a kind of original (...) givennesses», whit respect of which we in everyday life and science judge and which «show in knowledge and, thus, as something truthfully being», i.e., as something

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1 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 5.

2 Ibid., p. 230.

3 Ibid., p. 232.

4 Ibid., p. 244.

5 Ibid., p. 243.

6 Ibid., p. 7 - 8.

7 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 8.

“objective” even if not “real”<sup>1</sup>. In this sense, “object” is to be understood as equivalent to «predicable subject», which means, in a so «wide sense» granted on such an equivalence, which allows «“Ideas” to be valid as objects»<sup>2</sup>.

To identify logical objects and predicative subjects is evidently not enough. Not to every predication, can be in fact said, does correspond an object (“a square round”), but even to such objects, does correspond predications. There are therefore objectless expressions<sup>3</sup>. But something is an object if it is, according to Husserl, the logical subject of, at least, one true and primitive predication, even if the latter is not really realized. In this sense Husserl talks therefore about “universal objects” in the *First Logical Investigation*:

«Meanings constitute (...) a class of concepts in the sense of “universal objects”. They are not for that reason objects which, thought existing nowhere in the world, have being in a τόπος οὐράνιος or in a divine mind, for such metaphysical hypostatization would be absurd. If one has accustomed oneself to understand by “being” only real being, and by “object” only real objects, then talk of universal objects and of their being, may well seem basically wrong; no offence will, however, be given to one who has first used such talk merely to assert the validity of certain judgments, such in fact as concern numbers, propositions, geometrical forms etc., and now who asks whether he is not evidently obliged (...) to affix the label “genuinely existent object” to the correlate of his judgment's validity, to what it judges about. (...) The principle of the parallelogram of forces is as much a single object as the city of Paris»<sup>4</sup>.

Notoriously, the labelling under the expression “ideal objects” for the meaning as “universal objects” and even in general the impulse for such an inquiry may have generated, according to Husserl, from the «decisive impulse of Bolzano, and especially of Lotze» and their relevant work, the *Wissenschaftslehre* from 1837, and and *Logik*<sup>5</sup>. In 1903, looking back to his recent works in a review published in the famous *Zeitschrift für Psychologie der Sinnesorgane*, he describes in fact this such fundamental step

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1 Ibid., p. 282.

2 Ibid., p. 283.

3 E. Husserl, *Aufsätze und Rezensionen (1890 – 1910)*, in Husserliana XXII, p. 303f.

4 E. Husserl, *Logische Untersuchungen, zweiter Band*, in Husserliana XIX/1, cit., p. 106.

5 Hua XVIII, p. 229.

forward in his philosophy from the earlier psychological studies in mathematics:

«For what concern my concepts of the “ideal” meanings, the ideal presentative and judgmental contents, they arise originally not from Bolzano, but from Lotze's *Logik*. Especially, his series of insights around the interpretation of Plato's theory of Idea had a deep impact on me. A personal rework on such insights from Lotze gave me the key to (...) Bolzano's conceptions and to the treasury of his theory of science»<sup>1</sup>.

What Husserl was able to find in the first two Volumes of Bolzano's work was, «under the names of a theory of representations and propositions in itself», a perfect first project for a pure logic, in the form of a «first try for a complete account of the field of the purely ideal disciplines», applying yet his «Platonic interpretation»<sup>2</sup>. But besides this occurrence, Husserl's interpretation of universal objects originated from his understanding of the Universal may have first offer the necessary condition for his Specie conception of meanings.

As we have seen above now, the Specie conception for meanings will undergo in the years after the *Logical Investigations* some changes, especially for what concerned the kind of ideality belonging to the meanings which derived from Husserl's interpretation of the Universal. What instead will develop further and constantly from the 1900 Work, is the conception of the Universal in the sense of Essence or Eidos, which starts more explicitly from the traditional conception of the Universal, i.e., the universal interpreted as the something predicatively ascribable to different objects and which can have «an extension» to which refer, while represents the object defining moment. That is the concept of «every essence which has in a specific sense an universality, to which does correspond an extension as long as to this same Essence belongs the possibility to be comparable to an undefined multiplicity of individuals that correspond to the essence itself»<sup>3</sup>.

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1 *Aufsätze und Rezensionen (1890 – 1910)*, in Husserliana XXII, cit., p. 156.

2 E. Husserl, *Logische Untersuchungen, erster Band*, in Husserliana XVIII, cit., p. 298.

3 E. Husserl, *Logik und Allgemeine Wissenschaftstheorie. Vorlesungen 1917*, in Husserliana, XXX, ed. U. Panzer (Kluwer Academic, Dordrecht, 1996), p. 373. This quote is from the original 1910 Lecture.

### 3.2.3) *Essence as Defining Universal. Some brief Remarks from the Works after 1900.*

The universal or general determinations, properties and attributes which we «ascribe [zuschreiben]» predicatively through categorically articulated experiences to objects, but which basically already structures experience before such predicative turn, as it will explicitly become a point of interest in the Husserlian works of the '20s and with the investigations in the ante-predicative realm, define the broad sense of “essence” which dominates much of Husserl's works till *Ideas*. In this latter work we find in fact this encompassing sense of essence along with a more specific one, which is linked to the pure *eidōs*. This sense of essence results in fact first neutral with respect to the distinction pure/impure, and basically embraces the sense of a “conceptual universal” we have introduced. Husserl writes in fact in the first part of the 1913 work:

«An individual object is not merely an individual object as such, a “This here”, an object never repeatable; as qualified “*in itself*” thus and so, it has its *own specific character*, its stock of *essential* predicables which must belong to it (as “an existent such as it is in itself”), if other, secondary, relative determinations can belong to it. Thus, for example, any tone in and of itself has an essence and, highest of all, the universal essence tone as such, or rather sound as such - taken purely as the moment that can be singled out intuitively in the individual tone (alone or else by comparing one tone with others as “something common”). In like manner any material thing has its own essential species and, highest of all, the universal species “any material thing whatever”, with any temporal determinations whatever, any duration, figure, materiality whatever. *Everything belonging to the essence of the individuum another individuum can have too*; and *highest eidetic universalities* of the sort just indicated in our examples delimit “regions” or “categories” of *individua*. (...) *At first* “essence” designated what it is to be found in the very own being of an individuum as the What of an individuum»<sup>1</sup>.

As such therefore, it articulates in different levels of universality, but more importantly,

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<sup>1</sup> E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 12 – 3.

this kind of essence as conceptual universal is still the one which determines the possible subject *S* of a simple judgment of peculiar forms, for example, “This *S* is *p*”. «If I say “this is green”, so the subject is 'determined' by [*bestimmt durch*] the concept, by the essence Green, it is something of the essence Green», as Husserl affirms in a manuscript linked to the works for *Ideas*<sup>1</sup>. In this sense, an object which appears in a fulfilled judgment, does so as an object belonging, in the form of a non-independent moment, within a state of affairs; that means, generally, as the “object about which” [*Gegenstand-worüber*] of the former. But this object appears or it is posed in this form yet only in the sense of a This which is «placed in relationship with a certain essence»<sup>2</sup>, i.e., «a higher or lower universal», through which, on the basis of the same individual intuition, «the object constantly undergoes its *essential determination* [*Wesensbestimmung*]»<sup>3</sup>. This complex description briefly presents what Husserl understood after the *Logical Investigations* with the «defining Universal» which represents one fundamental aspect of his theory of essence and of his interpretation of the conceptual universal<sup>4</sup>.

First, Husserl affirms the fundamental function of such universal again and explicitly in predication. With this kind of universal, so Husserl, «the concept of property [*Merkmal*] first develops», by representing this kind of consciousness, the «consciousness of universality» as an object consciousness constituted “vis-à-vis” as consciousness of the particular (at lowest level: individual consciousness), a «synthetically relating act» that can place object and object in relation, and also the universal and the corresponding particular<sup>5</sup>. The Universal is therefore an objectivity whose «constituting relationship» with the individual is, so Husserl, *akin* to that of part and whole, but somehow different:

«The *universale is not in re* (is not *ante* and *post rem*), provided that we understand the *in* in the same sense as in whole and part. The thing does not *have* the conceptual universal *within itself*, but the concept belongs to the thing as its

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1 E. Husserl, “Substrat und Wesen”, in *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie, 2 Halbband, Ergänzende Texte (1912 – 1929)*, in *Husserliana* III/2, ed K. Schuhmann (Martinus Nijhoff, Den Haag, 1976), p. 580.

2 E. Husserl, *Vorlesungen über Bedeutungslehre. Sommersemester 1908*, in *Husserliana* XXVI, ed U. Panzer (Martinus Nijhoff Publishers, Dordrecht, Bostin, London, 1987), p. 210.

3 E. Husserl, *Einleitung in die Logik und Erkenntnistheorie. Vorlesungem 1906/07*, in *Husserliana* XXIV, cit., p. 302.

4 *Ibidem*.

5 *Ibid.*, p. 300.



“*essence*”; the thing has its determination, its properties, in the concept»<sup>1</sup>.

The relationship between the individual object and the property, like in “the ball is red”, is according to Husserl different from the one between the *Specie* and the *Genus* (red – color). We can in fact see the ball as divided into pieces, to which a moment “red” corresponds. Corresponding to the dividing into pieces of the spatial form, each piece of the ball has in fact its red moment and, on the other hand, its form moment, according to a law. Belonging to each moment of form is the corresponding universal form, to the whole ball, the ball form that belongs to the ball as property. Likewise, the coloration which, though, as qualitative covering over of the ball, has and presupposes the property ball as substratum. To each of this moment corresponds therefore a Universal, a universal of «least difference»; the universal of the whole object is as *Specie*, the unity over against this parts<sup>2</sup>.

Second, to this concept of Essence as a universal object-determination [*Gegenstandsbestimmung*] can now also be linked the so called “empirical Universalities” or empirical essences, which actually are co-posed explicitly or implicitly Individuals belonging to reality. Such universalities have therefore a bounded extension, which means, an «extension of actual and real possible individuals»<sup>3</sup>. These individuals are the objects through which such universalities do find their «exemplification»<sup>4</sup>.

It is for example by starting from this last characteristic remembered that it results more easy to distinguish now this concept of essence, from the specific one which is *Eidos*. At the time of the fundamental introduction to phenomenology which is *Ideas*, Husserl in fact eventually reach “clarity” and consistency in the use and distinction of the concept *Eidos* and *Essence*. The former assumes now a more peculiar meaning in respect to the concept of essence. Husserl states critically in the introduction of the *first Book*:

«With the expressions *Idee* [*idea*] and *Ideal* [*ideal*], it is perhaps not quite so bad with respect to disconcerting varieties of significations, though, on the whole, still bad enough, a fact to which the frequent misinterpretation of my *Logische Untersuchungen* have made me sufficiently sensitive. In addition, the need to

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1 Ibidem. Husserl recalls here also Plato's μένεις as a possible interpretation of such a relationship.

2 Ibid., p. 301f.

3 E. Husserl, *Erfahrung und Urteil*, cit., p. 409.

4 Ibid., p. 398.

keep the supremely important *Kantian concept of idea* cleanly separated from the universal concept of (either formal or material) essence decided me to make a terminological change»<sup>1</sup>.

That this is not only a more precise terminological use but defines also a distinction which was somehow absent around the time of the *Logical Investigation* and that exactly due to the definition given by Husserl of *Ideality* which, so broad and slightly undistinguished, could hold for the use of the term *eidōs* in the same sense also for the kind of ideality we have investigated till now, i.e., the *Specie* or every kind of universal object. We have seen the fundamental connection Husserl established between the *Specie* and the *Universal*: the former when «objectively considered» is a unity based on a peculiar identity which can be grasped as the «common» in the multiplicity of the objectivities, i.e., as the identical which individualizes in them, and under which, as conceptual universal, these themselves fall. We have found here a version of the traditional definition of the *Universal* as «ἐν ἐπὶ πολλῶν». Both find expression, at least till the 1907, in the concept of "essence", which is therefore still not itself further specified as *eidōs*. We can therefore say, the more specific concept of *Idea* which is to be reconstruct around this time, is somehow not understood in the same sense of *Universal* exposed.

This different conception of the *Universal* which basically define a equally peculiar sense of «essence», must therefore not be confused or «equivocated» with the broad sense of essence operating, for example, in the *Logical Investigation*<sup>2</sup>. Already terminologically, to this essence is linked a «pure universal» and moreover, it it actually the sense of essence which also defines a «science of essence» and according to which «essential laws» can be also defined<sup>3</sup>. Husserl refers to this sense of essence with "pure essence" and moreover, it used by Husserl in conjunction with the term "pure *Eidos*". The characteristic feature of essence as *Eidos* seems to be found in its pureness indeed, which emphasize for us a difference in respect of the essence in less specific sense already seen above, by means of its less strong or mandatory bond with the experiential givenness:

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1 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 8.

2 Ibidem.

3 E. Husserl, *Erfahrung und Urteil*, cit., p. 409.

«The Eidos, the *pure essence*, can be exemplified for intuition in experiential data [*Erfahrungsgegebenheiten*] - in data of perception, memory, and so forth; *but it can equally well be exemplified in data of mere phantasy*. Accordingly, to seize upon an essence itself, and to seize upon it *originarily*, we can start from corresponding experiencing intuitions, *but equally well from intuitions which are non-experiencing, which do not seize upon factual existence but which are instead “merely imaginative”*»<sup>1</sup>.

Therefore, the pureness of the pure essence is to be stressed by the equally possible exemplification by «experience givenness» as well as «by formation [*Gebilde*] of phantasy», as Husserl points out already in his 1909 *Einführung in die Phänomenologie der Erkenntnis* lecture<sup>2</sup>. The givenness could be conceived as a givenness of experience, but now a «mere imagining», or rather, «what is intuitively and objectively present in it», can serve our purpose just as well. This kind of «Universal reaches here givenness in a certain sense on the basis of individuality, but absolutely not by means that the being-position of the universal may somehow depend from the being of the individual»<sup>3</sup>. This latter, which only in «misleading way may be called the basis of abstraction [*Abstraktionsgrund*] of the universal», can be given in recollection, «fictional phantasy just as well in phenomenological perception». In this case, we «differently comprehend» the individual, «differently from the particular, single this-here»; we “intuitively single out” [*Herausschauen*] from perception data, memory, phantasy «the essence», we do it «generally» and we do not even need to «bring it to givenness»<sup>4</sup>. Individual is here also understood broadly: we can in fact, as in phenomenology, obtain the essence «memory, perception, judgment, (...) Or even “what we understand by...”»<sup>5</sup>. Within this new kind of intuition, «of ideation as I may say», we find a new kind of absolute givenness, free from the character of individual givenness. Even if there would be «no humanity», «no existence in the sense of nature», as long as

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1 E. Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch*, cit., p. 16.

2 E. Husserl, *Einführung in die Phänomenologie der Erkenntnis. Vorlesung 1909*, in Husserliana, Materialien VII, ed E. Schuhmann (Springer, Dordrecht, Berlin, Heidelberg, New York, 2005). Also in E. Husserl, *Erfahrung und Urteil*, cit., p. 411.

3 E. Husserl, *Einführung in die Phänomenologie der Erkenntnis. Vorlesung 1909*, in Husserliana, Materialien VII, cit., p. 84.

4 Ibid., p. 85.

5 Ibid., p. 86.

such words as “perception”, “judgment” and so on are somehow understood, it is always possible «to bring to clarity and givenness» such concepts without recurring to any position of transcendence whatsoever.

This pure essence or pure concepts are close as “exact concept” of such a science like pure geometry, for they do not necessarily co-positing anything real to which they unidirectionally refer, «no factual existence»; otherwise, that would in a certain manner define their extension [*Umfang*] and even their sphere of application only to a certain portion of actual givenness. But pure concept of phenomenology are somehow far more numerous and variable than the «exact concept» that we find, for example, in the «explicative science»<sup>1</sup>. The pure concept of phenomenology are in fact «type-concepts [*Typenbegriffe*]», while on the other hand, we find the «exact concept» which are, basically, «ideal limit-forms», under which do not properly fall any experience or even phantasy givenness<sup>2</sup>.

With the introduction of pure Eidos and, more importantly, Typical concept we are already entering the realm of Husserl's eidetics. Both are in fact terms and concepts which will undergo in the transcendental Phenomenology a deep and influential investigations. Especially the concept of Typus will in fact develop in a direction very close and somehow already delineated by the defining concept. But we are already here also leaving the field and the limit of our work.

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1 E. Husserl, “Der Wesensunterschied in den Wesensbegriffen und ihrer Bildung. Anschauungsbegriffe als Typenbegriffe gegenüber exakten Begriffen als Ideen” (1912), in *Zur Lehre vom Wesen und der eidetische Variation*, in *Husserliana*, XL, cit., p. 57.

2 *Ibid.*, p. 56.





## Concluding Remarks

In a later manuscript from 1918, only recently published, Husserl explicitly defines the essence in its «individual singularization» as in the form of a «concrete essence [*konkret*]» as the  $\varepsilon\nu \acute{\epsilon}\pi\iota \text{ πολλῶν}$ . Writes in fact Husserl in a articulated manner that

«The concrete essence is the  $\varepsilon\nu \acute{\epsilon}\pi\iota \text{ πολλῶν}$ , which means, the complete Eidetical-Identical of the multiplicity of individual particulars [*Einzelheiten*], which for their part do not “comprehend” anything further specific. If we distinguish the “Quale” in this  $\varepsilon\nu$ , in this concrete essence, in the same manner it results absolutely identical for all the individual particulars. It is an essence-moment, which does not absolutely include in itself any further difference»<sup>1</sup>.

This essence-moment, the concrete essence, does not yet results «*connected*» with the «extension in which it rather extents» and which “qualifies” it by the essence own stretching out over it; while the extension itself results not «absolutely identical, when we pass through the  $\text{πολλοί}$ », but rather it is punctually a different one<sup>2</sup>.

We see here, nearly 22 years later the 1896 manuscripts, how Husserl certainly continues his inquiry into Essence and Eidos with a perspective very close to the one we have tried to emphasize and to analyze in this very last section. Even after the radical changes his views on Specie, Essence and Eidos that we have, unfortunately, only briefly schematize, his struggle for understand the fundamental connection between our power to recognize trough experience the common One among different elements, still deeply penetrate his meditations. In the dense quote above, we also recognize again a late trace of the conceptual universal as interpreted, in our understanding, by Husserl: the  $\varepsilon\nu$  as the eidetical and identical Quale which constantly emerges from the

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1 E. Husserl, “Individuelle Vereinzelung des konkreten Wesens als *hèn epì pollôn*, das in ein sich nur spezifisch differenzierendes Quale und eine sich individuell differenzierende Extension zerfällt. Die spezifische Differenz gegenüber der letzten, echten, individuellen Differenz”, in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 148.

2 Ibidem.

multiplicity, assumes now one of Husserl's late name of the his refined definition of Essence, the concrete Essence. Still, this essence is a form of a Specie, and even more, appears in the following pages of the manuscript, as the defining essence we find passing through the πολλοί. As such, continues to maintain its status, its peculiar unity and identity, which means, its objectual ideality. But certainly, the late Husserlian works on Essence do also acquire a peculiar connection with our cognitive experience, introducing in fact important aspects of his *Wesenslehre* not yet present, even if considered somehow already present *in nuce* in some of his meditations from 1908, in the early works we have taken under consideration.

Around the time of the first *Book of Ideas*, for example, Husserl tries to eventually connect his analysis of essence to the question of «concept formation» in science and scientific thought in broad sense. The true aim of the investigations seems to lay, above the surely not extemporaneous inquiry into the nature and origin of the scientific conceptuality, in the elucidation of another aspect of the relationship between Husserl's articulation of ideality spreading in those years, and corresponding kind of conceptual experience<sup>1</sup>. In order to present scientific conceptuality, Husserl turns in first instance to the important distinction between “explication” and “description”, a distinction which he develops in the central years of our works. Natural science is articulated in this sense in two “levels”: the descriptive one, on which the objects are classified and coordinated in Genus and Species; the explicative one, whose aim is to link those Species to their constitutive elements and abstract principles. Husserl affirms to find such a stratification in «scientific psychology», while a corresponding application to phenomenology, by recalling a mistaking theoretical connection between description/concrete and explication/abstract taken from biology, would be erroneous<sup>2</sup>. Besides this distinction, Husserl goes through the distinction of the kind of concepts belonging to the descriptive sciences, to the explicative sciences and to phenomenology. Also the concept belonging

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1 E. Husserl, “Der Wesensunterschied in den Wesensbegriffen und ihrer Bildung. Anschauungsbegriffe als Typenbegriffe gegenüber exakten Begriffen als Ideen” (1912), in *Zur Lehre vom Wesen und der eidetische Variation*, in Husserliana, XL, cit., p. 56.

2 Husserl probably refers to the kind of psychological investigations conducted, for example, by Wundt. During the time of the intense work on the development of his first phenomenology (1904-1912), Husserl was in fact deeply studying the psychological approaches on different topics by Alexander Pfänder and Thomas Lipps, but also by the structuralist Oswald Külpe and earlier from Wundt and James. Especially Wundt in his largely reworked *Grundriss der Psychologie* (Wilhelm Engelmann, Leipzig, 5<sup>th</sup> 1902,) conducted an inquiry into the «psychical elements» (ibid., p. 35) and the higher and lower «psychical formations» (ibid., p. 109f), for linking this descriptive and experimental analysis, even if «partially», to the exposition of the «principles and laws of psychical causality» (ibid., p. 382).



to the normal cognitive experience are taken in consideration. In this sense, he systematically exposes here the distinction within «the formation of concepts» between intuitive concepts and concepts as Ideas. The former are therefore defined in the sense of the *Typic*, which is, with the introduction of the “concept” of *Typus*, an important step further in the genetic approach to cognition. *Typus* are in fact previously introduced in a similar way to the empirical universalities we have seen, and therefore, in the late works on the genetic theory of experience and judgment, are explicitly exposed as such and developed extensively in the realm of genetic phenomenology. Ideas on the other side, do assume even more explicitly the “narrower” sense we have seen emerge in the last pages of this work, assuming therefore even more their relevance for the future Husserlian inquiries into the Ideas of World and Ego, which will become pivotal arguments in Husserl's meditation of the late '30s.

Also if we briefly look to one of the main works of the genetic phenomenology, *Erfahrung und Urteil*, we find some interesting insights in order to trace back to the early inquiries some of Husserl's certainly impressive detailed-studies belonging to the late period.

He writes in fact extensively in *Erfahrung und Urteil*:

«it is clear that when we pass from like moment to like moment a unity emerges in the coincidence, a unity in the duality of elements which are both separated and linked together, and that this unity emerges over and over again as totally and identically the same when we pass to a new member (...), then again to <another one> in which we have a moment *p* which is always like. The unity first emerges on the basis of the passive coincidence of likeness of the individual moments; and if one comes back to it, it can then be apprehended for itself»<sup>1</sup>.

We must, therefore, according to Husserl, distinguish the first series of judgments in which there is predicated of each substrate its own individual moment, such as *S'* is *p'*, *S''* is *p''*, etc., and in contrast to this the judgments in which the same *p*, as everywhere like, is predicated as the universal as the identical one in all, that which emerges in *p'*, *p''*, and so on<sup>2</sup>. But he has also already introduced the passive coincidence, from which it

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1 E. Husserl, *Erfahrung und Urteil*, cit., p. 389.

2 Ibidem.

follows now

«that the unity is preconstituted in the passive coincidence of likeness of the moments  $p' p''$ , and so on *as the unity of the species  $p$* : on the strength of this, an act of judgment oriented in a new direction is possible, in which, if we return to  $S'$  and re-effect the identification, we no longer determine  $S'$  by  $p'$  as its individual moment but by  $p$  *as identically the same in  $S, S'$ , and so on*»<sup>1</sup>.

And a few sentences after he states again:

«There result the judgments  $S'$  is  $p$ ,  $S''$  is  $p$ , and so on, in which  $p$  no longer designates an individual predicative core but a general [*generell*] one, namely, *the universal as that which is common to two or more  $S$ 's successively apprehended*. Instead of being determined by the fleeting and variable moment, this is determined, therefore, by an *element ideally and absolutely identical*, which, in the mode of repetition or assimilation, goes through all the individual objects and their multiform moments as an ideal unity. As we will see later on, this is a unity which is not at all a function of the actuality of the moments; it does not come into being and disappear with them, and, though it is individualized in them, it is not in them as apart»<sup>2</sup>.

«Speaking genetically and as a matter of principle», the general core of an universal judgment, «is a  $\epsilon\nu \epsilon\pi\iota \pi\omicron\lambda\lambda\omega\nu$ » which can be present to consciousness in the form of «the unity of an a priori generality», and moreover is now and under this form ready for a possible «thematic apprehension», which for its part can only be the after result of a previous and active accomplishment of the multiplicity of the individual and «separate apprehension of like objects in a synthetic transition»<sup>3</sup>. The *one* which comes to light here is not in the objects as their part, as a partial-identical; otherwise, it would indeed be only a like [*Gleiches*] which is present everywhere and the like elements would be in a relation of intersection.

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1 Ibidem.

2 Ibid., p. 390. Italics mine.

3 Ibid., p. 391.

«Hence, the *one* does not repeat itself in the like; it is given only once, but in many. It confronts us as an *objectivity of a new kind*, as an objectivity of understanding, *arising from original sources of activity*, although obviously on the foundation of sensibility; for the activity of apprehending and running through particulars and bringing them into coincidence is necessary if the universal is to be preconstituted at all and then become a thematic object»<sup>1</sup>.

We see here, even if only so briefly exposed, how Husserl's meditations on the Universals assume their new forms in the genetic phenomenology, which for itself is a completely new realm of investigations, unfortunately too far from the aim of our work. But to a certain extent, the core of Husserl exposition explicitly regain the shape and the spirit of the early analysis.

For us it suffices here to have at least partially shared some light on the origin of what we see developing from the early years till these late works.

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<sup>1</sup> Ibid., p. 392.



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