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Review: Guillermo E. Rosado Haddock's *Unorthodox Analytic Philosophy*

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The present book is a book of essays, all by Guillermo E. Rosado Haddock, retired Full Professor of Philosophy at the University of Puerto Rico "Río Piedras". It combines two sorts of writings: papers published in peer review journals or as chapters of books, in addition to three – essays (2), (4) and (7) – unpublished so far, and critical studies. The book is divided into three parts. The first, titled *Some Fundamental Issues*, consists of papers (1-6) concerned with philosophical themes: from the relations among philosophy, logic and mathematics to the semantic structure of reference, from the epistemic status of *a posteriori* statements to that, ontological, of concepts and the role of intuition. The second, *Husserl and other Philosophers* (papers 7-11), is concerned mostly with Husserl's views about logic and mathematics in comparison with those of some eminent philosophers like Kant, Frege and Carnap, in order to reveal differences and common origins, and with those of one great mathematician of the past: Riemann. Finally, the third part – *Doing Rigorous Philosophy* – contains critical studies of books (12-20), mostly on Frege's views, Husserl's influence on Carnap and Husserl's work on logic, and a critical commentary (21) of a long paper on naturalism by Kanitscheider.

The book is written by a philosopher devoted to rigorous analysis and methodology that honestly rejects the widespread and apparently simplistic division of philosophy in analytic versus continental: it is just a prejudice to think that this rejection would open "the doors to all sorts of irrationalisms and obscurantisms" (p. ix). Author's intention is clearly to trace the boundaries between orthodox approaches to analytic philosophy and "unorthodox", those

that are not led by an ideologically blinded empiricism. The label 'unorthodox analytic philosophy' serves precisely the Author to point out that one cannot do serious philosophy without taking in account the development, at least, of the three more exact sciences – logic, mathematics and physics – but presupposing the "meta-dogma of empiricist ideology" (p. 1).

To be honest, Author's concerns have been here more with logic and mathematics, rather than physics, but still mathematics finds its own empiricism's ideological cousin in *nominalism*. Nominalism, albeit in different ways articulated, is the attempt to avoid accepting abstract entities that are not individuals – *qualia*, introduced by Nelson Goodman, are. Quine's "incorrect" – according to the Author – theses or criterion that 'to be is to be the value of a (first-order) variable' has served and still serves nominalism to justify its own principles about a flat ocean of individuals as structurally designed by first-order logic: yet, "if they accept the semantics of classical first-order logic, that is classical model theory, there is no way out of Platonism, since one is dealing with full blown mathematical structures" (p. 2). On the other hand, unorthodox analytic philosophy is essentially a contemporary version of rigorous philosophy, in its most genuine sense, whose Frege, Husserl, Popper and Whitehead, for different reasons, are just some of the most eminent – among the many, especially nowadays, analytic philosophers – key players, since they in no way accepted that meta-dogma.

After this general introduction to the spirit of the book, it seems to me time to deepen the contents presented and articulated by the Author. I'll come back to some considerations about Author's Platonist reading of Husserl's thought later. Since there is a lot of material here, for matter of space and opportunity my eyes will not linger on every topic if not briefly, with exception of the most relevant chapters, selected in order to provide a coherent and satisfactory review of the whole work.

The first chapter (or paper) gives the reader the adequate frame to read and interpret Author's investigations. It discusses the interplay between logic, mathematics and philosophy, as mentioned in the title. The Author offers various examples, from the application of group theory to semantics – "a clear case of the application of the mathematical theory of groups of transformations to philosophical semantics" (p. 17) – to the application of Husserlian philosophical semantics to logic where, f.i., it is well remarked how for Husserl not truth-values but, rather, *states of affairs* are the referents of statements. A choice, this one, "by far more informative than Frege's" (p. 16), where truth-values make statement to collapse. However, the core of the chapter is devoted to remark how the basic principle of nominalism is simply a meta-dogma, a meta-semantic criterion whose valid application is unjustified. Indeed, the Au-

thor proceeds, even confining themselves to first-order logic for avoiding any commitment further to that to mere individuals (abstract entities), nominalists have to do with both structures in a pure infinitary (to be read "non constructive") way and mathematical objects: the classic examples are the Upward Löwenheim-Skolem Theorem and the Robinson's Model Completeness Test. In few words, the interplay between the limitation to first-order theories and those theorems simply forces us to "accept classical, that is, first-order model theory" but not to refute abstract entities. It is shown that by the former theorem, infinitary non-denumerable structures are proved to exists and that, by the latter, true existential statements on mathematical entities cannot be *a priori* refuted. Hence, the acceptance of model theory – the acceptance, that is, of the possibility for logic of speaking about mathematics – turns Quine's criterion to a meta-dogma.

The Fine Structure of Sense-Referent Semantics (*An Excursus into Semantic and Mathematical Platonism*) is the first of the three papers published here for the first time. It is concerned with a deep introduction to and an application of Husserl's distinction between sense and referent – that distinction has been erroneously and unjustly attributed only to Frege, as the Author motivates in the introduction. Author's attention falls on statements and not of concepts words, just sketched. Such a distinction is articulated between modes of presentation of states of affair (sense) and states of affair or situation of affairs – roughly, equivalence classes of the states of affairs – (reference). In order to see the differences between the two semantic theories, the Author suggests to define a notion of *depth* of a semantic theory of sense and referent:

> [T]he depth of a sense-referent semantic theory is the number of semantic levels between the sense of a statement and its truth-value. In virtue of that definition, it follows that Frege's choice of a sense-referent theory has depth 0, whereas a semantic theory that has states of affairs as the referents of statements, but does not take into consideration the situations of affairs, has depth 1, and a theory like Husserl's, that considers both states of affairs and situations of affairs as intermediate levels between the level of senses and that of truth-values has depth 2. For semantic theories of natural languages that seems certainly enough. (p. 36)

An example of the application of the theory is to logic, in the case of first-order propositional functions: they have to be conceived as schemes of states of affairs. The application to mathematics is restricted to mathematical statements (theorems) and generates specific referents: sets of states of affair or abstract states of affair. The paper, then, proceeds about dual statements

in mathematics and logic, on some meta-logical considerations and accounting for the case of Platonism in semantic theories.

The third paper, according to the Author, is "the most ambitious" (p. 7) and, thus, I dedicate to it some attention, all the more so that the fourth essay "On Analyticity *a posteriori* and Syntheticity *a priori*" – published here for the first time – "is a sort of less rigorous presentation of the results in the former" (*Ibid.*). This is a paper of epistemic value, likewise (4), that wonder whether analytic *a posteriori* statements are possible. In order to provide an answer, a new definition of analyticity – a refinement of Husserl's – is presented. The new definition of analyticity proposed seems to well survives criticisms to Kant's, Frege's and Carnap's definitions and, even, to that to Husserl's one. If Kant's definition is twofold, i.e., (a) as statement whose concept of its predicate is included in the concept of its subject and/or (b) as derivable from the Principle of Non-Contradiction, only (b) survives Quine's criticism of *Two Dogmas*. Inspired to (b), the unfortunate Frege's definition, as statements that can be derived from logical principles and definitions, does not survive "the collapse of logicism" (p. 59). Husserl's seems to be "more solid" (*Ibid.*), then: a statement is analytic if it is true and its truth can be completely formalized *salva veritate*. Author's attempt here is to overcome the unavoidable weakness of the Husserlian definition, traceable in its profound adequacy as a notion of logical truth. With respect to previous attempts (refinement of Husserl's), where the Author formulated unsatisfactory definitions, the new one adds an extra condition (iii).

> A statement σ is analytic if and only if: (i) $\{\sigma\}$ has a model M, (ii) if $\{\sigma\}$ has a model M, then any structure M^* isomorphic to M is also a model of $\{\sigma\}$, and (iii) $\{\sigma\}$ does not imply or presuppose the existence either of a physical world or of a world of consciousness. (p. 61)

Notwithstanding this definition, the answer to the question made in the title of the paper is, in a strict sense, 'no'. Indeed, it is argued for the existence of analytic statements just as instantiations of analytic laws (or constant-free statements). Those are what Husserl called "analytic necessities": statements with constants obtained by quantifier elimination from analytic laws. Since they are instantiations, they are *a posteriori*. Such instantiations of analytic laws, the Author argues however, do not satisfy (iii) above, being that constants occurring in them not necessarily mathematical constants.

Essay (5) and (6) deal with different issues in unorthodox analytic philosophy, already touched in the first essay. In particular, the former – *Some*

Heterodox Analytic Philosopher – presents a deepening of the argument about Robinson's Model-Completeness test in first-order model theory and its role to refute nominalism. The latter, the last paper of this first part of the book, serves instead the Author as a sort of transition to the second group touching an issue treated also in (7), namely, a critique of one of Kant's arguments occurring in the Transcendental Aesthetic of the first *Critique* whose purpose was to show that space (and time also) is not a concept but an intuition. As clearly pointed out in the Abstract, "[i]t is here shown that Kant's conclusion is completely unfounded, since one can reproduce those arguments on the basis both of the concept of a continuous manifold in Riemann's sense and of that of an extensive whole in Husserl's sense" (p. 105). Thus, reference to Riemann's views on the nature of (geometrical and empirical) space are fundamental. Finally, some remarks on Frege's and Husserl's divergences on the notion of whole are presented and discussed.

Here the second part of the volume begins. I will focus much more attention to essays (7) and (8) for different reasons: for the former is one of the unpublished paper so far and for the latter is concerned with the many reasons why Husserl should be considered an analytic but, clearly, unorthodox philosopher.

It is immediately apparent the topic of chapter (7), titled *Husserl and Kant: voilà la différence*. Too many times philosophers, both analytic and continental, did not clearly recognized rightly both convergences and divergences between the two. Certainly, both Kant and Husserl used the adjective 'transcendental' in naming their philosophy or philosophical approaches on the "common interest in putting the 'transcendental subject' at the centre stage of philosophical research and examining the conditions of possibility of having (scientific) knowledge" (p. 115). This approach becomes mature since Descartes but, according to the Author, if for Kant surely the theory of knowledge was first philosophy, on the other hand Husserl's thought cannot be confined in his transcendental phenomenology, clearly immersed in that tradition. In his course on old and new logic (1908-1909) – after the transcendental turn – Husserl clearly emphasized that it is *philosophical logic* which deserves the name of first philosophy – this anticipates, in a sense, what is argued in the next essay about the analytic character of Husserl's philosophical investigations. After a recall on Kant's theoretical philosophy and an introduction to Husserl's thought prior to his phenomenology, the Author reveals the main difference. The section *On Husserl on Logic and Mathematics* highlights Husserl's conception of mathematics and how it is distant in many points from that of Kant. Take some: (i) mathematics is a "formal ontology", "which is basically a conception of mathematics as a theory of structures" (p. 130), against Kant's purely phenomenical and constructive view of mathematical entities; (ii) mathematics

"can be seen as a generalization of Riemann's conception of mathematics as a theory of manifolds" (*Ibid.*), that clearly contrasts with Kant's own reductionist conception; (i) and (ii) are then strictly related to the fact that (iii) mathematics is not based on one single fundamental mathematical concept, given that Husserl "acknowledged a plurality of fundamental concepts, which he called 'formal ontological categories'" (*Ibid.*). Furthermore and quite obviously, Husserl's conception of mathematics influenced his own view about the nature of intuition, again relevantly divergent from Kant's. Should be sufficient here to underline that two forms of intuition are possible, according to Husserl: the *eidetic* intuition or intuition of essences – and essences were banned from Kant's system – and the *categorical* intuition by which "even in our most simple 'sensible' perceptions there are categorial components – purely formal and intellectual for Kant – namely, states of affairs, relations, sets, etc." (p. 136) further to space and time.

With the eight paper, the Author feels the reader ready to see in which sense Husserl's many contributions were literally "ignored" by analytic philosophers, from to the philosophy of logic and mathematics to the epistemology of mathematics, passing through the philosophy of language and even the philosophy of physical science. The *incipit* is written in a way that could seem to be almost shocking to orthodox-friendly readers. The Author reports that in his work *Old and New Logic: Lessons 1908-1909*, Husserl considers philosophical logic – in the wide sense of logical analysis of concepts, language and even their philosophical implications – as "the presupposition and foundation for all the other genuine philosophical disciplines"; that it is, according to Husserl himself, "first philosophy'"; and even that in his philosophical investigation Husserl wants to proceed "analitically" (p. 145). Then, the paper comes back on the sense and reference distinction in Frege and Husserl accounting, first, for their independent 'discovery' – never accepted by analytic philosophers, yet by Frege – and, second, for the different semantic approaches to it, as I already mentioned. By the third section the Author writes about Husserl's refutation of psychologism in logic. An argumentation, this, judged properly analytic for it does not presuppose any phenomenological thesis and far superior in details and organization to Frege's one. The fourth section is, instead, dedicated to what Husserl thought about physical theories. The Author notices here the realist character of Husserl's conceptualist view on such theories, as they are based on *hypotheses cum fundamento in re* (p. 154):

> There is, thus, an ontological connection between objects (or concepts) that is objective and serves as a base for the building of even the most primitive sciences. (p. 153)

The sixth section is about Husserl on logic and mathematics. The great distance from logicists (Frege) consists in that, contrary to them, the two are parallel and not reducible disciplines: if "logic is essentially a syntactic-semantic discipline", on the other hand, "mathematics is more ontologically committed" (p. 157). The paper ends with Husserl's response to a letter from Frege (of 1906) and with a very brief appendix on his work *Philosophie der Aritmetik*.

I will not spend to too many words on the next three essays for almost all their contents have already been sketched writing about the previous items.

The ninth paper is concerned with Husserl's influence on Carnap. It is an issue on which the Author wrote a lot: a whole book *The Young Carnap's Unknown Master* (published in 2007), a paper – 'On the Interpretation of the Young Carnap's Philosophy' – included in a precedent collection of essays (*Against the Current*, published in 2013), and a critical study of Carnap's doctoral dissertation *Der Raum* (1922) – essay (15). This is a delicate issue, since the Author acknowledges strong influence of Husserl and the intellectual dishonesty of Carnap, telling us he knows of Carnap's appropriation of Husserl's ideas both as of Carnap's distinction (in *Logische Syntax*) between formation rules and transformation rules, mentioned in section 5 and 6 of (8), and as of the constitution of the heteropsychological in Carnap's *Aufbau*.

Husserl and Riemann is a paper on the influence of the great mathematician on Husserl. The importance of this topic to understand the origin of Husserl's views on mathematics as a formal ontology (a theory of formal structures) has been reported several times here, and appears in some details in section 5 of (1), 4 of (6), 4 an 5 of (7) as well as 3 of (8). After briefly showing that Frege had almost no influence on Husserl's views on logic and mathematics as well as on the sense-referent distinction, the Author argues that Husserl's conception of mathematics as a theory of structures and/or of manifolds is a direct generalization of Riemann's notion of manifold and that his views on physical geometry (empirical space) came directly from Riemann's reflections, as attested by letters of 1892 to Brentano, and of one 1897 and one another of 1901 to Natorp.

Finally, the eleventh and last paper of this second part, is concerned with with Husserl's contributions to the nature of mathematical knowledge or, better, with his epistemology of mathematics. Such contributions are clearly opposed to both the naturalist and the empiricist approaches, but even to pragmatist tendencies. In particular, the paper introduces to such mainstream tendencies and argues that they fail to distinguish the historical problem of the origin and evolution of mathematical knowledge from the epistemological one.

The third part is made of ten critical studies, nine of books and one, the last, of a paper. The choice of including critical studies in this collection is due to their usefulness "in polishing and developing" (p. ix) Author's views and as tools and models of analysis in making philosophy.

The first two critical studies are very extensive (about 30 pp. each) and about collections of papers both on Frege's works and philosophy and both edited by the Fregean scholar Matthias Schirn. If the Author confesses "that in the later years I have felt disappointed with the popularity that some erroneous and sometimes almost crazy interpretations of Frege have had in the Anglo American world" (p. 9), this has to be restricted, in particular, with respect exactly six papers of the second volume of the first collection, considered a "sample of the great prevailing confusion on how to interpret both Frege's view from 1879 and especially his view of 1892" (p. 237). For what concerns the second collection, mostly on Frege's philosophy of mathematics, the Author is convinced that will be regarded as an "irreplaceable reading", providing a "profound understanding of Frege's contributions to philosophy", including "some of its weaknesses" (p. 267).

The review of Oswaldo Chateaubriand's *Logical Forms* is the third critical study we find. It is a two-volumes book of philosophical analysis of truth and description and of logic, language and knowledge. No doubt that it would deserve to be much better known. Here, the Author focuses in particular on the discussion of Chateaubriand's criticism to Quine and the characterization of logical truth. Furthermore, though Chateaubriand seems not to be acquainted, many affinities between some of his views on logical and semantic issues and those of Husserl are noticed.

The next two studies are both concerned with Carnap's works and ideas in a twofold way. Item (15) offers a brief exposition Carnap's "not well known and not well understood" (p. 9) doctoral theses *Der Raum*. The Author sees here an apparent influence of Husserl on that work and tries "to correct some misleading renderings of that work" (p. 327). In particular, Carnap's defence of the synthetic *a priori* is clearly but much nearer to Husserl's views rather than to Kant's. The Author leaves, then, the reader with a question that "does not seem to have an answer: Did Carnap discuss this issue with Husserl during the years 1919 to 1921?" (p. 356). The fifth critical study, instead, analyses a collection of essays on Carnap edited by Cirera, Ibarra and Mormann. The Author critically assesses the several renderings of Carnap while sharpening his own interpretations. Further, he presents criticisms to some consequences of the demise of neopositivism.

The next four (17-20) critical studies have various subjects. Item (17) concerns a publication by Elisabeth Schuhmann of lectures of Husserl on old and new logic of 1908-1909 – after his transcendental turn. In this review the Author will concentrate on a few issues that will better understand Husserl's relation to analytic philosophy in general. There, Husserl stresses that philosophical logic is first philosophy and not transcendental phenomenology, as discussed in more details in (7). Worth noting the fact that Husserl answers critically to Frege's "confusion" – in his letters to Husserl of 1906 – of identifying what is *having the same sense* with what is *being logically equivalent*. The review of the book *Lógica, Matemáticas y Realidad* by Anastasio Alemán is essay (18). It touches each issue included, but is mainly concerned with the papers more directly related to philosophy of mathematics (papers 1-3 and 5). The eight critical study, is of a collection edited by Jaakko Hintikka and titled *From Dedekind to Gödel* that, contrary to most collections on the philosophy of mathematics, allows not so well known interpreters to have space. This explains why the review itself is titled *The Other Philosophers of Mathematics*: the term 'other' is used in the sense of 'non-Frege'. The Author feels particularly interested, even if he judges as "unbalanced" (p. 419), the combination of contributions and their contents. The last study (20) is an assessment of a book of essays edited by the Fregean scholar Dirk Greimann *Essays on Frege's Conception of Truth*. It consists of nine papers, some of which are only marginally concerned with Frege's views about truth, even for Frege wrote relatively little on that issue. According to the Author, it "can serve as perfect examples of the reinterpretation of Frege's views" (p. 445) on truth. At the same time the Author feels not very satisfied when he comments that "[i]n general, this collection of papers is not especially illuminating. I have opted to say very little about some of the papers, in order to concentrate my efforts on pointing to some weaknesses of a few of the most questionable ones" (p. 446).

Finally, a commentary to a long paper by Bernulf Kanitscheider, published in *Erwägen Wissen Ethik*, now extinct. The format of the journal was very similar to that of *The Library of Living Philosophers* but, here, a philosopher wrote a long paper and some twenty scholars criticized him. Then, the original author responded to their criticisms. What the Author sees relevant of this reading is that it clearly arises how Kanitscheider is assuming as valid Quine's views on naturalized epistemology as well as those on ontology: "a naturalism for which the unity of nature can be considered as the guiding idea" (p. 462).

Let me spend a few words on Author's work on Husserl, Husserl conception of mathematics.

Regarding Husserl in particular, readers who are looking for an analysis of Husserl's views on transcendental subjectivity, intentionality or consciousness will not be satisfied. The focus of the book is clearly other than the structures of transcendental subjectivity and its faculties or operations, that occupied Husserl in his distinctively phenomenological writings. The emphasis on Husserl's unorthodox approach to philosophical analysis and theoretical constructions stresses the role of philosophical logic, rather than of transcendental logic, as first philosophy. From this, it arises quite natural to interpret Husserl's transcendental phenomenological turn as a matter of mere methodology, a philosophical device for conceptual analysis. A consequence may be, then, the conclusion that a Platonist tendency of realism survives his transcendental turn.

At the same time, the issue of whether Husserl is a realist or an idealist (conceptualist) about mathematics and mathematical entities may not seem to be plainly clear to some readers. Recall what the Author notices about the realist foundation of Husserl's conceptualism about physical theories, as they are based on *hypotheses cum fundamento in re* (p. 154). Such a notion is introduced recalling that such theories "go far above the realm of [empirical] induction". According to this passage, physical theories and mathematics, then, seem to have (partially) overlapping domains, at least with respect to those regions of physics being not linked to empirical induction. Thus, it seems plausible to extend Husserl's view up to his conception of mathematics and mathematical entities conceived as (infinitary) structures. In this case, mathematical structures would have *fundamentum in re*. In this case, the relation between philosophical and transcendental logics discussed above would lead the reader of Husserl to imagine his idealism as a form of epistemic Platonist structuralism, despite the constructivist bias often associated to his epistemic view (or phenomenology) and surely due to the impact and affection of the phenomenological turn.

In particular, an answer to the issue of whether Husserl's kind of idealism can be articulated as a form of constructivism about mathematics (i.e., a predicative view) or as a form of mathematics more similar to that of Frege (i.e., an impredicative one) may find out an answer looking to the notions of intuition discussed in (7). Author's position seems to be that Husserl had strong Platonist tendencies and I personally agree with him. Both forms of intuitions, the eidetic and the categorical, lead the transcendental subject to the knowledge of the *essence* and of the *formal structure* constituting the essence itself – states of affairs, relations, sets, etc. – respectively. It is a fact. But this might, then, give back a non reductionist but Platonist form of realism about mathematics: a formal ontology. This hardly can be seen as a form of constructivism.

Notwithstanding these issues, *Unorthodox Analytic Philosophy* can be highly recommended for its perspective on several issues in analytic philosophy. Husserl's contributions on foundational issues in logic, mathematics and the exact sciences have been long neglected without concrete rationales. I found it a pleasure to read this collection of essays. They are clearly written and thought-provoking, especially those (analytic) philosopher who, even nowadays, knows almost nothing about the origin of Husserl's theoretical visions on formal ontology and his contributions on logic and mathematics. The book covers an interesting range of topics in a vibrant and harmonic sound. Rosado Haddock is also, unlike most analytic philosophers, a Platonist about logic and mathematics, but it comes quite natural to be in the suffocating season of philosophy affected by the orthodox analytic influence. Hopes and efforts have to be oriented to end that epoch of philosophy.

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