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Hugh MacColl after One Hundred Years

Some remarks on Hugh MacColl's notion of symbolic existence

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Some remarks on Hugh MacColl's notion of *symbolic existence*

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Résumé : L'approche la plus influente de la logique des non-existences est celle provenant de la tradition Frege-Russell. L'un des plus importants dissidents à cette tradition, à ses débuts, était Hugh MacColl. C'est en relation avec la notion d'existence et avec les arguments impliquant des fictions, que le travail de MacColl montre une grande différence avec celui de ses contemporains. En effet, MacColl fut le premier à implémenter dans un système formel l'idée qu'introduire des fictions dans le domaine de la logique revient à fournir un langage muni de sous-domaines avec différents types d'objets. Dans cet article, nous avançons quelques remarques sur la portée de la logique de MacColl sur les non-existences. Plus précisément, nous suggérons qu'il y a un lien conceptuel fort entre la notion de *subsistance* chez Russell et la notion d'*existence symbolique* chez MacColl.

Abstract: The most influential approach to the logic of non-existents is certainly the one stemming from the Frege-Russell tradition. One of the most important early dissidents to that tradition was Hugh MacColl. It is in relation to the notions of existence and arguments involving fictions that MacColl's work shows a deep difference from the work of his contemporaries. Indeed, MacColl was the first to attempt to implement in a formal system the idea that to introduce fictions in the context of logic amounts to providing a many-sorted language. The main aim of the paper is to add some brief remarks that should complete the scope of MacColl's logic of non-existence. More precisely, I will suggest that there seems to be a strong conceptual link between Russell's notion of *subsistence* and MacColl's notion of *symbolic existence.*

Introduction

The most influential approach to the logic of non-existents is certainly the one stemming from the Frege-Russell tradition. The main idea is relatively simple and yet somehow disappointing, to reason with fictions is to reason with propositions which are either (trivially) true, because with them, on

Russell's view, we deny the existence of these very fictions, or otherwise they are (according to Russell) false or (according to Frege) lack truth-value in the same trivial way. One of the most important early dissidents to that tradition was Hugh MacColl. [1] It is in regard to the notions of existence and arguments involving fictions that MacColl's work shows a deep difference from the formal work of his contemporaries. Indeed, MacColl was the first to attempt to implement in a formal system the idea that to introduce fictions in the context of logic amounts to providing a many-sorted language. Interesting is the relation between Bertrand Russell's criticisms of Alexius Meinong's work and Russell's discussions with MacColl on existence. Recent scholars of Meinong such as Rudolph Haller [Haller 1972] and Johan Marek [Marek 2003] and modal Meinongians such as Graham Priest [Priest 2005], Richard Routley [Routley 1980] and Edward Zalta [Zalta 1988] make the point that Russell's Meinong is not Meinong. An interesting historical question is to study how Russell's criticism of Meinong in their debates from 1904 to 1920 could have been influenced by Russell's discussion with MacColl. Notice that the main papers on this subject by Russell, Meinong and MacColl, were published between 1901 and 1905.

MacColl's work on non-existents resulted from his reaction to one lively subject of discussion of the 19th century, namely the *existential import of propositions.* This topic was related to the traditional question about the ontological engagement or not of the copula that links subject and predicate in a judgement. J. S. Mill [Mill 1843] introduced to the discussion the work of Franz Brentano who published in 1874 his theory on the existential import of the copula and on how to define away the alleged predicate of existence [Brentano 1874, chap. 7]. However, most of the British traditional logicians did not follow Brentano and the opposition between them and the "Booleans", who also charged the copula with existential import, triggered a host of papers on that subject. [2] The early Russell of the *Principles* and MacColl defended the idea that there is a *real* and a *symbolic* existence, that seems to be close to Russell's use of *subsistence*—a notion that Russell rejects later on, namely, in his notorious "On denoting" [Russell 1905b]. [3] MacColl's example, probably borrowed from Mill, targeted the meaning of the copula "is" in expressions such as "the non-existent is non-existent". Unfortunately, the example hinges on the ambiguity of the copula as identity and as predicative expression. Nevertheless, MacColl's development is—though sometimes puzzling—exciting and could be seen as providing the semantic basis for what nowadays we call free logic.

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1. For an overview of MacColl contributions to logic, see [Rahman & Redmond 2008]. Most of MacColl's logical writings, including his 1906 book, are collected and reprinted in [Rahman & Redmond 2007].

2. [Land 1876] spelled out the position of the traditionalists and triggered the discussions in *Mind* on the existential import of propositions.

3. For a thorough discussion of Russell's grounds for rejecting his early endorsement of Meinong's theory of objects, see [Farrell Smith 1985].

MacColl's Logic of Non-Existence

MacColl's logic of non-existence is based on a two-fold ontology and one domain of quantification, namely:

– The class of existents – MacColl calls them *reals*:

> Let e_1, e_2, e_3, etc. (up to any number of individuals mentioned in our argument or investigation) denote our universe of *real existences.* [MacColl 1905a, 74]

> [T]hese are the class of individuals which, in the given circumstances, have a *real existence.* [MacColl 1906, 42]

– The class of non-existents:

> Let $0_1, 0_2, 0_3$, etc., denote our universe of *non-existences,* that is to say, of unrealities, such as *centaurs, nectar, ambrosia, fairies,* with self-contradictions, such as *round squares, square circles, flat spheres,* etc., including, I fear, the non-Euclidean geometry of four dimensions and other hyperspatial geometries. [MacColl 1905a, 74]

> [T]he class of individuals which, in the given circumstances, have *not* a real existence [...] It does not exist *really,* though (like everything else named), it exists *symbolically.* [MacColl 1906, 42]

> In no case, however, in fixing the limits of the class e, must the *context* or given circumstances be overlooked. [MacColl 1906, 43]

– And the domain of quantification, the *Universe of discourse,* containing the two preceding classes:

> Finally, let S_1, S_2, S_3, etc., denote our *Symbolic Universe,* or "Universe of Discourse", composed of all things real or unreal that are named or expressed by words or other symbols in our argument or investigation. [MacColl 1905a, 74]

As expected, individuals, that are elements of the Universe of discourse, might be elements of the first two classes:

> We may sum up briefly as follows: Firstly, when any symbol A denotes an *individual*; then any intelligible statement $\phi(A)$, containing the symbol A, implies that the individual represented by A has a *symbolic* existence; but whether the statement $\phi(A)$ implies that the individual represented by A has *real* existence depends upon the context. [MacColl 1905a, 77]

Moreover, predicates might be interpreted by the means of classes containing reals, unreals or both of them:

> Secondly, when any symbol A denotes a *class,* then, any intelligible statement $\phi(A)$ containing the symbol A implies that the whole class A has a *symbolic* existence; but whether the statement $\phi(A)$ implies that the class A is *wholly real,* or *wholly unreal,* or *partly real and partly unreal,* depends upon the context. [MacColl 1906, 77]
>
> When the members A_1, A_2, &c.; of any class A consist wholly of realities, or wholly of unrealities, the class A is said to be a *pure* class; when A contains at least one reality and also at least one unreality, it is called a *mixed* class. [MacColl 1906, 43]

Notice that MacColl actually speaks of the existence of the class. I think that we should understand it as talking about the existence of the elements of the class (see below on his rejection of interpreting *hunger* independently of a hungry person).

   Let us read MacColl's own words on the *symbolic universe* more closely. On one hand it sounds as we might do logic in such a universe abstracting away whether objects are or not existent. On the other hand, MacColl, in his reply to Russell [4] and to Arthur Thomas Shearman, insists that the distinction between existent and non-existents within the symbolic universe is crucial for his logic:

> The explanation from my point of view is, that the confusion is solely on their side [Shearman's and other symbolists' side], and that it arises from the fact that they (like myself formerly) make no *symbolic* distinction between *realities* and *unrealities* [...] With them, 'existence' means simply existence in the Universe of Discourse, whether the individuals composing that universe be real or unreal [...] Once anything (real or unreal) is spoken of, it must, from that fact alone, belong to the Symbolic Universe S, though not necessarily to the universe of realities e. [MacColl 1905b, 579]

With some hindsight, we might add two kinds of existential quantifications or at least two kinds of existential statements, namely:

 – One kind of existential statements has as scope the whole symbolic universe. In other words, it is about quantification over all the objects of the domain, *realities* and *unrealities.* In this sense, everything (in the universe of discourse) exists at least symbolically. Now, MacColl's reading of this kind of quantification that ranges over all the domain is not really congenial to Meinongianism, since the analogous Meinongians quantifiers have a reading of sentences such as *There are lots of things which do not exist,* in which the objects in the range of the quantifier do

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4. "This sense of existence [the meaning in which we enquire whether God exists] lies wholly outside Symbolic Logic, which does not care a pin whether its entities exist in this sense or not" [Russell 1905a, 398].

not exist. [5] MacColl's notion of existence seems to be closer to that of the early Russell than to that of Meinong. Indeed, Meinong had also three ontological domains: (i) the domain of existents—signified by the verb *Existieren,* e.g. concrete objects in space time; (ii) the domain of subsistents such as abstract objects, e.g. propositions, events—which do not exist but have the kind of being Meinong called *Bestehen*; (iii) the domain of non-existent objects which possess no being of any kind, such as chimeras and other fictional entities. However, Meinong's notion of non-existence excluded any kind of being, even subsistence, while MacColl's *symbolic existence* and Russell's version of *subsistence* included existents and non-existents. In fact, MacColl and (the early) Russell think that even non-existents have a kind of being—that the later Russell calls (inappropriately) *subsistence* and MacColl *symbolic existence.* Compare, e.g., once more MacColl's 1902 remark:

> Take, for example, the proposition "*Non-existences are non-existent*". This is a self-evident truism; can we affirm that it implies the existence of its subject *non-existences*? [...] In pure logic the subject, being always a *statement, must* exist—that is, it must exist as a *statement.* [MacColl 1902, 356]

with the Russell of the *Principles*:

> Whatever may be an object of thought, or may occur in any true or false proposition, or can be counted as *one,* I call a *term* [... E]very term has being, *i.e. is* in some sense. A man, a moment, a number, a class, a relation, a chimaera, or anything else that can be mentioned, is sure to be a term. [Russell 1903, 43]

MacColl and Russell make the point that everything named must have some kind of being. This point of theirs might be seen as an ontologically charged reading of Aristotle's remark:

> Even non-existents can be signified by a name. [Aristotle 1989, 199]

Probably because of this doctrine Russell reduced Meinong's domain (iii) to the domain (ii). Thus, when Russell ascribed being to Meinong's non-existents (round-squares, golden mountains), sometimes tacitly in the 1905-1907 period and later explicitly in 1918, and 1943, he was missing a crucial distinction in Meinong. It is striking that Russell's reduction of Meinong's ontology is already pre-figured in MacColl's notion of symbolic existence.

Notice that, according to the quotations above, one of MacColl's points about the use of symbolic existence is that it allows the drawing of inferences by the use of the rule nowadays known as particularization. E.g. Derive:

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5. This point has been stressed—and rightly so—by an anonymous referee.

"Something is (symbolically) non-existent",

from:

"Joseph Cartaphilus is (symbolically) non-existent".

Perhaps the following paraphrase, though awkward, might be closer to MacColl's own analysis:

"The non-existent Joseph Cartaphilus exists symbolically".

Hence,

"Something non-existent exists symbolically".

There might be also some room to think dynamically about the interaction between symbolic and real existence. The real existence might come into play once the precise constitution of the universe of discourse has been specified. Juan Redmond and Mathieu Fontaine are developing a dialogic that does justice to this dynamics from an epistemic point of view: symbolic existence will be assumed so long as we do not know about the ontological constitution of our universe of discourse. [6] I shall not be discussing this approach here.

– The second kind of existential statement ranges over the domain of realities. Accordingly, the following use of particularization yields a non-valid inference:

"Joseph Cartaphilus is (symbolically) non-existent".

Hence,

"Something is *really* non-existent"

("Something non-existent *really* exists").

Certainly, formulations such as "the non-existent Joseph Cartaphilus exists symbolically" mentioned above sound strange and motivated, later on, Russell's rejection of the approach and the very well known criticism of Quine [Quine 1948]. If we think this in the context of two different sorts of particular and universal statements (implemented with the help of two kinds of quantifiers), and we liberate the *symbolical* pair of any ontological commitment then MacColl's proposal is as plausible as modern Meinongian interpretation of positive free-logic is. [7] Now, this reading of such a kind of quantified expressions free of any ontological commitment is not really congenial with MacColl's approach. On my view, as I will suggest below, it is possible to defend the very notion of *symbolic existence* in a more congenial way, though, unfortunately, this goes far beyond MacColl's own formal and conceptual framework.

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6. Cf. [Fontaine & Rahman 2010], [Fontaine, Redmond & Rahman 2011].

7. Meinongian positive free logic allows singular terms of the language to refer to non-existent objects. The domain might contain existent and non-existent elements. The result is that the identity axiom holds in any such logic extended with equality. That is, there might be identity of non-existent objects. Furthermore, in positive free logic we might introduce two pairs of quantifiers: ontologically committed quantifiers and ontologically not committed quantifiers. Cf. [Bencivenga 1983], [Lambert 1997].

A different source of puzzlement might relate to ontological questions. What are those objects that are non-existent? Did MacColl come to a conception close to some kind of realism that, despite the differences discussed above, shares some metaphysical tenets with Meinongianism? Some arguments in favour of an affirmative answer are the following:

1. MacColl's two notions of existence (the *real* and the *symbolic* existence) seem to have been conceived of as predicates. Indeed, in MacColl's notation existence, when applied to an individual or to (the members of a) class, is signified by an exponential. Now, in general, leaving to one side the many changes and hesitations of his notational system, exponentials are used in principle to express a predicative role. In fact, the basic expressions of MacColl's formal language are expressions of the form:

    $$H^B$$

    where H is the domain and B a predicate. For instance:

    H: the domain of horses

    B: brown

    H^B: The horse is brown: all of the elements of H (horses) are brown.

    The same can be said of the use of the predicates of symbolic, real existence and non-existence:

    H^e: The horse is real or has a real existence: all of the elements of H (horses) are *really* existent. H^0: The horse is an unreality: all of the elements of H (horses) are not *really* existent. H^S: The horse has a symbolic existence: all of the elements of H (horses) are *symbolically* existent.

2. Recall that according to Meinong we should distinguish the *Sein* of objects—their existential status—from their *Sosein,* their having—certain—features or properties. Thus, Meinongians claim that an object can have a set of properties even if it does not exist. This is the so-called *Principle of independence*: Pegasus, Ulysses, and Joseph Cartaphilus can be said to have properties without the propositions involved becoming false. MacColl's ontological approach seems to assume such a principle. However, MacColl's notion of symbolic existence (and Russell's *subsistence*), that, as mentioned above, assumes a kind of *being,* even for non-existents, waters down Meinong's principle of independence.

    Now, endorsement of the principle of independence pushes one towards the thesis that *any* singular term denotes an object, existent or not. This holds in particular for (definite and indefinite) descriptions, that is, noun phrases of the form "the/an object with such-and-such properties". We therefore have what we may call, following [Parsons 1980], and by analogy with the principle of comprehension in naïve set theory, an *Unrestricted Characterization Principle* (UCP) for objects. The idea

behind UCP is that we specify an object via a given set of properties, such as (1) *is a horse, is ridden by Don Quijote,* (2) *has a philosophical discussion with Sancho Panza's donkey,* (*n*). Take the conjunction of the relevant predicates expressing all of the relevant properties (1), (2) ... (*n*), then, according to UCP, an object is described by precisely this conjunction, namely the one called *Rocinante* by Cervantes. In his mature work, Russell raised deep objections [8] against two of the main features of UCP:

(i)   Can we deploy UCP to describe objects with contradictory properties? So far nothing prevents using UCP in this way.

(ii) Can we deploy UCP to produce some kind of ontological argument for anything whatever? Indeed nothing prevents us from doing so if we combine it with the fact that existence is taken to be a property. Take the properties of *being a Cyclops, having one eye, being son of Poseidon* and *being existent.* If we apply UCP, we have that an object called *Polyphem* has all the properties mentioned above including that of existence.

What about MacColl? In relation to contradictions, MacColl does not seem to be scared off by them: they are denizens of their own domain. It is not easy to see what the logic will be. Presumably the following is a valid inference in MacColl's system:

"This round square is (symbolically) round and square".

Hence,

"Something is (symbolically) round and square".

Nowadays we might embed this kind of inference in a paraconsistent framework. [9]

Does MacColl endorse some form of characterization principle? In fact it rather looks that MacColl would like to use a *restricted* form of the characterization principle. The classes of reals and unreals are disjoint classes and thus the corresponding predicates *being real* and *being unreal*—in contrast with other predicates such as *being round* and *being square*—cannot be predicated at the same time of the same object. The modern reader might invoke the distinction between *nuclear* and *non-nuclear* properties. [10]

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8. Cf. [Farrell Smith 1985, 313–319].

9. A logic is said to be *paraconsistent* if not every contradiction entails triviality. Cf. [Routley & Meyer 1976], [Heintz 1979].

10. Meinong's student, Ernst Mally (1879-1944) suggested distinguishing, what have been later called, *nuclear* from *non-nuclear properties.* Nuclear properties are those that allow safe uses of the comprehension principle (not any more unrestrictedly). When applied to fictional characters, this device is deployed to assert that they have all those nuclear properties that the relevant story attributes to them. [Parsons 1980] comes to the following list: Nuclear predicates ("is blue", "is tall", "is golden", "is

3. MacColl's approach and Meinongianism (including Russell's early Meinongianism) share the same unease about created objects. Indeed, since both MacColl and Meinongians assume that objects are always there, though they do not exist, they thus cannot be said to have been created. Accordingly, they are non-existents, and the creation of a fictional character cannot mean that it has been brought into existence (in the strong ontologically loaded sense).

4. MacColl provides some examples of the intentional application of his logic of non-existents [MacColl 1905a, 77–78], such as:

> "The *man* whom you see in the garden is really a *bear*."
>
> "The *man* whom you [thought to] see in the garden is not a *bear*."

MacColl takes the point of view of an observer, who asserts the above propositions and studies what happens with the ontological assumption implied by them. MacColl concludes that the ontological status of the individual man is that of not-existent in the first example and existent in the second.

There also are some very brief remarks on the ontological status of abstract objects, such as *hardness,* thoughts and feelings:

> There can be no hunger without a hungry person or animal; there can be no hardness without some hard substance [. . .]. Similarly, I cannot conceive of a *thought* apart from a *thinker,* or of a *feeling* or sensation without a soul or *feeler.* [MacColl 1910, 349–350]

Unfortunately, MacColl does not develop an explicit theory of intentionality or intentional objects nor does he systematically link those remarks to his ontological framework.

Nevertheless, as suggested by Juan Redmond [Redmond 2010, chap. 6], this might provide a basis for his concept of symbolic existence. Indeed, take the domain of unreals as the domain of ontologically dependent objects (roughly, in the same sense that a thought is ontologically dependent upon a thinker and a fictional character upon a copy of the book that describes it), the domain of reals as the domain of ontologically independent objects, then symbolic existence can be defined as the domain that contains both, ontologically dependent and ontologically independent objects. [11] Certainly this goes far beyond MacColl's

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a mountain", etc.); and Non-nuclear predicates: *Ontological* ("exists", "is mythical", "is fictional", etc.), *Modal* ("is possible", "is impossible", etc.), *Intentional* ("is thought about by Meinong", "is worshipped by someone", etc.), and *Technical* ("is complete", "is consistent", etc.). The nuclear/non-nuclear distinction is formally characterized in [Jacquette 2009, section 5.1]. Unfortunately the precise content of the lists is difficult to establish. Priest suggests a way out that allows the unrestricted version of the comprehension principle [Priest 2005, 82–85].

11. The key to this approach to fictional objects lies in acknowledging them a full ontological status—considering them as denizens of our world like armchairs,

own developments since he lacked both the notion of quantifier and a thorough study of the notion of intentional object.

Conclusion

The main aim of the paper is historical, namely the relation between MacColl's theory of non-existents and Russell's early endorsement and later criticism of Meinong. To state this clearly, though MacColl was aware of the discussions that took place in the British *milieu* on the existential import of propositions, triggered by the work of Brentano and Meinong, it is doubtful that MacColl ever read these authors. However, while reading MacColl's approach to this issue it is tempting to understand Russell's version of Meinong's notion of *subsistence* as an adaptation of MacColl's *symbolic existence* to the Meinongian framework—a misleading understanding of Meinong, some might say. Another, less contentious, way to see the emergence of the notions of *symbolic existence* and *subsistence* is to understand both concepts as the result of an interaction of MacColl with Russell and other members of the British logical community of those days on the existential import of propositions. In relation to the emergence of these notions, I hope the paper will motivate further and wider historical studies. [12] More generally, in this context we can understand MacColl's conceptions as the exploration of new territories in the philosophy of logic, despite the fact that he hadn't the right instruments to develop such incursions more thoroughly. Those attempts, in their time, not only announced a new refreshing wind in philosophy of logic but also aimed to take up anew the old philosophical tradition. I am certainly happy to acknowledge my respect for his brave insights, here, at the northern part of France that offered him a second home.

Acknowledgments

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elephants or galaxies. On the one hand, fictional objects are artifacts like tables or buildings. On the other hand, they are abstract creations like marriages, universities and theoretical entities postulated by physical theories. Fictional objects are tied to the everyday world by their dependence on readers, authors and copies of texts. Cf. [Thomasson 1999].

12. See, in this volume, F. F. Abeles and A. Moktefi's paper on MacColl's exchanges with Lewis Carroll, notably on the notion of existence.

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