

Hugh MacColl's Ontological Domains

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1. 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. 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 critics to Alexius Meinong's work and Russell's discussions with MacColl on existence. Recent scholars of Meinong such as Rudolph Haller and Johan Marek and modal Meinongians such as Graham Priest, Richard Routley and Edward Zalta make the point that Russell's Meinong is not Meinong.

An interesting historical question is to study how Russell's critics of Meinong could have been influenced by his discussion with MacColl. Notice that the main papers on this subject by Russell, Meinong and MacColl, where 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 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.¹ However, the 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 Hugh MacColl defended the idea that there is a *real* and a *symbolic* existence, that seems to be close to Russell’s use of *subsistence*. MacColl’s example, probably borrowed from Mill, targeted the meaning of the copula “is” in expressions such as “the non-existent is no-existent”.³ 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 semantical basis for what nowadays call free logic combined with a modal semantics for a fictionality operator⁴.

2. 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.⁵

[...] these are the class of individuals that, in the given circumstances, have a *real* existence.⁶

- 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

¹ Cf. Brentano, 1874, chapter 7.

² J.P.N Land’s paper 1876 “Brentano’s Logical Innovations” spelled out the position of the traditionalists and triggered in *Mind* the discussions on the existential import of propositions.

³ 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.

⁴ So far as I know, the explicit introduction of a fictionality operator was suggested as first by John Woods in his book *The Logic of Fiction: A Philosophical Sounding of Deviant Logic* (1974), a classical in the specialized literature.

⁵ MacColl, 1905a, 74.

⁶ MacColl, 1906, 42.

as round squares, square circles, flat spheres, etc., including, I fear, the non-Euclidean geometry of four dimensions and other hyperspatial geometries.⁷

[...] the class of individuals that, in the given circumstances, have *not* real existence. [...] It does not exist *really*, though (like everything else named), it exists *symbolically*.⁸

In no case, however, in fixing the limits of the class e, must the *context*, or given circumstances be overlooked.⁹

- And the domain of quantification, the *Universe of Discourse*, containing the two precedent 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 [...].¹⁰

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.¹¹

and predicates might be interpreted by the means of classes containing reals, unrealities 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.¹²

When the members A_1 , A_2 , &c of any class A wholly of realities or wholly of unrealities, the class 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.¹³

⁷ MacColl, 1905a, 74.

⁸ MacColl, 1906, 42.

⁹ MacColl, 1906, 43.

¹⁰ MacColl, 1905a, 77.

¹¹ MacColl, 1905a, 77.

¹² MacColl, 1906, 77.

¹³ 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 his rejection to interpret *hunger* independently of a hungry person.)

The partition of the universe of discourse into existents and non-existents, might lead the modern reader to think in the setting of a free logic with outer and inner domains. I think this is quite correct though there is more there and relates to the role of the symbolic domain. In fact, as discussed below, I think that the role of the symbolic domain MacColl is hinting at can be implemented in a framework with a modal fictionality operator. But let us see read MacColl's own word 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, while replying in 1905 to Russell¹⁴ 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.¹⁵

With some hindsight, we might add two kinds of existential quantification or at least of two kinds of existential predication, one that has as scope the whole symbolic universe and the other, when the classification between reals and not reals within the universe has been established, that applies to reals. In this sense, individuals might have a "symbolic" existence and a "real" existence. If we place the discussion in a modal framework one way to develop further this idea is that at the actual world we might have real and und reals in our domain of quantification but certainly not in the worlds triggered by the evaluation of the fictionality operator (see 4.1 below).

Perhaps, there is also some room to think dynamically about the interaction between the symbolic and the real existence. The real existence might come into play once the precise constitution of the universe of discourse has been *spoken out*. Juan Redmond and Mathieu Fontaine are developing a dialogic that renders justice to this dynamics from an epistemic point of view: symbolic existence will be assumed so

¹⁴ 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, 1905, 401.

¹⁵ MacColl, 1905b, 579.

long as we do not know about the ontological constitution of our universe of discourse. Do not fear we will not discuss this approach here.

A different source of puzzles might relate to ontological questions. What are those objects that are non-existent? Did MacColl come to a conception close to some kind of Meinongianism? Some arguments in favour of a positive answer are the following:

1) MacColl's claim of two kinds of existence mentioned above. In fact, MacColl's notion of existence seems to be closer to that of the early Russell than to the one of Meinong. Meinong had also three ontological domains: the existents, non-existents and subsistents. However Meinong's concept of subsistents only applied to abstract objects while MacColl's *symbolic existence* and Russell's version of *subsistence* included existents and non-existents. Compare, e.g., once more MacColl's remarks of 1902 and 1906:

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*.¹⁶

It [the class of non-existents...] does not exist *really*, though (like everything else named), it exists *symbolically*.¹⁷

with the Russell of the *Principles*:

Whatever may be an object of thought, or can occur in a true proposition, or can be counted as one, I call *term* [...]. Every term has being, i.e. is in some sense. A man, a moment, a number, a class, a relation, a chimera, or anything else that can be mentioned is sure to be a term.¹⁸

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.¹⁹

2) MacColl's two notions of existence (the *real* and the *symbolic* existence) seem to have been conceived as predicates. Indeed; in MacColl's notation existence,

¹⁶ MacColl, 1902, 356.

¹⁷ MacColl, 1906, 42

¹⁸ Russell, 1903, 43.

¹⁹ Aristotle, *Posterior Analytics*, 92b29-30.

when applied to an individual or to (the members of a) class, is signalled by an exponential. Now; in general, letting by 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. He gives the following example:

H : the domains of horses

B : brown

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

Similar applies to 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^o : 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.

3) MacColl assumes a logic of equality for terms that refers to existent and non-existent objects.

4) More generally, 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 that the propositions involved become false. MacColl's logic could be seen as assuming the principle of independence.

To state this clearly, it is doubtful that MacColl ever read Meinong's work. However, while reading MacColl 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. Nevertheless, in the overall context of MacColl's philosophy in relation to which he explicitly acknowledged sympathies for Poincaré's conventionalism and Peirce's pragmatism we might contest considering him as guilty of Meinongianism. At least not of the kind where non-existents are some kind of independent entities that are part of our universe since the creation of the universe.

Indeed, in his texts he explicitly defends the idea that thoughts and abstract notions and are not to be considered as independent of the thinker who is thinking them:

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 a feeling or sensation without a soul or feeler.²⁰

In this context, it seems to be compatible to MacColl's views to cast them in a framework such as the one developed by A. Thomasson, where abstract objects and thoughts are conceived as ontologically dependent objects in the sense of Husserl and Ingarden. Actually, this is what I will try to sketch in the next sections, that is, on how to put all the pieces of MacColl's ontology to work together into one semantic frame for modal logic, where the point is to make work together domains of ontologically dependent object with a fictionality operator. The precise details of the formal semantics are part of a paper developed in collaboration with Tero Tulenheimo and will be not given here. It is important to point out that the following reconstruction has an important restriction: it has been conceived in the context of literary fictions and fictional characters. The semantics does not in particular apply to fiction in science. Having said that it does not preclude such an extension but this needs quite a lot more of work.

3. Fictions and ontological dependence

The aim of this section is to sketch a semantic frame to MacColl's concept of non-existents that as mentioned above will consider them as ontological dependent objects. The claim is that Ingarden-Thomasson's artifactual theory fits the bill. Let us first briefly review the philosophical background.

3.1. Ingarden-Thomasson's notion of fiction

The key of Amie Thomasson's approach to fictions lays in acknowledging fictions a full ontological status. According to her view, fictional objects are inhabitants of domains of worlds just like non-fictional ones. On one hand, they are creations or more precisely, artifacts like chairs, buildings and on the other hand, they

²⁰ MacColl, 1910, 349-350.

abstract creations such as marriages, universities and theories. Fictional objects are bounded to the everyday world by dependencies on books, readers and authors

In her book, *Fiction and Metaphysics* Thomasson displays several types of ontological dependence; we will take up only two main kinds, namely *historical* and *constant dependence*, both have their roots in the work of Roman Ingarden. Thomasson, as already mentioned, develops these notions of Ingarden and combines them with the idea of *rigid* and *generic* dependence:

We can begin by distinguishing between constant dependence, a relation such that one entity requires that the other entity exists at every time at which it exists, from historical dependence, or dependence for coming into existence, a relation such that one entity requires that the entity exist at some time prior to or coincident with every time at which exists.²¹

The point is that the fictional character Holmes is ontologically historically dependent on Conan Doyle and that Holmes as an artifact or creation can survive even after Conan Doyle's death (as a real person: as an independent object). Moreover, the ontological dependence is in this example a *rigid* one: Holmes depends historically on a fixed object, namely Conan Doyle. Now, after Conan Doyle's death Holmes survives as an artifact because copies of the texts of Conan Doyle ontologically sustain it. In fact, while the historical dependence relates to the creation act, the role of the constant ontological dependence is to assure that the artifact Holmes, once created by Conan Doyle, is still here despite that his creator is not. In other words, the constant ontological dependence assures that artifacts are denizens of our world. Furthermore, if also the object(s) on which Holmes constantly depends disappear, also Holmes will disappear or at least be inaccessible. Important for these kinds of examples is to allow the constant ontological dependence relation to be *generic*, that is, Holmes is not constantly dependent on one particular copy of the texts, but at each time he is constantly dependent on one of the copies (or memories). The historical dependence relation is transitive and asymmetric. Reflexive cases of the relation of constant dependence can be used to define independent objects (see definition 6 below).

Interesting is that ontological dependence is to be thought as being bi-dimensional, that is, in a frame of worlds and moments of time with their respective relations. Indeed, Thomasson writes:

Assuming that an author's creative acts and literary works about the character are also jointly sufficient for the fictional character, the character is present in all and only those worlds containing all of its requisite supporting entities. If any of these

²¹ Thomasson, 1999, 31.

conditions is lacking, then the world does not contain the character, if Doyle does not exist in some world, then Holmes is similarly absent. If there is a world in which Doyle's work were never translated at all and all of the speakers of English were killed off,..., then Sherlock Holmes also ceases to exist in that world...²²

If historical dependence allows the creations to survive the creator, then the situation described in the quote above is only possible if we are talking in a bi-dimensional framework of world and time. Doyle must be present in the same world where Holmes is present, but not necessarily at the same time.

3.2. Dependence

- **Historical Dependence**

The Eigenart of fictional objects (and any other artefacts for that matter) becomes, according to this approach, clear in connection with a multitude of worlds. They are ontologically dependent objects. Any such object requires for its existence the maker of this object (while the converse requirement does not prevail). For instance, Sherlock Holmes exists only in those worlds in which Conan Doyle does, while there are possible worlds with Conan Doyle but without Sherlock Holmes. There are thus two classes of objects dependent and independent ones.

The move should be clear by now: we read MacColl's non-existents as the class of dependent objects and the class of reals as the class of independent objects.

Ontological requirement: X requires Y if in every world in which X exists, also Y exists.

Ontological dependence: X depends on Y if X requires Y but Y does not require X.

Notice that the approach is ontological rather than epistemological. We might not know who the creator of the table I am writing on is; nevertheless, I acknowledge that someone must have done it.

The first two definitions below should capture what Thomasson calls "historical rigid designation" in a bi-dimensional framework that will not be described here.

²² Thomasson, 1999, 39.

• Constant Dependence

As mentioned above, this kind of relation is crucial for the “existence” and “death” of the fictional characters as depending on the copies of the correspondent works. But certainly it is some copy that is responsible for this ontological dependence and not all of them. Moreover, the generic feature explains the abstract character of fictions and more generally of the literary work. Let us once more quote Thomasson:

A literary work is only generically dependent on some copy (or memory) of it. So although it may appear in various token copies, it cannot be identified with any of them because it may survive the destruction of any copy, provided there are more. Nor can it be classified as a scattered object where all of its copies are, because the work itself does not undergo any change in size, weight, or location if some of its copies are destroyed or moved.

But copies of the text are the closest concrete entities on which fictional characters constantly depend. ... Because they are not constantly dependent on any particular spatiotemporal entity, there is no reason to associate them with the spatiotemporal location of any of their supporting entities.²³

4. The ontological domains at work

4.1. The fictionality operators and their domains

In the preceding paragraphs, we defined the different kinds of ontological dependencies in relation to objects, but in Thomasson’s theory, the whole work should be considered as an artifact. The point is to provide the semantic counterpart to the introduction of an operator of fiction that should allow the evaluation of sentences such as “According to the story, Holmes is a detective” though it is false at the actual world that Holmes is a detective. The truth-conditions for the fictional operator deployed by Thomasson are still lacking and the paper by Rahman and Tulenheimo mentioned above fills that gap. Here I will restrict myself to describe the general ideas this semantics and how they could be understood as developing further MacColl’s theory on non-existents.

Our proposal for the semantics of the fictional operator is to introduce two of them, one with universal and the other with existential force.

According to the story: We take the construction according to the fiction, φ holds ($: \mathcal{F}\varphi$) to behave formally as a modality. What this means is that we take the

²³ Thomasson, 1999, 36-37.

story to specify (relative to the actual world – or if that for some reason does not suffice, relative to a number of other worlds as well) the totality of all the worlds that are compatible with *all that the fiction says*. That φ holds according to the fiction then means that φ holds in *all* the worlds compatible with the fiction. That is, the content consists in the explicit sentences of the work plus its logical implication –like in Lewis in this first approach we will leave out the complications of contradictions and open worlds deployed by Graham Priest²⁴.

The interpretation and the reader's perspective: We may also be interested in statements that are true only in *some* world compatible with the fiction. Here we introduce the reader's perspective. For example, presumably Conan Doyle's oeuvre leaves it perfectly open whether Watson's grandfather's cousin's dog was a German shepherd. However, there is presumably also nothing that precludes the possibility that Watson's grandfather had a cousin who furthermore had a dog, which might even have been a German shepherd. The latter is compatible with the story while surely not necessitated by it. While *according to the fiction, φ holds* ($: \mathcal{F}\varphi$) expresses a universal modality, φ is compatible with the fiction ($: \langle \mathcal{F}\varphi \rangle$) is an existential statement.' We may even read $\langle \mathcal{F}\varphi \rangle$ as *the fiction admits an interpretation according to which φ*

Ontological Domains as mixed classes: Each of the worlds displaying the content and compatibility will be conceived with a domain D1 partitioned in two domains, namely D2 and its complement: $D1|D2$. What each of the domains is requires some discussion but in general we can say that in D2 one finds all what the fiction says there is (at that world) or more precisely all that what can be quantified over in that world. From the point of view of MacColl, we might say that while D1 represents the symbolic universe, where the difference between what at this world or context is real or not real has not been *spoken out*. Real objects could appear in D2 , but what the fiction does is to add "new" statements about reals. That is, statements that might be false outside the scope of the fictional operator. In this approach, D2 and its complement do not strictly represent the division between dependent and independent objects. Napoleon, the (at the actual world) "real" independent individual, might be an element of the domain of (quantification) D2 of a world triggered by the appropriate fictionality operator. In that sense predicates of the non actual world will be interpreted as *mixes* classes: they might contain independent objects (realities) and dependent objects (unrealities). Once more, this consideration is only possible from an - in relation to the story - *external point of view*.

The actual world and the symbolic universe: The actual world is the world where the evaluation is performed outside the fictionality operator. It contains all

²⁴ Priest, 2005, 20-24.

objects, including the corresponding fictional characters, the objects upon they ontologically depend and even other fictions and objects. In other words at the actual world the domain is $D_2=D_1$. It is here where the difference between dependent and independent objects (realities and unrealities) can be *spoken out*. True statements in relation to a given world w about objects that are elements of D_2^w will be false at the actual world: *Holmes is a detective* is false at the actual world. Indeed, *Holmes is a detective* according to the story, not in the actual world: dependent objects can not be detectives or smoke a pipe at the actual world.²⁵

4.2. The semantic structure of the worlds

Worlds are otherwise defined standardly, but, as mentioned above, it is now intrinsic to the world that its domain is given in two pieces. Moreover, it will have an internal structure (determined by the story). Let us for simplicity consider the case where we only have one unary predicate P , one binary predicate Q and two constants k_1 and k_2 . In the standard case, a world w would consist of a domain together with the adequate interpretations defined as usual for the semantics of varying domains, where k^w and P^w stand for the values of the interpretation functions at the given world w .

- In our case worlds will be structures of the form $w = (D_1, D_2, P^w, Q^w, k^w_1, k^w_2)$, where $D_2 \subseteq D_1$.
- Constants are also in this case interpreted on the whole set D_1 : $k^w_1 \in D_1$, and $k^w_2 \in D_1$.
- Predicates are interpreted on D_2 : $P^w \subseteq D_2$. $Q^w \subseteq D_2 \times D_2$.

Our worlds have thus a domain D_1 equipped with a distinguished subset D_2 . The point is that the distinguished subset D_2 will determine the ranges of the quantifiers in worlds compatible with a given fiction. To assert that something exists at the non-actual world v amounts to assert that this something is an element of $D^w 2$.

The reason why the interpretation of constants are however determined on D_1 is the fact that we want to leave open notably the possibility of letting constants to refer to objects in $D_1 \setminus D_2$, though these objects might not “exist” in the world at stake (i.e. the interpretation of a constant might be outside the scope of the domain of quantification of this world). The reason why the interpretation of predicates must lie on D_2 is that we would like to preclude that, at non actual worlds, entities, assumed to be existent at that world might interact with some not assumed to exist at that world:

²⁵ This point should answer to Sainsbury’s objections to Thomasson’s artifactual theory, cf. Sainsbury, chapter 5, forthcoming.

if Watson exists at a given world but Conan Doyle not, we do not want to have that Watson kisses Conan Doyle at that world.

One feature of this semantics is that it is assumed that all constants of the language refer; indeed, they refer at least in D1. This can be changed by means of the introduction of partial interpretation functions.

Models are structures consisting of a set W of worlds of the kind just explicated and a relation R of accessibility among those worlds determined by the fiction being considered. Intuitively, the creator of the fiction (and whatever else we count as objects on which the fiction depends) is found in the “first domain” of each world v accessible from w (where w is thought of as the actual world, i.e., the world in which the fiction was created). We do not preclude, as already mentioned, the possibility that in the “second domain” there might also be some non-fictional objects, in some cases even the creator of the fiction. However, as far as the fictional objects are concerned, the object on which they depend is (or, the objects on which they depend are) always thought to be found at least in the “first domain.” In the case of fictions written by Conan Doyle, Conan Doyle himself is considered as being in the “first domain” of each world accessible from the actual world; Holmes and Watson are in the “second domain” of each world. Once more, if we assume that Conan Doyle exists in some world (is element of the second domain in some world), then it might be true at that world that Watson kicks Conan Doyle. Once more, I skip here the formal details.

The initial world w of evaluation is, as was already hinted at, thought of as the world that represents the facts and objects of the story outside the fictional operator. For this actual world, it is natural to postulate that its first and second domain is the same. After all, in that world we wish to apply plain quantification over all that there is, fictions existing in that world included.

Let us see what we think we have accomplished namely the articulation between the fictionality operator and mixed domains. “External points of view” are given at the actual world. It is there where « categorial » claims are asserted: *Samsa is a fiction; Poe is the author of The Golden Bug* and so forth. “Internalist” points of view involve the worlds that interpret the fictional operator.

4.3. Reply to objections

During the workshop on MacColl's centenary held at Boulogne sur Mer October 2009, where a version of this paper was presented with Tero Tulenheimo

some objections have been raised by John Woods and Ivor Grattan-Guinness. Let me start with the first since it might already answer some of the second kind of objections.

1) John Woods question targeted the denizens of the actual world. Let us assume that according to the story Holmes has tea with Gladstone. Then it is constitutive to the story of Holmes (i.e. it is true in all world compatible with the story) that he has tea with Gladstone. But it is not constitutive of Gladstone. To put it with Wood's words:

It is not true [at the actual world] *of* Holmes that he had tea with Gladstone and not true [at the actual world] *of* Gladstone that he had tea with Holmes. What is true is that it's History-constitutive of them both that in the story they had tea with one another. The question relates to the ability of the semantics mentioned above to reflect this kind of situations. Moreover Woods want now to forbid to Holmes all positions not within the scope of a fictionality operator.

Reply:

Indeed, it is one virtue of the semantics sketched above that at the actual world it is true that according to the story Holmes has tea with Gladstone (that is when the fact that both Holmes and Gladstone had tea with one another is within the scope of the fictionality operator); but false that Holmes, the dependent object, has tea with Gladstone (outside the fictionality operator) – let us assume for the sake of simplicity rigid designation. Dependent objects can not have tea, though independent object can. Having said at the actual world some interaction between dependent and independent objects are possible, the “real” dependent object Gladstone can admire Holmes though he can not kiss him. The first will not work if we disallow that the name Holmes has a bearer outside the fictionality operator.

2) Ivor Grattan-Guinness pointed out that this theory is not applicable for abstract objects in science. The problems are mainly two:

what happens with the example of the notorious Vulcan that was thought to designate a real object and it turned out to be a fiction? and second
how do abstract objects relate to reality if they are fictions?

Reply:

The first remark is to concede that as established at the end of section two above the semantics does not intend to deal at this stage with abstract objects in science. However, let me comment briefly the very interesting points raised by Grattan-Guinness. When the nineteenth century astronomers presented a theory about Vulcan, they intended it to apply to the actual world, but when I tell a world of fiction and introduce a “purely” fictional character I might rule out that such a character exists in the actual world – despite the fact that some of its properties might be shared by an actual object. The scientists who conceived the theory of Vulcan intended to designate a real object but it turned out to be fictional. Vulcan designates in the worlds relevant to the conception of the scientists an object that in the actual world is not existent. However the dependent object of the real world has the intentional property of being conceived as existents by the scientist who characterized it. Now; here is a problem, if we say that fictions are dependent objects and abstract objects too we might be in the trouble to differentiate between Vulcan and the centre of gravity of a given cup. Both are abstract objects but we would not say that both are fictional – at least not in the same way. Perhaps the start of a way out would be to describe accurately the identity conditions of fictional objects and abstract objects in science. According to Thomasson’s approach, the identity of the fictional object does not come only from its properties but from the fact that it historically and rigidly dependent on its creator. Abstract objects of science, say the concept of mathematical function, do not seem to ware their creators in their faces. They might not be rigidly dependent on a creator at all. Some others such as Priest and Routley defend the idea that abstract objects are necessarily non-existents but fictions not, fictional names might have as a bearer not a non-existent (ontologically dependent object) but an existent (ontologically independent object) by sheer luck. The latter is highly contentious. If we wish to push the difference between abstract objects and fictions further one possible way is to defend that properties of abstract objects (and not of fictions) are necessary and thus true in the actual world. The name Holmes can have a bearer in the actual world *qua* dependent object; but most of the properties that characterize the fictional character are false at the actual world.

Another source of troubles is that those sentences that are true “according to the scientific theory” must somehow link to truths in the actual world – something that is not in principle required by sentences within the scope of a fictionality operator. This is a deep problem and involves the relation of mathematics and physics. I do not attempt to have a solution but let me briefly mention a conception that seems to be compatible *mutatis mutandis* with an appropriate extension of our

semantics, namely Graham Priest's approach to abstract objects²⁶ We can use facts about mathematical objects (ontologically dependent objects) to infer facts about physical states (independent objects) precisely because the two have the same structure. That a certain relation obtains between the mathematical objects can be determined *a priori* from their characterizations; but which physical relations are isomorphic to which mathematical relations is an *a posteriori* fact. Its discovery is that of a law of nature. This explanation of the relation between mathematical and physical structures on no way depends on the numerical magnitudes being independent objects.²⁷ All it depends upon is their having the right properties at the right worlds. Priest considers that mathematical objects have no necessary properties (with the exception of being non-existents). Anyway, even conceding this position of Priest, the point is that we can compare at the actual world the properties of an abstract object *a* with those of a “real” object *d*. Indeed, we can compare the properties of *d* with those properties that the object *a* has according to the theory. Notice that this also applies to fictions. One can for example compare the height of Graham Priest with the height Baggins is characterized as having in the *Lord of the Rings*.

5. Conclusion

The paper contains two main point one is historical. The relation between Russell's criticism of Meinong and MacColl's theory of non-existents. The second is one is systematic and deliberately anachronistic. Is it possible to make sense of MacColl's theory today?

In relation to the first I hope the paper will motivate further and wider historical studies such as those that include the correspondence between MacColl and Lewis Carroll as suggested by Amrouche Mofteki at the MacColl workshop mentioned above.

In relation to the second I think that the theory MacColl was hinting at can nowadays be embedded in positive free logic combined with a fictionality operator.

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 had not the right instruments to develop thoroughly such incursions. Those attempts, in its time, not only announced a new refreshing wind in philosophy of logic but also

²⁶ Cf. Priest, 2005, chapter 7.

²⁷ Cf. Priest, 2005, p. 151.

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.

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