

Other worlds

What is the use of worlds beyond the real one?

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Wenn es aber Wirklichkeitssinn gibt, und niemand wird bezweifeln, daß er seine Daseinsberechtigung hat, dann muß es auch etwas geben, das man Möglichkeitssinn nennen kann. Wer ihn besitzt, sagt beispielsweise nicht: Hier ist dies oder das geschehen, wird geschehen, muß geschehen; sondern er erfindet: Hier könnte, sollte oder müßte geschehn; und wenn man ihm von irgend etwas erklärt, daß es so sei, wie es sei, dann denkt er: Nun, es könnte wahrscheinlich auch anders sein. So ließe sich der Möglichkeitssinn geradezu als die Fähigkeit definieren, alles, was ebensogut sein könnte, zu denken und das, was ist, nicht wichtiger zu nehmen als das, was nicht ist.

Robert Musil: *Der Mann ohne Eigenschaften*

Worlds we enjoy: literature and the arts

In a story called “Long journey’s goal”, Michael Ende (the author of the famous *Never-ending story*) tells a story of an eccentric aristocrat who comes across a painting of an other-worldly landscape with a strange valley and a dreamy castle above it. He at once realizes that this is the place he really belongs to, and guided by the advice of a Jewish sage, sets out to find it cost what it may. The point of the story is that his longing for the place has the power to bring it into being. I think that this story illustrates the uncanny passion we humans have for other worlds. As the products of the long history of our literature and other arts document, we are eager world-builders.

Literature appears to be traditionally torn apart by two opposite drifts: the drift toward realism, prohibiting any additions to what is really here, in our actual world, and the drift toward imagery, creating alternatives to our world, sometimes even wildly dissimilar to it. How is this achieved? In a paper on possible worlds in literary fiction, Lubomír Doležel (1989) proposes that the way we *create* worlds by literary texts is akin to that in which we create reality by means of what Austin calls *performative speech acts*. The idea is as follows: If I say „I promise to give you money“ or „Hereby I establish the Brotherhood of Other Worlds Explorers“ I do not describe an existing fact, namely that I am obliged to give you the money or that there is a brotherhood being established, but rather I *bring it into being*, i.e. *create* it. So there are linguistic performances, which are not descriptive of the world, but rather constitutive of it. And, Doležel argues, we can see literary fiction as constitutive of literary worlds in an analogous way.

Whatever the mechanism is, ordinary literary worlds are worlds only by courtesy. As Doležel points out, they are usually incomplete and inhomogeneous. We can say that they are *fragmentary*, *flat* and *non-interactive*: they can be perceived only in part and from one fixed perspective (namely the one offered by the text), and there is no way that they can respond to us, readers. This is what distinguishes them from our real world: for our world can be, in principle, investigated anywhere and from any viewpoint, and it responds to what we do with

it, i.e. it wields resistance (which allows us to learn its laws - what is and what is not possible within it).

How can a fictional world come closer to the real one? Well it has to be elaborated in reasonable detail, but even more importantly, it must lend itself to being viewed from more than one perspective. The simplest way to achieve this is to let the world be presented from the viewpoint of more than one individual, thus making it display varying aspects just as the real one does. Moreover, it may be even granted existence independent of any individual text, by letting it migrate between different texts.

Take William Faulkner's novel *The Sound and the Fury*: it consists of four, quite different individuals's descriptions of the same course of events from each of their parochial viewpoints. Moreover, the world in which these events take place, the Yoknapatawpha county¹, underlies many of Faulkner's stories and novels. Tolkien's Arda² has fared even better: it has been liberated not only from the bounds of the single text, but also from the bounds of an individual author: it has been cloned into the numerous fantasy worlds underlying both a great deal of fiction and the various fantasy worlds of "role playing games" games such as *Dungeons and Dragons*. And it seems to me that nowadays the firmness of, say, the fact that elven ears are pointed (i.e. its independence of anyone's will or subjective imagination) is comparable to that of the facts of the real world.

Moreover, some post-literary fictitious worlds have even overcome the most conspicuous shortfall of ordinary fictional worlds, namely their lack of interactivity. It is not that I cannot imagine myself as turning up within Yoknapatawpha county and face, say, a bear - but the world would not act independently of my will. If I want to kill the bear, I will; and if not, I will not. The problem of true interactivity is the problem of exempting the world from the legislation of any single mind and enabling it to wield resistance of its own; and this can be achieved by letting it be sustained by the collective collaboration of many. An instance of this occurs in *Dungeons and Dragons*: their elaborate rules make their world behave in its own independent way, being fuelled by throwing dice.

Computers, of course, make all of this much easier, for they can throw dice and project the results into the behavior of the world much more easily than a human arranger. Computers have also provided for an amplification of the idea of disguising a part of the real world as another one (i.e. the idea behind theater) by means of the Internet to produce "collaborative theaters" in which everybody can play a role. (The pioneering software environment is that of the so-called "multi-user dungeon" or MUD, originally a means of implementing RPG's, but then used for many other purposes - the development continues³).

Why do we fabricate the imaginary worlds? I would say there are at least three reasons. The first of them is strictly speaking, not a *reason*: We contrive and explore other worlds simply for the hell of it - we plainly enjoy it. Second, wayfaring into strange lands and strange worlds 'deepens our perspectives' - the more we experience, the smarter we can become. Just as Bilbo Baggins was never the same person after he accomplished his journey 'there and back', we are never the same persons after we find the way to Middleearth and back⁴. Third, contriving worlds different from our own may be a means of checking how things work, and especially how people fare, in counterfactual circumstances. Thus there are a host of hobbit-like people within our world: people who live their parochial lives, enjoy good food and good drinking and never do anything brave. But what if times get so bad that one must simply either be brave or perish (like when the ring of power appears and is desperately sought by its master)? Mr. Tolkien thought that then 'hobbits' might fare better than we would expect ...

Worlds we exploit: sciences

It may seem that science, in this respect, is to side with the realistic wing of literature: it appears to put premium not on fantasy but on austere realism, and concentrates on what is ‘tangibly’ here, in our *real world*. However, is this true? Is science possible without invoking other worlds?

As it turns out, the picture of a scientist as dealing immediately with our tangible reality is problematic in more than one respect. It seems, to start with, that one of the most important achievements of science is that it furnishes us, in Karl Popper’s often quoted dictum, with the possibility of letting “our hypotheses die in our stead”. And this possibility is clearly inseparably connected with modeling and simulating situations and courses-of-events which may (but need not) come to pass. Thus, science is inseparably connected with ways of representing, if not whole non-actual worlds, then surely non-actual situations.

This means that at least the last of the three reasons for making fictional worlds, which we listed above, maintains validity also when we turn our attention from the arts to science. However, I think that also the second still holds force. To help us predict and master the behavior of our environment is not the sole purpose of science (although it may sometimes seem so) – for surely there is still also the old-fashioned reason of becoming wiser (where wiser means not only more intellectually skilled). Hence the experience gained by wayfaring into the ‘worlds’ of scientific theories should again return us to our ordinary, everyday world with new eyes. However, I do not have very much to say about how science actually works; and I would prefer to turn my attention to philosophy.

Worlds which sustain meaning: philosophy

As an illustrious example of the employment of other worlds within philosophy let us consider Hilary Putnam’s (1975) famous ‘thought experiment’ featuring the so called Twin Earth⁵. Twin Earth is a world different from ours, but in quite a minimal respect. It is *almost* just like our world, including that each of us has an atom-by-atom identical copy there; the only difference being that our water, H₂O, is replaced by a different liquid with the formula XYZ on the Twin Earth. The point of the thought experiment is to find out what the term ‘meaning’ means: in particular whether the Twin Earth word ‘water’ could mean something different from our ‘water’. Putnam’s conclusion was that, indeed, it not only could, but really would; and that hence, in view of the fact that the heads of our twins are identical to our ones, “meaning ain’t in the head”.

Independently of whether we agree with Putnam’s conclusion, this illustrates a particular way of usage of other worlds in philosophical deliberation: we check an argument of the kind of *A is determined by B* (meaning is determined by the contents of human heads) by inspecting worlds in which *B* (people’s heads) is kept fixed while other things (environment) are varied – and check whether *A* also keeps fixed. (In fact this is structurally very much like a scientific experiment: if we want to find out whether an event *A* is caused by an event *B*, we keep producing *B* while varying collateral events to check whether *A* keeps obtaining. The difference is that philosophy, unlike science, often checks connections which are conceptual rather than causal.)

Some naturalistically minded philosophers have invested much effort into devising pictures on which our knowledge is a matter of a non-mediated contact between our selves and the real world. A prototypical example is Bertrand Russell’s (1914; 1918/9) philosophy of his *logical atomism* period: according to this, the world consists of things, properties and

relations, which together constitute facts (which are again only complex objects), and our thinking as well as our language is a means of picturing them. A truth is simply a thought or a sentence that succeeds in picturing a fact. Hence even such truths as those of logic, which *prima facie* do not seem to directly treat of the real world, must also be pictures of facts, although of more general ones than those pictured by the truths of natural sciences.

The problem with this Russellian picture is that it does not provide for a distinction between *the content* of our thoughts or pronouncements and what they are *about*. The phrase *the current king of France* refers to nothing in our real world, but it has content – we understand it. This indicates that we may need, as Frege suggested, a kind of a Platonist ‘world’ harboring *meanings*, which in contrast to the *referents* of our phrases, do not seem to be locatable within our real world.

The Polish philosopher Kazimierz Twardowski once put the problem of meaning in the following illuminating way⁶: take a picture of a landscape and consider the term ‘painted landscape’. The term is obviously ambiguous: it might either mean the virtual landscape of the painting (irrespective of whether there is a real landscape which it would reproduce), or a real landscape which the painting depicts. While there always is a ‘painted landscape’ in the first sense of the word (insofar as the picture can be reasonably said to be one *of a landscape*), there need not be one in the second. And analogously, it is something different for *the current king of France* to have a content in the sense of meaning something, and to have a content in the sense of there being an individual being referred to by it. (Just as in the case of the painting, the second kind of content presupposes the first one, but not vice versa.)

In fact, it was largely this very observation which led the young Wittgenstein to reject the austerity of Russell’s logico-atomistic picture and to offer his own less austere version of the man-world relationship in the *Tractatus* (1922). This picture allowed for possible, but non-actual states-of-affairs’ to give the content to false sentences. (The popular anecdote about Wittgenstein’s coming to entertain the Tractarian picture relates to just this aspect of his doctrine: allegedly he saw, in a newspaper, pictures of what could happen during a traffic accident and how to deal with it – i.e. pictures of possible, but non-actual situations.) This indicated that if we want to have meanings, we cannot make do without a Platonist world of ideas or a Fregean third realm over and above our physical world.

In fact, Russell himself not only admitted, but obviously hailed this kind of a supernatural world. In *The Problems of Philosophy* (1912) he is quite explicit about the existence of two realms:

The world of universals ... may also be described as the world of being. The world of being is unchangeable, rigid, exact, delightful to the mathematician, the logician, the builder of metaphysical systems, and all who love perfection more than life. The world of existence is fleeting, vague, without sharp boundaries, without any clear plan or arrangement, but it contains all thoughts and feelings, all the data of sense, and all physical objects, everything that can do either good or harm, everything that makes any difference to the value of life and the world. According to our temperaments, we shall prefer the contemplation of the one or of the other. The one we do not prefer will probably seem to us a pale shadow of the one we prefer, and hardly worthy to be regarded as in any sense real. But the truth is that both have the same claim on our impartial attention, both are real, and both are important to the metaphysician. Indeed no sooner have we distinguished the two worlds than it becomes necessary to consider their relations.

Hence should we be content with having our physical world plus the Platonist world? As a matter of fact, recent developments in the analysis of meaning have prompted the conclusion that we should see the Platonist world more as a *metaworld*, somehow ‘comprising’ the real world along with all kinds of its alternatives.

Worlds we use building semantic models: logic

When philosophers condemned Russell’s naturalistic picture for not making room for meanings, W.V. Quine launched a counterstrike: if there is no room for meanings in the real world, then the worse for them⁷. We must simply learn to live without them – take them for mere chimeras. Everything what truly is, according to Quine and his followers, is describable in the extensional, physicalist language of natural science.

However, as Bob Brandom (2001, p. 600) has pointed out, independently of whether we approve of the concept of meaning or not, to describe the world we need properly meaningful words, and words cannot get the proper kind of meaning, *pace* Quine and Kripke (1972), from merely their contact with the actual world:

The incompatibility of the property of being green with that of being red, is part of the content of the concept *green*. To call something ‘rigid’ is to commit oneself to various consequences concerning what *would* happen *if* one applied a potentially deforming force. That an object has a finite mass means that the application of force is *necessarily* to accelerate it. Apart from their involvements in material incompatibilities, counterfactual dependencies, and necessitations of the sorts these examples illustrate, bits of ordinary descriptive empirical vocabulary cannot have the meaning they do.

This is reminiscent of (though certainly not reducible to) Rudolf Carnap’s objections to identifying meanings with extensions. If the meaning of a term, says Carnap (1947; 1955), were determined solely by the objects to which the terms applies *in the actual world*, then the terms ‘human’ and ‘featherless biped’, or the terms ‘creature with heart’ and ‘creature with kidneys’ would be deemed synonymous, which intuitively they are not. Hence we must not restrict ourselves to *actual* individuals, but consider also *potential* ones – i.e. individuals which do not come to occur in the actual world, but which inhabit other possible worlds. There surely is a conceivable individual which is a featherless biped, but not human (actually a hobbit is a case in point, not to speak about dwarves, elves etc.), and there is a conceivable creature which has a heart, but no kidney.

This indicates that (i) we cannot have the vocabulary we do without having at least an implicit grasp of counterfactuality (and possibility and necessity); and (ii) whereas this is made primarily explicit by means of the adverbs ‘possibly’, ‘necessarily’ and especially by the overt counterfactual conditional ‘if it were the case that ... it would be the case that ...’, these locutions are further illuminatingly explicated in terms of *possible worlds*. To be necessary is to be true in every possible world, to be possible is to be true in some possible world, and to be true if such and such conditions obtained is to be true in every world in which the conditions do obtain.

Saul Kripke (1963) then came up with a more sophisticated theory. He realized that at least in some senses of ‘necessary’, what is necessary in our world need not be necessary in another world. (Take, for example, physical necessity – what is physically necessary here need not be necessary within a world with quite different physical laws.) Thus he proposes to

enrich the universe of possible worlds with an *accessibility relation* reflecting which worlds should be taken as conceivable alternatives of a given world.

This idea started an important revolution in logic: it has transpired that semantics of this kind can be set up for a very wide class of logical calculi. Kripke himself has shown that it is usable not only for almost any kind of modal logic, but also, with only a minor fix-up, for intuitionist logic. (The fix-up consists in the fact that within a possible world interpretation of intuitionist logic, a proposition true in a world cannot fail to be true in an accessible world. As a result, the worlds come to behave more like ‘information states’ than like worlds in the literal sense, and the accessibility relation starts to resemble something like an ‘information growth’.)

More recently, Kripkean model theory was adapted for the needs of dynamic logic. (In this case, ‘worlds’ are again seen as ‘information states’, but sentences are no longer seen as denoting sets of worlds, but rather relations between worlds – i.e., in effect, ‘accessibility relations’). And the possible-world framework is exploited also by many other logical systems. (Thus, e.g., paraconsistent logic assumes that each world comes with a counterpart world, its *alter mundus*, such that a negation of a sentence is true iff the sentence itself is false *in the counterpart world*. If every world is identical with its counterpart, we have simply the classical logic, but if this is not the case, we may have worlds which violate the law of contradiction.)⁸

Can we live without other worlds?

Hence are other worlds just as indispensable for philosophy, logic and the sciences as they are for the arts and literature? I think that the answer to this is complex and crucially depends on what we mean by ‘indispensable’. I am convinced that Quine’s project of ‘ontological asceticism’ is of fundamental importance – as I agree that one of the most basic tasks of philosophy is to discern which kinds of entities we are able to live without, and to reduce as much as possible what we take as existing to a minimum of basic building blocks.

On the other hand, I do not believe that this reductionist enterprise should be understood as the pursuit for some *ultimate* ‘furniture of the universe’. I do not believe there is *one true* reduction of everything to *a unique absolutely primitive* basis. Therefore I think we should understand the Quinean physicalist project as a project not of finding what there really is, but rather of finding how far we can go in describing reality by means of the particularly austere *final vocabulary* (in Rorty’s, 1989, term) of physics.

This means that once we are clear about how possible worlds could be ‘explained away’, there is no reason not to use these kinds of entities if we find them useful for scientific or philosophical purposes. (My long-term project, for example, has been to indicate how we can do ‘formal semantics without formal metaphysics’ – how we can reconcile rejecting the metaphysics of possible worlds with a (‘non-committal’) employment of possible worlds within semantics⁹.) And in this latter sense, ‘other worlds’ are, I think, utterly indispensable. There is no way of furnishing our basic empirical vocabulary with the appropriate semantics without settling the behavior of words within a rich repertoire of counterfactual claims – or, in ontological terms, without invoking worlds alternative to our own; and nor is there a comparable way of making perspicuous semantics for the common logical calculi without employing possible worlds.

After the idea of possible worlds has come to be commonly accepted, excited discussions started about whether the worlds other than our own ‘really exist’¹⁰. This seems to me to be a pseudoquestion. (I can see only two clear senses of ‘exists’, on both of which the answer to

the question is trivial. In the one sense, to exist is to assume some spatiotemporal part of our world – and in this sense other worlds surely do *not* exist. In the other sense, to exist means to be denoted by subjects of true subject-predicate claims – and in this very relaxed sense possible worlds surely *do* exist.) I think that the truly crucial question regarding possible worlds is the following: how do we learn about what is going on within the other worlds?

Some logicians and philosophers seem to assume tacitly that we can as if ‘look’ into them: they assume that we can *reduce* ‘to be necessary’ to ‘to be true in every (accessible) possible world’, for the latter claim is independently meaningful in the very same way as, say, ‘in every supermarket in New York’. I think that this is a misguided view, which produces both vicious circularities and the very kind of sterile metaphysics against which the fathers of analytic philosophy raised their arms¹¹.

The question, then, is whether the claims of a metaphysics of possible worlds should precede and found the claims of a logic which employs possible worlds semantics. My response is that they should not: just as the literary worlds should rightly be seen as brought into being by the literary texts, the possible worlds employed by logic should be seen as brought into being by the laws of logic. Thus, in the Wittgensteinian turn of phrase, not: something is necessary because it is true in every possible world, but rather: that it is necessary reveals that there cannot be a possible world where it would fail to hold.

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Notes

¹ See <http://www.mcsr.olemiss.edu/~egjbp/faulkner/glossaryy.html#Yoknapatawpha>.

² See <http://www.glyphweb.com/arda/>.

³ A striking indication of how close the ‘reality’ of such worlds has come to the reality of the actual world is offered by Dibell’s story ‘Rape in Cyberspace’ (<http://www.levity.com/julian/bungle.html>).

⁴ This is brought out by Neubauer’s (1992) tiny Czech ‘manual’ to the Tolkien’s saga.

⁵ See also Pessin (1996).

⁶ See Coffa (1991) for a discussion of this example.

⁷ See, e.g., Quine (1992, Chapter III).

⁸ See Priest (2001) for a variety of logics which can be furnished with possible worlds semantics.

⁹ See Peregrin (1995; 2001a, Part III).

¹⁰ See, e.g., Lewis (1986).

¹¹ See Peregrin (1998; 2001b).