

Mere Possibilities –
Bolzano's Account of Non-Actual Objects

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Forthcoming in: *Journal of the History of Philosophy*

Abstract:

The paper is a detailed reconstruction of Bernard Bolzano's account of merely possible objects, which is a part of his ontology that has been widely ignored in the literature so far. According to Bolzano, there are some objects which are *merely possible*. While they are neither denizens of space and time nor members of the causal order, they *could have been* so. Thus, on Bolzano's view there are, for example, merely possible persons, i.e. objects which are neither actual nor persons but which could have been both.

In course of the development of Bolzano's views, they are contrasted with the better known theory of his compatriot Alexius Meinong, and it is shown that they have a modern counterpart in the accounts of merely possible objects that were developed by Bernard Linsky & Ed Zalta, and by Timothy Williamson.

Structure:

Introduction

1. Preliminary Clarifications: Propositions, Ideas, and Actuality
2. An Ontological View
3. Bolzano's Account of Merely Possible Objects
4. Conclusion

Introduction

Although Alexius Meinong is probably the best known opponent to the “prejudice in favour of the actual”¹, the sceptical stance towards non-actual objects, he was neither the first nor the only one to pay attention to the non-actual. Bernard Bolzano emphasised repeatedly that there are more things than those inhabiting the realm of the actual. He regularly mentioned two different classes of examples: firstly, *abstract objects*, as for example propositions and concepts (non-propositional components of propositions), or mathematical objects like numbers and geometrical figures. But apart from abstract objects he also spoke of non-actual objects which are *possible* in that they could *become actual*; no number, however, could ever enter actuality (i. e. become efficacious), nor could a proposition or a concept do so. Examples of this second class of non-actual objects are *merely possible horses*, *merely possible mountains*, etc. It is Bolzano’s views on merely possible objects that I examine in this article. In propounding his ideas, I will also contrast them with the nowadays better known views of Meinong; they will turn out to differ from Meinong’s in crucial aspects.^{2,3}

A brief outline of my paper: the *first section* is dedicated to the clarification of some basic Bolzanian notions, an understanding of which is needed for what follows. In the *second section*, I set out to establish that Bolzano in fact had the ontological view I attribute to him. That is, he accepted that there are merely possible objects. The *third* (and final) *section* is concerned with the exposition and reconstruction of Bolzano’s account of mere possibilities.

¹ See p. 485 of Alexius Meinong’s *Über Gegenstandstheorie*, in R. Haller & R. Kindinger & R. M. Chisholm, eds., *Alexius Meinong Gesamtausgabe II* (Graz: Akademische Druck- u. Verlagsgesellschaft, 1971): 481–535.

² Despite the differences between Bolzano’s and Meinong’s account, it seems possible that Meinong had been (indirectly) influenced by Bolzano’s views. Edgar Morscher suggested that a possible link for such an influence may have been Robert Zimmermann; see his “Robert Zimmermann – Begründer der Gegenstandstheorie?” in Jan Berg & Edgar Morscher, eds., *Bolzano Forschung 1992–1998* (Sankt Augustin: Academia Verlag, 1999): 213–221. In that paper, Morscher draws attention to a passage in Zimmermann’s *Formale Logik* that looks like an anticipation of some Meinongian ideas. The crucial passage, in turn, alludes to Bolzanian ideas, adopting his terminology while parting from his philosophical doctrine and moving towards Meinongian conceptions.

³ There are wide-reaching correspondences between Bolzano’s account and the theories recently proposed by Bernard Linsky & Ed Zalta, and by Timothy Williamson. See (i) Linsky and Zalta’s “In Defense of the Simplest Quantified Logic,” *Philosophical Perspectives* 8 (1994): 431–458, and their “In Defense of the Contingently Nonconcrete,” *Philosophical Studies* 84 (1996): 283–294, and (ii) Williamson’s “Bare Possibilia,” *Erkenntnis* 48 (1998): 257–273, and his “The Necessary Framework of Objects,” *Topoi* 19 (2000): 201–208.

1. Preliminary Clarifications: Propositions, Ideas, and Actuality

A central notion of Bolzano's logic is the notion of a *proposition* ("Satz an sich"). Bolzano's conception of propositions is in general comparable to that of Fregean thoughts;⁴ propositions are

- (i) *what is asserted* in an assertoric utterance,
- (ii) the contents of judgements, and finally
- (iii) the ultimate bearers of truth-values.

Bolzano defends a mereological picture of propositions: propositions are *structured* entities, they are composed of parts in a determinate way. Those parts, if they are not themselves propositions, he calls *ideas as such* ("Vorstellungen an sich"; henceforth I will omit the qualification "as such"); accordingly, Bolzanian ideas are not mental entities.

I will use square brackets, "[]", as a kind of "meaning marks"; if I enclose an expression in such brackets, the resulting expression denotes what is expressed by the contained expression (its propositional or subpropositional meaning). So [Belmondo has charm] is a proposition while [charm] is an idea.

Although *there are* propositions, ideas, and numbers, they have no *actuality* ("Wirklichkeit") in Bolzano's sense of the word.⁵ Generally speaking, actual entities occupy positions in space and time,⁶ and they stand in causal relations to other actual things (the German adjective "wirklich" is related to a family of words which are explicitly causal notions, such as the noun "Wirkung", which means *effect*, the adjective "wirksam", which means *effectual*, or the verb "wirken"; being derived from the causal verb "to act", the English adjective "actual" behaves

⁴ For a detailed comparison of Bolzano's and Frege's conceptions see Wolfgang Künne, "Propositions in Bolzano and Frege," *Grazer Philosophische Studien* 53 (1997): 203–240.

⁵ Sometimes Bolzano talks of *being* ("Sein") meaning actuality, such as in "God is"; used in this way, "is" is not the copula but a fully fledged predicate true of all actual things and false of things like propositions or numbers. Still other expressions which Bolzano uses for the same purpose are "Dasein", "Existenz", and "Vorhandensein". For Bolzano's notion of actuality compare further Benjamin Schnieder, *Substanz und Adhärenz – Bolzanos Ontologie des Wirklichen* (Sankt Augustin: Academia Verlag, 2002), 21–27.

⁶ With some exceptions: (i) God is actual but may be thought of as occupying neither space nor time. (ii) It is at least disputable whether all *adherences* ("Adhärenzen"), i.e. actual, particularised qualities, have a spatial position (think of mental states for example).

somewhat similar in this respect).⁷ According to Bolzano, actual entities come in two varieties: they are either *substances* (prototypical examples of which are bodies, parts of bodies, and souls) or *adherences*, particularised qualities of actual entities.⁸

Since there are causally inert and therefore non-actual entities, it follows that not everything *there is*, is *actual*.⁹ While actuality is a genuine property of objects which can be ascribed to them, we do not ascribe a property to things of the kind *K* if we claim that there are *Ks*. Anticipating Frege, Bolzano regarded the grammatical predicate “there are” as expressing a second-level concept. He took sentences of the form

there are *Fs*

to be paraphrasable by sentences of the form

the idea [*F*] is objectual (or: has objectuality).¹⁰

In claiming that there are *Fs*, we say that the idea of an *F* is not empty, i. e. it is *objectual*, there are objects standing under it.

Notice that some ideas do not possess the right form to be objectual; logical ideas, such as [not] or [and] are clear examples. Let us call those ideas about which the question of their objectuality is not already negatively settled by their form *object-ideas*. That is, an object-idea possesses at least the right structure to be objectual, though it may still be analytically empty, like the idea [a married bachelor].

We have seen how Bolzano contrasts the phrases “*x* is actual” and “there are *Fs*”. How does the word “exist” relate to those phrases? According to Bolzano’s official terminology, “*x* exists” means as much as “*x* is actual”. He admits, however, that we sometimes use “exist” not to express the concept of actuality but rather as a variant of the “there is” locution.¹¹ Surely, we do this sometimes, if we use “exist”

⁷ Be careful not to confuse the current use of “actual” (which will prevail in what follows) with the use of this word in modern modal logic. In those systems, something is said to be actual if it belongs to the domain of the actual world; thus, numbers are actually existing in this sense. But they are not actual in Bolzano’s sense, since numbers are not members of the causal order.

⁸ For discussions of Bolzano’s bicategorical ontology of the actual see Wolfgang Künne, “Substanzen und Adhärenzen – Zur Ontologie in Bolzanos Athanasia,” *Philosophiegeschichte und logische Analyse* 1 (1998): 233–250, and Schnieder op. cit.

⁹ Some (but not all) of the things that Bolzano titles “non-actual” could be called *abstract*. I will come back to the notion of abstractness in section 3.c.

¹⁰ See volume II, § 137 of Bolzano’s *Wissenschaftslehre* [*WL*], in Friedrich Kambartel, Eduard Winter *et al.*, eds., *Bernard Bolzano Gesamtausgabe* [*GA*] (Stuttgart: Friedrich Frommann Verlag, 1969–), volumes 1.11/1–1.14/3 (Page numbers refer to the original pagination.)

¹¹ See also *WL* II, § 143.

in connection with abstract entities like propositions, of which we may be willingly saying they exist, not meaning by this to grant them a place in the causal order.¹² On the other hand, the tendency of some people to say that propositions do not *really* or *actually* exist, or even that they do not exist in the same sense in which pigeons, pipes, or people exist, may be taken as an indication that one may well assimilate “exist” to the concept of being actual. Thus, Bolzano declares “exist” to be ambiguous.¹³

¹² Unintentionally, Bolzano presented this kind of ambiguity in a prominent chapter heading of his *Theory of Science*. Thus, the first part of the *Fundamentallehre* (WL I, §§ 19–33) is titled “On the Existence of Propositions as Such” (“Vom Daseyn der Wahrheiten an sich”). Judged by Bolzano’s official terminology, this title is a blunder; one of the points he tries to establish is precisely that propositions lack actuality, i.e. existence (Bolzano himself remarked this in a letter to Robert Zimmermann and called the title “objectionable” and “wholly misleading”; see GA 2 A 12/2: 188).

¹³ Williamson argues for the same ambiguity of “exist”; see p. 130 of his “Existence and Contingency,” *The Aristotelian Society Supp. Vol.* 74 (2000): 117–139.

2. An ontological view

First things first: before reconstructing Bolzano's account of merely possible objects, I will address the exegetical question about whether, according to Bolzano, there are any merely possible objects. The answer will be a clear yes, and it can be established easily from some explicit remarks in various of his writings. Nevertheless, some of Bolzano's readers tended to overlook this Bolzanian thesis. Sometimes it is explicitly denied,¹⁴ seldom it is mentioned in something more than an aside,¹⁵ and, as far as I know, it is never discussed in detail. So, in this section I shall establish:

(MP-Ex) According to Bolzano, there are merely possible objects.

(MP-Ex) attributes to Bolzano an existential statement in the sense of contemporary logic, claiming that *there are* merely possible objects. Such objects are not actual; the title "merely possible" draws a line between those possible objects which are actual as well, and those possible objects which lack actuality.

Does (MP-Ex) correctly characterise Bolzano's position? The circumstance that Bolzano's belief in merely possible objects is rather seldom recognised might make one expect the relevant textual basis to be meagre. But to the contrary, there are numerous passages in which Bolzano proclaims his acceptance of merely possible objects. For example, he writes in the *Religionswissenschaft* that

[...] the sphere of the possible is indeed bigger than the sphere of the actual.¹⁶

This he had probably written years before he wrote his most important work, the *Theory of Science*, within which there are statements to the same effect:

One might make use of only two categories, if one divided the domain of the concept *something* into the two classes of the possible and the impossible, resting content with this. But one can also go further and divide the possible

¹⁴ For a recent example of such an explicit denial see p. 234 of Christian Beyer's "Logik, Semantik und Ontologie: Neuere Literatur zu Bolzano," *Philosophische Rundschau* 48 (2001): 231–262. Simon Dähnhardt thinks it is at least disputable whether Bolzano accepted merely possible objects; see his *Wahrheit und Satz an sich* (Pfaffenweiler: Centaurus-Verlagsgesellschaft, 1992), 90. But I will demonstrate by a series of quotations that there is no room for doubt; Bolzano deliberately committed himself to merely possible objects.

¹⁵ For a positive exception see Edgar Morscher, *Das logische An-sich bei Bernard Bolzano* (Salzburg & München: Anton Pustet 1973), 48 (note 45), *et passim*, and furthermore Ursula Neemann, "Der Begriff der Möglichkeit bei Bernard Bolzano," *Philosophia Naturalis* 17 (1979): 70–89.

¹⁶ § 137, p. 133 of Bolzano's *Religionswissenschaft Teil I*, in GA 1.6/2.

into the actual and the non-actual, or likewise into that which is to become actual and that which is not to become actual. (WL I, § 118: 557)¹⁷

If the sphere of the possible is bigger than the sphere of the actual, there should be some possible objects which are not actual. And if he did not countenance there being non-actual, yet possible objects, what kind of division should Bolzano be talking about?

One might nevertheless argue that Bolzano just did not choose his words carefully here. After all, the given quotations sound quite metaphorical, and what Bolzano intended to say literally is at least not obvious. Perhaps, he just wanted to allude to the fact that there are many truths of the form “*x* is possible” such that the corresponding statements of the form “*x* is actual” are false, something that may be agreed upon independently of one’s stance towards there being merely possible objects. So, although we surely would need reasons to opt for a non-literal interpretation of these passages, I admit that they are not decisive.

It is often difficult to tell what kind of ontology an author commits himself to. Often, when an author apparently talks about things of a particular sort, he will, being pressed, deny that there are such things and declare his way of talking to be a pure matter of convenience. Because of that, Quine once let his imaginary opponent McX wonder whether *nothing* a philosopher may say will definitely commit him to the acceptance of a certain sort of things. We know that Quine answered to McX’s doubts by providing a criterion for such commitments: we shall know them by quantification.¹⁸

Here Bolzano would wholeheartedly agree, as can be seen from his view on quantification (sketched in section 1). Statements of the form “there are *F*s” are the clearest expression of one’s belief in *F*s. And indeed, we find such crystal-clear existential statements about merely possible objects in Bolzano’s writings. Thus, in the *Theory of Science* he wrote:

[...] that apart from those things which have actuality, i. e. those which have being, there are also others which have mere *possibility*, as well as those which can never make the transition to actuality, e. g. propositions and truths as such. (WL IV, § 483: 184f.)

There are, it reads, merely possible things. That Bolzano really meant what he said (and in no way deviated from his official use of “there are”) is shown by a quotation from Bolzano’s *Wissenschaftslehre und Religionswissenschaft in einer beurtheilenden Übersicht* (Sulzbach: Seidelsche Buchhandlung, 1841):

Not every something has actuality and must have it. Do we not usually speak of things which, subsisting in the sphere of mere *possibility*, as yet have no

¹⁷ Cp. WL I, § 65: 295.

¹⁸ Cp. Willard Van Orman Quine, *From a Logical Point of View* (Cambridge & London: Harvard University Press, 1953), 12f.

actuality, and also of those which will at some time acquire actuality? It is therefore clearly false that the non-actual is *nothing*. Thus, in the same sense in which you can say that there are possibilities that are not actual, you can say that, although truths as such are nothing actual, there nevertheless are such truths. (30)

In a piece which is of a slightly later date we can find a passage to the same effect:

[...]to me it seems indisputable that there are also things which do not have actuality, e. g. everything that is merely possible, furthermore all propositions and truths as such as well as their parts, i. e. ideas as such. I also believe I have shown at several places in the *Theory of Science* in what sense *is* and *there is* are used when applied to such objects.¹⁹

We have seen in section 1 how Bolzano explained existential statements of the form “there are *F*s”. Now, when he says that there are merely possible things he deliberately uses the “there is”, and he uses it in his officially introduced sense. Having therefore settled the case for the correctness of

(MP-Ex) According to Bolzano, there are merely possible objects,

we can move on to the more interesting part: what is Bolzano’s account of merely possible objects?

(By the way: it might be interesting to speculate a little about what motivated Bolzano scholars to neglect his acceptance of merely possible objects. I can think of at least three possible motives. Since they will turn up in due course, I shall not comment upon them here but briefly hark back to them in section 4).

¹⁹ P. 73 of Bolzano’s “Aufsatz, worin eine von Hr. Exner in seiner Abhandlung: ‘Über Realismus und Nominalismus’ angeregte logische Frage beantwortet wird,” in *GA* 1.18: 67–76.

3. Bolzano's account of merely possible objects

Hitherto we have seen that, according to Bolzano, there are things of a sort he calls “merely possible” – but we do not know much about what those things should be like. It is the latter question which I will debate now. I will discuss several central aspects of Bolzano's view, here and there contrasting them with Meinong's ideas.

Though in what follows I will extract from Bolzano's writings quite a comprehensive account of merely possible entities, one should be aware that Bolzano commented on such entities rather sporadically and in passing. There is no single, longer passage in which he exclusively and exhaustively deals with merely possible objects. If, however, one collects the remarks Bolzano made on several occasions, they can be recognised as pieces out of which a theory emerges.

a. “Merely possible” has a Modifying Function

If we follow Meinong, merely possible objects can have many ordinary properties in common with actual things. Concerning a merely possible golden mountain, to use his famous example,²⁰ Meinong would hold that evidently such a thing is both a mountain and golden.²¹ Generally speaking, Meinong would subscribe to the correctness of the following schema:

(MPF) A merely possible F is an F .²²

²⁰ Incidentally, the golden mountain, though usually associated with Meinong, already belonged to Bolzano's stock of examples; cf. WL I, § 67: 305.

²¹ Thus, Meinong writes for instance: “Not only is the much-mentioned golden mountain made of gold, but equally is the round square as certainly round, as it is square.” (*Über Gegenstandstheorie*, 490).

²² Even for Meinong there are some problematic instances of (MPF) – is a merely possible, impossible mountain both possible and not? To separate the problematic cases from the others, Meinongians will usually invoke the distinction of nuclear and extra-nuclear properties, and hold that at least all those instances of “ F ” which signify a nuclear property yield true instances of (MPF); see, for example, Terence Parsons, *Non-existent Objects* (New Haven & London: Yale University Press, 1980), 22–27, and cp. Dale Jacquette, *Meinongian Logic* (Berlin & New York: Walter de Gruyter, 1996), 114ff. Another manoeuvre which may help is to distinguish two different modes of predication. Though favoured by some Meinongians, e.g. by Edward Zalta, *Abstract Objects: An Introduction to Axiomatic Metaphysics* (Dordrecht: D. Reidel Publishing Company, 1983), this strategy cannot be attributed to Meinong himself, who explicitly adopted the nuclear / extra-nuclear approach (incidentally, both approaches are due to Meinong's student Ernst Mally; see Jacquette 14ff. for an overview about the respective proponents and merits of both approaches).

Now, although Bolzano would also claim that there are non-actual, merely possible golden mountains, the similarities with Meinong soon come to an end: Bolzano wholeheartedly denies what Meinong takes to be obvious, i.e. that a merely possible golden mountain is a mountain (and golden).

His denial is based on some observations about the peculiarity of the linguistic device of attributive phrases, and it also allows for an explanation of why Meinong's claim may seem obvious. If Bolzano is right, someone who thinks like Meinong in this matter is deceived by surface grammar. Meinong's claim derives its plausibility from an analogical reasoning along the following lines: every mountain surely is a mountain, just like every ball is a ball. Now, every high mountain is both high and a mountain – just like every green ball is both green and a ball. And, similarly, a merely possible golden mountain will be golden, a mountain, and merely possible – just like a small green ball surely is small, green, and a ball.

But the relevant analogy does not extend far enough, and its breakdown can be seen from some uncontroversial cases. The schematic sentence

Every φ G is a G ,²³

has many wrong instances, a fact to which Bolzano repeatedly drew attention. Thus, he correctly held that a depicted fish is not both depicted and a fish. To the contrary, it isn't a fish at all – it is a pictorial representation of a fish.²⁴ Another counterexample to the schema is provided by *presumed murderers*; while some presumed murderers are really murderers, some others are innocent people who are wrongly accused.

We can therefore classify particular uses of attributive phrases into different categories.²⁵ We may do so in purely *extensional* terms. For sake of simplicity, I will mainly concentrate on *adjectives* used attributively, but everything I say can easily be applied to complex adjectival phrases or non-adjectival phrases as well. Let us begin with the paradigm case, represented by examples like “red” in “red ball” or “small” in “small mountain”. Here, by qualifying an expression e with some attributive qualification, we demarcate a subclass of the things of which e is true. To coin a phrase, I will say that such an attributive phrase *is determining* the qualified phrase (the following classifications of attributes are only *relative* ones,

²³ Here and elsewhere “ G ” is simply as a placeholder for a general term, whereas “ φ ” is a placeholder for a linguistic attribute qualifying the general term, such as “gold” in “gold mountain”.

²⁴ Cf. WL I, §59: 257f. Notice that the expression “depicted fish” is ambiguous and in one possible understanding of it, a depicted fish *is* depicted and a fish: for we could call a fish of which some painter has created a picture a *depicted fish*.

²⁵ While Bolzano puts his observation at least partly in terms of ideas and their mode of composition (see WL I, § 59: 257), I shall stick to some uncontroversial, linguistic data.

relative to a certain *usage* of the given expression; only for brevity's sake I will sometimes talk as if the distinctions applied to the phrases *simpliciter*):²⁶

(Df. Det) The attributive phrase “ φ ”, used on a particular occasion to qualify a general term “ G ”, is *determining* \leftrightarrow_{df}

All φ G s are G s, while not all G s are φ G s.

Since all red balls are balls while not every ball is red, “red” as used in “red ball” is determining. In the case of a determining attribute “ φ ”, it seems sensible to call φ G s a *special sort* (or kind) of G s.

In the definition, I made use of two sentential schemata. By varying the contained quantificational expressions, we can discover other kinds of attributive phrases. Using three quantifier expressions, “no”, “all” and “(only) some” we get the following matrix:

(S-1)(No / (only) some / all) φ G s are G s.

(S-2) (No / (only) some / all) G s are φ G s.

Let us put it to use: some attributive phrases do not change the class of objects demarcated by the modified expression at all. They may be called “redundant”:

(Df. Red) The attributive phrase “ φ ”, used on a particular occasion to qualify a general term “ G ”, is *redundant* \leftrightarrow_{df}

All φ G s are G s, and all G s are φ G s.

Defined like that, “redundant” has no epistemic input; while there are *evidently* redundant attributive phrases, as “male” in “male bachelors”, there are also non-evidently ones, as “prime” in “prime square root of 4”, and there are even contingently redundant attributes, as “black” in “black raven”.

Now for a more important case: some attributive phrases exchange the class of objects demarcated by an expression for a completely distinct class – as the adjective “depicted” does in Bolzano's example of the phrase “depicted fish”.²⁷ I call these phrases *modifying*:

²⁶ Following Dähnhardt (op. cit. 43) – who in turn follows Morscher (*Das logische An-sich* 53) – I take on terminological loan from Franz Brentano and Anton Marty who distinguished between determining and modifying attributes; see p. 60ff. (footnote) of Brentano's *Psychologie vom empirischen Standpunkt* II (Leipzig: Felix Meiner, 1925), and pp. 60 and 514 of Marty's *Untersuchungen zur Grundlegung der allgemeinen Grammatik und Sprachphilosophie*, vol. I (Halle: Max Niemeyer, 1908). My use of these terms, however, differs from theirs.

²⁷ As far as I understand him, Marty holds the thesis that a modifying attribute *literally* modifies the *meaning* of the qualified general term, such that “fish” should have different meanings in “depicted fish” and “blue fish” and thus be ambiguous (in op. cit.

(Df. Mod) The attributive phrase “ φ ”, used on a particular occasion to qualify a general term “ G ”, is *modifying* \leftrightarrow_{df}

No φ G s are G s, and no G s are φ G s.²⁸

Another example of a modifying attributive phrase would be “toy” in “toy duck” (contrary to the other examples, it is here a noun which plays the attributive role).

The distinction between determining, modifying, and redundant uses of adjectives, as defined above, is not yet exhaustive. Sometimes, an attributive phrase adds some new elements to the class demarcated by the modified expression while leaving some others in. Because of its adding some new elements we may call such an attribute *partly-modifying*. We can then distinguish between two species of partly-modifying attributes, those which also narrow down the original class of objects, and those which leave it unchanged. An attribute that throws out some of the objects of the starting is not only partly-modifying, but also partly-determining:

(Df. Partly-Modifying / Partly-Determining)

The attributive phrase “ φ ”, used on a particular occasion to qualify a general term “ G ”, is *partly-modifying* and *partly-determining* \leftrightarrow_{df}

Only some φ G s are G s, and only some G s are φ G s.

The attribute “apparent” serves as an example: some apparent idiots *are* indeed idiots, while others turn out to be witty and nice if you come to know them better (so “apparent” is partly-modifying). On the other hand, not all idiots wear their character on their sleeves, and therefore not all idiots are apparent idiots (so, “apparent” is partly-determining). Another example had been given above: “presumed murderer”.

Finally, an attribute may be partly-modifying while not being partly-determining:

137 he explicitly talks about *equivocations* resulting from modifying attributes). This strikes me as utterly implausible. When we learn how to use “depicted”, we do not learn new meanings of all those general terms which may be qualified by it. Rather, we learn to derive the meaning of “depicted F ” from the meanings of its components. The difference to a determining attribute as “blue” in “blue fish” consists in *how* the meaning of the component is derived, not in what the common component, in our case “fish”, means. What is modified or determined by an attribute, according to my usage, is not the meaning of any term, but rather the *class* of objects of which the qualified term is true.

²⁸ I exclude those instances of the schemata, such that “there are no φ G s” comes out true. Otherwise I had to count “female” in “female chancellor of Germany” as modifying by the standards of (Df. Mod), if only there were no female German chancellors. Of course, one could integrate the required distinctions explicitly in the definitions, but for reasons of brevity I refrain from doing so.

(Df. Partly-Modifying)

The attributive phrase “ ϕ ”, used on a particular occasion to qualify a general term “ G ”, is *partly-modifying* (while not partly-determining) \leftrightarrow_{df}

Only some ϕ G s are G s, while all G s are ϕ G s.

An example is provided by talk of possible lottery winners. Everyone who plays the lottery is a possible winner. But not every possible winner will really be winner – while all of those who are lucky enough to win do not lose their status of being *possible* winners (though they are not *merely possible* winners).

The propounded taxonomy of different uses of attributive phrases can be summed up in a diagram:²⁹

KIND OF ATTRIBUTIVE USE		EXAMPLE
<i>Redundant</i>	necessarily	trivially male (bachelor)
		non-trivially prime (square root of 4)
	contingently	black (raven)
.....		
<i>Determining</i>		red (ball)
.....		
<i>Partly-modifying</i>	partly-determining	apparent (idiot)
	not partly-determining	possible (winner)

Figure 1: Uses of linguistic attributes

The distinctions made so far are purely extensional; whether an attribute, used on a particular occasion, is determining or redundant can be a matter of contingent fact. But we may use the distinctions to characterise some semantic classifications that

²⁹ One may wonder whether the taxonomy is complete as it stands. Indeed, my characterisation of attributive uses is based on the two schematic sentences (S-1) and (S-2), each of which allows for three variants (due to the three quantificational phrase “no”, “(only) some”, and “all”). Thus, nine combinations are possible – while I present only five (redundant, determining, modifying, and two variants of partly-modifying). Accordingly, I missed out four possibilities. On reflection, however, all of these can be discounted for being logically inconsistent (it cannot be the case, for example, that no ϕ G s are G s, while some G s are ϕ G s). The distinctions made are therefore exhaustive.

are independent of such contingent factors. Thus, the general *function* of an attributive phrase, used in combination with a general term *G*, can be called modifying, if its *meaning* secures that its uses will be modifying; i.e. if the truth of a statement of the form “*x* is an *f G*” (in a given use) strictly entails the truth of “*x* is not a *G*”.³⁰ Furthermore, we might say that an attributive phrase has a *determining function*, if its meaning (only) allows for determining and redundant uses. Then we can say that, as a matter of fact, “black”, combined with “raven”, *is* redundant, while it *has a determining function*.³¹

Equipped with these distinctions we are well prepared to understand how Bolzano scores against Meinong. The contention that a merely possible mountain surely is a mountain (and its generalized version (MPF)) could arise, as we have seen, from assimilating the function of “merely possible” to the paradigmatic function of attributive phrases, i.e. the determining function. However, this is to misunderstand the use of epithets like “possible” and “merely possible”. In his discussion of Leibniz’ account of propositions as possible thoughts,³² Bolzano explains how we should not understand the linguistic attribute “possible”:

The concept that Leibniz’s expression *cogitatio possibilis* [...] represents is composed of the two concepts *cogitatio* and *possibilis*. However it is not composed in the same way in which many a concept expressed by a combination of a substantive and an epithet (as for example: a golden candlestick) is built up from the concepts that are indicated by the substantive and the epithet (in our example: candlestick and something golden). A golden

³⁰ A referee helped me see the importance of distinguishing between an attribute’s being *determining* and its *having a determining function*. However, as some later correspondence made clear to me, by drawing the distinction the way I do (I explain the non-extensional notion with recourse to the extensional), I only *partly* followed the referee’s advice. She/he apparently thinks that the *basic* notion is the *non-extensional* one. Perhaps, this is correct. But then, I am uncertain about how to decide this issue, and the above account still seems reasonable to me.

³¹ A grammatical mark of an attribute’s having a determining function is that it smoothly allows for a rephrasing into a relative clause. This is both true of determining phrases (a red ball is a ball *which is red*) and of redundant phrases (a black raven is a raven *that is black*). But it is inappropriate to call a depicted fish (in the intended reading) a fish *which is depicted* (cp. Bolzano’s WL I, § 59: 257f. and Dähnhardt 40ff.). Brentano and Marty seem to subsume under the head of the determining both of the cases which I call *determining* and *redundant* attributes. This indicates that by “determining attribute” they mean what I mean by “attribute with a determining function”).

³² Bolzano refers to Leibniz’ essay “Dialogus de connexione inter res et verba”. For a discussion of the legitimacy of Bolzano’s interpretation of Leibniz’ views see Massimo Mugnai, “Leibniz and Bolzano on the ‘Realm of Truths’,” in *Florence Centre for the History and Philosophy of Science*, ed., *Bolzano’s Wissenschaftslehre 1837–1987 (Proceedings of the International Workshop, Florence 1987)* (Florence: Leo S. Olschki Publisher, 1992): 207–220.

candlestick is a kind of a candlestick in general; a possible thought, on the other hand, is not a kind of a thought in general, but merely a kind of a possibility. (WL I, § 23: 92)³³

Bolzano's remark that the possible thought is "not a kind of a thought" but merely "a kind of a possibility" may sound somewhat esoteric at first. But above, I pointed out that in the case of a determining attribute " φ " it makes sense to say that φ Gs are a particular sort of Gs. If we rephrase Bolzano's message in our terminology, we find that, when he declares that the possible thought is not a kind of a thought, he just denies that "possible" has a determining function – and rightly so, as we have already seen from the example of the possible lottery winner. So the possible thought is not a kind of a thought in general, just as the apparent idiot is not a sort of idiot.

But what about the rest of Bolzano's remark, i.e. that the possible thought is *a kind of a possibility*? To use the comparison with the apparent idiot again, it makes hardly sense to proclaim the apparent idiot to be a kind of an "appearance". Instead of illuminating Bolzano's remark, the analogy makes it even more dubious. What should we say about it then? I suggest we should read Bolzano as using "possibility" as a stand-in for "possible object". Admittedly, there is a tension between this understanding and an ordinary usage of "possibility". On natural occasions, to classify something as a possibility calls for supplementing the predicate with a that-clause ("that we will loose the elections is, unfortunately, a possibility") or perhaps some nominalizations that can be substituted for that-clauses in certain contexts ("losing the elections must be recognised as a possibility", "the loss should have been thought of as a possibility in advance"). This explains why Bolzano's assertion sounds so queer (the queerness, by the way, is even stronger when we speak of particular individuals; normally nobody would ever utter the strange phrase "Robert Burke is a possibility"). But if we read Bolzano's "possibility" as an abbreviation of "possible object", his remark is correct, albeit misleadingly put (and, of course, Robert Burke *is* a possible, yet actual, object). To please modern readers, instead of "a possibility" Bolzano could have used a related Latin phrase, namely "*a possibile*" – whoever is acquainted with the relevant discourse in modal logic would have had no problems of understanding him then.

Now let us focus on "merely possible"; in its natural understanding it is indeed used in a *modifying* way. A merely possible winner is not a winner, and a winner is not merely possible one. Similarly, a merely potential shooting star is not a star at all; and genuine stars, on the other hand, are not adequately described as merely potential stars. Bolzano would therefore correctly reject the Meinongian thesis that a merely possible golden mountain is a golden mountain which just lacks existence, since it is based on a misunderstanding of the rules that govern our use of the

³³ Cp. WL I, § 27: 145.

attribute “merely possible”: whatever a merely possible golden mountain may be, it is surely *not* a golden mountain.³⁴

Accordingly, admitting that there are merely possible golden mountains in no way amounts to the claim that *there are* golden mountains (with some or the other sort of being). Indeed, if there are no actual golden mountains then there are no golden mountains at all. Bolzano provides a simple reason:

As to the circumstance that if there are no actual objects having all the attributes thought of in our idea, there are perhaps some objects in the realm of the possible which have these attributes, one may not forget that our idea of the philosopher Socrates requires him to have actually existed (some 2000 years ago). From this it follows that an entity which did not exist back then cannot be an object of this idea. The same holds true of all ideas which due to their nature require their objects to be something actual (whether at a particular time, or at all times). We must never say of those ideas that they comprise more objects than there are *actual* things which are the way the ideas describe them. For the merely possible things, which lack actuality (at the particular time), do not stand under these ideas already for the reason that they lack actuality. (WL I, § 68: 307)

It is constitutive of the nature of the idea [philosopher] that a philosopher is something actual. Speaking with Bolzano, the idea is *actuality-demanding* (“wirklichkeitsfordernd”),³⁵ and so is also the idea of a mountain. Everything which is rightly called a mountain must be located somewhere and must possess causal powers, while nothing which lacks actuality can ever be a mountain. It could, however, be a merely possible mountain, because “merely possible” is used as a modifying attribute here.

The upshot of this section is that Bolzano denies the following pair of theses, on which Meinong’s theory of merely possible objects is built:

(MT-1) Merely possible *F*s are *F*s,

³⁴ Incidentally, Marty, whose later birth enabled him to reply directly to Meinong, also refers to his distinction between determining and modifying attributes in a longer passage critically addressed to Meinong (Marty 341ff., especially 345, note 3).

³⁵ We find a pendant of Bolzano’s notion in Linsky and Zalta’s account of merely possible objects (“In Defense of the Simplest Quantified Logic,” 456, note 42): they call a property *concreteness-entailing* if it can only be possessed by concrete entities, i.e. by entities which are tempo-spatially located. I may add that I do not know how to define the intended notion exactly; a straightforward way consists in saying that ideas are actuality-demanding iff necessarily, every object of the idea is actual. However, this definition would render any necessarily empty idea actuality-demanding. But this is clearly inadequate for some such ideas: take the idea [round square]. So, one might restrict the definition to ideas which are *possibly* objectual. That, however, would also exclude ideas such as [married bachelor] – but is there not a point in calling this idea, albeit necessarily empty, actuality-demanding? Anyway, we should have a sufficient grasp of the idea to handle more ordinary cases.

(MT-2) There are *F*s (of some sort), if only there could be *F*s.

The first thesis gets the linguistic function of the attribute “merely possible” wrong, and the second fails since if the idea of an *F* involves the actuality of its objects, then there are *no F*s, if there are no *actual F*s. The reasons for Bolzano’s denial seem compelling to me.

b. Merely Possible Objects

I shall now address the question about the nature of Bolzanian merely possible objects more directly. As can be seen from the quotations in section 2, when Bolzano speaks of merely possible *objects*, he contrasts them with actual objects; Bolzanian mere possibilities are non-actual objects.

Now somewhat surprisingly, when Bolzano uses the attributive phrase “merely possible” in combination with the term “object”, he deviates from its ordinary use. For we have seen that normally “merely possible” is used in a modifying way; a fact on which Bolzano relies (albeit he did not put it in that terminology) in holding that merely possible mountains are not mountains. But since in Bolzano’s idiolect, “object” is a term true of everything there is,³⁶ if there are merely possible objects, they must be objects. So when Bolzano calls something a merely possible object, he gives “merely possible” a determining use after all and thus sins against his own insights.

We may, however, reconcile Bolzano’s usage of “merely possible object” with the modifying function of “merely possible” by ascribing to him an elliptical manner of speaking: when he calls something a merely possible object, he just saves some breath; it would have been more accurate, though more cumbersome, to speak of objects which are *merely possibly actual*, that is, of merely possibly actual objects. Here the “merely possible” has its ordinary, modifying use. What it modifies, however, is not term “object” but rather the adjective “actual”. So we can define Bolzano’s notion of a merely possible object as follows:

(Df. MPO) x is a merely possible object $\leftrightarrow_{\text{df}}$ x is non-actual &
 x is possibly actual.

But now the question arises about what relation holds between being a merely possible object and a merely possible *F* for some arbitrary instance of “*F*”. Here it is first of all important to notice that for suitable instances of “*F*”, a merely possible *F* may well be an *actual* object, and thus not a merely possible one. All people who play the lottery are possible winners (at least all those who do not breach the rules). Most of them, however, turn out to be *merely* possible winners. So there are actual people, made of flesh and blood, who are merely possible winners; accordingly,

³⁶ Cf. WL I, § 99: 459.

being a merely possible F is not sufficient for being a merely possible *object* in Bolzano's sense.

Nevertheless, there is more to say about the connection of being a merely possible object and being a merely possible F : *firstly*, there cannot be a "bare" *possibile* (for sake of brevity, I henceforth use "*possible*" as a convenient abbreviation of "merely possible object"; mind the "merely") which is only that – merely possibly actual. Everything which is possibly actual must possess the possibility to be an actual thing *of some specific sort*. So every merely possible object will also be a merely possible F for some substantive instances of " F ". While this is of course also true of actual objects (nobody is everything he could have been), we may notice the following important difference between actual objects and *possibilia*: usually there are many things to say about an actual object much more informative than what it *could have been*. Describing some man as a merely possible winner does not tell us much about him (though it tells us something, for sure). Things are different with merely possible objects, however. Apart from saying that they are non-actual, the most informative way of characterising them will refer to their merely potential characteristics.³⁷ The most important things to say about a merely possible human, for example, are that she could have been a human being, whose child she could have been, etc.

Secondly, while not every instance of " F " is such that being a merely possible F suffices for being a merely possible object, *some* instances do suffice; namely those which signify *essential* properties of the things of which they are true.³⁸ If belonging to a given biological species for example is an essential property of every member of that species, then everything which is a merely possible member of the species must be a *possibile*. Thus, nothing actual can be a merely possible human, if being human is an essential property.

One may wonder at this place in how far a human being could be essentially human on Bolzano's picture: a property P is usually said to be essential to an object x iff necessarily, if x exists then x possesses P . To make sense of this explication we

³⁷ Cp. Williamson's "Bare Possibilia," 266, and "The Necessary Framework," 204.

³⁸ In general, when I talk about essential properties (and also when I make use of modal notions), I rely upon standard modern views on modality which sometimes do not square with some of Bolzano's ideas on modality (for a helpful discussion of these ideas see Mark Textor, *Bolzano's Propositionalism* (Berlin & New York: Walter de Gruyter, 1996), chapter 5, and especially 244–247 on Bolzano's notion of an essential property). In particular, I neglect Bolzano's official doctrine that a property can be called essential to an object x only relative to some idea under which x is conceived (see WL I, § 111: 520). Though my approach may thus be unfaithful to some aspects of Bolzano's philosophical system, I take it that it is much more fruitful for an appraisal of Bolzano's theory of *possibilia* to presuppose some modern views on modality. Furthermore, it can even be argued that Bolzano implicitly relies on an unrelativised notion of essentiality now and then, since he seems to assume that certain objects must fall under certain ideas (cp. Schnieder 201f.).

need a predicate of existence; this is ordinarily defined via the existential quantifier: x exists $\leftrightarrow_{df.} \exists y. y=x$. Essentiality is then defined as follows :

(Df. Ess-1) P is an essential property of $x \leftrightarrow_{df.} \Box (\exists y. y=x \rightarrow x$ possesses $P)$.

But in the framework of merely possible objects developed, a horse could have existed as a merely possible horse, and thus as no horse at all. Therefore, *being a horse* cannot be an essential property in the sense of (Df. Ess-1). The same will hold for nearly all common examples of essential properties, such as having a specific genetic makeup, originating from a certain cell, or being fathered by NN. Merely possible objects are not fathered, do not originate from cells etc.

But I pointed out in section 1 that Bolzano takes “exist” to be ambiguous; sometimes it means as much as “actual”. If we employ this idea, we can define an alternative notion of essentiality that serves our purposes:

(Df. Ess-2) P is an essential property of $x \leftrightarrow_{df.} \Box (x$ is actual $\rightarrow x$ possesses $P)$.³⁹

By distinguishing two senses of “exist”, we accordingly get two senses of “essential”. On Bolzano’s theory of mere possibilities, substantial examples of essential properties belonging to actual things will only be essential in *one* sense of the word, captured by (Df. Ess-2) – so this is the sense I employ in what follows.⁴⁰

In this sense, most actual objects (with the possible exception of God) could have failed to exist: they could have failed to be *actual*. Now, imagine that the *Eiffel Tower* had never been built. Bolzano would describe such a counterfactual situation as one in which that actual object which is the *Eiffel Tower* had existed as a merely possible tower, a non-actual object with the potential to enter actuality *as a tower*. The readers of these lines, likewise, would have been merely possible objects if they had never been born at all. So, in one sense of “exist”, no actual object could have failed to do so – for whether it had been actual or not, there would have been something identical to it.

c. Impossibility, Abstractness, and Modal Spheres

Merely possible objects are to be distinguished from non-actual entities of another sort. Some of the things *there are* lack, *by their nature*, actuality. There are, for example, numbers, propositions, and ideas, and neither are they actual nor could

³⁹ It might be advisable to add the clause “... & $\Diamond x$ possesses P ” to the definiens – otherwise, entities which are non-actual by necessity would have all actuality-entailing properties essential, though lacking them necessarily.

⁴⁰ Linsky and Zalta (“In Defense of the Simplest Quantified Logic,” 447, “In Defense of the Contingently Nonconcrete,” 291) make the same distinction between two senses of “essential property”.

they have been so. So they are not *possible* in the sense in which an object is possible just in case it *could* have been *actual*.⁴¹

Consequently, one might call them impossible (which would be short for: not possibly actual) – and as we shall see, Bolzano does it. However, this title is certainly misleading. For it does not seem unnatural to declare, for example: “Round squares are impossible”. Here we do not mean that *there are* round squares while they could not have been *actual*; instead, we mean that *there could not have been* any round squares. Thus, we may distinguish two meanings of “impossible”: in the first sense, “impossible” is true of everything that is neither actual nor possibly actual. In the second sense, “impossible” does not function as phrase that is true of anything. But it can be used to formulate true statements by combining it with terms expressing contradictory ideas like “round square” (presumably, this is the more natural interpretation of the term). Used like that, “impossible” differs crucially from other modal notions; while the other notions demarcate spheres of objects, there simply are no ‘impossible objects’ in the second sense of “impossible”, and therefore ‘they’ do not form a sphere.

To avoid confusion, it might be better avoid the term “impossible” and speak of *abstract* objects on the one hand,⁴² and take a deeper breath to describe what we want to describe with the second notion of impossibility: that it leads to a contradiction to assume that there are things of such-and-such a sort.

We may now use the following stock of adjectives to classify entities with respect to our current interest:

- (a) actual (b) non-actual (c) possible (d) necessary
 (e) contingent (f) merely possible (g) abstract.

The relations between the mentioned modal terms can be illustrated by the following diagram:

⁴¹ The distinction I shall make, i.e. the distinction between abstract and merely possible objects, is also made by Williamson (“Bare Possibilia,” 265f.) and by Linsky & Zalta (“In Defense of the Contingently Nonconcrete,” 293, note 10; in “In Defense of the Simplest Quantified Logic,” 446, they had not yet made this distinction *in these terms*, but rather distinguished between contingently and necessarily abstract objects).

⁴² Beware of new confusions: “Abstract” is a term with multiple uses; philosophers differ in what they are willing to call abstract, and these are not just disputes about single cases. There are differences with regard to the very *point* of calling something abstract: one cluster of notions of abstractness is tied, in one way or another, to the notions of space, time and causality (this is the relevant cluster for the present concerns). Another tradition ties the notion of abstractness more or less directly to the act of (mentally) abstracting something from something; though such a notion will have a psychological flavour in its origin, it may perhaps be freed of it by turning to the idea of something’s being an *aspect* of something else (see for example Donald Williams, “Universals and Existents,” *Australasian Journal of Philosophy* 64 (1986): 1–14, 3). And these are but two influential strands of the usage of “abstract”.

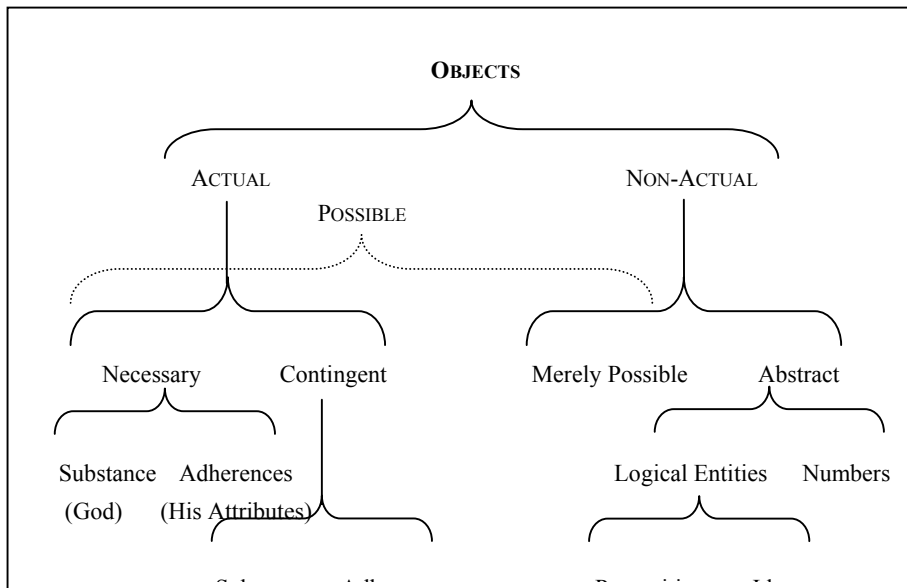


Figure 2: Modal Realms (and some inhabitants)

To finish our discussion of these modal notions, a short exegetical digression shall be in order. It might help to explain how the aforementioned scholarly tendency to ignore Bolzano’s conception of merely possible objects could arise.

Unfortunately, Bolzano himself apparently muddled up the two notions of impossibility distinguished above in a passage quite pivotal to his ideas about modality. In section 182 of the *Theory of Science*, a section wholly devoted to a discussion of modal notions, he proposes a definition of “is necessary” as a predicate which is true of an entity if it is necessarily actual (the intended extension for this predicate is God). Bolzano then goes on as follows:

If to the contrary not the proposition: A’ is, but rather the proposition: A’ is not, is a purely conceptual truth: then we say that the object A which stands under the idea A’ is impossible. (WL II, § 182: 230)⁴³

Bolzano here defines a concept, [impossible], which should be *true* of certain *objects*, namely of those about which it is conceptually true to say that they *are* not (i.e. that they are not actual). That is, he defines a notion of *abstractness*. Thus, an example of an impossible entity in the sense defined would be a proposition (incidentally, we met this Bolzanian use of “impossible” before; in a passage quoted in section 2, Bolzano talks of dividing the universal domain into two subclasses, the

⁴³ Bolzano normally uses an inverted comma after a schematic letter to talk about the idea expressed by a phrase substituted for the letter. In the quotation above, only the third inverted comma is in accordance with this rule, while the first two commas must be eliminated to render the whole passage sensible.

possible and the impossible objects). However, Bolzano himself gives the following example to illustrate his notion:

Thus we say, for example, that an omnipotent creature is something impossible, because the proposition that there is no such creature is a purely conceptual truth. (loc. cit.)

Here Bolzano temporarily misunderstands his own intention – or so we must assume. The example he provides misses its point. To start with, let me briefly explain the example: according to classical theism (on which Bolzano is relying here), there can be only one omnipotent being; such a being must furthermore be *unconditioned* (i.e. it must not be caused by anything else). But a *creature* is something *created* and therefore a conditioned being; hence it cannot be omnipotent.

Now, however, it is easy to see that an omnipotent creature is *not* impossible in the sense Bolzano just defined. As we have seen, Bolzano would hold the concept of an omnipotent creature to be *contradictory*. Therefore, he would also hold that *there simply is no such creature*.⁴⁴ But then, a fortiori, there is no such creature *of which* it is conceptually true that it is non-actual. The only thing which is conceptually true is that *there is* no such thing. So we can say that such a creature is impossible in the *second sense*, but this is not the relevant sense here.

The quoted passage may have led some Bolzano scholars into confusion about his ideas on modality; the misleading example may have suggested that he was not defining a term true of objects at all, and this (wrong) reading possibly led to further misinterpretations of other passages about merely possible objects.

d. Merely possible objects are not indeterminate

Back to the substantial aspects of the theory and to another comparison between Meinong's and Bolzano's accounts: typically, a Meinongian merely possible object will be *indeterminate*, that is, there will be properties with respect to which it is not settled whether the object has them.⁴⁵ Bolzano, however, was no friend of indeterminateness:

⁴⁴ Bolzano did not believe in objects which exhibit contradictory properties, as he often declared quite explicitly. In fact, he uses contradictory object-ideas as standard examples of *non-objectual* ideas (cp. WL I, §§ 67 and 70).

⁴⁵ Meinong speaks in such a case of *incomplete* objects: “[...] the ‘abstract’ C has therefore the very peculiar property that it neither possesses nor lacks any intensity. [...] The object is not determined with regard to the moment of intensity. We cannot, as a result, call it simply undetermined, but rather incompletely determined, or maybe shorter ‘incomplete’.” (p. (327) of *Über die Stellung der Gegenstandstheorie im System der Wissenschaften*, in Haller & Kindinger & Chisholm, eds., *Alexius Meinong Gesamtausgabe V* (Graz: Akademische Druck- u. Verlagsgesellschaft, 1973): (199) – (365)). For a longer discussion of incompleteness see pp. 168–181 of Meinong's *Über*

Not only actual objects, [...] but also merely possible objects, and even those objects, which can never become actual, in a word, *all* objects without any exception (any something you like) possess universal determinateness; such that it is wholly correct to say [...] that given any two contradictory features, every object (and thus every logical object) must possess one of them. (WL I, § 45: 209)⁴⁶

For the formulation of Bolzano's contention, let us agree on the following convention: given a property P , " $non-P$ " denotes the property of lacking P .⁴⁷ Then we can define the notion of an object's being *determinate* as follows (if an object is not determinate, it is *incomplete* in Meinong's sense):⁴⁸

(Df. Dt) x is *determinate* $\leftrightarrow_{df.} \forall P (x \text{ has } P \vee x \text{ has } non-P)$.⁴⁹

In the quoted passage, Bolzano can then be seen as advocating the principle:

(DT) $\forall x (x \text{ is determinate})$.

The Meinongian golden mountain is neither green nor red, nor does it possess any other colour (I assume that "golden" is not used as a colour word here, but rather in the meaning: *made from gold*); however, Meinong would say, it is not colourless either. Here Bolzano disagrees. Any merely possible mountain will either possess a colour or be colourless – and because only *actual* objects possess colours, every merely possible mountain is colourless. On the other hand, it seems likely that every merely possible mountain could have been of any colour; so if x is such a possible mountain, then x will be possibly green, possibly red etc. Of course, it will not be possibly green and red *all over* and *simultaneously*. The relation of possibly having a property is not closed under conjunction of properties:

Möglichkeit und Wahrscheinlichkeit, in R. Haller & R. Kindinger & R. M. Chisholm, eds., *Alexius Meinong Gesamtausgabe* VI (Graz: Akademische Druck- u. Verlagsgesellschaft, 1972). According to Meinong, all actual and all subsisting (*bestehende*) objects are complete, while typical examples of merely possible objects are incomplete – however, he does not take incompleteness to be a necessary condition of being a merely possible object (op. cit. 179). While Jacquette (116) ignores this view of Meinong, Parsons (106f.) not only acknowledges it but even attempts to prove that there are determinate non-existents.

⁴⁶ Cp. *Paradoxien des Unendlichen* (Leipzig: Reclam, 1851), § 26: 37f.

⁴⁷ Bolzano assumes that for every property P there is the corresponding property *non-P* (WL II, § 136: 47).

⁴⁸ For sake of simplicity, I neglect the fact that many properties are only possessed *at certain times*; temporal qualifications could easily be integrated into the principle.

⁴⁹ In their treatments of Meinong, Jacquette (117) and Parsons (116) present essentially the same definition (their versions, however, employ the distinction between nuclear and extra-nuclear properties, which I can ignore for my purposes).

(CC) x possibly has P & x possibly has Q

DOES NOT IMPLY x possibly has both P and Q .

It is worthwhile to reflect briefly upon the difference between (DT) and a similar principle which Bolzano rejects:

(OR) Of any two given propositions [a has P] and [a has $non-P$], one is true and the other is false.⁵⁰

As long as we only focus on propositions whose subject-ideas are objectual, (OR) is a consequence of (DT), and indeed correct. Of the propositions [BS is human] and [BS is not human], one must be false and the other true. But when pairs of propositions with *empty* subject-ideas are considered, the principles come apart. (DT) does not have any implications about the truth or falsity of such pairs, while (OR) obviously has. And these implications can be rejected, even if one holds (DT) to be true: Bolzano believes every proposition with an empty subject-idea to be false.⁵¹ Thus, if we take [Vulcan] as an example of an empty idea, Bolzano will maintain that both of the following pair of propositions are false: [Vulcan has the property of being a planet] and [Vulcan has the property of not being a planet].

e. Past and Future Objects

Since there are merely possible objects, things which could have been actual though they are not, being actual is in general not a necessary feature of the objects possessing it. But Bolzano goes farther: being actual, he holds, is not only a *contingent* but even a *temporary* feature of the things that exhibit it, that is, it may be gained at some time and lost at another.

Sometimes the actual realm acquires new inhabitants; houses are built and babies born. Sometimes it loses inhabitants; old men die and statues are pulled down and smashed into pieces. Together, the two kinds of events mentioned (something's coming into being and something's passing away) form the traditional

⁵⁰ Notice that (OR), just like (Df. Dt), makes use of *predicate* (or rather: property) negation and not of *sentential* negation (a distinction clearly drawn by Bolzano; see WL II, § 136). Bolzano accepts bivalence and thus thinks that for any proposition, either it or its negation must be true (WL II, § 125). This is compatible with his denial of (OR), since the negation of [a has P] is not [a has $non-P$] but rather [it is not the case that a has P], which is, according to Bolzano, equivalent to [the proposition that a has P is false].

⁵¹ Cf. WL II, § 196: 328ff.

category of *substantial changes*. In the following quotation, Bolzano relates his views about mere possibility to the topic of substantial change.⁵²

If we can correctly claim about some object that *it is becoming / coming into being* or that it is *about to come into being*, then this object must obviously belong to the class of things that can become actual. But the object need not already possess actuality when it is said to be coming into being; it will rather acquire this at some future time. (WL II, § 183: 241)

Bolzano assumes that if some actual entity comes into being, no truly new *object* is involved. Though he does not mention the notion of something's passing away here, it seems likely that he would hold the parallel claim that when an object passed away, it is not literally lost but just left the realm of the actual. Substantial change then involves only a change in some objects' modal status, while the total stock of objects remains the same. So, if an entity x came into being at a time t , then before t there was a non-actual but possible object identical with x which at t acquired actuality. Analogously, if an actual entity x passes away at t , it loses actuality at that moment – at later times there will be a non-actual object, identical with x .

To spell this out properly we may introduce some temporalized modal notions and speak about mere possibility at a given time. We can define such a notion on the basis of a temporalized notion of actuality and the absolute notion of possibility with which he have dealt so far:

(MPS) x is merely possible *simpliciter* \leftrightarrow_{df}
 (i) x is a possible object, but (ii) x is *never* actual.

(MPR) x is merely possible at a time t \leftrightarrow_{df}
 (i) x is a possible object, and (ii) x is not actual *at t*.

So we can say that some objects are actual at some times and merely possible at others. For every moment the class of possible objects will then divide into *future*, *present*, and *past* objects on the one hand, and those which are merely possible *tout court* on the other.

f. What merely possible objects are there?

Though we have already learned most of the essentials of Bolzano's conception of the different modal spheres and of merely possible entities, one central question has not yet been tackled: what merely possible objects are there, according to Bolzano's theory?

⁵² Williamson also sees a connection between substantial change and the ontology of merely possible objects; see "Bare Possibilia," 265f., and "The Necessary Framework," 204.

(S-EM) If the idea [merely possible F] is not contradictory, then there are merely possible F s.

Every instance of (S-EM) implies that there are objects which are merely possibly *such-and-such*; but not every such instance implies that there are *merely possible objects*: if we substitute “lottery winner” for “ F ”, the result only implies that there are merely possible lottery winners; but, as we have seen, merely possible *winners* need not be merely possible objects. If, however, we replace “ F ” with a general term that signifies an *essential* property of actual objects, then the resulting instance of (S-EM) is an existence-condition for merely possible objects of some sort. If we substitute, for example, the general term “horse”, we obtain:

(1) If the idea [merely possible horse] is not contradictory, then there are merely possible horses.

On Bolzano’s account, the antecedent of (1) is true, and so there are merely possible horses.

Now that we know what existence-conditions for merely possible objects Bolzano has on offer, we should ask whether they are acceptable. Unfortunately, we have to answer in the negative. The conditions are governed by the extremely generous principle (BOI), which is far too generous, as some examples produced by Simon Dähnhardt (39) show: take the idea [the object that Caesar’s recent thought was about]. Obviously, it is neither contradictory nor actuality-demanding (the idea would have had a non-actual object, if Caesar had just been thinking of a number). So, according to (BOI) the idea is objectual. But because Caesar has been dead for centuries, he was not thinking anything recently. To suppose that there is an object about which he just formed some thoughts is therefore evidently mistaken, and so is (BOI). Or take Dähnhardt’s second example, the idea [the object denoted (in English) by “the irrational prime number”]. This idea is not contradictory (the quoted expression could have had a different meaning in English), but as a matter of fact it lacks an object. Both examples work by the same mechanism, and we could easily produce many analogous cases.

Dähnhardt’s counterexamples involve ideas that leave it unspecified whether their objects are actual or not. So, he suggests, we could remedy (BOI) by a scope-restriction to ideas that *demand* their (potential) objects to be *non-actual*:

(BOI*) For every object-idea i :

i is objectual if

- (i) i is not contradictory &
- (ii) i is *non-actuality*-demanding.

But this is no good either, as Dähnhardt’s own counterexamples, in a slightly modified form, show: the idea [the *non-actual* object that Caesar’s recent thought was about] passes both clauses of (BOI*), but it is as certainly non-objectual as Dähnhardt’s original example. The same holds for [the *number* denoted (in English)

by “the irrational prime number”], and the idea [mathematical theorem named after Hegel] (an example suggested by Wolfgang Künne).

Both (BOI) and its variant (BOI*) have proven inadequate. Their deficits, so far brought out by examples concerned with abstract objects, are also relevant for merely possible objects: take the idea [merely possible human who is identical to BS]. According to Bolzano’s theory, the idea is not contradictory; I myself would have been its object, if I had never been born. Furthermore, the idea is *non-actuality-demanding* (I cling to my working assumption that being human is an essential feature of human beings; then any merely possible human is a non-actual object). Hence, the said idea should be objectual both by the standards of (BOI) and (BOI*). But assume it were objectual; what could serve as its object? Obviously, it could not be me (I am not a merely possible human). So there would have to be, *in addition* to myself, a merely possible myself.⁵⁵ But that is absurd, at least if identity is necessary. For assume x is a merely possible man identical to me. Then, by necessity of identity, $x = \text{myself}$. On the other hand, x , by assumption, is non-actual while I am actual; so, the *Law of the Indiscernibility of the Identical* yields $x \neq \text{myself}$. So, the assumption that the idea [merely possible human who is identical to BS] is objectual, together with the empirical fact of my actual existence, leads to a brute contradiction. This not only defeats (BOI) and (BOI*), but it also shows that the existential schema (S-EM) is invalid.

What could be done about the defective principles? Dähnhardt observed that the ideas which he used as counterexamples against (BOI) are neutral with respect to the actuality of their objects, and he thought that it is this feature which makes them troublesome. He erred in his diagnosis. But the troublemakers have some other feature in common that we can exploit to exclude problematic cases. They place certain constraints on how the actual realm is constituted, while these constraints are not met by reality: most of the troubling examples, albeit not presupposing the actuality of *their objects*, presuppose the actuality of *some other* objects, while the relevant presuppositions turn out to be false. Thus, the idea [the object that Caesar’s recent thought was about] presupposes that Caesar has recently engaged some thought, while he has not. The idea [mathematical theorem named after Hegel] presupposes that once some act of naming took place that actually did *not* take place. And the idea [the object denoted (in English) by “the irrational prime number”] presupposes that the phrase “the irrational prime number” has an enacted usage of a kind which would bestow it with a reference. But the only existing usage is not of that kind. Things are slightly different with the idea [merely possible human who is identical to BS]. This idea presupposes the *non-actuality* of some object which in fact *is* actual: the said idea can only be objectual, if I am *not* actual,

⁵⁵ Morscher (*Das logische An-sich*: 183) remarked that Bolzano (probably unintentionally) commits himself to accept a merely possible counterpart for every actual object x . We have seen above that Morscher is right (*pace* Neemann 79f.).

While instances of this schema imply that there are objects of some sort, namely possible *F*s, these instances are *neutral* with respect to the ontological status of the objects they postulate; it is left open by (S-EM*) whether these objects are *actual* or *non-actual*. Due to this neutrality, (S-EM*) is compatible with the example that was problematic for (S-EM): the idea [merely possible human who is identical to BS] is not contradictory, but due to my actual existence it is not objectual either. So it defeats (S-EM). But (S-EM*) is unaffected, because there is a *possible* human who is identical to BS – I am this possible (and furthermore actual) human myself.

To better understand the neutrality of (S-EM*), we should see that possible *F*s could either be (i) actual *F*s, or (ii) actual objects which are merely possibly *F*s, or finally (iii) *possibilia* which are merely possibly *F*s. Thus, to make the import of (S-EM*) somewhat clearer, we could reformulate it as follows:

(S-EM**) If the idea [merely possible *F*] is not contradictory, then

- (i) there are *F*s, *or*
- (ii) there are non-actual objects which are merely possible *F*s, *or*
- (iii) there are actual objects which are not *F*s, but which could have been *F*s.

Notice that the disjunction in (S-EM**) is *inclusive*; there can be actual *F*s and non-actual merely possible *F*s at the same time (there are mountains and there are merely possible mountains). Similarly, there can be at the same time actual and non-actual objects that are merely possible *F*s (there are actual people who are merely possible winners, and yet there are also merely possible people, which are also merely possible winners).

We have seen that some instances of (S-EM*) yield sufficient existence conditions for various kinds of *possibilia*. What (S-EM*) cannot provide, however, are necessary and sufficient existence-conditions, and due to its peculiar form it cannot systematically cover all interesting cases. So it is a partial result, upon which I cannot improve here any further.⁵⁶

Before finishing this section I want to point out that the validity of schema (S-EM*) (the same holds for the defective original (S-EM)) implies the validity of the so called *Barcan Formula*, which can be stated by the following schema:

(BF) $\diamond (\exists x. Fx) \rightarrow \exists x \diamond Fx.$

⁵⁶ Other existential claims about *possibilia* can be won from more sophisticated considerations which I cannot lay down here in detail. To have but one example, consider the fact that, for suitable instances of “*F*”, the number of *F*s populating the universe will not be limited by any metaphysical boundaries (there are no limits to the possible number of mountains, human beings etc.). This insight may be used in an argument establishing on the basis of (S-EM*) that there are infinitely many merely possible *F*s, if “*F*” signifies an essential property of actual entities.

To see this we just have to realize that if it is possible that there are F s, then the idea [F] is not contradictory. The consequent of (BF) is just the consequent of (S-EM*).

Bolzano thus unknowingly committed himself to the acceptance of the Barcan Formula by postulating a generous principle as (BOI**) – or: (BOI). This fact deserves to be stressed because it shows how close Bolzano's account and Linsky's, Zalta's, and Williamson's theories, which I have referred to repeatedly, really are (the latter also assume the validity of the Barcan Formula, and they are even motivated, at least partly, by the intention to show how to validate the Formula).

4. Conclusion

I have shown that Bolzano's thoughts on merely possible objects form a coherent ontological view. His account has not been properly reconstructed before; indeed, it has sometimes been denied that there is any such account. On the background of the foregoing discussion, I may suppose that at least three factors have contributed to this fact: *firstly*, Bolzano's remarks are scattered among his works and may have been overlooked by some readers. *Secondly*, general doubts about an ontological frame of mere *possibilia* may have been a motive to ignore or misinterpret passages in which Bolzano committed himself to such entities. And *thirdly*, we have seen that Bolzano himself may have confused some of his readers by providing at a crucial place an example contravening the spirit of his own theory (cf. section 3.c.).

But despite these possible reasons to neglect Bolzano's account, we have seen that it indeed deserves to be so called. His views form a coherent picture, of which the following definitions, theorems and theorem-yielding schemata constitute cornerstones:

- (Df. MPO) x is a merely possible object $\leftrightarrow_{\text{df.}}$ x is non-actual & x is possibly actual.
- (Bol-1) A merely possible F is not an F .
- (Bol-2) Every merely possible object is determinate.
- (Bol-3) Actuality is a contingent and temporary property (at least generally; an exception to this claim may be provided by God).
- (Bol-4) If an actual entity had not been actual, it would have been a *possibile*. When an entity comes into being or passes away it switches between actuality and mere possibility (in the temporalized sense).
- (Bol-5) If there could be F s, then there are possible F s.

Because the current article is a study on Bolzano, I have not discussed the question about the merits of the discussed ontology of merely possible objects. Coherent as it is, the assumption that there are legions of non-actual, yet possible entities, of which all contingent entities could have been members, certainly has an air of absurdity to many contemporary philosophers. So we may wonder what motives had driven Bolzano to his position. Unfortunately though, it seems as if he did not feel the need for providing reasons here; I have never come across any attempt of doing it in Bolzano's writings.

An argument for the acceptance of his ontological frame which had not been at Bolzano's disposal was brought forward by Linsky, Zalta, and Williamson. These modern proponents of the theory are moved towards their ontology by considerations about the relative merits of certain formal modal systems, in which the Barcan Formula is valid. Such a reasoning could not have motivated Bolzano, not even implicitly, since he simply did not know about formal modal logic at all.

Rather, if Bolzano really did not think it necessary to provide reasons for his ideas on mere possibilities, he apparently just deemed them *intuitively plausible*. While nowadays, Bolzano's intuitions may not be shared by many a philosopher, we are shown by the works of Linsky, Zalta, and Williamson that his resulting theory may nevertheless still be attractive.⁵⁷

⁵⁷ I would like to thank Thorsten Fellberg, Wolfgang Künne, Timothy Williamson, and two anonymous referees of this journal for their helpful comments.