Proof of the Existence of Universals – and Roman Ingarden's Ontology

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Abstract The paper ends with an argument that says: necessarily, if there are finitely spatially extended particulars, then there are monadic universals. Before that, in order to characterize the distinction between particulars and universals, Roman Ingarden's notions of "existential moments" and "modes (ways) of being" are presented; and a new pair of such existential moments is introduced: Multiplicity-Monadicity. Also, it is argued that there are not only real universals, but instances of universals (tropes) and fictional universals, too.

Keywords Universals · Particulars · Ingarden · Ways of being · Existential moments

1 Universals in the light of Roman Ingarden's philosophy

Roman Ingarden was a realist – with respect to both the spatiotemporal world and to universals. However, it seems that if he is famous today, it is not because of this double ontological realism but in spite of it. In present-day philosophy, he figures mainly in historical overviews of two traditions: Polish philosophy and phenomenological philosophy.[1]

As is reflected in the title of his main book(s), *The Controversy over the Existence of the World*,[2] Ingarden devoted himself more to an investigation of the controversy between idealism and the belief in the existence of the external world than to what might be called

[1] Recent English-speaking exceptions to the rule are J. Mitscherling, *Roman Ingarden's Ontology and Aesthetics* (1997), and A. Chrudzimski (ed.), *Existence, Culture, and Persons. The Ontology of Roman Ingarden* (2005). In the footnotes that follow, Mitscherling's book will be referred to simply as *Mitscherling*. Recent German-speaking exceptions are Chrudzimski, *Die Erkenntnistheorie von Roman Ingarden* (1999), D. v. Wachter, *Dinge und Eigenschaften* (2000, chapter 2), and K. Rynkiewicz, *Zwischen Realismus und Idealismus* (2008). The last book is a very long and detailed introduction to Ingarden, which I guess will be the classic non-Polish introduction to Ingarden for a long time to come. Its bibliography covers English, German, and Polish books and articles; missing is, though, M. Rosiak (2003). Let me add that I cannot read Polish at all.

[2] The German version written by Ingarden consists of three parts and four books, *Der Streit um die Existenz der Welt* I, II/1, II/2, and III, with a title of its own, *Über die kausale Struktur der Realen Welt*. They will be referred to as *Streit* I, II/1, II/2, and III, respectively. Large parts of volume I have been translated from Polish into English (by H. R. Michejda) and published as *Times and Modes of Being* (1964); it will be referred to as *Modes*. When possible, I will use her translations of Ingarden's terms. An exposition of some other translations is presented in footnotes 5 and, in particular, 22.

"The Controversy over the Existence of Universals". He took the existence of universals more or less for granted. In what follows, I will go the opposite way. I will take the existence of a plurality of spatiotemporal particulars for granted and argue in favor of the existence of universals. In this defense of universals, I will try to improve on some of Ingarden's analyses in order to find a better, more naturalist analysis of universals than that somewhat Platonist one he himself seems to cling to.[3] Ingarden's basic notions of "mode of being" and "existential moment" contain, as I will show, hitherto unexplored possibilities.

To readers who are already familiar with Ingarden's views and terminology, I can immediately present my view on universals: there are universals, but none is an *ideal* extratemporal entity; instead, universals are *real* temporal entities. Furthermore, we can also create *purely intentional* universals.

In my opinion, Ingarden is by no means of mere historical interest. If contemporary philosophy ever sees the end of the dominance of nominalism, social constructivism, and phenomenological bracketing, I think it will be either because Ingarden's basic analyses are rightly appreciated or because some of these views are rediscovered independently of his writings. In particular, I am thinking of his views on so-called fictional objects or what he calls *purely intentional beings*.[4]

2 Ingarden's Basic Views

According to Ingarden, in order to settle "The Controversy over the Existence of the World" one must first answer two preliminary questions: "What *existential moments* are there?" and "What *modes of being* can these moments possibly give rise to?" Only when this has been done, he thinks, is it meaningful to try to find out how the external world is in fact constituted and in what mode of being the so-called material things exist.

What, then, is a mode of being? Isn't it enough to talk about different *kinds* of being? No, according to Ingarden, it is not. Imagine that some philosophers are discussing whether entities of a certain kind, F, exist necessarily or contingently. Their question is not a question about whether what is regarded as F really is of the kind F; the question is *in what way*

[3] It should however be noted that Ingarden did not like to be called a Platonist. In a footnote, not included in *Modes*, he explicitly mentions "The objection of being a so-called Platonist, that is often made against me" saying that his *formal* investigations go much farther than anything to be found in Plato, and that Plato's view that knowledge about ideal entities is obtained through recollection is him quite foreign (*Streit* I 260, note 11).
[4] See *Mitscherling* chapters four and five. Ingarden's classic in this respect is his *The Literary Work of Art*; in what follows referred to as LWA.

(modus) Fs can exist.[5] Philosophy certainly needs the notion of "mode of being", but, equally certainly, this does no more to show that there are different modes of being than the existence of the notion of "unicorn" shows that there really are unicorns. Ingarden, however, is firmly convinced that there is more than one mode of being.

Plato proposed an ontology with four modes of being: (1) ideas or forms, i.e., the upper part of the extratemporal world of ideas; (2) concepts and mathematical entities, i.e., the lower part of the world of ideas; (3) primary sensible spatiotemporal entities; and (4) copies of such sensible entities, i.e., shadows, statues, pictures, etc. Ingarden thinks, somewhat analogously, that exactly four main modes of being are at least logically possible. Entities may exist:

(A) Absolutely (and be absolute entities),
(B) Extratemporally (or ideally, and be ideal entities),
(C) Temporally (or really, and be real entities),
(D) Purely Intentionally (and be fictional entities).[6]

This is the result of Ingarden's so-called "existential-ontological analysis", which he distinguishes from both "formal-ontological" and "material-ontological" analyses.[7] However, for the purposes of this paper these differences are not important. Here, it is sufficient to distinguish all of these *ontological* kinds of analyses from what Ingarden calls *metaphysical* investigations; the latter, he says, are needed if one wants to come to a definite conclusion about what really exists. Ingarden makes no such metaphysical investigations himself, but I will end with one. Implicitly, however, one nonetheless gets some indications about what his metaphysical views are like. He seems to have no definite view about the existence of absolute entities,[8] but thinks that there are real and fictional entities, and that there are probably ideal entities as well. About ideal entities he says that "it is of rather incidental

[5] "Seinsweise" ("*modes* of being") has even been translated as "*kinds* of being" (see Wachter, "Roman Ingarden's Ontology").
[6] The concepts of "ideal entities" and "real entities" are Ingarden's, but that of "fictional entities" is not wholly so. In *Modes* (159, 160, 161) one finds the three headings: "B (Extratemporal Being, Ideal?)", "C (Temporal Being, Real?)", and "D (Purely Intentional Being)", but in the original Polish edition there is neither "Ideal?" nor "Real?". In the German *Streit* I, B and C look the same (259, 260), but D says (in English) "D Purely Intentional Being, Possible Being?" (262). Why this confusion exists, and why, furthermore, Ingarden adds question marks, I do not know. Perhaps it has to do with the fact that he sometimes identifies the present with the real (*Modes* 39-40, *Streit* I 76), whereas in the headings mentioned the real embraces also the past and future. Be that as it may, I will interpret him as if the question marks can simply be deleted. He does not speak of fictional objects when he introduces the notion of "purely intentional being", *Modes* 162-163, *Streit* I 262-263, but now and then he talks of such beings as fictions; see e.g. *Streit* II/1 215 and LWA lxxxii.
[7] For more details about these distinctions, see *Mitscherling* 84-88.
[8] He writes, for instance, that "Whether either of these varieties of 'absolute' being really occurs anywhere, whether both of them are possible or only one–these are all questions which must still be clarified"; *Modes* 157, *Streit* I 257.

[importance] to the problem of the existence of the real world what the *modus existentiae* of ideal objects or ideas is. Hence, only as a certain kind of hypothetical concept do I propose the mode of being [B]".[9] For Ingarden, the main problem is whether what we regard as material things are real entities (mode C), as he himself believes, or purely intentional entities (mode D) created by transcendental egos, as the later Husserl believes.

With respect to the temporal mode of being, Ingarden introduces several sub-modes (as I will say) or varieties (as he himself says).[10] These sub-modes can be represented as being orthogonal to each other in the way, for example, that hue and intensity are often represented as being orthogonal to each other in the classification of colors. In one dimension, what exists temporally can be classified as being either

(C1) objects (real entities existing in the objectual sub-mode),
(C2) processes (real entities existing in the processual sub-mode), or
(C3) events (real entities existing in the event-sub-mode);[11]

but in another dimension real entities can be classified as having existence either

(CI) in the (sub-mode of the) present,
(CII) in the (sub-mode of the) past, or
(CIII) in the (sub-mode of the) future.[12]

[9] *Modes* 159, *Streit* I 259. I leave out of account Ingarden's distinction between two kinds of universals: ideas ("Ideen") and pure qualities ("reine Qualitäten"); about this, see (*Streit* I 39f, Wachter (2000) and Rynkiewicz (2008).

[10] *Modes* 161f, *Streit* I 260f. The sub-modes of the present, past, and future might also be called *phases*.

[11] Events are necessarily punctual, and processes have necessarily duration; *Modes* 102, *Streit* I 194. According to Ingarden, events such as the starting- and end points of something are punctual, but, as far as I know, he never takes a definite stand on the question whether the punctual is necessarily infinitesimally punctual or not; compare G. Haefliger and G. Küng. "Substances, States, Processes, Events", pp. 30-33. Ingarden's tripartition can be compared with the bipartite distinction between *endurants* (Ingarden's objects) and *perdurants* (processes) made famous by David Lewis in *On the Plurality of Worlds* (1986), pp. 202-205. Lewis's distinction is more or less the same as W. E. Johnson's bipartition between *continuants* and *occurrents*; see his *Logic* part III (1921). Endurants/continuants have no temporal parts and are in this sense identical through time, whereas perdurants/occurrents persist by unfolding temporal parts. My sympathies are with Ingarden. Both objects (endurants/continuants) and processes (perdurants/occurrents) persist, i.e., they are extended in time, but a complete ontology must also take account of what is non-persisting, i.e., what is punctual. There is however a complication in this comparison. It seems to be the case that all universals that can exist in the objectual sub-mode can also exist in the event-sub-mode, and vice versa, whereas universals that exist in the processual sub-mode cannot exist in any other sub-mode. This complication is discussed in I. Johansson, "Qualities, Quantities, and the Endurant-Perdurant Distinction in Top-Level Ontologies".

[12] This may be taken to imply that the distinction between object, process, and event is applicable in all the modes of present, past, and future, but Ingarden is forced to say something else. According to him, the mode of the future (and also that of the purely intentional) contains only a bipartition, not the tripartition object, process, and event; see *Modes* 161, *Streit* I 260-261. The sub-mode of objects in the future is deleted, since the existential

When we combine CI and C1 we obtain, I would say, the mode of being that contains those entities which are most perspicuous in perception, entities in the temporal-present-objectual mode of being. Ingarden regards both organisms and persons as enduring objects with a "stratiform structure" and "dynamic" kind of enduring identity.[13]

It should be noted that Ingarden is of the opinion that "*One and the same thing* cannot exist first in one mode of being, and then in another." He adds: "We say that '*such and such case* which heretofore had merely been a possibility, has become an actuality.' However, this is only a certain manner of speaking that should not be taken literally."[14] These two statements of Ingarden's have to be interpreted in such a way that they become compatible with his view that objects (C1) endure through time.[15]

Modes of being are not simple; they are complex unities of existential moments. This means, among other things, that an entity can only belong to one mode of being but can – and must – have a plurality of existential moments; no mode of being can consist of only one existential moment. There are three basic pairs of contrary opposites of existential moments; every possible mode of being has to have one moment from each of these pairs. I will explain them one by one; the German terms are Ingarden's. In my order of exposition, the first pair is:

- Originality ("Ursprünglichkeit") – Derivation ("Abgeleitetheit")

It is tempting to say that entities having the existential moment of originality are entities whose essence implies existence. However, this is not exactly what Ingarden says. Perhaps he thinks that such a statement would belong to a metaphysical and not to an existential-ontological investigation, since the latter is not concerned with actual existence. Instead, he says that original entities are entities that cannot have been created.[16] That is, either they exist in and of themselves or they cannot (despite not being logical contradictions) come into existence at all. Examples (mine) could be God in medieval philosophy, the Idea of the Good in Plato's philosophy, and Necessary Existents in contemporary analytic metaphysics. All

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moment of "self-dependence", which objects must have, cannot be combined with the moment of "heteronomy", which the future must have; the terms within scare quotes are explained in the pages to follow.

[13] *Modes* 141-156, *Streit* I 232-245. He has also written some pages about the subsystems of the human body; see Ingarden, *Man and Value* (1983), pp. 84-100.

[14] *Modes* 37, *Streit* I 74.

[15] In my opinion, this can only be done by allowing some kind of relation to bridge the gap between the sub-modes of the present and the past. The chair I was sitting on two minutes ago, which now exists in the sub-mode of the past, cannot be identical with the chair I am sitting on now, which exists in the sub-mode of the present; but the "pastly" existing chair must of course have some kind of relation to the presently existing chair.

[16] *Modes* 52, *Streit* I 87.

entities that lack originality have the moment of derivation. Everything that exists absolutely must have the moment of originality.

- Separateness ("Selbständigkeit") – Inseparateness ("Unselbständigkeit")

Entities that have the moment of separateness, when they have come into being in some way or other, can exist in themselves, whereas entities that have the moment of inseparateness are *always* dependent on something else for their existence. Cartesian material and mental substances have the moment of separateness, but their properties (modes) have the moment of inseparateness. That is, the latter cannot be separated from the former.

- Autonomy ("Autonomie") – Heteronomy ("Heteronomie")

In my opinion, Ingarden's conception of heteronomy is by far his most original contribution to philosophy, and it was already worked out in *The Literary Work of Art* (1931), although the term is mentioned here only in passing.[17] In *The Controversy over the Existence of the World* he gives examples of two kinds of entities that have the moment of heteronomy: fictions (entities that exist in the mode of the purely intentional) and empirical possibilities (entities that exist in the mode of the future). The moment of heteronomy must by no means be conflated with the moment of inseparateness. Think of a property instance such as the spherality of a certain presently existing ball. The existence of such a property instance is inseparable from the existence of the ball, but it nonetheless differs radically from fictions and empirical possibilities. The difference, according to Ingarden, is captured by the distinction between autonomy and heteronomy. An instance of spherality has the moment of autonomy; it is in and of itself a *completely determinate* something with *existential inertia*. This is not true of fictions and empirical possibilities. Let me explain.

From an ontological point of view, fictions may, and normally do, contain what Ingarden calls *spots of indeterminacy*.[18] Finding out how tall Hamlet is is not an epistemological problem; it is an ontological impossibility. Why? Because Shakespeare created a fictional figure without a determinate height. Nothing like this can be true of ordinary things and their

[17] Here he writes: "In the mere intentional state of 'having' determinations 'assigned' to it, the purely intentional object contains in its content nothing that could give it its own ontic foundation. It is in a true sense ontically heteronomous (LWA 122)." Heteronomy is presented in *Modes* 43-52, *Streit* I §12. Very relevant is also *Streit* II/1, chapter IX.

[18] LWA §38, *Streit* II/1 §47b, and *Mitscherling* 104-109. A fictional character that lacks spots of indeterminacy would be a figure defined as in all respects being exactly like a specific real person (the example comes from Pierre Grenon).

property instances. These are always ontologically determined, even though, for epistemological reasons, we may happen to have knowledge only about some small number of them. If one assumes, as I think Ingarden does, that the future need not, from an existential-ontological point of view, be completely determined, then even empirical possibilities have spots of indeterminacy.[19]

Although the concept of "existential inertia" is, as far as I know, Ingarden's own invention, he left it unexplained.[20] Let me therefore attempt an explanation. According to classical mechanics, all material things have a state-of-motion inertia. That is, they resist both changes in their speed (rest included) and in their direction of movement. An external force is needed to change a state of motion, but nothing is needed in order to sustain an already existing one. To have existential inertia means to resist going out of being. Ideal entities have existential inertia in the strongest possible sense: they cannot go out of existence. Real entities, both property bearers and property instances, have it in the sense that something external is needed to make them go out of existence. Otherwise, they continue to exist. This is not the case with fictions and empirical possibilities. If people completely forget a fiction, then it simply goes out of being *without any resistance at all*. Analogously, if the actual world changes from state S1, which contains the empirical possibility E, into a state S2 that does not contain E, then E goes out of being without any resistance.[21]

As there can be sub-modes of the main modes of being, there can be sub-moments of the main moments of existence. The following pair of existential moments contains sub-moments of the moment of separateness:

- Self-Dependence ("Unabhängigkeit") – Contingency ("Abhängigkeit")[22]

[19] Note that, for Ingarden, this does not exclude the possibility that a metaphysical investigation might show the physical world to be deterministic.
[20] *Modes* 80, *Streit* I 113.
[21] In the otherwise very good book *Fiction and Metaphysics* (1999), A. L. Thomasson mentions Ingarden but neglects his concept of "heteronomy", this making fictional characters look, in Ingarden's terms, much too autonomous. However, in her paper "Ingarden and the Ontology of Cultural Objects" (2005), she gives heteronomy its due. I would like to state in passing that I regard D. Lewis's analysis of fictional objects – as objects existing *actually* in possible worlds – as completely mistaken; see his "Truth in Fiction", reprinted in Lewis, *Philosophical Papers* vol. 1. But, of course, Lewis is a dedicated one-and-only-one-mode-of-being thinker.
[22] As I have said (footnote 2), I am using Michejda's translation in *Modes*. She translates "Unabhängigkeit"–"Abhängigkeit" as "self-dependence"–"contingency", but in *Mitscherling* it is mostly translated as "independence–contingency" (the exceptions are *Mitscherling* viii and 95), and P. Simons translates it as "independence"–"dependence"; see his "Editorial Note" (1982), p. 263. Also, Simons translates "Selbständigkeit"–"Unselbständigkeit" not as "separateness"–"inseparateness" but as "self-sufficiency"–"non-self-sufficiency". He uses these translations also in his paper "Ingarden and the Ontology of Dependence" (2005), and the same goes for D. v. Wachter's paper "Roman Ingarden's Ontology" (2005).

An organism has, as an organism, the moment of self-dependence. The same organism, as a father, however, has the moment of contingency.[23] I will not pay more attention to this pair: what Ingarden says suggests that he is either conflating monadic properties with so-called relational properties or making this distinction in the terminology of self-dependence and contingency.

The next existential moments come as a fourfold partition. According to Ingarden, none of the most specific modes of being can have more than one of the four following moments (the mode of the temporal, C, comprises the first three):

- Actuality ("Aktualität") – Post-Actuality ("Post-Aktualität") – Empiricial Possibility ("Empirische Möglichkeit") – Non-Actuality ("Nicht-Aktualität", "Inaktualität")

What exists presently exists actually, what exists in the past exists post-actually, what exists in the future exists as an empirical possibility, and purely intentional entities exist non-actually.

To complete the list of existential moments, I will mention but not explain the remaining two pairs of moments; they are irrelevant for the purposes of this paper:

- Fissuration ("Spalthaftigkeit") – Non-Fissuration ("Nicht-Spalthaftigkeit")
- Fragility ("Gebrechlichkeit") – Persistence ("Nicht-Gebrechlichkeit")

In a wonderful classificatory picture (see the figure at the end of the paper; created in 1977, but published here for the first time), Peter Simons has put *all* of Ingarden's modes of being and *all* their existential moments together in something he calls "Ingarden's Ontological Tear". I will be content to present the most essential existential moments of the following modes (and sub-modes) of being: Extratemporal, Temporal (Present, Past, Future), and Purely Intentional.

Extratemporal (Ideal):	*Present Temporal (Real):*	*Past Temporal (Real):*	*Future Temporal (Real):*	*Purely Intentional (Fictional):*
Originality	Derivation	Derivation	Derivation	Derivation
Autonomy	Autonomy	Autonomy	Heteronomy	Heteronomy
Non-Actuality	Actuality	Post-Actuality	Emp. Possibility	Non-Actuality

[23] *Modes* 90, *Streit* I 122.

In short: if ideal entities exist, they have not been created; like absolute beings, they have the moment of originality. Entities in all the other modes in this table need to be created, i.e., they have the moment of derivation. An interesting contrast is displayed between ideal and fictional kinds of entities. These share the moment of non-actuality, but differ radically with respect to the other moments.

3 The Nature of Universals and Evolution

Here are five distinct black equilateral triangles: ▲▲▲▲▲. Are they five instances (particulars) of one and the same color universal, *blackness*, or are they, contrary to what natural language may suggest, merely five particulars? Are they five instances (particulars) of one and the same geometrical shape universal, *equilateral triangularity*, or are they merely five particulars? This is the problem of universals. But this old metaphysical quandary has other names, too, and one of them, "the problem of one-in-many", captures the problem more precisely. If there is a universal *equilateral triangularity*, then this singular entity would here somehow exist in five places and five particulars at the same time. It is literally one-in-many. Ordinary individual things and property instances, on the other hand, exist only in one place at a time and are just, so to speak, one-in-one.

Immanent realism is the view that there are universals in mind-independent things (and perhaps in thoughts), but not outside the spatiotemporal world; as Platonist (transcendent) realism has it. I would be happy to call it Aristotelian, but some prominent scholars believe that Aristotle's view (apart from his opinion that the universals postulated by Plato do not exist) was: (a) that real universals can exist *only* in thought, and (b) that in mind-independent things there can *only* be instances of the universals. I have thus chosen to label this position of mine "immanent realism" instead of "Aristotelian realism".[24]

The feature of being one-in-many is more visible in immanent realism than in Platonism, but it exists in the latter as well. If immanent realism is true, then the singular universal *equilateral triangularity* in the triangles above must be wholly present in each of its instances. According to Platonism, on the other hand, such a singular entity exists wholly only in the extratemporal realm of ideas where it is a one-in-one entity; with respect to this world it is a one-*over*-many. Plato fuses the most essential feature of universals – the ability of being one-in-many – with the evaluative feature of being perfect. In the world of ideas, each universal is

[24] With respect to Aristotle, compare also the quotation from Armstrong referred to in footnote 35.

perfect, but in the sensible world, in its instances, it is claimed to be necessarily imperfect. The matter with which it is fused is claimed to "degrade" it. Nonetheless, according to Platonism, in instances (of one and the same universal) that are imperfect to the same degree, there is the plain phenomenon of one-in-many.

The capability of a universal to be numerically the same in distinct places simultaneously might be called the ability to have "intermittent" existence in space. I bring in the concept of "intermittent" at this point because I want, next, to consider universals in their relation to time. From Plato and Aristotle, through the medieval Scholastic discussion of universals, to Ingarden and David Armstrong (the foremost living defender of immanent realism), it is taken for granted that universals cannot come into existence or go out of existence; only their instances can. For Platonists as well as for Ingarden, this follows logically from their view that universals have ideal extratemporal existence. But why do immanent realists subscribe to the view that universals in some sense must have been and must be there forever? I have one hypothesis about Aristotle (assuming, contra Boethius and Aquinas, that he was an immanent realist)[25] and one about Armstrong.

My hypothesis concerning Aristotle rests on the distinction between substance universals (natural kinds, Aristotle's secondary substances) and quality universals (colors, shapes, etc.). Could it not be the case, that for at least one second in the entire history of the universe, there were absolutely no particles that had (to take only one example) the shape of an equilateral triangle? If so, then the universal *equilateral triangularity* would have had an intermittent existence. Why did Aristotle not think of this? After all, he thought that the world had existed for an infinitely long time. A good guess, I think, is that as far as the question of temporal entities is concerned, he bothered only about quality bearers, and in particular substance universals. With respect to the latter, he explicitly stated that all species and other natural kinds have an eternal existence. However, even if such a remarkable neglect of quality universals were defensible, his position on substance universals is today untenable. If we follow contemporary scientific literature on the topic, species and other natural kinds have not only come into being at a certain time in evolution; it is also quite possible, at least in principle, that species may become extinct and then be re-introduced. Such species (substance universals) would then literally have intermittent existence in time.

What then does Armstrong, living after the Darwinian revolution, have to say about intermittent existence of universals? First, it should be noted that he believes that there are no

[25] See the preceding footnote.

true substance universals at all,[26] but he is well aware of the objection concerning quality universals, which, of course, can also be given an evolutionary form. During evolution new qualities such as cell metabolism and having the capacity for language have emerged. Armstrong's version of immanent realism requires the Principle of Instantiation: *For each universal, there exists at least one particular.*[27] This means that if there are no particulars that have the shape of equilateral triangles, then there is no such shape universal. But he adds:

> We certainly should not demand that every universal should be instantiated *now.* It would be enough if a particular universal was not instantiated now, but was instantiated in the past, or would be instantiated in the future.[28]

On this account, every universal has to be instantiated at least once in world history, which seems to admit for intermittent existence. Armstrong however avoids this conclusion by combining the principle of instantiation with the (four-dimensionalist) view that there is no objective difference between the past, present, and future, and that, therefore, there is no real intermittent existence after all. Put in Ingarden's terms, Armstrong's claim is that the past, present, and future exist in the same mode of being. Here is another quotation from Armstrong:

> It is not clear just how far all this constitutes an argument for adopting the four-dimensional view of the world, with the future an existent. But it does seem that friends of Independence should lean to this view. We will so lean.[29]

It seems to me that Armstrong is so attuned to the old view that universals can neither come into nor go out of existence, that he feels compelled to introduce four-dimensionalism in order to remove at least some of the odd light that evolutionary theory casts on the combination of the principle of instantiation and the view that universals must exist forever. In the next section I will show that the latter view can be rejected without any peculiarities arising. If, as evolutionary cosmology, geology, and biology seem to tell us, both substance universals and quality universals can come into and go out of existence, such universals should be able to

[26] Armstrong *Universals & Scientific Realism* vol. II (1978), section 18.1.
[27] This is a simplified version of Armstrong's formulation: "For each *n*-adic universal, U, there exist at least *n* particulars such that they are U." See *Universals & Scientific Realism* vol. I (1978), p. 137.
[28] Armstrong, *Universals. An Opinionated Introduction* (1989), p. 75.
[29] Armstrong, *A World of States of Affairs* (1997), p. 208. "Friends of Independence" believe that states of affairs are logically independent of each other.

have a truly non-four-dimensionalist intermittent existence as well. At any rate, evolutionary science implies evolutionary informed ontology.

4 Ingarden's List of Existential Moments Enlarged

There is a philosophical consensus to the effect that *if* there are universals, then they have the feature of being able to have intermittent existence in space. But what about their having intermittent existence in time? There is to my knowledge in the philosophical literature no argument for the view that *quality* universals cannot have intermittent existence in time. With respect to *substance* universals, things are a bit different. Arguments supporting the principles of the conservation of matter and/or energy typically imply that there is at least one substance universal that cannot have intermittent existence, prime matter or energy as such. Be this as it may, if no contradiction arises when intermittent existence in time for some universals (not for particulars!) is allowed, then I think such existence should be accepted.

Intermittent existence in space and intermittent existence in time have something in common. I will call it *multiplicity*, and will look upon it as an existential moment in Ingarden's sense, i.e., as something that can be a constituting part of some modes of being. Even though he did not include it in his list of such moments, it fits his conception of moments very well. The contrary opposite moment is *monadicity*.[30] Concrete particulars such as material property bearers and monadic tropes (i.e., once-and-for-all occurring quality instances) have the moment of monadicity both in time and space.[31] They can only exist in one connected time interval, and they can only be in one place at a time. Even abstract particulars such as Plato's ideas and Frege's thoughts have the existential moment of monadicity. In their extratemporal realm, neither space nor time can distinguish two ideas or thoughts that are qualitatively identical.

Since Ingarden himself played with the possibility of enlarging his list of existential moments in order to account for moral facts,[32] I surely do no violence to his general approach when, now, I amend his list of existential moments with:

[30] In fact, Ingarden uses the term monadicity ("monadisch") a couple of times when he discusses the essence of individual objects (e.g., *Streit* II/1, p. 419); and he does so in such a way that I have no qualms in adopting the term.
[31] I will argue in section 5 that tropes are complex since they contain a universal.
[32] See A. Półtawski, "Roman Ingardens Ontologie und die Welt" (2005); in particular the quotation from Ingarden on p. 211.

- Multiplicity – Monadicity

Like all of Ingarden's own pairs of existential moments, this distinction does not in itself contain any reference to space, time, or an ideal realm. I have merely used such examples in order to explain the distinction. If the distinction is accepted, then it can be used in order to characterize different sub-modes of some modes of being. With respect to the temporal mode (C), some temporal entities such as concrete particulars have the moment of monadicity,[33] whereas others, such as the immanent universals, have the moment of multiplicity. I think spatial and temporal extensions have enough in common in order to make the following true: (a) what can have multiplicity in space (e.g., universals) must be able to have multiplicity in time, and vice versa, and (b) what necessarily has monadicity in space (e.g., concrete particulars) must have monadicity in time, and vice versa.

Ingarden himself introduced two different dimensions of sub-modes of temporal being: objects–processes–events, and present–past–future. My introduction of the existential moments of multiplicity–monadicity amounts, in the temporal realm, to the introduction of universals–particulars as two sub-modes in yet another and third such dimension. Earlier, I drew an analogy between the "orthogonality" of Ingarden's two dimensions and the way the color dimensions of hue and intensity are often represented as orthogonal to each other. This analogy can be developed. The dimension that contains universals–particulars can be said to be orthogonal to both objects–processes–events and present–past–future in the way that saturation can be represented as being orthogonal to both hue and intensity. The opposition between being a universal and being a particular can be found among objects, processes, and events as well as in the present, past, and future.

To be clear, in the temporal mode of being, the distinction between multiplicity and monadicity is extensionally equivalent with that between universals and particulars.[34] What it may amount to in other modes lies outside the scope of this paper.

On the immanent realist view of universals that I have presented, universals exist in a sub-mode of the temporal mode which has the following main existential moments:

1. Derivation

[33] This is true also of tropes or "abstract particulars" (G. F. Stout, K. Campbell); about the meaning of the latter notion, see e.g. E. J. Lowe's remarks in *A Survey of Metaphysics* (2002), pp. 366-367.

[34] This means that the view presented does not suffer from the problem that S. Mumford in his book *David Armstrong* (2007) finds in "the late" Armstrong (chapter 11), who is not discussed in this paper, and who holds that instantiation is not contingent but necessary. Mumford claims: "The difference between particulars and universals now looks to be a very uncertain matter" (p. 193).

2. Autonomy
3. Actuality or Post-Actuality or Empirical Possibility
4. Multiplicity.

Spatiotemporal particulars have the same first three moments, but then they have the moment of monadicity. A comparison between this immanent realist temporal view of universals and that of Ingarden's extratemporal view looks like this. First, where Ingarden's view of universals has originality, this immanent realist proposal has derivation; that is, universals derive (in Ingarden's sense of derivation) their existence from particulars. Second, on both views universals have autonomy; that is, universals are completely determinate entities. Third, rather than claiming non-actuality for universals, immanent realism claims that they exist in time; that is, that they can be part of instances that exist in the sub-modes of the present, past, and future. Fourth, instead of the Platonic monadicity of primary (transcendent) universals, immanent realist universals straightforwardly have the central feature of universals, namely the ability to be one-in-many.

Universals are traditionally conceived of as entities that lack temporal location. The proposal put forward retains this feature, if only in a new, not extratemporal sense. What can be intermittently wholly present in distinct temporal locations cannot adequately be said to have any *definite* temporal location.

The view put forward implies that there are both tropes (with monadicity) and real universals (with multiplicity), but some philosophers take it simply for granted that these categories mutually exclude each other. Armstrong, for instance, notes the possibility of accepting both immanent universals and tropes, but then says: "This view has been held by some good philosophers, for instance, the Oxford philosopher J. Cook Wilson. It may even have been Aristotle's view. But […] Once one has accepted universals, the tropes seem to be redundant (or vice versa)".[35] In contemporary analytic metaphysics, the view that there are both *immanent* universals and tropes has been put forward, for instance, by D. W. Mertz (1996) and E. J. Lowe (2006). Also Ingarden thinks that there are both universals and tropes,[36] but he regards the universals as ideal and extratemporal.

The view that universals exist in a special mode that has the existential moment of multiplicity implies (a) the falsity of the view that if an entity is wholly present at one location, then it cannot possibly be present at another location. It also implies (b) that the

[35] Armstrong, *Universals. An Opinionated Introduction* (1989), p. 17.
[36] This Ingarden interpretation is supported both by Wachter, *Dinge und Eigenschaften* (2000, pp. 25, 66, 94, 176), and Rynkiewicz, *Zwischen Realismus und Idealismus* (2008, pp. 444, 451-454).

phenomenon some have called "identity-in-difference" – what I have termed "one-in-many" – exists. In an interesting paper, D. L. M. Baxter has defended universals and both of these implications of immanent realism.[37] Nonetheless, the view presented here must not be conflated with his. Baxter says (i) that "a universal can differ from itself without contradiction", (ii) that it can have different "aspects", and (iii) that instantiation is a matter of non-mereological partial identity. The view put forward here rejects these three theses.

About (i) and (ii): a universal that has multiplicity in space is *wholly itself* in many places simultaneously; it does not "differ from itself" or have different "aspects" of itself in the different places. Nor is instantiation a symmetric relation of partial identity (iii). It is a peculiar asymmetric parthood relation. Think of a particular instance of a certain universal. As a part has to be everywhere where its whole is, this universal has to be everywhere where this instance is. This instance, on the other hand, need not and cannot be everywhere where the universal can be. The universal is therefore part of the instance but not conversely. It is neither a *spatial* part, nor a *temporal* part, nor a *functional* part, nor a *logical* part of the instance.[38] The relation between the universal and its instance seems to be a special case of *constitutive* parthood,[39] and needs a label of its own. I will call it *instantiative* parthood.

In Platonism, instances of a universal are said to *participate* in a corresponding transcendent universal, but in immanent realism it is the other way around. The universal "part-icipates" in the instance. Because of its moment of multiplicity, this does not mean that the universal turns its instances into universals. There is both particularity and universality, but, as Armstrong says: "So particularity plus universality yields particularity. Let us call this phenomenon 'the victory of particularity'".[40]

To realize that universals can have intermittent existence in time is to solve the challenge that evolutionary science puts to traditional immanent realism, i.e., an immanent realism in which there is also an objective difference between the past, present, and future. But there is another related problem: what about non-instantiated universals? Obviously, in thinking and talking we can both identify and re-identify some such universals. In philosophy, the favored examples are "unicorn" (substance universal) and "Hume's missing shade of blue" (quality universal). But if all universals are immanent, what are we then talking about when we refer

[37] Baxter, "Instantiation as Partial Identity" (2001).
[38] The notion of "logical part" is used in the sense in which, following Brentano, "color" is said to be a logical part of "red".
[39] For elaborate defenses of such a relation of constitution, see Simons, *Parts* (1987), chapters 4.7, 6.1, and 6.5; L. R. Baker, *Persons and Bodies. A Constitution View*, (2000), chapter 2, and *The Metaphysics of Everyday Life* (2007) chapters 8-9; E. J. Lowe, *A Survey of Metaphysics*, (2002), chapter 4. The relation of constitution is used also in, for instance, I. Johansson, *Ontological Investigations* (2004), pp. 134-136, and B. Smith, "On Substances, Accidents and Universals" (1997).
[40] Armstrong *Universals & Scientific Realism* vol. I (1978), p. 115.

to such things? Are we talking about nothing? No: clinging to Ingarden, we can claim that we are talking about empirical possibilities, entities that exist in the mode of the future. And here Ingarden's analysis automatically gives rise to an interesting and, I think, true observation. Unicorns and missing shades of perceived colors have the existential moment of heteronomy, i.e., they have spots of indeterminacy. We cannot simply tell beforehand *exactly* what a unicorn or an unperceived color hue would be like when they come into existence.

So far so good, but this does not solve the whole problem. We can even talk about empirically impossible qualities such as having an infinite mass. The solution here is to bring in Ingarden's mode of purely intentional being. Just as we can create, identify, and re-identify fictional persons such as Hamlet, we can create fictional universals such as the infinite mass.

According to Ingarden, the mode of the purely intentional has the following existential moments:

1. Derivation
2. Heteronomy
3. Non-Actuality.

He claims that entities with these existential moments, unlike extratemporal ideal entities, can come into being at a certain point in time and go out of being at another; even though, since they have the moment of non-actuality, they do not really as such exist in time. Hamlet did not exist before Shakespeare, and if Shakespeare's works one day no longer exist and are completely forgotten, then Hamlet will no longer exist. One problem with this account is how to explain in what way Hamlet and the infinite mass exist when no one is thinking or talking about them, even if they are remembered. Without expanding on it, I would like to put forward the hypothesis that also Ingarden's thinking on this problem can benefit from the notion of "multiplicity": as universals have multiplicity and can have intermittent existence in the temporal realm, fictional individuals such as Hamlet can have multiplicity and intermittent existence in the purely intentional realm. A fictional universal such as "infinite mass" might then be said to have "double multiplicity": first as being a fiction and then as being a universal. In my opinion, the mode of the purely intentional is characterized by a fourth moment, too; namely:

4. Multiplicity

In sum, if there are monadic universals, then they are wholly present as instantiative parts of all their instances, and the following is true:

- *Real universals* exist in the temporal mode of being, but only in the sub-modes that contain the existential moment of multiplicity.
- *Instances of universals* (tropes) exist in the temporal mode of being, but only in the sub-modes that contain the existential moment of monadicity.
- *Fictional universals* exist in the purely intentional mode of being.

To complete the picture, it has to be shown that there are real universals. In Ingarden's terminology, we have to move from existential-ontological investigations to a metaphysical investigation.

5 Proof of the Existence of Universals

Even epistemological fallibilists have to distinguish between proofs, probability reasoning, and empirical investigations. This being said, I will put forward in this section what I claim is a proof – partly new – of the existence of thought- and language-independent monadic universals.[41] Mostly, I will speak abstractly about particulars and universals, but the reader should understand that, thereby, I am also trying to prove that there is one singular and numerically identical universal *equilateral triangularity* in the following three distinct spots: ▲▲▲. The proof consists of one explicit premise and four consecutive inferences. The final conclusion the argument is intended to reach can be stated thus:

- Necessarily, *if* there are finitely spatially extended thought- and language-independent particulars, *then* there are thought- and language-independent monadic universals, too.

The premise is of course that there are such particulars. We know with certainty that perceptions in perceptual space contain delimited particulars (such as the three black triangles

[41] The classic contemporary defense of the existence of universals is of course Armstrong's *Universals & Scientific Realism*. He argues, rightly in my opinion, that predicate nominalism and concept nominalism are involved in two vicious infinite regresses, and that class nominalism and resemblance nominalism are involved in one such regress.

presented), and we know almost with certainty that the mind-independent world contains some kind of spatially delimited three-dimensional material particulars. Here are the four inferences I wish to state and defend:

(1) Necessarily, if there are distinct finite spatially located particulars, then there are spatial boundaries.

If there are (in at least two dimensions) distinct finitely extended particulars, then each of them has to have some kind of spatial limit. This limit, whatever it consists of, is a kind of *bona fide* (as opposed to fiat) boundary.[42] If there were no bona fide boundaries, neither perceptual space nor the mind-independent world could contain more than one particular.[43] Here comes the ensuing inference (where "trope" means a unique spatiotemporal monadic quality instance).

(2) Necessarily, if there are spatial boundaries, then there are at least two tropes.

Five remarks in order to justify this inference.[44] First, spatial boundaries cannot be constituted *only* by an empty or otherwise homogenous space. Since space is continuous, if it were in and of itself individuating, then every point in a homogeneous space would be equally individuating. And if this were the case, then each extended particular would in fact be an infinite collection of infinitesimal point-particulars.

Second, a spatial boundary between two extended particulars must itself be a particular. The boundary has to be either (a) a particular surface or (b) a particular line.

[42] The fact that boundaries are of utmost importance in ontology has been stressed in contemporary philosophy mainly by B. Smith. Going further back, there are R. M. Chisholm and Brentano. Smith writes: "In order to arrive at a definition of substance, then, it is the notion of boundary which we shall need to take as our guiding clue (something that has not been done in standard treatments of substance in the literature of analytic metaphysics –"; from "Objects and Their Environments: From Aristotle to Ecological Ontology" (2001). For the distinction between 'bona fide' and 'fiat' boundaries, see Smith, "Fiat Objects" (2001).

[43] Such a particular could be either completely homogeneous or perfectly continuous. Neither homogeneity nor continuity can give rise to a bona fide boundary. When we say, for example, that some colors continuously shade off into each other, we are saying that there are no boundaries between these colors. A boundary is a discontinuity.

[44] There are other attempted proofs of the existence of tropes, too. The first might be Avicenna's (Ibn Sina's), which is discussed and improved on by Mertz, *Moderate Realism and Its Logic* (1996); see also his *Essays on Realist Instance Ontology and its Logic* (2006). Both Avicenna's and Mertz's proofs are further discussed in Svennerlind, *Moderate Nominalism and Moderate Realism* (2008, chapter V).

Third, it is the case: (a) that either a boundary *surface* is infinitesimally thin, or it is a very thin three-dimensional body,[45] and (b) that either a boundary *line* between two particulars is infinitesimally thin, or it is a very thin surface.

Fourth, if a boundary is either a thin body or a thin surface, then the ontological boundary problem reappears. Why? Because there must then also be boundaries between the original boundary and the particulars that this boundary marks off. Example: let the original boundary be the black thin line that in the rectangle □ distinguishes the white area inside from the white area outside of it. What distinguishes this black line from the inner area must (on pain of an infinite regress) be infinitesimally thin. In other words, if there are boundaries, there must be infinitesimally thin boundaries.

Fifth, if an infinitesimally thin *bona fide* boundary marks off two tropes that are exactly similar, it cannot itself be exactly similar to both these tropes, because then there would be homogeneity. That is, there must be at least two non-similar tropes: the boundary and what the boundary distinguishes. If, on the other hand, the boundary marks off tropes of different kinds, then there are trivially two non-similar tropes (and the boundary may belong to either of them or make up a third kind of trope). In my illustrative example, there is a black trope (the black line) and a white trope (the area enclosed by the line). If the area within were black as well, then there would be no bona fide boundary between this area and the line. Similarly, if the line were white, there would be no bona fide boundary between the line and the area within. Every (two- and three-dimensionally) extended finite property bearer has to have a shape, but a real particular shape trope needs for its existence some quality that is distinct on each side of the shape. Together, the inferences (1) and (2) yield a new kind of defense of what Armstrong calls the Principle of the Rejection of Bare Particulars.[46] Let us next proceed from tropes to a relational universal.

(3) Necessarily, if there are tropes that are exactly similar, then there is a relational universal, exact similarity.

The fact that there are tropes by no means entails that there are only tropes, or that tropes are simple. On the contrary.[47] What I am now going to say was first outlined by Edmund Husserl

[45] A. Stroll, "Two Conceptions of Surfaces" (1979).
[46] Armstrong, *Universals & Scientific Realism* vol. I (1978), p. 113.
[47] The view that tropes are simple is defended by Anna-Sofia Maurin in *If Tropes* (2002) and "Same but Different" (2005). If I am right, then tropes are complex; each trope has at least one universal as a constitutive part. More criticism of the view that there are only tropes can be found in Herbert Hochberg, "A Refutation of

and by Bertrand Russell, and later elaborated on by David Armstrong and by Herbert Hochberg.[48] Tropes can be more or less similar, and even exactly similar. My argument will take for granted that there are some exactly similar tropes, but it is enough if such tropes are possible. Nominalists cannot allow that universals are possible and that the presumed truth of nominalism is a mere contingent fact. Personally, I find it obvious that now and then there are relations of exact similarity between perceptual entities, and physics postulates several such similarities; all electrons, for instance, are said to resemble each other exactly with respect to electric charge.

Assume we have three (and, for simplicity's sake, only three) exactly similar tropes, for example three equilateral triangle shapes, a, b, and c. One way of explaining this qualitative identity is to accept universals and claim that all the three shapes are instances of one and the same monadic universal, equilateral triangularity. However, someone trying to explain this qualitative identity without bringing in a universal might claim that the three tropes allow him to construct a nominalistic resemblance class to which the general term "equilateral triangle" refers; it can be called the (local) class of equilateral triangularity tropes. Such a class should contain only particulars, and in its construction no universals can be allowed to be used. In the case at hand, the class would consist of the three tropes a, b, and c, and it would be constructed by means of a single relation of exact similarity. This construction (I), however, must make use of the following three claims:

(In resemblance class I):

(i) "a and b are exactly similar"
(ii) "a and c are exactly similar"
(iii) "b and c are exactly similar".

The trouble for the nominalist is that this construction employs three instances of *similar*. It implicitly presupposes the existence of a relational universal, *similarity*. If the nominalist responds by saying that he can solve this problem by constructing a new resemblance class (II) based on a second-order relation of similarity (similarity^2), i.e., a relation that relates similarity-(I:i), similarity-(I:ii), and similarity-(I:iii) to each other, then the realist's rejoinder

Moderate Nominalism" (1988) and "Relations, Properties and Particulars" (2004), as well as in Christer Svennerlind, *Moderate Nominalism and Moderate Realism* (2008).

[48] Husserl, *Logical Investigations* vol. 2, section II, §4, last paragraph (1901); Russell, *The Problems of Philosophy*, chapter 9, eleventh paragraph (1912); Armstrong, *Universals & Scientific Realism* vol. I, chapter 5: vi (1978); Hochberg, "Russell's Proof of Realism Reproved" (1981).

is that such a construction cannot be completed. A vicious infinite regress will arise. The nominalist's second and third constructions rely on the following claims:

(In resemblance class II):

(i) "similarity-(I:i) and similarity-(I:ii) are exactly similar^2"

(ii) "similarity-(I:i) and similarity-(I:iii) are exactly similar^2"

(iii) "similarity-(I:ii) and similarity-(I:iii) are exactly similar^2".

(In resemblance class III):

(i) "similarity^2-(II:i) and similarity^2-(II:ii) are exactly similar^3"

(ii) "similarity^2-(II:i) and similarity^2-(II:iii) are exactly similar^3"

(iii) "similarity^2-(II:ii) and similarity^2-(II:iii) are exactly similar^3".

But now, of course, there are three instances of *similar*^{2} and *similar*^{3}, respectively; and the arguments can (with *similarity*^{n}) be repeated indefinitely. The construction of the Nth class contains:

(In resemblance class N):

(i) "similarity $^{n-1}$-(N-1:i) and similarity $^{n-1}$-(N-1:ii) are exactly similar^n"

(ii) "similarity $^{n-1}$-(N-1:i) and similarity $^{n-1}$-(N-1:iii) are exactly similar^n"

(iii) "similarity $^{n-1}$-(N-1:ii) and similarity $^{n-1}$-(N-1:iii) are exactly similar^n".

The nominalist has to end his construction by saying (with a definite number N inserted):

- The resemblance class for "equilateral triangularity" consists of the classes I, II, III, …, N, and so on *ad infinitum*.

This statement differs radically from saying:

- The class of the natural numbers consists of the numbers 1, 2, 3, …, n, and so on *ad infinitum*.

The finite natural numbers 1 to n are *not* for their definitions dependent on the clause "and so on *ad infinitum*", but the classes I to N are for their *nominalistic* constructions so dependent.

The threatening similarity universal is, so to speak, always pushed a step forward. In other words, in the case of natural numbers, what comes after is defined by what comes before, but in the case of the resemblance classes at hand, what comes first is for its definition dependent on what comes afterwards. In such a case, an infinite regress is vicious.[49]

Faced with this argument, some nominalists (verbal communication) try to rely on a "variably polyadic predicate" of exact similarity.[50] Instead of the dyadic predicate "x and y are exactly similar" ("Rxy"), they use the indefinite relational predicate "Rxyz…". However, in the relevant applications this indefiniteness disappears. In our example, the predicate comes out as triadic: "a, b, and c are exactly similar (Rabc)". The (local) nominalistic resemblance class searched for must be constructed and "held together" by means of the single relation Rabc. This attempt to avoid the Husserl-Russell regress fails because the statement ("Rabc") "a, b, and c are exactly similar" entails the three statements which created the regress in the first place, namely (i) "a and b are exactly similar", (ii) "a and c are exactly similar", and (iii) "b and c are exactly similar". The fact that R holds directly between a-b-c cannot possibly explain why it is the same R that figures in Rab, Rac, and Rbc. If, for instance, c disappears, this change will not affect Rab at all.

The conclusion is inevitable: we have to accept the existence of at least the relational universal *exact similarity* and become at least so-called resemblance nominalists. The fourth inference takes us from this relational universal to monadic universals; and from resemblance nominalism to realism.[51]

(4) Necessarily, if there is a relational universal of exact similarity, then there is also a monadic universal.

Assume a universe with empty space and only two things, a and b, both of which are exactly spherical. As far as I can see, such a universe is logically possible. Let us next disregard space and the other possible properties of these two things and focus exclusively on their common geometrical shape. Under these assumptions, there are then two spherical-shape-tropes and one instance of the relational universal *exact similarity* of shapes. According to the realist, the

[49] Compare Russell, *The Principles of Mathematics* (2006), section 329.
[50] I do not know who introduced this kind of predicate into the problem of universals, but it is used by D. Lewis in "New work for a theory of universals" (1983); see his *Papers in Metaphysics and Epistemology* (1999), pp. 14-15. The attempt to block Russell's argument with the help of "paradigms" is discussed and rejected by G. Rodriguez-Pereyra, "Paradigms and Russell's Resemblance Regress" (2004). For other problems with nominalistic resemblance classes, see E. J. Lowe, *A Survey of Metaphysics*, (2002), pp. 355-365.
[51] The essence of the argument that now follows was first put forward in section 2 of my "Determinables as Universals", I. Johansson (2000).

assertion "a is spherical" is made true by the fact that a instantiates or exemplifies the universal *spherality*,[52] whereas the resemblance nominalist has to claim that this assertion is made true by the combined existence of the shape-trope of a *and* its similarity relation to the shape-trope of b.

If a universe with only two material spherical things is logically possible, then a universe with only one ought to be possible, too. So let's take away one of the things in our thought experiment and look at the new situation. There is now only one spherical-shape-trope and no instance of the universal *exact similarity* of shapes. Again, the realist can claim that the assertion "a is spherical" is made true by the fact that a instantiates or exemplifies the universal *spherality*, but the resemblance nominalist can no longer make any corresponding claim. A predicate such as "being a spherical-shape-trope" must in resemblance nominalism be regarded as being defined by a relational irreflexive predicate "being exactly similar". That is, the nominalistic predicate "being a spherical-shape-trope" is like the predicate "being a sibling". As there can be no siblings in a one-person-world, in a one-thing-world nominalistically conceived there can be no spherical things.

To claim, as some nominalists do (verbal communication), that the one-thing-world contains an instance of the relational universal of exact similarity because the remaining thing, a, can be said to be exactly similar to itself, is to confuse analytic a priori predication with a posteriori predication. When the variables x and y in "x and y are exactly similar" are given the same values (as in "the spherical-shape-trope of a is exactly similar to the spherical-shape-trope of a") we arrive at a tautology, but when they are given different values (as in "the spherical-shape-trope of a is exactly similar to the spherical-shape-trope of b") we obtain an assertion that is empirically true or false. Only the latter kind of statement can be used to report the contingent existence of an instance of a universal. In ordinary statements of the form "a and b are exactly similar" – such as those I have used – a and b are tacitly assumed to be distinct, and the predicate "being exactly similar" is tacitly assumed to be irreflexive. This is quite consistent with the fact that this predicate is also both symmetric and transitive, and that in relation logic one can prove that relations that are both symmetric and transitive are reflexive as well. In relation logic, all relations are conceived of as sets of ordered tuples, but in the argument under discussion the relation in question is not such a set. It is a universal; more precisely, a relational universal whose relata are instances of monadic universals. When the relation predicate "x and y are exactly similar" is used to refer to such a universal, a clause saying that the values of x and y have to be different should be added. As Armstrong has

[52] About the distinction between "instantiation" and "exemplification", see E. J. Lowe, *The Four-Category Ontology* (2006), and my review of the book, I. Johansson (2006).

noted, being symmetric and transitive entails being reflexive only if "we allow *unrestricted* substitution within the range of the variables."[53]

We can now make the following *reductio ad absurdum*. Assume that in the one-thing-world envisaged there is no universal *spherality*, but only a spherical-shape-trope. Since there is no instance of the relational universal *exact similarity* of shapes that can be used in a construction of a nominalistic resemblance class, this implies that this lonely thing cannot truly be described as being spherical. This conclusion is absurd. Therefore, there is a monadic universal, *spherality*. Two spherical things are not spherical because they resemble each other; rather they resemble each other because both are spherical. The same kind of argument applies to many different monadic universals, be they mind-independent or perceptual. In fact, it applies to sign types as well. The distinction between types and tokens is merely the distinction between universals and particulars applied to signs. Not even a pure philosophy of language can get rid of the distinction between universals and particulars.

There are monadic universals, *Q.E.D.*

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[53] See Armstrong, *Universals & Scientific Realism* vol. II, chapter 19: vi (the quotation is from p. 93).

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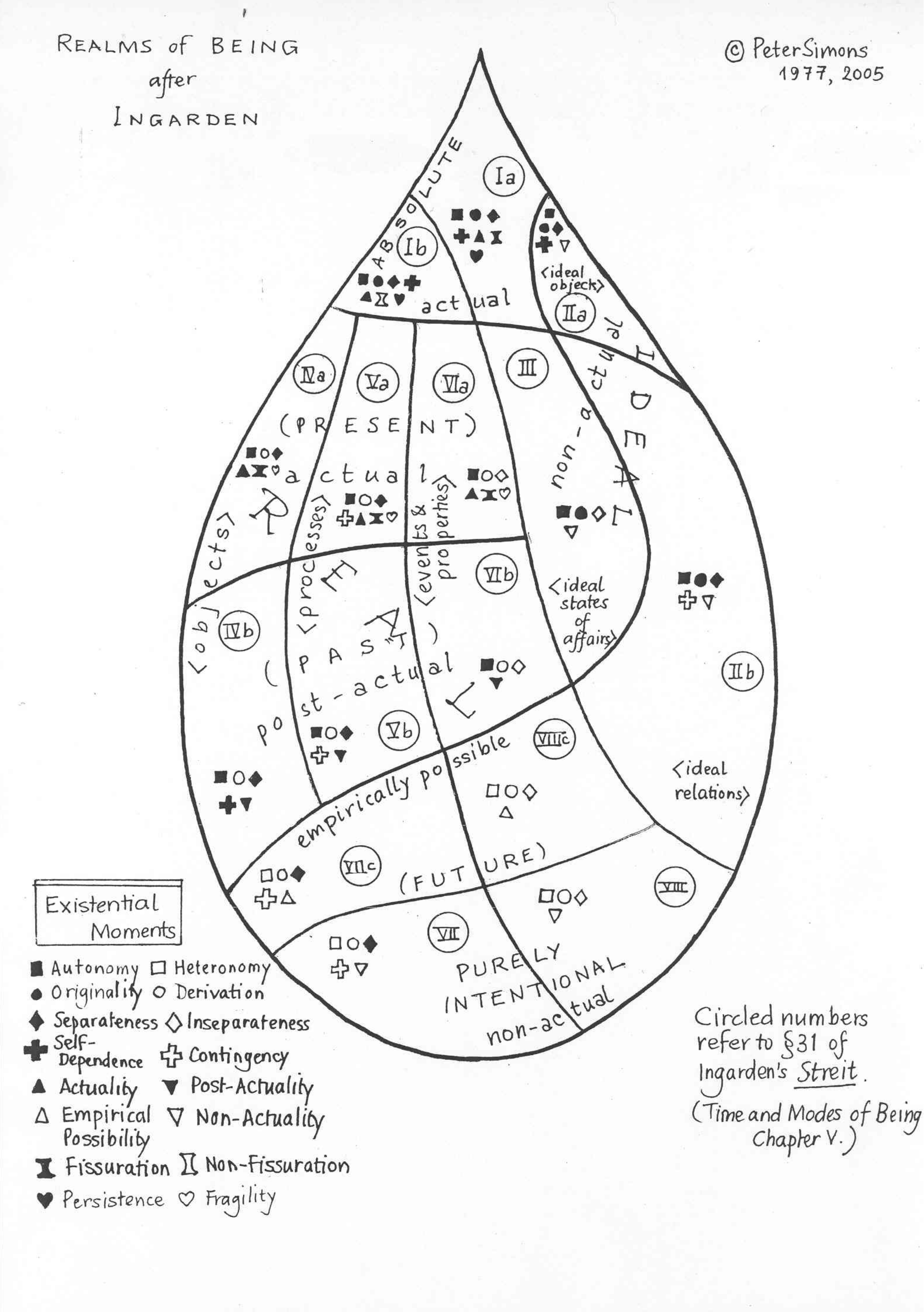
REALMS of BEING after INGARDEN
© Peter Simons 1977, 2005
ABSOLUTE
Ia
Ib
actual
<ideal objects>
IIa
IDEAL
non-actual
IVa
Va
VIa
III
(PRESENT)
actual
REAL
<objects>
<processes>
<events & properties>
<ideal states of affairs>
IVb
VIb
IIb
(PAST)
post-actual
Vb
VIIIc
empirically possible
<ideal relations>
VIIc
(FUTURE)
VIII
VII
PURELY INTENTIONAL
non-actual
Existential Moments
Autonomy
Heteronomy
Originality
Derivation
Separateness
Inseparateness
Self-Dependence
Contingency
Actuality
Post-Actuality
Empirical Possibility
Non-Actuality
Fissuration
Non-Fissuration
Persistence
Fragility
Circled numbers refer to §31 of Ingarden's Streit.
(Time and Modes of Being Chapter V.)