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On the Difference Between Inseparability and Dependence

Abstract

This article is devoted to some issues concerning the difference between dependence and inseparability on the grounds of Roman Ingarden's ontology. The main problem is connected with the possibility of object parts which must coexist, but do not make a whole in the same sense as the qualities of objects do. Thus I will argue that the main difference between inseparability and dependence is based upon the difference between two types of whole: the absolute whole and the relative (summative) whole: inseparable ingredients constitute an absolute whole and dependent objects do not constitute a whole at all – or constitute only a relative (summative) whole. The two types of whole are defined in terms of the ties which integrate their ingredients: formal functions and relations. In the first section I present a general sketch of Ingardenian ontology and show the place of the inseparability/dependence distinction in it. The second section is a presentation of the main problem this article. In this section I also introduce the concepts of absolute and relative (summative) whole. The next part exhibits the differences between relations and formal functions and the last contains my solution to the problem and a formulation of possible arguments against this solution.

This article is devoted to some issues concerning the difference between dependence and inseparability on the grounds of Roman Ingarden's ontology. The main problem is connected with the possibility of object parts which must coexist but do not make a whole in the same sense as qualities of object do. Thus, I will argue that the main difference between inseparability and dependence involves the difference between two types of whole: the absolute and relative (summative) whole: inseparable ingredients constitute an absolute whole and dependent objects do not constitute a whole at all, or constitute only a relative (summative) whole. Two types of whole are defined in terms of ties which integrate their ingredients: formal functions and relations.

In the first section I present a general sketch of Ingardenian ontology and show the place of the inseparability/dependence distinction in it. The second section is a presentation of the main problem of the article. In this section I also

introduce concepts of the absolute and relative (summative) whole. The following part exhibits the differences between relations and formal functions and the final contains my solution to the problem and the formulation of a possible charge against this solution.

1. Basic ontological notions[1] and the place of the inseparability/dependence distinction in Ingardenian ontology

In Ingardenian ontology we have two concepts of an object. In the narrow sense, an object is subject of properties. In the broader sense, an object is everything what is "a trinity" of matter, form and mode of existence (I, §9, 68–72/22–27).[2] The last three notions are of the greatest importance in the Ingardenian ontological framework and are basic tools of analysis. Since all of them as primary concepts are indefinable, we can only evoke some intuitions and examples to explicate them.

Matter is a collection of qualities of object – its qualitative make-up (content). The word "qualitative" and "quality" are used in a very broad sense. We can distinguish the following groups of qualities (it is a provisional and incomplete list[3]):

1. Sense qualities: e.g. redness, wetness, smoothness, sweetness, soundness, whiteness, coarseness, coldness etc.

2. Shapes and geometrical qualities: roundness, squareness, triangularity, sphericity, rectangularity etc.

3. Dispositional qualities: fragility, resilience, thermal conduction, electrical conduction, electric resistance etc.

4. Quantities: magnitude, extensiveness, density, length, height, mass etc.

5. Quasi-natures: animality, humanity, being a living entity etc.

6. Constitutive natures: a) haecceities (possible at least in the case of human persons): petreity, socrateity; b) non-unique determinate constitutive natures: caninity, equinity, felinity etc. Quasi-natures are abstract and determinable aspects of constitutive natures.

As we can see the term "quality" is so broad that it refers also to quantities – this is one of reasons why the term "matter" is more suitable (although it is less suitable in other contexts).

Form is a result of the functions matter fulfills with respect to the object and

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[1] A very good English introduction to Ingarden's ontology is given in D. von Wachter, *Roman Ingarden's Ontology: Existential Dependence, Substances, Ideas and Other Things Empiricists Do Not Like*, [in:] A. Chrudzimski (ed.), *Existence, Culture and Persons: The ontology of Roman Ingarden*, Frankfurt 2005, p. 55–81.

[2] Ingarden's opus magnum: *Spór o istnienie świata (The Controversy over the Existence of the World)* is cited in the main text. I cite the Polish third edition (Warszawa 1987). "I" stands for "vol. I", "II/1" stands for "vol. II, part 1". After the section number I list the page numbers. In the case of the first volume I also quote the page numbers from the English translation of parts of *Spór o istnienie świata* (R. Ingarden, *Time and Modes of Being*, trans. by H. Michejda, Springfield 1964). German version of *Spór* is: R. Ingarden, *Der Streit um die Existenz der Welt*, Tübingen 1964. I do not cite this edition but the section numbers are the same in both the Polish and German versions. Terminology of *Time and Modes of Being* differs from mine.

[3] Ingarden gives examples of matter in many places of *Controversy*. The list is my reconstruction.

vice versa (II/1, §34, 5–41). The basic form of an individual object is a subject-properties form (II/1, §39, 63–74). Let us consider two sentences:

1. This is a horse.
2. John is brave.

In the second sentence, the word "brave" stands for some quality John "has" (matter which can be distinguished in John): bravery. The word "is" stands for the function bravery plays in John. We can name this function "characterization". The first sentence can be regarded as referring to the relation of some object to its natural kind – but we must remember that for Ingarden an object belongs to a kind because of some immanent matter: just constitutive nature. Thus this sentence is about constitutive nature "equinity" and the word "is" refers to the function equinity plays with respect to the given horse. Ingarden calls it "immediate determination" but I will use the term "constitution". An object is immediately determined or constituted as a subject of properties. Hence it is not bare (non-qualitative) particular but as a subject it has its own matter different from the qualities which characterize it. In turn, the latter are called "properties". In other words, properties are only such qualities of object which play the function of characterization. Property is not a quality itself but quality performing some special role (the role is an abstract aspect of property). The difference between property and constitutive nature (considered as integrated with the function of constitution) is very hard to express. We can only say that constitutive nature makes an object this something (John, this horse etc.) and properties make an object such-and-such (red, big, brave, fragile etc.). In other words: nature gives "whatness" to object and properties give "suchness" to it (II/1, §40–41, 74–91).

We can easily notice it is an Aristotelian approach to the problem of object-qualities structure. According to Ingarden an object is not a bundle of qualities but has subject-properties structure. Yet a subject is not a non-qualitative substratum. Of course this view presupposes that nature cannot be reduced to matter of properties, even essential properties. The distinction between nature and properties is not modal: there are possible essential properties (in Ingardenian terms: absolutely proper properties) which do not belong to nature although are implied by it or "flow" from it. At this point Ingarden is an Aristotelian: peripatetic philosophers also postulated so called *propria*.

All characteristics of individual objects are also individual in the sense that they are characteristics only of a given object. Yet the individuality does not mean (nor imply) qualitative uniqueness. For example two tomatoes can be red in the same way: they have exactly similar rednesses of exactly similar shade, brightness etc. But we still have two rednesses, not one wholly present in two tomatoes.

In the case of properties, Ingarden often says that characterization is a form of property and being a subject is a form of an object (considered in abstraction from properties) and these two forms are inseparable aspects of one form: subject-of-properties. In my opinion these "partial" forms should be rather called "formal functions" and the name "form" better fits the whole complex of formal functions. In a sense, form is a way of organising qualities. Subject-properties is basic form but there some others.

Mode of existence is a complex of existential moments. And existential moment[4] is the way an object (in the broader sense) is existentially conditioned by other objects, or the lack of such conditioning (I, §11, 76–84/32–42). Ingarden distinguishes four pairs of existential moments:[5]

1. Originality/derivativeness (I, §13, 92–116/52–82) – an object is original iff its existence flows from its essence or belongs to its essence. Such an object cannot be produced by any other object. Of course originality is better known as scholastic *aseitas*. An object is derivative iff its existence does not belong to its essence nor flows from it. Such an object must be produced by other object(s).

2. Autonomy/heteronomy (I, §12, 84–91/43–52) – an object is autonomous iff it belongs to its essence that its matter is immanent to it. Ingarden says that autonomous objects have their foundation of being in themselves. An object is heteronomous iff essentially its matter is not immanent to it. Consider such a case: you are reading *Doctor Faustus* by Thomas Mann. One of the figures is Serenus Zeitblom. When you are thinking about him or trying to imagine him, you are ascribing to him some matter, for example humanity, calmness, the sense of responsibility etc. All Zeitblom's matter is projected by Thomas Mann and his readers. He does not have his qualitative content on his own but he needs our conscious acts which project him as an object of their intentional relations. Therefore he does not have his foundation of being in himself but in those acts. Real objects as trees, dogs and persons do not need such conscious acts to exist. Their matter is immanent to them and really "builds" them.

3. Separability/inseparability (I, §14, 116–121/82–89) – an object is inseparable iff it belongs to its essence that it must co-exist with some other object(s) within the larger whole. An object is separable iff it belongs to its essence that it does not have to coexist with any other entity within the larger whole. Consider some particular redness and colourness.[6] It flows from the essence of redness (it means: redness as redness) that it must exist with colourness forming the larger whole, namely red colour. There are several types of inseparability:

3.1. Taking into account the source of inseparability we can distinguish material and formal inseparability. For example, redness is materially inseparable from colourness (redness implies colourness). On the other hand, redness of some particular rose is only formally (as matter of property) inseparable from the rose (being a rose does not imply redness). There are two types of material inseparability:

3.1.1. Qualitative inseparability[7] (II/1, §40, 79–80, also notes 33–34) – this is inseparability which obtains between the determinable and its determinate, or

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[4] Detailed and creative analysis of existential moments is presented in: M. Rosiak, *Spór o substancjalizm. Studia z ontologii Ingardena i metafizyki Whiteheada (The Controversy over Substantialism. Studies in Ingarden's Ontology and Whitehead's Metaphysics)*, Łódź 2003, p. 23–36. See also M. Rosiak, 'Existential Analysis in Roman Ingarden's Ontology', *Forum Philosophicum* 12 [1] (2007), p. 119–130.

[5] My presentation of existential moments draws from my article *Ontological Priority of Substances over Objects of Other Categories*, [in:] M. Szatkowski (ed.), *Dualistic Ontology of the Human Person*, München 2013, p. 203–214.

[6] In this article I accept that determinables are at least possible, but I know how many problems are connected with this view.

[7] The name is quite misleading insofar as it suggests that the second type of material inseparability has not its source in matter.

rather between determinable and determinans, so to speak. For example in human beings, animality is qualitatively inseparable from some determining aspect – let us say: rationality. Animality and rationality make up the larger whole: humanity which is a more determinate unit. A complete determinate is qualitatively separable (although it can be inseparable in other ways – for example formally). Notice that the determinable – determinans relation, as a relationship between qualities, is also some kind of formal function although it is not an objective form – it is not a form able to make the complete object (subject of properties). For by no means a determinable is a subject of determinans nor is determinans a property of a determinable. Let us call this kind of formal function "determination". Determination is possible both between material aspects of constitutive natures and between material aspects of properties. Only fully determinate (i.e. qualitatively separable) qualities can play the functions of either characterization or constitution.

3.1.2. Material inseparability in the broad sense[8] – not based on determination. For example, the ability of photosynthesis is inseparable from being green but being green does not determine the ability of photosynthesis(nor vice versa) although the latter needs the former. All essential properties are materially inseparable (in the broader sense) from constitutive nature although their matter is not an aspect of nature.

3.2. Taking into account the range of entities which an object can be inseparable from, we have:

— Rigid inseparability – an object must co–exist in a single whole with one specific object (with this–and–this specific object);

— Generic inseparability – an object must co–exist with one of the objects from the specific class 'M'.

3.3. Rigid inseparability can be mutual or unilateral.

4. Dependence and independence (I, §15, 121–123/89–92) – an object is dependent iff it is separable and essentially needs some other object to exist. An object is independent iff it is separable and does not need any object to exist. There are the same varieties of dependence as in the case of inseparability with the exception of 3.1.1. For example, Socrates is generically dependent on particles of oxygen. According to theistic conception of *creatio continua*[9] every being is rigidly dependent on God.

Every existential moment excludes some others (for example heteronomy excludes autonomy, originality and independence) and implies some others (e.g. inseparability implies derivativeness). A mode of existence is a complex of existential moments coherent (at least not excluding) with each other. Ingarden also analyses existential moments connected with existence in time (and non-existence in time) but they are not relevant to the topic of this article (I, §28–30, 189–232/102–156).[10]

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[8] Ingarden does not use a distinct name for this second type.

[9] *Creatio continua* is conceived here as supporting existence and not as a continual production of new beings.

[10] Detailed considerations concerning temporal modes of existence one can find in M. Rosiak, *Spór o substancjalizm*, p. 48–58, and in F. Kobiela, *Filozofia czasu Romana Ingardena (Roman*

In a trinity of matter, form and mode of existence, the matter is ontologically the strongest in the sense that form and mode of existence are determined by matter. For example, roundness of a ball cannot be its constitutive nature but plays the formal function of characterization, or in other words: is a property. Playing this formal role, the roundness is rigidly inseparable from the subject which it characterizes. Thus it is also a derivative. Ingarden does not explicitly use the concept of identity-dependence but I think it can be applied in his ontology just in the case of the ontological status of properties.

2. Inseparability and dependence – problems with a specific borderline case

Inseparability is considered here as existential conditioning between some items within a larger whole. But sometimes we use to say that this larger whole is inseparable from its ingredients, for example a rose is inseparable from its necessary properties e.g. ability of photosynthesis. Thus, I think[11] we must distinguish inseparability between the ingredients of a whole (say I-I inseparability), inseparability between a whole and the ingredients it contains (say W-I inseparability) and analogical inseparability between an ingredient and a whole (I-W inseparability). In the second and the third case we have different meaning of inseparability than defined above. That this rose (considered as complete object, not as an abstract subject of properties) is inseparable from its ability of photosynthesis means that the rose essentially must be some larger whole containing the ability in question as one of its inner elements. Ingarden also recognizes the need of such clarification.[12] In this paper I am interested only in I-I inseparability but of course we must remember that the concepts of W-I and I-W inseparability are based on the fundamental I-I concept.

Dependence *ex definitione* excludes inseparability. It means that dependent objects must co-exist with other objects but they do not make up a whole with them. I think that the Ingardenian distinction between inseparability/separability and dependence/independence is very important. For example, it enables us to define the ontological status of properties more precisely. We intuitively feel that there is a great difference between the way in which God conditions the creatures and the way an object conditions its properties. A concept of dependence as it is used in analytic philosophy[13] is not enough even if we distinguish generic and rigid, existential and identity, dependence etc. To say that creatures are rigidly, existentially and identity-dependent[14] on God and that properties are in the same way dependent on their bearer, is to neglect very important difference between

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Ingarden's Philosophy of Time), Kraków 2011, p. 151–199, 251–275.

  [11] See my *Ontological Priority of Substances*, p. 208–209.

  [12] See R. Ingarden, *O sądzie warunkowym (On Conditional Proposition)*, [in:] R. Ingarden, *Z teorii języka i filozoficznych podstaw logiki (On Theory of Language and Philosophical Fundaments of Logic)*, Warszawa 1972, p. 297–299.

  [13] The most extensive analytical study on dependence is: F. Correia, *Existential Dependence and Cognate Notions*, München 2005.

  [14] In the case of *creatio ex nihilo* God is the only source of creatures, so He determines them completely, also with respect to their identities.

these two cases.[15]   On the ground of Ingardenian ontology we have a tool to express the difference.

But I also think the Ingardenian distinction is only the beginning and can be easily misinterpreted.[16] Let us consider an object which is composed of some other objects. Artifacts are composed of mutually independent objects. But in the case of organisms some parts on higher levels of composition seem to have to coexist with each other. And even if we are mistaken with organisms known from common sense, it is possible to conceive such an organic whole which is composed of objects (in the narrow sense), the existence of which is conditioned by other parts of the whole: mutually and rigidly or unilaterally and generically. Let us call such a whole, a "strong organic whole". We do not need to search for such a whole in reality – its possibility is enough because ontology should provide a framework for ontologically possible entities.

The main problem is: are parts of a strong organic whole inseparable to each other or rather dependent?[17] At the first glance we should choose the first option: for parts of a strong organic whole must coexist with the other parts within the larger whole. If it is true, we still do not have a tool to distinguish the ontological status of properties from the ontological status of complete objects (subjects-of-properties) which are parts of strong organic wholes. But we intuitively feel that properties are in a different sense distinct from parts of a strong organic whole. The latter seem to have a stronger ontological status. Or, in other words: we have very a strong intuitive feeling that the "wholeness" of a strong organic whole is different than the "wholeness" of subject-of-properties and that the difference does not consist in the essential coexistence of parts or lack of it. We can conceive ontological atoms – in Ingardenian terms: primary individual objects. Such atoms are not composed of other objects in the narrow sense (subjects-of-properties) but still, we can distinguish different qualities in them although we resist to say that those qualities compose an object in the same way as organs compose a strong organic whole. On the other hand, in the case of secondary individual objects (composed objects – a strong organic whole is a specific case of such objects) the whole itself has some qualities which supervene on qualities and relations of

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[15] Of course God is by no means dependent on creatures and this is the difference between the two aforementioned cases. But it makes no difference with respect to the distinction between the status of creatures and the status of properties. We can even conceive that God is dependent generically or even rigidly on His creatures – of course He would not be a God of Abrahamic faiths but such a situation is ontologically possible and in that case there is no difference between God-creatures conditioning and object-properties conditioning.

[16] In my opinion Peter Simons's approach to the distinction is based on misinterpretation. See P. Simons, *Ingarden and the Ontology of Dependence*, [in:] *Existence, Culture and Persons*, p. 39–53.

[17] I know (from private communication) that the problem was also recognised by Katarzyna Barska in her Ph.D. thesis *Momenty bytowe a formalna i materialna struktura przedmiotu w ontologii Romana Ingardena (Existential Moments and Formal and Material Structure of Object in Roman Ingarden's Ontology)*, Kraków 2012, manuscript. Unfortunately I do not know the results of the thesis – it is unpublished. Barska analyzed the concept of inseparability in: 'Niesamodzielność materialna i formalna jako naczelne typy niesamodzielności bytowej' ('Material and Formal Inseparability as the Main Types of Existential Inseparability'), *Principia* 47–48 (2007), p. 281–293.

parts, but these supervenient qualities do not constitute the next (higher) level of composition (II/1, §43, 102–137).[18] If we have only one notion of composition and one notion of wholeness we must admit that the qualities of primary individual objects are in fact primary individual.

These considerations suggest that we rather should say that properties are inseparable and parts of a strong organic whole are only dependent. Thus the crucial point of definition of inseparability should not be that inseparable items have to coexist in the larger whole, but that they have to coexist in the larger whole in very special meaning of "whole".

Ingarden introduces a distinction which can be relevant to this problem. He speaks about absolute whole and relative whole (II/1, §39, 67–69; §43, 104–105). An absolute whole is a whole in the sense of material (in Ingardenian sense), formal and existential completeness. Every real individual object is completely defined in its qualitative content, form and mode of existence. Matter is organized by some form, especially by the subject-properties form, and an object also has a defined mode of existence. It is wholeness in the sense of definiteness. Such completeness makes an object a distinct item of reality. It is an allusion to the Wolffian use of the word "determination" – cutting off (*de-terminatio*). An object as an absolute whole is closed in itself. Such a whole is absolute in the sense that it is not a whole with regard to some other objects in narrow sense, but rather with regard to its ontological ingredients like qualities joined by formal functions etc.

A relative whole is also called a summative whole – this is a whole with regard to some other objects in the narrow sense – this is a whole of these-and-these objects. A composed object can be grasped both as an absolute whole and as summative whole. It is an absolute whole with regard to its qualities (supervenient on qualities and relations of parts) and it is a summative whole with regard to its parts. Of course we can easily notice that the main non-controversial contribution of this distinction are only those names: absolute/relative whole. This distinction is based on the intuitions evoked above – but we need a stronger basis.

If we want to distinguish inseparability and dependence then the concept of an absolute whole must be entangled into the definition of the former. But only entangled because not every two items make up an absolute whole. There are degrees of completeness. Notice that absolute wholeness is the same as full concreteness. The larger whole in the definition of inseparability means a more concrete unit. Consider the colour red. We can abstract from it redness and colourness. Thus, there is a hierarchy of inseparability. Redness and colourness are at the bottom of the hierarchy. They are the highest *abstracta*. Red colour is on the second level but it is inseparable from the function of characterization, forming the larger

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[18] Clarification and development of Ingardenian part-whole theory is contained in M. Rosiak, *Spór o substancjalizm*, p. 87–98. See also: M. Rosiak, *Ingarden Roman*, [in:] H. Burkhardt, J. Seibt, G. Imaguire (eds), *Handbook of Mereology*, München (forthcoming); M. Rosiak, 'Własności relacyjne, całości i przedmioty wyższego rzędu' ('Relational Properties, Wholes and Objects of Higher Level'), *Principia* 30 (2001), p. 117–133; K. Barska, 'Formalna i egzystencjalna analiza całości sumatywnej w ontologii Romana Ingardena' ('Formal and Existential Analysis of Summative Whole in Roman Ingarden's Ontology'), *Kwartalnik Filozoficzny* 35 [2] (2007), p. 109–121.

whole, i.e. the property "being red". And this property is inseparable from many other properties of a particular rose. The rose is the full *concretum* and is simply separable.

The parts of a strong organic whole are concrete entities. Although they must coexist with each other they do not supplement each other in the way qualities of concrete object do.

But do we have any non-circular criterion of distinction between an absolute and summative whole? We are tempted to define an absolute whole in terms of inseparability, but it automatically leads to circularity. All those words "*concretum*", "concrete", "absolute whole", "more concrete unit" cannot be defined in terms of inseparability, although we know it would be the easiest way of defining them. On the other hand, the "absoluteness" of an absolute whole so strongly contrasted with the "relativeness" of a relative whole turns out to be only another type of relativeness. An absolute whole is also a whole in relation to some parts – but parts of a very special type: the material, formal and existential ingredients of an object. Completely non-relative wholeness would be wholeness of an absolutely simple being – like, for example, God – conceived in the scholastic manner.[19] The distinction between two types of whole as based only on the distinction of two types of parts – qualities on one hand, and "normal" objects on the second, leads to circularity. Thus we are still at the starting point and do not know how to distinguish these types of whole without using inseparability/dependence terms.

It is not only the problem of Ingarden's ontology. It is well known that Aristotle, in *Categories* (*Cat.* 1a 20–1b 10), says about four kinds of entities: primary substances, secondary substances, individual accidents (non-substantial individuals – substance/accident distinction is not modal here), universal accidents. Relations[20] among these items form a so-called ontological square. The square was interpreted in many different ways. Here is my interpretation, similar in important respects to E.J. Lowe's four-category ontology:[21]

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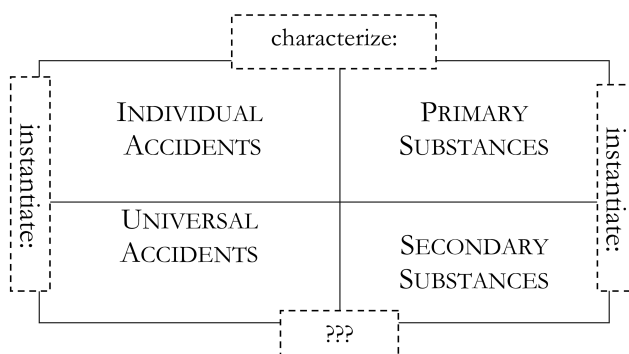
[19] Ingarden maintained God is not absolutely simple: He has a subject-properties structure.
[20] I will use this word because I think they are not relations. See the next section.
[21] See E.J. Lowe, *The Four-Category Ontology. A Metaphysical Foundation for Natural Science*, Oxford 2006, p. 40.

The characterization relation corresponds to Aristotle's "not-being predicated of a subject and being-in a subject". I interpret the relationship of being predicated of as a converse of instantiation – thus I insist universal accidents are predicated of individual accidents. I cannot agree with Lowe that universal accidents characterize secondary substances. We do not have space for discussion about my interpretation. What is relevant to the main topic of this article is that Aristotle's definition of being in a subject: "by 'in a subject', I mean what is in something not as a part and that it cannot exist separately from what is in it" (*Cat.* 1a 24–25). It seems Aristotle gives two conditions of being in: a) being in not as a part, b) the impossibility of being separated. Of course we cannot at the moment identify b) with Ingardenian inseparability.

The first condition is quite mysterious. Many scholars think that being in, not as a part, means being in not as a *physical* part – and being a physical part is often understood as being separable.[22] Of course on the ground of such interpretation, the second condition is already contained in the first. If we want to treat a) and b) as two distinct conditions we must admit that there are possible parts which cannot exist separately.

What items do we get when we cross two distinctions: being in as a part / being in not as a part and the possibility of separate existence/impossibility of separate existence? Obviously we get four types:

1. parts which can exist separately;
2. non-parts which can exist separately;
3. parts which cannot exist separately;
4. non-parts which cannot exist separately.

The first case is uncontroversial. The third seems to correspond to parts of our strong organic wholes and the fourth to properties or even to aspects of properties or other "non-part-like ingredients". We can try to complicate the division by interpreting "can exist separately" in terms of Ingardenian independence or separability. But what would the difference be between inseparable (now, in Ingardenian sense) parts and inseparable non-parts? Would there be possible dependent non-parts? Notice that in the Ingardenian framework, non-parts would mean "ingredients of an absolute whole". Thus, this qualification "not as a part" implies that the phrase "cannot exist separately" in 4. must mean Ingardenian inseparability. On the other hand, the possibility that *parts* of some kind cannot exist separately should be expressed in terms of Ingardenian dependence. On the ground of this ontology, 2. would be impossible in any way: non-parts cannot be separable nor independent.

The above considerations suggest once again that the modal distinction between parts and non-parts is not enough – there are possible necessarily coexistent parts of object parallel to its necessarily coexistent non-parts which however make up different types of a whole.

The trip to Aristotle teaches us that there were attempts to treat "metaphysical ingredients" as non-parts. Ingarden is also inclined to such an approach, but

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[22] See R. Heineman, 'Non-substantial Individuals in the *Categories*', *Phronesis* 26 (1981), p. 295–307.

sometimes he admits we can analyse an absolute whole in terms of "normal" part-whole relations (II/1, §35, 33–36), yet he immediately explains that this is a special variety of part-whole relationship and that in this case we impose on the object (as an absolute whole) the formal structure which does not express the real specificity of its objective form. For in analysis in terms of the part-whole relation, specific formal functions (characterization, constitution and determination) are lost. Formal functions *integrate* qualities and this is the reason why they seem to play an analogical role as a complex of relations which obtain among parts of some summative whole. Notice that part-whole relation is (trivially) possible only if some object is a part of another object and that parthood is not a relation on its own, but rather results from some relations in which the given object stands to other objects – relations sufficient to make a whole. In Ingardenian ontology such set of relations is called "form III" and objects standing in form III are called "matter III". Form analysed in section 1. is named "form I" and its correlate: "matter I". A part-whole relation is possible only because some objects are formed by form III. Because qualities of object are formed by form I they also seem to be very specific parts of an object and we think we can analyse their relationship with the object in terms of a part-whole relation. We cannot avoid thinking about them as special parts – even if we name them "metaphysical parts", "logical parts", "non-physical ingredients" etc. This is the cost of the possibility of analysis, which always involves some kind of distinction between some items – in contrast with other items. The only thing we can do is to show how specific parts they are and how specific wholes they make up, and that this part-whole structure is not fundamental but derivative.

A summative whole is a result of form III and an absolute whole is a result of form I. Thus if we want to find the difference between these types of whole, we must find the differences between form III and form I, or in other words, between relations and formal functions. The difference between inseparability and dependence can be expressed only in terms of the difference between formal functions and relations.

3. Relations and formal functions (formal relationships)

Ingardenian theory of relations[23] can be sketched as following (II/1, §55, 291–303):

In a relational state of affairs we must distinguish:

1. Relation bearers – objects among which a relation obtains. For example, in a relational state of affairs "Joseph is similar to his dog (Piwko[24])" relation bearers are Joseph and Piwko.

2. Foundations of relation (*fundamenta relationis*) – these aspects of relation bearers (their properties, constitutive natures or quasi-natures) due to which a relation obtains. Let us assume both Joseph and Piwko like beef. Thus the foun-

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[23] Clear introduction to Ingardens theory of relations is given in: P. K. Szałek, 'Romana Ingardena ontologiczna teoria relacji' ('Roman Ingarden's Ontological Theory of Relations'), *Kwartalnik Filozoficzny* 34 [1] (2006), p. 31–60.

[24] "Piwko" was the name of Josef M. Bocheński's dachshund.

dations of similarity between them are Joseph's and Piwko's special food-habits.

3. Relational bond or a relation in the strict sense – this is what exists between objects participating in a relational state of affairs. In fact we do not have sufficient vocabulary to talk about this item because we almost always use names of so called relational features (see the next point) and they are more like monadic properties. In our example, a relational bond is just a similarity between Joseph and Piwko.

4. Relational features – features which characterize relation bearers because of their standing in the given relation. In our example they are accordingly: Joseph's being similar to Piwko and Piwko's being similar to Joseph. Now we can see how easily we can confuse these three things: relational feature, relational state of affairs, and relational bond. Let us consider a state of affairs: 3>2. We have a relational bond: > and relational features: 3's being greater than 2 and: 2's being smaller than 3. According to Ingarden, there is only one relations in the strict sense here and not, as many philosophers think, two relations: "being greater than" and its converse "being smaller than". There is only one relational bond and because this bond implies some order of bearers, they have different relational features. Notice also that in the case of Joseph and Piwko they also have two different relational features – although named with the same words: "being similar to...". Probably Ingarden would say that the broadly discussed problem of so called neutral relations[25] is caused by the fatal confusion of a relational bond with relational features or the confusion of relational states of affairs with relational features.

On the grounds of this theory, all relations are internal in Russell's sense but only insofar as they must be ontologically grounded in something non-relational. Of course there are possible such relations which have other relations as their foundations, but ultimately all relations are founded in non-relational qualities. Yet Ingarden's view is not reductionist – relational bonds are genuine elements of being although very weak and materially (in the sense of matter I), formally and existentially conditioned. Ingarden has very strong doubts whether some types of relational features are autonomous (non-intentional – real) but he never reduced relational bonds to non-relational qualities.

What must be emphasized here is that relational bonds are objects in the broad sense: they have matter, form and a way of existence. Relations (from now I will use the term "relation" instead "relational bond" or "relation in the strict sense") are distinguishable in terms of their matter (II/1, §55, 298–299). Of course it is very difficult to speak of matter of relations because it is very easy to confuse it with the whole relation (as "composition" of matter, form and way of existence). In the case of similarity relation, its matter is just similarity, its form is being a relation. We do not have a technical term to signify form of relation as we have the characterization in the case of properties. Redness plays the role of characterization with respect to some tomato and similarity also plays some formal function with respect to Joseph and Piwko – function different than characterization. And because being red belongs to the category of property due
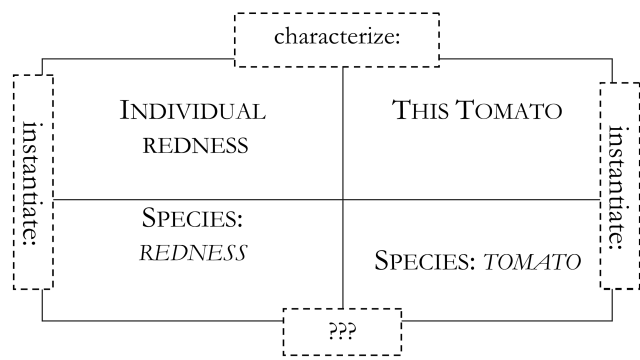
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[25] See K. Fine, 'Neutral Relations', *The Philosophical Review* 109 [1] (2000), p. 1–33. Fine notices Ingarden's contribution to the ontology of relations – see p. 1, note.

to the function of characterization, then similarity belongs to category of relation due to its special form.
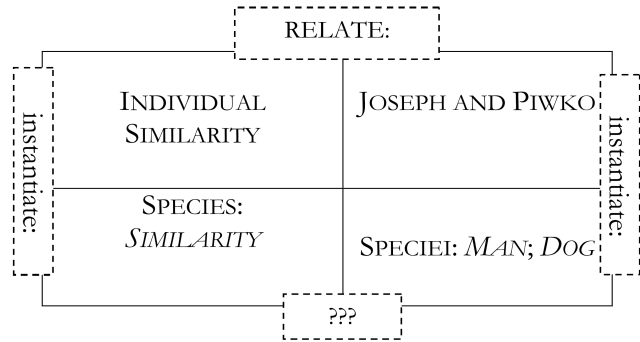
Moreover, that matter of relation is not the same as matter of relational feature (matter of similarity relation is not the same as matter of relational feature) although we sometimes use the same name to signify it. Matter of relational feature plays the function of characterization and does it only with respect to one object – whereas matter of relation plays its formal function with respect to at least two objects. Let us call the formal function of relation "RELATE".

The Ingardenian view of relations is highly complicated. But its main thesis that relations have matter and form can be grasped also in another way. Consider once again an ontological square. Universal accidents are of course all non-substantial universals. Let us compare two cases:

A.

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                    ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
                      characterize:
                    └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
     ┌ ─ ┐  ┌──────────────────┬──────────────────┐  ┌ ─ ┐
     ╎   ╎  │   INDIVIDUAL      │   THIS TOMATO     │  ╎   ╎
     ╎ i ╎  │   REDNESS         │                   │  ╎ i ╎
     ╎ n ╎  │                   │                   │  ╎ n ╎
     ╎ s ╎  ├──────────────────┼──────────────────┤  ╎ s ╎
     ╎ t ╎  │   SPECIES:        │                   │  ╎ t ╎
     ╎   ╎  │   REDNESS         │  SPECIES: TOMATO  │  ╎   ╎
     └ ─ ┘  └──────────────────┴──────────────────┘  └ ─ ┘
                    ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
                            ???
                    └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
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B.

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                    ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
                         RELATE:
                    └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
     ┌ ─ ┐  ┌──────────────────┬──────────────────┐  ┌ ─ ┐
     ╎   ╎  │   INDIVIDUAL      │ JOSEPH AND PIWKO  │  ╎   ╎
     ╎ i ╎  │   SIMILARITY      │                   │  ╎ i ╎
     ╎ n ╎  │                   │                   │  ╎ n ╎
     ╎ s ╎  ├──────────────────┼──────────────────┤  ╎ s ╎
     ╎ t ╎  │   SPECIES:        │                   │  ╎ t ╎
     ╎   ╎  │   SIMILARITY      │ SPECIEI: MAN; DOG │  ╎   ╎
     └ ─ ┘  └──────────────────┴──────────────────┘  └ ─ ┘
                    ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
                            ???
                    └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
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Redness plays the function of characterization with respect to its subject, and similarity plays the function RELATE with respect to its relation bearers.[26] The

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[26] "This tomato" in A. is of course not the full object but an object considered as a subject, i.e. in abstraction from its properties. *Mutatis mutandis* we can say the same about Joseph and Piwko in B.

full relation is not only individual similarity from the upper left box in B. The whole relation is individual similarity as fulfilling the function RELATE.

It is time to ask a very important question: are formal functions relations? They seem to be but they are not (II/1, §56, 309–311). Formal functions do not have matter[27] but are ways in which matter is organized. It is evident in the examples A. and B. RELATE is not a further relation but is rather a much more fundamental tie by which relational matter (individual similarity) is attached to relation bearers (Joseph and Piwko). The same, *mutatis mutandis*, must be said about characterization. Formal functions are not instances of relational universals but are ultimate ties between instances of non-substantial (so also relational) universals and instances of substantial universals. Moreover, if formal functions were relations, we would be involved in infinite regress: their matter would have to be attached to the related items by further relation, and so on, ad infinitum.

Similar reasons lead to the thesis that instantiation also is not a relation. But Ingarden would say it is not a formal function in the strict sense. Ingardenian universals are transcendent ideas. Thus instantiation is not a tie which organizes matter of individual objects.

Strictly speaking, formal functions are not entities. I know it is a very controversial claim, but I do not mean that formal functions are simply nothing, or that they are completely out of being. They are not entities in a similar way that existence is not an entity. In a sense they are more fundamental than entities because due to them, an entity can be an entity.[28]

To sum up: we have relations and non-relational ties. Within the latter subdivision we should distinguish formal functions. The main difference between relations and non-relational ties is that the latter do not have matter. Thus they are not objects even in a broad sense.

4. A possible solution and a new problem

Given the distinction between relations and non-relational ties, an absolute whole can be defined as a whole formed by specific non-relational ties – formal functions – and a summative whole, as a whole integrated by relations. We must remember that there are also possible non-relational ties which cannot make up a whole of any type (for example instantiation) and relations unable to make up a summative whole (similarity is such a relation).

Hence we cannot define inseparability and dependence in purely existential terms. These concepts turn out to be existential-formal concepts. A new definition of inseparability/separability can be stated as following:

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[27] In this sense they can be called "thin" relations. About thin and thick relations see K. Mulligan, 'Relations: Through Thick and Thin', *Erkenntnis* 48 [2–3] (1998), p. 325–353. Mulligan has some troubles with the criterion of distinguishing thick and thin relations. As we see Ingarden's concepts of matter can be helpful here.

[28] This approach to formal function is similar in many respects to E.J. Lowe's. See E.J. Lowe, *The Four Category Ontology*, p. 44–49; E.J., 'Some Formal Ontological Relations', *Dialectica* 58 [1] (2004), p. 297–316.

INSep: An object is inseparable iff it belongs to its essence that it must co-exist with some other object(s) within the larger whole integrated by some formal functions.

Sep: An object is separable iff it belongs to its essence that it does not have to coexist with any other entity within the larger whole integrated by some formal functions.

Literally, definitions of dependence and independence are not changed but of course the term "separable", as used here, has a more precise meaning:

Dep: An object is dependent iff it is separable and essentially needs some other object to exist.

INDep: An object is independent iff it is separable and does not need any object to exist.

Given these definitions dependent objects can be of two types:
1. Those which do not make up any whole.
2. Those which make up the whole but are integrated by relations.
At first glance it seems that the third type is also possible : those objects which make up the whole but which are integrated not by relations nor by formal functions but by non-relational ties of some other kind. But in that case, such a whole would be indistinguishable from an absolute whole and objects would not be dependent but inseparable – and those non-relational ties would turn out to be formal functions.

What are necessary conditions of 2.? There is only one condition: relations must be essential in that case. Parts of a strong organic whole are dependent (and not inseparable) only if they stand in such whole-making relations which are essential to them. What does this mean? Ingarden does not talk about essential relations but he proposed a very interesting approach to essential properties and we can apply this analysis to relations.

Ingarden maintains that the intrinsic/extrinsic distinction is too rough and replaced it with a four-fold division of properties (II/1, §57, 314–333):

1. Absolutely proper properties – their matter and existence is conditioned only by the object itself.

2. Attained properties – the beginning of their existence is caused by an external factor but their further existence is conditioned only by the object itself.

3. Externally conditioned properties – their beginning and further existence is conditioned by external factors.

4. Relational features.

For Ingarden, essential properties are some absolutely proper properties – but only those which immediately flow from the constitutive nature and, as Ingarden says, are equivalent to it (II/1, §58, 345–353). There are also possible absolutely proper properties which are implied by essential properties. We can say that they are essential in a broad sense. From now I will use the term "essential properties" as the equivalent of "absolutely proper properties". Of course the constitutive

nature and its determinable aspects are also essential characteristics of a thing, but they are not properties.

Essential relations would be relations which are either (1) contained in constitutive nature or (2) implied by constitutive nature or (3) implied by essential properties. I think that the first case should be excluded because of two reasons. Firstly I cannot accept that individual objects have relative identities (generic or individual). Secondly, ingredients of constitutive nature cannot be objects even in a broad sense. Yet I will not develop these problems.

The second and the third case are acceptable but we must refine some issues. Firstly, notice that "absolutely proper relation" is a contradiction in terms insofar as we conceive relations as entities conditioned at least by two objects. Thus essential relations are "absolutely proper" only in the sense that they cannot be attained and lost. Moreover, the thesis that essential relations are implied only by constitutive nature or essential properties does not only mean that nature and those properties are in that case foundations of relations. For there are possible non-essential relations which fundament is constitutive nature or essential properties. Every two objects of the same natural kind are similar to each other also because of their constitutive natures and absolutely proper properties, but of course such similarity is not necessary to them: for example, all dogs with one exception can be terminated and the survivor will not be similar to other dogs – although this similarity was based on its constitutive nature. Essential relations are implied by the nature or essential properties in the sense that nature or essential properties are mutually materially inseparable (in the broad sense) from the relations in question.

But there is a very serious problem of this new approach. If RELATE is a formal function, then relations are inseparable from their bearers. This means that matter of relations must coexist in the absolute whole with their bearers so (given transitiveness of inseparability) that the bearers are also inseparable from each other.[29] Then, parts of strong organic wholes are inseparable and we cannot express our intuitions (mentioned in section 2) in ontological terms.

I do not want to analyse this problem, but I will mention some possible solutions:

1. We can refute the transitiveness of inseparability.

2. We can accept that parts of a strong organic whole are in fact inseparable.

3. We can accept the view that RELATE is a non-relational tie, but refute the opinion it is a formal function.

I am inclined to 3. although I am aware of problems connected with this solution. As I have mentioned above, non-relational ties which are not formal functions could not be whole-making ties. But notice that such non-relational ties are ties between objects of different categories. For example, instantiation is a tie between individual objects and universals (Ingarden's ideas) but there are also non-relational ties between objects and processes, objects and events, and so on. In these cases, entities of different categories tied in such non-relational ways do

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[29] Of course it is not true in the case of non-essential relations because object does not have to coexist with them.

not make an absolute whole. But entities of some categories can be means by which entities of other categories are integrated into a summative whole. Relations are such means by which individual objects can be integrated. Processes can also be means of integration: objects can be unified by process in which they participate. In such cases, integrated objects are dependent (if relations and processes are essential to them) but not inseparable. Of course the cost of such a solution is that integrating relations or processes can only be dependent on their bearers or participants.