

## LEVELS

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It is plain that the problem of the levels or layers of a work of art is an important part of any theory of the aesthetic object. In other words, what I wish to state clearly from the outset is that of the two components that select the field of interest – that of the object, and that of its aesthetic valence – reference to the object arranges reference to its aesthetic valence. Put otherwise, the theme of the aesthetic object is a particular subdivision of ontology – a subdivision, moreover, which may prove fundamental, shedding light on several aspects of the overall framework of ontology. This was pointed by Nicolai Hartmann, when in the introduction to *Zur Grundlegung der Ontologie* – one of his main ontological works – he asserted that “the problematic [of art] belongs to the area of problems in which the ontological problem is rooted.” Evidently, when matters are viewed from this point of view, that part of aesthetics which addresses the problem of the aesthetic object may yield results of relevance to more general ontological reflection as well.

Complementary to investigation by objects is investigation by acts. In this case, however, it becomes more difficult to develop the theme that I wish to discuss here, namely that of levels or layers. Hartmann again points out: “the aesthetics of today still concentrates mainly on analysis of the act, and this is why the stratification relationship, although it has often been noted, is not yet familiar to it” ([Hartmann 1933], 565). The perspective to which I allude was first outlined by the phenomenologist Geiger, who not coincidentally sought to develop a form of phenomenological reduction which mainly involved objects and their structures. This, as we know, was a form of reduction different from the, so to speak, more classically phenomenological ones elaborated by Husserl in order to bring out the structures and operations of consciousness. Moreover, for the purposes of this paper, the decision to give priority to the perspective of the object becomes well-nigh obligatory.

That said, and before I develop with my theme in detail, I must present at least two presuppositions to the arguments that follow. These are two presuppositions that I shall present from perhaps an unusual point of view, but which are of central importance nonetheless.

1. The first presupposition concerns the problem in general of ontological reflection, starting from the fact that recent years have seen a revival of interest in ontology. However, consolidation of a genuine interest in ontology requires the removal of certain prejudices that have profoundly oriented both analytic and continental philosophy. As we know full well, in recent decades both sides have systematically delegitimated ontological inquiry in favour of their epistemological transformation (not to say 'reduction'). The analytic camp has flanked this error of neo-Kantian stamp with a linguistic prejudice, and the continental camp has flanked it with styles of inquiry and writing often devoid of methodological rigour.

One of the most interesting aspects of the recent revival of interest in ontology is that it does not solely involve philosophers. In the last six or seven years, in fact, various sectors of artificial intelligence – and in particular those areas of knowledge engineering concerned with databases and automatic translation – have begun to refer systematically to ontology ([Poli 1996], [1997b], [1999]).

This prompts the following questions: Why should a highly technological discipline like knowledge engineering interest itself in the speculations of philosophers? And how does this relate to the theme of the aesthetic object? I shall advance some possible answers later. For the time being I merely point out that ontology is of relevance to knowledge engineering because it is one of the means with which robust databases can be constructed: ontologically founded knowledge of the objects of the worlds may make codification simpler, clearer and more natural. In short, there is a belief among knowledge engineers that ontology is able to give greater robustness to databases by furnishing methodological criteria and categories with which to organize and construct them, as well as contexts in which to merge and re-categorize different databases in order to give them greater reciprocal transparency.

However much their points of departure, languages and problematics may significantly differ, ontologies in knowledge engineering (ontologies as technologies) and ontology in philosophy (ontology as categorial analysis) have numerous problems in common, and they seek to answer the same questions. A particularly explicit version of this proximity has recently been proposed by Brian Cantwell Smith, according to whom “the most serious problems standing in the way of developing an adequate theory of computation are as much *ontological* as they are semantical. It is not that the semantic problems go away; they remain as challenging as ever. It is just that they are joined ... by even more demanding problems of ontology” ([Smith 1995], 14); “despite the progress that has been made so far, we are not going to get to the hearth of computation, representation, cognition, information, semantics, or intentionality, until the ontological wall is scaled, penetrated, dismantled, or in some other way defused” ([Smith 1995], 17).

There thus arises a situation which, although it is not entirely new, provides fresh stimuli and perhaps unexpected opportunities for philosophical reflection. In this context, aesthetic analysis may also find new stimuli and new occasions for influence and application.

2. The second aspect that I wish briefly to discuss is the difference between levels of reality and levels of description. These two types of level are often confused in the literature, even though their denominations explicitly denote the different positions that they assume in a theoretical framework with even the minimum amount of structure. The levels of reality have a strictly ontological valence, while those of description have a strictly epistemological one. The presence of intermediate or ambiguous cases does not justify confusion of their categorial specificities. Having chosen to discuss the theme of levels from the point of view of a theory of the aesthetic object – or in other words, from the point of view of an ontology – in what follows I shall address the theme of levels mainly from the point of view of the levels of reality.

To forestall excessive generalization of the references, it is advisable to set some temporal and geographical parameters. For my purposes, the most convenient time period is from 1900 to 1950, that is to say, from Edmund Husserl's *Logical Investigations* to Nicolai Hartmann's *Aesthetik*.

The most suitable geographical ambit instead replicates a linguistic one: namely that of philosophical, artistic and scientific production in German, with some minor and occasional forays into the English- and Polish-speaking worlds.

These two delimitations, temporal and geographical, direct attention (within the perimeter thus delineated) to a particular focal centre constituted by the phenomenological circle of Munich. This is an aspect that is certainly well known but which assumes particular importance in the present context. The point to be emphasised is that the Munich circle comprised a group of phenomenologists who paid close and simultaneous attention to both aesthetic and ontological issues.

We shall see that intellectual output during the period defined above comprises a surprisingly large number of authors who paid particular attention to the problem of levels. For convenience, we can divide them into three main groups.

First, we have a group of authors with typically formal inclinations: Russell, Brouwer, Chwistek, Ramsey and Quine. Second, we have a group of phenomenological bent: Husserl, Ingarden, Hartmann, Plessner, Geiger and Conrad. Third, we have the art historians of the Viennese school (Panofsky and Riegl), the *allgemeine Kunstwissenschaft* movement of Berlin (Dessoir), and the structural investigations of Uitz.

Despite their profound differences of intellectual background and interest, all these authors addressed the problem of levels. Perhaps most surprising, however, is the fact that, notwithstanding their disciplinary differences, their works display a number of reciprocal influences. On analysing their theories, in fact, one finds passages of analysis which refer or relate to the work of other authors. In other words, there emerge relatively common features which may – given adequate development – give rise to further convergences.

I presume that the work of the third group of authors can be taken for granted. Accordingly, I shall concentrate on the other two groups in order to highlight their differences and similarities with respect to the authors in the third group. I shall begin with very brief discussion of certain aspects of the first group comprising the logicians.

It is well known, of course, that the problem of levels in the formal sense derives immediately from the options selected in constructing the formal language of modern mathematical logic. As soon as one chooses to formalize the typical structure of the proposition as 'P(a),' one has also decided (1) to distinguish the level of individuals from that of properties and relations, and (2) to treat individuals as the ultimate elements of the ontology subsumed by the logic and the properties and relations as dependent entities located at a different formal or ontological level.

So far there are no problems. And yet it is equally well known that this first distinction is not enough. In effect, Russell's paradox of the classes of all classes that are not members of themselves requires the introduction first of the simple theory and then the ramified theory of types. These ontological-formal theories tell us that properties and relations are organized into an infinite series of types constructed on each other. Independently of the formal details, discussion of which would be beyond the scope of this paper, it should be borne in mind that at the beginning of this century Russell developed a formal theory of levels which was also a theory of the levels of reality. This theory was subsequently further developed and refined by Chwistek and by Ramsey and Quine. I shall leave Ramsey and Quine aside, partly because their theories are well known and partly because the evolution of Quine's thought in particular has followed a different route from the one that I intend to present here. Of more direct relevance to my purposes is Chwistek, who is of interest for at least three reasons:

1. because he developed an original version of the formal theory of types;
2. because he flanked his formal theory of types with a theory of the levels of reality; to use Husserlian terminology, we may say that he elaborated both a formal theory and a material theory of levels;
3. and above all because in the Polish culture of the time he was Ingarden's opposite.

Neither Chwistek nor Ingarden, of course, reflect the general positions of the Lvov-Warsaw school founded by Kazimierz Twardowski, one of Franz Brentano's most outstanding pupils. In Poland, during the period of interest to us here, Twardowski's movement was intellectually and academically paramount. Among the few who did not subscribe to the theories of the Lvov-Warsaw school, the logician-ontologist Chwistek and the phenomenologist-ontologist Ingarden can be viewed as standing at the rightmost and leftmost extremes to Twardowski and his pupils. For the time being it suffices to have pointed out this node of central and eastern European culture: more thorough treatment of its still largely unknown history is available elsewhere ([Woleński 1989], [Coniglione 1990], [Coniglione, Poli and Woleński 1993], [Albertazzi, Libardi and Poli 1996], [Poli 1997a]).

In any case, of the three points mentioned (formal theory of levels, material theory of levels, and the link with Ingarden) I shall concentrate on the second, that of the material theory of levels.

Chwistek called what we term the material point of view the "theory of the plurality of realities," and he distinguished four levels: those of natural, physical, phenomenal and intuitive reality. Natural reality is what we refer to with naive or common-sense realism. Physical reality is the reality described by physics. Phenomenal reality is that usually associated with Hume and Mach. The final layer, that of intuitive reality, is comprised of intuitively represented elements.

For Chwistek, these various types of reality are all equally valid. None of them is real and proper reality, because all of them are true in the same way. Moreover, they cannot be treated as applicable to different regions or domains of reality because each of them exhausts the whole of reality. Consequently, there is no basis for talk of a true reality comprising the totality of objects. The essential point for Chwistek is that the various types of reality are accompanied by different ethical attitudes, and for this reason the choice of one or other type of reality is strictly value-based.

Unlike Chwistek, Brouwer develops a theory of levels in which what I have called the 'material' and 'formal' components are embedded in each other, so that it becomes difficult to distinguish the purely formal part from the purely material one. The situation can be better described by saying that mathematics, for Brouwer, is the theory that studies the form of reality. In this sense mathematics, and logic as well, are not a purely formal pattern of symbols.

Brouwer's system articulates into three levels:

1. the fundamental intuition;
2. the mathematical system constructed on the fundamental intuition;
3. the logical rules that govern the system.

Brouwer's fundamental intuition consists of temporal passage in which "an actual sensation furnishes another actual sensation in a manner such that the consciousness retains the first sensation as a past sensation." The second level derives "from identification of different sensations and of different complexes of sensations". At this level emerge what we call objects. The third level is that of the identification of other subjects and of other sources of individual causal action (for a reconstruction of Chwistek's and Brouwer's theories see [Russell 1984]).

From these premises Brouwer derives an original conception of mathematics and logic which I unfortunately cannot dwell upon here.

If we set Brouwer and Chwistek side by side, we see that they are respectively proponents of an eminently phenomenological position (Brouwer) and of a directly metaphysical one (Chwistek). However, they both apparently lack that ontologically mediation which alone is able to connect phenomenological levels and non-phenomenological levels, or the various types of reality, together.

Bearing this situation in mind we may proceed further.

The question that now arises and which I have already anticipated is 'What has all this got to do with the aesthetic object?' Apparently nothing, except for one aspect: namely that a group of logicians like the authors that I have briefly mentioned set about analysing – starting from their specific 'perspective points' – problems of a purely metaphysical and phenomenological nature, thereby highlighting the need to reinterpret their reflections in ontological terms.

That said, we may now move to discussion of certain aspects of the second group of authors comprising more or less explicitly phenomenological thinkers.

I presume that we are all aware of Husserl's theory of regional ontologies, with the consequent distinction among the regions of nature, consciousness and society. These three regions correspond to three levels of reality, and in this respect Chwistek theory appears to be an extreme version of Husserl's in which the various regions are segmented in partly different ways, and in which they are absolutized so that each of them acquires its own and unconditioned metaphysical sense of reality. Unlike Chwistek, Brouwer restricts himself to proposing a specific articulation of the region of consciousness, and in this sense he is more thoroughly phenomenological than Chwistek.

While Husserl's regional ontologies are well known, perhaps less so is that fact that similar distinctions are to be found not only in the just-mentioned Chwistek and Brouwer but also in many other thinkers belonging to the group of phenomenologists, with some interesting changes of emphasis. In Hartmann's case, for example, we find essentially the same regional segmentation as Husserl's, although it is formulated in original terms. Compared with Husserl, in fact, Hartmann conducts sophisticated analysis of the laws of dependence among and within levels.

A terminological note may be of use here. For the sake of clarity, I shall say that overforming relationships hold among ontological *layers*, while building-above relationships hold among ontological *strata*. The term ‘level’ will refer to both ‘layer’ and ‘stratum.’ Whereas by ‘overforming’ is meant that every category can constitute the ‘matter’ of a higher category, the term ‘building-above’ denotes a very different type of conditioning. In this case, the higher stratum requires the lower one only as its *external basis of existential support*, but not as matter to be supraformed.

English term	Hartmann’s German term	relation between	form of dependence
overforming building-above	Überformung Überbauung	layers strata	matter/form bearer/borne

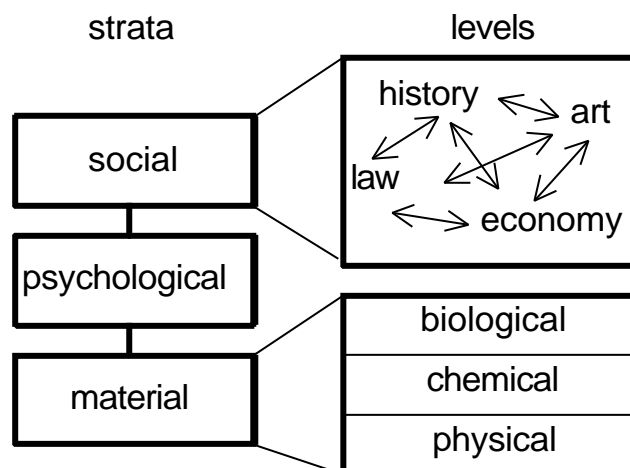
In short, the core of Hartmann’s position resides in the distinction among different types of dependence:

- matter-form dependence
- bearer-borne dependence

For completeness’ sake, a further type of dependence should be considered:

- self-referential dependence (Luhmann).

The picture that emerges is synthesised in Table 1.



The various forms of dependence articulate themselves into specific categorial laws. Matter-form dependence is well exemplified by the cases of overforming so efficaciously described by the natural sciences (atom-molecule-cell-tissue-organ-organism). Bearer-borne dependence arises in cases of interruption of categorial dependence and the simultaneous onset of a new substance-form series (as in the passage from the material to the psychological plane, and from the latter to the social plane). Finally, what I call (using Luhmann's terminology) self-referential dependence synthesises a variegated multiplicity of forms of dependence in which intervenes the complex dialectic among personal, objective and objectified 'spirit.'

This theoretical scheme is not pointlessly complex. The general ontological distinctions just outlined return explicitly in the problem of the aesthetic object, as soon as one realizes that the aesthetic object is a multi-layered object and therefore exhibits multiple forms of dependence.

From this point of view, a general theory of layers and levels in their various forms of dependence is an instrument of fundamental importance. It seems, in fact, that an articulated categorial context enables one also to handle the further complications that arise in aesthetic inquiry. Of course, my entire interpretative argument depends on the hypothesis that the aesthetic object is a stratified object.

It is well known that the core of a phenomenological theory of the layers of aesthetic objects was developed by Conrad. And it is equally well known that the most sophisticated theories on the subject are those of Hartmann and Ingarden. I shall now try to draw at least some direct comparisons between the latter.

Hartmann distinguishes two layers in the aesthetic object, which he calls the foreground layer and the background layer. The foreground layer comprises the real, concrete and sensible dimensions of the object, everything that is independent of the presence of a subject who addresses the object and seeks to understand it. The background layer is the layer of the content embedded in the foreground layer. The background layer exists only for the subject who grasps it. This layer is typically organized into many distinct sub-layers. Following Hartmann, we may therefore state that "according to its manner of being, the artistic object necessarily has two layers" (those of foreground and background), while "according to the overall structure of its content – that is to say, according to its inner form (i.e. the background layer) – it has many levels [layers]" [1950]. A theory of this kind obviously has two critical points: first, the problem of how the relationship between the two layers is articulated; second, the problem of how the relationship among the levels of the background layer is articulated. In the former case, Hartmann talks of a 'relationship of manifestation' on the basis of which – as has been pointed out on innumerable

occasions – the foreground (i.e. the matter of the object) imposes constraints on the background.

More interesting is that part of the theory which concerns the typical stratification of the background. Different aesthetic objects display different articulations of the background layer. In the case of literary works, for example, Hartmann distinguishes at least six different levels for more sophisticated genres like epic narratives or novels, while other genres have fewer levels. This applies to lyrical poems, for example, whose expressiveness is articulated into fewer levels because of the constraints imposed on the admissible expressive forms.

As an example of a visual aesthetic object, Hartmann cites the portrait, distinguishing the following levels in its background layer:

- the three-dimensional space in which the subject of the portrait and some elements of the setting appear;
- the movement of the subject's apparent corporeality;
- the subject's character;
- his or her individual idea, or the idea that the person portrayed has of him/herself;
- the symbolic, or the universal content manifested by the portrait.

Independently of the details that connect the various levels and layers, one notes that Hartmann's interpretation coincides in many respects with that propounded by Ingarden. In his analysis of literary works, Ingarden distinguishes – besides the phonological level, which corresponds to the foreground layer – the levels of meaning, of the represented objects, and of the aspects schematized, which are the levels that correspond to the background layer. Each of these levels has more specific internal articulations.

I would stress – and it is for that matter obvious – that the two interpretations have several overlapping features. The point is so evident that Ingarden himself, in a note to his *Untersuchungen zur Ontologie der Kunst* ([Ingarden 1962], 33), felt duty-bound to point out that his *Das literarische Kunstwerk* had been published two years before *Das Problem des geistigen Seins*, the work in which Hartmann laid the basis of his aesthetic theory. And yet, Ingarden complains, Hartmann did not feel it necessary to declare the similarity between their points of view. Of course, Ingarden's complaint is only justified if there is reason to believe that Hartmann had read, or at least was aware of, Ingarden's work, and for this there is no evidence. The debts that Hartmann acknowledges in his preface to *Das Problem des geistigen Seins* are to Hegel, to Dilthey, and to the students that had helped him formulate his arguments during his two semester courses taught during the academic year 1929/30. Hartmann also states that the first draft of the work was written in 1927/28. It thus seems reasonable to

conclude that, despite the similarity between Ingarden's and Hartmann's works, they are in fact the outcomes of different and parallel trains of thought.

In any scientific context, overlaps of this kind are regarded as highly significant. When several researchers working independently obtain similar results, it is reasonable to assume that there is some accuracy in their theories. And it is likewise interesting to analyse their points of contrast. Particularly intriguing in this regard is the case of music, which for Ingarden is a mono-stratified objectuality, while for Hartmann it has at least two layers of meaning: that of sounds in space-time, and that of the sequence of sound patterns.

Independently of these differences, the general problem to be addressed is that of the *integration* of the levels. Often, in fact, analysis of the levels of wholes concentrates on decomposition, giving rise to an overall effect of separation and juxtaposition. Conversely, analysis of the complementary procedures of coordination and integration is often inadequate. Consequently, the greater structural dynamism of the interpretation proposed by Hartmann seemingly offers greater possibilities for development than Ingarden's more static reading.

However, comparison between the two theories does not finish here. Among the many other features that could be mentioned, there is at least one that I consider to be of particular importance. And for this the merit is solely Ingarden's. I refer to the problem of the points of indeterminacy (*Unbestimmtheitsstellen*), which for Ingarden constitute the main criterion with which to distinguish the objects of the empirical world from the objects intentionally created by a literary work.

In my view, the most striking feature of Ingarden's theory of the points of indeterminacy is that it is not constrained to the distinction between empirical and intentional objects, but is generalizable to the ontologically and cognitively fundamental problem of the degrees of freedom of the object represented.

Ingarden's thesis is that every work of art structurally contains points of indeterminacy, or points for which the text does not furnish details. Note that the presence of points of indeterminacy is structural and therefore irremovable. To be precise, Ingarden distinguishes between two different types of points of indeterminacy: those that can be removed because the text allows details to be provided, and those that cannot be eliminated because the text does not furnish any support for the formulation of an adequately circumscribed variety of admissible information (cf. [Strelka 1990], 190).

Ingarden treats the theme of the points of indeterminacy in several of his works. The concept is introduced in *Das literarische Kunstwerk*, in one of the sections of the chapter devoted to analysis of the layer of represented objects (§ 38). Here Ingarden describes the represented object as a *schematic* construction. This means that the represented object can only be characterized in terms of a finite number of properties. Complementarily, however, as well as the

properties positively ascribed to the object there also exists an unlimited set of other, indeterminate properties.

Ingarden later returned to the problem of the points of indeterminacy in various other works, developing and modifying aspects of the theories set out in *Das literarische Kunstwerk*. Purely by way of summary, the main features of the different development phases of Ingarden's theory are the following (cf. [Markiewicz 1975]):

- explicit affirmation of a correlation between the points of indeterminacy and the schematic nature of a literary work, and extension of the points of indeterminacy from the layer of represented objects to other layers as well (first edition of [Ingarden 1937]);
- extension of the points of indeterminacy to all the layers of a literary work ([Ingarden 1940a], [1940b]);
- assertion of their enormous number as opposed to their previous infinity ([Ingarden 1968a]);
- acknowledgement that the points of indeterminacy do not necessarily have to be filled, and indeed that their filling may nullify the artistic effect ([Ingarden 1968a]).

To exemplify the last point, Ingarden analyses Mann's *Tristan*, commenting: "the details of the death, whether it was swift or slow, whether it was painful or otherwise, etc., are points of indeterminacy in Mann's story which no reader fills ... their filling does not serve the artistic form of the story ... On the contrary, leaving these details unfilled makes the situation more expressive ... If the details were provided, the artistic effect would be weakened" ([Ingarden 1968a], 253; cit. in [Markiewicz 1975]).

Under other names, the theme of the points of indeterminacy has been widely discussed. For the German world it may suffice to mention *Das Stilgesetz der Poesie* (1901) by Meyer, an author often cited by Ingarden himself. In the English-speaking world, mention should be made of the debate that followed publication of Empson's *Seven Types of Ambiguity* (1930) and Knight's "How many children had Lady Macbeth?" (1936), and in Italy at least of Umberto Eco's *Opera aperta* (1962). Here we may keep more closely to developments of Ingarden's theory. From this point of view, in the course of the 1940s the theory of the points of indeterminacy was given greater articulation by Stefania Skwarczynska, a pupil of Ingarden's who proposed the structuring of the theory on the distinction between omission and non-expression [Skwarczynska 1947].

For Skwarczynska, omission is a type of indeterminacy of non-aesthetic nature. In other words, it is a type of indeterminacy irrelevant to artistic endeavour which can be revealed by comparing the object of the work of art

against reality. The real object is characterized by numerous details which are irrelevant to the work of art and which can therefore be safely omitted. Non-expression, by contrast, has aesthetic valence. Non-expression is an indeterminacy deliberately introduced into the literary work, and for this reason it contributes to its structural quality. Skwarczynska then distinguishes several types of non-expression. It may be simple or compound, and compound non-expression may be distributed randomly or it may be concentrated in regions of accumulation. Moreover, non-expression may be only apparent – in the sense that the missing information may be supplied in the course of the work – or it may be non-apparent. In the latter case, simply unresolved non-expression is distinguished from non-expression unresolvable for more general ontological or metaphysical reasons.

I previously mentioned the structural valence of the points of indeterminacy. We must now determine exactly what is meant by ‘structural.’ The question cannot be resolved by hypothesising, for example – ingenuously – making finer and more detailed the plot of the work. The exemplificatory analysis of *Tristan* outlined above clarifies the point. But this means that the concept of point of indeterminacy is not reducible to the concept of lack of information.

One way to come up with a possible answer is to observe the interplay between the fully-rounded traits of the protagonists and the less articulated ones of the minor characters. If the points of indeterminacy were reducible only to a pure and simple lack of information, then the most unexpected surprises and the less foreseeable forms of behaviour should be imputed to the minor characters, those whom we know less about – those, that is to say, who seem to have more points of indeterminacy. In reality, however, the reverse is invariably the case. Why?

In effect, the problem is not one of information or of the amount of information available, but rather of the degrees of freedom of the object modelled. Typically, a minor character is a stereotype with few dimensions, and is described along a limited set of thematic axes. Since he or she is a personage with few degrees of freedom, s/he in reality has little indeterminacy. If we elaborate the theory in these terms, we see that the points of indeterminacy of an object depend on the space of its dimensions. Paradoxically – although the paradox is only apparent – the more an object is rich, elaborate or constructed, the more indeterminate it becomes, and precisely because it is characterized by a more articulated complex of dimensions. Figuratively, the more it acquires full relief, the more it becomes indeterminate.

It is my contention that Ingarden’s theory of the points of indeterminacy is one of his most significant achievements. Unfortunately, the first to underestimate this achievement was Ingarden himself. In the entirety of his considerable output one finds only a few pages devoted to this important intuition. Which amounts to saying that his theory still awaits construction in its details.

I shall conclude by returning to one of the presuppositions with which I began. It will be remembered that I mentioned the recent revival of interest in ontological themes in both philosophy and artificial intelligence.

Knowledge engineers devote a great deal of their energies to the representation of knowledge. Independently of the technical details – however important they may be – I believe that it is obvious that the ontological perspective can explicate the thematic connection between the representation that operates in information technology and the representation that operates in aesthetics. That representation and aesthetics are connected should come as no surprise: after all, Kant discussed the matter at length in his *Critique of Judgment*. More surprising is the extension of the concept of representation to domains with high technological content. And yet the theme of levels that I have discussed is evidently common to both disciplinary sectors. Consider, for example, Ingarden's theory briefly analysed in the last part of this paper. It is obvious that the problem of the points of indeterminacy arises in all situations of representation. Accordingly, Ingarden's theory – precisely because it is also an ontological theory – is not solely and exclusively a proposal confined to pure aesthetic reflection. On the contrary, it may prove of great importance for other areas of inquiry as well. From this point of view, themes and problems which hitherto have been the exclusive province of aesthetic reflection may be of help for investigation that apparently has nothing to do with it. We know that the reverse is by now entirely the case: it is taken for granted that aesthetics can benefit from the stimulus provided by technological advances. But the fact that the stimulus can move in the other direction – from aesthetics to science and technology – and that there are aspects of ontological and aesthetic reflection that may be of central importance for scientists and engineers, should not go unobserved. Indeed, I wish to conclude by saying that this is an aspect to which attention should be directed much more forcefully. At bottom, it is a matter of understanding and believing that some of the most advanced frontiers of contemporary scientific research, like those of artificial intelligence and of the cognitive sciences, can greatly benefit from the deliberate and targeted use of themes and ideas from a full-fledged theoretical aesthetics.

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