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THE ONTOLOGY OF WHAT IS NOT THERE

ABSTRACT. After discussion of the mainstream definition of ontology, and a short analysis of the Aristotelian's principles, the paper addresses the problem of the categorial nature of the future by distinguishing (a) possibility from potentiality and (b) forward from upward emergence.

Introduction

Contemporary “common-sense” readings of ontology often rely on the idea that ontology is the theory of what exists. The following are just a few of the many quotes in defence of that thesis:

- “The word ‘ontology’ is used to refer to philosophical investigation of existence or being” (*Routledge Encyclopaedia of Philosophy*, 1998)
- “[Ontology is] the branch of philosophy concerned with the nature of existence and the relations between things” (*Longman Dictionary of Contemporary English*, 1981)
- “[Ontology is] the philosophical investigation of the nature, constitution, and structure of reality” (*The Cambridge Dictionary of Philosophy*, 1999; under the entry “metaphysics”, to which one is directed from “ontology”).

Its wide acceptance notwithstanding, the thesis that equates ontology and reality is nevertheless wrong. Better, it is ruinous for any scientifically and philosophically well-structured understanding of ontology, and its wide acceptance only testifies the miserable level attained by contemporary awareness of philosophical matters.

A few exemplary cases immediately show that “existence” and “being” are not synonymous, and that “material existence” is but one of the many forms of “temporal extendedness”.

CASE 1. The simplest case concerns mental (psychological) and social entities. The former do not exist in the same way as material beings are said to exist. Moreover, they present both forms of dependence on some material bearer and forms of independence from them.¹ Detailed analysis of the laws of dependence

¹The idea of form as bearer of temporal information is due to M. Leyton. See his (1992, 2001).

and independence between intentional items and their bearer is a demanding undertaking that requires intensive study and cannot be decided by postulation.

Social entities raise similar problems: they both present forms of dependence on material bearers and independence from them. Moreover, mental and social entities display forms of mutual dependence. Boldly stated, societies require minds as their environment, and minds require society as theirs. Proper treatment of these topics requires a well-developed theory of levels of reality and their dependences.² Considering material entities as the only ones that exist seems at best an ideologically oriented decision. If mental and social entities are legitimate entities as well, their analyses from an ontological viewpoint (call them “mental ontology” and “social ontology”) are perfectly acceptable areas of research.

CASE 2. Properly speaking, ideal entities do not exist, because they are not temporally bounded like truly “real” entities are. On the other hand, both (ideal) values and mathematical entities are structured entities. This means that they offer “resistance” to improper treatment. Moreover, both values and formal constructs influence and shape “normal” entities. In short: non-existing entities exert influence on existing ones. Something has obviously gone wrong. Accepting the oversimplified understanding of reality put forward by the mainstream definition of ontology is the main source of the above difficulties. If ideal entities are legitimate entities, their ontological analysis is a perfectly acceptable area of research.

CASE 3. Past and future entities obviously do not exist. At most they existed and will possibly exist. Logicians have invented a number of clever tricks to deal with these cases. This is not to gainsay their relevance and usefulness from a formal point of view, but there is no reason to believe that formal tricks are free, neutral or transparent from an ontological viewpoint. In the rest of this paper I shall begin analysis from a categorical viewpoint of one class of the ontological entities that are not there, namely future entities.

An Aristotelian Intermezzo

Strange though it may seem, Aristotle still has interesting surprises in store. Everyone knows that, for Aristotle, individual substances have a basically twofold structure: they are composed of matter and form. Form in its turn has a number of different meanings, the most relevant of which is the interpretation of form as essence. Now, what is essence?

Aristotle’s expression for what is nowadays called essence was *to ti en einai*, rendered in Latin by *quod quid erat esse*: “what was (considered) to be”. That is

²For the theory of levels of reality, see Poli (2001).

“the essence of x is what x was considered to be” This definition raises a number of interpretive problems, the most relevant being the meaning of the past sense. Why did Aristotle formulate his definition of (what we call) essence in the past?

My understanding is as follows: The form of the actually existing x depends on what x was before. In contemporary jargon: the form of the actual x is *the result* of iteratively applying a number of transformation rules to the original x .

The definition advanced by Aristotle can therefore be explicated as follows: (1) x is a temporally extended entity; (2) the actual nature of x depends on x 's previous nature. Aristotle's definition can be further improved by adding a third clause not explicitly contained in his original wording: (3) there *are rules of transformation* connecting the actual nature of x to its previous nature(s). In one sentence, the concept of essence carries temporal information.

Aristotle's definition of matter seems much more difficult to decipher. Matter for Aristotle is the indeterminate, the unknowable, what offers resistance to the understanding. This does not explain much until a further aspect is taken into account, namely that the above features of matter (indeterminability, unknowability, etc.) depend on its role as substratum of the becoming, of changes. I have found that the best way to understand Aristotle's definition of matter is to apply the same criterion used for deciphering form, but shifting from the past to the future. That is to say: The matter of the actual x is what x will become. Otherwise stated: matter is the bearer of the future developments of x . Matter is therefore a *principle of openness*. This explains why matter is indeterminate and unknowable. If my reading is accepted, all the classical features ascribed to matter become immediately transparent.

The actuality of a given individual substance comprises form and matter. In my rewording, this amounts to saying that any entity has a past (form) and a future (matter). The past is what is maximally informative: the actual (internal or external) configuration of the entity presents traces of its past history (better: the entity's past history is retrievable as far as it has left traces in the entity's actual configuration). The future is minimally informative: its actual configuration excludes some of the possible choices, but for the rest almost everything is open.

Enlarging the Aristotelian Framework

Two moves are relevant. Firstly, and properly speaking, the actually given entity is the only existing entity. Past and future entities do not exist. This can be accepted without further ado. What really matters is the subsequent idea that actually existing entities contain *traces* of their past and *tendencies* toward the future. Traces and tendencies are legitimate existing components or aspects of the actually existing entity. This first move of a Leibnizian flavour is nevertheless not enough.

The point is that, upon a deeper reflection, matter shows two different components. The first component of matter is the reflection of form around the present. The same rules used to obtain the actual from the past can be used to project what is actually given into the future. In its simplest form, this is the idea embedded in the geometry of state (or phase) spaces so widely developed in science. The problem with the theory of state spaces is that all the possibilities should be calculated in advance. Which is unlikely, to say the less, and simply unfeasible as far as complexity issues are considered.

The second and truly demanding component of matter is embedded in the creativity of causality, i.e. permanent openness towards novelty. Entities change: they are born, grow, develop, die. A different conceptual framework is required for these cases. To mark the difference between the two components of matter, I shall distinguish between possibility and potentiality.

The Categorical Structure of the Future

We can retrieve (fragments of) the past from its traces. Can we do the same for the future? Otherwise stated: can we categorically analyze the tendencies actively present in actually existing entities in order to foresee (fragments of) the future? The answer is definitely “yes”.

Unfortunately, the task of providing a categorical analysis of the future is absent from the agenda of mainstream philosophy. This means that we cannot rely on the work of other colleagues: everything must be done from scratch. On the other hand, there have been and are thinkers trying to describe the future. Utopian thinkers, fantasy writers, cyber literates do so. Leaving aside their literary merits, which are not our concern here, we may try to consider them as sources for categorical analyses of what is not. Unfortunately, from a categorical viewpoint, such literature is usually poor, fragmented and astonishingly boring. Generally speaking, utopian and cyber works are made up of the already seen. The simplest way to figure out the situation is to consider Freud's theory of dreams and related topics (repression, etc.): they always concern what happened before. Utopian and cyber writer more often than not embellish on already seen pictures. By resorting to our previous distinction between the two dimensions of matter (the continuation of the past in the future dealt with by the category of possibility and the originally new taken into account by the category of potentiality), utopian and cyber literatures are as a norm patently confined within the boundaries of the category of possibility. The past is projected on the future, possibly with some make up. The motto “*magistra vitæ*” (history teaches us) well represent the underlying idea. This said, it is clear that possibility is not of much interest to us.

As soon as we turn to the category of potentiality, we immediately realise that the idea of potentiality as described above depends on a strong ontological thesis, namely that *reality is open*. This means that the ontological nature of entities is not thoroughly established. Something new can always happen. Entities are never totally given in advance. All of them present some kind of tendency toward the future.

Understanding the past often helps understanding of actually given situations. Likewise, prefiguring the future may also help in understanding actually given situations.

Not many thinkers have tried to clarify these issues. A number of sociologists and psychologists, generally gathered under the heading of field and dynamic thinkers, have done some preliminary work.³ I have in mind scholars like Sorokin, Coutu, and Dewey. The concepts of invitation-character (Lewin), demand-character (Koffka), affordance (Gibson) and implicit order and its unfoldings (Bohm) are all relevant. From a philosophical viewpoint, Uschenko did some good work. Important hints can occasionally be found in Leibniz (the concept of tendency is his), Husserl, Bergson, Hartmann, Peirce and Whitehead. But the thinker that developed the most extensive categorical analyses of the future has undoubtedly been Ernst Bloch. His *The Principle of Hope* is an encyclopaedia of the categories of the future.⁴

In what follows I shall present a minimal selection of some aspects of Bloch's work.

Potentiality

Ontology, as opposed to epistemology, is what interests us. This implies that the problem of missing information (the entity is imperfectly or only partially known) must be distinguished from the problem of the entity's categorical openness. The former is an epistemological problem, one which does not concern us. The latter is a truly ontological problem.

"Categorical openness" means that the entity is only partially determined, some of its aspects are still hidden. Better: some of its determination may be latent. The difference between being hidden and being latent can be clarified as follows: hidden components are there, waiting for proper triggers to activate them. On the other hand, latent components do not exist at all in the entity's actual state.

Hidden and open components interact with each other. They form the entity's space of possibilities.

³To my knowledge, the widest discussion of field theorists is provided by the first volume of Rummel (1975–1981) entitled *The Dynamic Psychological Field*.

⁴E. Bloch's opus magnum has been translated into English as Bloch (1995).

Latent components relate to incompletely present conditions and aspects. Their incompleteness may be ascribed either to still maturing conditions or to new conditions that may subsequently arise. The constantly open space of potentialities is constructed around them.

The whole of the entity therefore comprises both tendencies and latencies, possibilities and potentialities.

On submitting the category of potentiality to closer scrutiny, a number of new categories emerge, the most important being those of horizon and front.

Everything that is, being temporal, tends towards something else. From the point of view of the space of possibilities the development is towards the entity's stable points, if any. On the other hand, from the point of view of the space of potentialities, the existence of something like stable points cannot be accepted. What is needed is the idea of something that is neither reachable nor crossable. The concept of *horizon* — as opposed to the concept of boundary, used to distinguish the system of the entity from its environment — suits our purpose precisely.

The entity's horizon sketches that fragment of the space of potentialities whose conditions are maturing. As its conditions mature, the entity's horizon moves ahead. The category of horizon is a structurally teleological category. It encompasses the whole of the entity, its *entelechy*. Without horizons, entities are dead. They may still continue along their trajectories, but no real novelty can ever appear: everything is forever fixed.

Horizons have fronts, "areas" where novelties appear. The front is the growing, maturing, changing section of the horizon.

Emergence

In many respects, Bloch's mystical theory of what I have called potentiality (real possibility, in his terms) fades into obscurity. In my understanding, it may be given a chance to develop into a more tenable theory only if it is conjugated with a theory of the levels of reality. I have presented elsewhere a broad outline of a theory of levels (see references below). In a nutshell, the main tenet of the theory foresees a categorical segmentation of entities into four main strata (material, psychological, social, ideal). The various strata are subsequently segmented into a number of sublevels, called layers. The organization of the layers of each stratum differs as we pass from one stratum to the next. A complex network of laws of dependence and independence structures the connections between strata and within strata.

In this framework, emergence intervenes in at least two different fashions:

- *Forward emergence*: the interplay of phenomena at one level of reality gives birth to categorically new (emergent) phenomena at the same level of reality.

- *Upward emergence*: the interplay of phenomena at one level of reality gives birth to categorically new (emergent) phenomena at a higher level of reality.

Reference interplay among phenomena enables me to link emergence with causation. The two above-distinguished forms of emergence can therefore be translated into two different forms of causation. This means that causation can be creative and open to novelty. The last step is to add the idea that higher levels of reality can possibly constrain lower levels of reality, what is nowadays known as downward causation.⁵ This third form of causation closes the circle, reorienting forward causation into a form of feedback. All this amounts to saying that the idea of causality should be properly updated: the traditional understanding of causation as only forward causation should be enriched with (at least) upward causation and downward forms of causation.

This feedback circle of causes may therefore throw some light on at least some of the features of potentiality.

All things considered, we are falling back on the Aristotelian idea that there are different types of causes, variously interrelated and reciprocally dependent on each another. The source of the difference between the space of possibility and the space of potentiality may therefore depend on the difference between linear and non-linear forms of causality. The deplorable lack of an adequate conceptual framework, and in particular of a theory of the levels of reality, has made it almost impossible to work on themes of this kind, and forced interested people to lapse into mystical and prescientific jargons.

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REFERENCES

- Andersen, P. B., C. Emmeche, N. O. Finnemann, P. V. Christiansen, eds. (2000). *Downward Causation: Minds, Bodies and Matter*. Aarhus: University Press.
- Bloch, E. (1995). *The Principle of Hope*. 3 vols. Cambridge, MA: The MIT Press.
- Leyton, M. (1992). *Symmetry, Causality, Mind*. Cambridge, MA: The MIT Press.
- Leyton, M. (2001). *A Generative Theory of Shape*. Berlin: Springer.

⁵On downward causation, see Andersen *et al.* (2000).

- Poli, R. (2001). The Basic Problem of the Theory of Levels of Reality. *Axiomathes* **12** (3/4), 261–283.
- Poli, R. (2006). Levels of Reality and the Psychological Stratum. *Revue Internationale de Philosophie*, 165–182.
- Poli, R. (2006). First Steps in Experimental Phenomenology. In: A. Loula, R. Gudwin, J. Queiroz (eds.), *Artificial Cognition Systems*, pp. 359–387. Hersey: Idea Group Publishing.
- Rummel, R. J. (1975–1981). *Understanding Conflict and War*. NY: J. Wiley and Sons.