Conference
Εἶδος Metaphysics Conference

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The *Εἶδος* Metaphysics Conference, hosted by the Philosophy Department of the University of Geneva on July 15-18, has been the international launch event of the *Εἶδος* Center for Metaphysics. The conference ranged on four main topics of contemporary analytic metaphysics, each represented by a thematic session: *Time and Change*, *Modality and Essence*, *Object and Property*, and *Meta-Metaphysics*. Every session featured both plenary and parallel talks. For reasons of space and due to the size of the event, I will here focus only on some of the plenary talks.

The session *Time and Change* centered on two questions: Is time possible without change? and 2) Why does time pass? The first question was addressed by Robin Le Poidevin in *Time and Change: the Argument from Contingency*. Le Poidevin defends the thesis that there can be time without change. Central in the construction of Le Poidevin's position is the argument from contingency". Applied to a world containing only three spheres, the inference schematically goes:

> It is possible for any one of the spheres to exist in a state of temporal changelessness.
>
> Whether or not any individual sphere exists in a state of temporal changelessness is logically independent of the other spheres.
>
> Therefore, it is possible that all three spheres exist in a state of temporal changelessness.

The conclusion expresses Le Poidevin's thesis of the independence of time from change. To elucidate his argument, Le Poidevin refers to Sidney Shoemaker's thought experiment of the frozen world-zones. The gist of the thought experiment is that there can be a world consisting of three different zones *A*, *B* and *C*, each experiencing a complete stop in change (a “freeze") with different frequencies. As a consequence time keeps existing (since a zone keeps changing while another freezes). This is admissible also for the opponent of time without change, since a frozen zone is seen as experiencing temporal changelessness by the inhabitants of the other (un-frozen) zones. Yet the frequencies are such that every *n* years *A*, *B* and *C* freeze concurrently. During this time all three zone experience temporal changelessness, so the whole world experiences it. This shows, concludes Shoemaker, that there can be time without change.

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Brad Skow tried to revive a proposal that has gained very few adherents, the *moving spotlight theory of time*. Theories of time are classified according to two orthogonal criteria. One is the distinction between eternalism and presentism. Eternalists believe that present, past and future are all on par, in the sense that they all exist (timelessly); presentists attribute existence only to present events. The other distinction is between A-theories and B-theories of time. A-theorists regard the present as determined absolutely, whereas B-theorists think that what is present is relative to some parameters. The moving spotlight theory of time is an A-theory for the eternalist: the NOW is absolute and flows along the (timelessly) existing instants of time. As the absolute NOW moves forward, new instants of time become present, while others sink into the past.

However, there are two key questions that remain unanswered: Why does time pass? And why does time pass at the rate at which it does? Facts about passage of time and the rate of its flow are taken as primitive in the received theory. In his version, Skow addresses this explanatory gap.

The new moving spotlight theory links change to the passage of time. We know already from the old theory that the NOW's movement makes time pass. But what pushes the NOW forward? According to Skow, change is what moves the NOW. Combining these two facts leads to the submitted solution to the First puzzle: facts about the passage of time are explained in terms of more primitive facts about change. Clearly, this explanation is a good one only if the NOW does not move in funny ways. Accordingly, the moving spotlight theory is enriched with principles regulating how the NOW behaves. From these principles a few desiderata follow: the NOW does not skip time points; things change only if the NOW moves; the NOW always moves. This last condition is required to guarantee that time never stops, and follows from the (crucial) assumption that change is necessary. In other words, time never ceases passing because things never cease changing.

Skow answers the second question along the same lines. Since change is what determines why and how time passes (via the movement of the absolute NOW), the rate at which this happens is also determined by change. Namely, the constant rate of time is determined by a constant rate of change in the world.

As Ned Markosian pointed out, the idea that passage of time entails change leads to trouble. For if we admit that there can be parts of the universe that are changeless for extended periods of time, we can use Lewis' mereological principle of recombination to show the possibility of an unchanging world in which time passes. In general, the proposed version of the moving spotlight theory is incompatible with the conclusions reached in Le Poidevin's paper. Skow replied that we should drop the unrestricted principle of recombination. Incidentally, one may think that the moving spotlight theory is inconsistent with special relativity. For A-theorists regard present as absolute, while in Einstein's theory coexistence is relative to an inertial frame of reference. Although he did not elaborate on this point, Skow claimed that the theory can be easily reconciled with special relativity.

L.A. Paul focused on the metaphysics of phenomenal experience. It is often argued that subjective or first-person knowledge cannot be derived from objective or third-person knowledge. For example, my experiencing the brightness of this computer screen cannot be reduced to knowledge of the cognitive processes instantiated in my brain. This is the point Thomas Nagel makes when he argues that a complete knowledge of a bat's brain will not tell us what it is like to be a bat. Let us call this the “epistemic gap". Anti-reductionists have relied on this fact to infer the existence of an ontological gap - which is, a gap between objective and subjective ontology, or between the objects of third-person experience and the objects of first person experience. This ontological dualism results in postulating consciousness and its properties as a primitive phenomenal ontology. The ontological irreducibility of consciousness is then used to explain why we cannot have objective knowledge of qualia. In other words, the ontological gap is both inferred from and used to explain the epistemic gap.

Paul accepts the epistemic gap but claims that neither is the inference from epistemic to ontological gap justified nor does primitive phenomenal ontology fill the epistemic gap. Her thesis is that, if we reject the inference and endorse physicalism, the epistemic gap can be explained by clarifying the ontology of cognitive properties. How so? An individual *S* is in the first-person state of seeing red if she has a relevant cognitive property, call it *R*. This does not mean that the subjective experience of seeing red is identical to the cognitive property *R*. Rather, it is identical to the structured entity *S's having R*. But what our scientific theories quantify over are cognitive properties like *R*, i.e. the properties instantiated in our brains, and these properties have less structure than relational complexes of the form *S's having R*.

Why does this explain the epistemic gap? After all, one might react, a complete scientific description of my brain will describe *S*'s having cognitive property *P*, for every cognitive property *P* had by *S*. The problem is that the epistemic gap is filled if the scientist, by means of sole objective knowledge, can have subjective experience of each cognitive property *S* has. But this can happen only if the scientist *is* the individual *S* having *R*. This fact shows that, if Paul is right about the ontology of cognitive properties, a physicalist cannot fill the epistemic gap but at least can explain why the gap cannot be filled. Consequently, the epistemic gap does not entail either an ontological or an explanatory gap.

Modality and Essence has discussed 1) some application of the notion of *essence* to the philosophy of language, and 2) the worth of treating *metaphysical de re modalities* in terms of *essence*. Possibility (necessity) is *de re* if it is a possibility (necessity) for an individual, or a collection of individuals. For example, by saying “Cicero is necessarily provided with a genetic code" I am making an assertion about a necessary property of the individual Cicero.

In the past few decades it has become standard to reduce facts about essence to facts about de re necessity, as per the definition: *x* is essentially a *P* iff *x* is necessarily a *P*. In possible-worlds semantics, this becomes: *x* is essentially a *P* iff *x* is a *P* at every world (or: at every world where *x* exists). Kit Fine has criticized this reductive approach, pointing out that there are necessary properties of individuals that are not their essential properties. For example, Cicero belongs necessarily to his own singleton, but not essentially, since the fact that Cicero belongs to singleton-Cicero is not part of the (real) definition of Cicero. Fine revived

the Aristotelian idea that not only expressions but objects as well have definitions, and essences of objects are their definitions. This allows to rid an object's essence of properties that are “merely" necessary. Accordingly, the *essence* of an object *x* is a set of properties on which *x* is identity-dependent, where *x* is identity-dependent on *P* iff the (real) definition of *x* involves *P*.

The session opened indeed with a talk by Kit Fine, titled *Essence and Modality in Language*. Fine suggested to regard meaning as a special case of essence. Roughly, the idea is that the *meaning* of an expression is something on which the expression is identity-dependent. The word 'snow' could not be itself if it referred to something different from its actual reference and if its sense would differ form the actual one. Central in this view is the notion of *semantic requirement*: a set of conditions an expression must satisfy to perform its given linguistic role. In order to shape its position Fine touched upon a crucial issue of semantics, the determination of sense and reference of expressions. Semantics has traditionally been ruled by the following principle:

> *Standard View*: The determination of the sense of an expression is prior to the determination of its reference and the latter derives form the former.

Fine proposes to reverse the order imposed by the standard view: the assignment of a sense to an expression will encode a semantic requirement on the reference of the expression. In other words, the sense of an expression is determined by a way of determining its reference. For example, the reference of the true identity sentence 'Cicero is Tully' is the proposition ⌜Cicero is identical with Cicero⌝. A given way of determining such a reference contributes as well to determining the sense of 'Cicero is Tully'. The new theory has a great advantage: it avoids a problem that jeopardizes the standard view. Indeed, it obtains that

> $\mathbf{T_1}$ 'p_1' is true iff p_1
> .
> .
> .
> $\mathbf{T_n}$ 'p_n' is true iff p_n

are theorems of the semantic theory. They are biconditionals as "'the snow is white' is true iff the snow is white", and the like. However, since any of $\mathbf{T_1}$,..., $\mathbf{T_n}$ are theorems, it follows that

> 'the snow is white' is true iff the snow is true and $\mathbf{T_1}$ and... and $\mathbf{T_n}$.

But suppose the above theorems are to assign a sense to a sentence (a widespread posit) and the sense of a sentence *p* contributes to determining the reference of *p*, as the standard view suggests. As a consequence, the sense of *any* sentence contributes to determining the reference of *p*. Yet it is implausible that, say, the reference of 'the snow is white' should be established also by means of "'the apple *a* is red' iff the apple *a* is red".

This problem about expressions and their meanings mirrors the above point on objects and their essences. The received semantic theory defines the meaning (essence) of an expression via its necessary properties, that is the conditions it necessarily satisfies. But some of these necessary conditions may not be constitutive of the meaning of the given expression. Fine's proposal skirts this problem, as the semantic requirement for 'the snow is white' does not apply to any other proposition. Indeed, the meaning of 'the snow is white' is determined by a requirement that depends on the requirements for 'snow' and 'white', and the latter do not coincide with the requirements for other expression (say 'apple', '*a*', 'red'). Thus, the account proposed by Fine avoids a redundancy affecting the standard theory.

The notion of essence has his opponents, too. In *Disagreeable Essences*, Daniel Nolan has questioned the notion of essence. A theoretical notion, argues Nolan, should be used only if we have good reasons to endorse the theories that employ it. What may these reasons be? According to Nolan, *theoretical appeal* and *explanatory power* are the main reasons to endorse a theory. A natural way to determine appeal and power of a theory is by *inference to the best explanation*. By extension, one may be tempted to apply this criterion to the case of essentialist theories, too. Yet it is not clear what "the best explanation" could be in metaphysics, and how it should be established. Indeed, the role of metaphysics is allegedly to decide what kinds of entities populate the world. But if it is our prejudice that there is nothing like essences in the world, no explanation that relies on essences can be the best" explanation. In other words, we cannot appeal to inference to the best explanation of what there is in order to decide what there is, namely whether there are essences. As a consequence, inference to the best explanation seems not to be a valid method to settle the debate.

Object and Property has hosted a symposium with Peter Simons, Ralf Busse, Joseph Melia and Benjamin Schnieder. In his *Tropes and part relations*, Peter Simons addressed some problems that ensue when we model properties as tropes. There are two traditions regarding the relationship between tropes and their bearers. One is the Aristotelian, according to which tropes are not parts of their bearers. The bundle theorists, on the other hand, regard a *concretum* as a bundle of tropes. It is not clear how else tropes could be instantiated if not by being parts of their bearers. For this reason Simons elaborates on trope theory within the bundle-theoretic tradition. Now, let us suppose that mereological parthood formalizes the trope-bearer relation. Some paradoxes will then arise. For example, any sphere contains a cube as a proper part, therefore a sphere is a cube by having a cube-ness trope as a part. Also, a connected sphere contains two disconnected spheres as parts, therefore a sphere is the fusion of two disconnected spheres. Likewise, a white shirt with a black fleck is a black shirt - and so on.

How can we block these conclusions without rejecting either trope or bundle theory?

There are three candidates that may take the blame:

1. parthood is transitive;
2. tropes are parts of their bearers;

3. *a* is *X* iff *a* contains an *X*-ness trope.

But we cannot drop (1) without abandoning classical mereology, and (2) amounts to bundle theory. So, if anything can be done at all, we must revise the third condition. Simons proposes the following version of (3):

1. If a trope *T* of kind *K* is part of a concretum *C* and not part of any concretum *D* which is a proper part of *C*, then *C* has *T* directly, and has the kind of property imparted by *K*.

As desired, this modification blocks the above paradoxes. For instance, every cube contained in a sphere as a proper part is also contained in a proper part of that sphere. Hence, the sphere does not have the property of being a cube.

The session *Meta-metaphysics* dealt with some methodological issues in metaphysics, with a particular attention to the status of existential statements and the value of the ontological commitment they carry.

The moral we can draw from the *Ειδος* Metaphysics Conference is twofold. In only a few decades analytic metaphysics has become a highly sophisticated discipline, with its own machinery of concepts, principles and goals. Although most central topics are being debated and some of them are still controversial, it cannot be denied that metaphysics has as defined a shape as it has ever had. On the other hand, current metaphysics is not fragmented as many other technical disciplines are, both inside and outside of philosophy. It is still possible for metaphysicians of all breeds to convene and discuss each other's views in a thorough and competent way. Metaphysics has avoided the risk of becoming a label for groups of philosophers with different interests, methods and backgrounds. One can only hope that this fortunate coincidence of sophistication and intellectual breadth will lead to further surprising results.

However, the event also had one remarkable absentee, the metaphysics of science. A good deal of today's metaphysics happens at the intersection with natural sciences, especially physics, as witnessed by the work of Tim Maudlin, James Ladyman, Steven French and Simon Saunders. But the challenges coming from quantum mechanics, relativity and biology - to mention a few - have barely been touched upon at the *Ειδος* Metaphysics Conference. This is even more striking as it happens at a time when Geneva kicks off the Large Hadron Collider experiment, the largest high-energy physics experiment yet. It is my conviction that we can hardly have a full-blown metaphysics without the physics.

One short remark on today's geography of metaphysics is due as well. It is a natural consequence of adopting the analytic method that metaphysics is being propelled mainly by the work of philosophers from English-speaking countries. Yet Geneva has become a central node for metaphysics in continental Europe and beyond. Hopefully this is the beginning of a more widespread trend.

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