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| **Meeting title:** Overfitting and Heuristics in Philosophy |
| **Date:** 4.3.2025.  |
| **Time:** 12.00 |
| **Place:** Zoom |
| **Zoom link:** Filozofija Doktorski is inviting you to a scheduled Zoom meeting.Join Zoom Meeting[https://us02web.zoom.us/j/83068045475?pwd=wMvYolCaxdfwfoU9voTBkpha6MNGpS.1](https://us02web.zoom.us/j/83068045475?pwd=wMvYolCaxdfwfoU9voTBkpha6MNGpS.1" \t "https://mail.proton.me/u/5/almost-all-mail/VHg6mBQC4-gLVWzXsIGvitXgsz9V9YglIYlMY3MDHdfXXnjeDxHkJsZh9yRX9qXvgfOO8wjLb7UN0IpKw9Ud2A==/_blank) Meeting ID: 830 6804 5475Passcode: 922979 |
| **Duration:** 2 hours |
| **Participants:** Boran Berčić, Filip Čeč, Matija Rajter, Ksenija Savčić Vito Balorda, Timothy Williamson, Ljudevit Hanžek, Andrej Jandrić |
| **Agenda:**1. The members of the audience presented Williamson with their questions and comments regarding his recent book *Overfitting and Heuristics in Philosophy*.
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| **Summary of the book:** The following description of the book is offered by Oxford University Press:“In his Rutgers Lectures, Timothy Williamson explains how contemporary philosophy suffers from a widespread pathology known as *overfitting* to natural and social scientists, but little understood by most philosophers. Overfitting involves an insufficiently critical attitude towards data, which leads to over-complicated theories designed to fit what are in fact errors in the data. In philosophy, the data typically comprise verdicts on hypothetical or actual cases. Errors in such data can result from our reliance on *heuristics*, efficient cognitive shortcuts, simple to use but not fully reliable. Just as heuristics embedded in our visual system produce visual illusions, so heuristics embedded in our general cognitive systems produce philosophical paradoxes. Williamson explains the heuristics responsible for paradoxes of vagueness and identity over time, paradoxes of conditionals, paradoxes in ascribing beliefs and other mental states to others, paradoxes of truth and falsity, and paradoxes of weighing reasons and intersectionality. As a case study, Williamson shows how illusions of hyperintensionality can result from a heuristic that projects cognitively significant differences in how explanations are presented onto supposed differences in the non-linguistic world, which then form the starting point for metaphysicians' theorizing. In each case, Williamson provides independent evidence that we commonly use the heuristic, and that it sometimes leads us astray. In short, we are being suckered by our own heuristics, and the result is overfitting. Williamson also discusses how philosophers can best avoid these problems. Williamson's important diagnosis and prescription will be of interest to a wide range of philosophers.” (*Overfitting and Heuristics in Philosophy*, [Overfitting and Heuristics in Philosophy - Timothy Williamson - Oxford University Press](https://global.oup.com/academic/product/overfitting-and-heuristics-in-philosophy-9780197779217?cc=hr&lang=en&), accessed 3.9.2025.) |
| **The questions that were presented to Williamson were the following:****Berčić*** In the book you claim that hyperintensional properties and relations are representational. Therefore, they do not belong to the world but rather to the way we represent things. Would the following example represent a counterexample to this claim? Imagine the relation of being downhill or uphill. There are hyperintensional properties (x is downhill iff x is uphill). But it does not appear that they are representational properties, they are properties that belong to the world: if you drive uphill you consume more fuel, if you drive downhill the breaks are put under more stress etc.
* In the book you have presented an interesting an general argument against conceptual analysis. It goes along the following lines. Philosophers try to offer complicated analyses of terms such as ‘knowledge’, ‘causation’, ‘action’, etc. However, the output of these analyses is not what average competent speakers have in mind when they use said concepts. But let’s take for an example the mathematical operation of addition. An average competent speaker that goes shopping on the market can perfectly well add two and three potatoes together. However, when the average speaker is operating by means of addition he is not necessarily aware of the properties of addition: the associative, cummulative, and identity property. So by analogy it may be completely legitimate that epistemologists are analyzing knowledge with safety conditions, sensitivity conditions, justified probabilities etc.

**Balorda*** It seems that in your book, particularly in Chapter 1, you caution against premature rejection of philosophical theories based on isolated counterexamples, as a “Popperian” falsificationst framework would suggest. It seems that your view resonates with the Kuhnian notion of paradigm shifts in science, where a dominant paradigm is typically replaced by a new one only after accumulating substantial anomalies or counterevidence. Given this analogy, and considering the ongoing debate between intensionalism and hyperintensionalism, could we interpret these as competing philosophical paradigms? If so, does your argument suggest that the 'victory' of one over the other will depend not on a single decisive counterexample, but on the gradual accumulation of evidence that better fits one framework, as it is the case with Kuhn’s scientific paradigm shifts?
* If I interpreted your Chapter 5 right, you argue that cognitive significance does not supervene on semantic properties, as illustrated by the 'furze' and 'gorse' example. You emphasize that linguistic guises, that is, the specific forms in which content is expressed, play a crucial role in cognitive significance. That, in turn, allows for distinct cognitive relations to necessarily equivalent propositions. You advocate for a separation of content and cognitive significance to avoid distorting semantic frameworks. Given this, how does your framework account for the cognitive value of learning new linguistic guises for previously understood concepts, particularly in domains like metaphysics, logic, and mathematics where necessary equivalences are prevalent? Specifically, how does the recognition of linguistic guises as 'what we think with,' rather than 'what we think,' enable us to understand the acquisition of new cognitive relations to old truths without conflating these relations with changes in semantic content?

**Čeč*** How do we individuate heuristics in philosophy and/or metaphysics? Is the mutual inconsistency between the libertarian and compatibilist meanings of “could have done otherwise” a heuristic or a clash of heuristics, much like the mutual inconsistency of opposing counterfactuals? Could it be that our notion of a material object—the so-called “object talk”—is a heuristic as well? It functions properly with chairs and tables but not as well when dealing with energy particles and galaxies. It is reliable in most cases but not all.
* It seems we could say that many of our philosophical debates are clashes of heuristics and perhaps even illusory problems. But wouldn't such a solution be too radical? How can we determine whether we are dealing with a genuine philosophical problem or merely a clash of heuristics?
* If we accept the truth of counterpossibles, aren’t we giving up on reductio ad absurdum? In reductio ad absurdum, we accept a claim by rejecting its opposite, as the opposite leads to a contradiction. However, if we accept counterpossibles—in which we treat the antecedent as true even though it is impossible—aren’t we, in fact, accepting and building on something that we typically use as an endpoint in reductio ad absurdum argumentation?

**Jandrić*** I have a strong feeling that there are cases which call for hyperintentional analysis. And and an obvious case is is mathematics because because I I really cannot help but feel that different mathematical true, sentences express different propositions say that a sentence about the sum of two numbers expresses a different proposition than a sentence about a particular value of a, I don't know, sine function or something like that. And and, in in the last chapter of the book, you you suggest really that all true mathematical statements express, the same proposition only under different guises and that these guises, have cognitive significance, but they do not enter into meaning. And, I don't I I really I don't know if is it really that when we are dealing with mathematics, when we're doing mathematics, that we are simply transforming, one guise of a single proposition into some of its other guises. Is is that all that we're doing?
* This question is simmilar to Filip’s. How do we individuate heuristics? Is it transparent to us which heuristic we are using or could we be wrong about this? Since heuristics are generally reliable, how can we know that they fail us in exactly those cases that seem to support hyperintensionalism?
* If, after some time, there would appear a hyperintensional compositional semantics, would this be a reason to accept hyperintensional metaphysics?

**Rajter*** When we apply the persistence heuristic to vague terms or concepts then it leads us to sorites paradoxes because vague terms do not have clear boundaries or defeaters. However, it is at least prima facie plausible to claim that we could continue using the heuristic in these cases if we would ameliorate these vague terms. I would claim that, when we talk about the persistence heuristic, we actually want to *maximize* the use of such a heuristic so we can use our cognition more efficiently, while at the same time *minimize* the danger that vague or otherwise inconsistent terms pose to us. Therefore we can think of conceptual analysis/conceptual engineering as complementing the use of the persistence heuristic.
* In the chapter *Overfitting and Degrees of Freedom* you write the following: “A different way to assess the plausibility of JTB is by noting that knowledge is a central focus for our ordinary thought and talk about cognitive matters (Williamson 2000, Nagel 2014): is justified true belief a good candidate to play that role? ” (str. 69-70). It is claimed here that the term or concept of knowledge has a specific role or function it fulfills in our everyday lives. We should therefore evaluate knowledge as JTB on the basis of such a function. If I understood you correctly, you conclude that JTB does not fulfill this function in a satisfactory manner which is one of the reasons why we should drop the JTB analysis of knowledge. Such a manouvre reminds me of the recent methodology of conceptual engineering, the practice of assessing and improving our concepts. Authors working within this framework argue that if a concept fails to fulfill its function in a satisfactory manner we should then revise or replace said concept. However, authors working on conceptual engineering also claim that concepts are not the only objects of our evaluation, we can evaluate the functions they are intended to fulfill as well. Therefore, a friend of the JTB analysis of knowledge working within the framework of conceptual engineering might claim that, although our concept of knowledge currently fulfills a function *x*, it *should* actually fulfill another function *y*. It is this function *y* that is best satisfied by the JTB analysis of knowledge. Do you find this convincing?

**Savčić*** Science progresses through paradigms—universally accepted models that define research problems and solutions for a community (Kuhn, 1970). Before a paradigm is established, inquiry might be guided by curiosity, common sense, and practical concerns, but once accepted, it drives researchers toward highly specialized, very precise, and often counterintuitive investigations. Postparadigm science advances rapidly because researchers focus on predefined problems rather than questioning fundamentals, treating research as puzzle-solving (Levy, 2003). The progress comes with the cost. Scientists tend to suppress novelty and assume anomalies will eventually be resolved within the existing framework (Kuhn, 1970). Thus, overfitting appears to be an inevitable byproduct of science. Yet, paradigms shift when new data accumulates, forcing reconsideration. For example, Lynn Margulis’s Endosymbiotic Theory (1967) was initially dismissed, rejected 15 times by different journals, and unanimously ridiculed but later validated by genetic evidence, becoming a cornerstone of evolutionary biology by the 1980s. Scientific paradigms change due to empirical evidence, not because they grow too complex. Philosophy, however, does not rely on empirical data in the same way science does. In Margulis’s case, genetic evidence and advances in molecular biology eliminated alternative explanations. What would be the analogue procedure for philosophy?
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| **Engaging discussion points raised by the audience:*** The nature of hyperintensional properties and relations
* The nature and viability of conceptual analysis/conceptual engineering
* Situating the intensional/hyperintensional debate within the framework of the kuhnian paradigm shifts
* The individuation of heuristics
* Hyperintensional treatment of mathematics
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