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York, UK

## **Habilitation Report for Dr Błażej Skrzypulec**

### *Summary*

In the seven years since being awarded his PhD, Dr Skrzypulec has created a body of work that is impressive in its unity, breadth, novelty and nuance. This work constitutes a significant contribution to the development of philosophy of perception. More generally, the findings of Dr Skrzypulec's work in this area are of importance both to philosophy of mind and empirical psychology as it relates to perception, as well as to interdisciplinary and empirical work on perception and the senses. Furthermore, Dr Skrzypulec's distinctive methodology, combining careful use of concepts from analytic metaphysics with close attention to relevant empirical findings, is a welcome development. As such, it is my view that the achievements of the candidate clearly correspond to the requirements set out in the Law on Higher Education and Science.

### *Findings and their significance*

The candidate included in their application a series of twelve wide-ranging but thematically linked articles, published in philosophical and interdisciplinary journals that are highly regarded internationally: *Review of Philosophy & Psychology*, *Synthese*, *Erkenntnis*, *Mind & Language*, *Philosophical Studies*, *Australasian Journal of Philosophy*, *Philosophia*, *Pacific Philosophical Quarterly*, and *Philosophical Psychology*. These articles (arranged into four 'modules') are the outputs of a research programme investigating structural aspects of perceptual representations, both modality-specific, and multi-modal. These structural aspects include features of experience that are invariant over changes in the objects and properties represented, as well as rules or principles involved in the generation of perceptual representations. In this section I describe the conclusions drawn in this series of papers, drawing attention to their novelty, significance and unity, as well as evidence of their having made a difference in and beyond the discipline.

In the first module, Dr Skrzypulec considers the principles employed by perceptual systems when they represent an object as numerically the same over time. In article 1, he argues that in vision, spatiotemporal continuity is merely necessary for the representation of this kind of diachronic identity. It is not sufficient for the representation of an object as the same over time however, because in addition to spatiotemporal continuity, he argues, the principles governing visual object representation also involve ‘thisness’, which is to say, the ‘pure’ property of being *this object*. This is a wholly novel conclusion. That it is of significance to interdisciplinary work on perception is demonstrated by its having been cited in interdisciplinary and empirical journals *Mind and Language* (Vernazzani 2021), *Frontiers in Psychology* (Decock 2018) and *Wiley Interdisciplinary Reviews: Cognitive Science* (Rakoczy et al. 2019). The other two papers in this module are continuous with article 1. Article 2 investigates a further aspect of how vision represents objects as numerically the same over time, and specifically whether the relation of sameness this involves is transitive or intransitive. The candidate argues that empirical results favour a transitive interpretation.

Article 3 extends the consideration of the rule- or principle- structure of perceptual object representation to a comparison between audition and vision. It is often stated that the continuing existence over time of sounds and visual objects is quite different. For example, sounds are sometimes thought of as temporally extended events which persist over time by having successive temporal parts. In other words, auditorily represented sounds *perdure*. Visually represented objects, on the other hand, are assumed not to happen or unfold in this way, but instead to be wholly present at each moment that they exist. In other words, they do not *perdure* but *endure*. Dr Skrzypulec identifies a number of ways of understanding this distinction between endurance (for visual objects) and perdurance (for sounds) over time. Then, he argues, on any way of understanding the distinction, it is not warranted to think of visual and auditory representations as differing in this way. Rather, he suggests, it is merely the case that certain features associated with perdurance are more salient in auditory than in visual experience. This novel result makes an obvious contribution not only to answering questions about the rule-structure of perceptual representations, but to ongoing debates about the metaphysics of sound. For instance, defenders of ‘event’ theories of objective, worldly sounds (for example, O’Callaghan 2009) often appeal to the claim that sounds are represented as perduring in support of their view.

Module 2 concerns itself with ‘interoceptive’ aspects of perception, which is to say, features of perceptual representations relating to the perceiver and her body, rather than items ‘out there’ in the world. Article 4 is (so far as I know) the only philosophical paper to have addressed the question of whether pain experience has a spatial sensory field. Roughly, a modality has such a field if, in addition to representing the presence of particular items, it also makes one aware of a space within which such items are located. Dr Skrzypulec argues that, surprisingly, whilst the interoceptive aspect of tactile experience has such a field, pain experience does not. This is because, he argues, empirical data suggests that pain experiences do not represent distance which he takes to be a necessary condition for having field-like content. This paper is discussed in a ‘Current Directions’ essay on spatial representations in sensory modalities in *Mind and Language* (Cheng 2022). Cheng notes that the candidate has moved the debate on by distinguishing between spatial aspects of touch that are interoceptive and those that are exteroceptive. Article 5 also defends a surprising conclusion, namely, that reflection on experiences of blurriness suggest that visual experience also has an interoceptive element. Specifically, according to Dr Skrzypulec, experiences of blurriness represent not only a loss of visual acuity, but the state of the perceiver’s own visual system. A distinctive feature of this paper is that the candidate seeks to accommodate what he calls the ‘positive’ aspects of blurriness, namely that it justifies beliefs about our visual system and motivates certain actions, such as rubbing our eyes or having them tested. This is a new account of the experience of blurriness, but also a contribution to a long-standing debate over whether perceptual experiences are transparent and wholly representational. (Martin 2002 and Tye 2002 are seminal in this debate) It is consistent with the candidate’s account that the transparency thesis is true and that perceptual experiences are purely representational, since to accommodate blurriness we need only appeal to mind-independent objects that the experiences represent, including the subject’s own visual system. This paper has already received some attention, for example, in Zięba 2021. Article 6 considers whether we hear silence. Dr Skrzypulec argues that we do, and that this involves representing empty egocentric directions: for example, that there is nothing on my left. This he suggests is to be preferred to extant accounts that propose that hearing silence is a matter of representing intervals of *time* as empty. That is because (he argues) audition and vision represent space but not time differently, relying on different, modality-specific physiological mechanisms. Whilst targetting silence perception specifically, this paper contributes to a broader, unresolved debate about whether absences can be perceptually experienced, or even admitted into our

ontology. As such, this paper has already been discussed by Laura Gow in her ‘Empty Space, Silence and Absence (Gow 2021).

A notable feature of the candidate’s work is his attention to perception in various modalities in addition to vision. In module 3, he directs his attention to olfaction. In article 7, he takes on the question of whether olfaction, like vision, represents objects. An alternative view is that it represents only features. Dr Skrzypulec defends an intermediate position, on which olfactory content should be described in term of a *sui generis* category that meets some but not all of the conditions on object representation. Though, he argues, represented odours are like visual objects the primary subjects of features, and have mereological (part-whole) structure, the rules governing the identity over time of represented odours are different to those (see papers 1-3) governing the identity over time of visual objects. Unlike visual objects, he proposes, and like visually represented features, odours do not survive certain qualitative changes: a vanilla odour represented now will not be experienced as identical to a coffee odour represented shortly afterwards. This conclusion adds some much-needed nuance to the debate over olfactory content. It is discussed in a newly published paper in *Synthese* (Masciari 2022).

Articles 8 and 9 provide further depth to the candidate’s account of the rule-structure of olfactory representation. In article 8 he argues that though olfactory content does have mereological structure—i.e., it represents parts and wholes—there is a significant and surprising difference between this and the mereological structure involved in visual representation. In particular, he argues that it is not true of olfactory objects that they cannot have only one proper part. Olfactory representation thus violates a component of formal ‘classical mereological systems’ that specify the parthood relation. It should of course be noted that there is room to dispute claims that Dr Skrzypulec makes in support of his conclusions. For instance, I am not convinced that when we experience a cherry note in a perfume, this is represented as a *part* of the perfume odour, rather than one of its *properties*, as the candidate claims in arguing that an odour can be represented as having only one proper part. However, this does not diminish the role of this work in developing the discipline. On the contrary, one way in which the candidate’s work will develop the discipline is by motivating further argument over such controversial conclusions.

In contrast to article 8, article 9 argues for a commonality between vision and olfaction. Both vision and olfaction have a ‘subject/properties’ structure, attributing properties such as redness (in vision) or vanillariness (in olfaction) to particulars. Furthermore, Dr Skrzypulec argues that in both modalities, the subjects to which properties are attributed serve to unify other experienced elements into perceptual units. This issue is central to the debate over whether olfactory content should be specified in terms of objects at all (for contrasting views in this debate see for example Millar 2019, and Masciari 2022). Resolving this issue has broader significance. If olfaction does not represent objects then there is more disunity to perceptual representation that we might have expected—enough, perhaps, to make us doubt whether it is a unified phenomenon at all.

The final module (module 4) constitutes a sustained exploration of the subject/properties structure of perceptual representation. I discuss the articles in this module in reverse order. Having argued that olfaction represents subjects and attributes properties to them (in article 9), in article 12 Dr Skrzypulec explores the role and nature of visual subjects: represented objects to which visual properties are attributed. It is he suggests typically assumed that vision requires *strong* subjects in order to solve the ‘many properties problem’. This is, roughly, the problem of determining which properties are bound to which objects in a scene so that, for example, a red square and a blue triangle are represented, rather than a blue square and a red triangle. A strong subject, as the candidate defines it, is one defined in terms of a predication relation that is asymmetric and intransitive. Dr Skrzypulec argues for the subtly different conclusion that the many properties problem can be solved by making use, instead, of a symmetric and intransitive relation. Hence, we need not postulate strong subjects to explain visual content. Furthermore, he goes on to argue that this answer best explains the results of some empirical studies, and specifically data about the conditions under which the visual system fails to solve the many properties problem.

The topic of article 11 is the subject/properties structure of audio-visual experiences: experiences that are both visual and auditory. This original contribution to the ongoing debate over multimodal experiences argues that there are audio-visual experiences that are not merely conjunctively multimodal, which is to say, they cannot be broken down without remainder into a visual and an auditory component. The candidate goes on to provide a novel account of some of these experiences. In the cases that concern him, we perceive an event (for example, a ball hitting a surface) that has properties—e.g., relating to the force of the

impact—which we experience in virtue of auditory and visual elements. The novelty and value of this account lies in its being able to explain such multimodal experiences whilst preserving the intuitive claim that sounds and visual objects are distinct, and each proprietary to their modality. Finally, article 10 takes on another long-standing debate in the philosophy of perception, concerning the reach of its content. On what Tim Bayne (2009) has called a conservative view, we perceptually represent only low-level properties such as, in the case of vision, colour and shape. On more liberal views, we perceptually represent a wider range of ‘higher’ level properties. In particular, defenders of liberal views have sometimes argued that we can perceptually represent natural kind properties, such as being a pine tree or a tiger. (Siegel 2005) Dr Skrzypulec defends a different version of the liberal position, on which perceptual content is not restricted to low level properties, but does not represent natural kind properties either. Instead, he argues, we can come to perceptually represent a range of higher level sortal properties he calls R-properties that are not natural kind properties, and which supervene on low level properties. This new contribution to the debate over the reach of perceptual content has been made use of by Elvira Di Bona (2022) in her discussion of auditory content.

### *Methodology and philosophical approach*

In addition to the novelty and unity of the conclusions Dr Skrzypulec has defended, it is worth drawing attention to some distinctive features of his philosophical approach. Firstly, there is in philosophy of perception a divide between those working in what is called ‘empirically informed’ philosophy of mind, whose principal focus is accommodating results from the science of the mind, and those who use more traditional, analytic, ‘armchair’ approaches. (See for example Logue and Richardson 2021, Introduction, for discussion) It is a feature of Dr Skrzypulec’s work that he straddles this divide with aplomb. On the one hand, in much of his work, he defends his results by discussing their relationship with empirical data. For example, the main conclusion of article 1 is defended by arguing that it is supported by the pattern of errors observed in ‘Multiple Object Tracking’ experiments. This pattern, he argues, is best explained by his claim that ‘thisness’ is involved in the principles governing visual object representations. Similarly, he argues against pain experience having field-like content in article 4 by appeal to Mancini et al’s (2015) study into our capacity to assess distance on the basis of pain experience. Here as elsewhere the use he makes of empirical work is cautious and well-informed. He is always careful to consider alternative explanations

of empirical results, and to note where he is ‘hostage to empirical fortune’, in the sense that other, future studies might overturn his conclusions. Dr Skrzypulec’s engagement with the science of perception has extended to conducting collaborative empirical research, published in article 15 (not part of the series of papers submitted for this habilitation procedure).

On the other hand, the candidate also makes judicious and knowledgeable use of ‘armchair’ methods too, such as appeals to intuition and phenomenological claims. In particular, a characteristic of his work is using concepts and distinctions from analytic metaphysics. One example of this is the use of ‘thisness’ in article 1. Another example is the consideration of the applicability of formal mereological systems to olfactory representation in article 8. The use he makes of concepts and distinctions from analytic metaphysics makes for nuance and subtlety in his conclusions, but also allows him to identify new questions. For instance, it allows him to go beyond asking ‘does olfaction represent to objects?’, to the more specific ‘does olfactory content have subject/properties structure?’ and—more specific still—‘what are the formal properties of the subject/properties structure involved in olfaction?’ In summary, the candidate has an admirable capacity to engage, in detail, with empirical work and consider its implications for precisely formulated philosophical hypotheses.

#### *Additional observations*

The twelve articles discussed above form a thematically related series. Dr Skrzypulec has however published a number of other original articles on the philosophy of perception, not included in these series. For example, he has entered into the debate over the existence and nature of unconscious perception, arguing that current empirical work does not support the claim that conscious and unconscious representations of colour have equivalent content (article 13). The candidate has also made a contribution to a debate between generalist and particularist accounts of perceptual content, identifying some problems facing the latter and not the former (Article 14). Since submitting his habilitation application, he has had additional papers accepted for publication, including article 16, which defends ‘olfactory evaluativism’, a position intended to accommodate the evaluative (e.g., pleasure and disgust related) aspects of olfactory experience within a representationalist framework. This further demonstrates Dr Skrzypulec’s ongoing productivity as well as the breadth of his philosophical achievements. He has also contributed to the discipline by undertaking editorial work, as co-editor of a 2020 special issue of the journal *Synthese* on the structure of perceptual objects, and by his

involvement in the European Society for Philosophy and Psychology (ESPP). He co-organised a symposium that was accepted for inclusion in the society's 2021 conference, and has presented his work at previous annual ESPP conferences too.



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