

## **Authors' Reply to Reviewer**

### **Reviewer's general comment**

This is a very clear, elegant, and persuasive paper. The topic is of central interest in the philosophy of action: how do intentions link up to motor processes to achieve the execution of the intended action? The paper argues that some motor processes are representational, that these motor representations are distinct from intentions in that they represent non-propositionally, but that they nonetheless play a role in explaining the purposiveness of an action by representing (part of) the outcome toward which the action is directed. The argument is plausible, well-informed, and accessible even without much familiarity with the empirical literature. In my view, only minor revisions are needed.

### **Reply**

**We are very grateful to the reviewer for these supportive comments.**

### **Reviewer's request 1**

The title is seriously misleading. There has been much philosophical and empirical attention devoted lately to the phenomenon of temptation and the use of intentions or resolutions to overcome temptation (e.g. Richard Holton's work). The title suggests that this is the subject of the paper. Given that it is not in fact concerned with temptation as such, I strongly suggest that the title be revised.

### **Reply 1**

**We are grateful to the reviewer for pointing this out. We have changed the title to 'Intention and motor representation in purposive action'.**

### **Reviewer's request 2**

Page 8, second full paragraph: the argument that motor representations are constrained in ways that could not be explained if they were propositional goes by very quickly and fails to fully convince. It is claimed that in imagining performing an action, there are bio-mechanical, dynamical, and postural constraints on what can be imagined, and that no such constraints would apply to propositional attitudes. But wouldn't these constraints apply to propositional attitudes if what is being imagined is \*oneself\* performing an action, in virtue of the the constraints imposed on the relevant propositional content by bio-mechanical facts about one's own body? Further, it seems possible (to me, at least) to imagine performing an action while inhabiting a very different body and thus being subject to very different constraints. In general, it seems to me that the defender of motor representations as propositional has much more to say about why such constraints would apply to the relevant propositions, and the extent to which they do apply, than is acknowledged by the authors. This section of the paper should be bolstered by further argument.

### **Reply 2**

**We have done this and acknowledge the useful suggestion. In reflecting**

**on the referee's comments we found it was necessary to make revisions throughout Section 3 which aim at strengthening each step of the argument. A first step in addressing the referee's concerns is to introduce a distinction between cognitive and phenomenologically action-like ways of imagining acting (p. 8). We then revised the discussion and added new material intended to bolster our arguments both for the preliminary claim that motor representation differs in format from visual representation and also for the main claim that motor representation is not propositional in format (pp. 10-11).**

### **Reviewer's request 3**

Pages 12-13: The appeal to demonstrative concepts as a way for intentions to defer to motor representations in their contents is appealing. However, it raises a pressing question about how this demonstration occurs in practical thought. The authors discuss one possible way to perform the demonstration: by engaging in motor imagery, and then forming an intention to "do that." But surely this happens relatively infrequently; most planning does not include imagining how precisely to move one's body in order to bring about some outcome. It seems to me that more of a story is needed as to how the demonstrative concepts involved in intentions would get their reference when no motor imaging occurs in practical thought. The authors briefly allude to "experiences of action" as possibly making motor representations available for demonstrative reference, but it is not clear to me what is meant here. An expansion of this discussion may help.

### **Reply 3**

**Following the referee's suggestion we have extended the discussion in two places, on pages 16 and 18. We agree with the referee that most planning does not involve experiencing actually or imagining acting. The new material is intended to clarify this and to explain how it is consistent with our proposal.**