Response to second-round reviews and editorial comments on: *What do we mean by the directions “cranial” and “caudal” on a vertebra?*

Mike Taylor

Our gratitude goes to the handling editor and reviewers for turning this resubmission around promptly. We are pleased to see that we are converging on a satisfactory conclusion. We have addressed the new comments as follows:

# Comments on review 1 (Ryan D. Marek)

Taking Marek’s suggestion to further combine illustrations together with Tschopp’s strong feeling that this should not be done, we unsurprisingly side with Tschopp. We feel that the push towards reducing figure count arises from a habituation to how things are done at prestige journals such as *Science* and *Nature*: but one of the great joys of proper online journals is that there is no need to squeeze space, making it possible instead to focus on clarity. We have therefore kept the set of illustrations as it was in the previous version.

XXX We are grateful for the suggestions of changes in wording, and have adopted some of them.

We have added references where (rightly) requested:

* XXX Although the spinal cord does not completely fill the neural canal in most vertebrates, the cross-sectional area of the neural canal does vary in concert with the cross-sectional area of the spinal cord.
* XXX For other purposes, such as measuring the articular surface area of the centrum to estimate biomechanical loading or intervertebral cartilage properties, we might prefer to orient the vertebra with the articular surfaces vertical

XXX The point that orientation is important for morphometric landmarks is useful, and we have incorporated it. We have followed other suggested tweaks that improve the generality of statements that at times are too focused on angles.

XXX The suggested changes to Figures 1 and 2 are both helpful, and we have implemented them.

XXX We have looked at the four papers recommended by Marek as relevant to out work, and … Well?

XXX Work through the annotated manuscript for specifics.

# Comments on review 2 (Emanuel Tschopp)

XXX Tschopp’s further comments on the matter of neural canal cross-sectional area are well taken. We have revised the relevant section of the manuscript to make our point in a different way, recognising that the area shown in Figure 2, parts A and B is simply incorrect, and that this is itself an argument for using a neural-canal-based definition.

We are grateful to the reviewer for catching some embarrassing typos and grammatical errors.

XXX Work through the annotated manuscript for specifics.

# Comments on handling editor’s summary (Peter Falkingham)

XXX We are happy to move the Open Peer Review section down into the acknowledgements, as you suggest. This seems like a happy arrangement that both preserves important material and prevents it from interrupting the main flow of the argument.

Finally, we resist the suggestion of shopping the backgrounds out of Figure 11. The purpose of that particular illustration is precisely to show the “rough and ready” approach in action in real physical environments, and presenting it in a neatly cleaned-up form would undermine that.

Overall, we are really pleased with the form this paper has arrived in.

XXX Update acknowledgements