O’Donoghue et al.

Revision: Disentangling the influences of curiosity and active exploration on cognitive map formation

The manuscript is substantially improved. The clarity of the question makes more sense, as does the relationship between active learning and curiosity. Most of the comments and concerns brought up by the reviewers have been addressed.

The question is very interesting and understanding more about how curiosity drives learning will add richness to our understanding of learning processes. On the other hand, my enthusiasm is still rather tepid. There is nothing seriously wrong with the methods, so on that front it can pass the registered report, but I’m not sure that these are the best methods to answer the question. I just don’t feel confident that this paradigm would really give us a definitive resolution to the question.

To me, asking people about how curious they are about an office or lounge doesn’t really get at how curious they are about finding out about a specific thing in that environment, but more their general interest in offices and lounges. Perhaps this is more of a critique on the field of curiosity research – it is fairly new and the paradigms do not quite fit right – rather than this particular study, although it does suffer from the same shortcomings.

To then rely solely on drawings also is very limited. The navigation field has moved on from only using drawings because they have substantial shortcomings, which I pointed out in my previous review. The scoring is only based on reviewer 1-5 ratings rather than objective measurements of locations of objects. The removal of the other tests makes the reliance on drawings even more central to the study.

The authors say that people spend more time in rooms that they are curious about, and that later spatial memory is also better. One question is whether it is the curiosity that is leading to the better memory or whether it is an indirect effect of the amount of time spent and amount they looked around. I think the authors are making this conjecture. I would suggest some kind of mediation analysis to understand the nature of this relationship more carefully.