Review of: "Effect of Self-Movement on Visually Directed Throwing: Implications for Distance Perception"

A. Michael West[1]

1 Massachusetts Institute of Technology

Potential competing interests: No potential competing interests to declare.

The article was well written. The motivation was well-stated and the methods align directly with the motivated hypothesis. However, I have a few comments that could be used to better the interpretation of the results.

1. In Experiment 2, the authors aimed to estimate DOR in throwing for a target 6m away. However, the subjects could not see the target. One unaddressed confounding factor is the the change in subject's biomechanics from running to standing. It was shown that subjects consistently threw the ball further while running (Figure 4). The authors make a claim that this is due to an error in their perception. However, how can we decouple the effects of perception and biomechanics especially when subjects can't continuously perceive the target? It may be best to let the subjects always view the target. However, not be able to view where the ball landed.
2. Due to the accuracy in dg error, the authors claim that the subjects may be aiming for the base of the target. This seems like a strong unsupported claim. If subjects were instructed to aim to throw the ball through the hoop, it would be best to assume that subjects were just consistently missing the shot short, not changing their exact interpretation. Again I think providing subjects with some amount of feedback could mitigate this.
3. The introduction provided sounded evidence in suggestion of a model described by Equation 3. However, the results never touched upon how the observed subject data fit to this model. I think adding this would provide powerful insight.