“It All Happened So Slow!”: The Impact of Action Speed on Intentionality Judgments
Zachary C. Burns and Eugene M. Caruso
University of Chicago
Booth School of Business

Introduction
From YouTube to the courtroom, people have an increasing number of opportunities to view the actions of others on film. We investigate the impact of slow motion replay on assessments of intentionality. Using videos of physical contact in various sporting events, as well as experimenter generated clips, we demonstrate that participants who view events in slow motion believe that actions are more intentional, compared to those who watch it at regular speed. We test two possible explanations: 1) that people are actually seeing the “true intentions” better in slow motion and 2) that elements of the slow motion tangential to actual intent induce people to see more intent.

Background and Hypotheses
• Making judgments of intentionality based on secondhand recordings is becoming more and more normal
• Some research suggests this could be problematic (1)
• Recordings allow us to see the actions in ways other than we might be able to firsthand (e.g. in slow motion)

H1: Actions in slow motion seem more intentional than at regular speed.
• We might intuitively believe slow motion is better, but is this true?
• People have an implicit theory that actions are intentional (2), slow motion may aid in this confirmation

H2: People see actions as more intentional in slow motion because it is a more accurate portrayal of the truth.
• Slow motion may aid in seeing intentions because it seems as though the actor has more time for a conscious intention to arise (3)

H3: People see actions as more intentional in slow motion because it seems like they have more time to prepare for the outcome

References

Study 1: Basic effect
Participants watched either the regular speed or slow motion versions of three different sports clips, then rated how intentional, forceful, blameworthy and worthy of punishment the actors were.

Across several measures, slow motion is more intentional than regular speed.

Study 2: Within Subjects
Perhaps the action is intentional, and the slow motion version aids people in seeing the truth. Participants who see the regular version first should show the effect, but participants who see slow motion first should not.

All participants saw the helmet-to-helmet clip both at regular speed and in slow motion. They gave separate ratings for each video.

People change their assessments regardless of which version they see first.

Study 3: Perceived Time
We filmed our own stimuli to gain some experimental control. The video was of a man riding a bike, then hitting a target with a foam sword dipped in paint.

We created long and short versions of the video by adding a longer lead-up to hitting the target. We again used slow motion and regular versions of the clips. The lengths were selected so that Short/Slow was the same length as Regular/Long.

The clip length IV did not impact any measure (except perceived time), nor did it interact.

People think slow motion is more intentional and lasts longer than regular speed. Clips of the same viewer length seem to take longer in slow motion. Perceived time mediates the impact of slow motion on intentionality.

Conclusions
People rate actions which they observe in slow motion to be more intentional than the identical actions viewed at regular speed. This does not seem to be because slow motion gives better information about an actor’s intentions; rather it stems from a misperception of how long the actor had to prepare for the outcome.