Dear editors,

We are pleased to submit to *PNAS* the enclosed manuscript entitled *Hysteresis in human computation: how one task affects another*. This work makes fundamental contributions in the emerging area of crowdsourcing, demonstrating that a near-ubiquitous task design paradigm can introduce strong bias into the results. Our findings show that crowdsourced workers can be unintentionally primed in powerful ways *during* a task (beyond priming through instructions or examples). We find evidence, however, that this priming may not be all bad, opening the door to further research on leveraging psychological phenomena to improve the quality and reliability of human computation. In short, our findings apply to virtually every crowdsourcing study that has ever been done or ever will be done - and highlights a very serious and uncharacterized systemic source of bias.

Well-over 100,000 published studies have used or investigated crowdsourcing platforms. These studies span nearly every scientific discipline including biology, sociology, urban planning, and physics. As a result, our findings have very far-reaching implications for a massive and diverse community of researchers - impacting both past and future research that leverages or innovates on crowdsourcing platforms.

Given the implications of our study, a large portion of your readership will find our work relevant to their past, current, and future work. Also noteworthy is the extensive use of crowdsourcing in industry - further expanding the potential impact of our study and the community of readers that will find it relevant.

We certify that none of this material has been published or is under consideration elsewhere, including online.

Sincerely,

Edward Newell and Derek Ruths