

# On motor prediction in autism spectrum disorder

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## BACKGROUND

Can people with ASD use their motor system to make sense of other people's behavior?

## QUESTION

Is ASD associated with a decreased ability to predict others' actions?

## METHOD

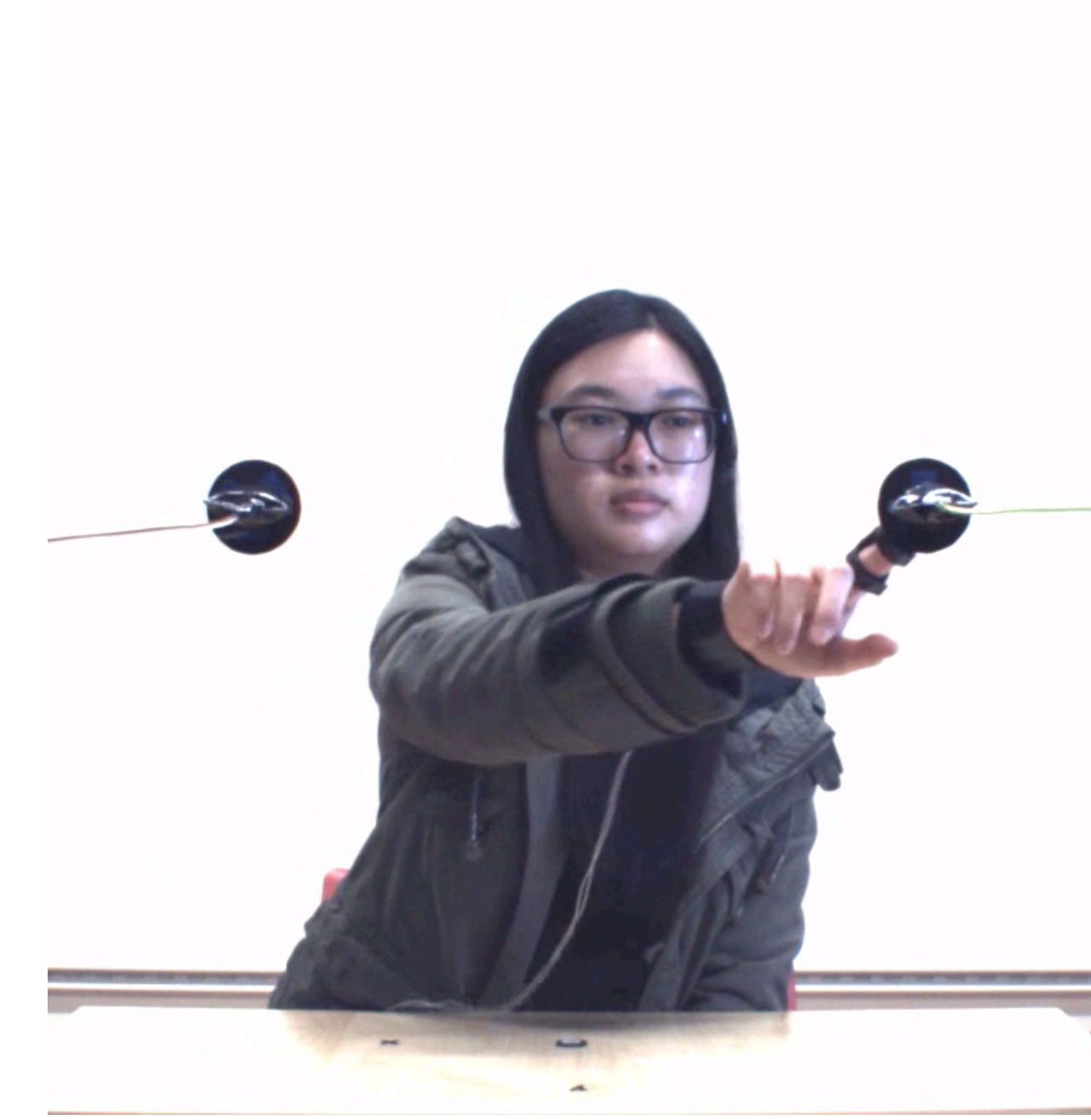
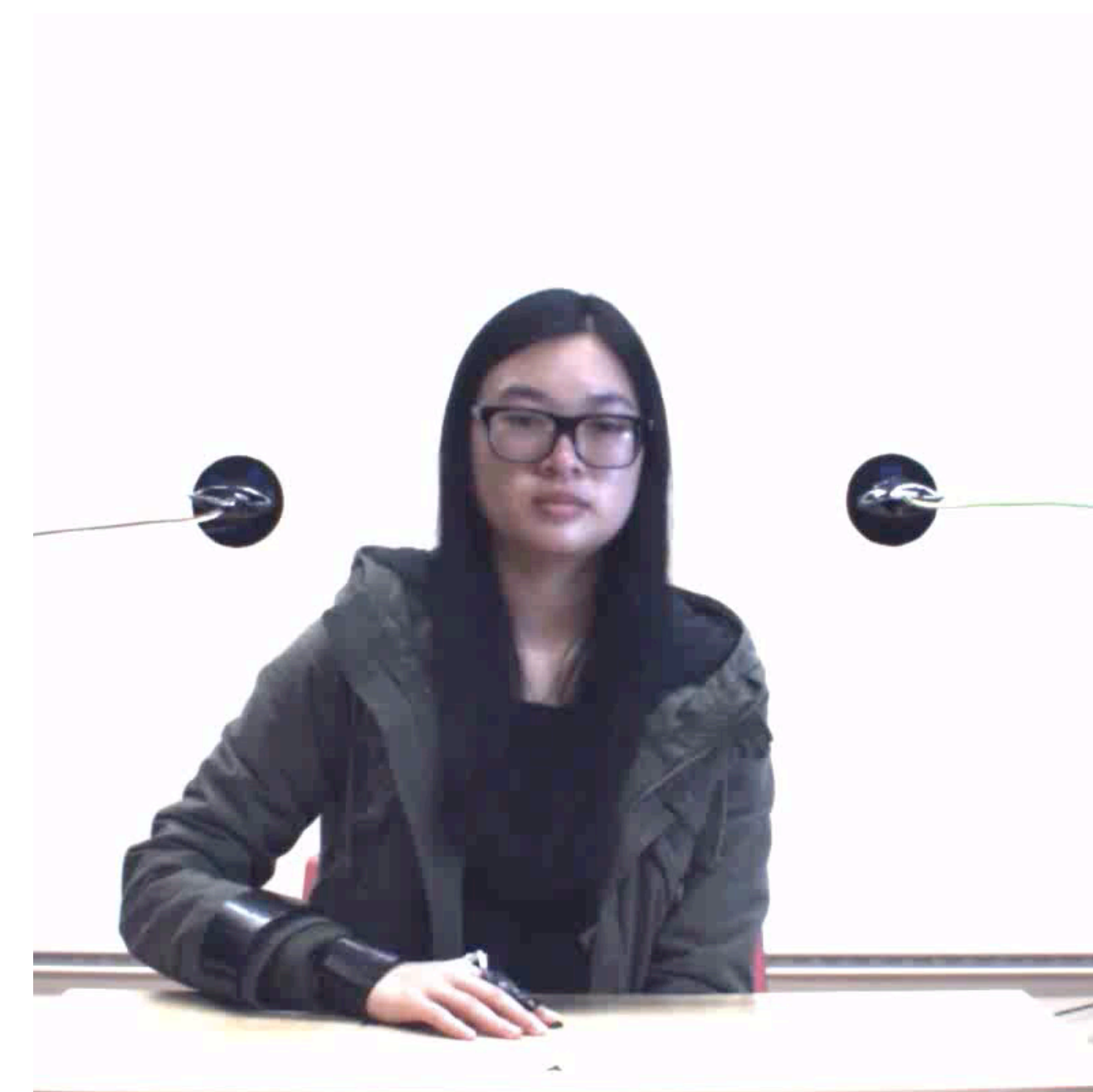
20 children with ASD  
22 typical children.

Each child tested in  
20-200 trials.



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Children with ASD can predict others' actions as well as their typically developing peers.



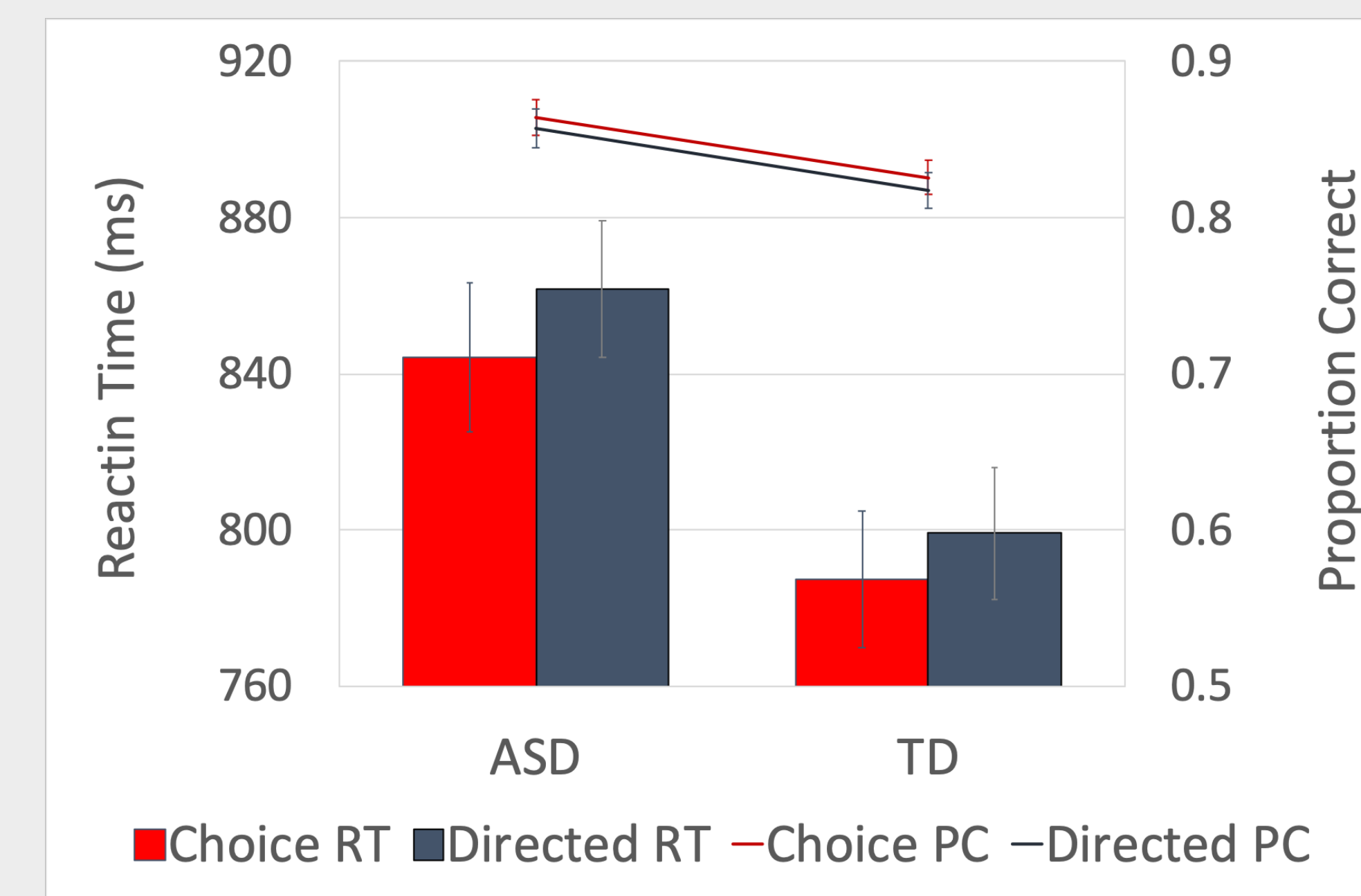
Task:

Will this person point to the right or the left?

Participants are generally faster to respond when the actor's action is freely **chosen** and not **directed**

..because chosen actions are more predictable!

## RESULTS



RT and accuracy not different for ASD vs neurotypical children,  
 $F(1,40) = 1.44, p > .2$ .

All children respond faster to chosen over directed actions,  
 $F(1,40) = 8.9, p = .005$ .  
No interaction,  $F < 1$ .

## CONCLUSION

These results suggest that basic action prediction is not affected by ASD. Further studies will focus on control mechanisms over motoric prediction and imitation.

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