

# A Comparison of a Humanoid Robot to a Human Simulated Client in Training Research



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CalABA 2015  
San Diego, CA

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- Evaluated if a robot was a viable alternative to human actors

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  - Percentage of trials correctly performed
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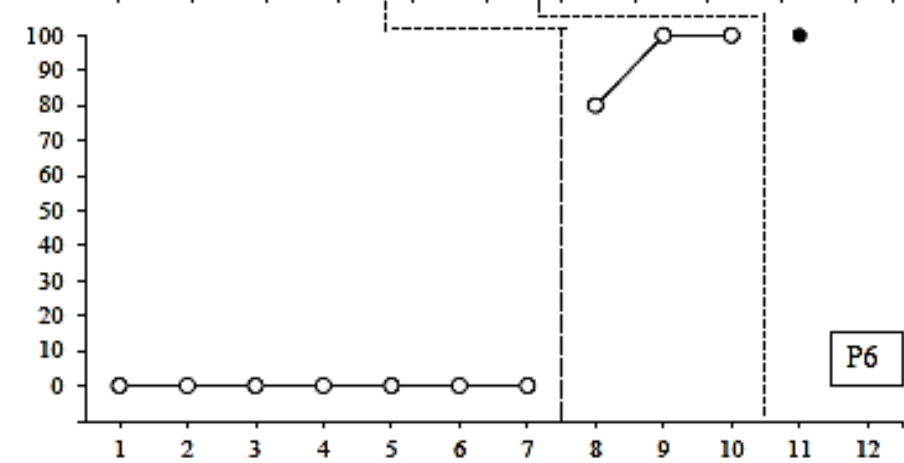
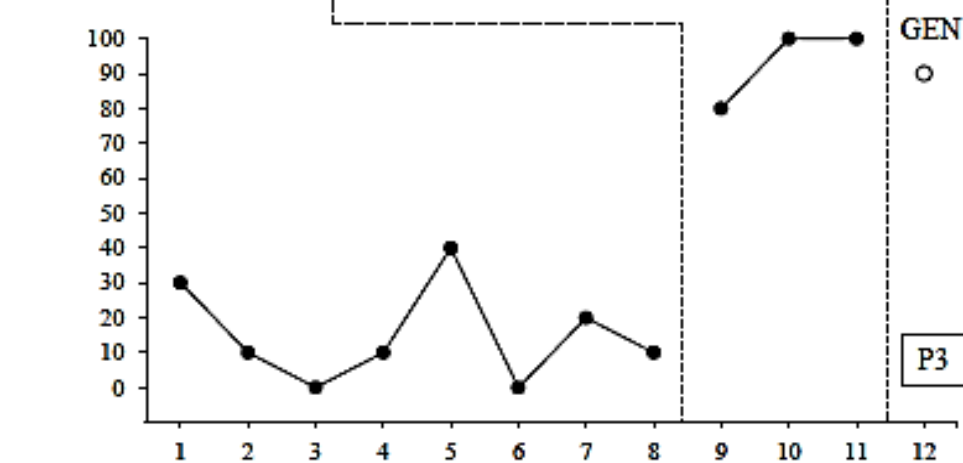
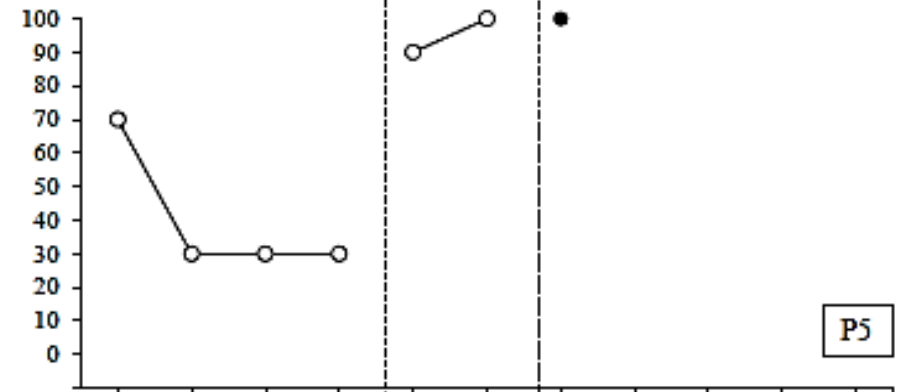
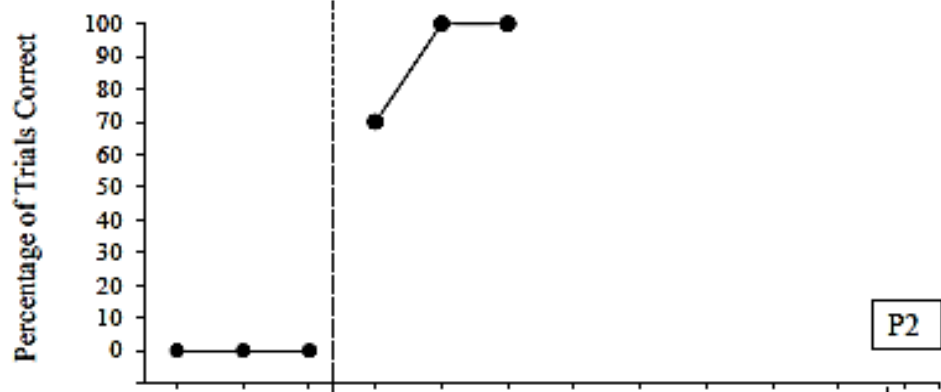
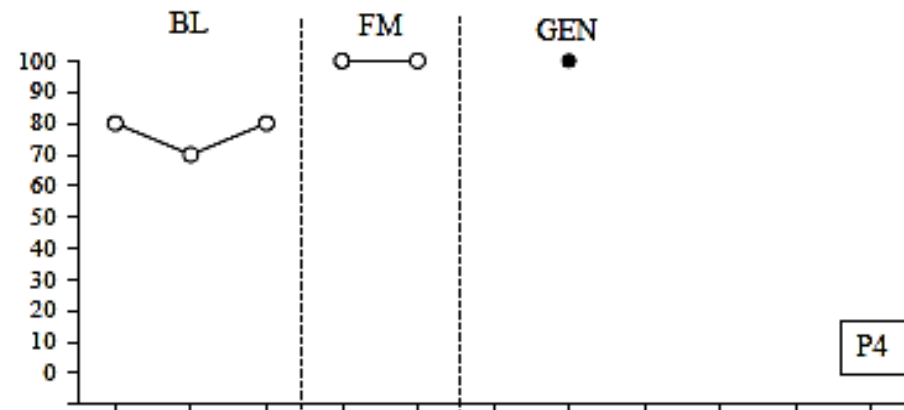
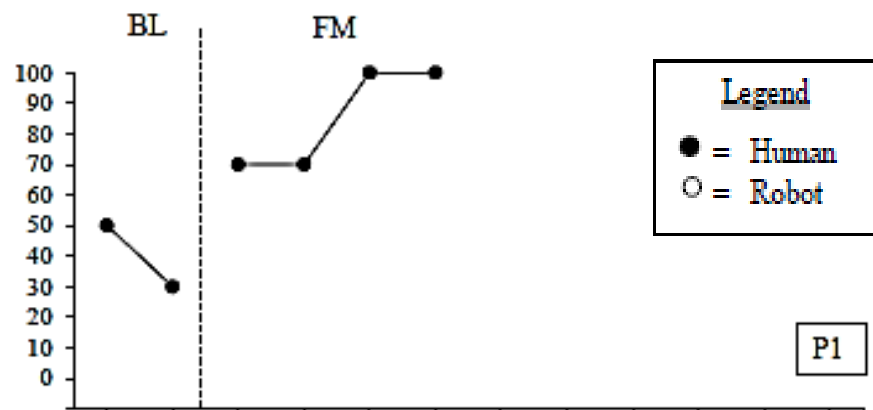


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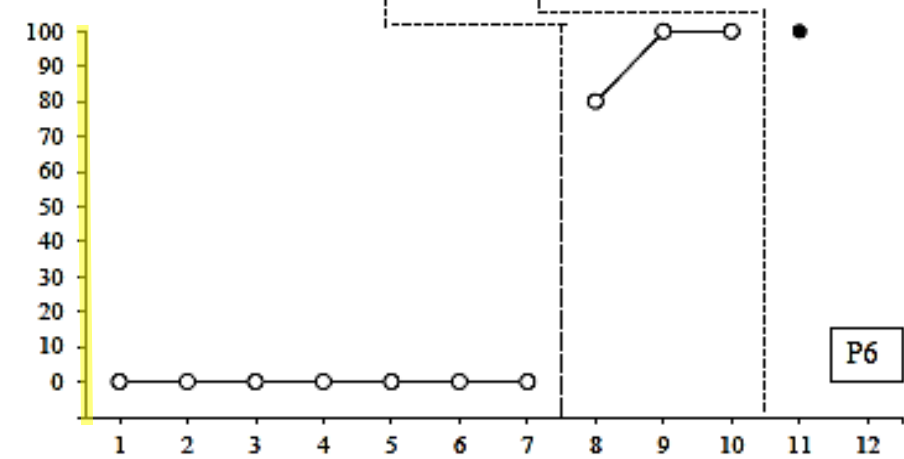
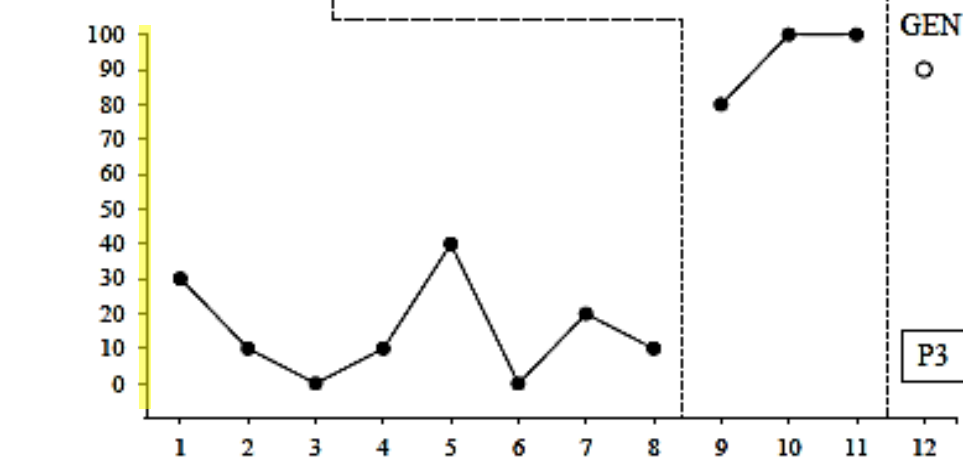
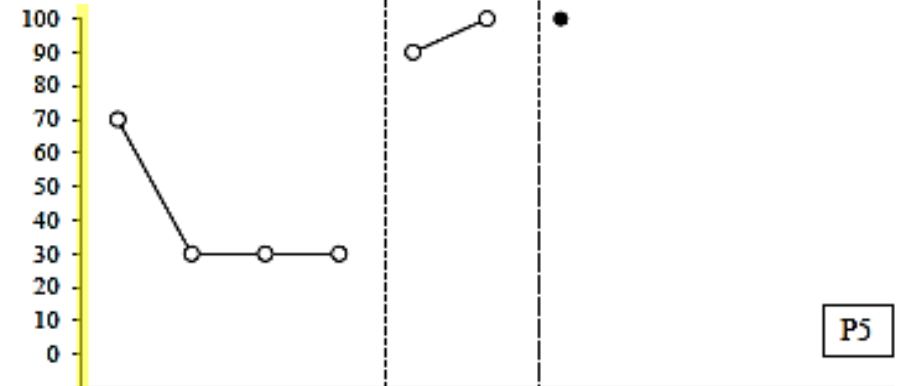
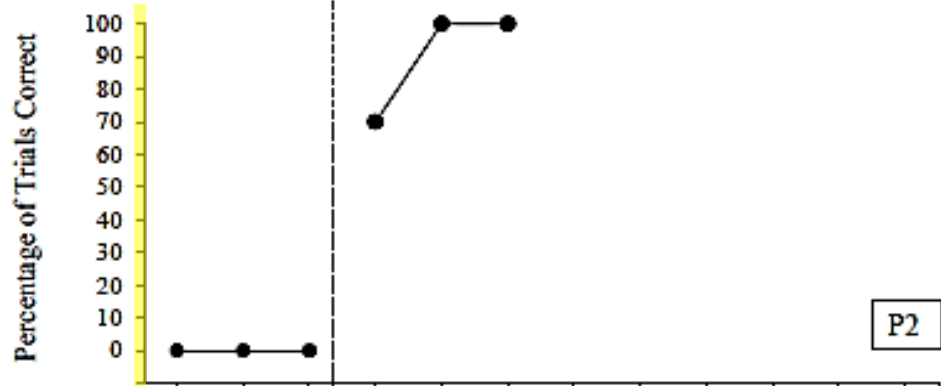
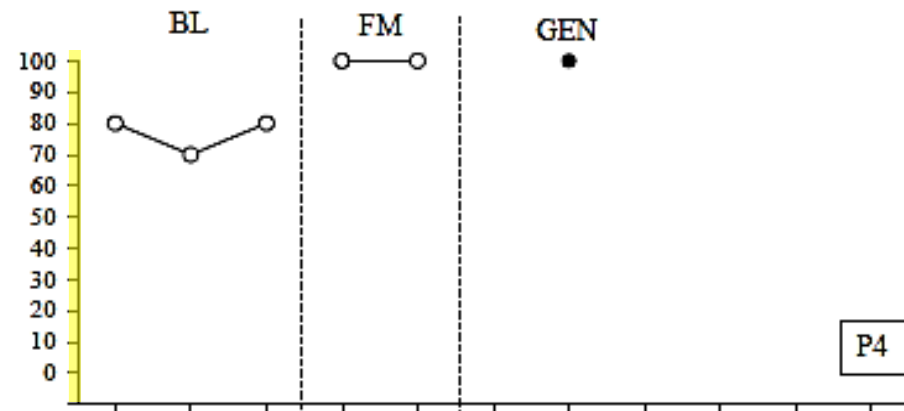
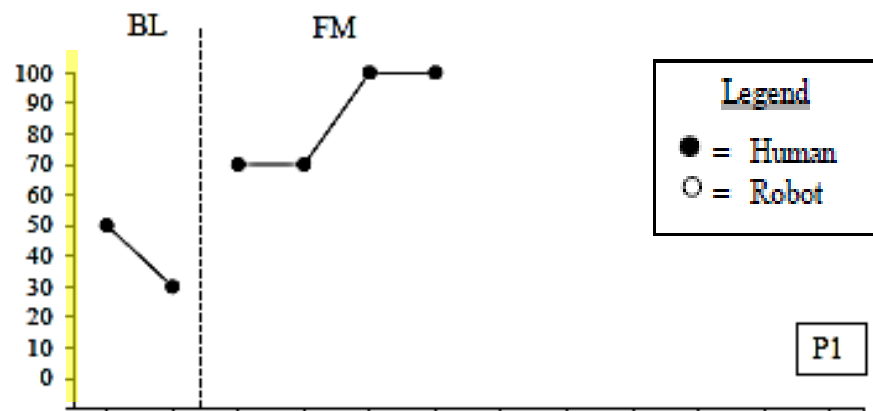
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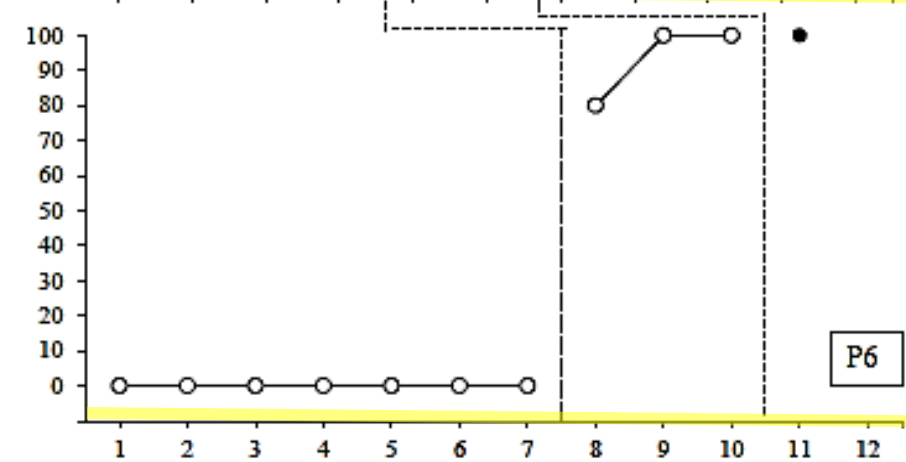
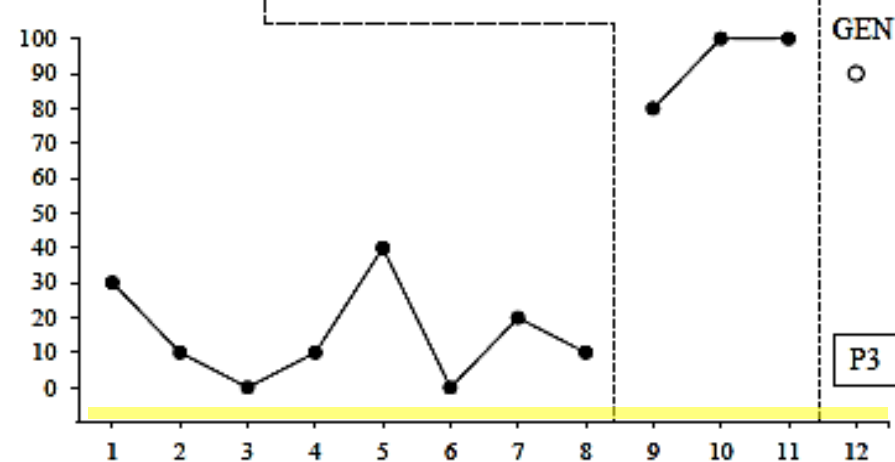
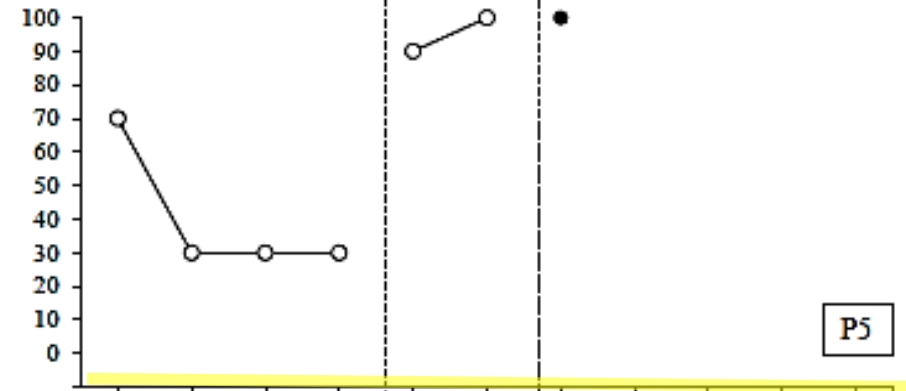
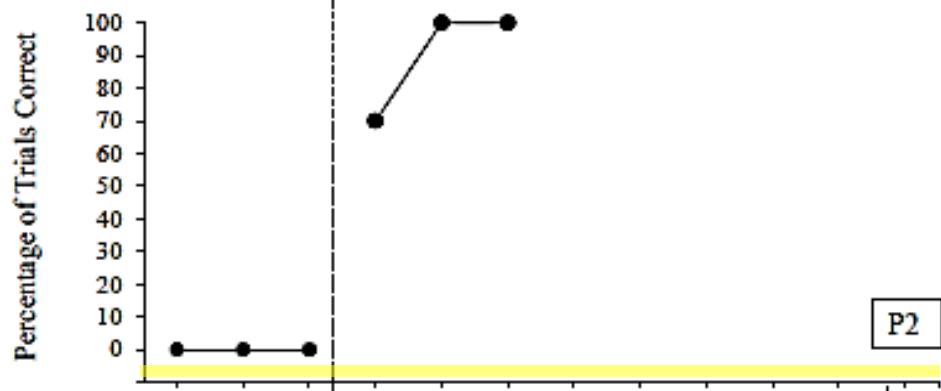
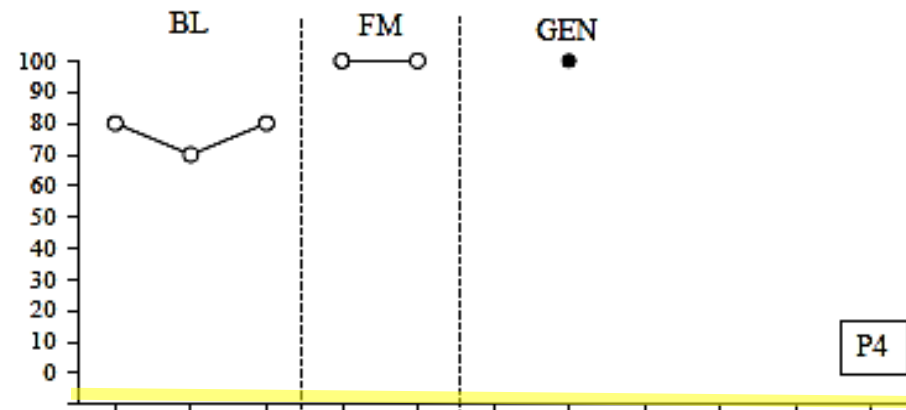
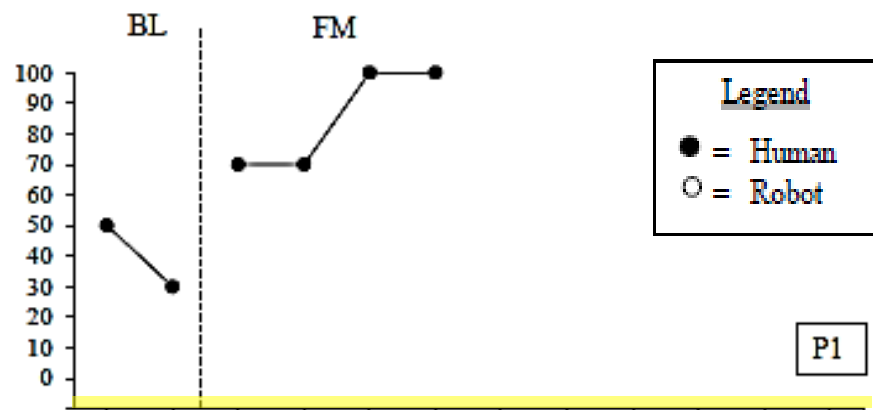




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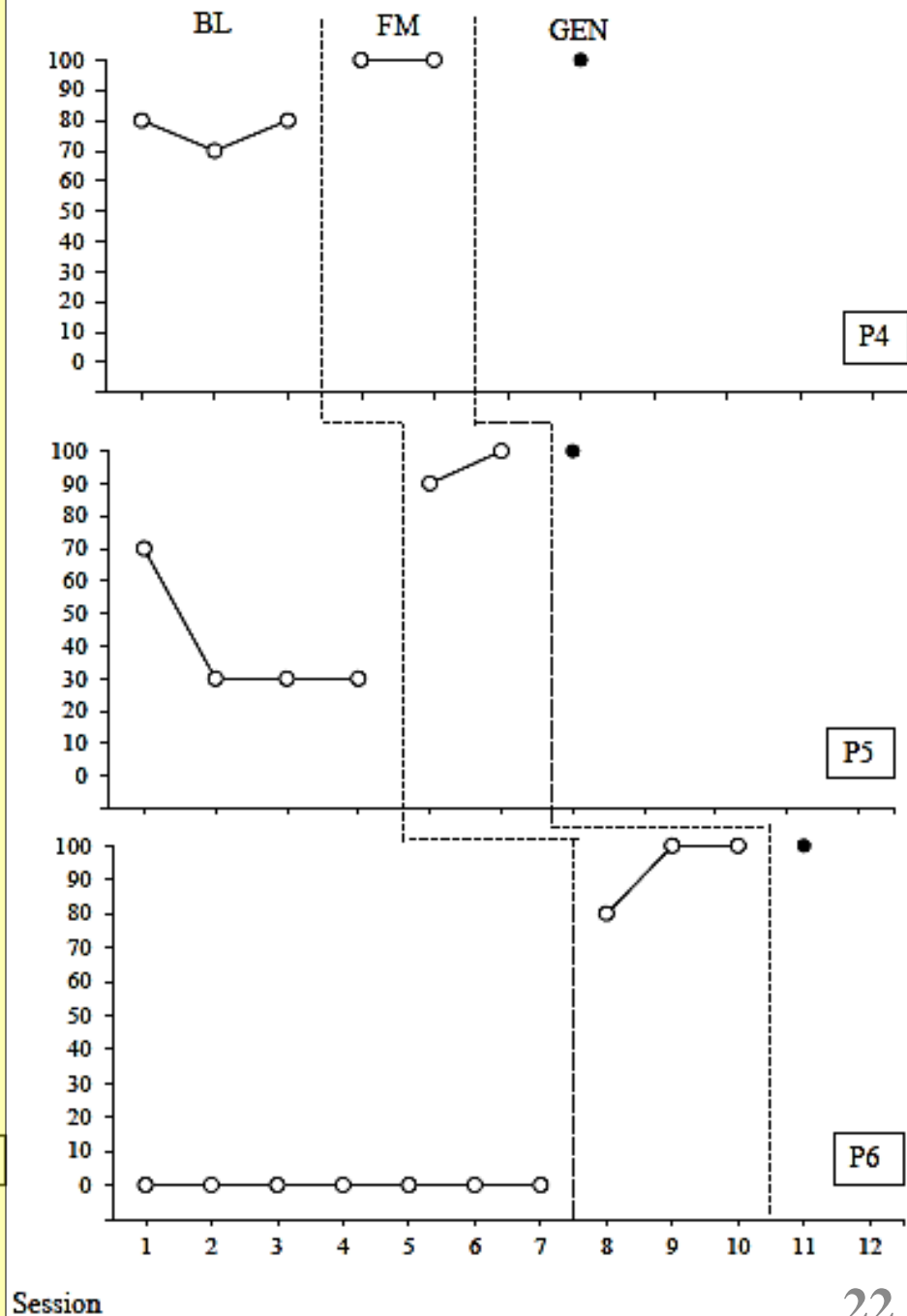
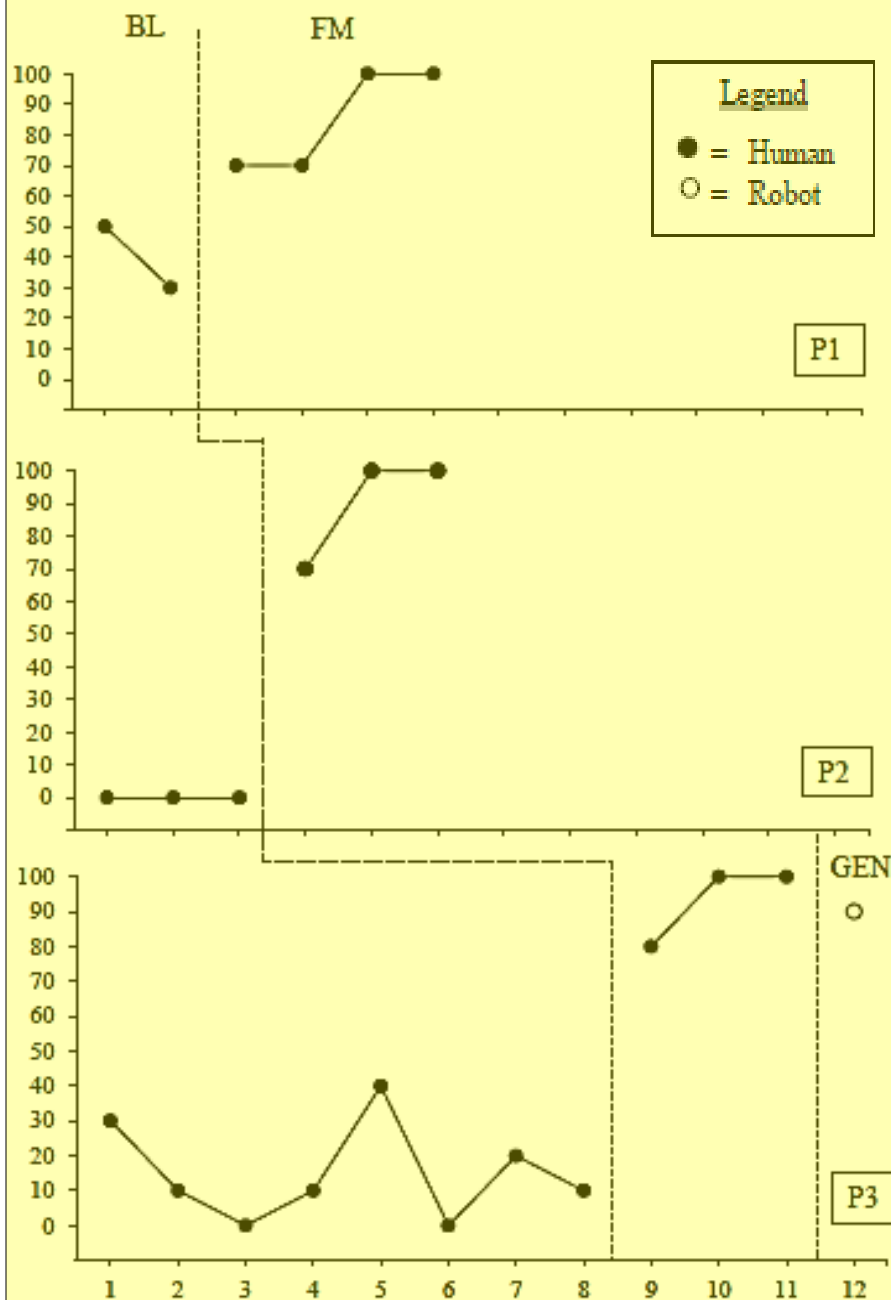


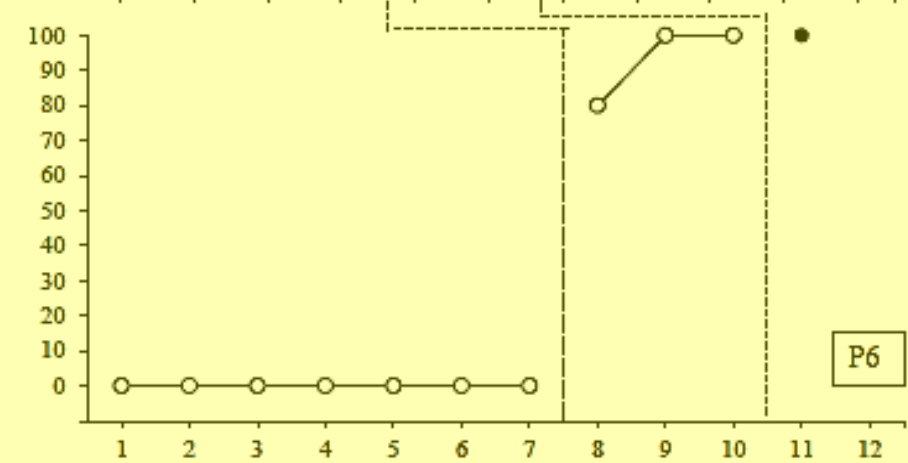
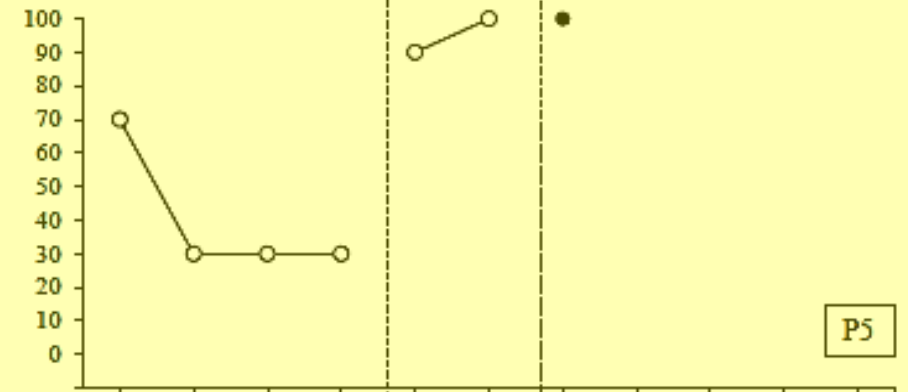
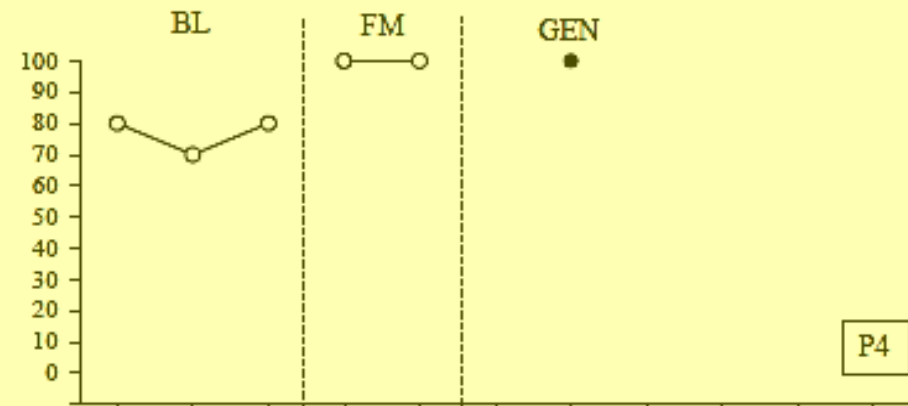
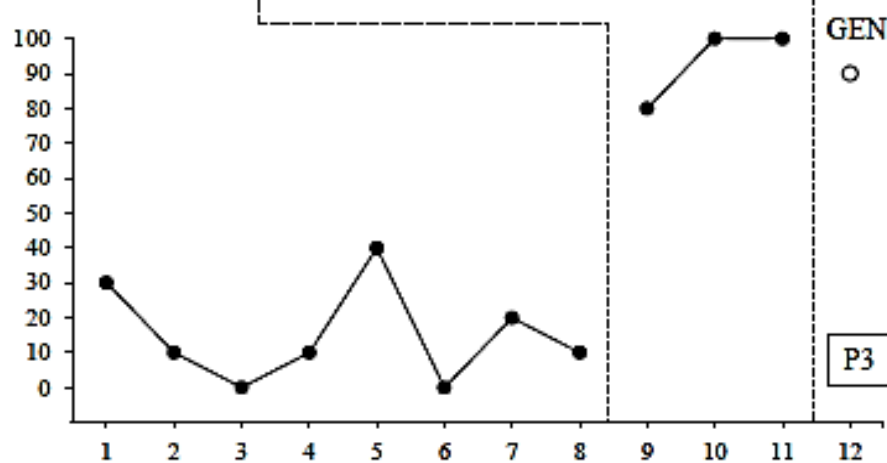
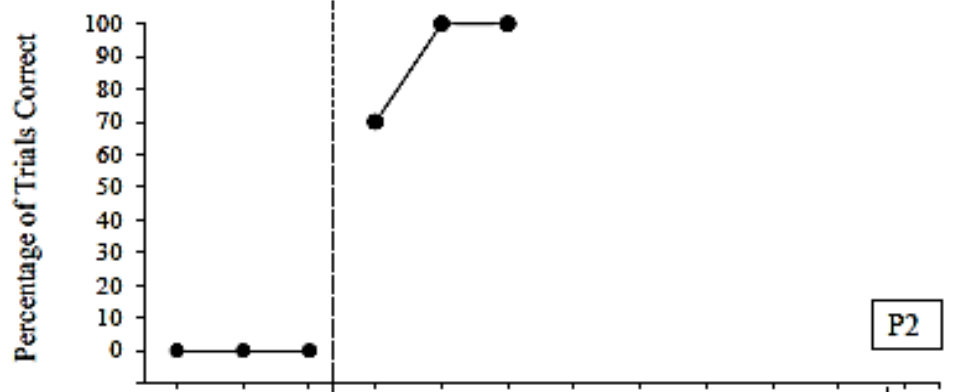
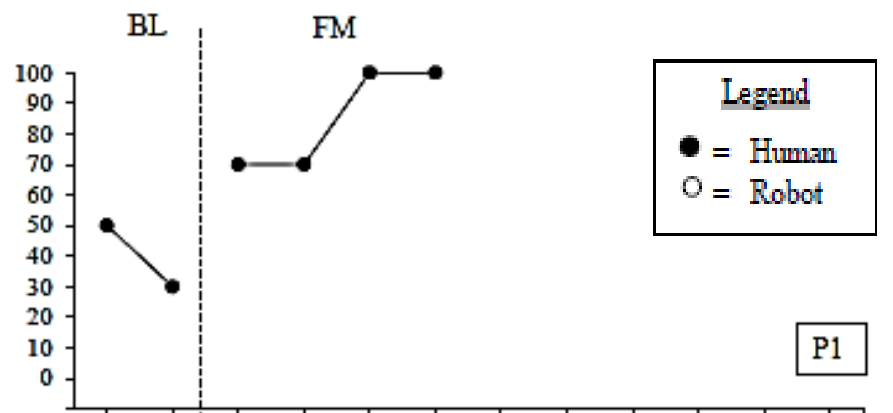
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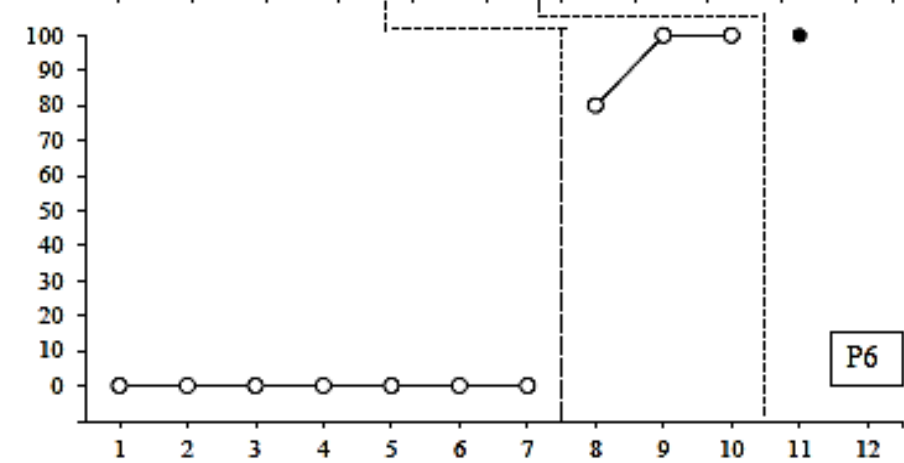
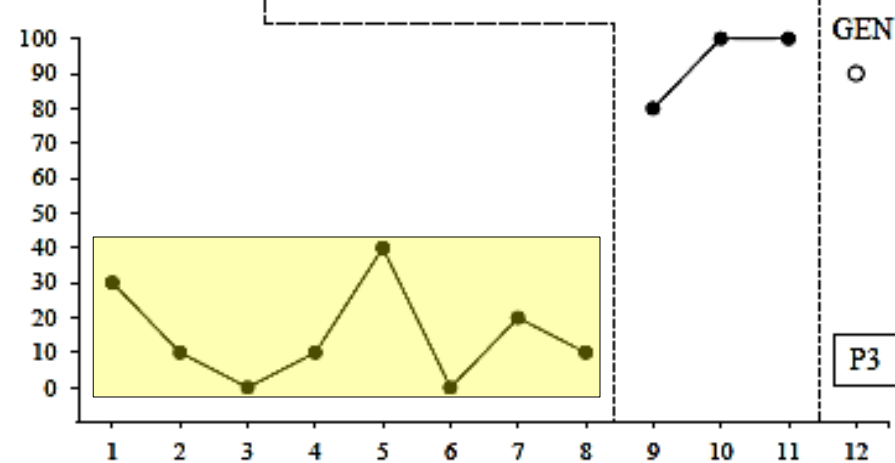
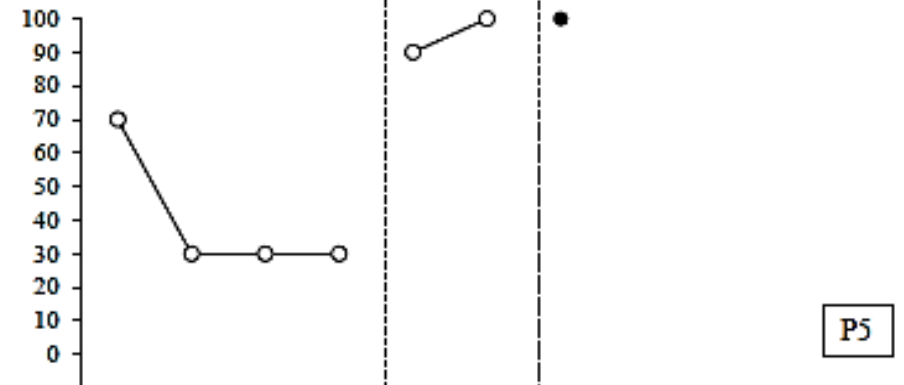
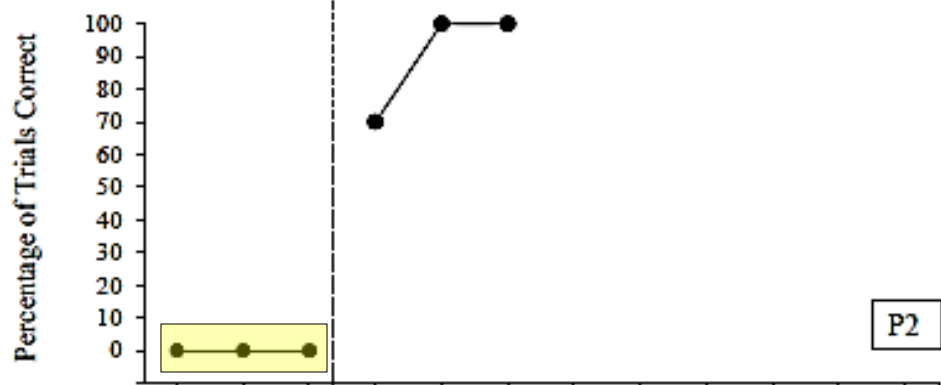
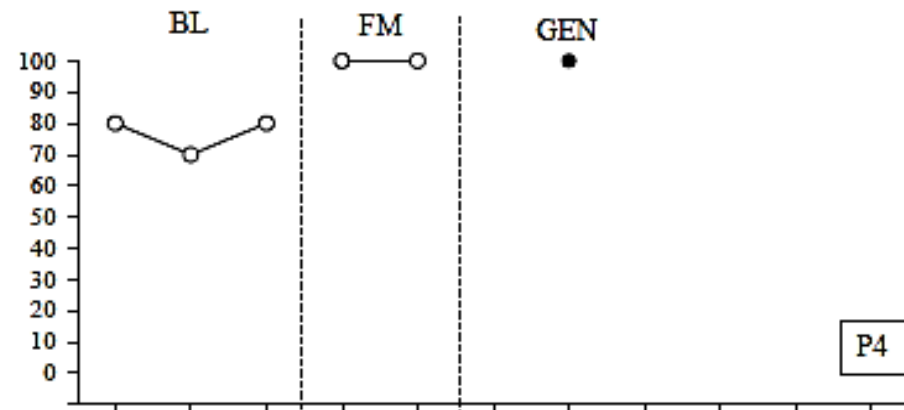
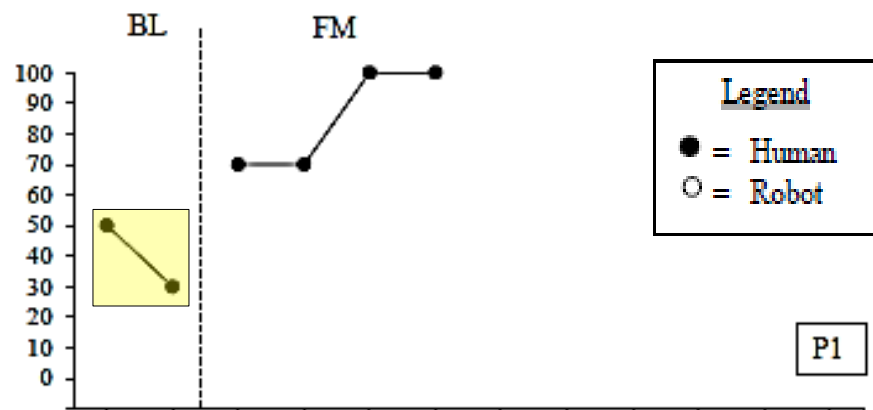
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Percentage of Trials Correct



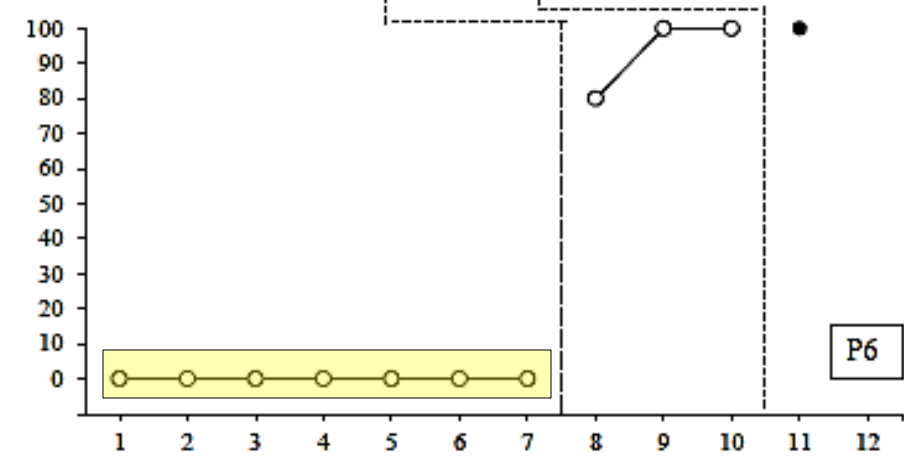
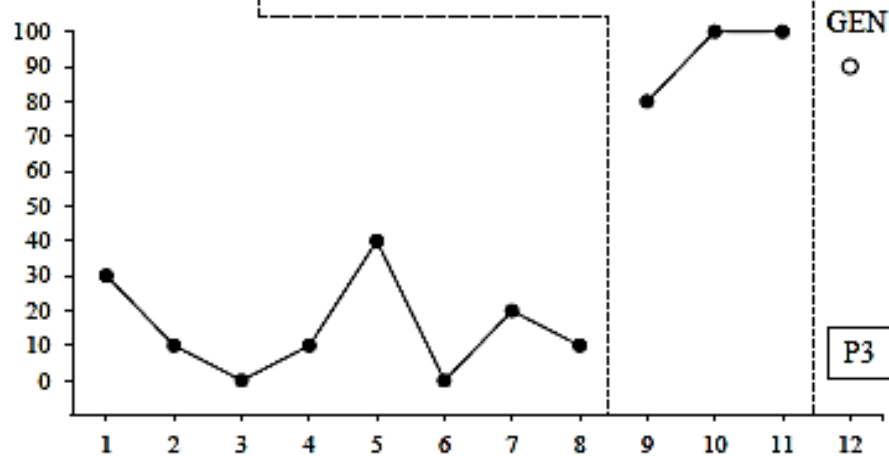
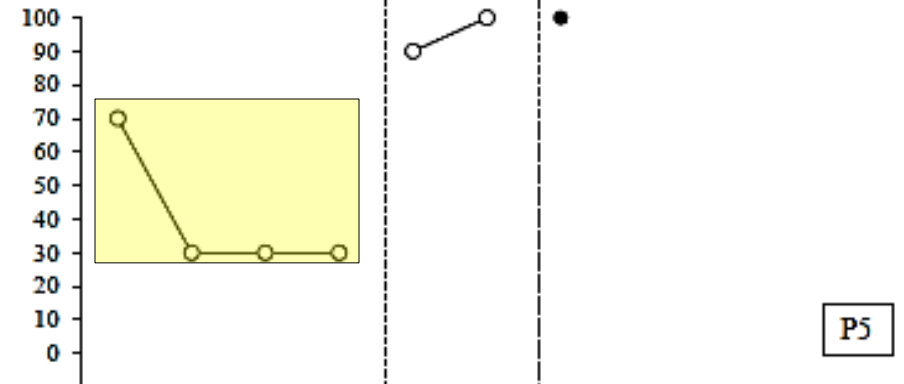
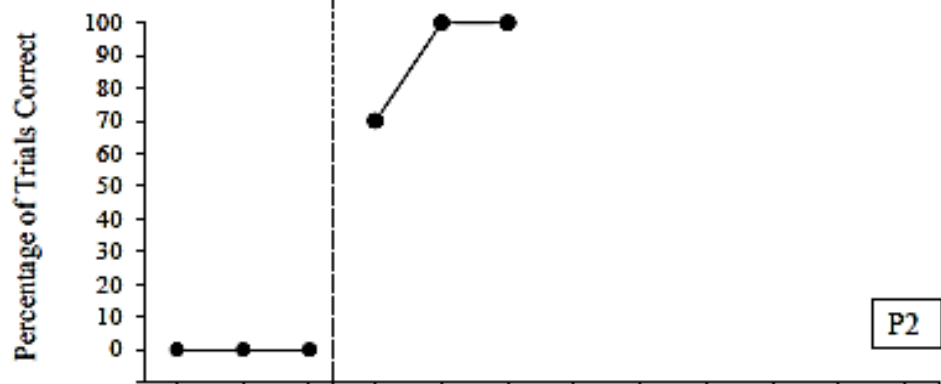
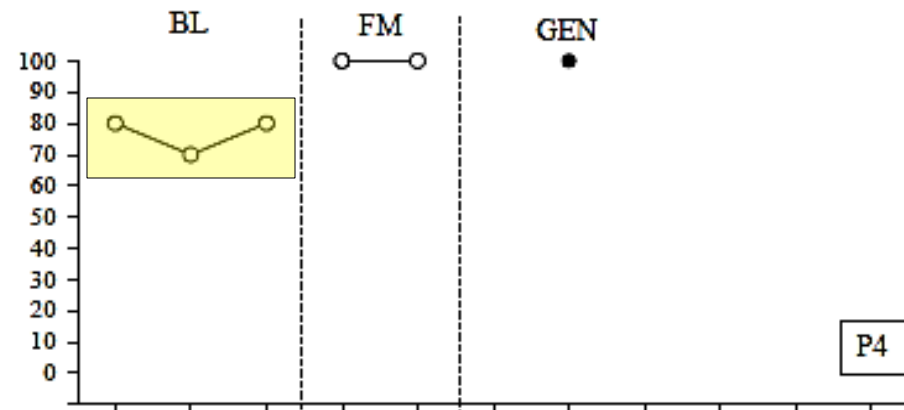
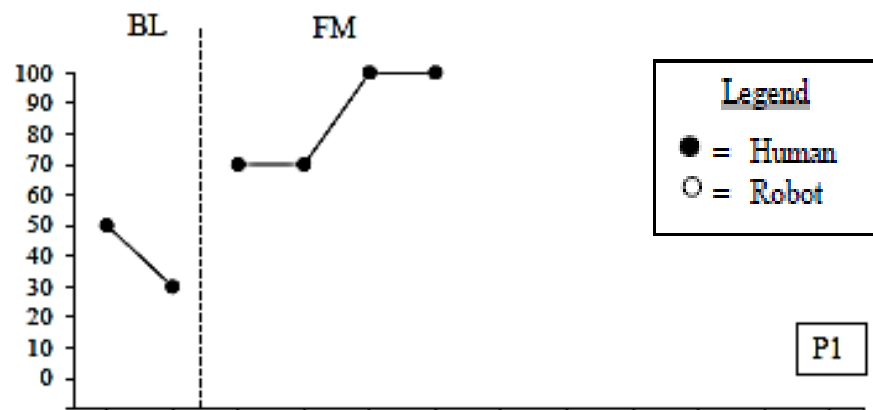


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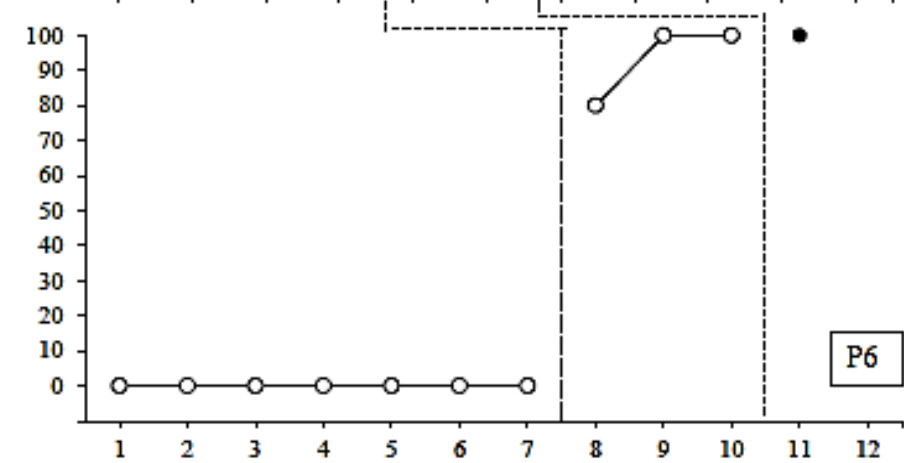
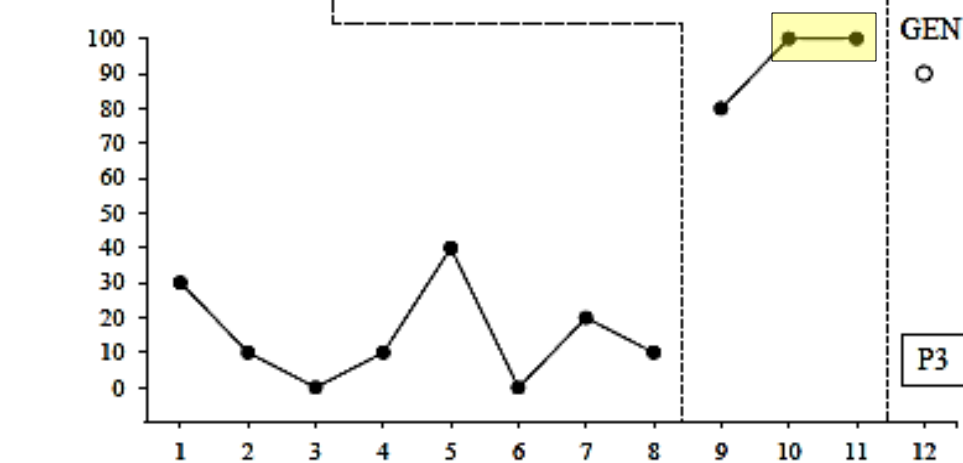
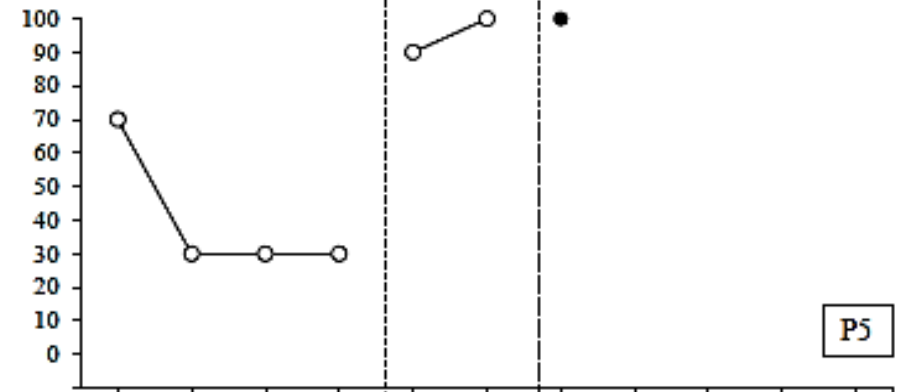
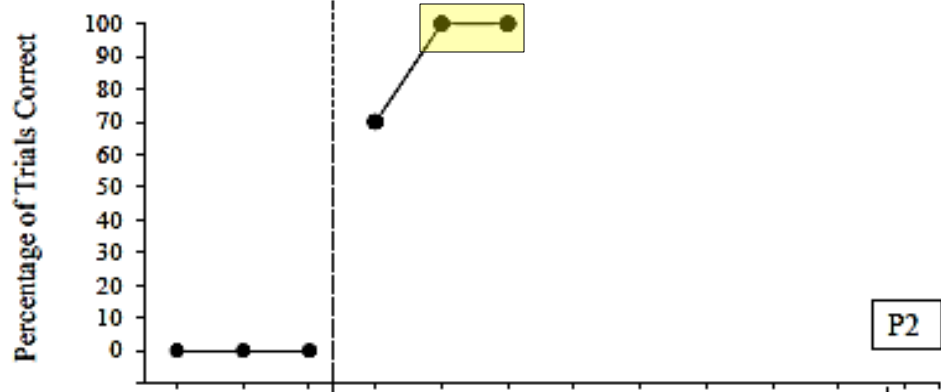
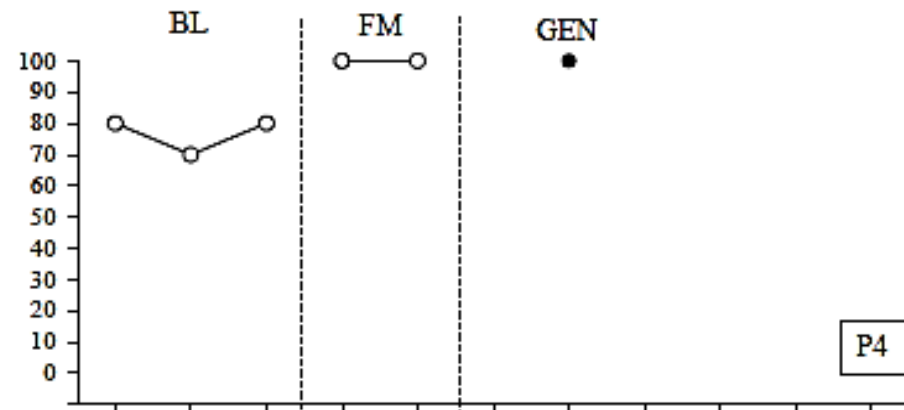
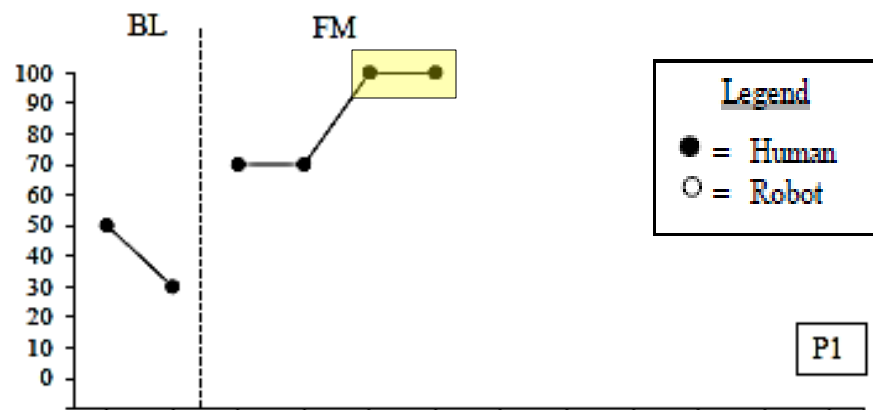


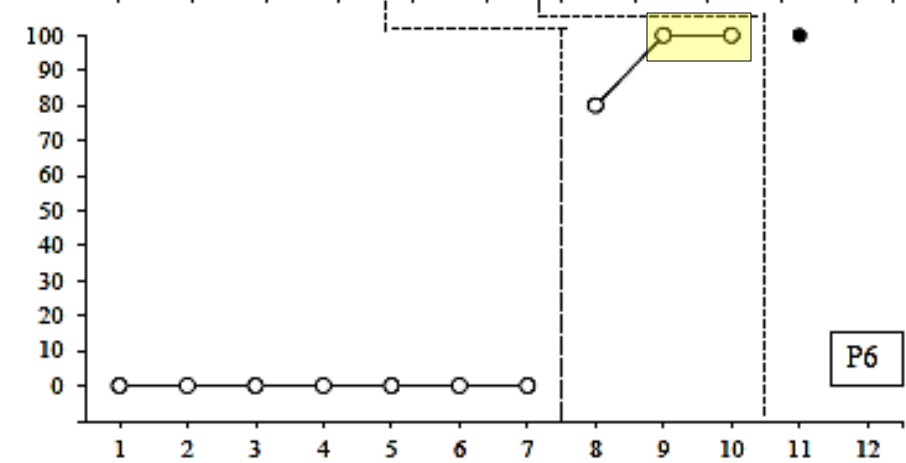
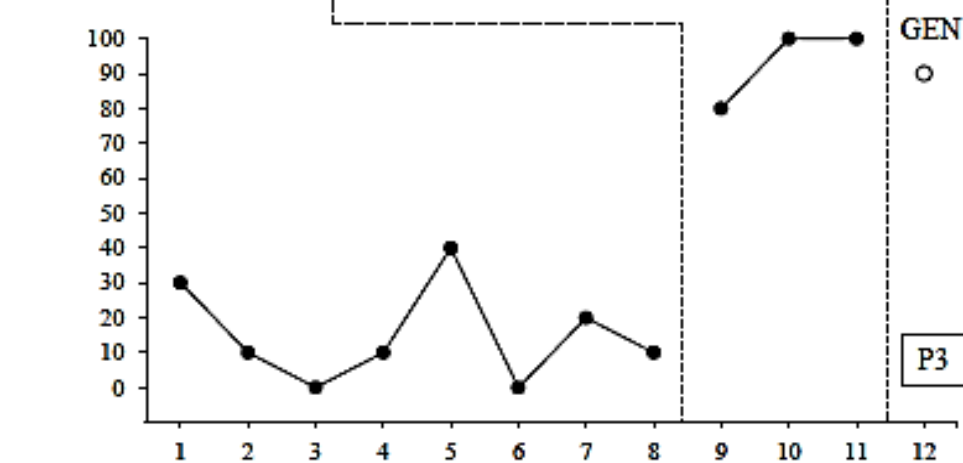
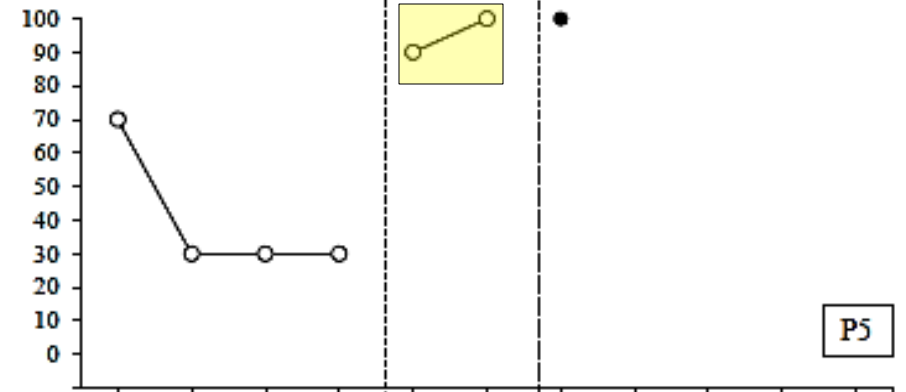
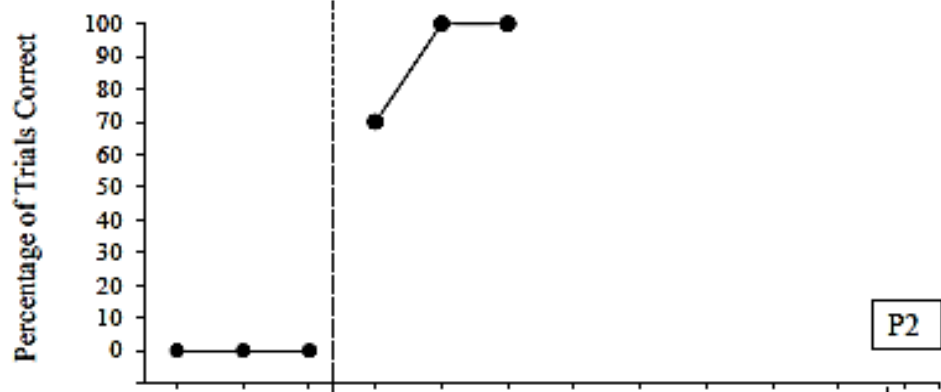
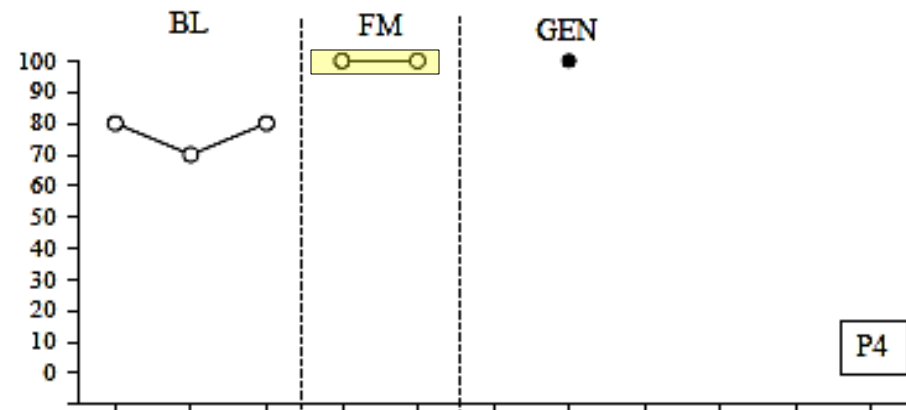
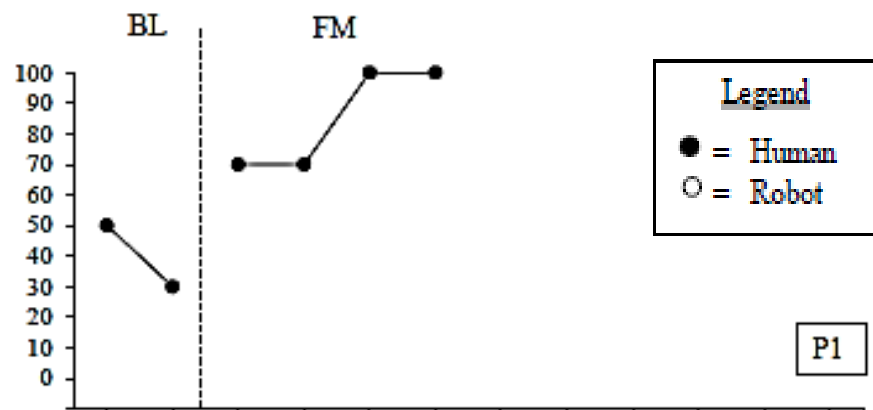
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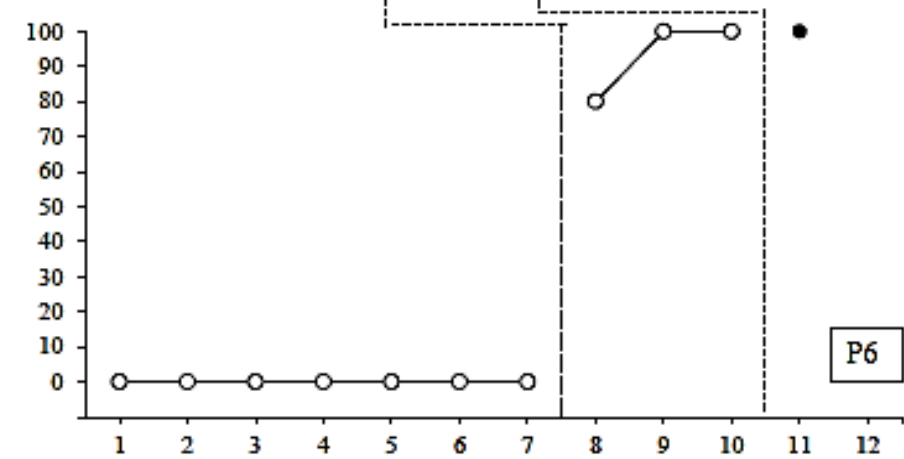
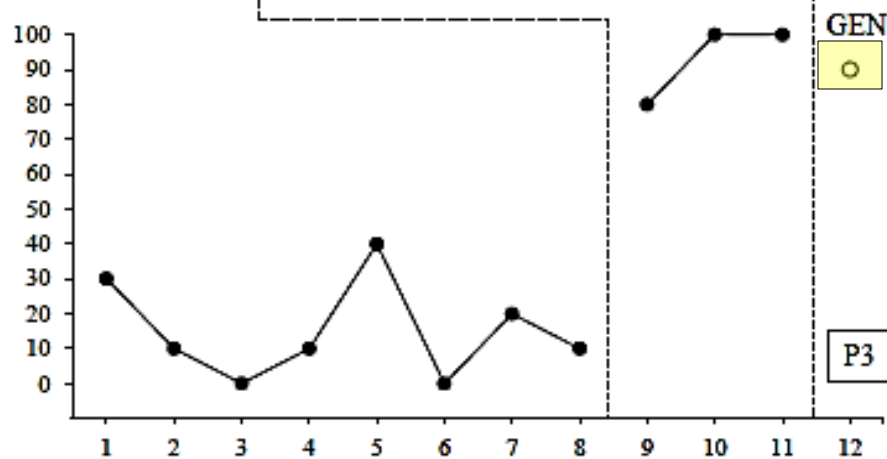
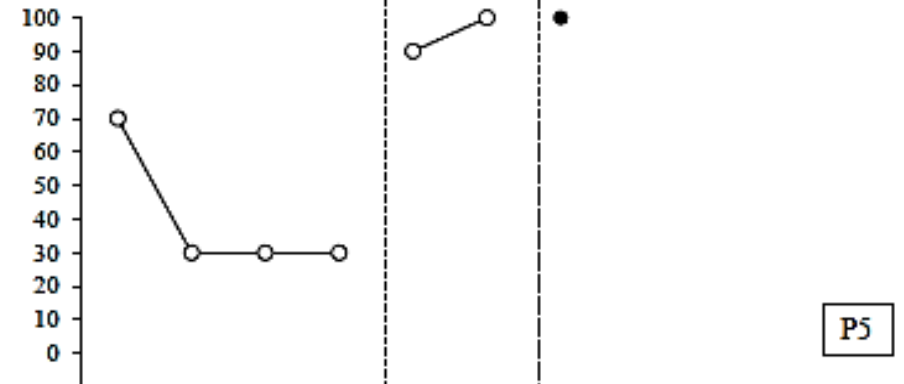
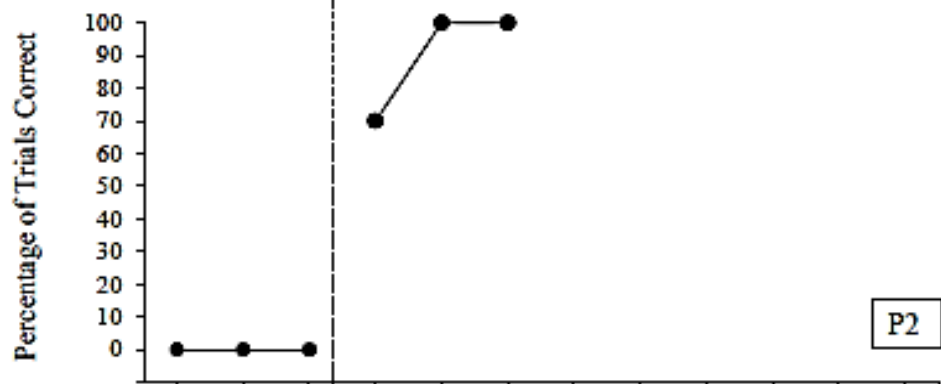
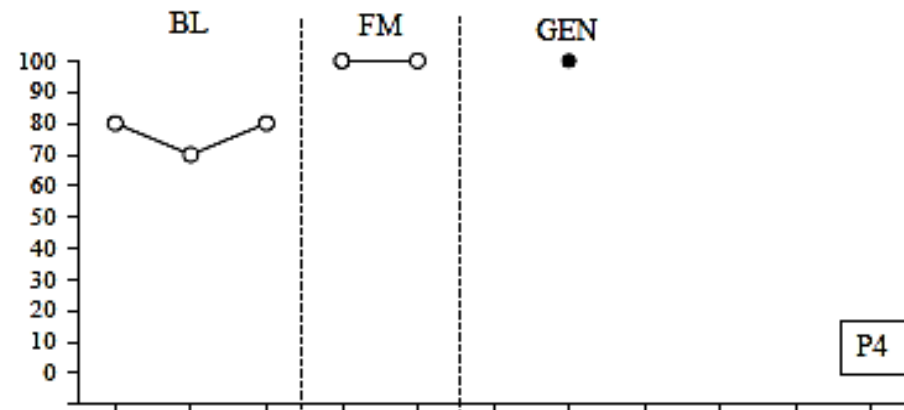
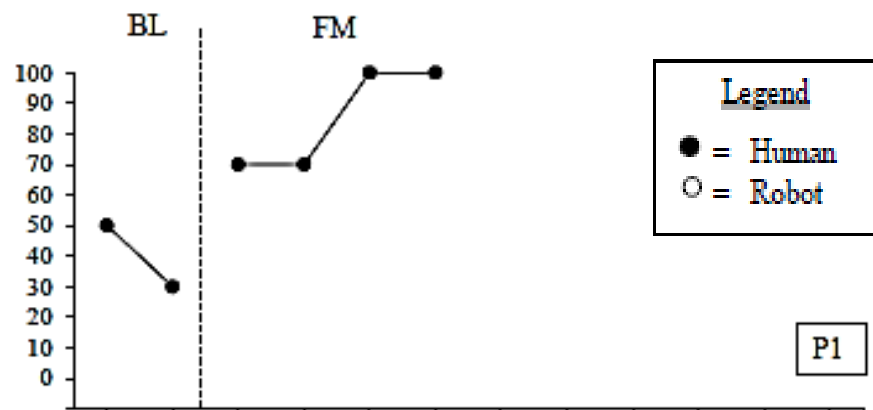


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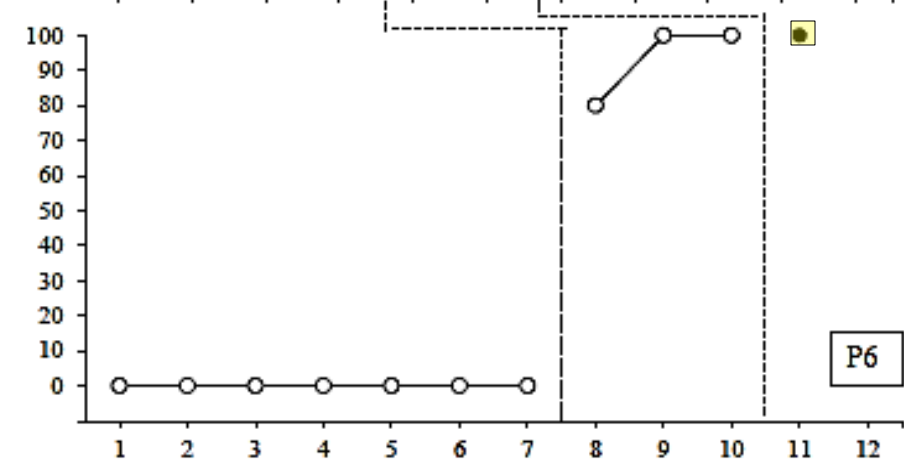
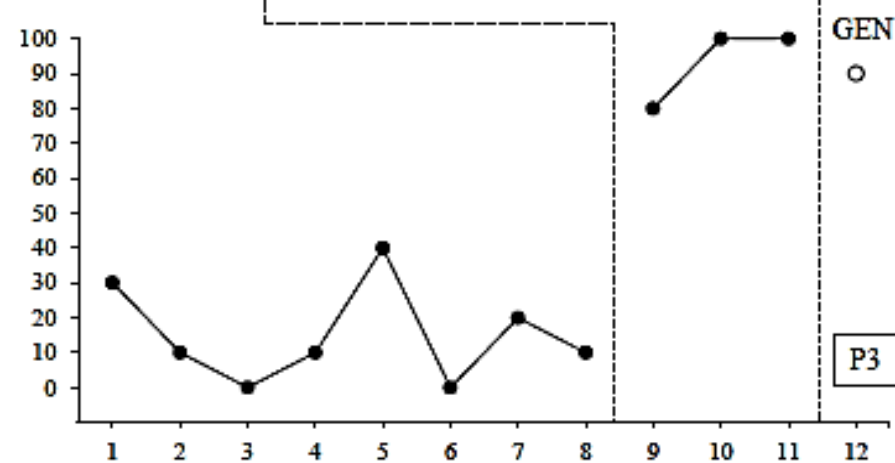
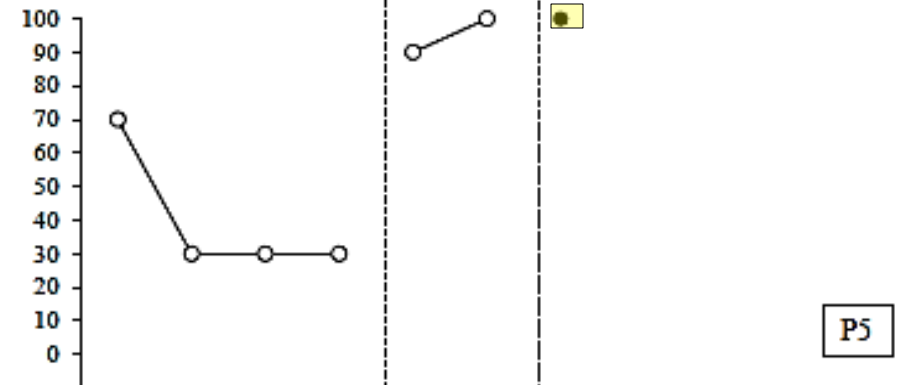
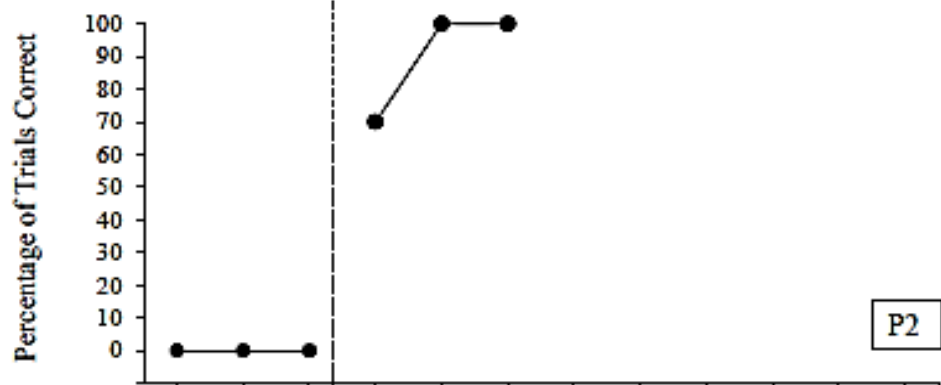
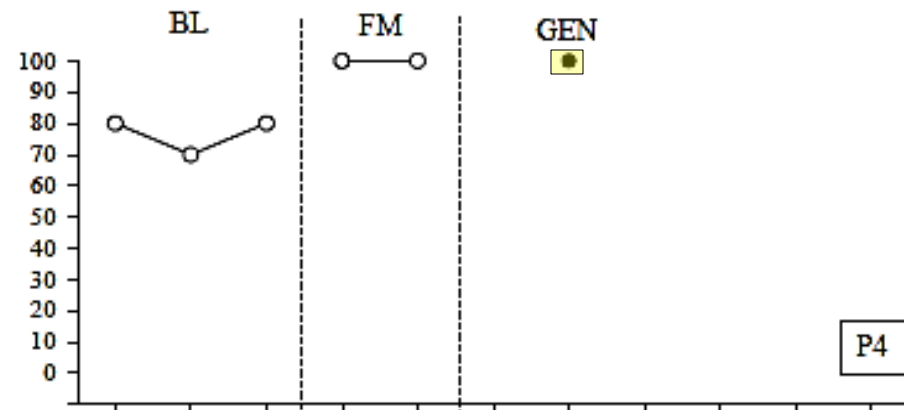
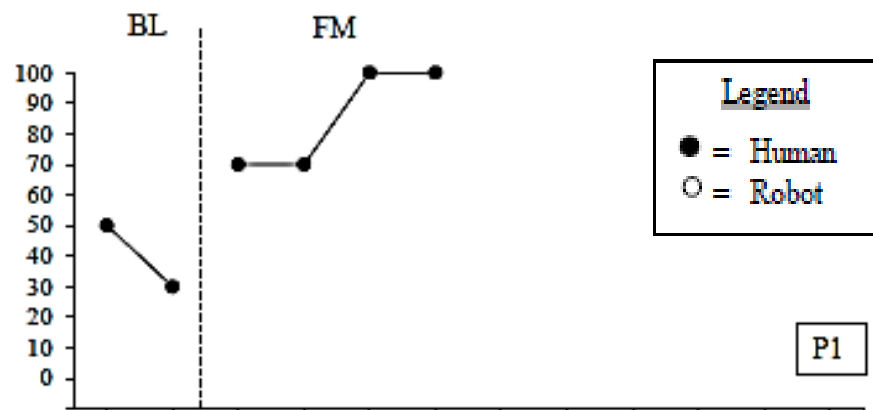




Session



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- Objective:
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  - Evaluate whether an individual would perform similarly across an actor and a robot

# Experiment 2:

- Design:
  - Multiple baseline
    - Across behaviors and stimuli
    - 10 participants

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## PS Target Behaviors

Number of items

Placement of items

Removal of unselected item

Blocking approach to both items

Ending trial if no selection

## MSWO Target Behaviors

Number of items

Placement of items

Rotation of unselected item

Blocking approach to more than 1 item

Ending session if no selection

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# Experiment 2:

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  - Feedback on accuracy of performance
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# Experiment 2:

- PS Baseline
  - Fisher et al. (1992)
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# Experiment 2:

- Generalization:
  - Alternate simulated client

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- Generalization:
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  - Child
- Social Validity:
  - Brief questionnaire
  - Before and after experimental sessions

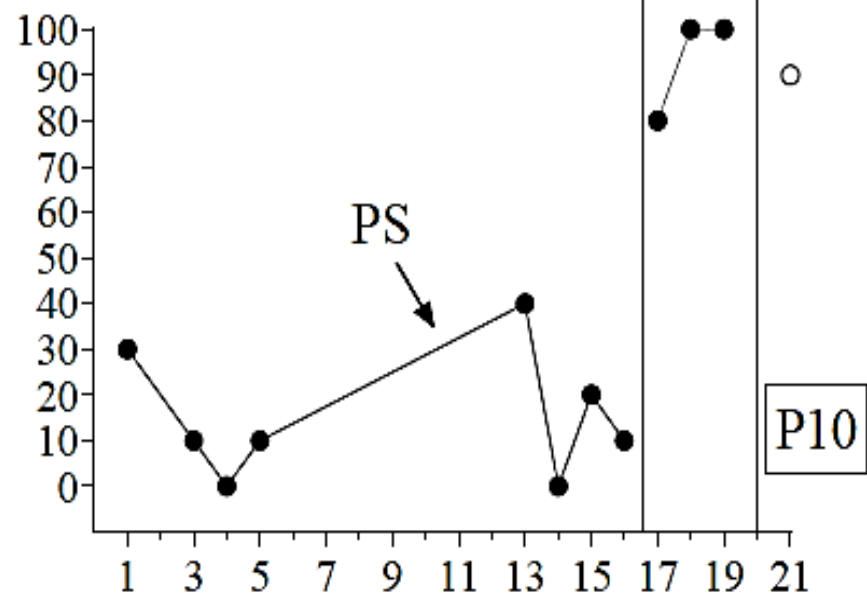
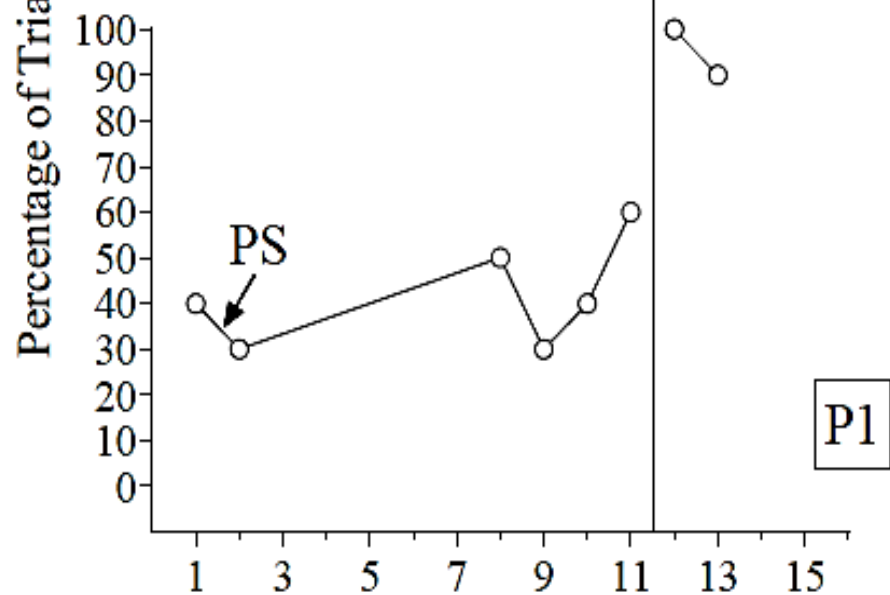
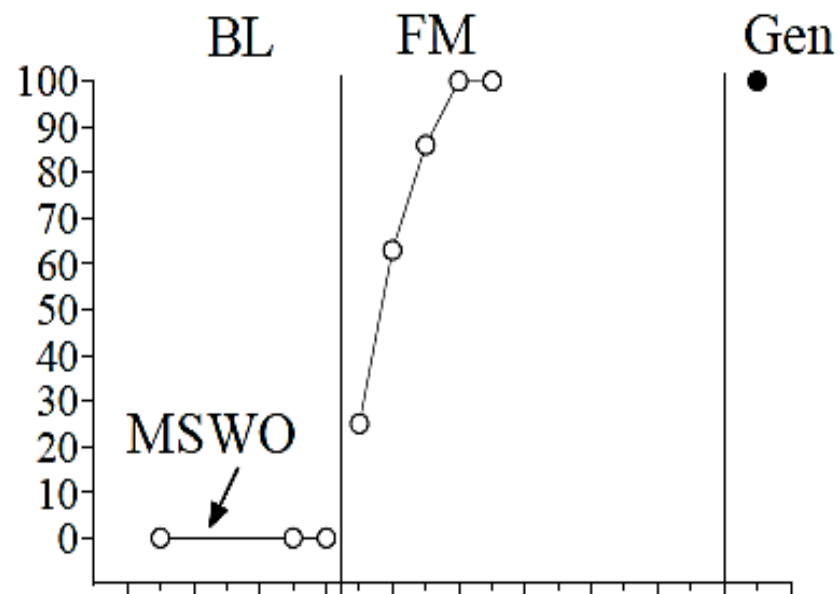
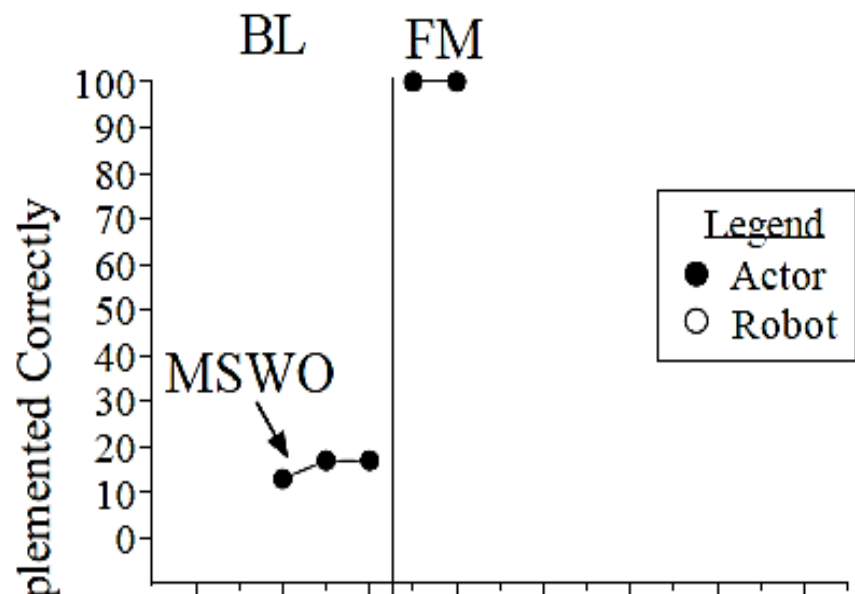
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  - Evaluate whether participants would perform similarly across a human actor and a robot

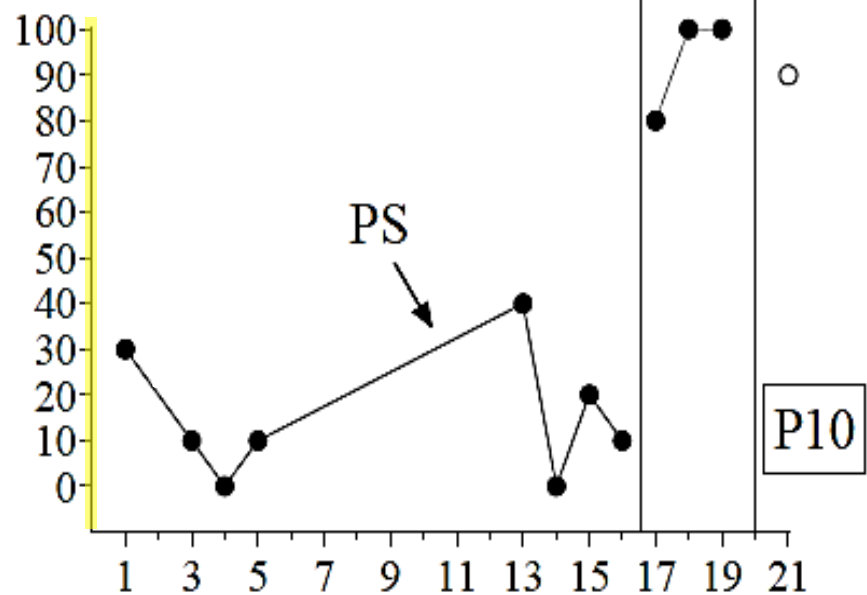
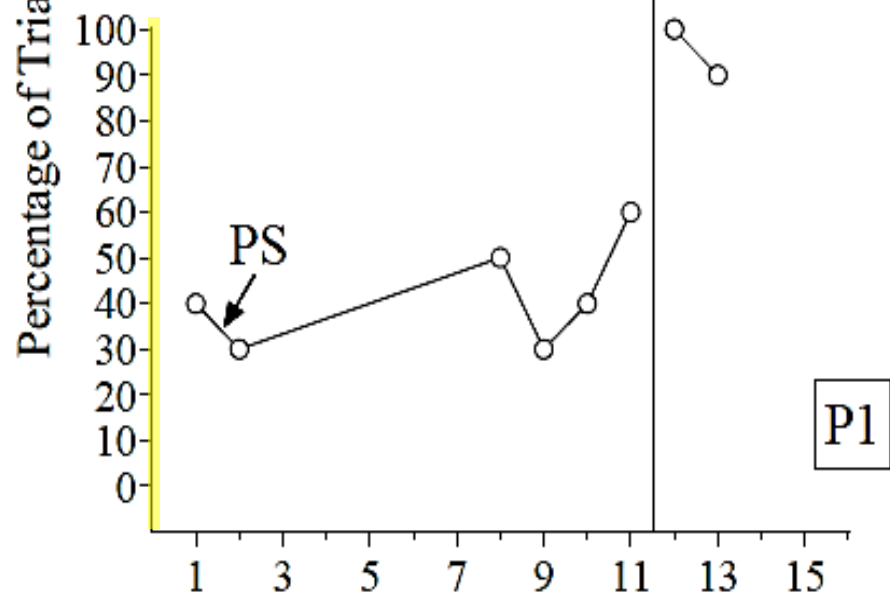
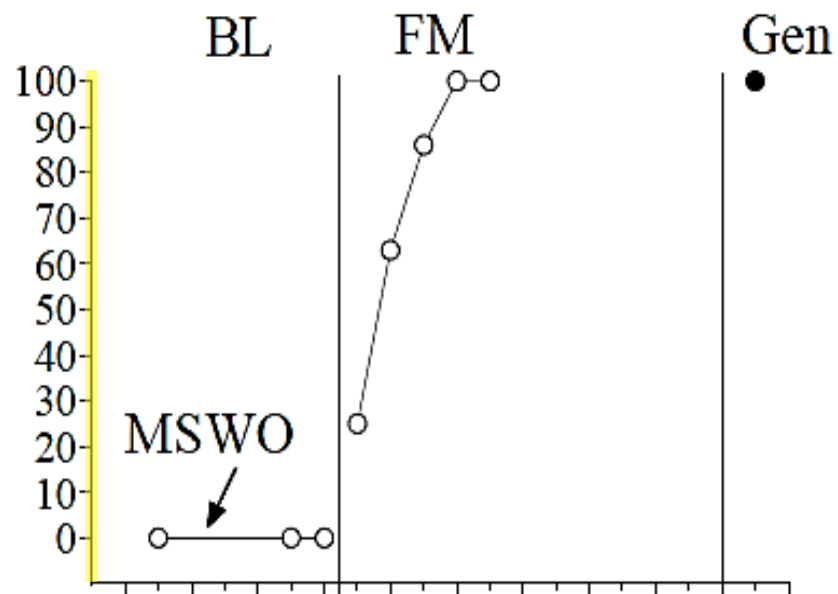
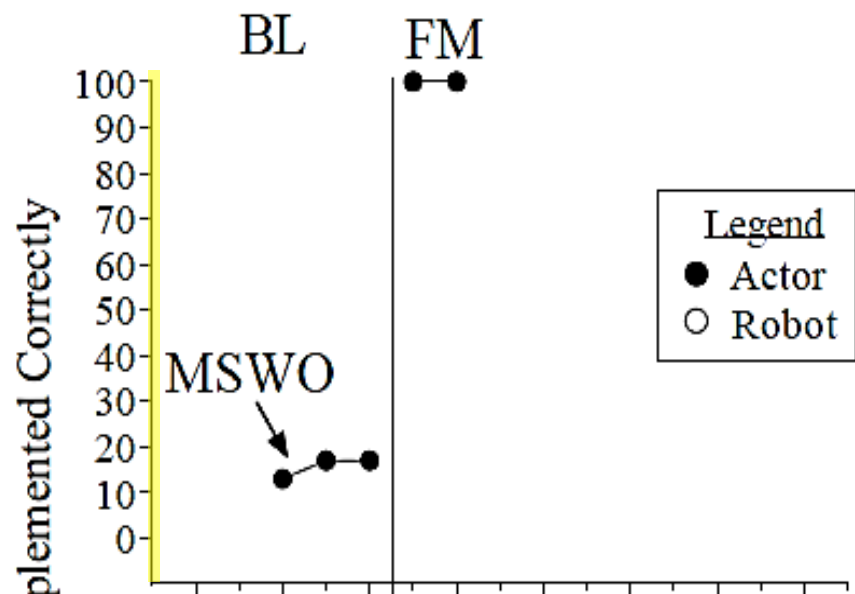


# Experiment 2:

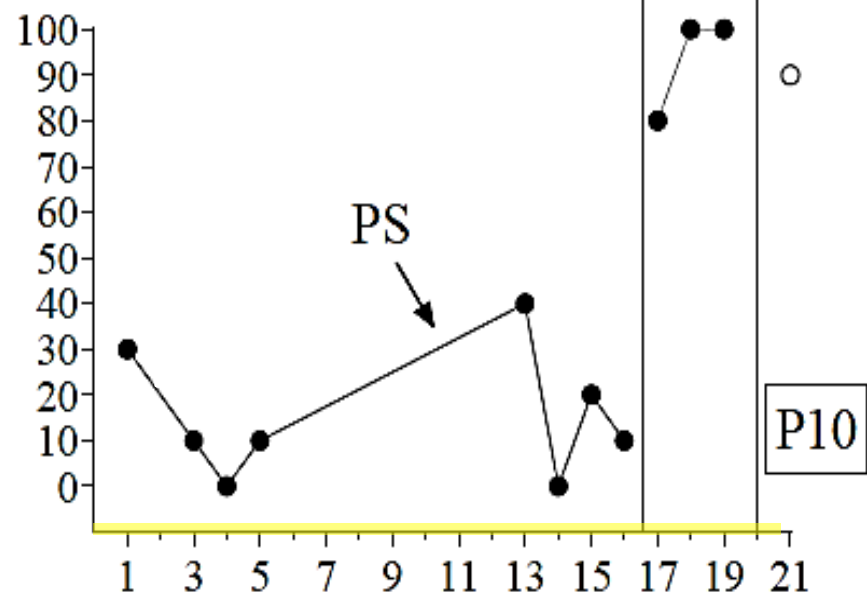
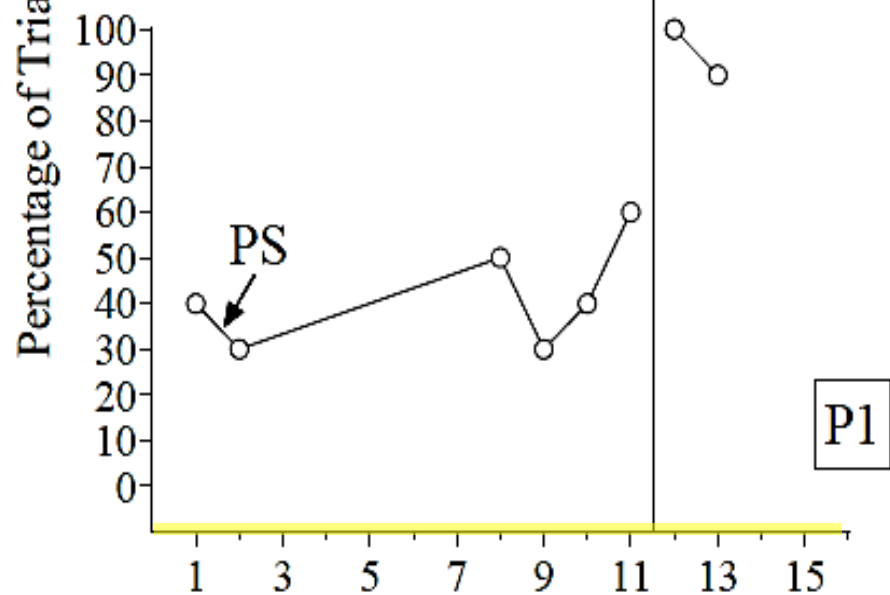
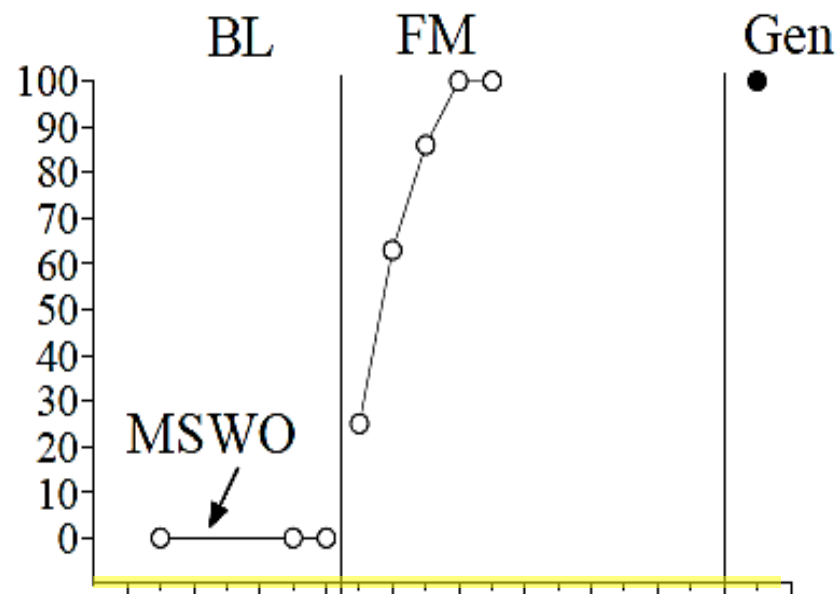
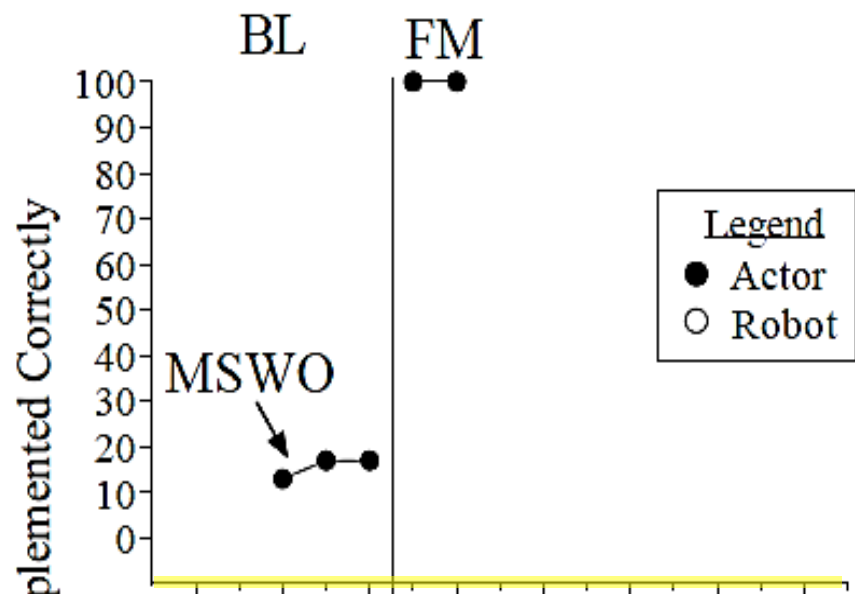
- Objective:
  - Extend results of Experiment 1
  - Evaluate whether participants would perform similarly across a human actor and a robot



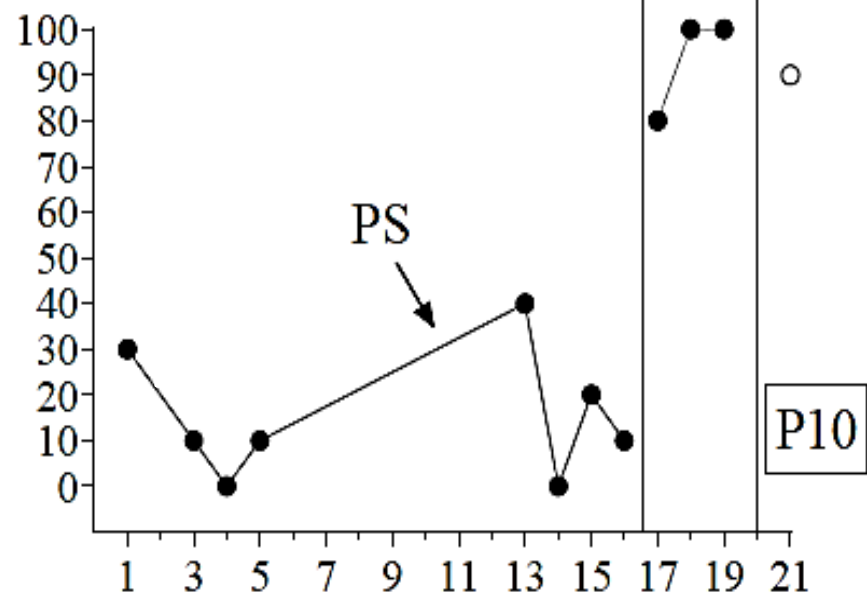
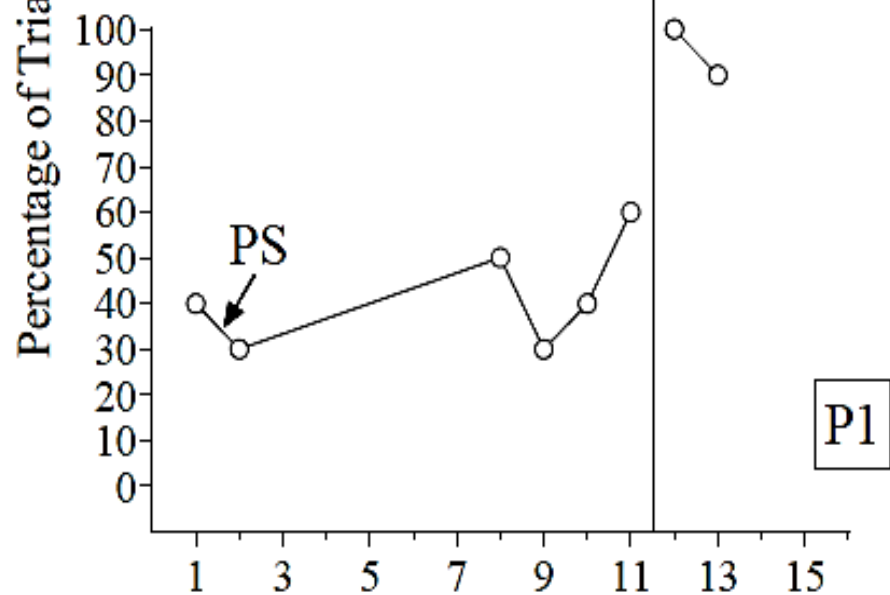
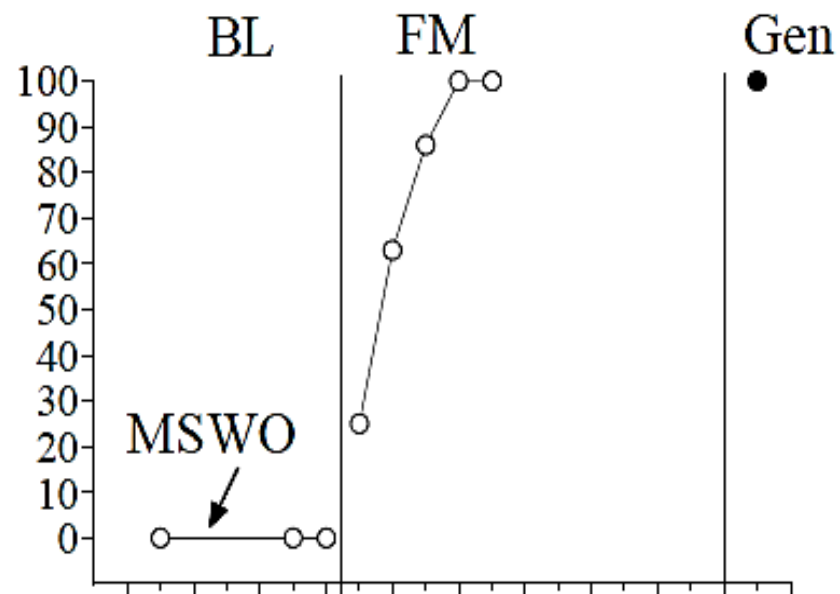
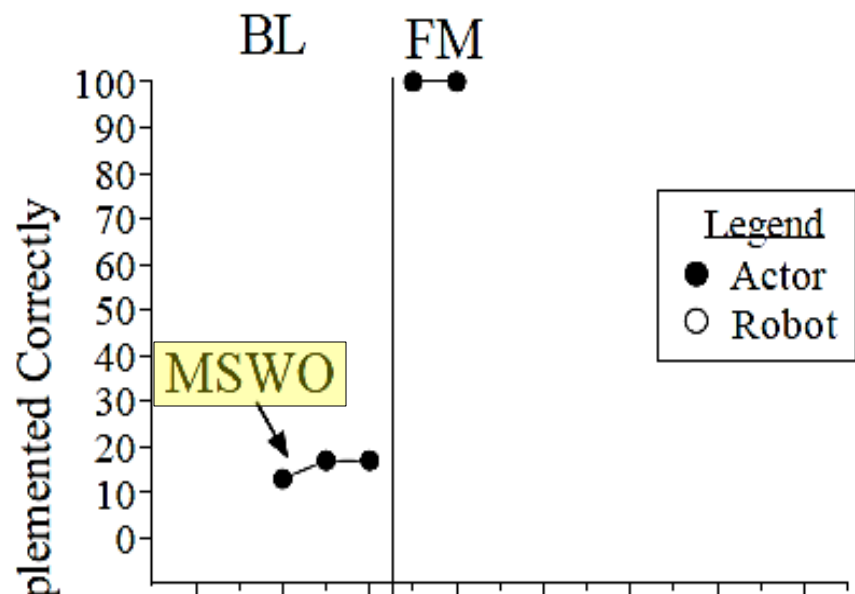
Sessions



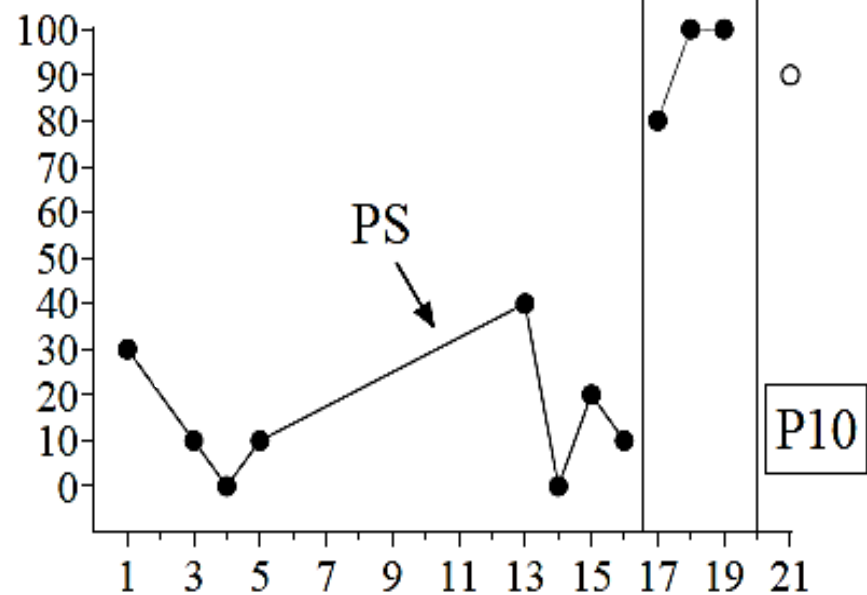
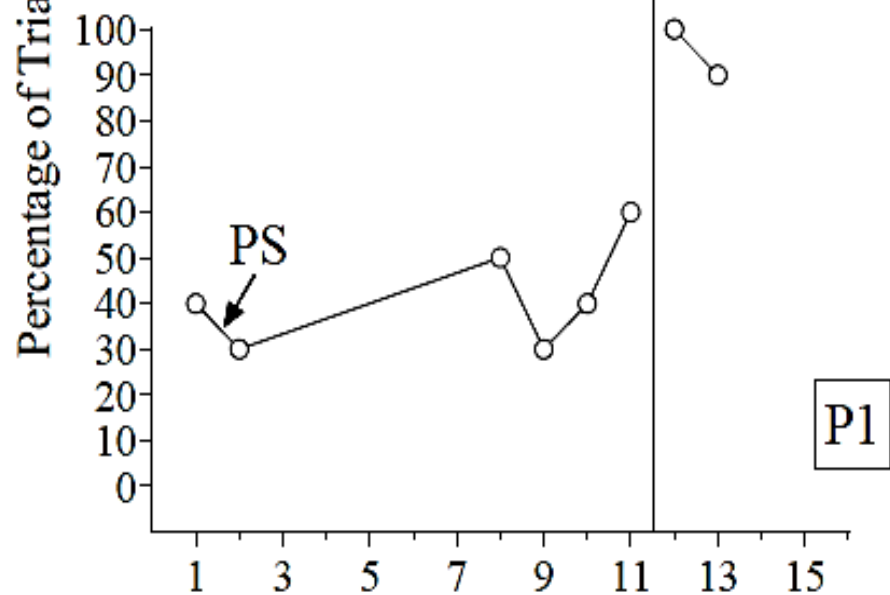
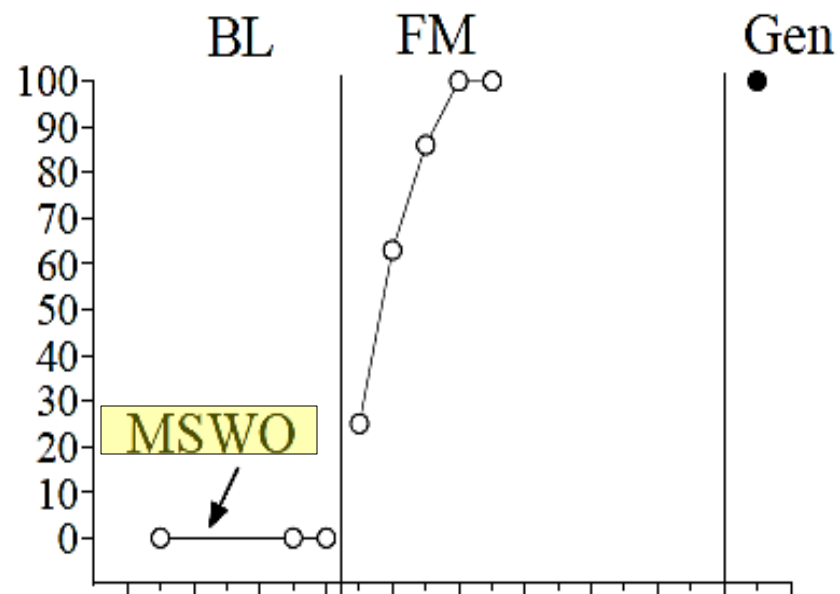
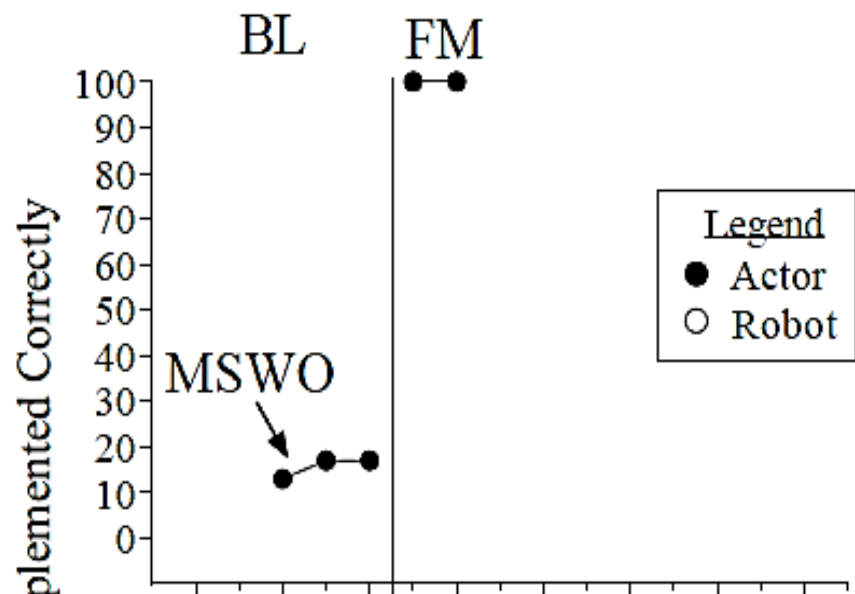
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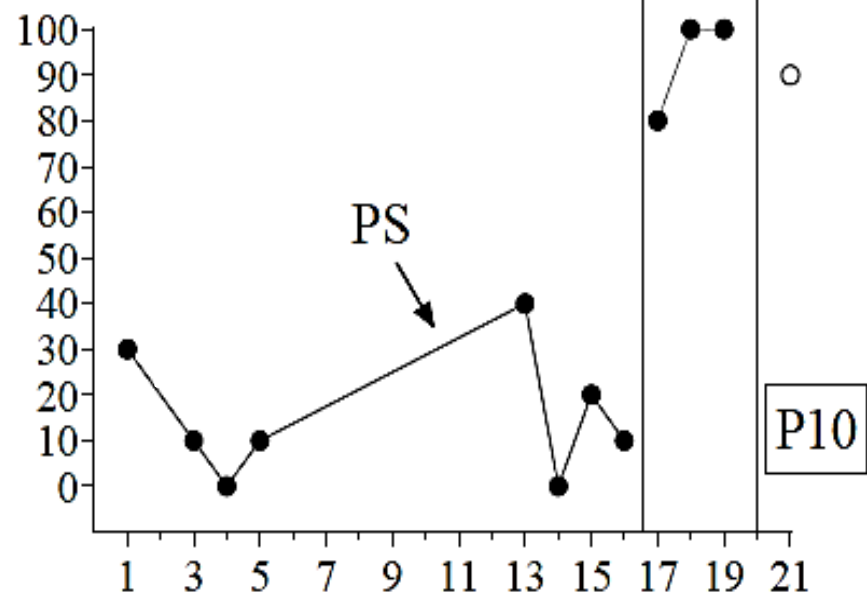
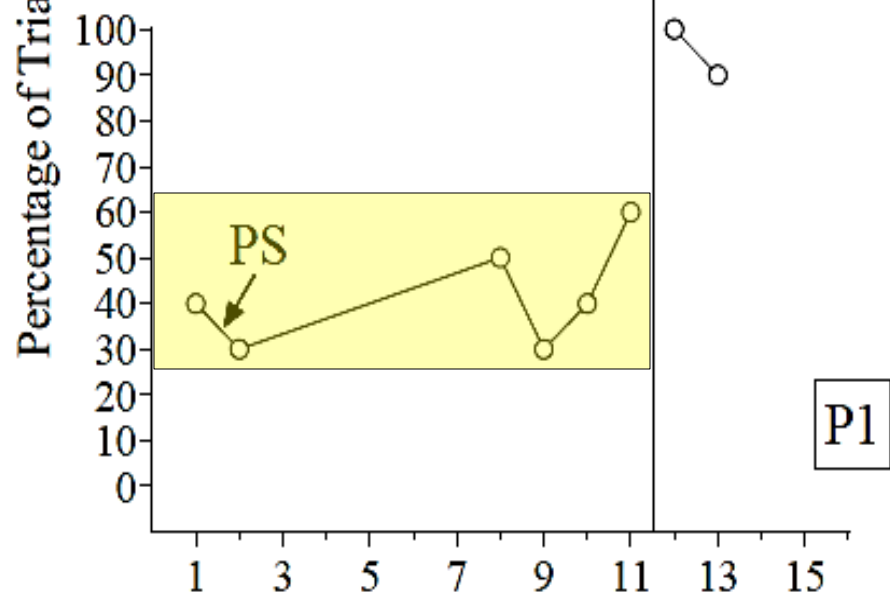
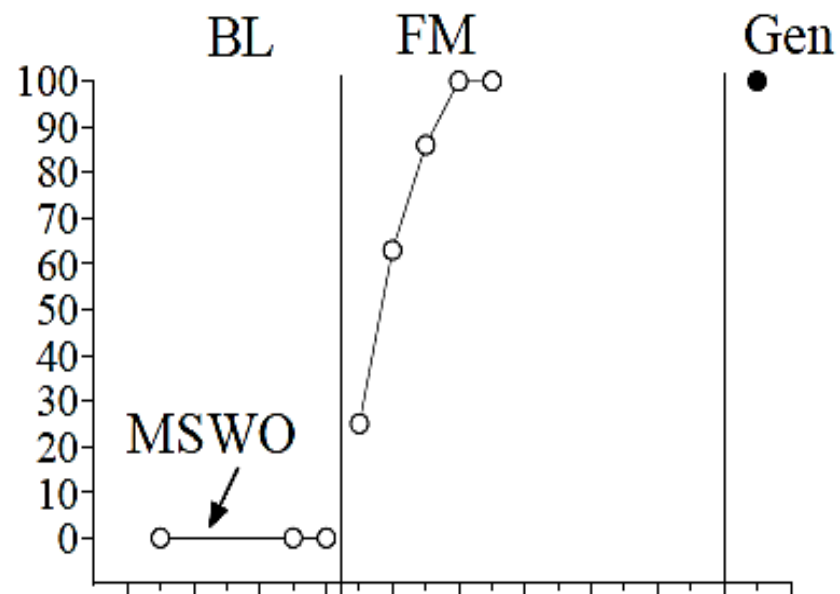
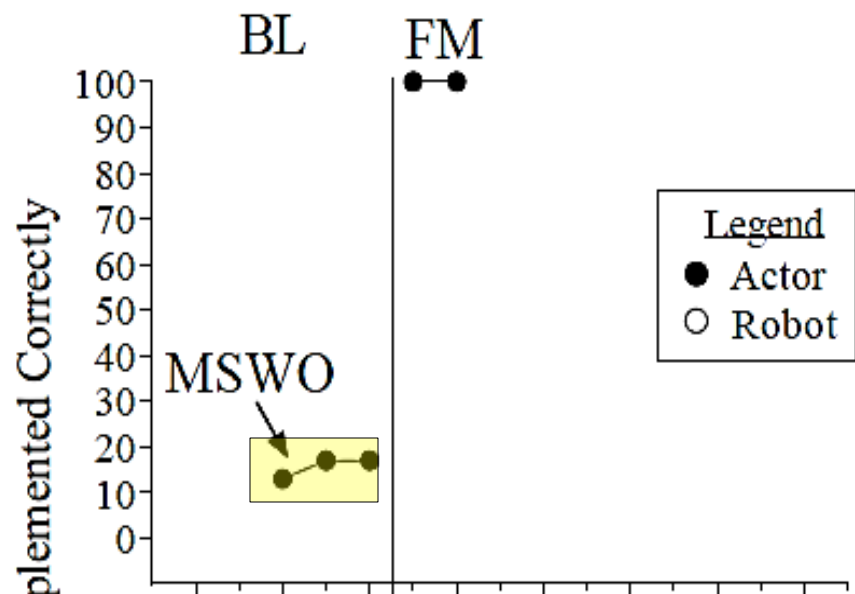
Sessions



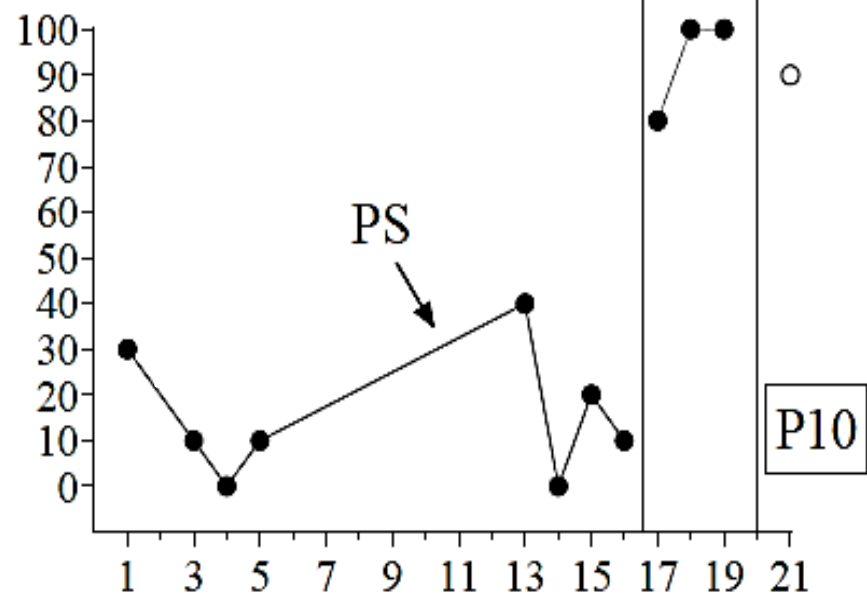
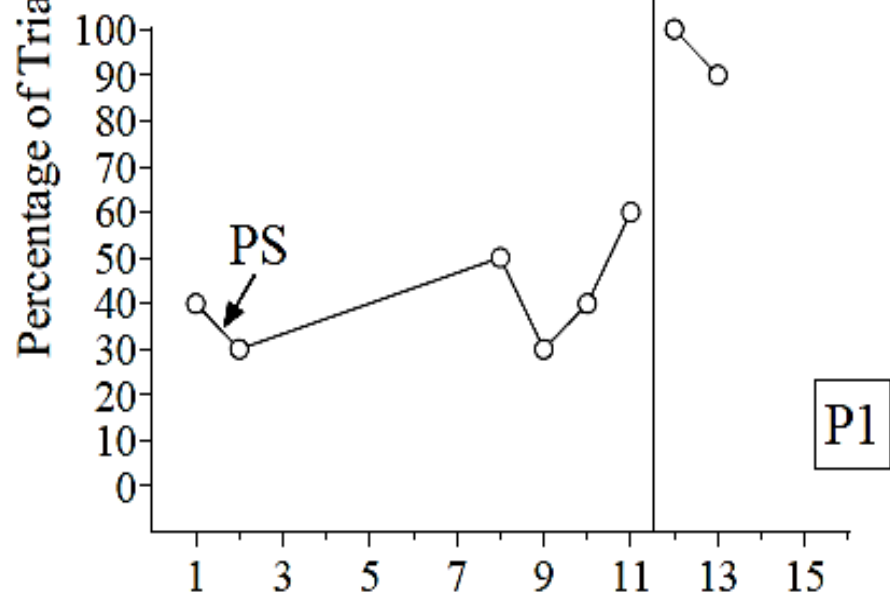
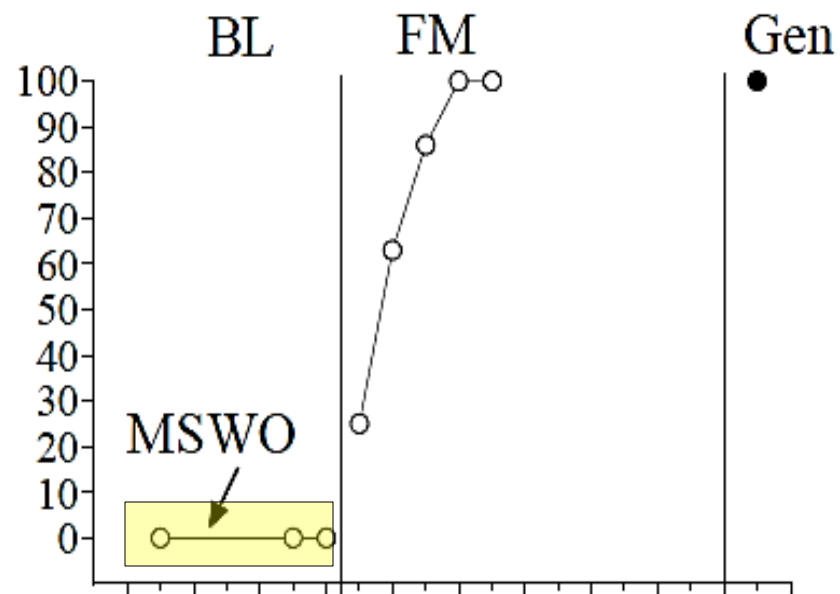
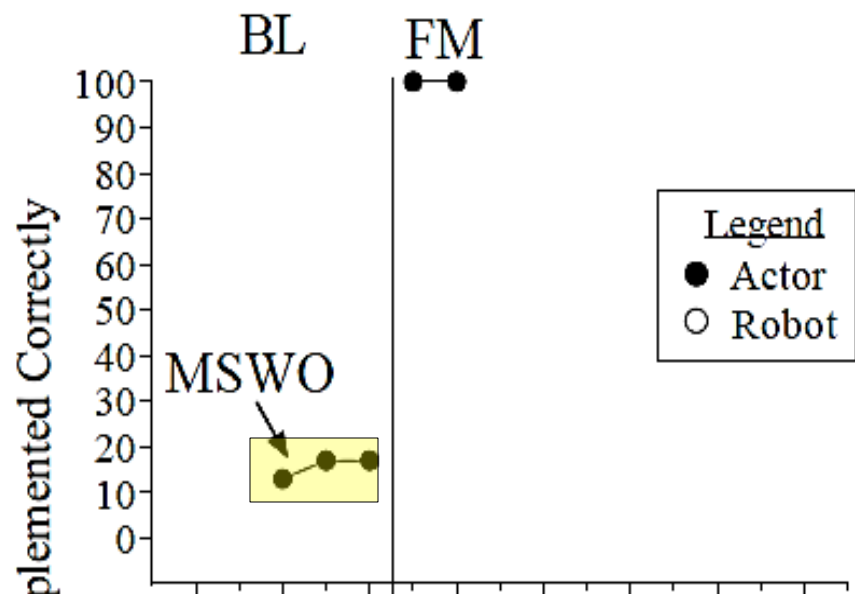
Sessions



Sessions

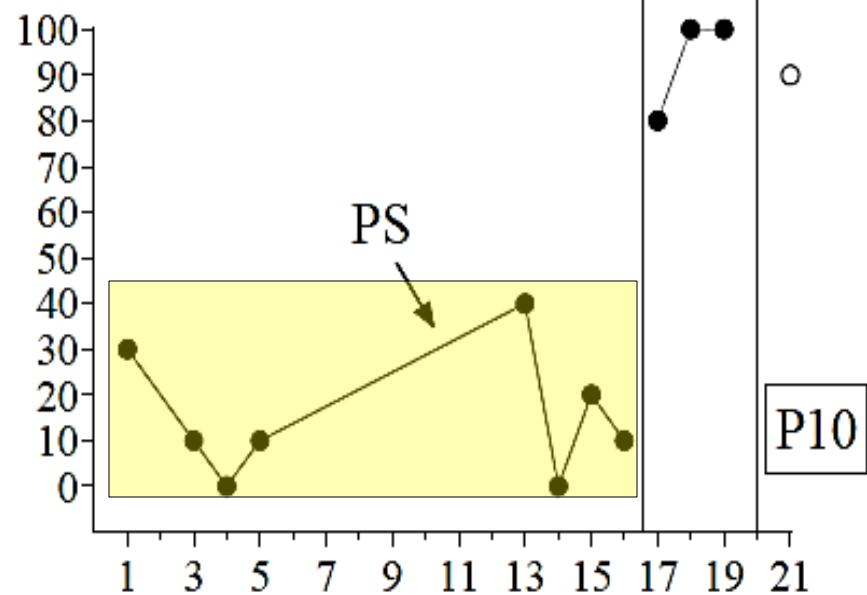
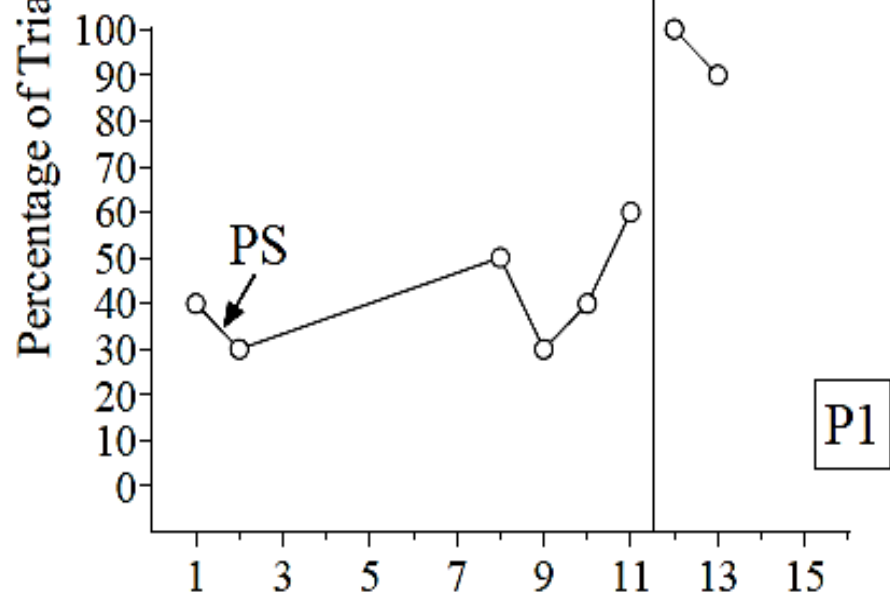
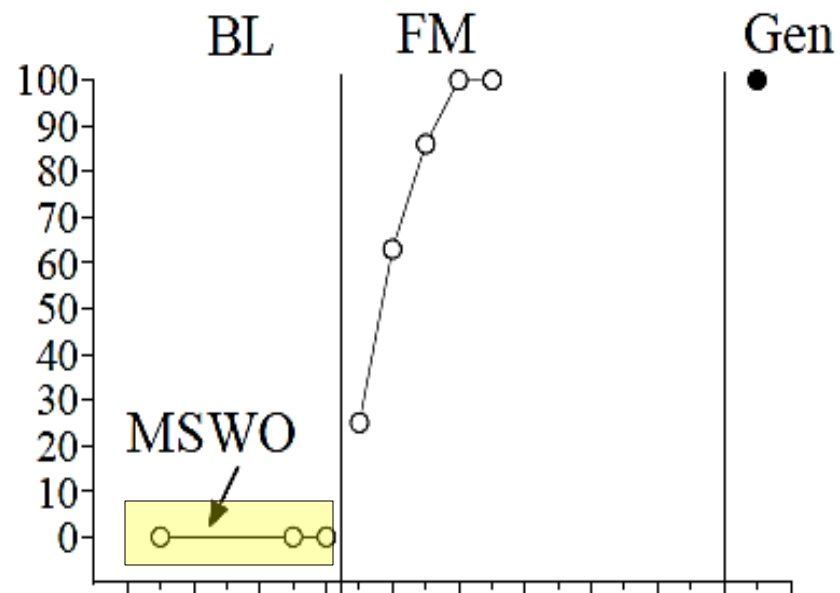
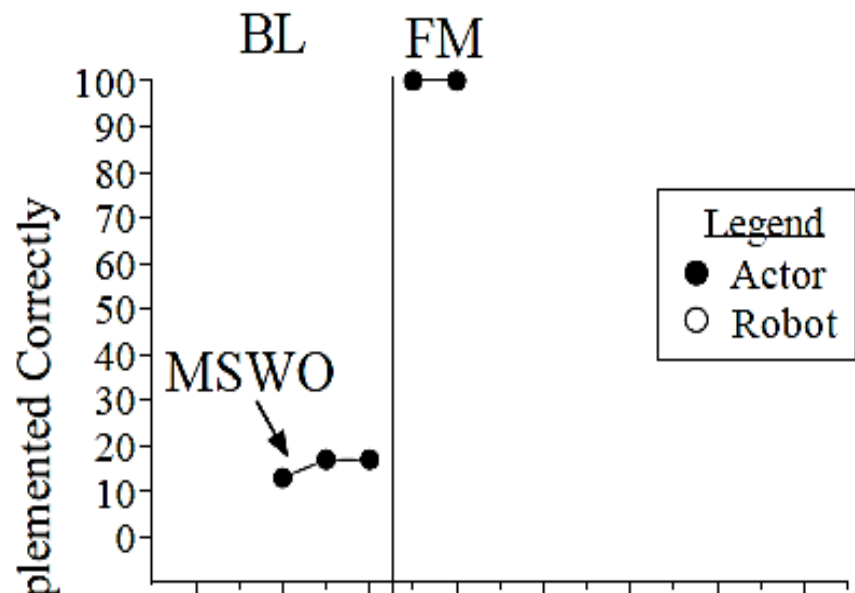


Sessions

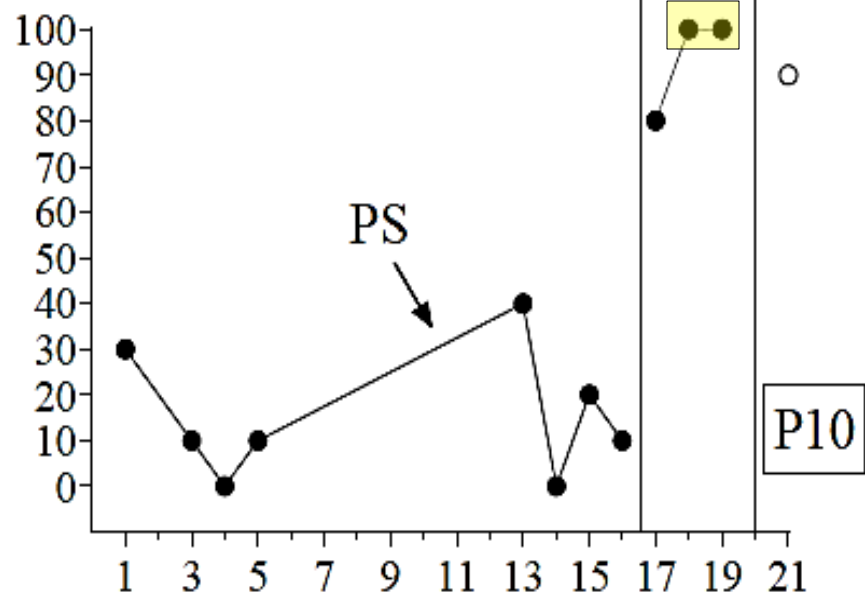
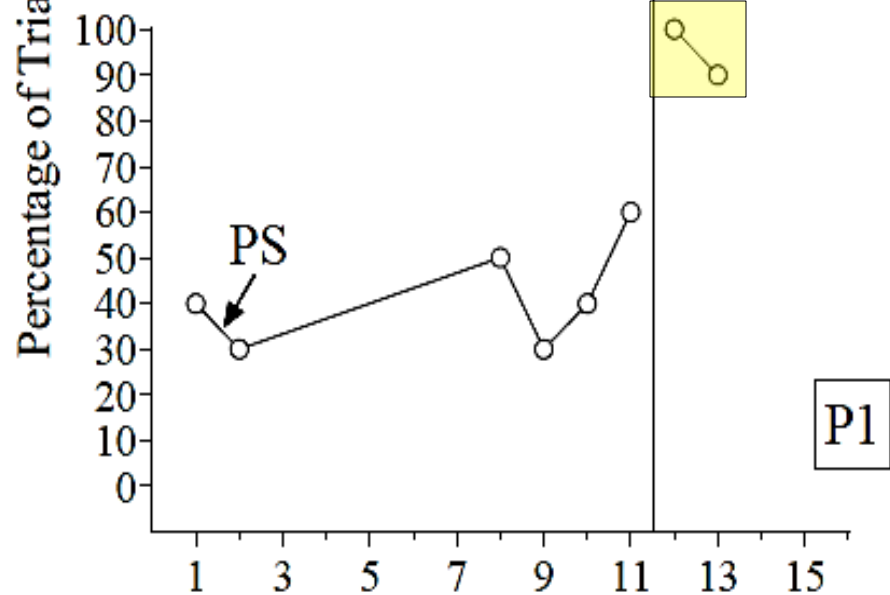
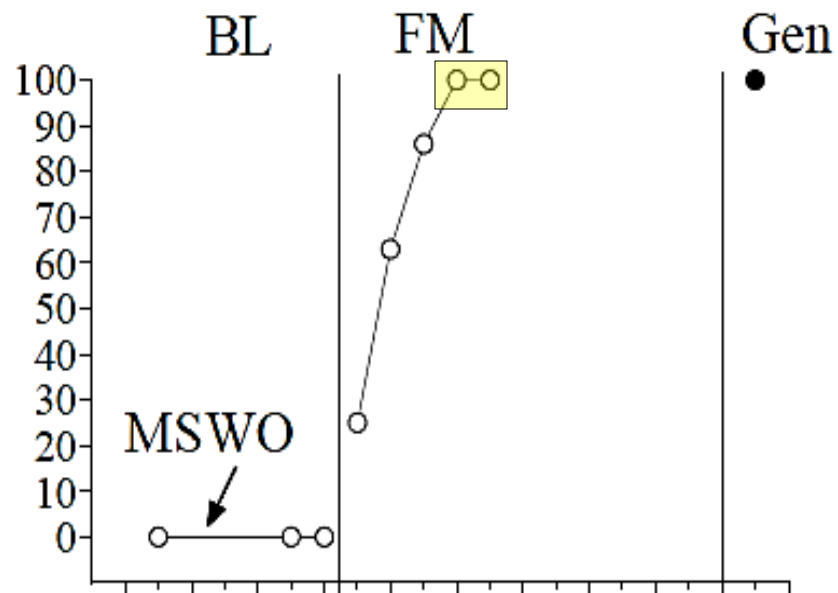
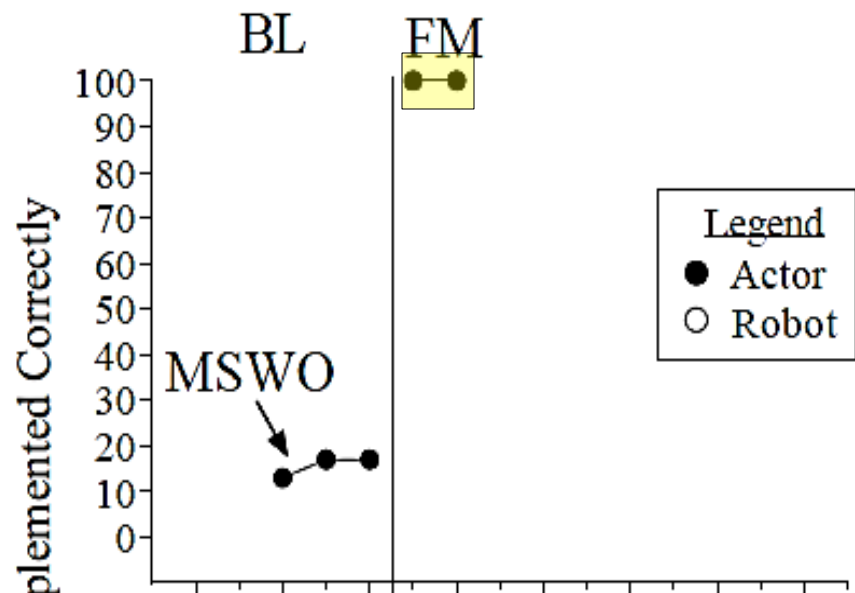


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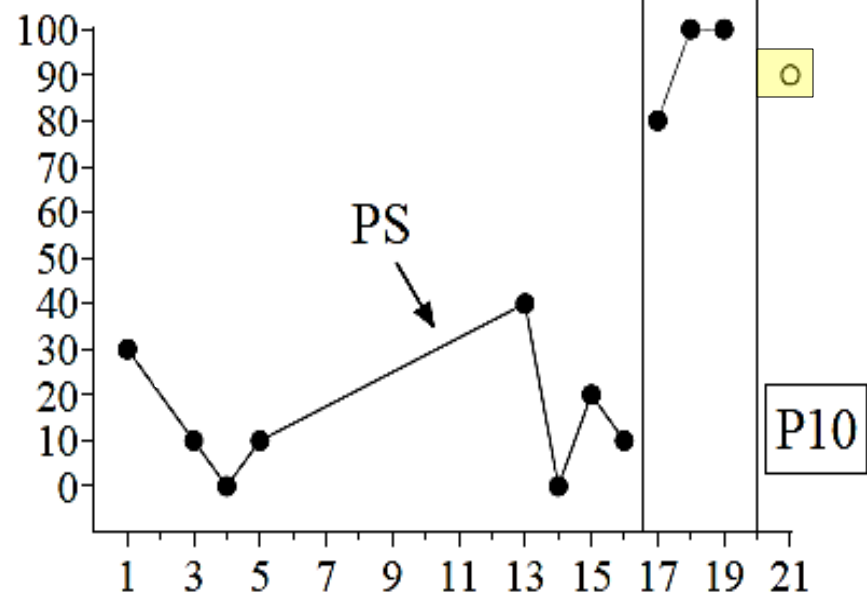
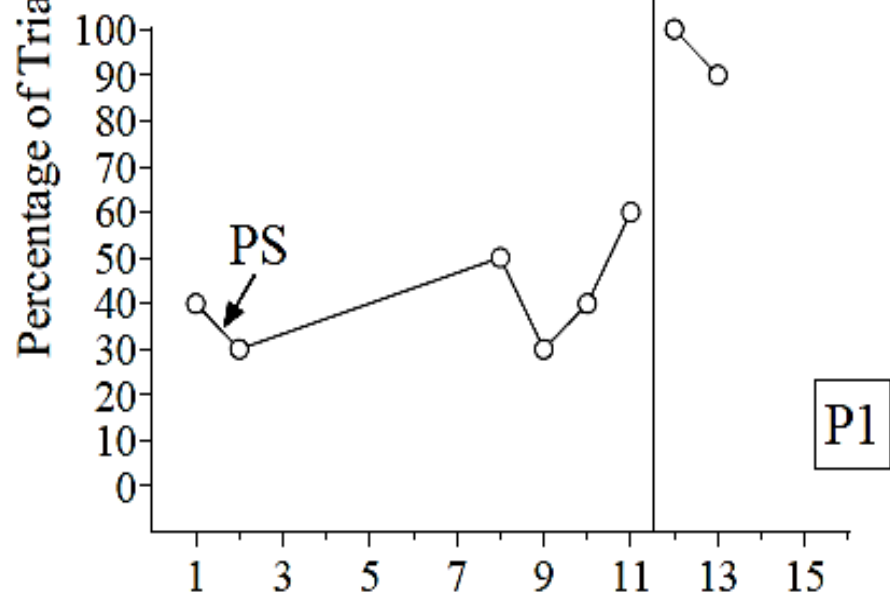
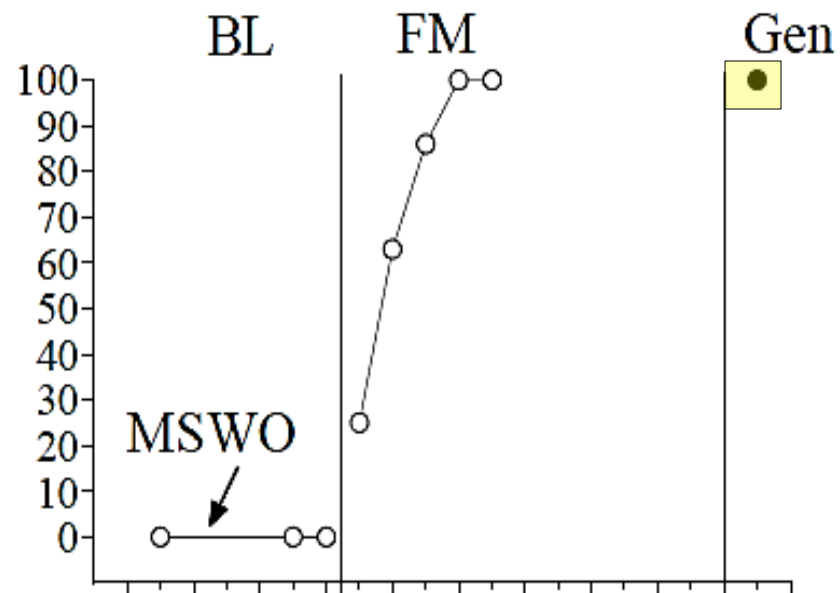
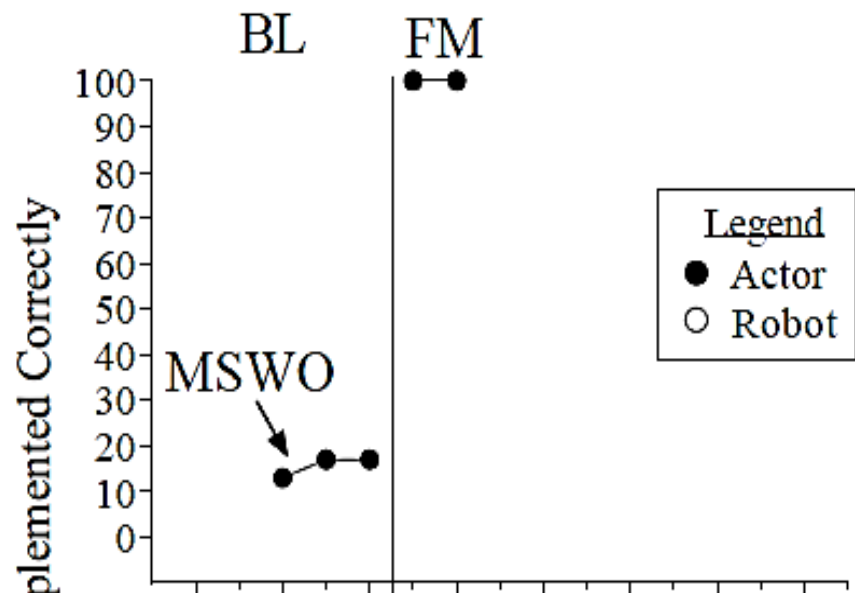




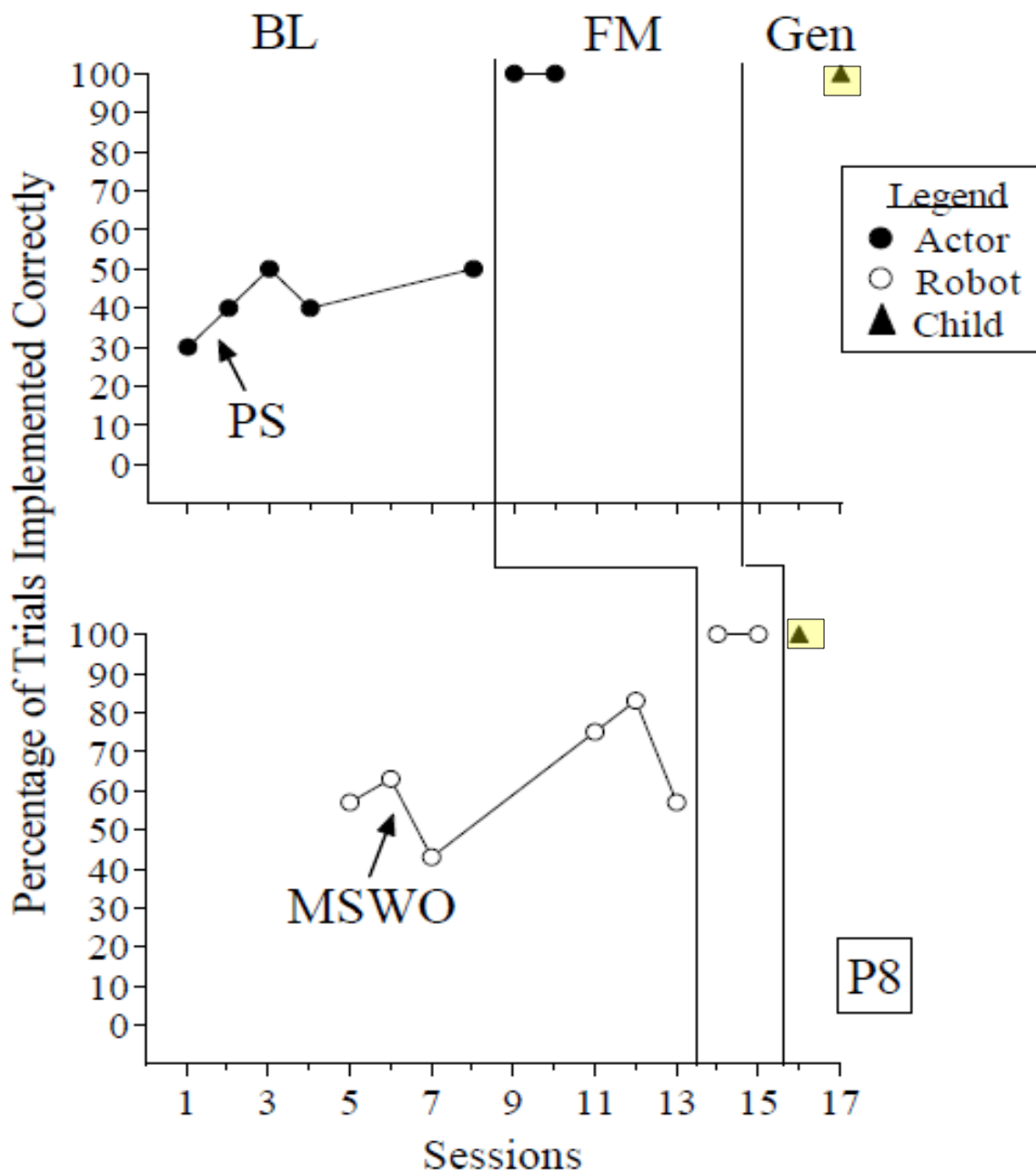
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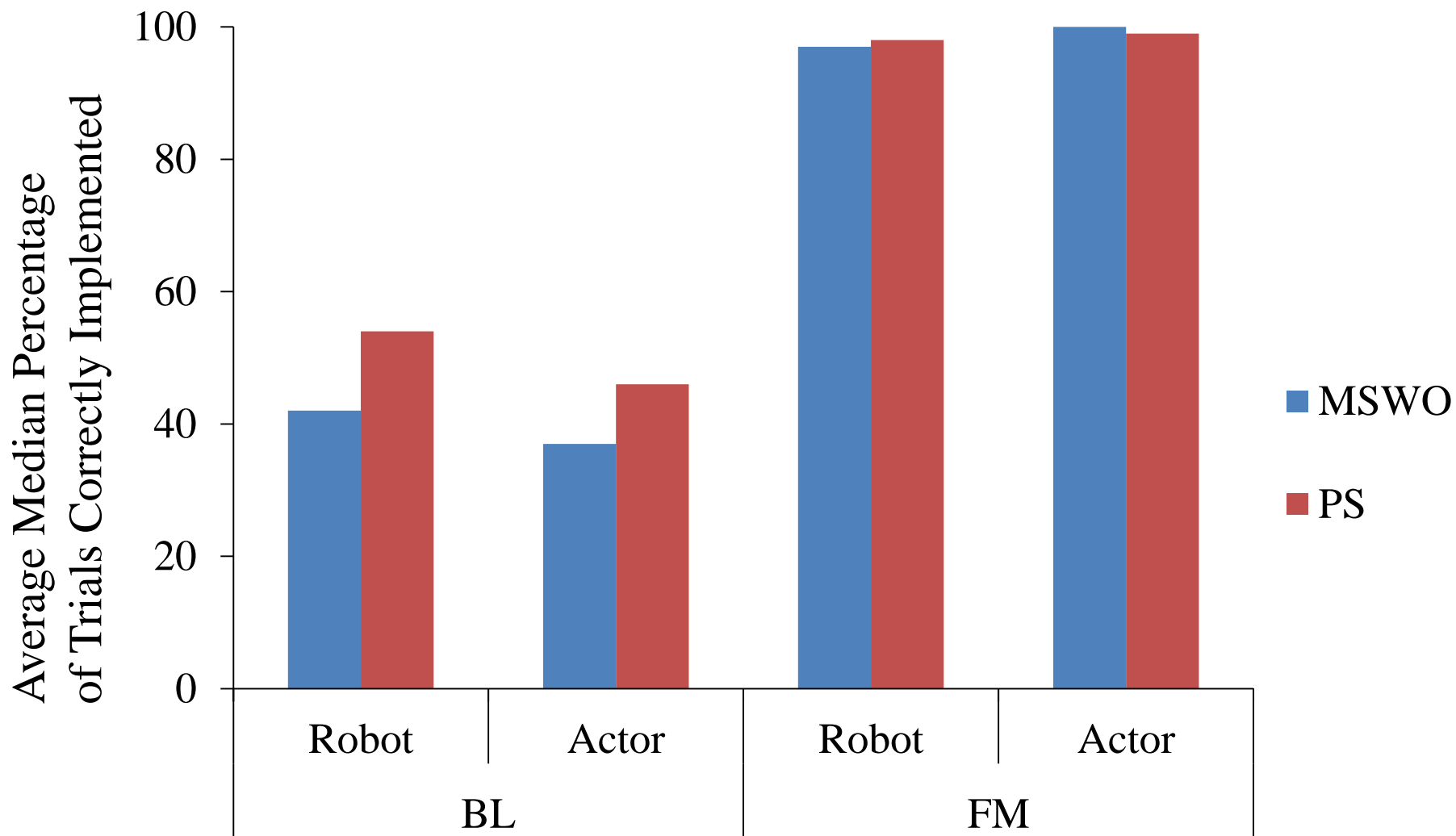


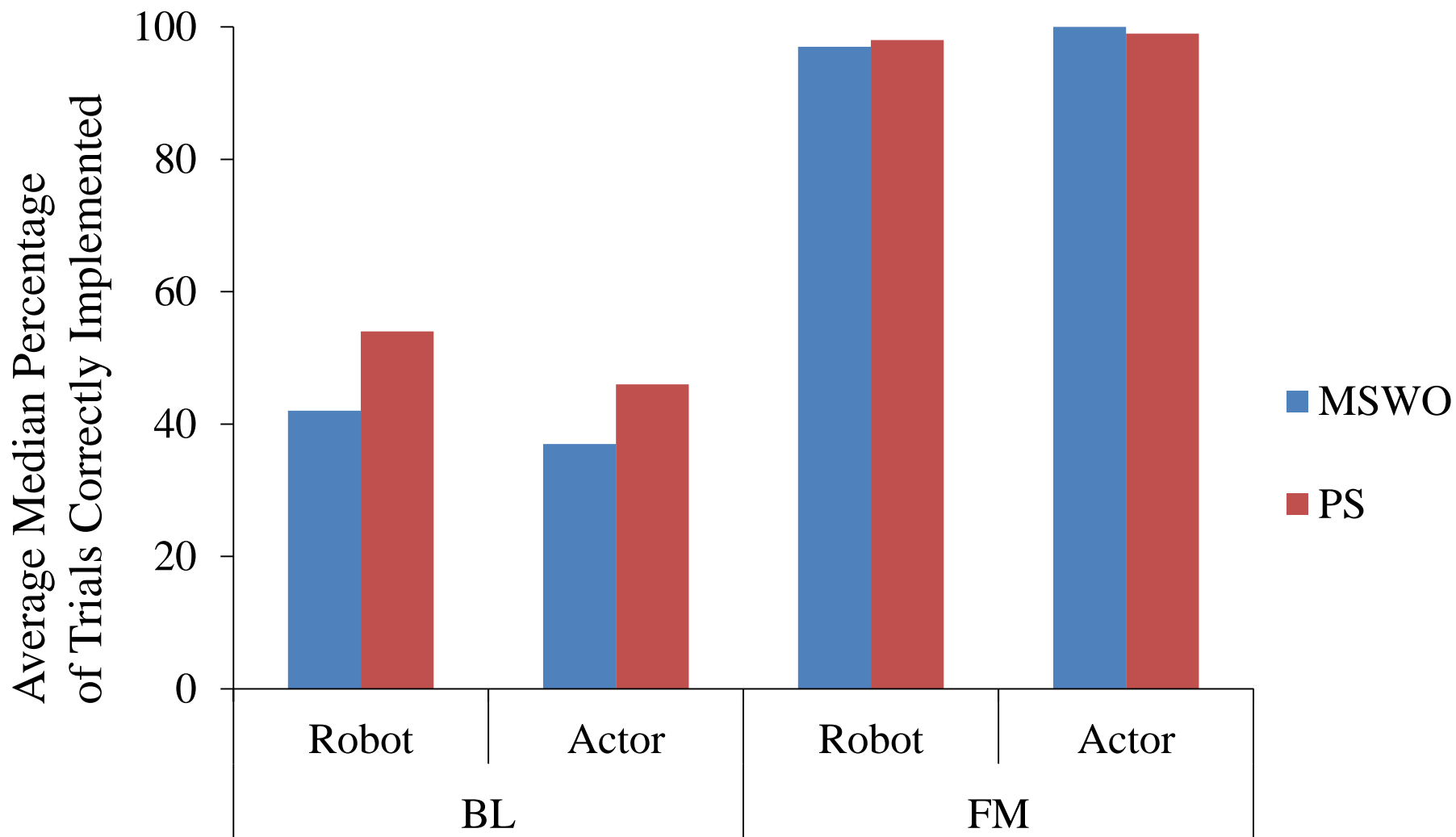
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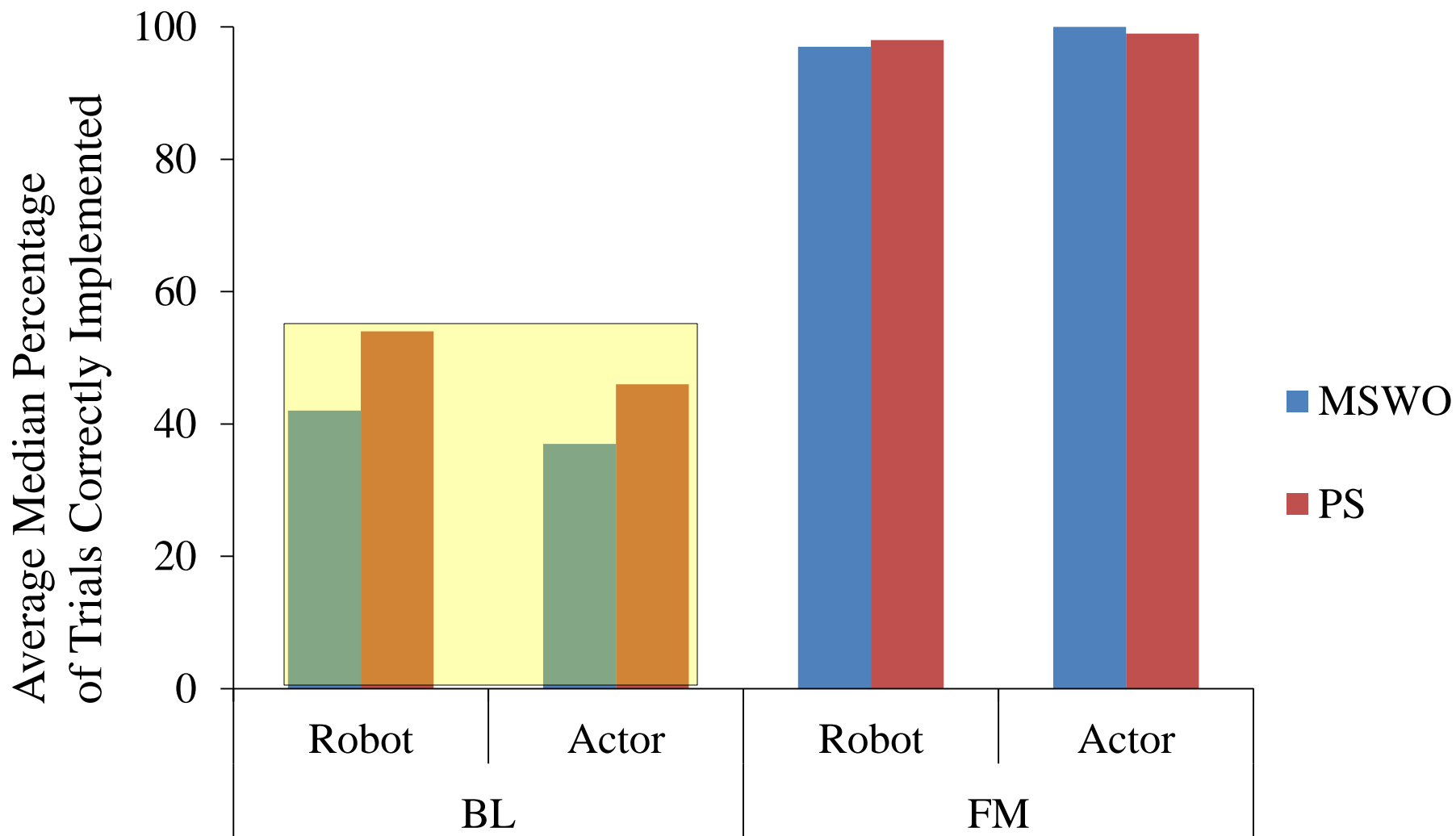


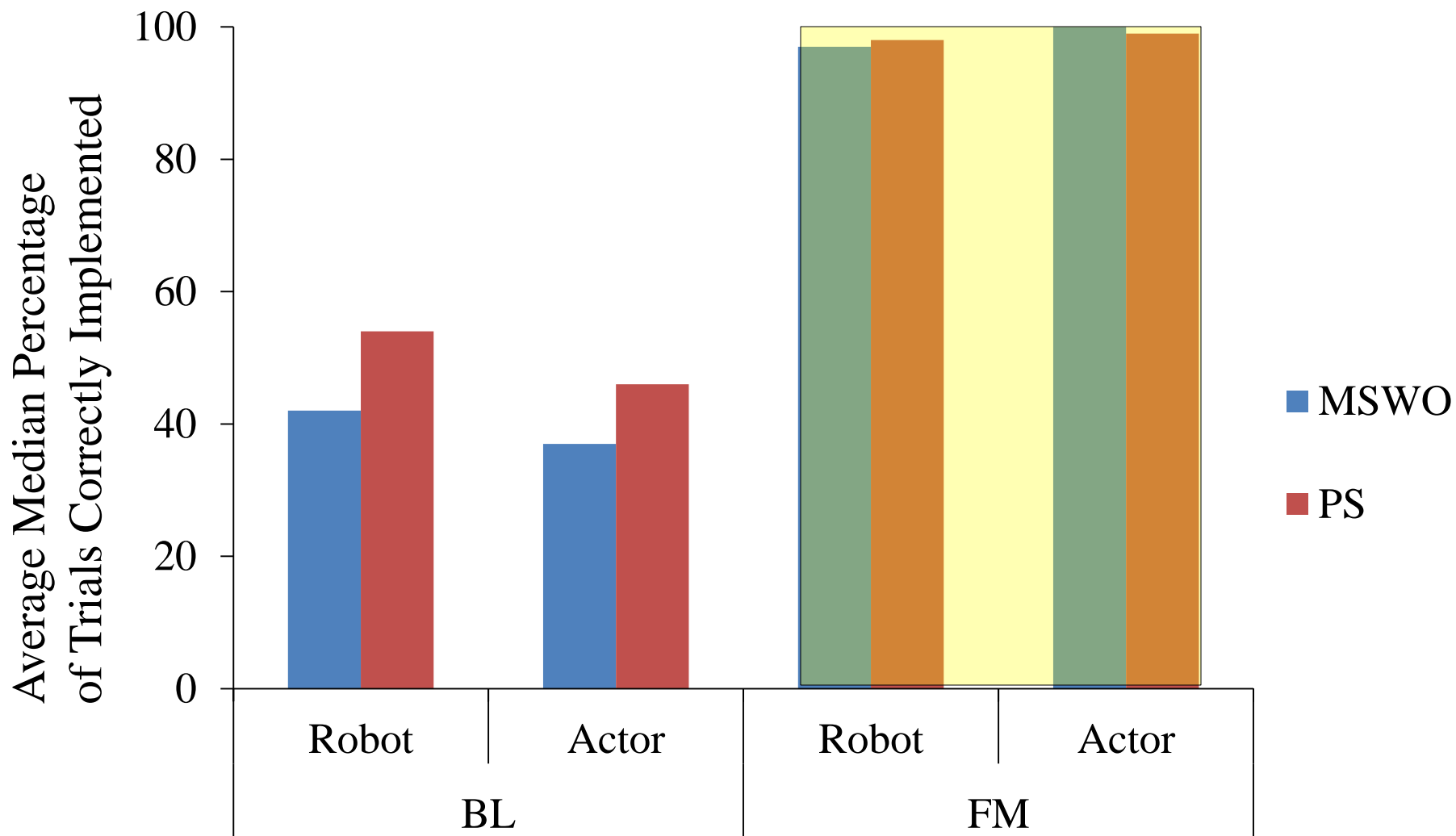
Sessions













# Experiment 2:

- Social Validity:

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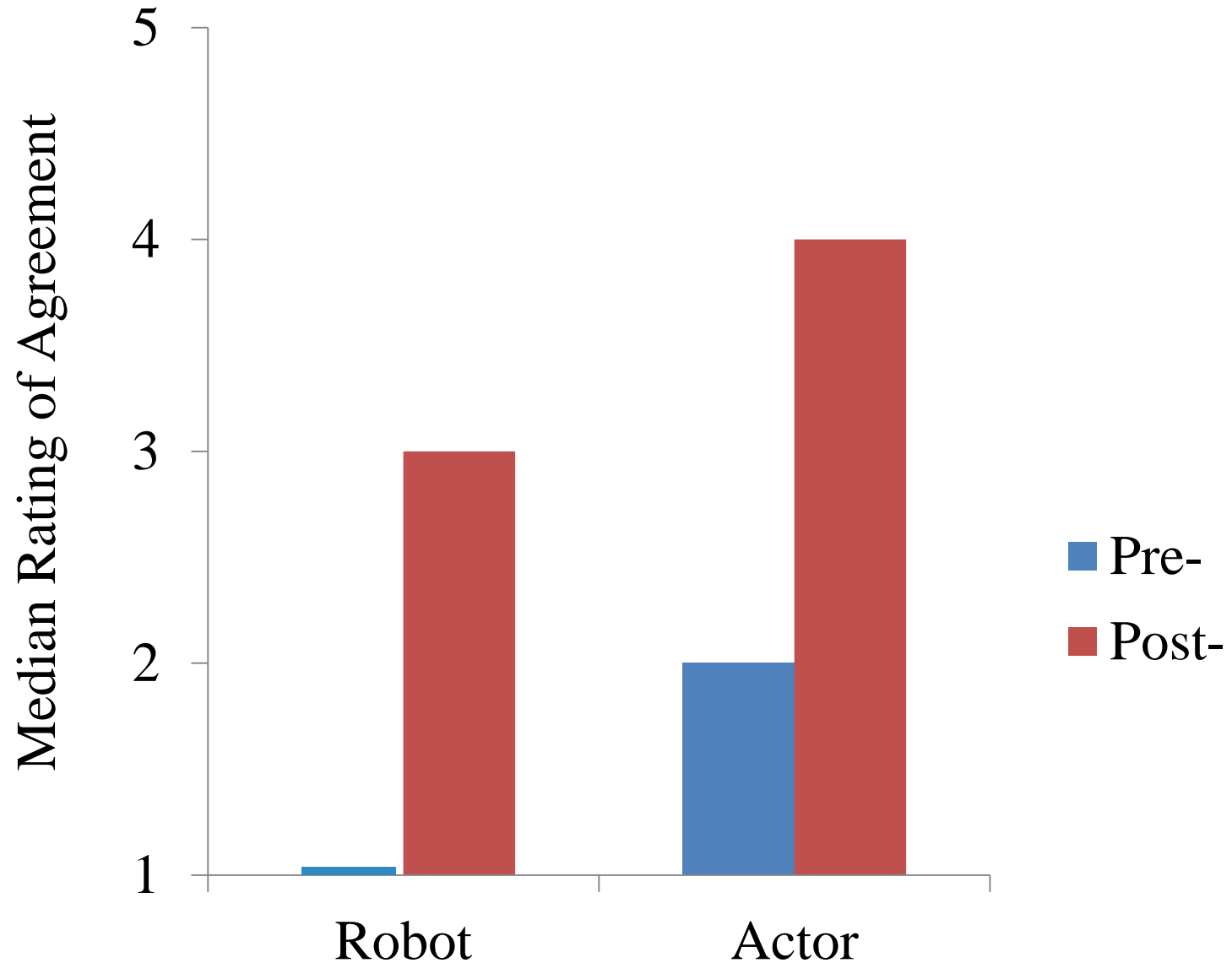
- 1) “A humanoid robot can be used, instead of a client, when training clinicians, teachers, and/or caregivers to conduct assessments with children.”

# Experiment 2:

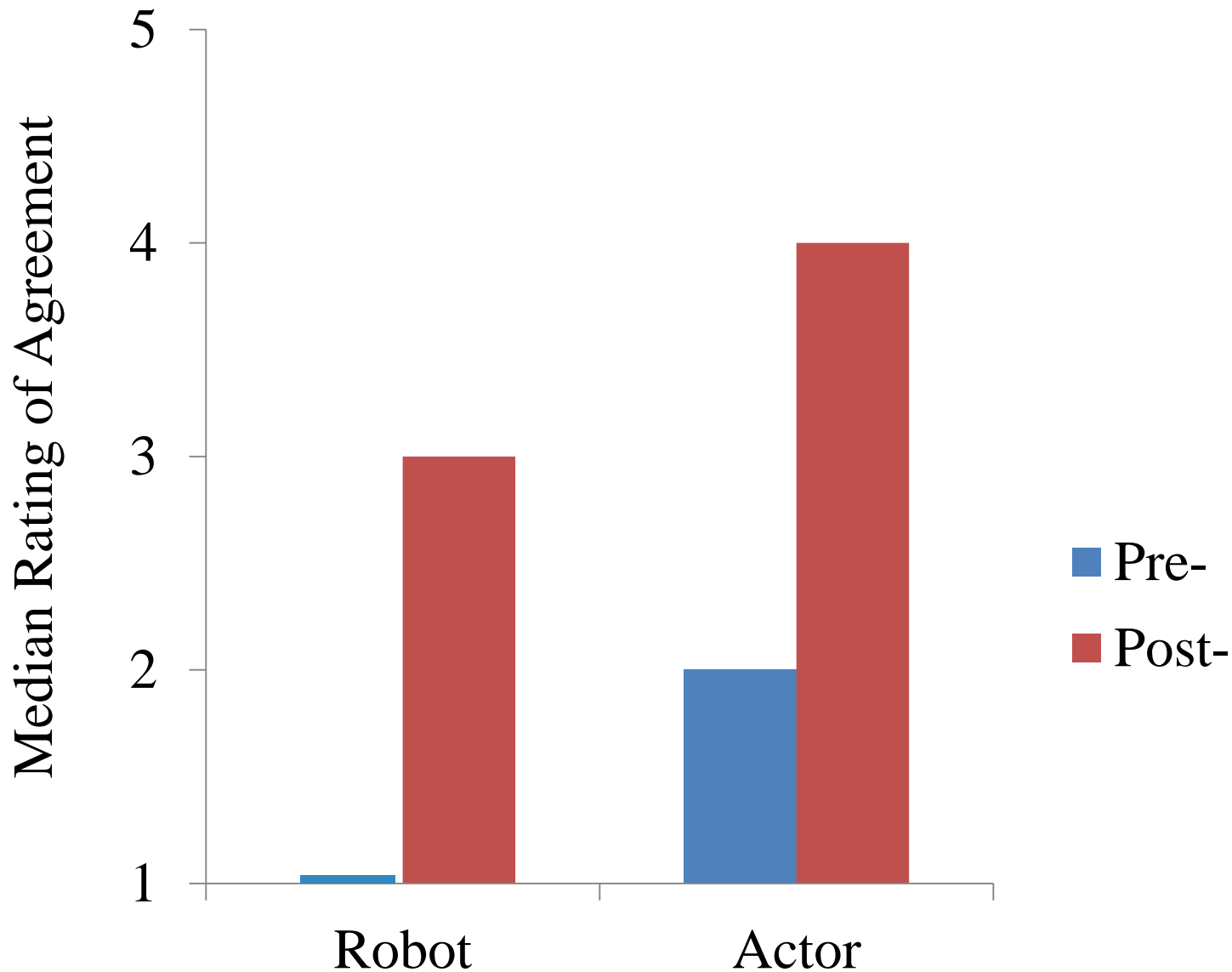
- Social Validity:

- 1) “A humanoid robot can be used, instead of a client, when training clinicians, teachers, and/or caregivers to conduct assessments with children.”
- 2) “An actor can be used, instead of a client, when training clinicians, teachers, and/or caregivers to conduct assessments with children.”

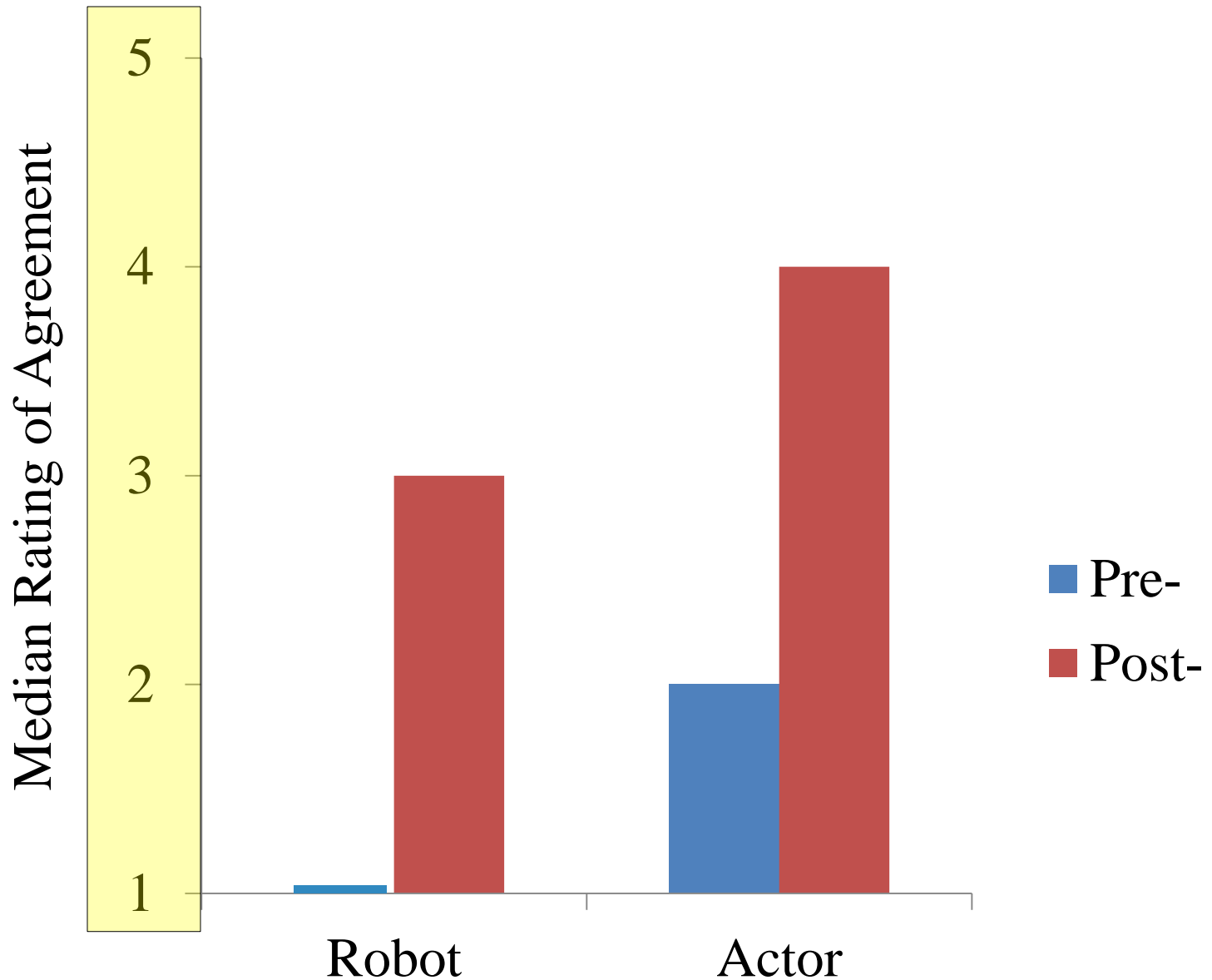
A (robot or actor) can be used for training individuals to conduct assessments with children



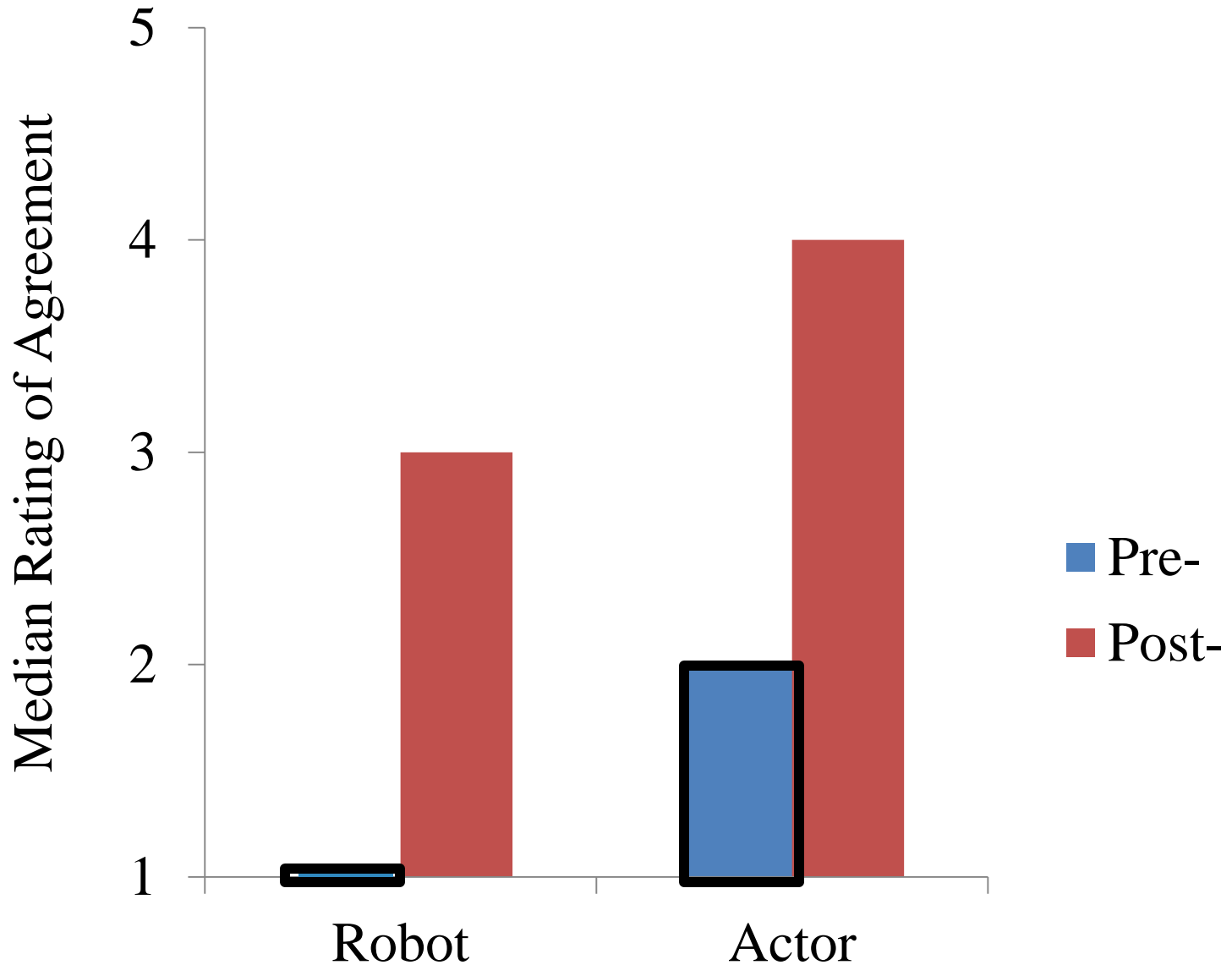
A (robot or actor) can be used for training individuals to conduct assessments with children



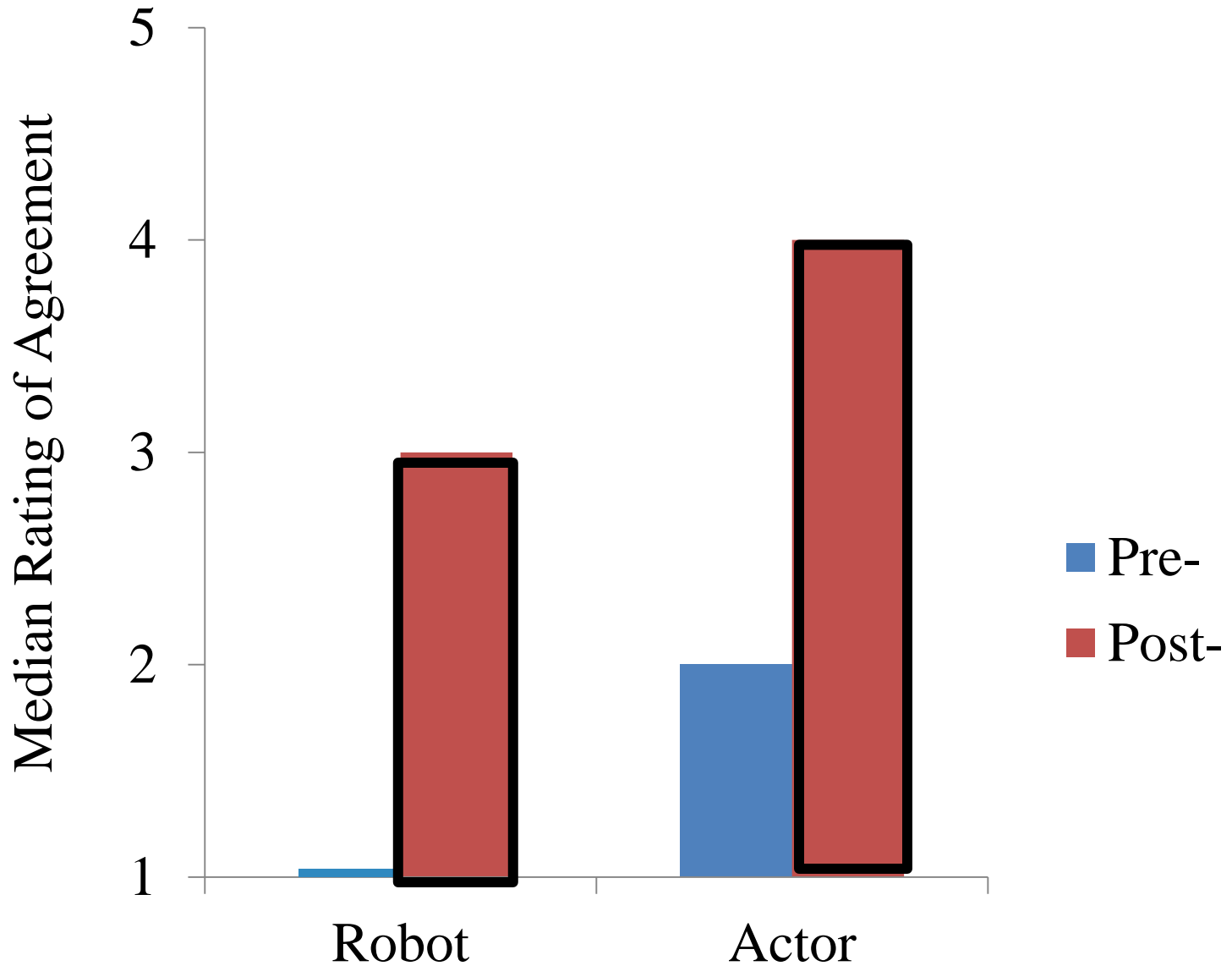
A (robot or actor) can be used for training individuals to conduct assessments with children



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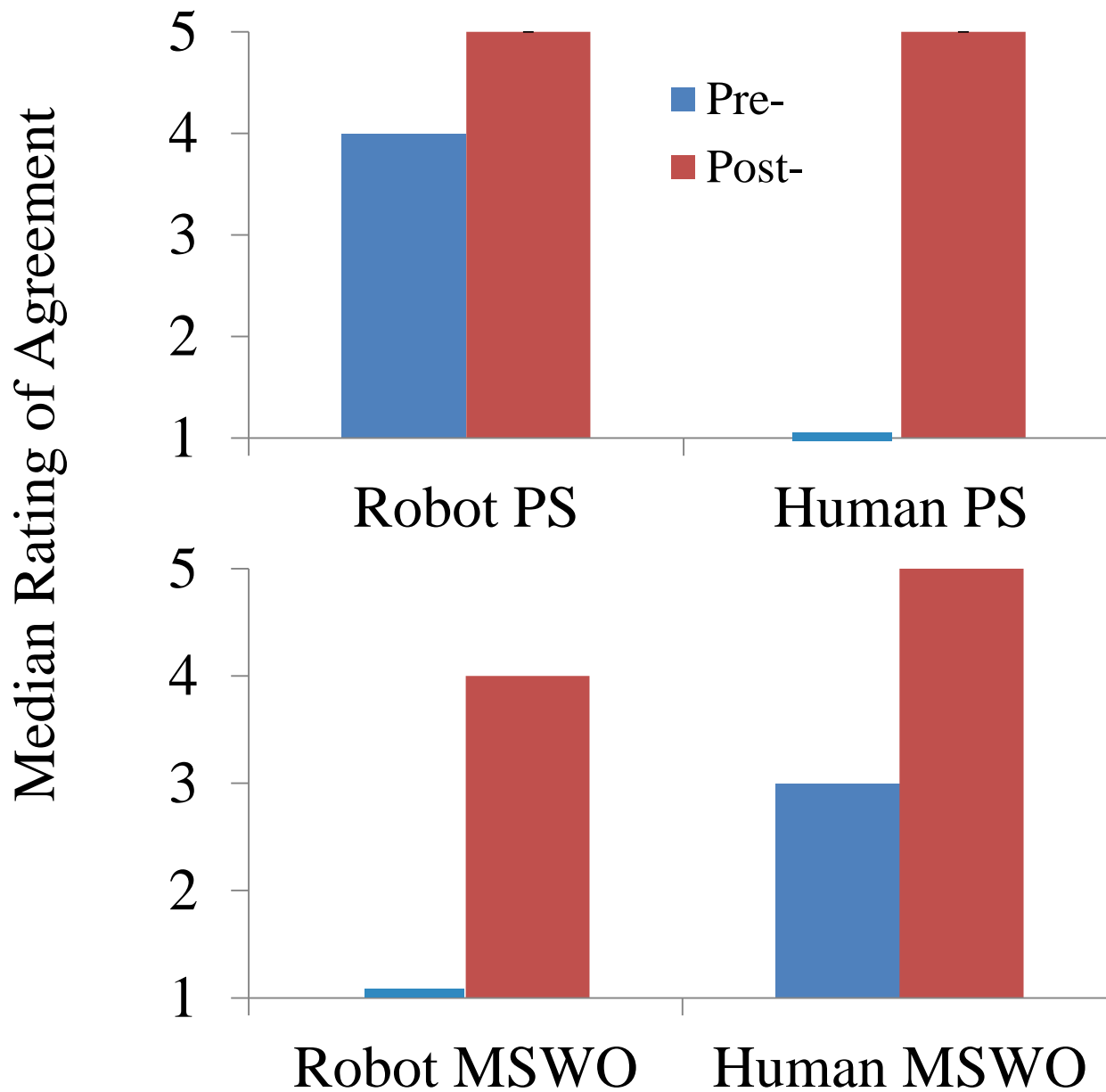
# Experiment 2:

- Social Validity:

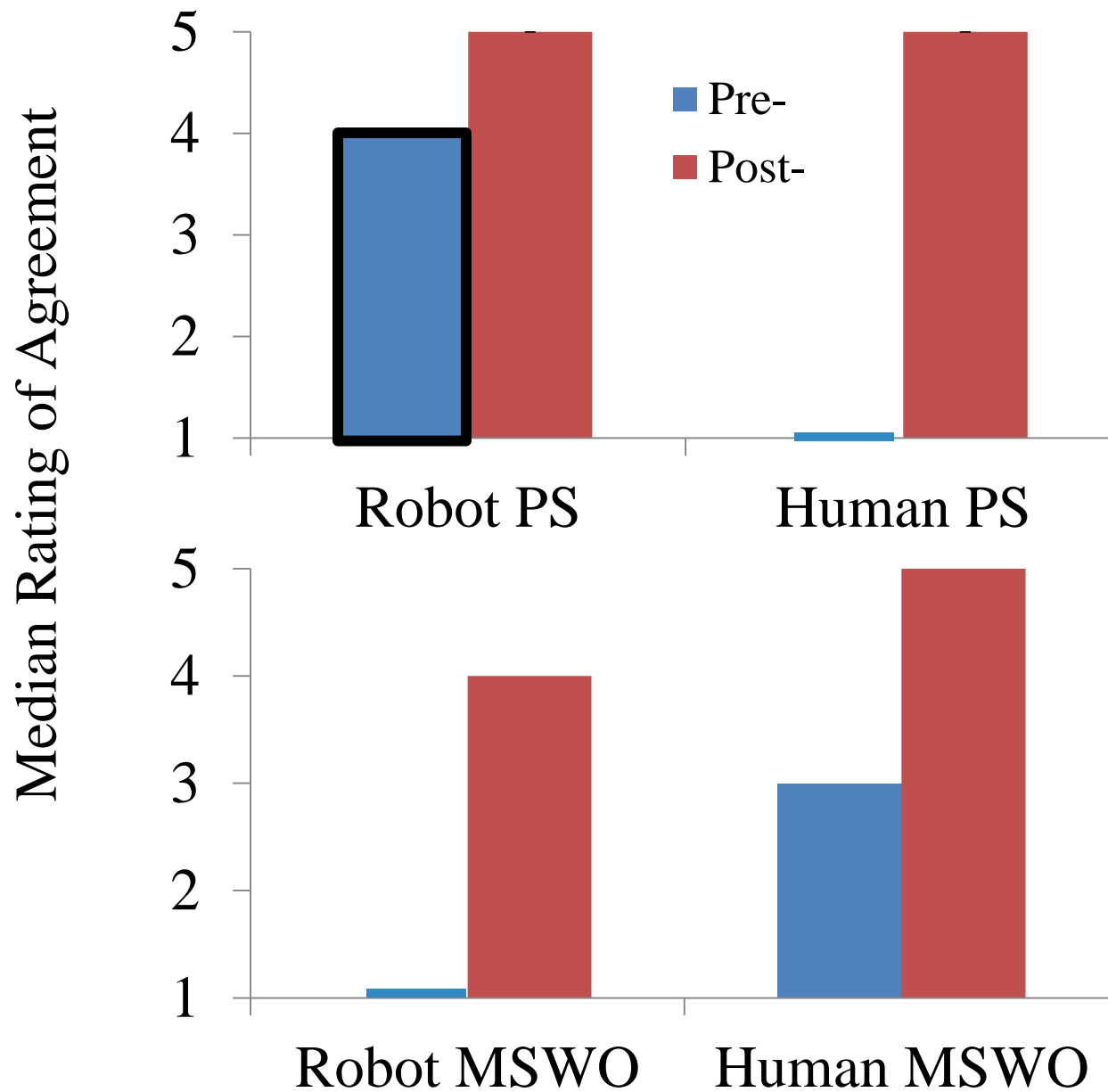
- 1) “I feel confident that I can correctly conduct a PS preference assessment.”

- 2) “I feel confident that I can correctly conduct an MSWO preference assessment.”

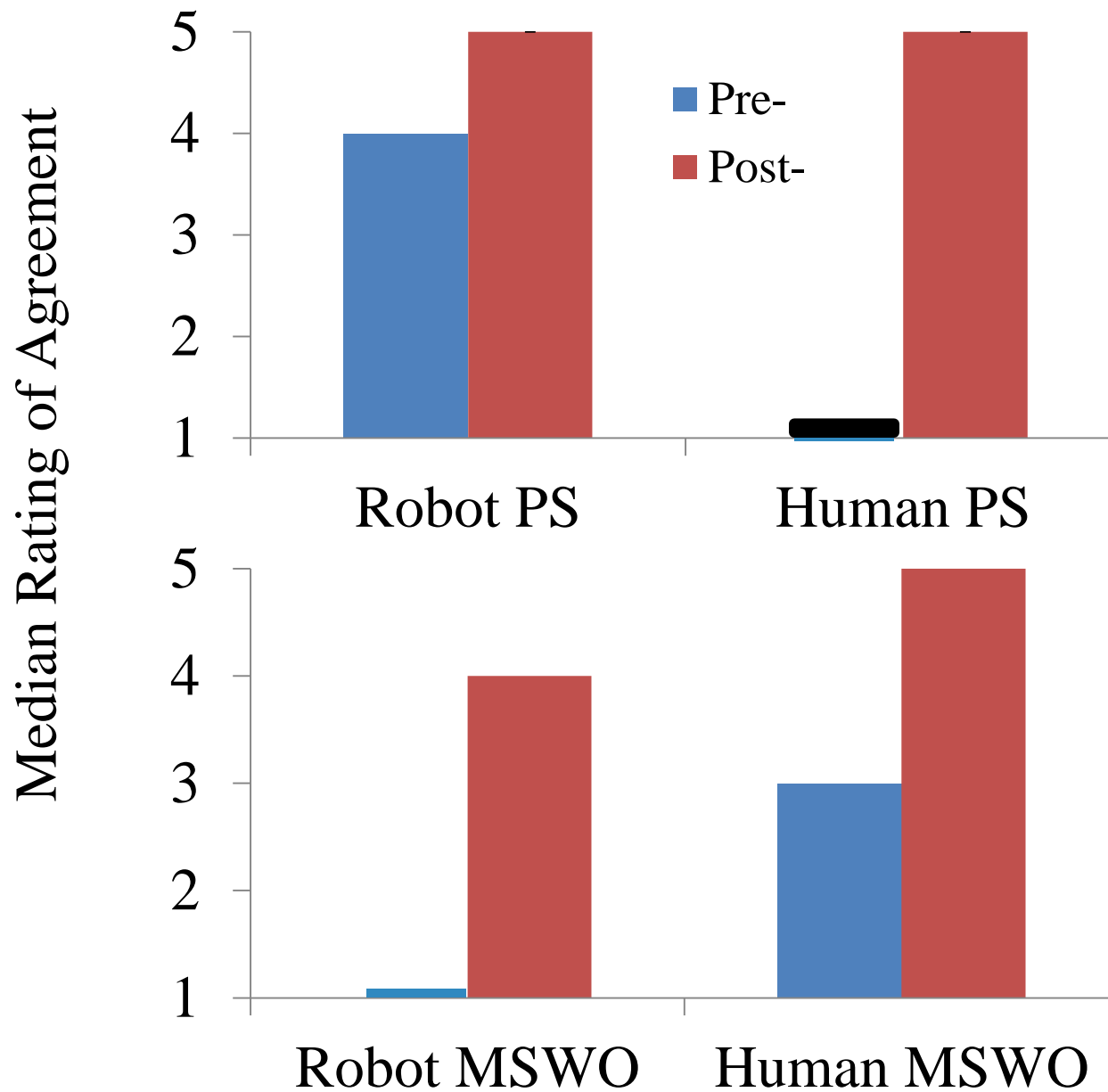
# I feel confident I can conduct (an MSWO or PS)



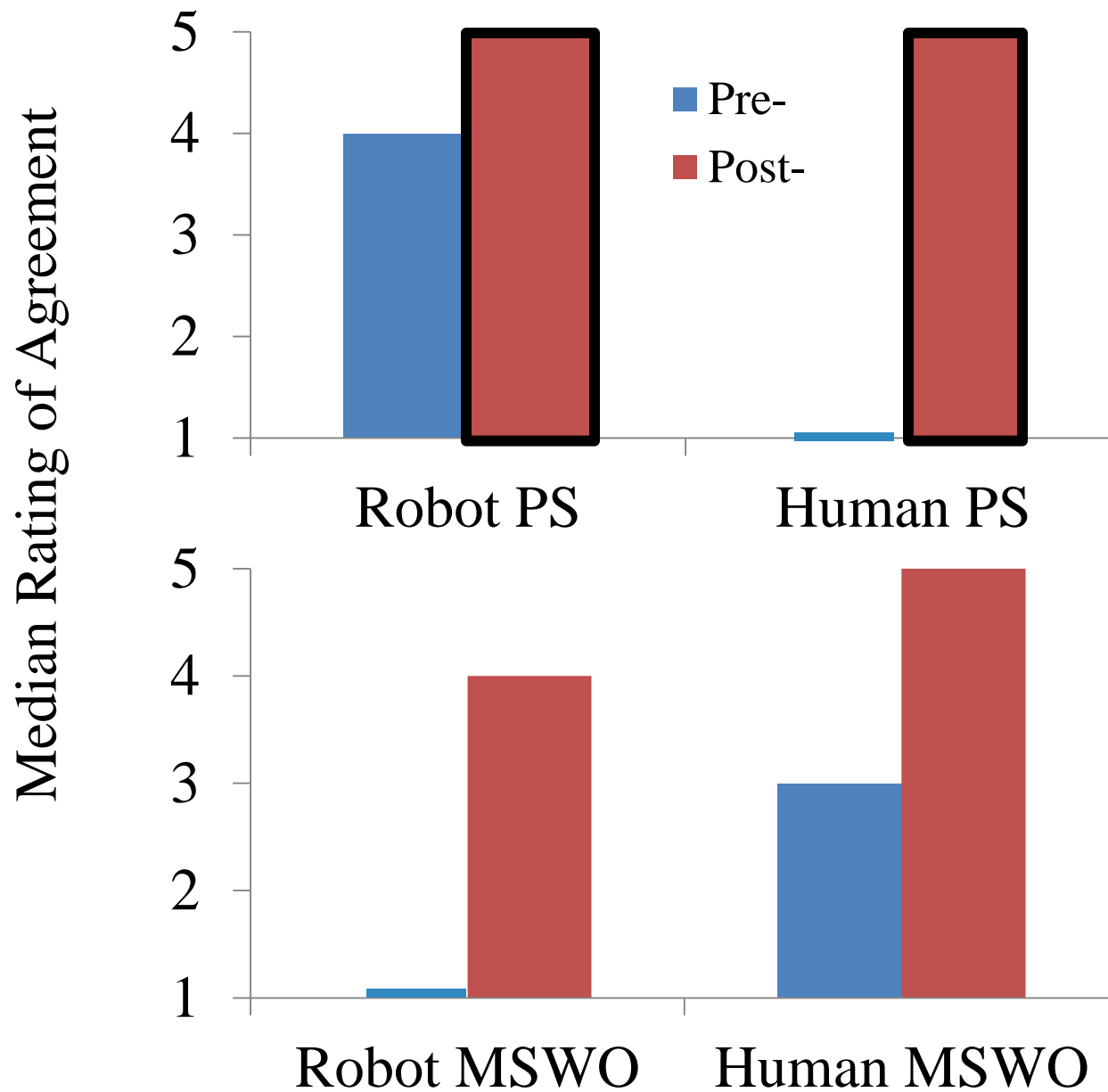
# I feel confident I can conduct (an MSWO or PS)



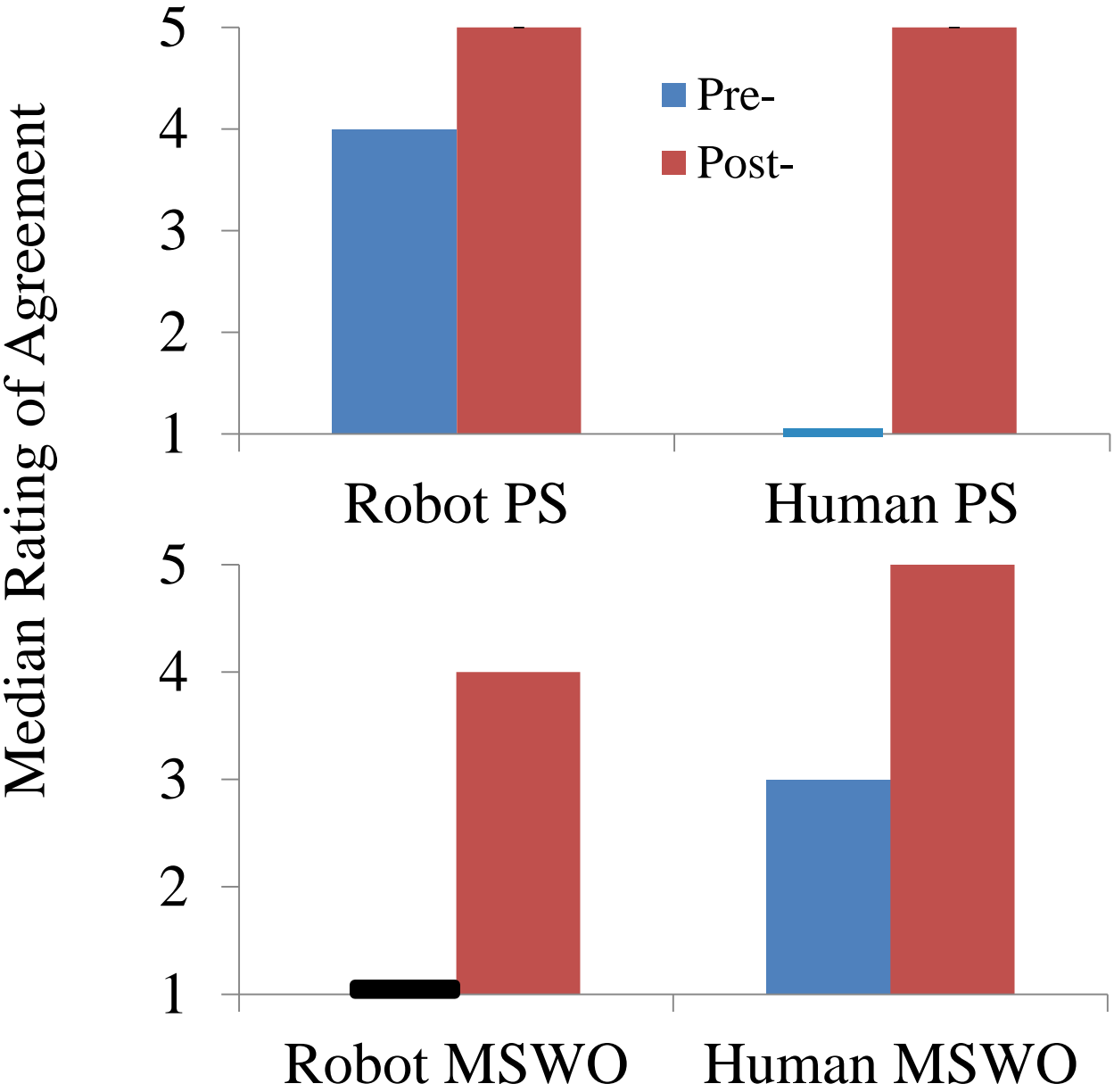
# I feel confident I can conduct (an MSWO or PS)



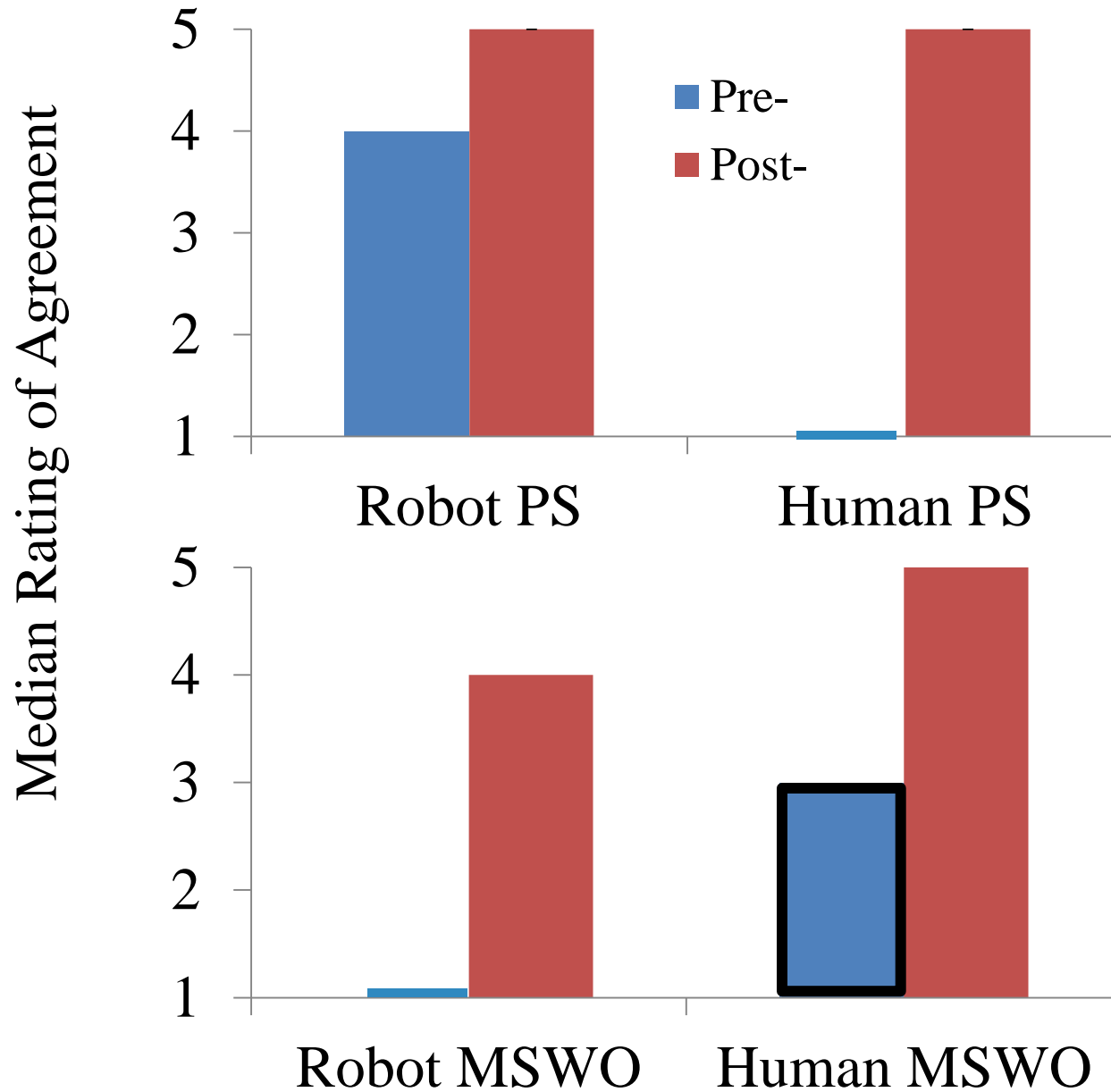
# I feel confident I can conduct (an MSWO or PS)



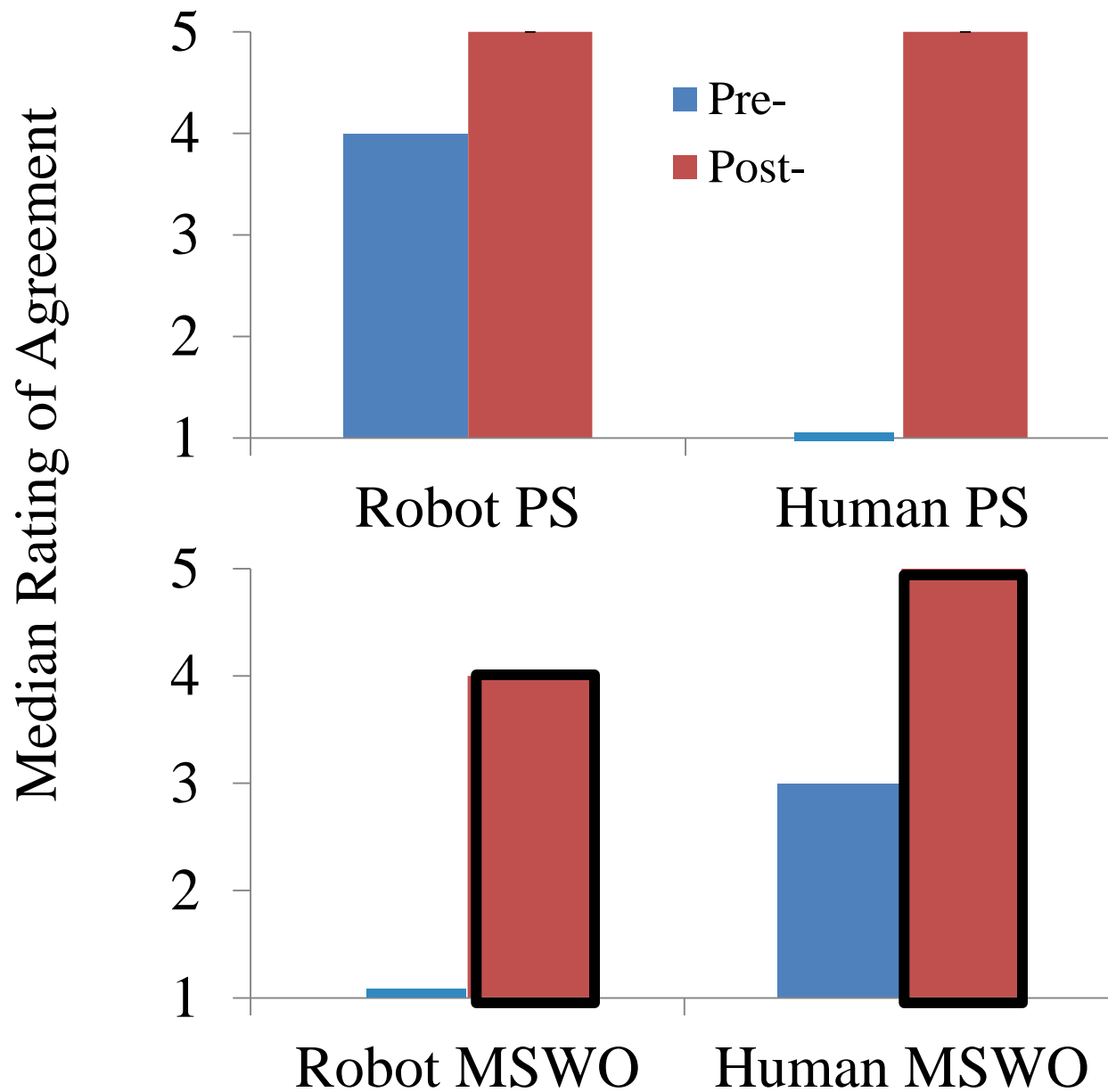
# I feel confident I can conduct (an MSWO or PS)



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# Discussion & Future Implications

- Robot is a viable alternative
  - For training PS and MSWO implementation

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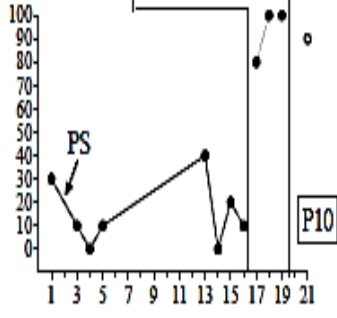
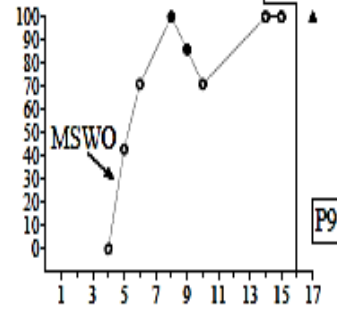
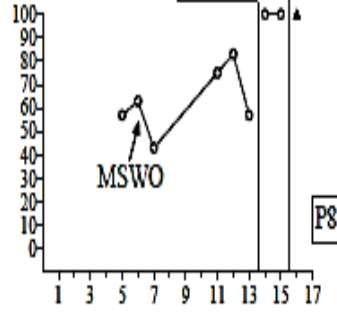
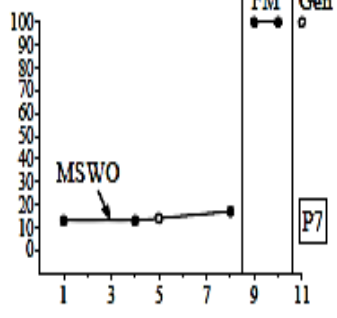
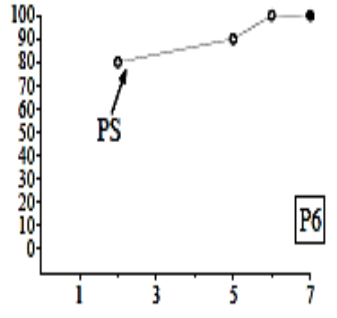
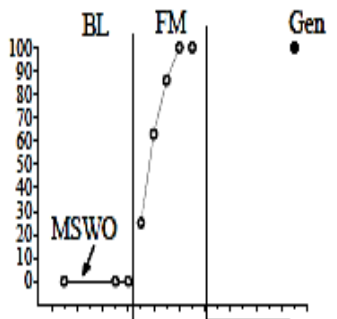
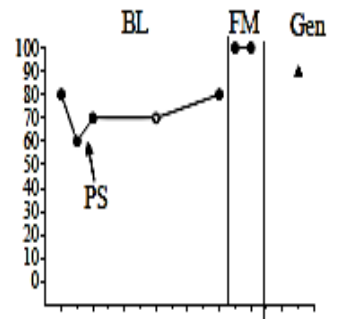
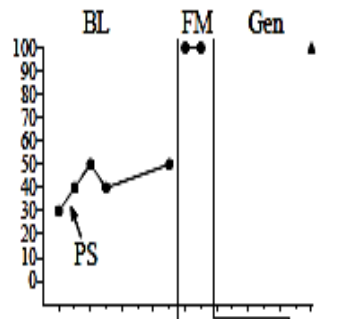
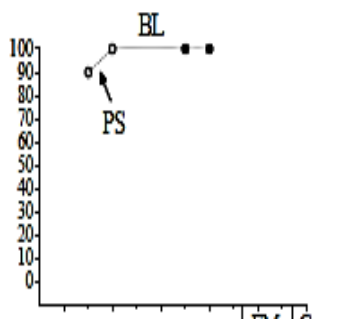
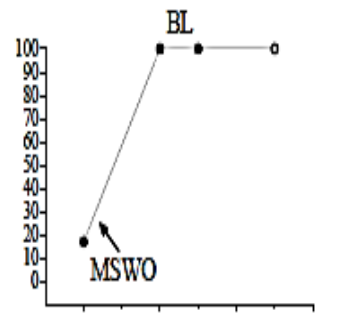
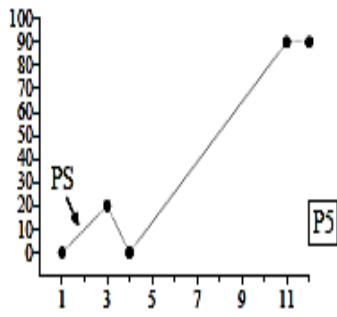
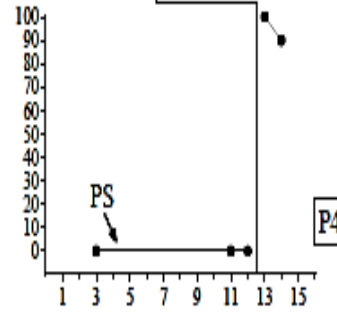
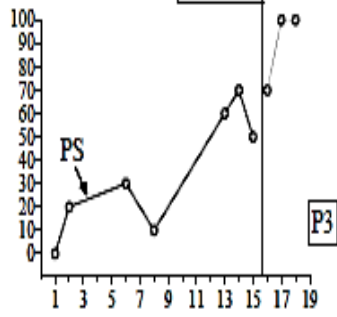
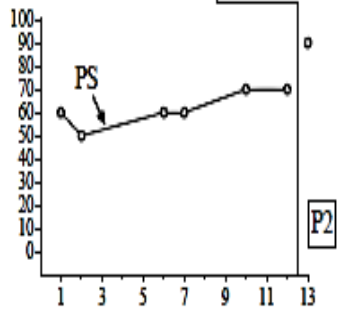
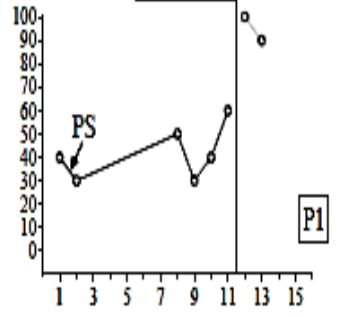
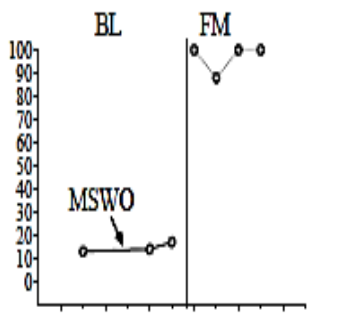
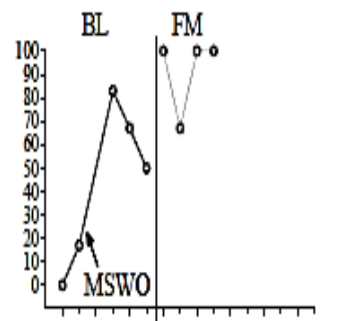
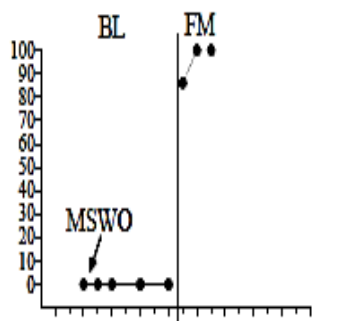
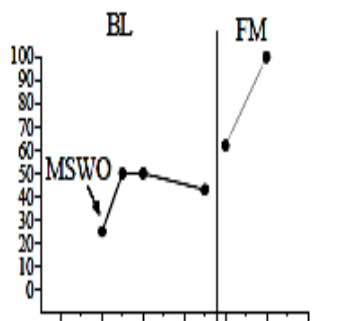
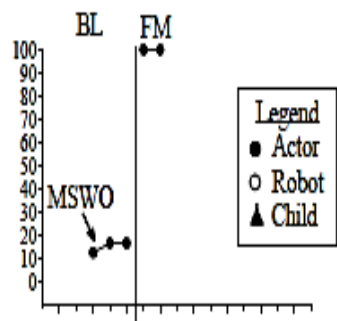
- Robot is a viable alternative
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  - Skills generalize to working with children
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- Replications

# Fin.





Percentage of Trials Correctly Implemented



Session