

## Wearable Robot Perception (WeaR-P) Questionnaire

Draft Version 1.0\*

Applied Cognition and Safety Lab

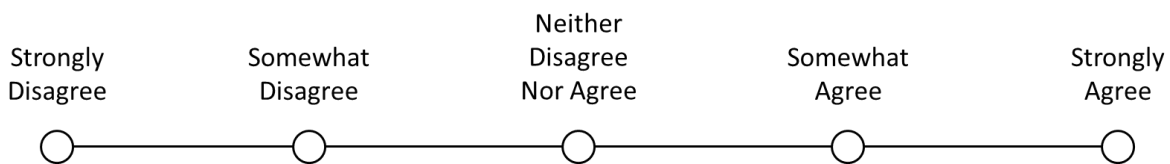
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This questionnaire can be used to assess a current or future user's perception of wearable robots in ten dimensions.

Instruction for using this scale:

- *wearable robot(s)* can be replaced with a name of a specific wearable assistive system, such as exoskeleton(s) or robotic prosthesis (prostheses).
- Reverse coded items: # 6, 7, 11, 12, 16, 19, 21

**Please rate your level of agreement or disagreement with the following statements.**



| Dimension       | Question   | Rating    |
|-----------------|--|-----------|
| I. Usefulness   | 1. <i>Wearable robots</i> would help me perform physically demanding tasks.              | 1 2 3 4 5 |
|                 | 2. Using a <i>wearable robot</i> would increase my productivity.                         | 1 2 3 4 5 |
|                 | 3. Using a <i>wearable robot</i> would improve my performance.                           | 1 2 3 4 5 |
|                 | 4. Using a <i>wearable robot</i> would enhance my effectiveness.                         | 1 2 3 4 5 |
|                 | 5. Using a <i>wearable robot</i> would improve the quality of my work.                   | 1 2 3 4 5 |
| II. Ease of Use | 6. Using a <i>wearable robot</i> would require mental effort.                            | 1 2 3 4 5 |
|                 | 7. Using a <i>wearable robot</i> would require physical effort.                          | 1 2 3 4 5 |
|                 | 8. I would quickly know how to use a <i>wearable robot</i> .                             | 1 2 3 4 5 |
|                 | 9. I would be able to use a <i>wearable robot</i> without any help or training.          | 1 2 3 4 5 |
|                 | 10. It would be easy for me to become competent at using a <i>wearable robot</i> .       | 1 2 3 4 5 |
| III. Affect     | 11. I would feel uneasy if I was given a job where I had to use <i>wearable robots</i> . | 1 2 3 4 5 |
|                 | 12. I would find <i>wearable robots</i> intimidating.                                    | 1 2 3 4 5 |
|                 | 13. <i>Wearable robots</i> would make life more interesting.                             | 1 2 3 4 5 |
|                 | 14. I would enjoy wearing a <i>wearable robot</i> .                                      | 1 2 3 4 5 |
|                 | 15. I would find <i>wearable robots</i> fascinating.                                     | 1 2 3 4 5 |
|                 | 16. I would be nervous using a <i>wearable robot</i> .                                   | 1 2 3 4 5 |

|                              |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|
| IV. Safety and Health Impact | 17. Using a <i>wearable robot</i> would make me less fatigued during physical tasks.                          | 1 | 2 | 3 | 4 | 5 |
|                              | 18. <i>Wearable robots</i> would help me perform my work safely.  | 1 | 2 | 3 | 4 | 5 |
|                              | 19. Wearing a <i>wearable robot</i> would result in pain and discomfort.                                      | 1 | 2 | 3 | 4 | 5 |
|                              | 20. <i>Wearable robots</i> would prevent injuries.  | 1 | 2 | 3 | 4 | 5 |
| V. Social Influence          | 21. I would feel nervous operating a <i>wearable robot</i> in front of other people.                          | 1 | 2 | 3 | 4 | 5 |
|                              | 22. My family and friends would be in favor of me using a <i>wearable robot</i> .                             | 1 | 2 | 3 | 4 | 5 |
|                              | 23. My coworkers would be in favor of me using a <i>wearable robot</i> .                                      | 1 | 2 | 3 | 4 | 5 |
| VI. Embodiment               | 24. When wearing a <i>wearable robot</i> , I would see it as an external tool.                                | 1 | 2 | 3 | 4 | 5 |
|                              | 25. When wearing a <i>wearable robot</i> , I would see it as part of my body.                                 | 1 | 2 | 3 | 4 | 5 |
|                              | 26. When wearing a <i>wearable robot</i> , I would see it as an extension of my body.                         | 1 | 2 | 3 | 4 | 5 |
|                              | 27. I would feel emotionally attached to it if I used a <i>wearable robot</i> for an extended period of time. | 1 | 2 | 3 | 4 | 5 |
| VII. Reliability             | 28. In general, <i>wearable robots</i> would be reliable.   | 1 | 2 | 3 | 4 | 5 |
|                              | 29. In general, <i>wearable robots</i> would be dependable.   | 1 | 2 | 3 | 4 | 5 |
|                              | 30. In general, <i>wearable robots</i> would be consistent.   | 1 | 2 | 3 | 4 | 5 |
| VIII. Adaptability           | 31. <i>Wearable robots</i> would be able to adapt to assist me with what I need at a particular moment.       | 1 | 2 | 3 | 4 | 5 |
|                              | 32. <i>Wearable robots</i> will be able to adapt to what I need with my changing capabilities.                | 1 | 2 | 3 | 4 | 5 |
| IX. Cost                     | 33. The maintenance of a <i>wearable robot</i> would be difficult.  | 1 | 2 | 3 | 4 | 5 |
|                              | 34. I worry about a <i>wearable robot</i> breaking down easily.   | 1 | 2 | 3 | 4 | 5 |
|                              | 35. <i>Wearable robots</i> would require costly repairs.  | 1 | 2 | 3 | 4 | 5 |
| X. Aesthetic                 | 36. <i>Wearable robots</i> are visually appealing.  | 1 | 2 | 3 | 4 | 5 |
|                              | 37. <i>Wearable robots</i> look sophisticated.  | 1 | 2 | 3 | 4 | 5 |
|                              | 38. Wearing a <i>wearable robot</i> would make me look professional.  | 1 | 2 | 3 | 4 | 5 |
|                              | 39. I like the overall look of <i>wearable robots</i> .   | 1 | 2 | 3 | 4 | 5 |
|                              | 40. Wearing a <i>wearable robot</i> would make me look powerful.  | 1 | 2 | 3 | 4 | 5 |

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**\*Note.** This draft questionnaire has not been comprehensively evaluated. An updated questionnaire is expected to be published in early to mid-2024.