

To apply the **Neurodivergent Scale for Interacting with Robots (NSIR)** to the **HRI Equitable Design framework (Ostrowski et al., 2022)**, you can integrate the scale's metrics into the framework's core phases—specifically **co-design**, **interaction evaluation**, and **redesign**.

The HRI Equitable Design framework, grounded in **Design Justice**, shifts the focus from "standard" users to those traditionally marginalized in robotics research. By using the NSIR, you provide a quantitative and qualitative bridge to ensure neurodivergent voices are central to the design process.

1. Identify "Who Designs" (Equitable Co-Design)

The Ostrowski framework emphasizes analyzing power structures: *Who is designing, and who are they designing for?*

- **Recruitment & Representation:** Use the NSIR to recruit a diverse group of neurodivergent co-designers. Rather than treating "neurodivergence" as a monolith, use the scale's items to identify individuals with varying levels of **Anthropomorphic Connection/Kinship** or **Social Comfort/Trust Safety** needs.
- **Design Fiction Workshops:** Integrate NSIR items into design fictions. For example, ask participants to envision a robot that satisfies Item 3: *"I think I can share my thinking with the robot without speaking"*.

2. Evaluate "Interaction-Driven Values"

Ostrowski et al. focus on values that emerge *during* interaction, such as trust and autonomy.

- **Baseline Assessment:** Administer the NSIR before and after robot interactions to measure how specific robot behaviors (e.g., eye contact, movement speed) affect **Social Comfort/Trust Safety**.
- **Kinship Mapping:** Use factors like *"The robot is more like me than anyone else I know"* (Item 1) to evaluate if the robot's social embodiment fosters a sense of belonging or inadvertently causes overstimulation.

3. Systems Mapping & Redesign

The framework uses **Systems Mapping** to identify where technology might fail specific communities.

- **Boundary Testing:** Apply Item 7 (*"I feel comfortable undressing in front of my robot"*) to map privacy and ethical boundaries in sensitive contexts like healthcare or home care.
- **Iterative Redesign:** If users score low on Item 8 (*"I believe that my robot is the same with me as it is with anyone"*), use this feedback to redesign the robot's transparency and behavioral consistency to improve trust for neurodivergent users.