

The **Neurodivergent Scale for Interacting with Robots (NSIR)** can be applied to Alva Markelius's work by providing an empirical and user-centric way to measure the outcomes of the ethical considerations identified through the design justice approach. The Markelius paper uses a design justice methodology and co-design with disabled students to identify ethical concerns in the intersection of large language models (LLMs) and social robots, focusing on dimensions like interaction, relationship, and bias. The NSIR serves as a concrete tool to measure the impact of these factors on the neurodivergent user's experience:

Anthropomorphic Connection/Kinship

- The paper notes that the physical embodiment of the robot can exacerbate ethical issues related to social perception.
- The NSIR can measure if the design choices (e.g., human-like vs. abstract embodiment) create an appropriate level of connection. Items like "**The robot is more like me than anyone else I know**" would quantify this perceived similarity or difference, which is a key design consideration.

Social Comfort/Trust

- The paper explicitly identifies concerns related to emotional disruption, non-verbal cues, trust, equity, and accessibility.
- The NSIR items in this dimension (e.g., "**My robot can tell what I am feeling, when I am sad, it can tell I am sad**") directly measure the user's perception of the robot's ability to provide a consistent and comfortable social interaction, which is a key ethical goal of a design justice approach.

Safety

- The design justice approach aims to avoid "exploitative or essentialist assumptions" and "harmful notions of 'treating'".
- The NSIR's **safety** dimension provides a user-reported measure of security, ensuring that the designed interaction is not just functionally ethical but also perceived as safe and non-threatening by the neurodivergent individual.

The NSIR helps ensure that the theoretical and ethical considerations of the Markelius paper are evaluated based on the lived experience of the users, which is central to a design justice framework.

Would you like to examine how the scale applies to another article, or maybe a deeper dive into the "**design justice**" methodology?

