The reference matrix for the **Neurodivergent Scale for Interacting with Robots (NSIR)**—identified in research documentation as **Table 79**—functions as a structural bridge between specific behavioral items and interdisciplinary research across psychology, ethics, and human-robot interaction (HRI). [1]

Key Attributions from References

The matrix organizes its statements into three primary pillars, with specific authors providing the empirical and theoretical weight for each:

- **Anthropomorphic Connection and Kinship (Items 1, 3, 4, 6):** These items evaluate the humanization of robots and the formation of social bonds. The work of **Waytz et al. (2010)** and **Leslie (2001)** is central here, providing the basis for how users attribute "internal" minds to machines. [1] **Balle (2022)** and **Abbo et al. (2025)** further attribute "moral status" and "attachment theory" to these connections, suggesting that if a user perceives a robot as having an internal cognitive link (Item 3), they are more likely to grant it the ethical consideration of a social partner rather than a mere tool.

- **Social Comfort and Trust (Items 5, 8):** This section focuses on the robot's reliability and perceived empathy. **Park & Whang (2022)** and **Graham (2025)** provide the framework for affective recognition (Item 5), while **Zolyomi & Snyder (2021)** attribute the "Social Comfort" of neurodivergent users to mechanical consistency and "sameness" (Item 8), which reduces the "social threat" often found in human-to-human interactions. [1]

- **Safety and Vulnerability (Items 2, 7):** These items measure ethical safety. **Coleman et al. (2025)** provide data on "staring" (Item 2) as a valid form of social monitoring for those with slower face-processing speeds. The **Risk-regulation model** and the work of **Winkle et al. (2023)** regarding Feminist HRI provide the grounding for "vulnerability safety" (Item 7), arguing that feeling comfortable undressing in front of a robot signals that it has successfully avoided enforcing harmful social hierarchies. [1]

Conflicting Information and Divergent Findings

The documentation highlights several areas where traditional HRI theories conflict with the neuro-affirming data presented in the NSIR:

- **Uncanny Valley vs. Anthropomorphic Kinship:** While traditional HRI theory suggests that human-like robots cause revulsion (the "Uncanny Valley"), the NSIR findings suggest that for neurodivergent users, the predictable logic of a robot can actually foster a deep sense of identification or "kinship," making the synthetic nature a source of comfort rather than discomfort.
- **Monitoring Mentor vs. Non-Judgmental Sanctuary:** There is a tension between the "medical model" of robotics—where the agent acts as a mentor to correct social

"deficits"—and the "affirmative model." The NSIR warns that a mentor role can reinforce ableist power imbalances, whereas the scale's items measure the robot's utility as a "Somatic Sanctuary" free from the "monitoring" gaze of a neurotypical observer. [2]

- **Affective Sensing (Deficit vs. Validity):** Standard affective computing often misinterprets "flat affect" or unconventional prosody as a communication "deficit." However, the 2024–2025 research associated with the NSIR identifies these same features as valid emotional states, arguing that AI should be calibrated to recognize diverse speech patterns rather than enforcing a single social ideal. [2]

- **Universal Consistency vs. Ableist Generalization:** There is an ethical conflict between the risk of Large Language Models (LLMs) adopting generalizations rooted in ableist norms and the user's need for "logical fairness." The NSIR uses Item 8 to verify that the robot remains consistent with the user regardless of their disability status, countering the risk of algorithmic discrimination. [2]