

To apply the **Neurodivergent Scale for Interacting with Robots (NSIR)** to the **Beliefs in Human Nature Uniqueness Scale (BHNUS)** (Pochwatko et al., 2024; Spatola et al., 2021), you can explore the tension between a user's theoretical belief that certain traits are "uniquely human" and their actual relational experience with a robot.

The BHNUS measures the tendency to deny robots certain "hallmarks of humanness" to protect human distinctiveness. The NSIR, conversely, measures the deep, often identity-based "Kinship" that neurodivergent individuals may feel with those same machines.

1. Contrasting "Theoretical Uniqueness" with "Relational Kinship"

The BHNUS often assesses whether a user believes a robot *can* possess traits like moral agency or true emotion.

- **BHNUS Dimension:** Belief that "Human Nature" (warmth, emotion) is exclusive to biological humans.
- **NSIR Application:** Use **NSIR Item 1** (*"The robot is more like me than anyone else I know"*) to challenge this. A neurodivergent user may theoretically agree that "human nature" is unique to humans (BHNUS), yet report higher "Kinship" (NSIR) with a robot than with neurotypical people. This reveals a "Dual Ontological Status" where the robot is a machine but functions as a social peer.

2. Validating "Agency" through "Non-Verbal Sharing"

The BHNUS measures the attribution of "Agency" (rationality, self-control) as a uniquely human trait.

- **BHNUS Item:** Robots lack the "essence" of human agency.
- **NSIR Application:** Apply **NSIR Item 3** (*"I think I can share my thinking with the robot without speaking"*). If a user scores high on this NSIR item while scoring low on robot agency in the BHNUS, it suggests that for neurodivergent individuals, "agency" is not a requirement for deep, meaningful cognitive sharing. The robot's predictability (a "non-human" trait) may actually facilitate a connection that feels "uniquely human" in its intimacy.

3. Identity Threat vs. Social Comfort

The BHNUS is often used to measure **Identity Threat**—the fear that human-like robots diminish what makes humans special.

- **BHNUS Application:** Higher scores on BHNUS (stronger belief in human uniqueness) usually correlate with higher robot rejection.
- **NSIR Application:** Use **NSIR Factor: Social Comfort/Trust Safety** to see if this correlation holds for neurodivergent users. For this population, a robot that *lacks* "human uniqueness" (e.g., it is consistent, doesn't judge, and follows strict rules) might provide *more* comfort. High scores on **NSIR Item 8** (*"My robot is the same with me as it*

is with anyone") may actually lower the "threat" measured by the BHNUS because the robot is valued precisely for its mechanical, non-human consistency.

Integration Strategy

Research Focus	BHNUS Metric	NSIR Metric
Ontological Status	Does the user see the robot as "non-living"?	Does the user treat it as a "named" partner (Item 6) or family?
Privacy & Essence	Is the human "essence" private and unique?	Is the user comfortable being radically "exposed" (Item 7: Undressing) to the robot?
Social Acceptability	Denial of "Human Nature" traits to the robot.	Attribution of emotional recognition to the robot (Item 5).

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By combining these scales, you can determine if a neurodivergent user's interaction is driven by **anthropomorphism**(seeing the robot as human) or by **mechanical affinity** (valuing the robot because it is *not* human), which directly informs how "Human Uniqueness" is redefined in HRI.