The study by **Balle (2022)**, titled *"Empathic responses and moral status for social robots,"* applies to the **Neurodivergent Scale for Interacting with Robots (NSIR)** by providing a philosophical and ethical basis for how humans—particularly those who attribute mental states to non-human agents—assign value and trust to social robots.

While the NSIR is a psychometric tool for measuring neurodivergent user experience, Balle's work explores the **moral consequences** of the very connections the scale quantifies.

1. The Ethical Weight of "Mind Attribution" (NSIR Item 3)

Balle argues that if a human perceives a robot as having the capacity for empathic responses, they are more likely to grant that robot a higher "moral status".

- **NSIR Application:** This directly relates to **NSIR Item 3** (*"I think I can share my thinking with the robot without speaking"*).
- **Connection:** When a user believes a robot can perceive their internal states (**Mind Attribution**), it moves the robot from a "tool" to a "moral subject" in the user's mind. Balle's work suggests that for neurodivergent individuals who may experience high attunement with technology, the "moral status" they grant the robot is a direct function of this perceived shared thinking.

2. Empathic Responses as a Foundation for Trust (NSIR Item 5)

Balle discusses how a robot's ability to simulate or express empathy is central to its social acceptance.

- **NSIR Application:** This aligns with **NSIR Item 5** (*"My robot can tell what I am feeling; when I am sad, it can tell I am sad"*).
- **Connection:** The NSIR measures the **Social Comfort/Trust Safety** factor. Balle's theory suggests that the "Trust" measured by the scale is actually a "Moral Trust." If the robot "understands" sadness, the user feels a sense of **Reliable Functioning**, leading them to treat the robot with the ethical consideration usually reserved for living beings.

3. Attachment and Moral Responsibility (NSIR Item 4)

A significant portion of Balle's inquiry focuses on whether our emotional bonds with robots create moral obligations for us.

- **NSIR Application:** This is the psychological counterpart to **NSIR Item 4** (*"The robot and I will be together forever"*).
- **Connection:** The scale measures **Attachment Theory**. Balle's work posits that the stronger the bond (as measured by Item 4), the more "wrong" it feels for a user to "harm" or "discard" the robot. For neurodivergent users who may form intense **Fictive Kinship** (**NSIR Item 1**), Balle's framework explains why the robot's "moral status" becomes a protective factor in their social environment.

Summary Alignment

Balle (2022) Ethical Concept	NSIR (Sadownik, 2025) Scale Application
Empathic Response	**Item 5:** Validates the robot's perceived ability to recognize and mirror human emotions.
Moral Status Attribution	**Factor 1 (Kinship):** Explains why "humanizing" the robot leads to treating it as a moral peer.
Social Agency	**Item 2:** "Sometimes I stare at the robot"—indicates processing the robot as a social agent with moral presence.
Ethical Safety	**Item 7:** Measures the "Trust" required to be vulnerable (undressing) in front of a moral subject.