The **Neurodivergent Scale for Interacting with Robots (NSIR)** by Sadownik (2025) provides a psychometric bridge to several of the "surprising" technical properties of Large Language Models (LLMs) discussed in **Bowman (2024)**. While Bowman focuses on the technical and structural behavior of LLMs, the NSIR measures the human psychological response—specifically the neurodivergent experience—to those very behaviors.

1. Emergent Behavior vs. Social Comfort (Bowman's Point 2)

Bowman notes that important LLM behaviors, such as **chain-of-thought reasoning**, emerge unpredictably as models scale.

- **NSIR Application:** These emergent capabilities directly impact **Factor 2 (Social Comfort / Trust Safety)**. For a neurodivergent user, the sudden emergence of a new "reasoning" capability in a robot or chatbot can either enhance or disrupt the sense of **Reliable Functioning**. If the behavior is perceived as inconsistent or "surprising," it may lower scores on NSIR Item 8 (*"I believe that my robot is the same with me as it is with anyone"*).

2. Internal Representations and Mind Attribution (Bowman's Point 3)

Bowman argues that LLMs appear to learn and use **internal representations of the outside world**, suggesting they are more than just "symbol manipulators".

- **NSIR Application:** This aligns with **Factor 1 (Anthropomorphic Connection / Kinship)**, specifically **Item 3** (*"I think I can share my thinking with the robot without speaking"*). The user's belief that the robot "understands" their internal state (Mind Attribution) is the psychological counterpart to the LLM's technical capacity for internal world-modeling.

3. Misleading First Impressions (Bowman's Point 8)

Bowman points out that brief interactions with LLMs can be misleading because a model's failure in one setting doesn't mean it cannot perform the task with better prompting.

- **NSIR Application:** This technical volatility challenges the **Attachment Theory** elements of the NSIR. For a user to form a long-term bond (**Item 4**: *"The robot and I will be together forever"*), the interaction must move past "misleading" first impressions toward a stable social presence.

4. Steering Behavior and Ethical Safety (Bowman's Point 4 & 7)

Bowman highlights that there are currently **no reliable techniques for steering LLM behavior** and that models do not necessarily reflect the values of their creators.

- **NSIR Application:** This lack of control is a primary concern for **Social Comfort / Trust Safety**. NSIR **Item 7** (*"I feel comfortable undressing in front of my robot"*) measures a

sense of **Vulnerability and Perceived Security**. If an LLM-powered robot cannot be "steered" to guarantee ethical safety or lack of judgment, users are unlikely to feel the level of safety the NSIR intends to measure.

Summary Comparison

Bowman (2024) LLM Property	NSIR (2025) Factor / Item Application
Emergent Abilities	**Factor 2:** Affects perceived reliability and social predictability.
Internal World Models	**Item 3:** Psychological "Mind Attribution" and attunement.
Human Performance is not an Upper Bound	**Item 1:** "The robot is more like me than anyone else I know" (Fictive Kinship).
Steering/Alignment Challenges	**Item 7:** Evaluates the user's "Safety/Trust" in an unsteerable agent.