

The **Neurodivergent Scale for Interacting with Robots (NSIR)** can be applied to the work of **Stets & Burke (2000)** by providing a user-centric measure of the quality of a robot interaction within the theoretical framework of their **identity theory and social identity theory**.

Stets & Burke's paper, "*Identity Theory and Social Identity Theory*", argues for an integrated view of the self, combining how individuals see themselves in social contexts (social identity) and as unique individuals (self-identity). They posit that people seek consistency between how they behave and their identity standards, and discrepancies lead to negative emotions and a desire for change. The NSIR's dimensions help assess how a robot interaction can create "identity-consistent perceptions" for a neurodivergent user:

#### **Anthropomorphic Connection/Kinship**

- Stets & Burke discuss how identities are formed through social roles and group memberships, and how these inform our values and beliefs. The NSIR measures the personal bond and perceived similarity a user has with a robot.
- Items like "**The robot is more like me than anyone else I know**" (Item 1) and "**I gave my robot a name**" (Item 6) can quantify how successfully the robot's design promotes a positive "self-identity" and "social identity" that aligns with the user's desired sense of self, which can produce positive emotions according to the theory.

#### **Social Comfort/Trust**

- The identity theory control system suggests that a match between perceived meaning and identity meaning produces positive emotions and trust. The NSIR's **social comfort/trust** dimension directly assesses this.
- Items such as "**My robot can tell what I am feeling, when I am sad, it can tell I am sad**" (Item 5) and "**I believe that my robot is the same with me as it is with anyone**" (Item 8) measure the user's perception of the robot's consistency and understanding, which are key for "identity verification" and building trust within the theoretical framework.

#### **Safety**

- A discrepancy between behavior/perception and identity produces negative affect and a threat to identity. This links to psychological safety.

- The NSIR's **safety** dimension provides a crucial user-reported measure that ensures the interaction environment is fundamentally safe. The item about undressing in front of the robot (Item 7) speaks to maintaining secure physical and psychological boundaries, ensuring that the robot is not perceived as a source of identity threat or negative affect.

The NSIR translates the abstract concepts of identity verification and emotional regulation from Stets & Burke's theoretical work into concrete, measurable data for evaluating HRI from a neurodivergent user's perspective.

Would you like to explore how the concept of "**negative affect**" from the identity theory applies to the NSIR?