Rueschemeyer, S., Gardner, T., & Stoner, C. (2015). The Social N400 effect: How the presence of other listeners affects language comprehension. *Psychonomic Bulletin & Review Psychon Bull Rev, 22*(1), 128-134.

Methods

* 42 participants
  + All native English speakers
* Joint group and alone group: one had a confederate and one did not
* Ask whether confederate understood written sentence and *then* ask whether they understood the sentence
  + Alone group not asked about confederate
* 42 trials for each of the three experimental conditions (C, I, & P)
* Counterbalanced stimuli so same critical word used in all three experimental conditions
* Order in which participant saw the target word in one condition versus the other two conditions was counterbalanced
* 64 electrodes of EEG

Results

Behavioral

* no main effect of condition or question in accuracy of joint group
* interaction of condition and question in accuracy of joint group
  + when participants responded to PLAUS sentences they were more accurate in determining their own ability to understand
  + When they responded to IMPLAUS sentences they were more accurate in determining the confederate’s abiity to understand
  + No diff in CONTEXT
* Main effect of group (joint/alone) in accuracy of self question
* Trend of conditions in accuracy of self question
* Interaction of Group and conditions in accuracy of self questions
  + Alone group more accurate than joint in IMPLAUS sentences on self question

ERPs

* Changes in N400- sensitive to difficulty with which word meaning can be integrated into a preceding language context
* Main effect of condition (C,I,P)
* Condition and group interaction
  + Not carried by the difference in the implaus condition between the groups
  + PLAUS > IMPLAUS N400 joint group
  + PLAUS>CONTEXT N400 joint group
  + PLAUS = CONTEXT N400 in alone group

Discussion

* Social N400 effect
  + Elicited by constraints of social situation
* Doesn’t speak to how automatically we track the comprehension of others, just that there’s an underlying cognitive process doing it

Lanzetta, J. T., & Englis, B. G. (1989). Expectations of cooperation and competition and their effects on observers' vicarious emotional responses. *Journal of Personality and Social Psychology*, 56(4), 543-554.

Intro and Methods

* Hypothesize that cooperative situations involve shared, or empathetic, emotional experiences and competitive situations involve mutually excusive, or counterempathetic, emotional experiences.
* Provided subjects with false feedback on a preexperimental questionnaire telling them the likely relationship that would arise during the game between the two participants (competitive or cooperative)
* Coactor gave displays of emotion during the game that had nothing to do with the outcome for the observer
  + “coactor’s displays were equally likely to be associated with shock, reward, or no outcome for observers”
* Measure skin resistence and heart rate as measures of intensity of autonomic arousal in response to coactors’ display
  + Empathetic response to pain🡪predicted increase in autonomic arousal (decrease in skin resistance and heart rate acceleratio)
  + Empathetic response to pleasure (smiles) 🡪 predicted autonomic relaxation (increase in skin resistance and heart rate deceleration)
* Predicted interaction between expressive display (smile or grimace) and observer’s expectancy (cooperation or competition)
* Participants either received a shock, a reward, or no outcome
* 12 women and 28 men

Procedure

* questionnaire given to subject and results say comp or coop expectation with fellow participant (who’s actually a recording)
* randomly assigned to male or female cofactor
* Subjects told they got one of three levels of shock but actually got only midpoint of range
* Investments game
  + Win = counter whose points worth a nickel each
  + Loss = two pulses of shock
  + Outcomes determined by decisions of BOTH participants
* Subject made investment choice, saw coactor’s response (grimace/smile), and after 5 seconds got their own reward/punishment
* Vicarious phase followed: subject watched coactor play the game
* Survey

Results

* No main effect on emotional reactions of with expectancy (coop or comp) or sex of coactor
* Agreement of subjects’ rating of situation (coop/comp) with the desired expectancy (coop/comp)
* Expectancy (coop/comp) x expression (smile/grimace) was significant when looking at physiological responses of subject.
  + Skin conduction and heart rate sig interaction
    - Subjects expecting cooperation showed arousal in response to distress displays and relaxation in response to displays of pleasure. Opposite for subjects expecting competition.
  + Trend in oculi and depression (facial EMG measure)

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