Temperamental shyness and children's communicative behaviors in a goal-oriented task: A dyadic perspective

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Background

- Children's ability to attune their communication style to the interpersonal and contextual situation is a critical aspect of their socio-cognitive development.[4 - 6]

- Children's cognitive skills (executive functioning, working memory, perspective-taking[7-10]) guide their ability to communicate flexibly and effectively with peers; however, less work has examined how temperamental factors relate to one's own and one's partner's communicative behaviour.

- **Shyness** is one factor that may impact dyadic communication:
  - Shy 6-7 year-olds perform worse on pragmatic communication measures. [12]
  - Shy 8-9 year olds demonstrate less verbal communication in interactions with friends.[13]
  - 2.5 – 6 year old children distinguish between non-shy, shy, and unsociable peers and indicated they would give differing conversational replies accordingly[14]

- Shyness is associated with important socio-emotional factors (peer acceptance, friendship quality, self-confidence[15-16]) with communication skills potentially playing an important role within such associations.[17]

- Yet, little work has examined shyness in a dyadic context, and there are gaps in our understanding of how shyness might be associated with various communicative roles.

Research Questions

Aim: To investigate the dyadic influences of shyness on communication during a structured, goal-oriented task with multiple communicative roles.

1. Do associations between shyness and communicative behaviours emerge when the child is in both a listener and instructor role?

2. Do we see communication differences when examining utterances related to task completion (e.g., instructions) and those related to general performance (e.g., encouragement)?

3. Do patterns of association hold when children are first introduced to the task and when they repeat the task in the other communicative role?

Method

Participants

- N= 338 children (M_{age}= 10.07, SD = 0.39) from a larger longitudinal study examining temperament across development.

  52% girls   67% White; 17% Black; 5% Hispanic; 4% Asian; 8% other

- Children were paired with a same-age and same-sex unfamiliar peer.

Measures

Maternal-reports of Shyness.

- Social anxiety subscale (8-items; α = .89) of the Screen for Child Anxiety-Related Emotional Disorders [1]

  "My child is shy"

- Shyness subscale (5-items; α = .84) of the Early Adolescent Temperament Questionnaire[2]

  "Feels shy about meeting new people"

Observed communicative behaviors during goal-oriented task.
Dyads completed two timed 2-minute puzzles, wherein children were assigned to the "instructor" and "listener" roles. Children switched roles between puzzle trials.
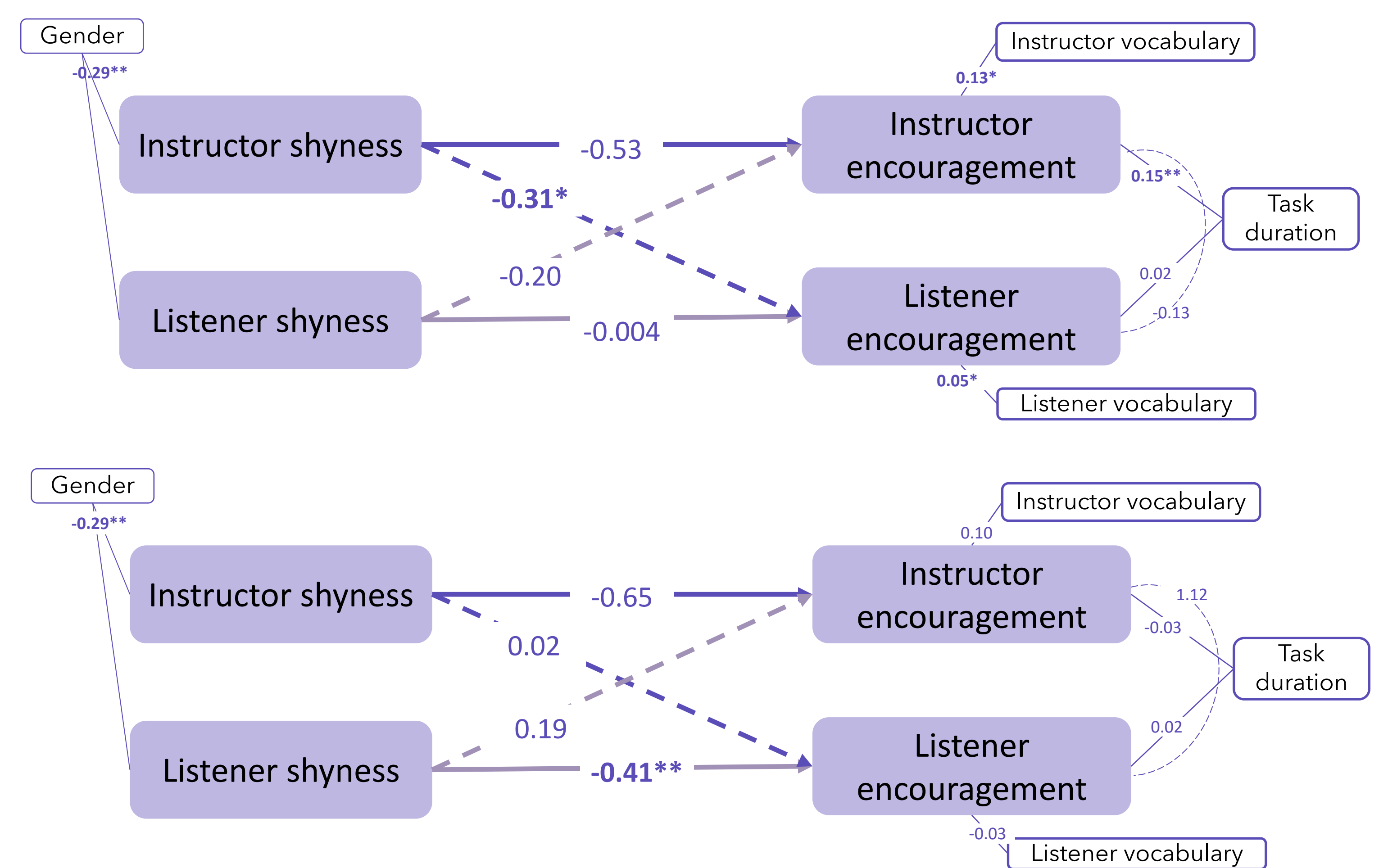
- **Instructor** was only able *see* the puzzle vs. **listener** could only *move* the puzzle pieces

Task-oriented behaviours (κ_{mean}= .84; κ_{range}= .68 to .95)	
Instructor Total Instruction	Instructor giving directions (e.g., move it to the right), manipulations (e.g., turn it around)
Listener Responses	Listener making queries (e.g., Where should I move this?), stating intentions (e.g., I'll start with this piece)
Performance-oriented behaviours (κ_{mean}= .91; κ_{range}= .87 to .97)	
Instructor Encouragement	Instructor providing positive feedback about performance to listener (e.g., "good job", "you did it")
Listener Encouragement	Listener providing any positive statement about performance (e.g., "good!", "we did it!")

Vocabulary.

- Vocabulary subtest (31 items) of the Wechsler Abbreviated Scale of Intelligence[3].

Results

Dyadic association between shyness and children's *own* and *their partner's* **task-oriented behaviours**

Dyadic association between shyness and children's *own* and *their partner's* **performance-oriented behaviours**

* p < .05. ** p < .01. ***p < .001.
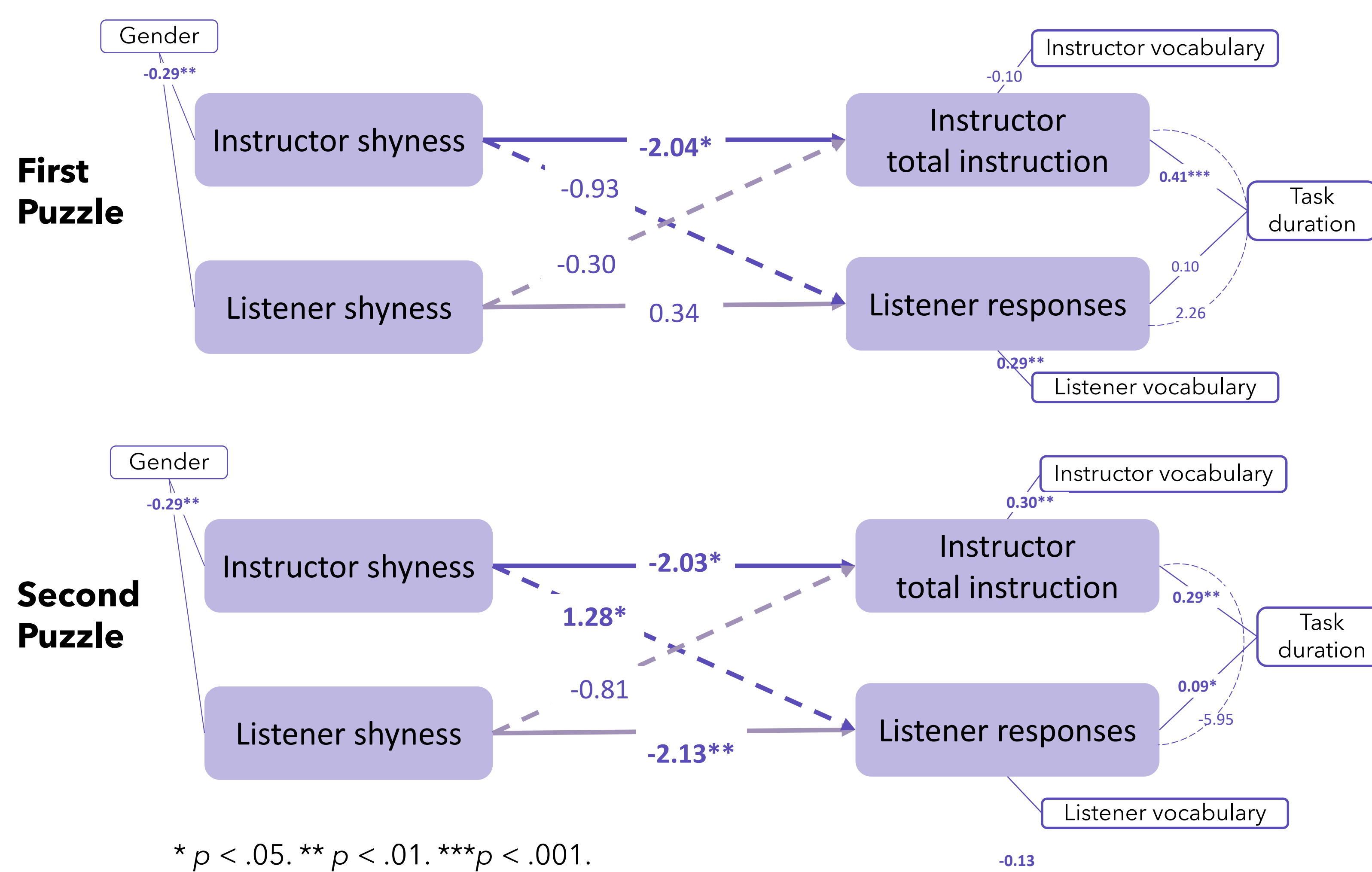
KEY FINDINGS: Highly shy instructors provided fewer total instructions to partners but did not differ in the encouragement they provided across puzzles. Similarly, highly shy listeners provided fewer responses and encouragement but *only* in the second puzzle. Additionally, highly shy instructors received *less* encouragement in the first, but *more* responses in the second puzzle. Shy listeners did not differ in the frequency of instructions and encouragement they received from instructors.

Implications & Future Directions

- In addition to shyness impacting children's own communication, children adapted their communication to the disposition of their partner.
  - Interestingly, associations differed across roles (i.e., instructor versus listener) and as children gained experience with the context (i.e., the second trial), suggesting that the impact of shyness on communication also depends on situational context, familiarity, and experience.

- Our findings support previous work showing shy children demonstrate reduced speech compared to less-shy peers, and extended findings to demonstrate this pattern holds when the child is in an authoritative role. We also demonstrate that these patterns may be consistent across different *kinds* of communicative statements (e.g., performance vs task-based utterances), but may have less distinctive influences on partner behaviour in dyadic interactions.

- Future work should continue to explore the dyadic associations of shyness among different interpersonal and communicative contexts. Expanding the study of other elements of communication (e.g. affect) will help elucidate the mechanism through which individuals' temperament influences communicative behaviour.

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