Communication & Relationship Building

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Communication Issues

- **Requirements**
  - Understand all kinds of speakers (e.g. child speech)
  - Anything could come up
  - Potentially must need to understand anything someone can say

- **Is it necessary to completely solve the NLU problem in order to have a companion?**
  - Will probably take a long time if ever

- **To what degree can we avoid NLU?**

- **How well can we do with imperfect understanding?**
  - Can we provide the right feedback/interventions without (full) understanding?
  - Can we understand just the important bits to facilitate learning (even without understanding the domain)?
  - How much understanding do you need to facilitate learning?
  - Could we teach Shakespeare?

- **Positive Role of Misunderstanding/Grounding, especially for learning**
  - Diagnosis, constructive thinking, explanation, critical analysis, collaboration

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What is purpose of Companions?

- **Aid to help when you want to learn (more tool than person)**
    - Knows my best way to learn, under my control

- **Hired hand to make us do things we have trouble doing (Fitness coach, language teacher)**
    - Delegated short-term control for long-term objective

- **Mandated Training (Sexual Harassment or Compliance training)**
    - External control/consequences

- **Is companion only for learning? Or also non-learning activities?**
    - Learning only: is there enough motivation to continue?
    - More than learning: is there enough learning?

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Do we need a relationship with companion? Why?

- **Maybe not if only a tool**

- **Uses of relationships**
  - We are used to social interactions, relationships help
  - Adherence, more attention leads to more compliance
  - E.g. Directing disappointment in poor performance to lack of effort rather than lack of ability can lead to greater self-efficacy
  - Accountability is important for compliance
    - Need to care what character things to get this accountability
  - Relationships can also get in the way (reduce learning & work purely on relationship or activity level)
  - Is relationship just like "points" in a game, or different/more basic?

How should companion relate?

- **Praise for learning/achievement/effort**

- **Definitely Socratic arguing (not necessarily "fighting")**

- **Negative feedback?**
  - Scold or act upset?
  - Withhold praise? (passive/aggressive agent)

- **Why should person care?**
  - Maintain relationship
  - Face model (view self through presumed others' view of self)

What should status of companion be?

- **High (traditional teacher-student roles)**

- **Same (peer-learning)**

- **Low (learning by teaching to novice/student)**

- **How does person relate to companion:**
  - Perceived face threats based on status

Should a companion have a consistent personality/relationship?

- **Yes, to maintain consistency, scrutibility**

- **But: Different personalities and relationships needed for different kinds of learning interaction**
  - Companion Tutoring learner
  - Peer learning
  - Learner tutoring companion

- **We probably need different characters to support both consistency and different learning interactions (like Primer?)**

- **Perhaps story-related interactions between characters**
  - Good companion/bad companion
  - Transition to most helpful character for current learning needs

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