The Social Layer of Dialogue

Who I am?

Alafate Abulimiti

by **Alafate Abulimiti**

The Role of Socio-conversational strategies in Task-Oriented Dialogues in the case of Peer-Tutoring Interactions: A Focus on Off-Task Talk and Hedges

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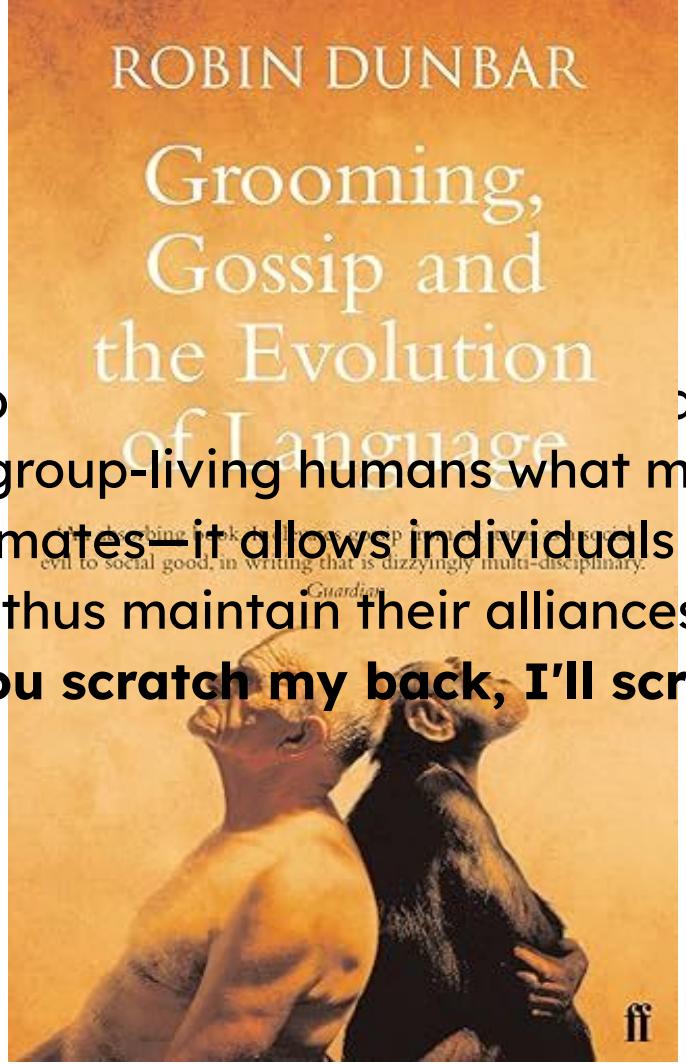
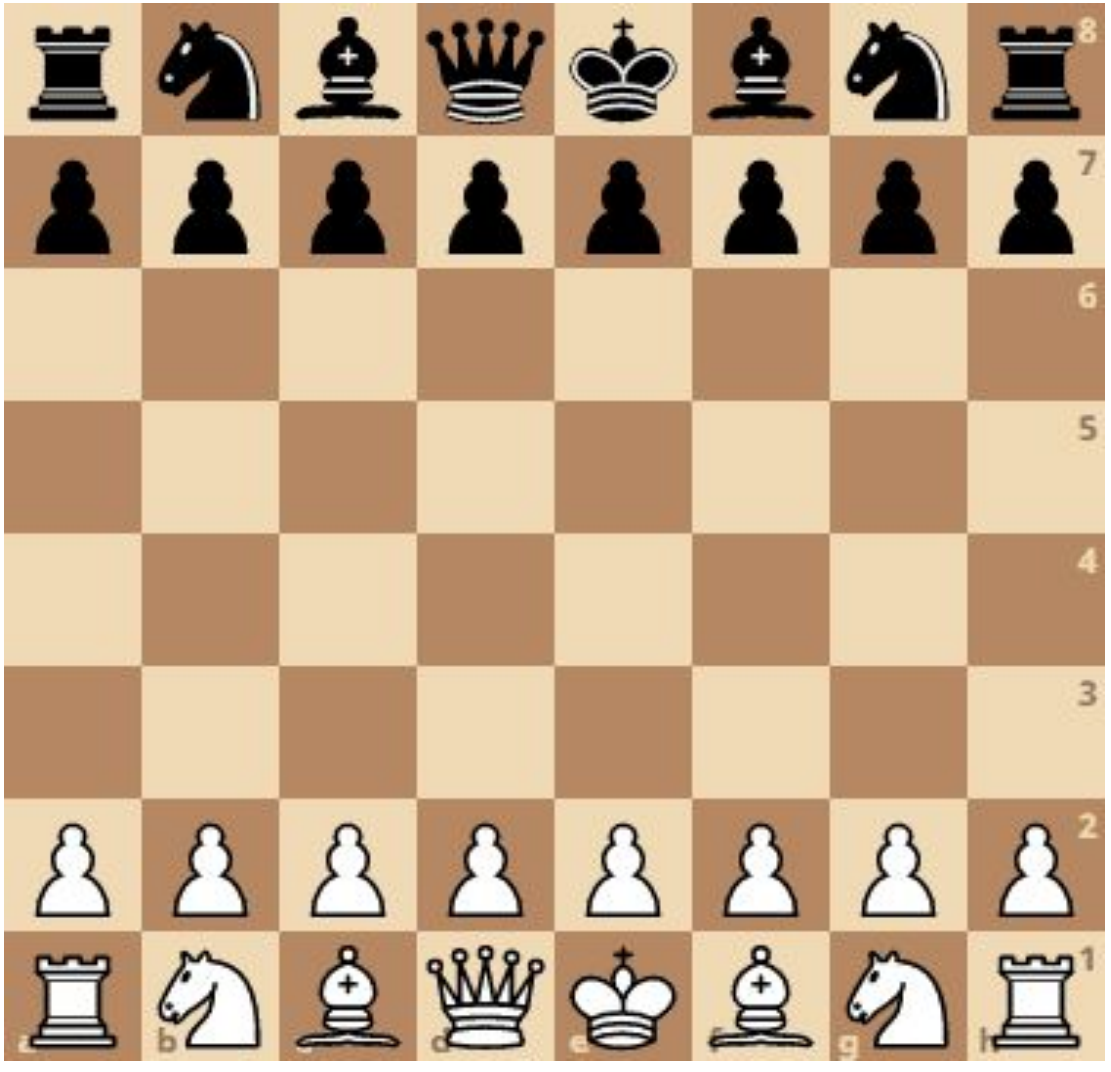
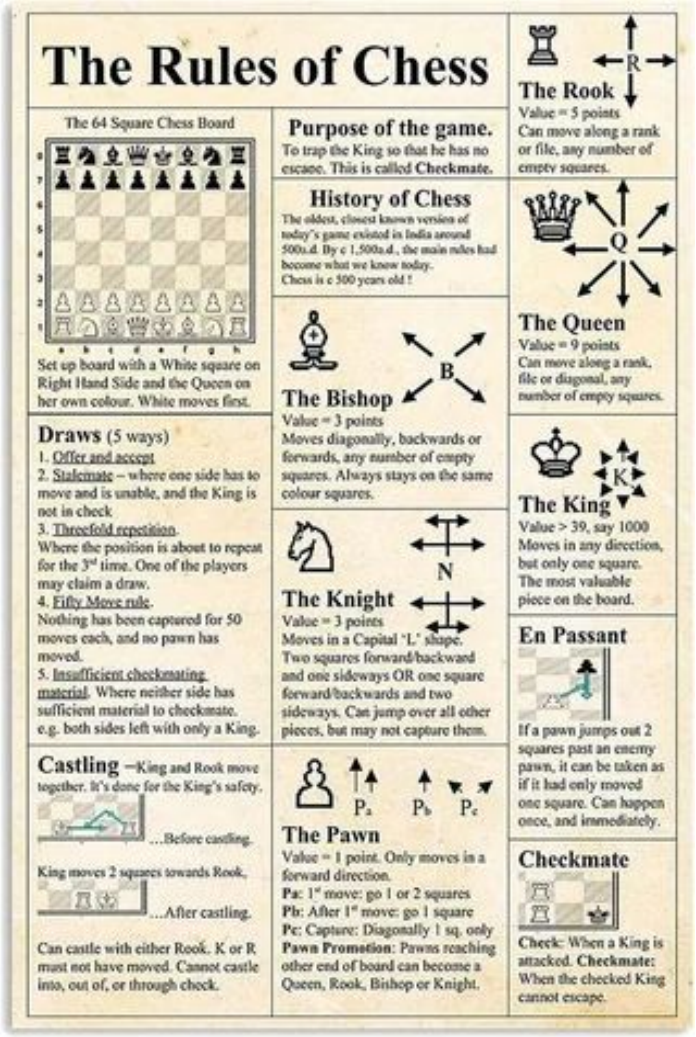
Now a postdoc with Prof. Catherine Pelachaud &
Prof. Agnes Helme-Guizon



Robin said, "If yo atch yours."
"Gossip does for group-living humans what manual grooming does for other primates—it allows individuals to service their relationships and thus maintain their alliances on the basis of the principle: **if you scratch my back, I'll scratch yours**"



Gameboard



The Rules of Chess

The 64 Square Chess Board

Set up board with a White square on Right Hand Side and the Queen on her own colour. White moves first.

Purpose of the game.
To trap the King so that he has no escape. This is called **Checkmate.**

History of Chess
The oldest, closest known version of today's game existed in India around 500a.d. By c 1,500a.d., the main rules had become what we know today.
Chess is c 500 years old !

Draws (5 ways)
1. Offer and accept
2. Stalemate – where one side has to move and is unable, and the King is not in check
3. Threefold repetition. Where the position is about to repeat for the 3rd time. One of the players may claim a draw.
4. Fifty Move rule. Nothing has been captured for 50 moves each, and no pawn has moved.
5. Insufficient checkmating material. Where neither side has sufficient material to checkmate. e.g. both sides left with only a King.

Castling –King and Rook move together. It's done for the King's safety.

…Before castling.

King moves 2 squares towards Rook,

…After castling.

Can castle with either Rook. K or R must not have moved. Cannot castle into, out of, or through check.

The Bishop
Value = 3 points
Moves diagonally, backwards or forwards, any number of empty squares. Always stays on the same colour squares.

The Knight
Value = 3 points
Moves in a Capital 'L' shape. Two squares forward/backward and one sideways OR one square forward/backwards and two sideways. Can jump over all other pieces, but may not capture them.

The Pawn
Value = 1 point. Only moves in a forward direction.
Pa: 1st move: go 1 or 2 squares
Pb: After 1st move: go 1 square
Pc: Capture: Diagonally 1 sq. only
Pawn Promotion: Pawns reaching other end of board can become a Queen, Rook, Bishop or Knight.

The Rook
Value = 5 points
Can move along a rank or file, any number of empty squares.

The Queen
Value = 9 points
Can move along a rank, file or diagonal, any number of empty squares.

The King
Value > 39, say 1000
Moves in any direction, but only one square. The most valuable piece on the board.

En Passant

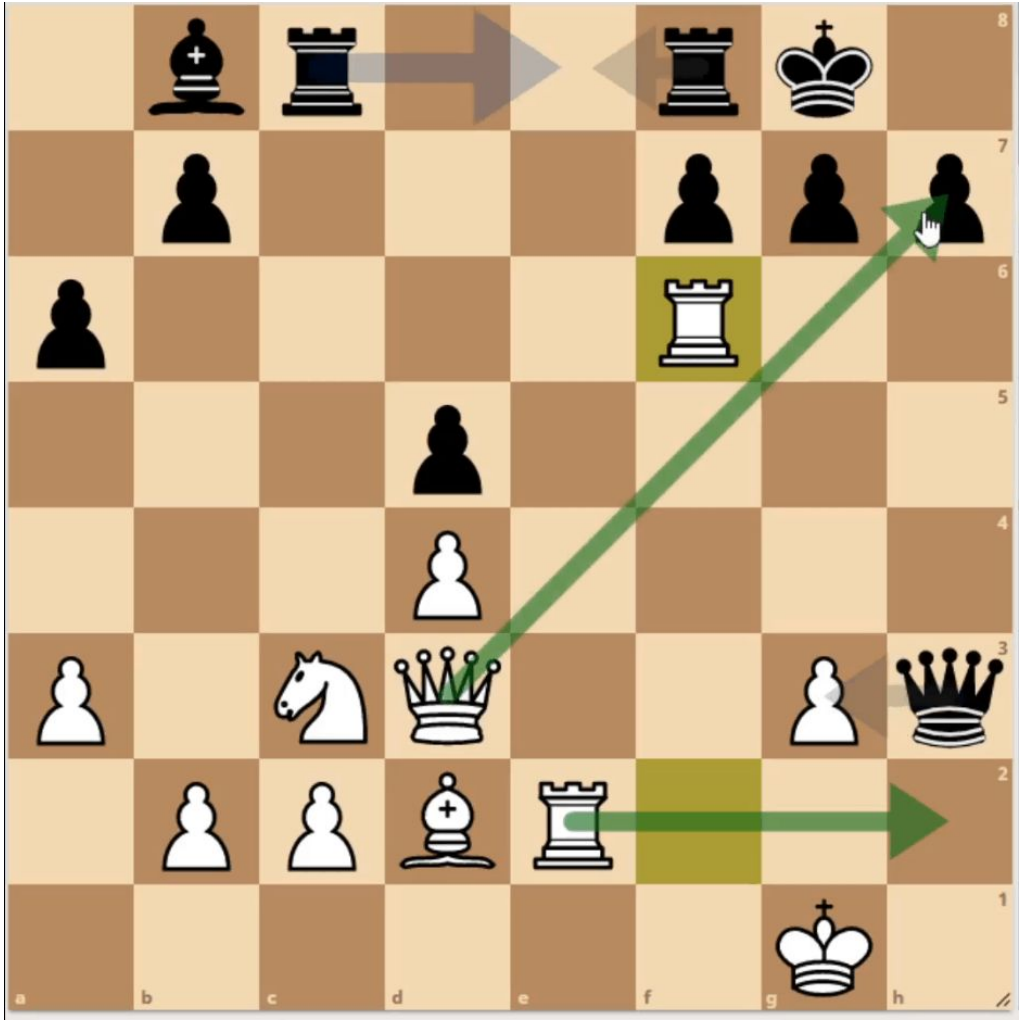
If a pawn jumps out 2 squares past an enemy pawn, it can be taken as if it had only moved one square. Can happen once, and immediately.

Checkmate

Check: When a King is attacked. **Checkmate:** When the checked King cannot escape.

Legal Moves

Legal **Signals**



Key Moves

Strategies

Different Understandings & Styles

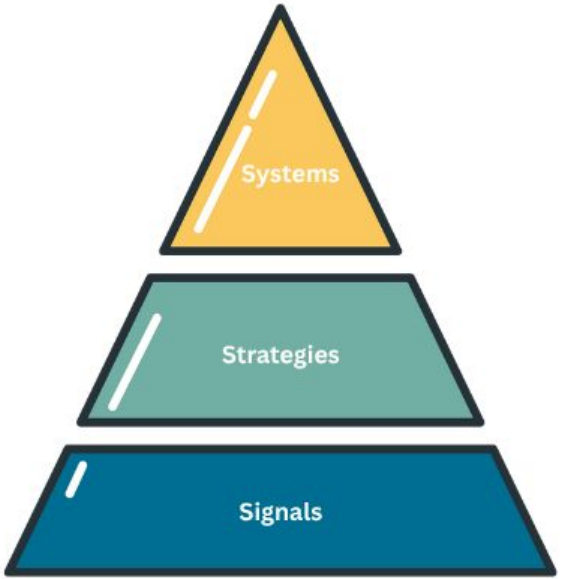
Systems

The social repertoire

Signals: backchannels, gaze, laughter, prosody

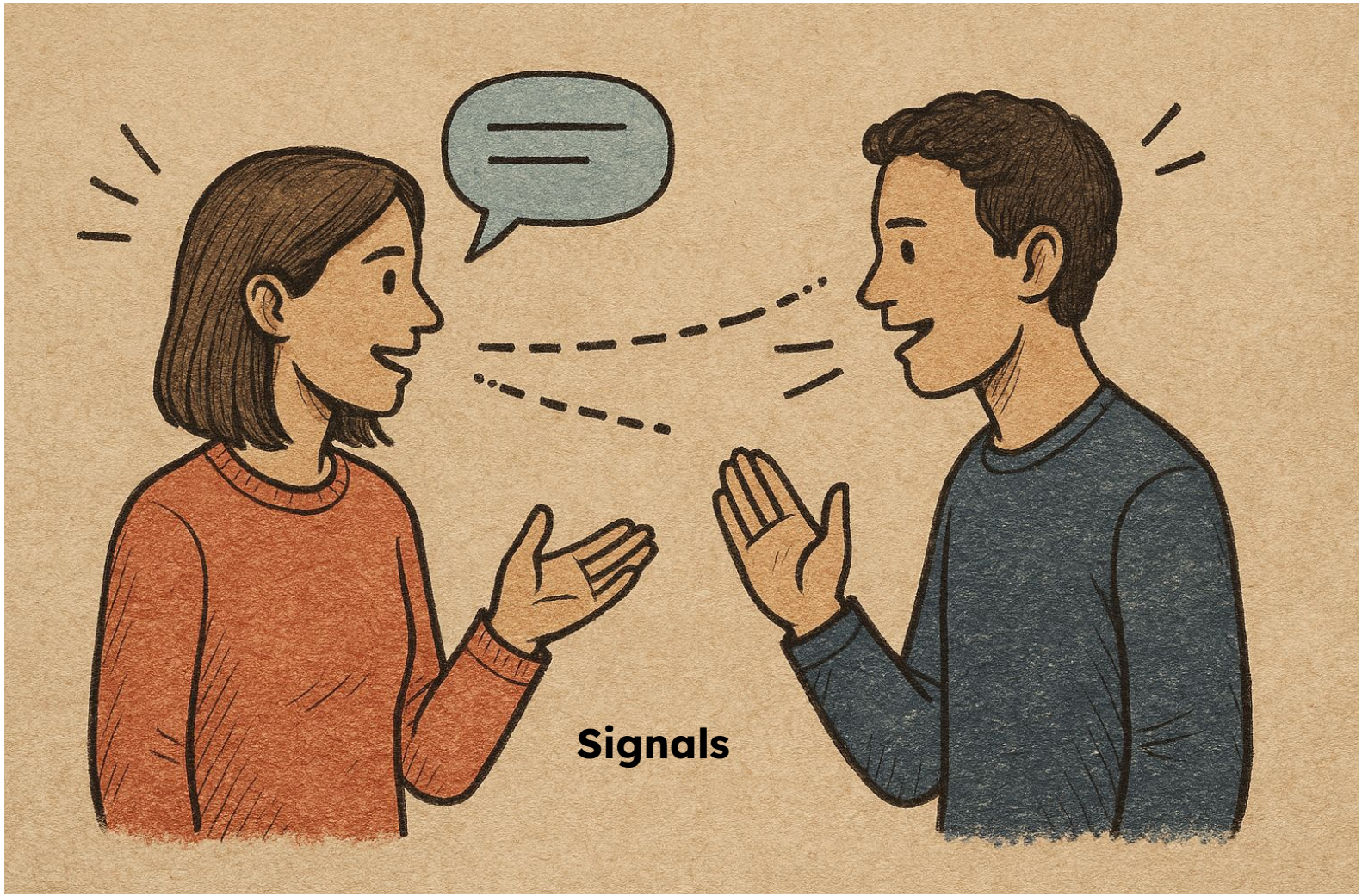
Strategies: hedging, praise, self-disclosure, repair

Systems: overall style or model of interaction



Studying the social aspect of dialogue is important.

Key elements: signals, strategies, and systems.


Signals

Signals: language

Slurs and Their Oppressive History: A Dialogical Account

Mihaela Popa-Wyatt[1] · Jonathan Ginzburg[2]

Accepted: 27 March 2025

Abstract

One account of slurring utterances is that they function as a power grab in conversation (Popa-Wyatt and Wyatt in Philos Stud 175(11):2879-2906, 2018). The speaker assigns a powerless role to the target while taking on a dominant role. This establishes a power imbalance in the conversation. However, this power asymmetry creates further conversational effects that differ across the participants. For example, the target is humiliated, while the speaker is not; the speaker's status is elevated while that of the target is diminished. This is the foundation of an *act of humiliation*. A robust dialogical theory should be able to capture these divergent effects. In this paper, we propose to model this power asymmetry using an existing formal model of dialogue KoS (in: Ginzburg The interactive stance: meaning for conversation. Oxford University Press, Oxford, 2012). Core to KoS is the idea that conversations and interactions are modelled in terms of individual but coupled cognitive states. This framework enables us to model how slurring utterances have differential effects across the speaker and target by capturing these variations through participant-sensitive update rules. We develop a formal account which relates the perceived emotional signals ('*Mood*') and power relations evolving or already operative in society. However, slurs do more than merely humiliate; they enact sustained oppression over time. To address this, we introduce the concept of *oppressive history* which draws on two interrelated processes: a cumulative history of slur usage and its emotionally charged impact.

Keywords Slur words · Slur uses · Dialogue · Semantics · Pragmatics

Signals: gaze

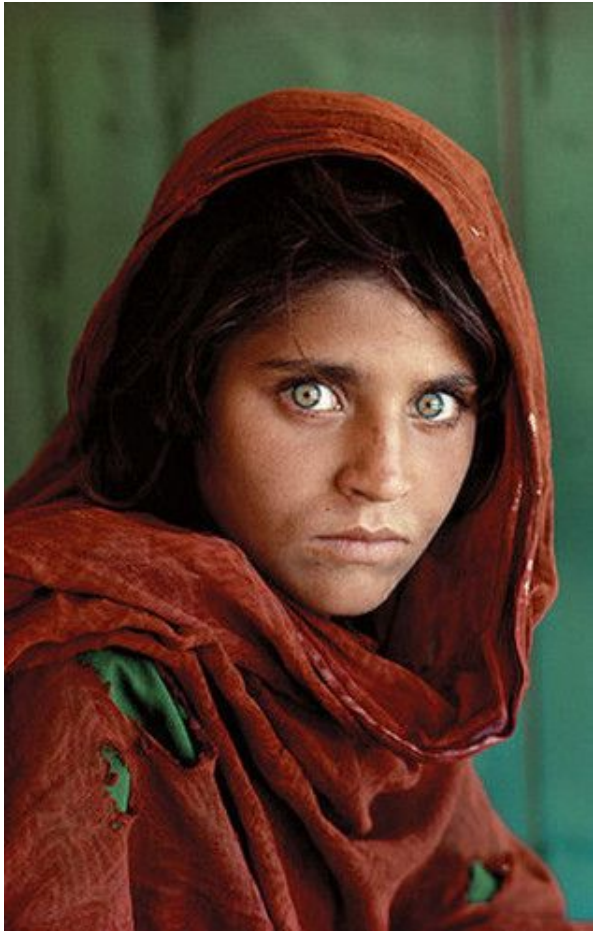
Gaze regulates turn-taking (Yukiko I. Nakano et al. (2003)).

Prolonged gaze → challenge / face-threatening act.

Mutual gaze → trust, rapport, intimacy.

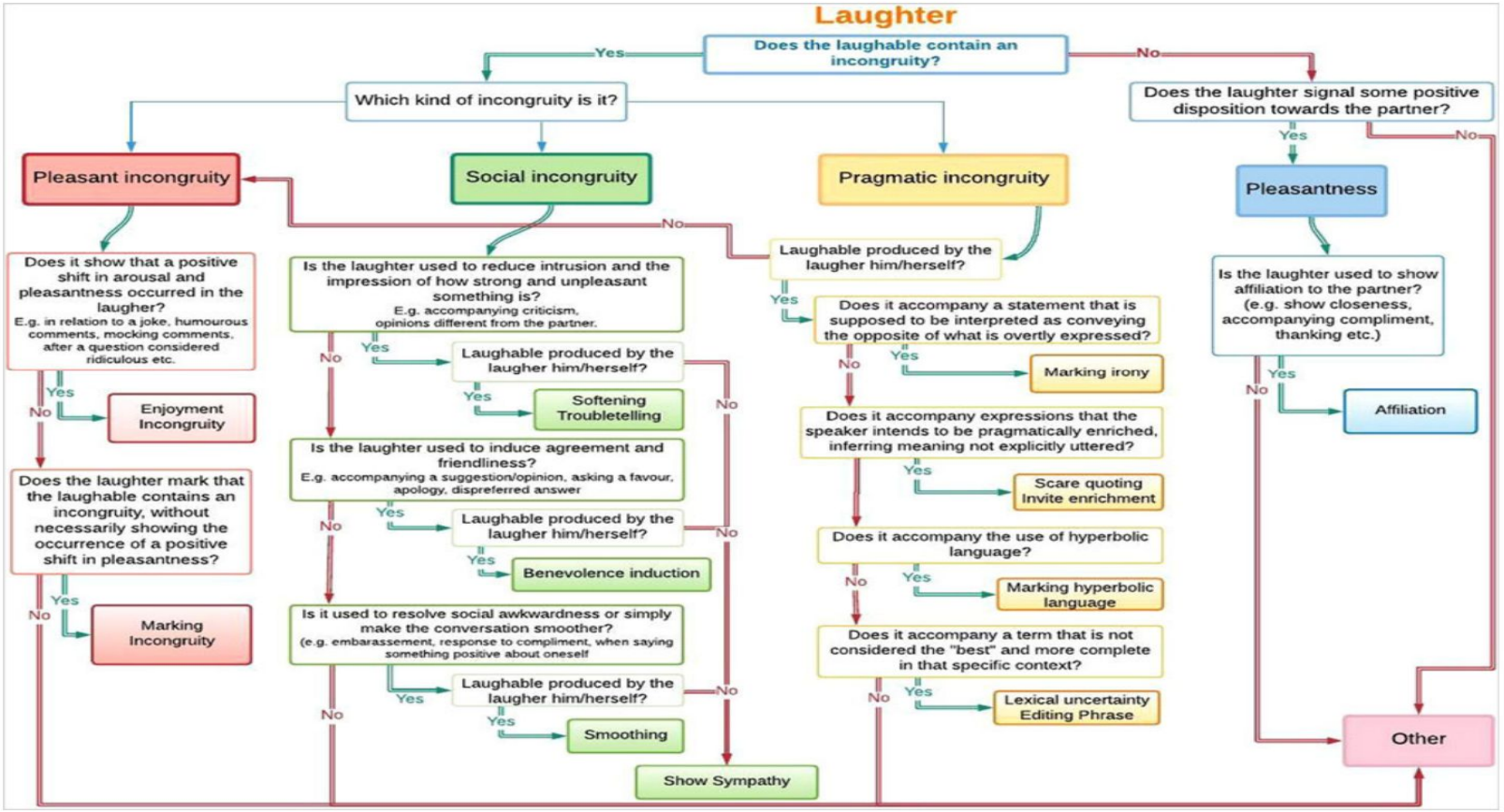
Gaze aversion → discomfort, deference, or politeness.

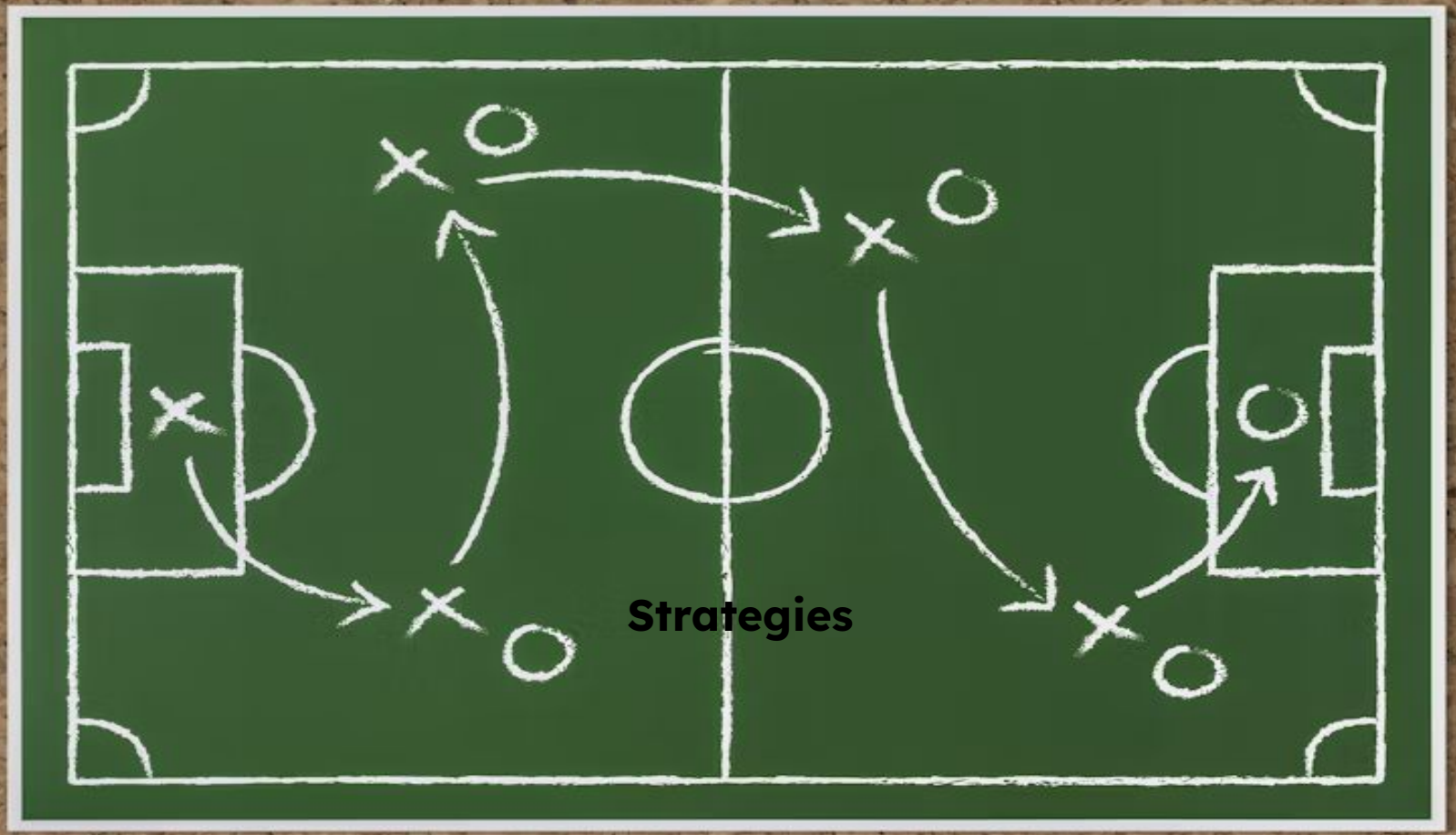
Interpretation depends on cultural norms and interpersonal goals.



Goffman, E. (1967). Goffman, E. (1967). Kendon, A. (1967).

Signals: laughter




Strategies

Social Repair

What it is: When interaction misfires socially (face, rapport, stance), participants perform social repair to restore relational alignment.

Target of repair: not just informational content; it's the social beliefs in play (respect, register, role expectations).

Typical trigger: a perceived incompatibility ($\perp$) in the social reading via *social interpretation function* (ξ), often surfaced by an observable *protest*.

Repertoire (choices): 1) *Accommodation* (concede/align), 2) *Calibration* (clarify/reframe), 3) *Ignoring* (leave unresolved).

Abulimiti & Maraev (2025)

Social Repair

Scheme: "Bonjour" accommodation

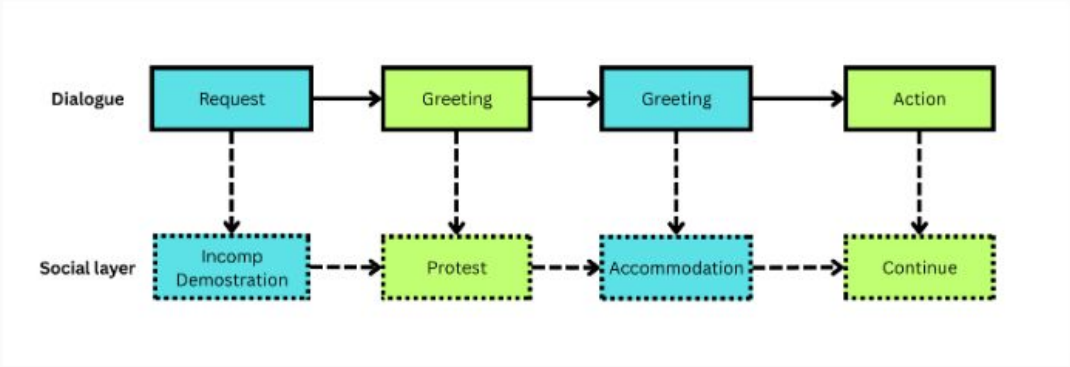


Figure: Dialogue layer (top) vs social layer (bottom): [1] request → social incompatibility → [2] baker protest (greeting) → [3] customer accommodation → [4] service.

Self-discourse

Definition: Revealing personal information (facts, feelings, preferences).

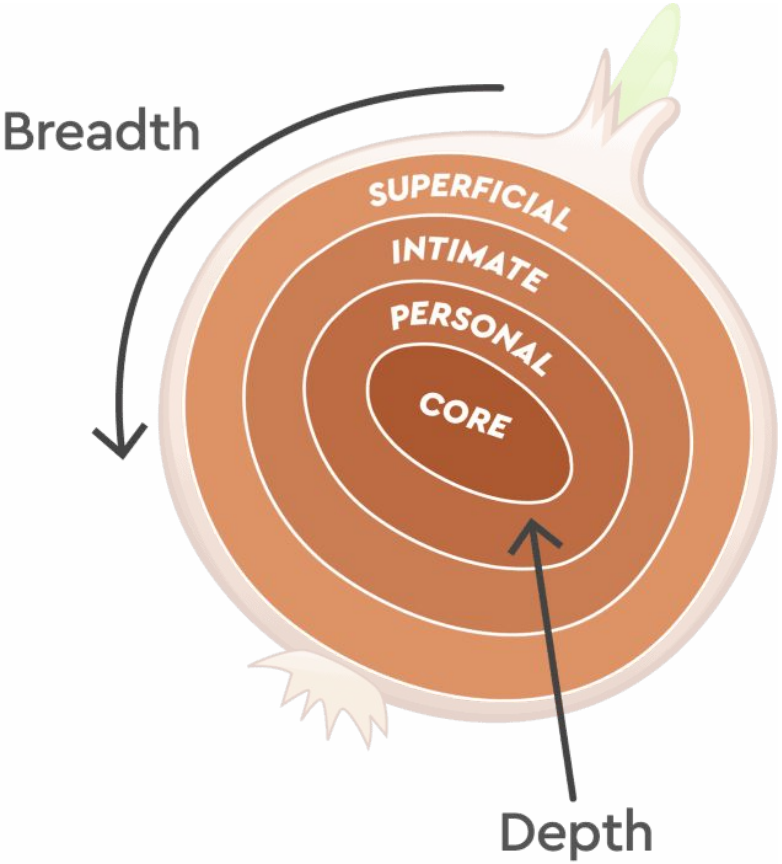
Functions in dialogue:

- Build rapport and trust.
- Signal vulnerability → invite reciprocity.
- Shift interaction from purely task to relational.

Theoretical basis: **Social Penetration Theory** (Altman & Taylor, 1973)

Altman, I., & Taylor, D. (1973) Zhao, R., Papangelis, A., & Cassell, J. (2014).

Self-discourse



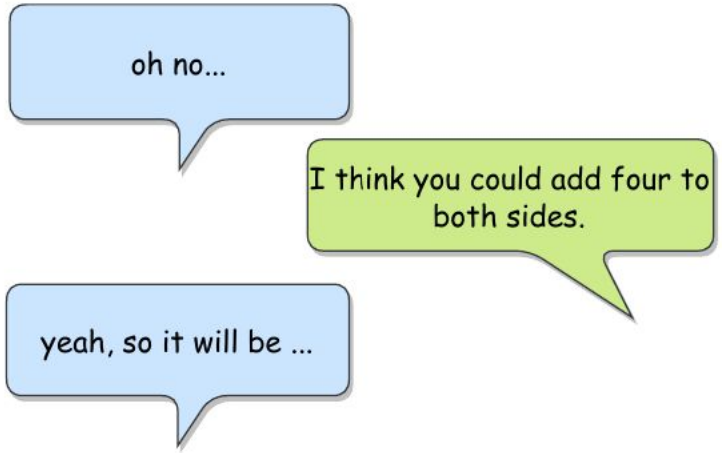
Social Penetration Theory

https://bsquared.media/create-better-content-for-social-media/

Hedging

Hedging is a way of diminishing **face** threat (or embarrassment) by attenuating the extent or impact of an expression.

Corpus study shows hedges are abundant.



Confident tutors use more hedges to encourage tutees.

[Brown and Levinson, 1987, Fraser, 2010], Madaio et al., 2017]

Types of hedges

Apologizers — use apology formulae to soften statements.

Example: “Sorry, the verb is ‘be’.”

Extenders — add vague category markers to lessen intensity or precision.

Example: “All I see is different pages with like scribbles and stuff.”

Subjectivizers — frame the claim as personal opinion or attribute it to a source.

Example: “Yes, I would say so.”

Qualifiers — signal uncertainty or partial commitment to reduce force.

Example: “You’re kind of under pressure to reply straight away.”

Hedge Prediction

Feature	Details
Turn Embedding	Sentence Transformer, **semantic information**
Conversational Strategies (CS)	Self-disclosure, praise, norm violation, hedges (**previous turns'**)
Tutoring Strategies (TS)	Deep/shallow questions, meta-communication, knowledge building/telling
Dialogue Act (DialAct)	DAMSL coding schema, 6 types
Rapport	7-point Likert scale
Nonverbal Behaviors (NB)	Head nod, smile, gaze
Contextual Information (ConInfo)	Session, problem ID, tutor/tutee, **pre-test scores**
Verbal Alignment Signals	Frequency from previous four turns, e.g. "um", "oh", "ah". [Norman et al., 2022]

Abulimiti et al. (2023 b)

Hedge Prediction

Features	Valence
correctness	+
no gaze from tutor	-
problem id	-
rapport	-
tutee's deep question	-
tutee's gaze at tutor	-
tutee's pre-test	-
tutor's gaze at elsewhere	-
tutor's praise	-

Table: Features and their Valences

(a) Feature In
emb)

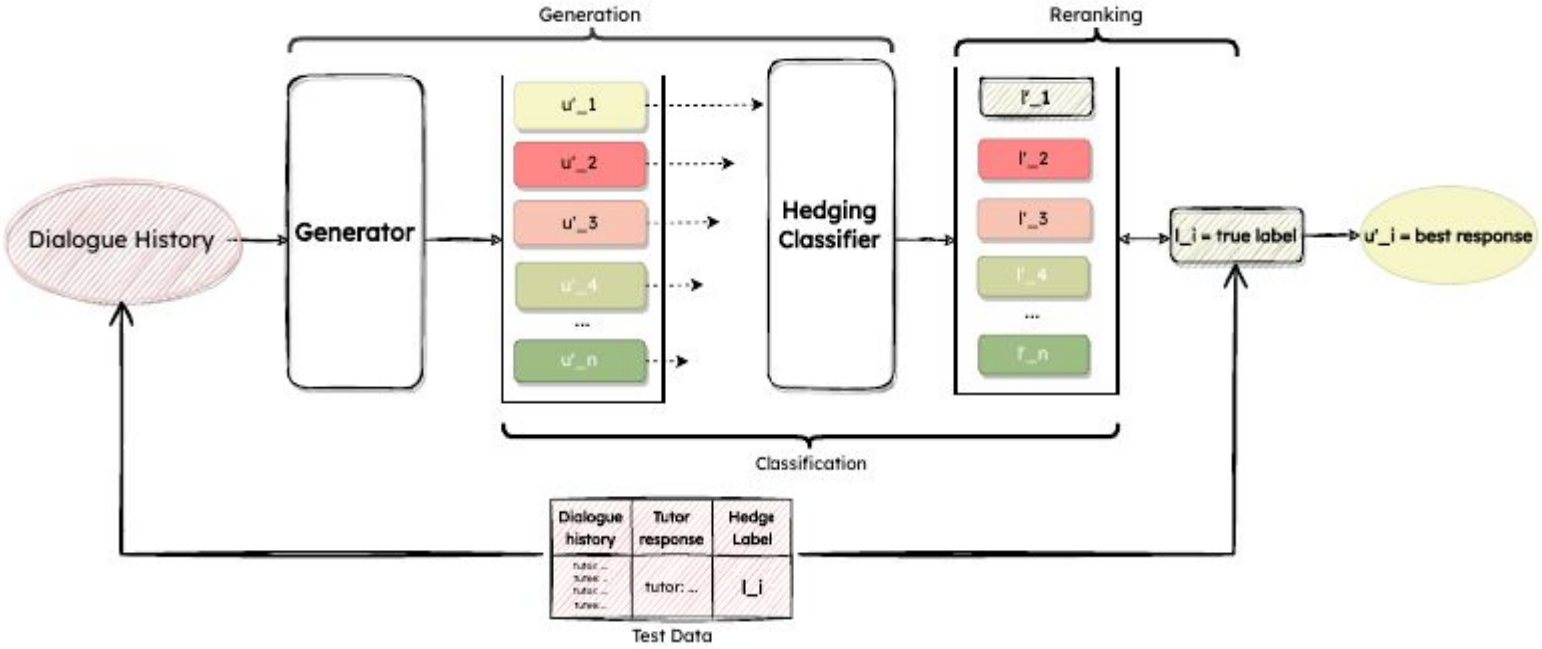
(without emb)

(c) Feat

ightGBM

Abulimiti et al. (2023 b).

Hedge Generation



Abulimiti et al. (2023 a).

Hedge Generation

Tutor: Wait, you're on question three, <laughter> just checking
Tutee: I told you, the answer is two
Tutor: We just found out
Tutee: oh really?

Tutor: <laughter> okay problem four is four (non-hedge)

System: We just found out the answer is two x equals three
(hedge)

Classification Error

Tutor: mhm, so what are the two things that you can do, there are only two.
Tutee: I could move x over to three x.
Tutor: Yeah what do you think we should, should we do it now.
Tutee: mmm I dont know, do you have the, um, minus

Tutor: Well the other one would be to divide three by thirty six ...
(hedge)
System: What do you think we should do, what's the next step (non-hedge)

Goal Mismatch Error

If models generate hedges when rapport is low?

Abulimiti et al. (2023 a).

What about hedging in actions?

Interactive Social Agent Behaviors of Politeness and Compromise in Collaborative Decision-making

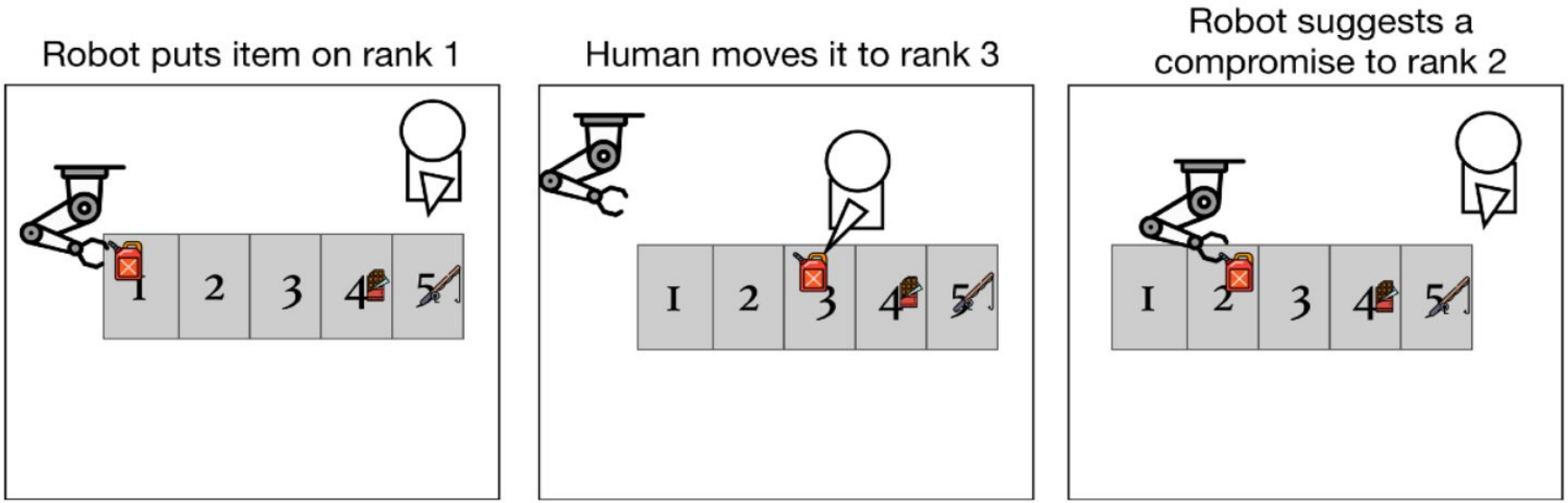
JiHyun Jeong and Guy Hoffman

Cornell University

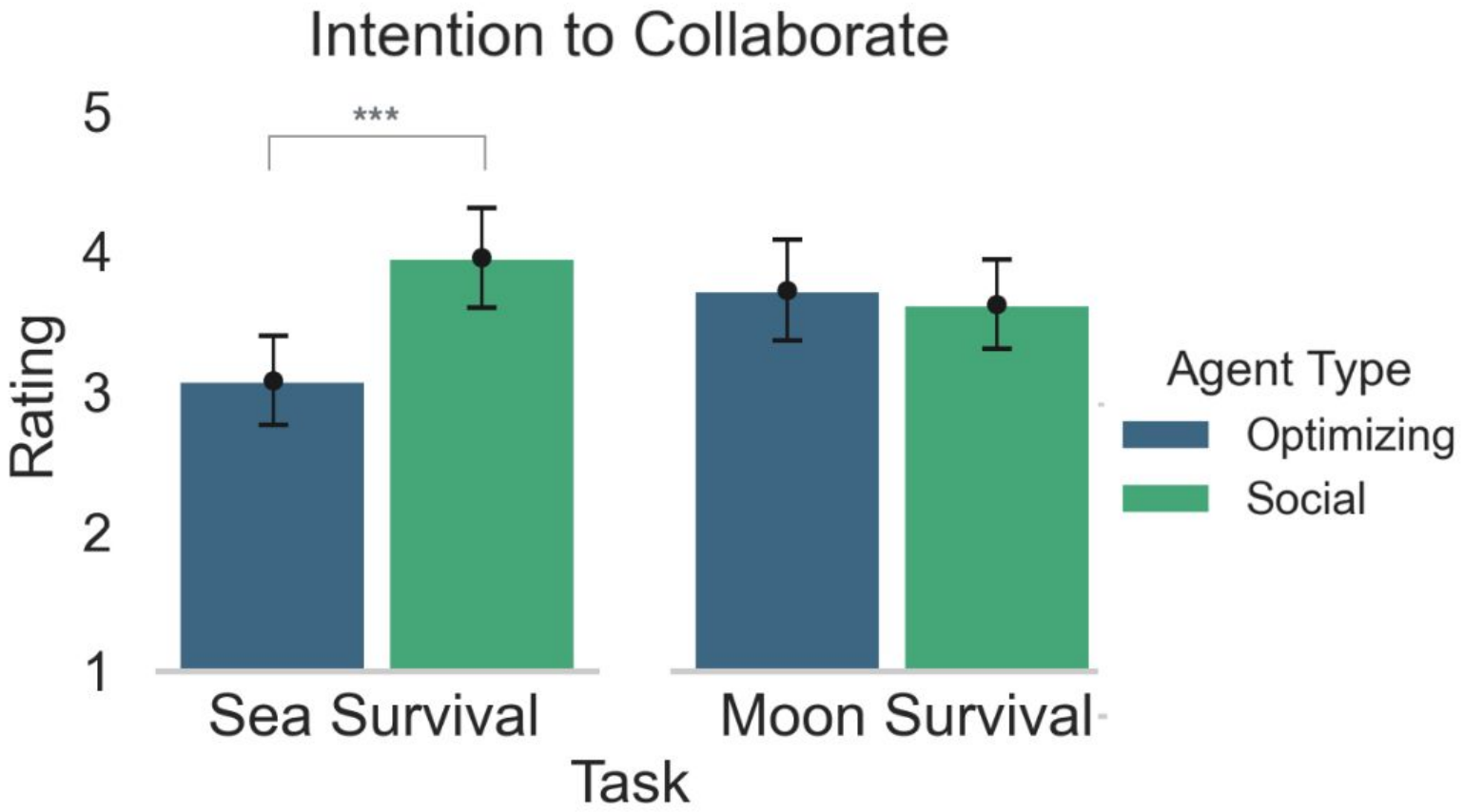
HRC² human-robot collaboration & companionship lab

What about hedging in actions?

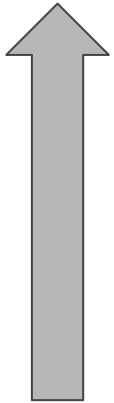
Social Agent

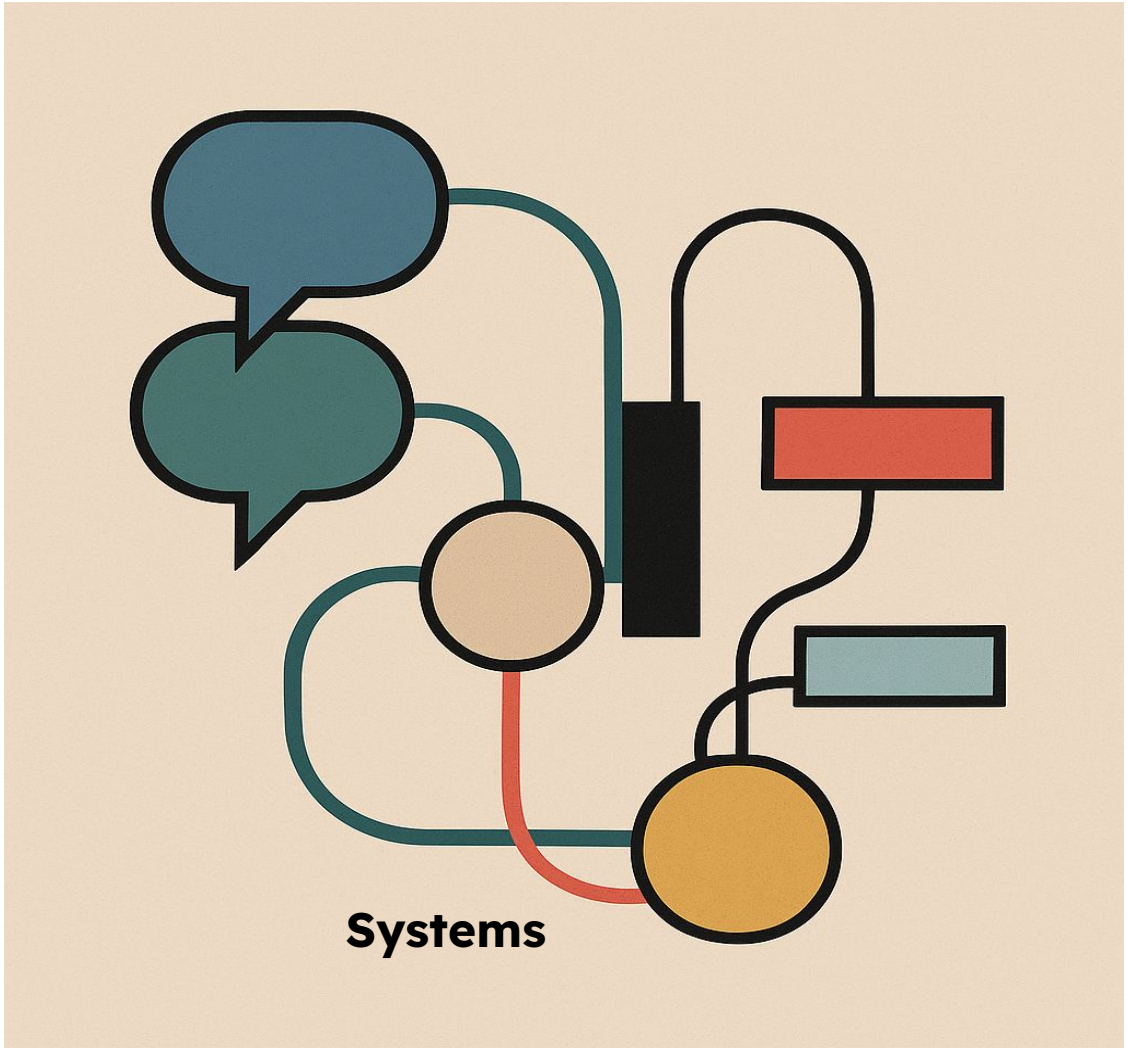


What about hedging in actions?

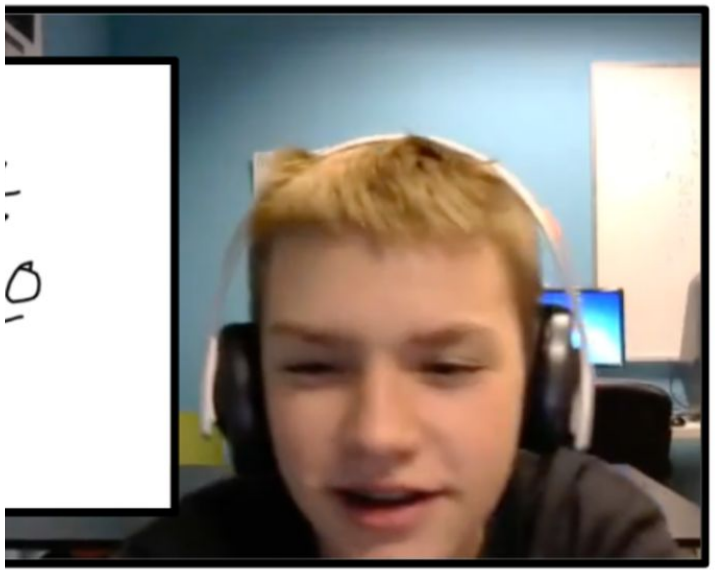


How to balance task and social?

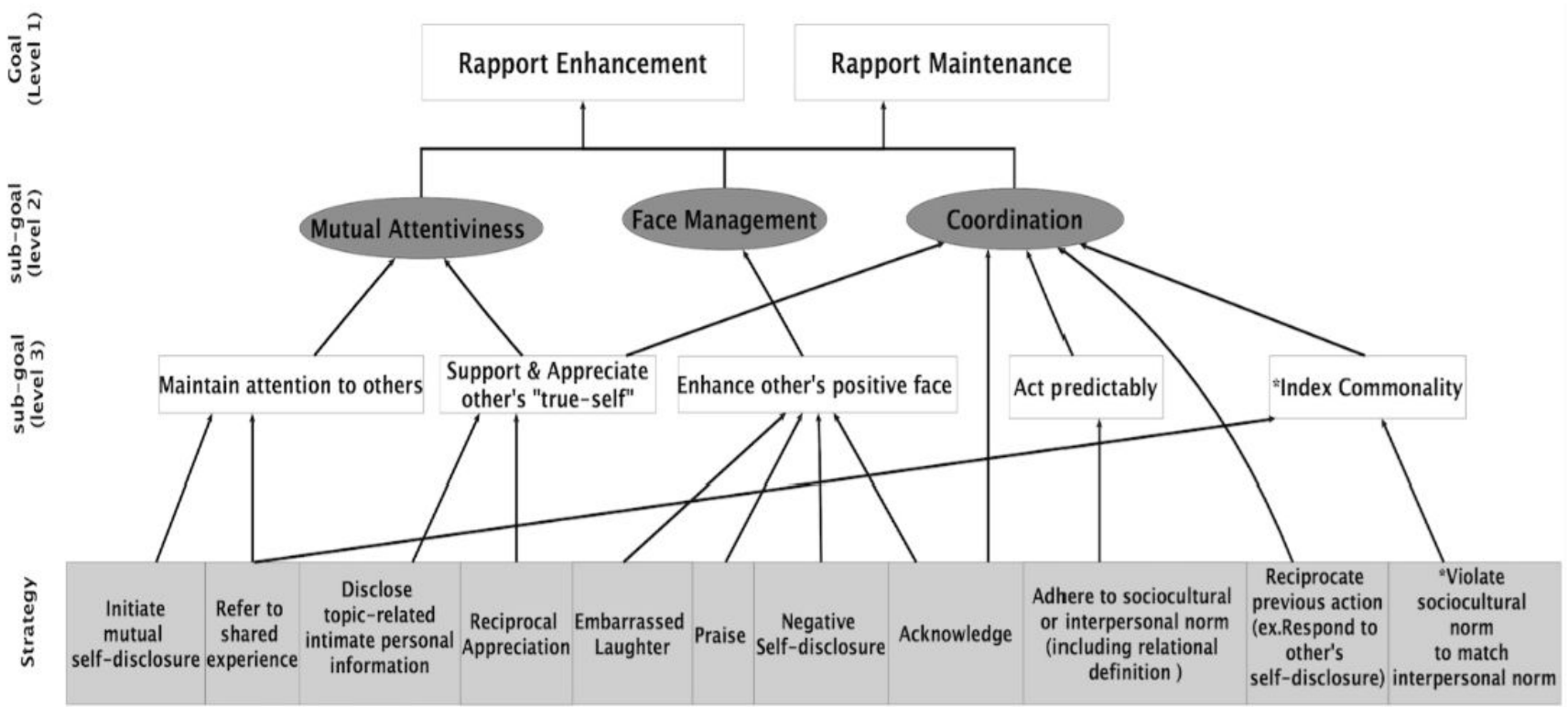



Systems

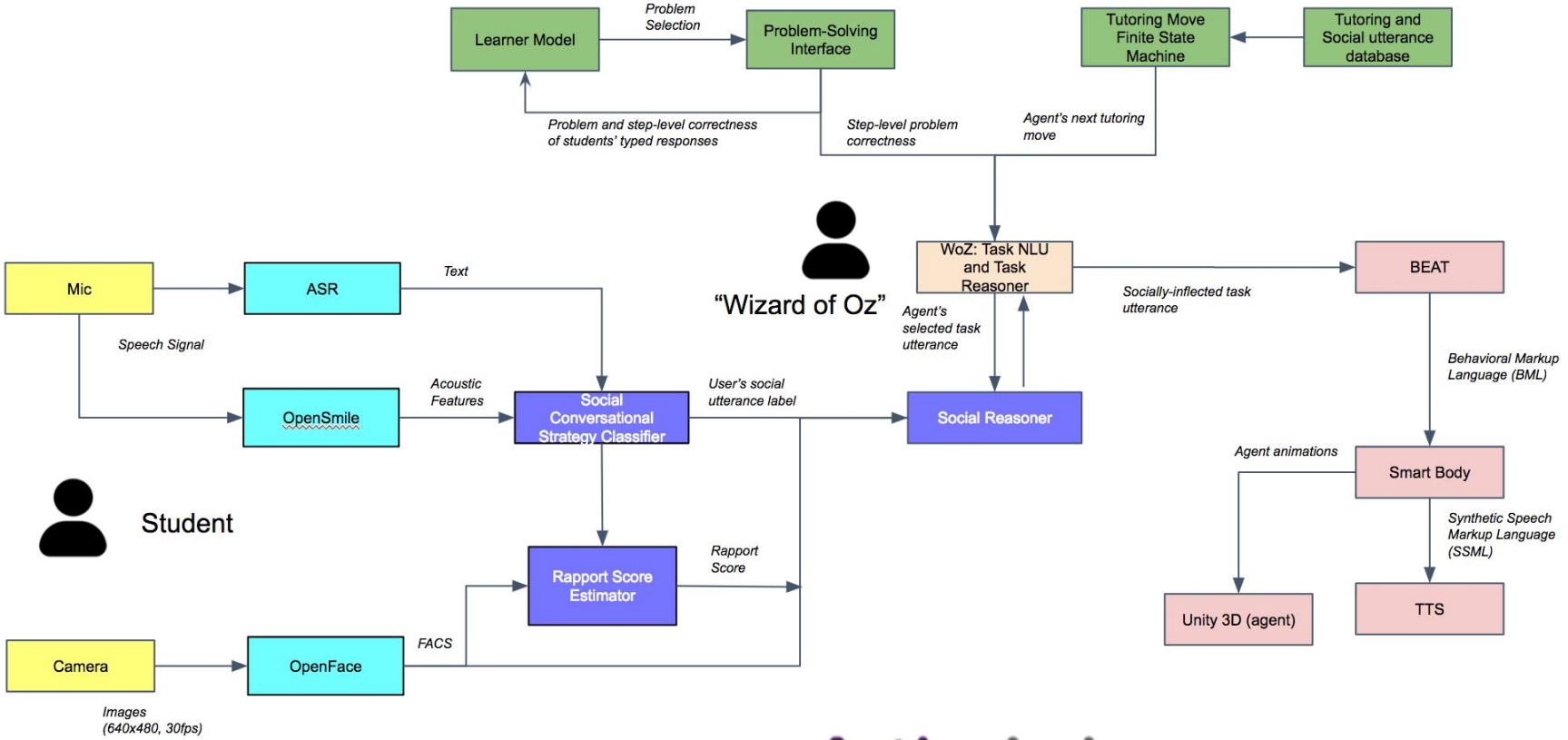
Rapport-Aware Virtual Peer Tutor (RAPT)



https://www.justinecassell.com/articulab/projects/rapt/



Towards a Dyadic Computational Model of Rapport Management for Human-Virtual Agent Interaction (Zhao et al. 2014.)

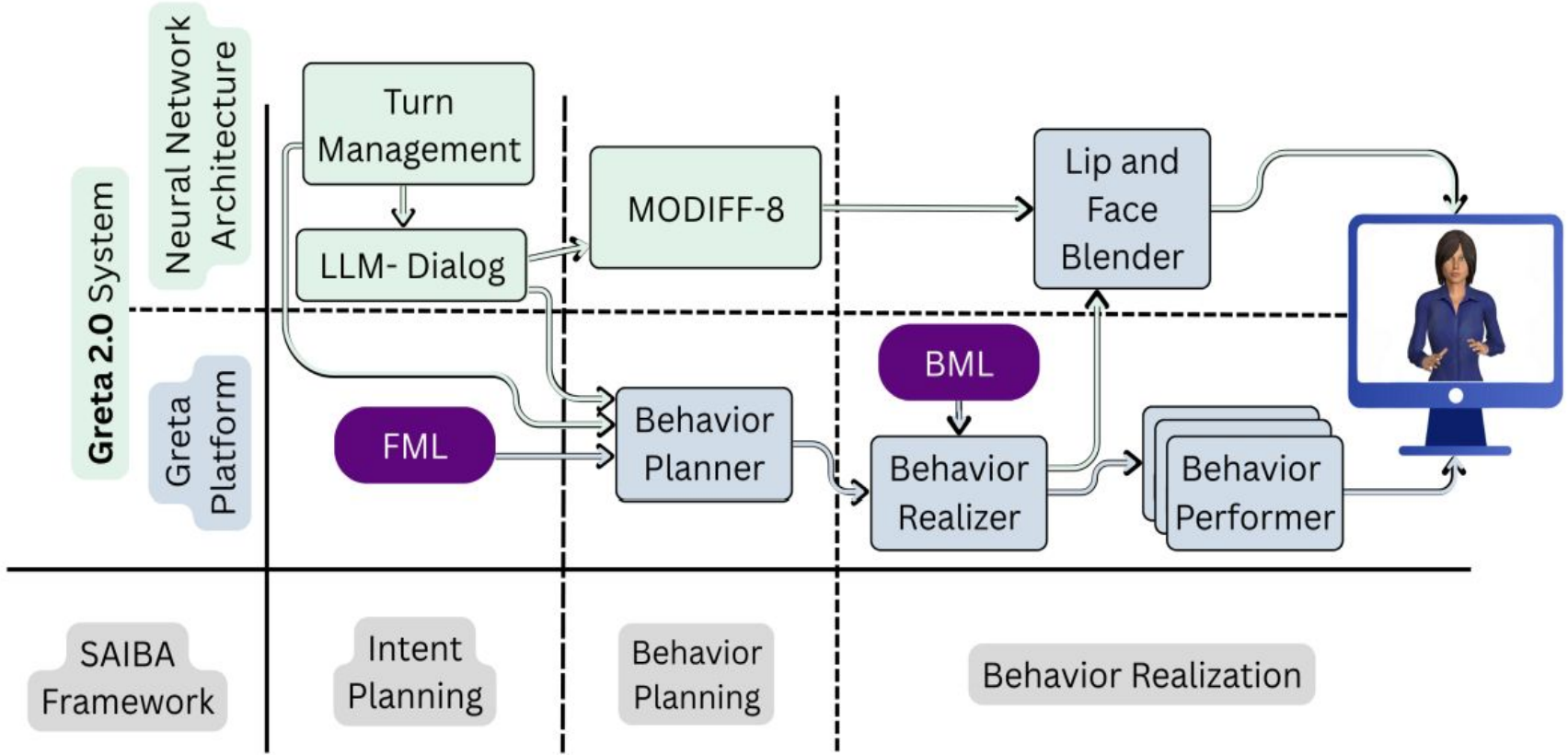


ArticuLab

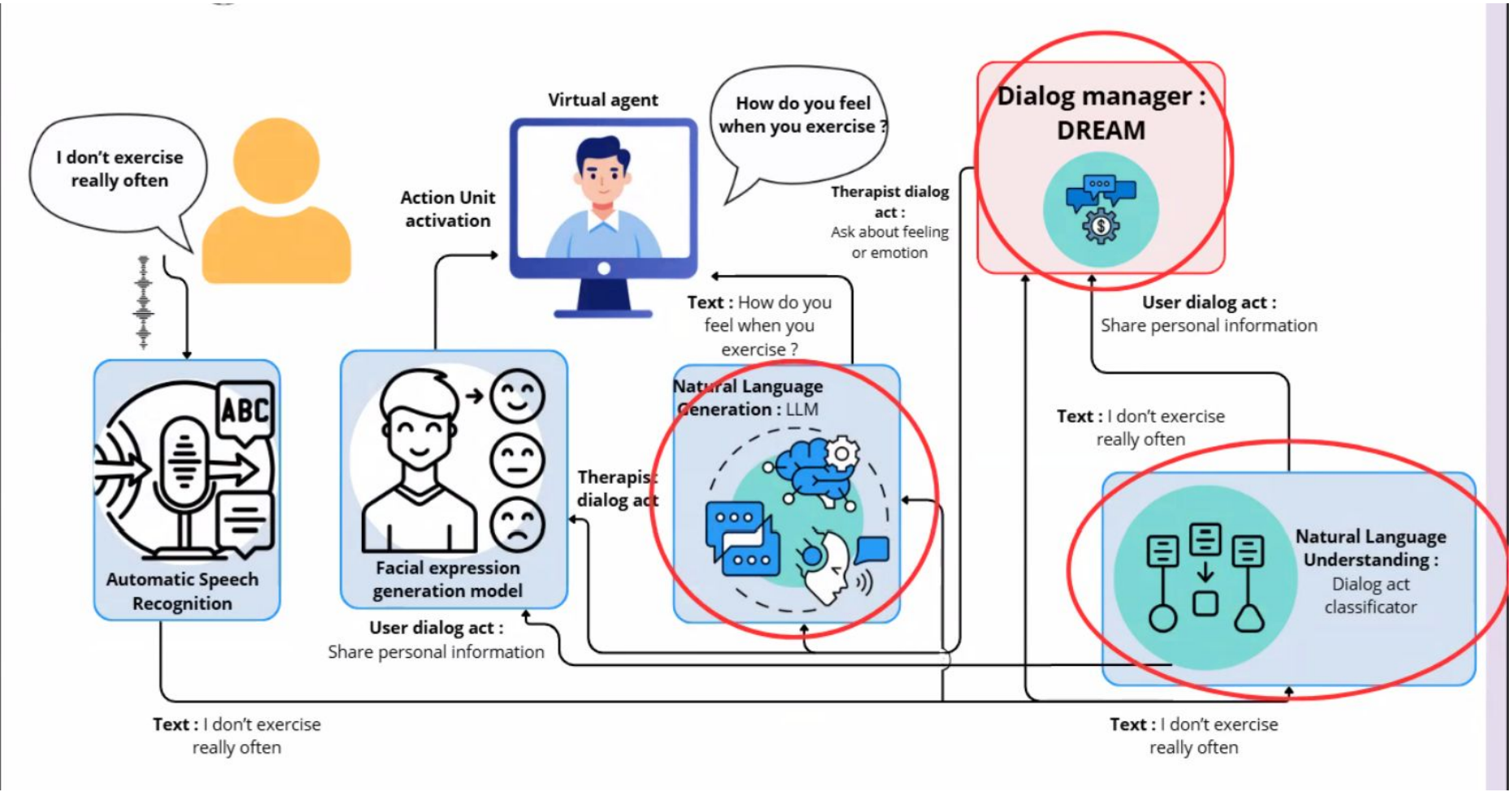
https://www.justinecassell.com/articulab/projects/rapt/

GRETA

https://github.com/isir/greta



Greta 2.0: Social Interactive Agent system, optimized for neural network integration



Lucie et al. 2025


Thank you! Questions?

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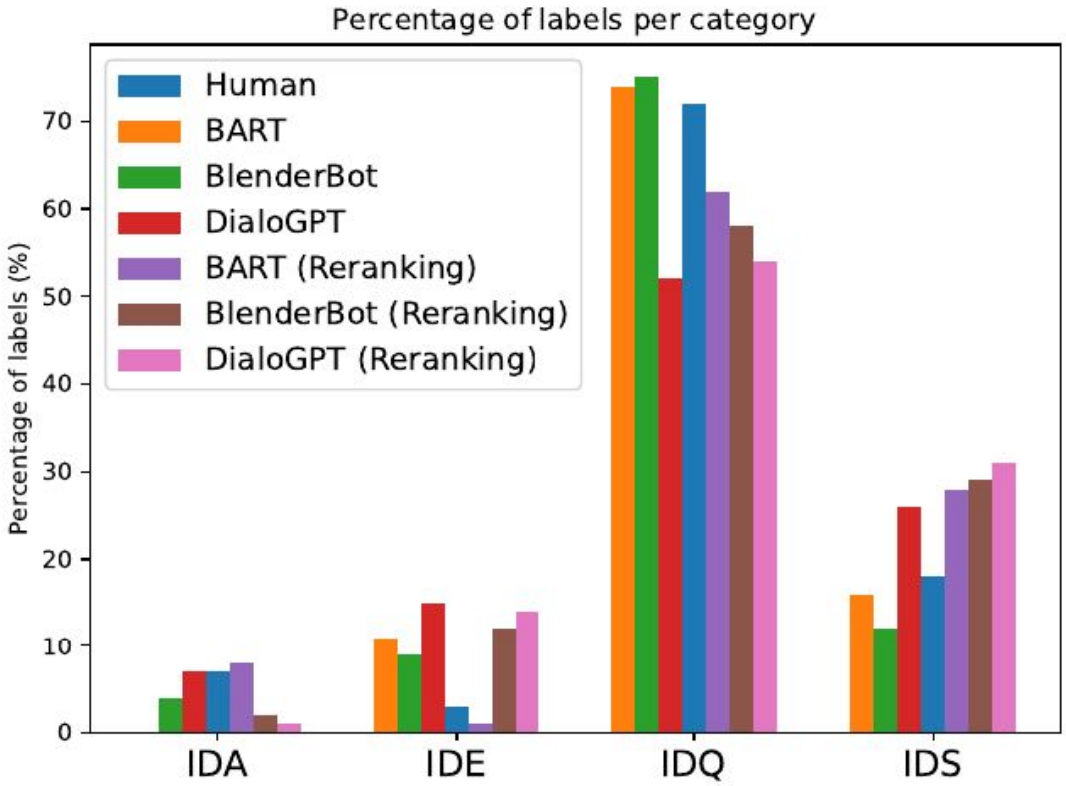

Figure 5.4: Hedge subcategories distribution in models' outputs compared with humans. IDA: Apologizer; IDE: Extender; IDQ: Propositional hedges; IDS: Subjectivizer