

Socially Facilitated Alignment and Novelty in Separate Channels of Communication

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Introduction

A recent prominent theory of alignment proposes that priming is a central mechanism underlying alignment (see Pickering & Garrod, 2004, and Ferreira & Bock, 2006, for review and debate). When two people communicate, their levels of linguistic representation align by co-activating similar words, sentence structures, and so on.

This "socially facilitated priming" perspective suggests that people who believe they are conversing with another person would align in both verbal and nonverbal ways at the level of pragmatics.

On the other hand, there may be a disadvantage to aligning too much during interaction. In some circumstances, interlocutors may instead resist alignment in order to generate novel contributions that keep the conversation new and interesting. This perspective could be termed "socially facilitated novelty."

Participants

161 participants recruited through Amazon's Mechanical Turk, which operates as a micro-task market. Each received 75 cents for participating, which required approximately 12 minutes.

Figure 1: The basic interface for the 12 "I never" statements. During interaction trials, the example prime sentence shown is prefaced with either a database access (examples condition: n = 97) or that another person typed it (talk condition; bolded: n = 62). Participants supplied a statement of their own in response. Following this, both conditions performed a recall task, as shown.

Method

The experiment consisted of a computer game, programmed in Adobe Flash (see Figure 1). Participants supplied their own statement after each conversation turn.

All participants were presented with statements in the "I never..." format that were pre-constructed. These statements did not differ between conditions (see Table 1). The pseudo-confederate/database always presented the first statement. After 12 interaction turns, participants were asked to recall the endings of six of the given statements.

For the talk (pseudo-confederate) condition, an open-ended comment box asked how participants felt about the interaction. All data was sent to a server that stored the information.

Table 1: Example Prompt Stimulus Lists

| Set Type | Example |
|-----------------------|-----------------------------------|
| Past Tense / Frowns | I never ate buffalo meat :-(|
| Past Tense / Smiles | I never watched a documentary :-) |
| Present Tense | I never get Starbucks coffee |
| Present Perfect Tense | I have never climbed a mountain |

Note: Other lists included past perfect tense, present perfect tense with mixed emoticons, past tense with mixed emoticons, and two additional lists with mixed properties.

Coding

Each response given by a participant was binary coded according to whether certain alignment dimensions matched or did not match the given prompt, including verb, tense, and topic. Two coders reached inter-rater reliability above $\kappa = .82$. We calculated an alignment score across the three dimensions of possible alignment (verb, tense, topic) ranging from 0 (none) to 3 (all).

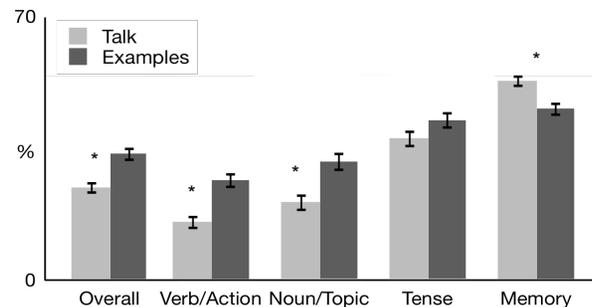


Figure 2: The first 4 pairs of bars reflect percentages of alignment with the immediately preceding prompt. The last bar shows the percentage performance in the memory recall task. * = $p < .05$.

Alignment Results

Examples showed more alignment than talk. It appears this difference is generated by alignment of verb and topic. These results are shown in Figure 2.

Emoticons were extremely rare in the participant responses; overall, only 13 emoticons were generated despite 356 smiles and 340 frowns presented in all prompts. Virtually all of these (save 2) occurred with primes that contained emoticons, suggesting a local emoticon alignment. These emoticons were overwhelmingly used in the talk condition (11 vs. 3, $\chi^2_1 = 11.5, p < .001$).

Recall Results

The responses to six recall questions were coded as either correct or incorrect and a total score given to each participant.

Participants who believed they were chatting with another person were significantly more likely to remember the topics than those who believed they were seeing examples from a database (see Figure 2).

Discussion

Our data suggest that:

- (1) Verbal alignment is significantly less in natural communication than in bare priming circumstances,
- (2) Nonverbal alignment is significantly more in natural communication than in bare priming circumstances, and
- (3) The conditions of interaction weave a context in which participants are able to schematize shared facts more effectively for recall.

These results may be interpreted such that whether facilitated priming or facilitated novelty occurs depends on the communicative channel being examined. Novelty is favored in the verbal channel; priming is favored in the nonverbal channel.

These results further suggest that it may be important to consider distinct functions of alignment at different communicative levels or channels.

Further, it suggests that *pure* alignment fails because it does not necessarily facilitate socializing; conversations must be driven forward with ties to prior topics to maintain flow.

References

- Ferreira, V. S., & Bock, K. (2006). The functions of structural priming. *Language and Cognitive Processes*, 21, 1011-1029.
- Pickering, M. J., & Garrod, S. (2004). Toward a mechanistic psychology of dialogue. *Behavioral and Brain Sciences*, 27, 169-190.

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