



# The Effects of Cooperation and Relationship Status on Alignment in Conversation

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## Introduction

- Communication Accommodation Theory: conversation partners align in their communicative behaviors over time (Giles & Ogay, 2006).
- In computer-mediated communication (CMC), people may align in structural (e.g., turn taking) and linguistic (e.g., word choices) conversation elements (Scissors et al., 2009).
- **Purpose:** To examine the effects of conversational tone and relationship status on structural alignment in instant messaging (IM) conversations across four different corpora.
- **Hypotheses:** Alignment on length and duration of IM sequences will increase over time in cooperative (vs. conflicting) conversations and when conversation partners are friends (vs. strangers).

## Corpora

- Each corpus consisted of dyadic IM conversations. Conversation partners were either friends or strangers. Each conversation was either cooperative or conflicting in tone.
- Hamburger Corpus** (46 stranger dyads; Walther et al., 2010)
  - 10 minute discussions of best hamburger restaurants
  - One participant was assigned to either like or dislike their partner
- Vaccination Corpus** (42 stranger dyads; Riordan et al., 2013)
  - 30 minute discussions of Gardasil vaccinations
  - A confederate was instructed to take either opposing or neutral position toward partner's argument
- Friends Corpus** (35 friend dyads; Riordan et al., 2014)
  - Each dyad had two 20 minute discussions: a debate and a social conversation
  - Partners were assigned to opposing positions of a debate on school printing fees
- Cell Phone Corpus** (39 stranger dyads; Kovaz et al., 2013)
  - 10 minute discussions of the use of cell phones while driving
  - A confederate was instructed to either agree or disagree with his partner's position

## Analyses

- Conversation transcripts were segmented into transmission units which were grouped into sequences (see Figure).
- Alignment was measured as the difference between adjacent sequences on length and duration measures (lower difference scores indicate greater alignment):
  - **Sequence Length:** number of words in each sequence
  - **Sequence Duration:** number of seconds elapsed until the beginning of the next sequence
- Each alignment measure was analyzed using a linear mixed-effect model (results presented in Table):
  - **Main effects:** sequence, tone, relationship
  - **Interactions:** tone x relationship, sequence x tone, sequence x relationship, sequence x tone x relationship
  - **Random intercepts:** conversation number, sequence

Figure: Conversation excerpt showing units of analysis

<b>Transmission Unit</b>	[15:09:58] <P> i think it's dangerous, but texting while driving is definitely more dangerous than being on the phone while driving
<b>Confederate Sequence</b>	[15:10:14] <C> Yeah, I agree
<b>Participant Sequence</b>	[15:10:21] <C> texting is definitely a killer
	[15:10:35] <P> i'm not gonna lie though i'm guilty of both, but i only text when i have a red light
	[15:10:45] <P> i've never had a wreck though
	[15:10:56] <C> me neither
	[15:11:01] <P> do you?
	[15:11:11] <C> it's good to be honest haha
	[15:11:19] <C> I talk on the phone
	[15:11:34] <P> driving is too boring if you don't look at your phone haha

Note: The bracketed confederate sequence contains 43 characters, 8 words, and is 21 seconds in duration. The bracketed participant sequence contains 113 characters, 25 words, and is 21 seconds in duration. The difference scores for these adjacent sequences are 70, 17, and 0 for number of characters, number of words, and duration respectively.

Table: LME Model Coefficients for Alignment Measures

	Length (SE)	Duration (SE)
<b>Intercept</b>	1.955 (0.157)	2.470 (0.203)
<b>Sequence</b>	-0.086** (0.003)	-0.012*** (0.003)
<b>Tone</b>	-0.571*** (0.071)	-0.691*** (0.080)
<b>Relationship</b>	0.076 (0.090)	0.176 (0.114)
<b>Tone x Rel.</b>	0.313*** (0.054)	0.343*** (0.065)
<b>Seq. x Tone</b>	0.007** (0.002)	0.008** (0.002)
<b>Seq. x Rel.</b>	0.005* (0.002)	0.007** (0.002)
<b>Seq. x Tone x Rel.</b>	-0.004* (0.002)	-0.004 (0.002)

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Tone coded as 1 = cooperative and -1 = conflicting.

Relationship coded as 1 = friends and 2 = strangers.

Models based on unstandardized log-transformed alignment measures.

## Results

### Main Effects

- Significant main effects for sequence show that alignment in both measures (length and duration) generally increased over time.
- Significant main effects for tone show that alignment in both measures was generally greater in cooperative conversations.
- Main effects for relationship were not significant for either measure.

### Interactions

- **Tone x relationship** was significant for both measures, showing greater alignment between friends in cooperative conversations.
- **Sequence x tone** was significant for both measures, showing greater alignment over time in conflicting conversations.
- **Sequence x relationship** was significant for both measures, showing that friends had greater alignment over time compared to strangers.
- Three-way interaction (**sequence x tone x relationship**) suggests that there was greater alignment over time between strangers in cooperative (vs. conflicting) conversations. However, this was only marginally significant for duration ( $p = .059$ ).

## Discussion

- Our hypotheses concerning alignment over time were only partially supported: there was greater alignment over time between friends, but less alignment over time in cooperative conversations.
- Overall, these results show that there can be many interacting social factors (i.e., cooperation and relationship status) that can affect conversational alignment in IM across a variety of topics.
- Future research would benefit from examining new corpora (such as social networking sites and text messaging).

## References

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