

# Managing Third-Party Interruptions in Conversations: Effects of Duration and Conversational Role

Adrian Bangerter,<sup>1</sup> Eric Chevalley,<sup>1</sup> and Sylvie Derouwaux<sup>1</sup>

<sup>1</sup>University of Neuchâtel, Neuchâtel, Switzerland

## Abstract

Dealing with interruptions in collaborative tasks involves two important processes: managing the face of one's partners and collaboratively reconstructing the topic. In an experiment, pairs were interrupted while narrating personal stories. The duration of the interruption and the conversational role of the target were manipulated. Listeners were more polite than narrators, and longer suspensions caused more effort in reinstatement than short suspensions, but participants were not more polite when suspensions were long.

## Keywords

interruptions, collaborative tasks, conversation, narrative

Interruptions of conversations by third parties are commonplace. For example, people conversing in a restaurant might be interrupted by the waiter. In such situations, people manage their original conversation *and* the interruption. They typically suspend the original (*primary*) conversation, deal with the interruption (initiating a *secondary* conversation), and reinstate the primary conversation. This involves two processes: reconstructing the primary topic and managing partners' face (Chevalley & Bangerter, in press). The present study explores how the conversational role of the person interrupted (the *target*) affects these processes.

---

## Corresponding Author:

Adrian Bangerter, Institut de Psychologie du Travail et des Organisations, Université de Neuchâtel, Rue de la Maladière 23, 2000 Neuchâtel, Switzerland

Email: [adrian.bangerter@unine.ch](mailto:adrian.bangerter@unine.ch)

Interruptions disrupt individual tasks. Longer interruptions are more disruptive than shorter ones (Hodgetts & Jones, 2006a) because of time-dependent decay of memory for task goals (Altmann & Trafton, 2002). Conversational interruptions are similar in this respect. However, participants do not only reconstruct their own memories of the conversational topic but coordinate them with their partners' (Horton & Gerrig, 2005). Also, suspending a conversation is potentially face threatening (Brown & Levinson, 1987), because, often, only the target is solicited by a third party. Other participants are thus kept waiting. This leads participants to perform redressing behaviors (politeness) such as apologizing or justifying. Thus, participants do not just stop or start talking with each other but coordinate getting into and out of the conversation (Bangerter, Clark, & Katz, 2004; Clark, 2006).

What variables affect coordination of topic reinstatement and face management? One variable may be the duration of the interruption. Longer interruptions may complicate topic reinstatement, leading participants to abandon interrupted topics and revert to prior topics. They also keep partners waiting longer and are therefore more face threatening. They may thus lead to more politeness in suspending and reinstating (Chevalley & Bangerter, in press). Another variable is the conversational role of the target (speaker vs. listener). It is more effortful for listeners to suspend a conversation, because they have to interrupt the speaker (an additional face threat), while speakers need only self-interrupt. Also, the conversational role of the target may affect the responsibilities of conversational partners for topic reinstatement. But listeners may sometimes also support topic reconstruction (e.g., *you were saying*). Chevalley and Bangerter (in press) found field evidence that listeners were more polite than narrators in suspending but were not able to test this conjecture experimentally, nor did they explore interactional behavior of listeners in detail.

The duration of interruptions of telephone conversations and the conversational role of the target were thus manipulated to test effects on politeness and topic reconstruction at reinstatement. Longer suspensions should lead to more politeness than shorter ones (Hypothesis 1). Moreover, this effect should reveal itself in politeness *at reinstatement*, because at suspension, targets cannot know for how long they will be interrupted. Longer interruptions should also lead to more collaborative effort in reinstating the topic than shorter ones (Hypothesis 2). Finally, conversational role should affect politeness: Suspensions by listeners should feature more politeness than those by narrators (Hypothesis 3). In addition to the quantitative hypothesis tests, typical examples of listeners' strategies for managing topic reinstatement and interrupting the speaker are presented.

## Method

### *Setup and Design*

To create seemingly natural interruptions of a dyadic conversational task, a setup was used involving a cover story that led targets to believe that they were responsible for not adequately completing a task (writing descriptions of pictures) preceding the

conversation. This provided a reason for the experimenter to disturb them. During the conversation, the experimenter entered the target's room on two occasions and claimed it was impossible to analyze the descriptions because they were unclear. To answer, targets suspended their conversation with their partner. The conversational task was a close-call story (Bavelas, Coates, & Johnson, 2000), where something bad almost occurred, but where everything finally turned out all right. Participants told detailed close-call stories to each other, adopting stable roles of narrator and listener for several minutes, before switching roles.

The design was a  $2 \times 2$  mixed factorial with duration (short vs. long) as between-subjects factor and conversational role when interrupted (narrator vs. listener) as within-subjects factor. Targets (determined randomly) were thus interrupted once as listener and once as narrator (order was counterbalanced).

### *Participants and Procedure*

Eighty-four unacquainted French speakers (34 men) participated in pairs in exchange for 10 Swiss Francs. Participants similar in age were paired to avoid status differences within pairs.

Participants arrived in separate rooms. They were instructed about how to complete the first (bogus) task and the subsequent phone conversation task. In the first task, participants wrote descriptions of two pictures. When they were finished, the experimenter informed them that the descriptions would be coded during their phone conversation and that they would be informed in case of a problem, thus setting the stage for the interruption later on.

For the conversation task, participants narrated a close-call event they had experienced using USB phones and Voice over Internet Protocol software, which recorded their conversation. Participants knew they were being recorded but not that they were being monitored in real time. After 6 minutes, the experimenter asked participants to switch narrators, and after 6 minutes of the second story, the experimenter stopped the experiment and debriefed participants. None suspected that the interruptions had been staged.

The interruptions took place about 90 seconds after the beginning of each story. Experimenters monitored the conversations, timing entry into the targets' room to interrupt them while they were either speaking or listening. The duration of the suspension was manipulated by bringing up a problem related to one of the descriptions. In both conditions, the experimenter entered the room, approached the target, and said *excuse me*. The experimenter then either asked the target a *yes/no* question (short interruption) or an open-ended question (long interruption) about one of the descriptions. Procedures were pretested to produce interruptions of approximately 10 seconds (short interruption) and 45 seconds (long interruption).

### *Data Preparation and Dependent Measures*

Both primary and secondary conversations were transcribed and checked using Praat 4.3.01 (Boersma & Weenink, 2007).

Variables related to politeness (Hypotheses 1 and 3) and reinstatement (Hypothesis 2) were coded. Variables involving subjective assessments were coded by two judges for two thirds of the data set. Interrater agreement was assessed using Cohen's kappa for dichotomous variables and correlation coefficients for interval-scaled variables.

**Politeness.** Politeness acts included *hold on*, interrogative form (*can you*), *please*, expressions of time (*one sec*), mitigations (*just*), justifications, thanks, and apologies (Brown & Levinson, 1987). Presence or absence of each act for each interruption was coded, both at suspension and reinstatement. Interrater agreement was high (Cohen's  $\kappa$  between .70 and .94, all  $ps < .001$ ). These acts were then tallied to create an interval-scaled measure of the amount of politeness. The number of words used for polite acts was also computed. Interrater agreement was high,  $r(28) = .85, p < .001$ .

**Reinstatement.** Effort of reinstatement was measured by three variables. The first was the number of words of *meta-communication*, or explicit signaling of problems in topic reconstruction (*where was I?*). By Hypothesis 2, longer interruptions should lead to more meta-communication than shorter ones. Interrater agreement was high,  $r(28) = .95, p < .001$ . The second variable was how far back in the conversation partners repeated utterances when reinstating (*rank of repeated utterances*). Utterances preceding the interruption were segmented and ranked. A higher rank indicates a repeated utterance more remote from the interruption. If partners continued without repeating, then this rank is zero (high interrater agreement,  $r = .97, p < .001$ ). By Hypothesis 2, longer interruptions should increase the rank of repeated utterances. The third variable was *verbatim repetition*, or the number of consecutive words in the first topical utterance at reinstatement that repeat words preceding suspension (satisfactory interrater agreement,  $r = .71, p < .001$ ). By Hypothesis 2, longer interruptions should decrease verbatim repetition, because of memory decay (Altmann & Trafton, 2002).

### Manipulation Check

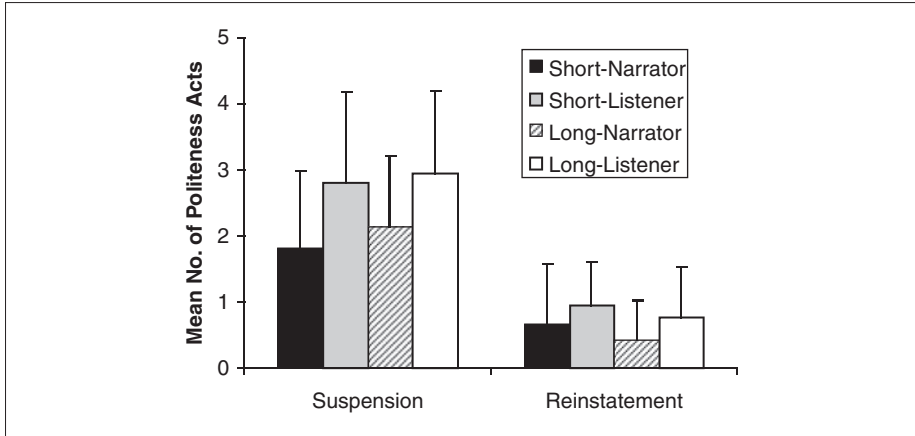
The duration manipulation was checked. As expected, short suspensions ( $M = 5.8$  s,  $SD = 2.6$  s) were significantly shorter than long suspensions ( $M = 34.3$  s,  $SD = 10.3$  s),  $F(1, 40) = 204.6, p < .0001, \eta_p^2 = .84$ .

## Results

### Politeness (Hypotheses 1 and 3)

For the number of politeness acts and number of words, 2 (Duration: Long vs. Short)  $\times$  2 (Role: Narrator vs. Listener)  $\times$  2 (Moment: Suspension vs. Reinstatement) mixed ANOVAs were conducted. Only significant effects are reported.

There was a main effect of role on politeness acts,  $F(1, 40) = 20.5, p < .001, \eta_p^2 = .34$ , and a main effect of moment,  $F(1, 40) = 120.8, p < .001, \eta_p^2 = .75$ . Means are shown in Figure 1. Thus, supporting Hypothesis 3, listeners were more polite than speakers.



**Figure 1.** Mean number of politeness acts at suspension and reinstatement for short and long interruptions of narrators and listeners

Against Hypothesis 1, however, duration did not affect politeness. Interestingly, more politeness acts were produced at suspension than reinstatement, as indicated by the main effect of moment.

Analysis of the number of politeness words revealed similar results. There was a main effect of role on politeness words,  $F(1, 40) = 14, p = .001, \eta_p^2 = .26$ . Listeners used more words ( $M = 24.1, SD = 17.4$ ) than narrators ( $M = 12.5, SD = 9.4$ ). And there was a main effect of moment,  $F(1, 40) = 7.23, p = .01, \eta_p^2 = .15$ . Pairs used more words at suspension ( $M = 10.8, SD = 6.4$ ) than at reinstatement ( $M = 7.5, SD = 6.4$ ). Thus, again, Hypothesis 3 was supported but Hypothesis 1 was not.

### *Reinstatement of the Topic (Hypothesis 2)*

To test Hypothesis 2, 2 (Duration: Long vs. Short)  $\times$  2 (Role: Narrator vs. Listener) mixed ANOVAs were conducted on the three dependent variables. There was a main effect of duration on meta-communication (words), with more meta-communication after long interruptions ( $M = 2.12, SD = 3.02$ ) than short ones ( $M = .95, SD = 2.16$ ),  $F(1, 40) = 4.93, p = .032, \eta_p^2 = .11$ .

There was a main effect of duration on the rank of repeated utterances, which was higher for long interruptions ( $M = 3.5, SD = 3.5$ ) than for short ones ( $M = 2.1, SD = 1.8$ ),  $F(1, 40) = 5.9, p = .02, \eta_p^2 = .13$ . Thus, for longer interruptions, partners repeated utterances from earlier in the narrative than for shorter interruptions.

Finally, there was a main effect of duration on verbatim repetition, with more words repeated for short interruptions ( $M = 2.2, SD = 2.6$ ) than long ones ( $M = 1.2, SD = 2.1$ ),  $F(1, 40) = 5.5, p = .024, \eta_p^2 = .12$ .

## Listener Strategies

Qualitative analyses of the actual strategies used by listeners revealed that they actively contributed to topic reinstatement.

Excerpt 1: Long interruption of narrator

23: Narrator: Okay so uh right uh where was I

24: Listener: Um you were saying that that your father was screaming when uh when the rescuers tried to put him on the stretcher

25: Narrator: And then afterwards well they put him on the stretcher [continues]

In 23, the narrator reinstates the conversation. He hesitates before asking the listener for help in reconstructing the topic. The listener obliges (24) by summarizing the gist of the story, whereupon the narrator continues. Thus, listeners can influence the way narrators continue by highlighting or glossing a particular aspect through their summaries. Listener and narrator can also contribute parallel versions to the reinstated topic.

Excerpt 2: Long interruption of narrator

28: Narrator: I resume

29: [laughter]

30: Narrator: And so they passed where was I they passed themselves off as the police

31: Listener: Yeah we were there

32: Narrator: Right and then they said we had a-

33: Listener: [*inaudible*] Called *his girlfriend*

34: Narrator: *The guy who*

35: Listener: actually

36: Narrator: Right they he called in fact it was three sisters [continues]

In 30, the narrator starts to continue, then self-interrupts (*where was I*) before continuing. In 31, the listener answers the narrator's query (*yeah we were there*). The narrator acknowledges this answer (32, *right*) and continues. But the listener offers his own version summarizing the talk before the interruption (33 and 35; *called his girlfriend actually*). Listener and narrator speak simultaneously before the narrator continues in 36. Excerpts 2 and 3 thus illustrate how participants jointly commit anew to a particular perspective on the narrative. During this process, listeners can briefly become conarrators of an event they have themselves not witnessed (Goodwin, 1987).

The qualitative analyses also revealed listeners' strategies for dealing with the added face threat of interrupting the narrator's turn at talk before suspending. One strategy is to wait for a potential utterance completion point (Sacks, Schegloff, & Jefferson, 1974), acknowledge the narrator's utterance, and then suggest suspending.

Excerpt 3: Long interruption of listener

101: Narrator: Th- the teacher wasn't there because he said put up the goals then  
he went away uh I don't know where

102: Listener: Oh yeah right. Hold on t- t- two

103: Narrator: *yeah yeah go ahead*

104: Listener: *seconds there's she* just uh has a question uh

Here, the listener waits till the narrator completes an utterance, acknowledges (*oh yeah right*), and then uses the floor to request suspension (*hold on t- t- two seconds*). A second, less polite strategy is to directly interrupt the narrator.

Excerpt 4: Long interruption of listener

65: Narrator: there's a road uh paved where cars pass and we know that if we  
follow *this road we'll come*

65.1: Listener: *Sorry but there's*

65.2: Narrator: to the chalet

66: Listener: I have to interrupt you sorry but here's Sylvie [the experimenter]  
who's asking me something wait just

67: Narrator: Yeah

Here, the listener interrupts the narrator mid-utterance. This strategy is disruptive, as suggested by the overlapping speech in 65 and 65.1. It also requires the listener to engage in extensive politeness, apologizing twice. Thus, these excerpts illustrate the dilemma of listeners: They can either defer interrupting the primary conversation (thus keeping the interrupter waiting) or accommodate the interrupter, which entails directly cutting into the narrator's turn at talk.

## Discussion

Hypothesis 1 was not supported: The duration of the suspension did not affect politeness. This result partly contradicts previous findings of Chevalley and Bangerter (in press). They found that long interruptions were related to politeness in a field study. In an experiment, they also found that long interruptions led to more politeness words but not more politeness acts. The present result may be because of differences in the conversational tasks. Here, participants were interrupted while narrating vivid personal stories. They may have preferred applying politeness at suspension and moving on with the story after the interruption. Another possibility is that the differences in duration may have been too small to cause differences in politeness. The proposition that face threat increases in direct proportion to duration may not hold for short durations, where participants may find it more cumbersome to engage in extensive politeness than to proceed with reinstating. Further exploration of the relationship between the duration of interruptions and politeness is recommended.

Results support Hypothesis 2. Collaborative effort (more meta-communication, higher rank of repeated utterances, less verbatim repetition) to reinstate the topic was higher after long interruptions than short ones. This increase seems to result both from demands on individual memory (verbatim repetition) and from coordination of common ground (meta-communication).

Results support Hypothesis 3. Listeners were more polite in suspending than narrators. This is because listeners need to interrupt the narrator and take the floor before proposing the suspension, whereas narrators already have the floor and just need to interrupt themselves. In the qualitative analyses, listeners had to choose between interrupting the narrator and keeping the experimenter waiting. Part of this predicament is because of the particularities of telephone conversation. Because the physically remote narrator cannot witness the solicitation of the listener by the experimenter, it is the listener's responsibility as target to alert the narrator. If the narrator, experimenter, and listener/target are copresent, suspending may be easier. But the qualitative analyses also revealed that listeners can actively contribute to topic reconstruction, extending previous findings on the role of listeners as conarrators. Bavelas, Coates, and Johnson (2000) showed that listeners contribute to narrative delivery by giving specific feedback. The present study shows that listeners can actually exert much more influence on the subsequent course of the narrative.

One limitation of this study is the restricted range of the duration manipulation. Qualitatively different phenomena may emerge for longer durations. For example, as duration increases, nontargeted participants may themselves engage in other activities. As a result, they may be unable to aid narrators in topic reconstruction. Or targets may feel obliged to release their partners from waiting (e.g., *I'll call you back*). Such large-scale activity-switching behavior is rare in an experimental setting. Another potential limitation is that, in spite of the cover story, participants may not have attributed as much responsibility to the target as they might have in real life.

Nevertheless, this study contributes to the understudied topic of how collaborative activities are suspended and reinstated, by illustrating the asymmetrical roles of listeners and narrators. Collaborative suspensions and reinstatements are important because many real-life interruptions concern collaborative tasks executed in parallel (Gonzalez & Mark, 2005). The microprocesses involved in managing these interruptions are still poorly understood.

Politeness in suspensions is an important topic for future research in work settings because of status differences. Yet little is known about how politeness interacts with status differences in managing suspensions. Furthermore, in some organizational situations, interruptions attain a legitimacy that makes politeness unnecessary. For example, waiters interrupting diners may not apologize for interrupting, because that is part of their job. But other situations are not as clear-cut. Understanding when participants construe task interruptions as either legitimate or warranting justification could further understanding of work-related processes such as time management (Perlow, 1999) or stress (Semmer, Jacobshagen, & Meier, 2009).



More research on collaborative topic reinstatement is necessary. Results show that narrators can enlist listeners' help in topic reconstruction. This may seem similar to the effect of a contextual cue that aids goal retrieval (Hodgetts & Jones, 2006b): Narrators use listeners as cues to retrieve the topic. But analysis of the actual dialogue reveals that listeners can become conarrators that actively influence topic reconstruction, especially because they may pursue their own conversational goals that are only partly aligned with narrators' (Russell & Schober, 1999).

### **Acknowledgment**

We thank Céline Bulliard for assistance in conducting the study and two anonymous reviewers for their comments.

### **Declaration of Conflicting Interests**

The authors declared no conflicts of interest with respect to the authorship and/or publication of this.

### **Funding**

The authors disclosed receipt of the following financial support for the research and/or authorship of this article:

This study was supported by the Swiss National Science Foundation (Grant No. 100013-112568/1 to Adrian Bangerter).

### **References**

- Altmann, E. M., & Trafton, J. G. (2002). Memory for goals: An activation-based model. *Cognitive Science*, *26*, 39-83.
- Bangerter, A., Clark, H. H., & Katz, A. R. (2004). Navigating joint projects in telephone conversations. *Discourse Processes*, *37*, 1-23.
- Bavelas, J. B., Coates, L., & Johnson, T. (2000). Listeners as co-narrators. *Journal of Personality and Social Psychology*, *79*, 941-952.
- Boersma, P., & Weenink, D. (2007). Praat: Doing phonetics by computer (Version 4.5.26) [Computer program]. Retrieved May 8, 2007, from <http://www.praat.org/>
- Brown, P., & Levinson, S. (1987). *Politeness: Some universals in language use*. Cambridge, UK: Cambridge University Press.
- Chevalley, E., & Bangerter, A. (in press). Suspending and reinstating joint activities with dialogue. *Discourse Processes*.
- Clark, H. H. (2006). Social actions, social commitments. In N. J. Enfield & S. C. Levinson (Eds.), *Roots of human sociality: Culture, cognition and interaction* (pp. 126-150). Oxford, UK: Berg.
- Gonzalez, V., & Mark, G. (2005, September). *Managing currents of work: Multitasking among multiple collaborations*. Paper presented at the proceedings of the Ninth European Conference on Computer-Supported Cooperative Work, Paris.
- Goodwin, C. (1987). Forgetfulness as an interactive resource. *Social Psychology Quarterly*, *50*, 115-130.

- Hodgetts, H. H., & Jones, D. M. (2006a). Interruption of the Tower of London task: Support for a goal-activation approach. *Journal of Experimental Psychology: General*, *135*, 103-115.
- Hodgetts, H. H., & Jones, D. M. (2006b). Contextual cues aid recovery from interruption: The role of associative activation. *Journal of Experimental Psychology: Learning, Memory and Cognition*, *32*, 1120-1132.
- Horton, W. S., & Gerrig, R. J. (2005). Conversational common ground and memory processes in language production. *Discourse Processes*, *40*, 1-35.
- Perlow, L. A. (1999). The time famine: Toward a sociology of work time. *Administrative Science Quarterly*, *44*, 57-81.
- Russell, A. W., & Schober, M. F. (1999). How beliefs about a partner's goals affect referring in goal-discrepant conversations. *Discourse Processes*, *27*, 1-33.
- Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simple systematics for the organization of turn-taking in conversation. *Language*, *50*, 696-735.
- Semmer, N., Jacobshagen, N., & Meier, L. L. (2009). *Illegitimate tasks as a source of stress*. Manuscript submitted for publication.

## Bios

**Adrian Bangerter** is professor of work psychology at the University of Neuchâtel, Switzerland. He is currently the editor-in-chief of the *Swiss Journal of Psychology*. His research interests include coordination processes in conversation, gesture, and language; interactions between recruiters and applicants in personnel selection; and cultural transmission of knowledge and popular beliefs.

**Eric Chevalley** is a doctoral student at the University of Neuchâtel, Switzerland. He is interested in coordination processes in pairs and in groups. His dissertation focuses on effects of interruptions in joint activities.

**Sylvie Derouwaux** has completed her master's degree in work and organizational psychology at the University of Neuchâtel, Switzerland.