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Anticipating Distracted Addressees: How Speakers' Expectations and Addressees' Feedback Influence Storytelling

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To what extent are speakers' utterances shaped by their expectations of addressees' behavior, and to what extent are they shaped by the feedback they receive from addressees? In 39 pairs (32 men and 46 women), speakers told addressees 2 jokes. Addressees were either attentive or else distracted by a second task, and speakers expected addressees to be either attentive or distracted. Attentive addressees gave more feedback than distracted addressees. Speakers with attentive addressees told the jokes with more vivid details than those with distracted addressees, but only when they expected attentive addressees. Speakers with distracted addressees put less time into the task than did those with attentive addressees, but only when they did not expect them to be distracted. These results suggest that speakers' narrations are shaped not only by addressees' feedback, but also by how speakers construe a lack of feedback on the part of a distracted addressee.

Imagine you are filling in your best friend on the latest gossip. The stories you want to tell her are juicy, so you expect her to be quite engaged. However, you quickly notice that she does not react much. In fact, she does not seem to be very interested at all. Disappointed, you change the topic of conversation. Later, she tells you that she pulled an all-nighter yesterday and has not slept since. If

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you had known this earlier, would you have reacted differently to her lack of interest in your stories? To what extent were your anecdotes shaped by how you anticipated your addressee to behave, and to what extent were they shaped by the actual feedback you received in the interaction? This report aims to address these questions.

We begin by considering communication as a collaborative endeavor, with speakers and addressees jointly constructing perspectives (rather than sending messages and passively receiving them; see Bavelas, Coates, & Johnson, 2000; Clark, 1996; Clark & Wilkes-Gibbs, 1986; Goodwin, 1979; Krauss & Fussell, 1996; Kraut, Lewis, & Swezey, 1982; Schober & Clark, 1989). Speakers tailor their utterances for their addressees, and this has been labeled *audience design* (Bell, 1984; Fussell & Krauss, 1989; Schober & Brennan, 2003; Shatz & Gelman, 1973). Audience design is driven by at least two kinds of information: the initial expectations or knowledge with which people begin a conversation, and the feedback they receive from their partners as the conversation unfolds.

The first of these kinds of information that have been shown to shape utterances, prior expectations, may originate from a variety of sources, including assumptions about community co-membership (Clark & Marshall, 1981), previous experience, common ground, or familiarity with a particular partner (Clark & Marshall, 1981; Clark & Wilkes-Gibbs, 1986; Fussell & Krauss, 1989); stereotypes, such as gender (e.g., Fussell & Krauss, 1992) or age (e.g., Hummert & Shaner, 1994); or knowledge about a partner's needs or expertise (e.g., Brennan, 2005; Isaacs & Clark, 1987; Lockridge & Brennan, 2002). This information may be known from the start. Feedback, on the other hand, becomes available only as an interaction unfolds, but can also have a profound influence on utterances. For instance, when speakers are deprived of addressee feedback, their expressions become less efficient, using more words to express the same content (e.g., Krauss, Garlock, Bricker, & McMahon, 1977; Krauss & Weinheimer, 1966) and becoming less comprehensible (Kraut et al., 1982).

Many experiments that demonstrate audience design—even among those conducted in an interactive setting—do not distinguish the contribution of speakers' initial expectations from that of addressees' feedback in shaping utterances (e.g., Bavelas et al., 2000; Brennan & Clark, 1996; Lockridge & Brennan, 2002; Pasupathi, Stallworth, & Murdoch, 1998). What we do know is that when relevant information about an addressee is not known in advance, speakers (without initial expectations) can quickly adapt to what they learn about their partners over the course of an interaction. For example, in a referential communication study by Isaacs and Clark (1987), pairs of strangers were left on their own to discover relevant information about their partners' expertise as they matched postcards of New York landmarks together, over six trials. They quickly assessed each other's status as native New Yorkers or non-natives, and then used this knowledge to guide their use of names (which are appropriate referring expressions for

natives) versus descriptions of the landmarks (appropriate for non-natives). This adaptation began in the first few turns and was achieved rapidly, over the first few matching trials. So, in the absence of initial expectations about a partner, relevant information is acquired from a partner's responses that inform and guide audience design.

Initial expectations about a conversational partner, when they exist, may turn out to be wrong. However, even when an expectation has no basis in fact, it may become a powerful force in shaping events as a *self-fulfilling prophecy*, as described by Merton (1968). With respect to the topic of audience design in communication, the question remains as to how robust an influence an expectation can be, in the face of feedback that does not necessarily confirm the expectation. Consider what happens when conversational partners are actually misinformed about each other. A study by Russell and Schober (1999; for a similar study, see Wilkes-Gibbs, 1986) examined the effects of having mismatched goals: Whereas one conversational partner needed very detailed information to successfully identify a referent, the other needed less detailed information. Partners were led to expect either incongruent or congruent conversational goals (so, in the latter case, they were misinformed). Speakers who mistakenly expected to have the same conversational goals misestimated their partners' actual informational needs: Those who thought their partners needed less detailed information initiated referring in a single, one-shot description, whereas those who thought their partners needed more detailed information initiated multiple-exchange contributions. Crucially, although their partners' feedback could have informed them about their partners' real conversational needs, speakers did not revise their initial assumptions. Instead, they attributed their partners' incongruent behavior to their partners' particular personality traits. These results suggest that speakers' expectations about partners' conversational needs can have such a strong influence that they can override evidence to the contrary, particularly if the speakers can make an attribution about the unexpected feedback.

The ways in which people adapt to their conversational partners' behavior have been shown to be flexible. A study by Brennan (1991) aimed to tease apart initial expectations about a partner from subsequent feedback, using an interactive text communication task in which a remotely located confederate partner provided one of three different styles of rule-based responses to people who expected to interact with either a natural language-processing computer or a human partner. The responses they received from the confederate (who was blind to their expectations of human or computer) were phrased in rule-based ways: either short, elliptical turns or else complete, grammatical sentences. At the outset of the interaction, utterances meant for a human partner were more polite and sensitive to social context, contained more first- and second-person pronouns, explicitly acknowledged partners' responses, and were more likely to be grammatical sentences than those meant for a computer partner. During the

interaction, however, people adapted their utterances syntactically to match their remote partner's response style, producing more elliptical or telegraphic turns to a partner who used short turns, and more complete sentences to a partner who used complete sentences. During the last half of the interaction, their response style was shaped entirely by the confederate's response style (such that initial expectation did not matter by the end of the interaction), whereas other choices related to social context (as measured by the use of first- and second-person pronouns and by indirect requests) remained stable and consistent with initial expectations about whether the partner was human or computer. These results suggest that audience design is not only complex but also flexible, with some aspects of utterances shaped more by speakers' expectations and with others shaped more by addressees' feedback responses.

Even when the nature of an interaction is relatively monologic, such as during storytelling, feedback plays an important role in audience design. In a study by Bavelas et al. (2000, Experiment 1), speakers told addressees an autobiographical story. Addressees' attention to the narrations was manipulated by instructing one half of the addressees to count the number of days until Christmas while speakers were telling the stories. Speakers with distracted addressees received less spontaneous feedback and told their stories less well. Similarly, a study by Pasupathi et al. (1998) examined speakers' memory for a story when told to distracted addressees. Speakers interacting with distracted addressees were less fluent, tended to speak for less time, and recalled less, whereas those interacting with attentive addressees recalled more information, both immediately and after a delay. Like Bavelas et al., Pasupathi et al. concluded that speakers' retellings were affected by addressees' feedback behavior.

However, in both of these investigations, speakers were able to anticipate their addressees' distraction and might have interpreted addressees' behavior accordingly. Speakers in Bavelas et al.'s (2000) Experiment 1 were present when addressees received instructions on the distractor task. Speakers in Pasupathi et al.'s (1998) study were forewarned that their addressees would be distracted by a second task. Therefore, speakers' expectations might have influenced the course of the interaction. Because neither study teased apart the effects of addressees' feedback behavior from speakers' expectations about this behavior, it is unclear what caused the loss of quality in the narrations: Did addressees' lack of feedback impair speakers' narrations, or was it the expectation of interacting with distracted addressees that caused speakers to change their behavior, or perhaps a combination of both?

Bavelas et al. (2000) addressed this concern in their Experiment 2. In that study, one half of the addressees were instructed to count words beginning with a /t/ sound, whereas all of the speakers were told their addressees would be "listening for something" during the storytelling. So, the initial instructions speakers received were the same whether addressees were distracted or not (although

expecting one's addressee to be "listening for something" might lead to an expectation of a more attentive addressee by some speakers and a more distracted one by others). Again, results showed that speakers with distracted addressees received less feedback and told stories less well, which confirmed that feedback influences narration quality. In particular, the endings of the narrations, which were intended to be suspenseful, fell flat when told to distracted addressees. However, neither Bavelas et al.'s nor Pasupathi et al.'s (1998) studies provided a direct investigation of the possibly distinct roles speakers' expectations and addressees' feedback play in shaping utterances.

We set out to more directly test the effects of addressees' behaviors and speakers' expectations of addressees' behaviors on storytelling in face-to-face conversations. One half of our addressees were distracted from fully attending to the speakers' narrations, and one half were able to pay full attention. Based on previous literature highlighting the importance of addressee feedback, we reasoned that distracted addressees would have a detrimental effect on speakers' narrations. However, based on previous literature showing how expectations can shape speaking, we hypothesized that speakers would also adjust their narrations based on their expectations about addressees' behavior. To test this, one half of the speakers interacting with distracted addressees expected to interact with distracted addressees, and the other half expected to interact with attentive addressees; and one half of the speakers interacting with attentive addressees expected to interact with attentive addressees, whereas the other half expected to interact with distracted addressees. This design enabled us to tease apart the effects of distracted addressees from the effects of speakers' expectations about addressees' behavior.

PREDICTIONS

We expected that the amount of time and effort speakers put into the interaction and the quality of the narrations themselves would vary. The simplest predictions are that one variable may take precedence over another in guiding audience design—that is, if feedback trumps initial expectations (as was the case for Brennan's, 1991, syntactic and lexical variables, if not for the social context variables), then whether addressees are *actually* attentive should matter more than speakers' expectations about their attentiveness. If, on the other hand, expectations trump feedback (as apparently was the case in Russell & Schober's, 1999, study, where speakers did not seem to detect that they were providing their partners with too much or not enough information), then speakers who expected attentive addressees should put in more effort and produce the most vivid narrations. In fact, this might be even more likely to occur in a relatively monologic task, like storytelling, than in a referential communication task.

However, we expected that the pattern of findings would be more complex: For addressee distraction, both feedback and expectations about addressee's distraction should shape narrations. We expected that an addressee's preoccupied state would be detectable (given Bavelas et al.'s, 2000, findings) and, at the same time, be attributable to a partner's level of distraction (rather than to their personality, as was the case in Russell & Schober's, 1999, study). If both feedback and expectations do play a role in audience design for distracted addressees, then speakers should put more effort into an interaction and the narration should be of higher quality when addressed to an attentive addressee, especially one who is expected to be attentive. Finally, when a speaker has an attribution for an addressee's distracted behavior, this may mitigate any effect of disrupted feedback on the narration. Because speakers and addressees collaborate during communication (see Clark & Wilkes-Gibbs's, 1986, principle of *mutual responsibility*), one partner may put in more effort to compensate for another's deficiencies. So, if speakers aim to do the task well, then they should try to compensate when they know their addressees are distracted. These predictions are not mutually exclusive.

METHOD

Participants

Eighty-six native English-speaking undergraduates from Stony Brook University (34 men and 52 women) participated in 43 pairs. The gender composition of each pair was balanced across experimental conditions and conversational role of being either speaker or addressee. In all pairs, partners were previously unacquainted, with the exception of 1 pair in which partners were loosely acquainted. Three pairs were excluded from the analysis for blatantly not following instructions, and were replaced with new pairs. A fourth pair was excluded after the data collection was completed because the addressee turned out to have ignored the distraction task during the second storytelling (covertly, as discovered by the button press data for the secondary monitoring task). As a result, each experimental condition contained 10 pairs, except for one (in which the speaker expected an attentive addressee, but the addressee was distracted) that contained 9 pairs. All participants consented to being videotaped and gave permission for the analysis of their tapes. For their participation, they received research credit or were paid $8.

Materials

The materials consisted of two jokes, 313 and 440 words long, respectively, which were each provided on a sheet of paper to the speaker before each

retelling (see Appendix A). To make the task appropriately challenging, the jokes contained many narrative details and had an elaborate plot. The retellings of the two jokes were separated by a filler task in which speakers described an apartment layout to addressees.

Design and Procedure

The experimental design manipulated how much attention addressees could pay to speakers and whether speakers expected attentive or distracted addressees. Each conversational dyad participated in one of four experimental conditions: (a) speaker expected attentive addressee–addressee was attentive, (b) speaker expected attentive addressee–addressee was distracted, (c) speaker expected distracted addressee–addressee was distracted, and (d) speaker expected distracted addressee–addressee was attentive. In two of the four experimental conditions, therefore, speakers held mistaken expectations about their addressees' behavior: When they expected distracted addressees, the addresses were, in fact, attentive, and vice versa. Each session was both audiotaped and videotaped.

Upon arrival, participants were informed that they would be interacting with another person. Participants were assigned to either the role of speaker or addressee. They were then separated to receive individual instructions.

One half of the addressees were instructed to listen carefully to the jokes the speaker was going to tell because they would later have to retell them. The other half were told that they would have a second, "secret" task to work on. This task was inspired by one used by Bavelas et al. (2000; Experiment 2). In that experiment, distracted addressees counted words beginning with /t/ and proved to be so distracted that speakers became uncomfortable (J. B. Bavelas, personal communication, February 3, 2006). We alleviated the distraction task somewhat by instructing addressees to count "ands" instead of words beginning with /t/. Counting "ands" was assumed to be somewhat less disruptive because they are more syntactically predictable. Addressees were instructed to surreptitiously press a button installed underneath their chair whenever they detected an "and." The button activated a light, which was positioned out of sight of both speaker and addressee, and was captured by one of the cameras.

One half of the speakers were led to expect their addressees' distraction. They were informed that their addressees would be working on a second task, and were warned not to be surprised if their partner seemed distracted. The exact nature of the addressees' task was not revealed. The other half of the speakers were not informed about the distraction task. All speakers knew their addressees would have to recall the jokes and their team performance would be judged on the accuracy of their addressees' recall. Therefore, it was assumed that in the absence of information to the contrary, speakers would be expecting attentive addressees.

Speakers were given time to study the jokes until they felt ready to retell them. After the retelling of the first joke, speakers returned to a separate room and prepared for the next task while addressees retold the joke to the experimenter. At the end of the experiment, speakers and addressees were fully debriefed about the nature of the study.

Analysis

Addressee feedback. Both verbal and nonverbal addressee feedback was transcribed following the conventions described in Bavelas et al. (2000). Addressee feedback was defined as verbal or nonverbal responses on the part of addressees that indicated they were attending, following, appreciating, or reacting to what speakers were saying. Included in the analysis were verbal contributions to the interaction, as well as head nods and vocalizations such as "yeah," "mhm," "huh," and laughter. Excluded from the analysis was ambiguous or subtle behavior such as eye blinking, raising an eyebrow, or faint smiling. Addressee feedback that continued as the speaker told the joke (e.g., nodding continuously) was coded as one feedback response. Different types of addressee feedback that occurred at the same time and appeared to convey the same meaning (e.g., head nodding while saying "yeah") were also coded as one feedback response (as did Bavelas et al., 2000). Addressee feedback was normalized by the number of words used by the speaker (number of addressee feedback responses per 100 speaker words). We also coded how amused addressees appeared to be at the end of each joke by measuring the length of displays of amusement (both visual and auditory expressions of laughter) at the joke's final punch line.

Addressee distraction. As a manipulation check, the percentage of "ands" detected by the addressee was calculated to confirm that addressees were sufficiently distracted. Due to technical difficulties, the button that addressees used to mark "ands" did not function for seven of the interactions. In these cases, the number of "ands" addressees reported hearing after the story was used to calculate the detection rate (the denominator in both cases was the actual number of "ands" in the transcribed story). On average, addressees caught 53.40% ($SD = 5.39$) of "ands" speakers produced. Considering that the word "and" is often subject to shortening and, therefore, can be hard to detect, this level of performance on the secondary detection task was confirmed as having the potential to cause an appropriate level of distraction.

Duration of interaction. The duration of the interaction was recorded as a measure of how much effort speakers put into the interaction. Time was measured from the point the speaker started the task until the last utterance by either speaker or addressee.

Speakers' joke retellings. Errors in retellings (incorrect information, such as calling a *fox* a "wolf") were rare, and so were ignored. Speakers' retellings of the jokes were coded on two dimensions: how completely the jokes were told with respect to the original versions of the jokes, and how many extra details (elaborations and repetitions) speakers added to the jokes that had not been present in the original versions.

For this, the original jokes were divided into narrative units. A narrative unit consisted of a proposition or a set of propositions forming an event that advanced the plot of the joke: for example, (1) "An atheist was taking a walk through the woods," (2) "admiring all that evolution had created" (3) " 'What beautiful trees,' he said to himself." In total, the original two jokes consisted of 103 narrative units. The jokes retold by speakers were segmented into narrative units in a similar fashion. The narrative units of the retellings were then compared with the narrative units of the original joke and categorized by Anna K. Kuhlen as "original element," "extra detail," or "other" (the category "other" referred to utterances not pertaining to the joke itself).

Narrative units were coded as to whether they matched the original joke. For example, the following utterance, "There was some- this atheist he was walking in the forest, right?," was treated as one narrative unit, and was coded as referencing the original element, "An atheist was taking a walk through the woods." The order in which narrative units were mentioned was not considered. The more narrative units matched original elements, the more complete the retelling was judged to be.

Narrative units were coded as extra details if the main idea had not been mentioned in the original joke, or if the narrative unit mentioned the original element more than once. For example, of the following three narrative units, the first one was coded as the original element: "He saw a 7-foot grizzly charging right towards him"; and the last two narrative units were coded as extra details: "(1) so he looks and there's this HUGE seven foot grizzly b-bear. (2) and he's like holy shit (3) you know what am I supposed to do?" Also, the narrative unit, "and like why should I (-) help YOU," would be coded as extra detail because it was mentioned earlier in the retelling ("he's like um (-) why should I help you in this predicament, right?"). All of the extra details were consistent with the joke; none could be considered to be inaccuracies. See Appendix B for additional examples.

Reliability. A second coder, blind to the experimental conditions, coded 70% of all speakers' joke retellings. The small number of disagreements in coding decisions were resolved by discussion. Kappa agreement (Cohen, 1960) between the two coders was .84 over 2,280 coding decisions. According to Krippendorff (1980), this represents strong agreement between raters.

Number of words used by speaker. The number of words used by the speaker to tell the jokes was recorded. Vocalizations such as "uh," "um," or "mhm" did not count as words. Contracted forms such as "don't" and "it's" counted as one word.

Addressees' recall of the jokes. To assess how completely addressees were able to retell the jokes later, each addressee's version of the joke was compared to the corresponding speakers' version of the joke. In a procedure similar to the one described earlier, narrative units recalled by addressees were classified as either *speaker elements* (mentioned in the speaker's version of the joke) or *intrusions* (not mentioned in the speaker's version of the joke). To take into account that some speakers may have told more elaborate jokes than other speakers, the final analysis of speaker elements was based on the percentage of narrative items recalled by addressees. In addition, the number of words addressees used for retelling the jokes was recorded.

Overall "quality" of narrations. In addition to these quantitative measures, we attempted to measure the quality of the narrated jokes. We randomly assigned the narrations into quartets, such that each quartet contained one narration from each of the four conditions (because 1 pair had been excluded for not doing the task, 1 pair of each of the remaining conditions was randomly excluded, resulting in 9 quartets for each joke, totaling 72 narrations). Three independent raters (blind to the experimental conditions and hypotheses) listened to each quartet, first ranking the narrations, and then rating each on how well they thought the joke was told on a scale from 1 (*very poor, even for an ordinary conversation*) to 5 (*excellent, for a nonprofessional*). This rating scale was adopted from Bavelas et al. (2000). These data were analyzed for effects of speaker expectation and addressee attentiveness in two different ways: by comparing at the average numerical ratings for conditions and by examining the within-quartet rankings for which narrations were ranked as "best" or "worst."

Analyses. Repeated-measures analyses of variance (ANOVAs) indicated that the two jokes did not reliably differ from each other with respect to the independent measures. Therefore, for final data analysis, dependent measures from both jokes were combined and entered into 2 × 2 ANOVAs (Attentive vs. Distracted Addressee × Speaker Expects Attentive vs. Speaker Expects Distracted Addressee).

RESULTS

Counting "ands" was indeed distracting; addressees who counted "ands" gave significantly less feedback than addressees who did not count "ands," $F(1, 35) =$

9.42, $p < .01$ (see Figure 1). Attentive addressees laughed marginally longer after punch lines than did distracted addressees (3.1 s vs. 2.3 s), $F(1, 35) = 2.94$, $p < .10$; there was no expectation effect or interaction. Addressees' distraction did not discourage speakers from doing the task: speakers told their jokes equally completely, as measured by the number of original narrative elements mentioned in the retellings, regardless of their addressees' attentiveness, $F(1, 35) = 1.35$, $p = .25$; regardless of their expectations about addressees' attentiveness, $F(1, 35) = 0.09$, $p = .76$; and with no interaction between expectation and addressee attentiveness, $F(1, 35) = 1.08$, $p = .31$ (see Table 1). Also, speakers did not differ in the number of words used toward attentive versus inattentive addressees, $F(1, 35) = 0.91$, $p = .35$; nor to addressees expected to be attentive versus those expected to be inattentive $F(1, 35) = 0.23$, $p = .64$; nor was there an interaction, $F(1, 35) = 1.05$, $p = .31$ (although, numerically speaking, the most words were produced in narrations toward attentive addressees expected to be attentive, but this was not reliable; see Table 1).

Speakers did differ in how many extra details they provided to attentive versus distracted addressees. Overall, attentive addressees elicited more extra detail from speakers than did distracted addressees, $F(1, 35) = 3.96$, $p = .06$. However, as Figure 2 illustrates, this was driven entirely by speakers with attentive addressees mentioning more extra details when they were expecting

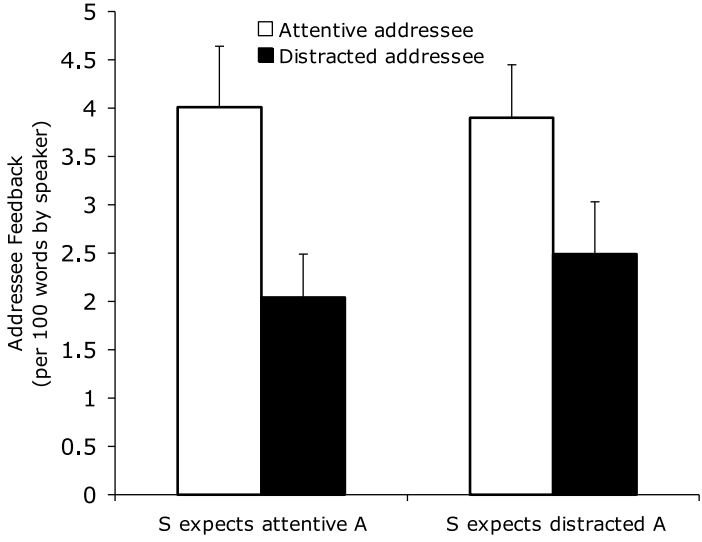

FIGURE 1 Mean values and standard errors for number of addressee feedback responses per 100 speaker words relative to speakers' expectations and addressees' feedback ($N = 39$; S = speaker; A = addressee).

TABLE 1
Means and Standard Deviations for Speakers' and Addressees' Joke Retellings Relative to Speakers' Expectations and Addressees' Feedback

Measures	*Speaker Expectations*	*Attentive Addressee*		*Distracted Addressee*	
		M	*SD*	*M*	*SD*
Speakers' joke retellings					
Number of words	Attentive addressee	870.30	185.61	791.67	66.34
	Distracted addressee	810.60	120.80	813.40	82.03
Original narrative elements	Attentive addressee	73.80	10.98	81.00	8.63
	Distracted addressee	76.20	11.57	76.60	9.23
Addressees' joke recall					
Number of words	Attentive addressee	677.80	136.06	583.78	58.99
	Distracted addressee	656.60	85.56	562.40	109.22
Speaker elements (%)	Attentive addressee	59.10	8.12	57.21	8.36
	Distracted addressee	70.25	11.84	56.75	9.87
Intrusions	Attentive addressee	7.95	2.34	6.17	2.76
	Distracted addressee	6.05	2.50	6.70	5.08

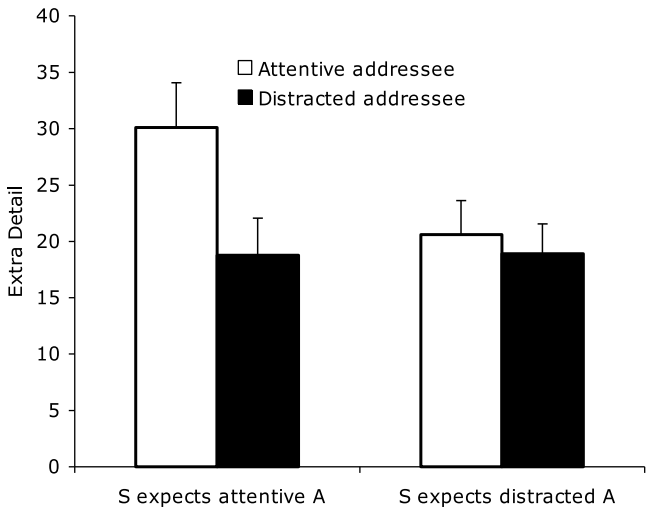

FIGURE 2 Mean values and standard errors of number of extra details provided in speakers' narrations relative to speakers' expectations and addressees' feedback ($N = 39$; S = speaker; A = addressee).

attentive addressees than when they were expecting distracted addressees. These speakers provided, on average, 10.7 more extra details than speakers averaged in the other three conditions, *post hoc* contrast, $F(1, 35) = 10.67$, $p < .01$. Speakers with distracted addressees gave about the same amount of extra detail whether they expected attentive or distracted addressees.

Speakers also differed in the amount of effort they put into the interaction, as estimated by how much time they spent telling the jokes. This depended on both addressees' level of attention and speakers' expectations (see Figure 3). When addressees' attentiveness matched speakers' expectations, speakers spent nearly 44 s longer telling the jokes than when addressees' level of attention and speakers' expectations were mismatched. This pattern emerged as a significant interaction, $F(1, 35) = 4.54$, $p < .05$. Specifically, speakers with attentive addressees told jokes that were nearly 39 s longer when they expected their addressees to be attentive than when they expected them to be distracted, and speakers with distracted addressees told jokes that were nearly 49 s longer when addressees were indeed distracted than when they were actually attentive. This finding for attentive addressees is consistent with one of Kraut et al.'s (1982) findings: Speakers without feedback spend less time speaking. That this effect is reversed when addressees are known to be distracted provides additional evidence that audience design for distracted addressees is sensitive to expectation, as well as to feedback.

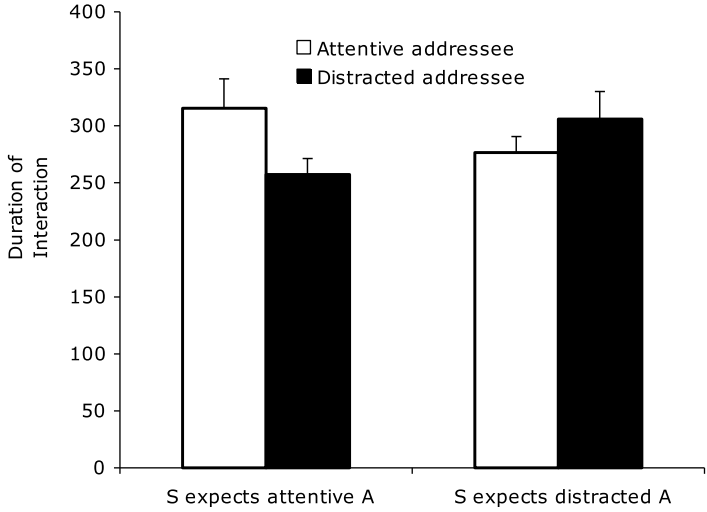

FIGURE 3 Mean values and standard errors for duration of interaction (in seconds) relative to speakers' expectations and addressees' feedback ($N = 39$; S = speaker; A = addressee).

When addressees recalled the jokes later by retelling them to the experimenter, attentive addressees used more words than distracted addressees, $F(1, 35) = 8.20$, $p < .01$ and also recalled a higher percentage of narrative elements, $F(1, 35) = 6.13$, $p < .05$ (see Table 1). Attentive addressees recalled a marginally higher percentage (11.15%) of all the narrative elements they had heard if speakers had originally expected them to be distracted, rather than attentive, yielding a marginal interaction, $F(1, 35) = 3.49$, $p = .07$. Attentive and distracted addressees did not differ in the number of intrusions (incorrect, confabulated, or any other information not heard originally) that they produced, $F(1, 35) = 0.27$, $p = .6$.

Concerning the overall "quality" of the 76 jokes, there was, unfortunately, little agreement among the three undergraduate raters about what constituted a well-told joke; their ratings showed a relatively low intraclass correlation (.41). There were no reliable differences related to the addressee attentiveness or speaker expectation factors in the averaged ratings, nor in best-ranked or worst-ranked jokes within the quartets.

DISCUSSION AND CONCLUSION

Our findings confirm that addressees shape speaking. Speakers were sensitive to addressee feedback, telling jokes more vividly (with more extra detail) when they interacted with attentive addressees than with distracted addressees. This result is consistent with previous findings by Bavelas et al. (2000) and Pasupathi et al. (1998) that distracted addressees weaken speakers' narrations.

However, our findings go beyond these previous studies to demonstrate that speaking is shaped by speakers' expectations about addressees' behavior as well: Speakers provided attentive addressees with extra details only when they also *expected* attentive addressees. Speakers who expected distracted addressees, but who were, in fact, interacting with attentive addressees (who give regular feedback), nevertheless told jokes with fewer extra details. Thus, being an attentive addressee is not enough; speakers must also expect addressees to be attentive in order to narrate vividly. This somewhat complex pattern of findings is consistent with our prediction that both feedback and expectations matter. Speakers may notice when addressees expected to be attentive are not, but may notice less when speakers expected to be distracted are actually attentive. Alternatively, this effect could be driven by having a normative versus an unusual addressee, as speakers ordinarily expect attentiveness and addressees are usually attentive (we thank an anonymous reviewer for pointing this out). In any event, speakers' expectations of interacting with distracted addressees decrease the vividness or detail in narrations such that they become comparable to narrations told to addressees who actually *are* distracted. Being able to anticipate an

addressee's distraction does not eliminate the detrimental effect of having a distracted addressee in this respect.

However, anticipating distraction on the part of an addressee does help by enabling speakers to determine the appropriate amount of effort to put into the interaction, presumably helping to mitigate the effect of the addressee's distraction. When speakers can anticipate an addressee's distraction, they spend more time (a proxy for effort) in the interaction than when they cannot anticipate the distraction. This adjustment is consistent with Clark and Wilkes-Gibbs's (1986) notion of mutual responsibility, which proposes that speakers and addressees are both responsible for establishing meaning. Converging evidence is provided by a study by Gumbrecht and Clark (2005) showing that, although directors ordinarily produce more words and take more initiative than matchers in a referential communication task, when typing is more costly for them than for matchers, they produce fewer words and matchers tend to take over the role of managing the conversation. In our narration task, speakers may have been willing to put more effort into the narration when they could make an attribution for an addressee's lack of feedback, but not when they had no attribution for why an addressee seemed uninterested.

A misalignment between speakers and addressees has been shown elsewhere to disrupt the quality and smoothness of the interaction. In one study of referential communication (Wilkes-Gibbs, 1986), conversational partners (directors and matchers) sometimes had incongruent goals that resulted in differences in the levels of detail with which they needed to talk about route directions. With incongruent goals, partners coordinated less successfully: Directors used more words in fewer turns, and matchers made more errors. Wilkes-Gibbs concluded that neither the directors' nor the matchers' goals alone, but the successful alignment of their goals, led to smoother interactions. Although our narrative task is quite different from referential communication in its structure, grain of interaction, and pattern of initiative, to the extent that duration is helpful in our narrations, our finding that narrations last longer when speakers' expectations matches addressees' attentional states and behaviors is consistent with the value of alignment.

Our findings about addressees' recall, from their retellings of the jokes, are partially consistent with the picture so far: Attentive addressees recalled more narrative elements and produced more words than distracted addressees. However, when attentive addressees were expected to be distracted, they tended to recall speakers' jokes better than in all other conditions. This may be an indication that speakers took extra care that their (engaged) addressees would understand and remember the jokes when they expected them to be distracted by another task. When addressees (by virtue of actually being attentive) had the resources to benefit from this (hypothetical) extra care, their recall excelled. However, we were not able to measure any corresponding evidence from speak-

ers' audience design behavior toward these addressees (speakers did not produce more extra details, nor take more time in this condition). If audience design led to the improvement in these addressees' recall performance, then it was for a reason that our measures did not detect.

Another potential limitation in our study was the inability to detect any pattern in the three raters' qualitative judgments of what makes a story good. First, there are enormous and salient individual differences in individuals' abilities to tell jokes, and this may have swamped any more subtle effects of speaker expectation or addressee feedback, given our between-subject design. Second, there was substantial variability in raters' judgments of story quality even for the same story (although there was slightly more agreement in what stories were "best" within a quartet than "worst"; sometimes the same story was ranked both "best" and "worst"). We think this is due, in part, to the spontaneous nature of the retellings, where some well-told stories had speech disfluencies and hesitations while the speaker tried to recall details, whereas others may have been verbally fluent but less vivid or coherent. Although we instructed the raters to ignore disfluencies and hesitations, we were not successful at getting consistent ratings. In any event, what makes a story subjectively "good" must certainly be multidimensional, and is beyond the scope of this project.

The question remains about exactly how nimble speakers are about integrating their initial expectations about addressees' behavior with the evidence they acquire about addressees' actual behavior during the interaction. When this information is incongruent, over what time course do speakers adapt their expectations to align with feedback? Our storytelling task is not well-suited to measuring how audience design behavior changes due to feedback over the detailed course of an interaction, as there are not predictable points at which addressee responses are expected (as there are in referential communication). Nevertheless, the influence of speakers' expectations might be more pronounced at the beginning of the interaction, whereas the influence of a partner's actual behavior might become more pronounced as the interaction unfolds (as found by Brennan, 1991). Other research suggests that speakers' initial expectations about their addressees persist throughout the interaction (Russell & Schober, 1999). Further research is needed to understand the conditions under which expectations may mask evidence and how this may affect the time course of audience design in interaction.

Taken together, the results of our study support the conclusion that speakers' narratives are shaped not only by addressees' feedback, but also by speakers' expectations about that feedback—in particular, how they construe a lack of feedback on the part of a distracted addressee. Most speakers are painfully aware when their conversational partners—be they friends, family members, or colleagues—are inattentive, and they can often tell when their partners are only pretending to pay attention. However, our findings suggest that there may

be a vicious cycle: Speakers who come to *expect* inattention may work a bit harder, but may nevertheless risk becoming even less interesting, making it even more of a challenge to keep their addressees' attention. To revisit the opening example about the futility of gossiping with a sleepy friend, the prudent thing would probably have been to save your best anecdote for later, when your friend would be awake enough to react with the shock it so deserves.

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APPENDIX A
Narrative Elements of Jokes 1 and 2

No.	*Narrative Element*
Joke 1	
1.	An atheist was taking a walk through the woods,
2.	admiring all that evolution had created.
3.	"What majestic trees!
4.	What powerful rivers!
5.	What beautiful animals!," he said to himself.
6.	As he was walking along the river,
7.	he heard a rustling in the bushes behind him.
8.	When he turned to see what the cause was,
9.	he saw a 7-foot grizzly charging right towards him.
10.	He ran as fast as he could.
11.	He looked over his shoulder and saw that the bear was closing,
12.	He ran even faster,
13.	crying in fear.
14.	He looked over his shoulder again and the bear was even closer.
15.	His heart was pounding
16.	and he tried to run even faster
17.	He tripped and fell on the ground.
18.	He rolled over to pick himself up, but
19.	saw the bear right on top of him,
20.	reaching for him with his left paw
21.	and raising his right paw to strike him.
22.	At that moment, the atheist cried out "Oh my God! . . . "
23.	Time stopped.
24.	The bear froze.
25.	The forest was silent.
26.	Even the river stopped moving.
27.	As a bright light shone upon the man,
28.	a voice came out of the sky,
29.	"You deny my existence for all of these years;
30.	teach others I don't exist;
31.	and even credit creation to a cosmic accident.
32.	Do you expect me to help you out of this predicament?
33.	Am I to count you as a believer?"
34.	The atheist looked directly into the light
35.	"It would be hypocritical of me to suddenly ask You to treat me as Christian now,
36.	but perhaps could You make the bear a Christian?"
37.	"Very well," said the voice.
38.	The light went out.
39.	The river ran again.
40.	And the sounds of the forest resumed
41.	And then the bear dropped his right paw
42.	. . . brought both paws together . . .
43.	bowed his head
44.	and spoke: "Lord, for this food which I am about to receive, I am truly thankful."

(*continued*)

APPENDIX A
(*Continued*)

No.	*Narrative Element*
Joke 2	
45.	One sunny day
46.	a rabbit came out of her hole in the ground
47.	to enjoy the fine weather.
48.	The day was so nice that she became careless
49.	and a fox snuck up behind her
50.	and caught her.
51.	"I am going to eat you for lunch," said the fox.
52.	"Wait," replied the rabbit,
53.	"You should at least wait a few days."
54.	"Oh yeah? Why should I wait?"
55.	"Well, I am just finishing my thesis on 'The Superiority of Rabbits over Foxes and Wolves'."
56.	"Are you crazy?
57.	I should eat you right now
58.	Everybody knows that a fox will always win over a rabbit."
59.	"Not really, not according to my research.
60.	If you like, you can come into my hole
61.	and read it for yourself.
62.	If you are not convinced, you can go ahead and have me for lunch."
63.	"You are really crazy!"
64.	But since the fox was curious
65.	and had nothing to lose,
66.	it went with the rabbit.
67.	The fox never came out.
68.	A few days later the rabbit was again taking a break from writing and sure enough,
69.	a wolf came out of the bushes
70.	and was ready to set upon her.
71.	"Wait!" yelled the rabbit,
72.	"you can't eat me right now."
73.	"And why might that be, my furry appetizer?
74.	"I am almost finished writing my thesis on 'The Superiority of Rabbits over Foxes and Wolves'."
75.	The wolf laughed so hard that it almost lost its grip on the rabbit.
76.	"Maybe I shouldn't eat you;
77.	you are really sick . . . in the head.
78.	You might have something contagious."
79.	"Come and read it for yourself;
80.	you can eat me afterward if you disagree with my conclusions."
81.	So the wolf went down into the rabbit's hole . . .
82.	and never came out.
83.	The rabbit finished her thesis
84.	and was out celebrating in the local lettuce patch.
85.	Another rabbit came along and asked, "What's up? You seem very happy."
86.	"Yup, I just finished my thesis."
87.	"Congratulations, What's it about?"

(*continued*)

APPENDIX A
(*Continued*)

No.	*Narrative Element*
88.	" 'The Superiority of Rabbits over Foxes and Wolves'."
89.	"Are you sure? That doesn't sound right."
90.	"Oh yes. Come and read it for yourself."
91.	So together they went down into the rabbit's hole.
92.	As they entered,
93.	the friend saw the typical graduate abode,
94.	albeit a rather messy one after writing a thesis.
95.	The computer with the controversial work was in the corner.
96.	And to the right there was a pile of fox bones,
97.	on the left a pile of wolf bones.
98.	And in the middle was a large, well-fed lion.
99.	The moral of the story:
100.	The title of your thesis doesn't matter.
101.	The subject doesn't matter.
102.	The research doesn't matter.
103.	All that matters is who your advisor is.

APPENDIX B
Extra Details of Joke

Category	*Example*[a]
Narrative element	[23][b] ***and then suddenly everything stopped***.
	[26] ***the river stopped flowing?***
	[25] ***and the forest was silent?***
	[27] ***and a bright light shown from the sky.***
Extra detail (not mentioned in the original joke)	[20] *the BEAR is like GRABbing him*
	[X] ***and he is panickin'***
	[X] ***and he is like sweating***
	[15] *and his heart is racing*
	[X] ***and it's this whole big dramatic thing***
	[22] and he goes OH MY GOD
Extra detail (repeated narrative element)	[20] *and the bear just is * kinda has his left paw on top of him?*
	[21] *and with the right paw about to strike him.*
	[X] ***a:nd right as he's* the bear is about to strike this guy***
	[22] *he says oh my GOD. (-)*
Other	**[X]** ***a'right ((laughs)). so I'm gonna tell you a joke,***
	[X] ***she told you right you'll have to repeat it? um. a'right.***
	[1] *so there's this ATHEIST walking through the woods. (-)*

[a]Transcription follows conventions of the "Gesprächsanalytisches Transkriptionssystem" (Selting et al., 1998): *(-)* = brief pauses; * = interrupted speech; capital letters = accentuation. [b]Square brackets = index number of narrative element (see Appendix A); boldface type and [X]s = target coding category.