

# The Novelty Penalty: Why Do People Like Talking About New Experiences but Hearing About Old Ones?

Gus Cooney<sup>1</sup>, Daniel T. Gilbert<sup>1</sup>, and Timothy D. Wilson<sup>2</sup>

<sup>1</sup>Department of Psychology, Harvard University, and <sup>2</sup>Department of Psychology, University of Virginia

## Abstract

People often tell each other stories about their past experiences. But do they tell the right ones? Speakers and listeners predicted that listeners would enjoy hearing novel stories (i.e., stories about experiences the listeners had never had) more than familiar stories (i.e., stories about experiences the listeners had already had). In fact, listeners enjoyed hearing familiar stories much more than novel ones (Studies 1 and 2). This did not happen because the familiar and novel stories differed in their content or delivery (Study 3). Rather, it happened because human speech is riddled with informational gaps, and familiar stories allow listeners to use their own knowledge to fill in those gaps (Study 4). We discuss reasons why novel stories are more difficult to tell, and why familiar stories are more enjoyable to hear, than either speakers or listeners expect.

## Keywords

communication, social interaction, affective forecasting

Received 8/29/16; Revision accepted 12/3/16

Most people know quite a lot about things they have never done and places they have never been, and that is because people can transfer their experiences into each other's minds by telling stories. Indeed, sizable portions of most ordinary social interactions are devoted to recounting experiences that one person has had and others have not (Dunbar, Marriott, & Duncan, 1997; Kellermann, 2004; Mesoudi, Whiten, & Dunbar, 2006), whether those are experiences with people ("I saw Erica yesterday"), places ("I just returned from Abu Dhabi"), or things ("The new *Star Wars* movie sucks"). Language is "the first and greatest human device for stepping up the observational intake" precisely because it allows people to engage in "vicarious observation" (Quine & Ullian, 1978, p. 51). Some of what people know about the world comes from their own observation of it, but much comes from simply listening to others tell stories about their experiences.

And yet, simply listening is not as simple as it seems. Stories leave out far more information than they contain, and listeners can typically understand a story only if they have extensive background knowledge that allows them to fill in the story's informational gaps. When a speaker says, "That new place in the square was fantastic," her experience is successfully communicated only if the

listener already knows that "new place" refers to a particular restaurant and "the square" refers to a particular intersection of streets (Clark & Carlson, 1981; Clark, Schreuder, & Buttrick, 1983; Krauss & Fussell, 1991). Listeners have little trouble filling in these informational gaps when speakers tell stories about experiences with which the listeners are already familiar. The day after the Super Bowl, two friends may say little ("Some game, huh?"), but the little they say is easily understood because the informational gaps in the speaker's speech (i.e., the type of game, the teams involved, etc.) are easily filled in by the listener, who has also had the experience to which the utterance refers. Ordinary conversations are seamless in part because speakers ordinarily say so little that listeners do not already know.

Alas, what makes conversation seamless can also make it pointless. One of the most important reasons that people listen to each other's stories is to gain new information—to learn about cities they have never visited,

## Corresponding Author:

Daniel T. Gilbert, Harvard University, Psychology Department,  
33 Kirkland St., William James Hall, Cambridge, MA 02138  
E-mail: gilbert@wjh.harvard.edu

books they have never read, and foods they have never tasted. Thus, listeners are often eager to hear stories about novel experiences—that is, experiences that the speakers have had but the listeners have not—rather than stories about familiar experiences (Loewenstein, 1994; Teigen, 1985). The problem is that novel experiences are difficult to communicate because when an experience is novel, listeners will often lack the background knowledge they need to fill in the story's informational gaps. Jackson may be eager to hear about Sophia's recent trip to Shanghai precisely because he has never been there himself, but for that very reason, he may not understand Sophia when she talks about "going to the Bund to get a dunzi." The novelty of experience may make stories more interesting to hear, but it also makes them more difficult to tell, and this fact creates a conundrum for speakers: If they tell familiar stories, they are more likely to be understood but less likely to be interesting, and if they tell novel stories, they are more likely to be interesting but less likely to be understood. The successful speaker, then, must strike a careful balance between these two outcomes by telling stories that are familiar enough to be understood, but novel enough to be worth understanding.

We suspect that speakers often miss this mark—that they worry too much about boring their listeners and not enough about confusing them, and that they therefore tell novel stories to listeners who would have enjoyed hearing familiar stories a great deal more. In Study 1, we tested the hypothesis that when speakers tell stories about their personal experiences, they expect listeners to award them a *novelty bonus*—that is, to react more positively to novel stories than to familiar stories—but that in fact, listeners impose a *novelty penalty*—that is, they react more positively to familiar stories than to novel stories. In Study 2, we tested the hypothesis that listeners share speakers' mistaken beliefs, and also expect to award a novelty bonus rather than to impose a novelty penalty. Finally, in Studies 3 and 4, we tested the hypothesis that listeners impose a novelty penalty not because familiar stories are objectively better than novel stories, but because they find it easier to fill in the informational gaps in familiar stories. In short, we predicted that people believe that speakers can impress and delight their listeners by telling them about experiences the listeners have never had, but that listeners are actually more impressed and delighted when speakers tell them stories about experiences that the listeners have already had.<sup>1</sup>

## Study 1: Do Speakers Expect to Receive a Novelty Bonus?

### Method

Participants were tested in groups of 3. In each group, we assigned 1 participant to play the role of speaker and 2 participants to play the roles of listeners. All participants

watched one of two videos in private. Each speaker was then asked to predict how the listeners would react to hearing the speaker tell a story about the video that the speaker had watched; in one condition, the listeners had watched that video, and in another condition, the listeners had not watched that video. The speaker then described his or her video-watching experience to the listeners, and the listeners reported their reactions to the speaker and his or her story.

**Materials.** The stimulus materials for Study 1 were videos selected from a pool of 10 videos, each of which was roughly 10 min in duration. The videos in the pool ranged from TED Talks to short animated films to scenic montages of the natural world.

Seventy-six pretest participants (37 male, 39 female; mean age = 21.2 years,  $SD = 2.31$  years) reported to the Harvard Decision Science Laboratory and participated in exchange for \$10.00. Each pretest participant watched four videos that were randomly selected from the pool. After watching each video, pretest participants answered two questions, using 100-point linear scales: (a) "How did you feel while you were watching the video?" (scale endpoints were labeled *not very good* and *very good*); and (b) "Could you explain what this video is about to someone who hadn't seen it?" (scale endpoints were labeled *definitely not* and *definitely yes*).

On the basis of the pretest participants' responses, we selected two videos for use in Study 1. One video was a TED Talk about the intelligence of crows (Klein, 2008), and the other was an interview with a man who owned a specialty soda shop (Slatkin, 2009). We refer to these videos as the "Crows" and "Sodas" videos, respectively. Pretest participants reported feeling equally good whether they had watched the "Crows" video ( $M = 79.31$ ,  $SD = 14.45$ ) or the "Sodas" video ( $M = 80.21$ ,  $SD = 16.91$ ),  $t(55) = 0.21$ ,  $p = .83$ , mean difference = 0.90, 95% confidence interval (CI) = [-7.60, 9.39], Cohen's  $d = 0.06$ . Pretest participants were confident that they could explain the video to someone who had not seen it, and they were equally confident whether they had watched the "Crows" video ( $M = 85.04$ ,  $SD = 15.02$ ), or the "Sodas" video ( $M = 87.22$ ,  $SD = 15.91$ ),  $t(55) = 0.53$ ,  $p = .60$ , mean difference = 2.18, 95% CI = [-6.13, 10.48], Cohen's  $d = 0.14$ .

**Participants.** Because the predicted effect had not previously been demonstrated, we prespecified a target sample size of 90 participants on the basis of our best estimate of the likely effect size. Ninety people (34 males, 54 females, and 2 who did not report their gender; mean age = 21.51 years,  $SD = 2.48$  years) reported to the Harvard Decision Science Laboratory and participated in exchange for \$10.00.

**Procedure.** Each session involved 3 participants. After arriving at the laboratory, the participants were escorted

to individual cubicles that were equipped with computer displays on which the participants received instructions. Two participants were randomly assigned to play the roles of listeners, and the remaining participant was assigned to play the role of speaker. All 3 participants learned that (a) each of them would watch a 10-min video alone in his or her cubicle, (b) all 3 would then be escorted to a room where the speaker would spend approximately 2 min telling the listeners the story of the video he or she had just watched, and (c) they would each then return to their individual cubicles and answer some questions. Once the participants indicated that they understood the procedure, they were told that they would watch one of two videos (which we referred to as Video A and Video B) that had been rated by pretest participants as equally enjoyable. The listeners were then asked to wait while the speaker received further instructions.

*Prestory measures.* The speaker was told that the listeners would be watching Video A and was then asked to predict how the listeners would feel if the speaker were assigned to watch and describe Video A and also how they would feel if the speaker were assigned to watch and describe Video B. The speaker made these predictions by answering each of the following questions for both videos, using 7-point Likert scales: “How much do you think these participants will enjoy hearing about the following videos?” (scale endpoints: *not very much* and *very much*), “How interesting do you think these participants will find your presentation of the following videos?” (scale endpoints: *not very interesting* and *very interesting*), and “How effective do you think these participants will find your presentation of the following videos?” (scale endpoints: *not very effective* and *very effective*). The speaker was then asked about his or her own feelings. Using a 7-point Likert scale with endpoints labeled *not very much* and *very much*, the speaker indicated how much he or she would expect to “enjoy talking to these participants about” each of the videos. Finally, the speaker selected Video A or Video B as the video he or she would “rather present to the other two participants.”

*Video watching and storytelling.* Once the speaker made these predictions, the 2 listeners were assigned to watch Video A (which in about half the sessions was the “Crows” video and in the remaining sessions was the “Sodas” video). In the *familiar condition*, the speaker was also assigned to watch Video A, and in the *novel condition*, the speaker was assigned to watch Video B. The participants watched these videos in their private cubicles.

When the videos concluded, the participants were told that the listeners would now listen as the speaker described his or her experience of the video he or she

had just watched. Participants in the novel condition were reminded that the speaker had watched a different video than the listeners had watched, and participants in the familiar condition were reminded that the speaker had watched the same video as the listeners had watched. The speaker was told to describe the experience however he or she wished (e.g., “You can give a summary, talk about your favorite part, offer your opinion, etc.”). The experimenter then escorted the 3 participants from their private cubicles to a room that contained a table and three chairs. The 2 listeners were seated across the table from the speaker, and the speaker was asked to spend 90 s describing his or her experience. The experimenter sat in a corner of the room with a stopwatch. After 90 s, the experimenter stopped the speaker if necessary and asked him or her to leave the room and wait in the hallway.

*Poststory measures.* Once the speaker left the room, the experimenter gave the listeners a questionnaire with questions that were analogous to those the speaker had previously answered. Specifically, listeners were asked “How much did you enjoy hearing about the video?” “How interesting did you find the presentation of the video?” and “How effective did you find the presentation of the video?” These three questions were answered on the same scales that the speaker had used for the corresponding questions. Next, the listeners were asked, “How do you feel right now?” They answered this question using a 7-point Likert scale with endpoints labeled *not very good* and *very good*.

When the listeners finished answering these questions, the experimenter escorted all 3 participants back to their private cubicles, where they answered some additional questions, using 7-point Likert scales. Specifically, the speaker was asked “How do you feel right now?” (scale endpoints: *not very good* and *very good*), “How much did you enjoy telling the other participants about the video you watched?” (scale endpoints: *not very much* and *very much*), “How much do you think the other participants enjoyed themselves?” (scale endpoints: *not very much* and *very much*), “How interested do you think the other participants were?” (scale endpoints: *not very interested* and *very interested*), and “How effective do you think the other participants found you?” (scale endpoints: *not very effective* and *very effective*). Finally, all 3 participants answered a series of open-ended questions (e.g., “Do you have any guesses about what we are studying?”), answered several demographic questions (e.g., “What is your age?”), completed several exploratory measures (e.g., “Had you seen this video before today?”), and were then debriefed and dismissed. It is worth noting that only 1 participant reported having seen one of the videos prior to participation. Because participants were

randomly assigned to condition, we assumed that their familiarity with the topic in each video did not differ by condition.

## Results

The data from 1 listener were not recorded because of a computer failure. This left 89 participants (30 speakers and 59 listeners; 34 males, 54 females, and 1 who did not report his or her gender; mean age = 21.51 years,  $SD = 2.48$  years) in the data set.

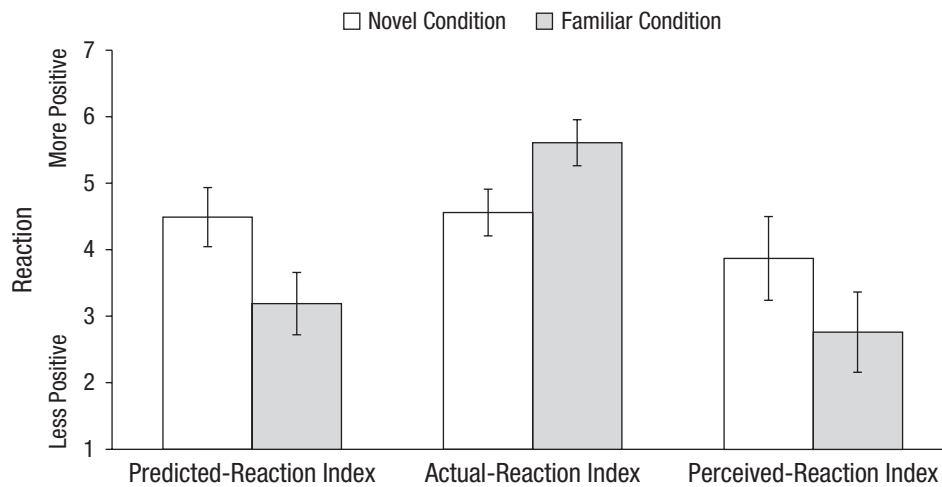
Speakers and listeners were nested within groups. We first fit a linear mixed model that included condition (novel or familiar) as the individual-level predictor and group number (1–30) as the group-level predictor. Using the RLRsim package (Scheipl, Greven, & Kuechenhoff, 2008) in R (R Core Team, 2013), we determined that the group-level predictor was not a significant addition to the model. Therefore, we decided to use within-participants  $t$  tests to analyze speakers' prestory measures and between-participants  $t$  tests to analyze listeners' poststory measures and speakers' poststory measures. The use of  $t$  tests rather than a linear mixed model did not change the interpretation of our results.

**Prestory measures.** How did speakers think listeners would react to the stories they told? Our three main measures (i.e., predicted enjoyableness, interestingness, and effectiveness) were highly correlated in both the novel condition ( $\alpha = .81$ ) and the familiar condition ( $\alpha = .84$ ), so we averaged these measures to create a *predicted-reaction index*. Analysis of this index revealed that speakers expected listeners to have a more positive reaction to a novel story ( $M = 4.49$ ,  $SD = 1.26$ ) than to a familiar story ( $M = 3.19$ ,  $SD = 1.39$ ),  $t(29) = 3.76$ ,  $p = .001$ , mean

difference = 1.30, 95% confidence interval (CI) = [0.59, 2.01], Cohen's  $d = 0.98$  (see Fig. 1). Indeed, most of the speakers (66.7%) reported that they would rather tell listeners a novel story than a familiar story, exact binomial  $p = .099$  (two-tailed), despite the fact that they themselves did not expect to enjoy telling a novel story ( $M = 4.00$ ,  $SD = 1.53$ ) more than a familiar story ( $M = 3.70$ ,  $SD = 1.76$ ),  $t(29) = 0.81$ ,  $p = .42$ , mean difference = 0.30, 95% CI = [-0.45, 1.05], Cohen's  $d = 0.18$ . In short, speakers expected listeners to award them a novelty bonus.

**Poststory measures.** Did they? To find out, we analyzed listeners' reactions to the speakers and their stories. The three main measures (i.e., enjoyableness, interestingness, and effectiveness) were highly correlated in both the novel condition ( $\alpha = .68$ ) and the familiar condition ( $\alpha = .83$ ), so we averaged these measures to create an *actual-reaction index*. Analysis of this index revealed that contrary to what speakers expected, listeners had a more negative reaction to hearing a novel story ( $M = 4.56$ ,  $SD = 0.92$ ) than to hearing a familiar story ( $M = 5.61$ ,  $SD = 0.98$ ),  $t(57) = 4.27$ ,  $p < .001$ , mean difference = 1.05, 95% CI = [0.56, 1.55], Cohen's  $d = 1.10$  (see Fig. 1). Although listeners in the novel condition felt worse about both the speaker and the story than listeners in the familiar condition did, they did not feel worse in general (familiar condition:  $M = 4.76$ ,  $SD = 1.45$ ; novel condition:  $M = 4.57$ ,  $SD = 1.33$ ),  $t(57) = 0.529$ ,  $p = .60$ , mean difference = 0.19, 95% CI = [-0.54, 0.92], Cohen's  $d = 0.14$ . In short, although speakers expected to receive a novelty bonus, they actually received a novelty penalty.

Did speakers realize that this had happened? To find out, we analyzed speakers' poststory estimates of the listeners' reactions. Our three main measures (i.e., enjoyableness, interestingness, and effectiveness) were highly



**Fig. 1.** Results of Study 1: mean predicted, actual, and perceived reactions to the speaker's story in the novel and familiar conditions. Error bars show the 95% confidence intervals around the means.

correlated in both the novel condition ( $\alpha = .88$ ) and the familiar condition ( $\alpha = .83$ ), so we averaged these measures to create a *perceived-reaction index*. Analysis of this index revealed that speakers mistakenly believed that their listeners had reacted more positively to the novel story ( $M = 3.87$ ,  $SD = 1.27$ ) than to the familiar story ( $M = 2.76$ ,  $SD = 1.22$ ),  $t(28) = 2.44$ ,  $p = .021$ , mean difference = 1.11, 95% CI = [0.18, 2.04], Cohen's  $d = 0.89$  (see Fig. 1). In other words, even after speakers gave their speeches, they mistakenly believed that they had been awarded a novelty bonus. Note that speakers did not report feeling better after telling a novel story ( $M = 4.73$ ,  $SD = 0.80$ ) than after telling a familiar story ( $M = 4.40$ ,  $SD = 1.06$ ),  $t(28) = 0.98$ ,  $p = .34$ , mean difference = 0.33, 95% CI = [-0.37, 1.03], Cohen's  $d = 0.35$ , but they did report having enjoyed telling a novel story ( $M = 5.00$ ,  $SD = 1.07$ ) more than telling a familiar story ( $M = 3.40$ ,  $SD = 1.40$ ),  $t(28) = 3.51$ ,  $p < .01$ , mean difference = 1.60, 95% CI = [0.66, 2.53], Cohen's  $d = 1.28$ .

## Study 2: Do Listeners Expect to Award a Novelty Bonus?

Speakers in Study 1 mistakenly expected listeners to award them a novelty bonus. Our account suggests that this happened because the speakers realized that novel stories would be more interesting to hear, but failed to realize that they would also be more difficult to tell. Of course, listeners are people too, and if our account is right, then listeners should have the same mistaken expectations that speakers do. We tested this hypothesis in Study 2.

### Method

**Participants.** We prespecified a target sample size of 150 participants on the basis of a pilot test. One hundred fifty people (83 males, 67 females; mean age = 36.51 years,  $SD = 11.45$  years) participated via Amazon Mechanical Turk in exchange for \$0.75.

**Procedure.** Participants were told about the procedure for Study 1. Specifically, they were asked to imagine “an experiment where people are randomly assigned to be ‘speakers’ or ‘listeners.’ In every group of three people, one person is the speaker, and the other two people are listeners.” To ensure clarity, we both described the procedure in words and depicted it in drawings. Participants were asked to imagine that they had been assigned to the role of a listener who had watched Video A and were asked to predict their reactions to hearing a speaker tell a story about Video A (*familiar condition*) and their reactions to hearing a speaker tell a story about Video B (*novel condition*). Specifically, they predicted how much

they would enjoy hearing a speaker tell a story about each video and how interesting and effective they would find the speaker to be in each case. They made these predictions on scales that were identical to those that were used as prestory measures in Study 1. Next, participants were asked, “How much do you think the speaker would enjoy telling you about the following videos?” They answered this question for both Video A and Video B by marking a 7-point Likert scale with endpoints labeled *not very much* and *very much*. Finally, they were asked, “After you watch Video A, which of the following videos would you rather hear about?” To respond, they chose either Video A or Video B. At the conclusion of the study, participants answered a series of open-ended questions, answered several demographic questions, and were debriefed and dismissed.

## Results

No participants were excluded from the data set. As in Study 1, the measures of predicted enjoyableness, interestingness, and effectiveness were highly correlated in both the novel condition ( $\alpha = .92$ ) and the familiar condition ( $\alpha = .88$ ), so we averaged these measures to create a *predicted-reaction index* for each condition. Analysis of this index revealed that participants expected to react more positively to a novel story ( $M = 4.93$ ,  $SD = 1.47$ ) than to a familiar story ( $M = 3.65$ ,  $SD = 1.60$ ),  $t(149) = 6.83$ ,  $p < .001$ , mean difference = 1.28, 95% CI = [0.91, 1.66], Cohen's  $d = 0.83$ . Most participants (77.0%) reported that they would rather hear a novel story than a familiar story, exact binomial  $p < .001$  (two-tailed), and they expected speakers to enjoy telling a novel story ( $M = 5.31$ ,  $SD = 1.38$ ) more than a familiar story ( $M = 4.17$ ,  $SD = 1.59$ ),  $t(149) = 6.50$ ,  $p < .001$ , mean difference = 1.14, 95% CI = [0.79, 1.50], Cohen's  $d = 0.50$ . In short, listeners in Study 2 expected to award speakers a novelty bonus, just as speakers in Study 1 had expected to receive one.

## Study 3: Why Do Listeners Impose a Novelty Penalty?

### Method

Why did the speakers in Study 1 receive a novelty penalty? One explanation is that when the speakers told stories about experiences that were familiar to the listeners, the listeners were easily able to fill in the informational gaps in the stories, and the ease of comprehension compensated for the stories' lack of novelty. We refer to this as the *easy-listening* account. But another explanation for the results of Study 1 is that the speakers in the familiar condition, who knew that their listeners would already be familiar with the experience their story described,

attempted to compensate for the story's lack of novelty by making it more interesting and entertaining, perhaps by injecting more humor, making more trenchant observations, or simply delivering it with more brio. This *better-telling* account suggests that speakers received a novelty penalty because the content and delivery of the familiar stories was objectively better than the content and delivery of the novel stories. In essence, the better-telling account suggests that the novelty penalty in Study 1 was due to what the speakers said, whereas the easy-listening account suggests that it was due to what the listeners knew. Which of these accounts is right?

We sought to answer this question in Study 3 by assigning speakers to tell stories that they *believed* were either novel or familiar to listeners for whom they actually *were* either novel or familiar. We then measured listeners' reactions to the speaker and the story. The better-telling account suggests that what really matters to listeners is the speaker's belief about the story's novelty, because that is what determines how well the story is told, but the easy-listening account suggests that what really matters to listeners is the story's actual novelty, because that is what determines how easily the story can be understood.

**Procedure for speakers.** We recruited participants to tell stories while we videotaped them. We continued to recruit participants until the end of the semester, by which time 43 people (26 males, 17 females; mean age = 20.64 years,  $SD = 1.06$  years) had reported to the Harvard Decision Science Laboratory and participated in exchange for \$10.00. Participants were told that they would play the role of speaker and that the speaker would watch a short video and then be videotaped while describing his or her experience of the video. Because no differences between the two videos emerged in Studies 1 and 2, we simplified our procedure and assigned all speakers to watch the "Crows" video. After the speakers watched this video, we randomly assigned them to condition. Speakers in the *familiar condition* were told that "the people who will eventually listen to your video (the 'listeners') have also seen Crows," and speakers in the *novel condition* were told that "the people who will eventually listen to your video (the 'listeners') have not seen Crows." As in Study 1, the speakers were told that they could "give a summary, talk about your favorite part, offer your opinion, etc." They were asked to look into the camera and speak for 90 s. The experimenter then left the room to minimize awkwardness.

When the speakers finished telling their stories, they were given a questionnaire. The first question was intended to ensure that they had understood the condition to which they had been assigned: "When the listeners watch the video of you talking, will the listeners have

already seen Crows?" The speakers answered this question by endorsing either "Yes, the listeners will have already seen Crows" or "No, the listeners will not have already seen Crows." Finally, the speakers answered a series of open-ended questions, answered several demographic questions, completed several exploratory measures that we never analyzed, and were debriefed and dismissed.

We made 43 videotapes, but 13 were unusable (1 speaker was not properly recorded because of a technical failure of the camera, 1 speaker revealed personally identifying information, 5 speakers failed to speak for the full 90 s, and 6 speakers did not correctly identify the condition to which they had been assigned). This left us with 30 usable videotapes (from 15 males and 15 females; mean age = 20.76 years,  $SD = 0.95$  years).

**Procedure for listeners.** For this part of the study, we prespecified a large target sample size of at least 300 participants. Three hundred sixteen people (199 males, 115 females, 2 who preferred not to report their gender; mean age = 24.25 years,  $SD = 3.80$  years) participated via Amazon Mechanical Turk in exchange for \$0.75.

All participants were assigned to play the role of listener. They were told that they would first watch a 10-min video, and then watch a 90-s video of a speaker telling a story that was either about the 10-min video they had just seen or about a 10-min video they had not seen. The listeners were then randomly assigned to one of two conditions. Listeners in the *familiar condition* watched the "Crows" video, and listeners in the *novel condition* watched the "Sodas" video. After watching the assigned video, listeners were randomly assigned to watch a videotape of 1 of the 30 speakers telling a story about the "Crows" video. After watching the speaker tell the story, listeners were asked, "How much did you enjoy hearing about the video?" "How interesting did you find the presentation of the video?" "How effective did you find the presentation of the video?" and "How do you feel right now?" These questions were answered on the same scales that the listeners in Study 1 had used. To make sure that the listeners had answered these questions with regard to the speaker and not with regard to Joshua Klein, who gave the TED Talk about crows, we asked them this question: "You just answered some questions about how enjoyable, interesting, and effective a video was. Which video were you answering questions about?" The listeners responded by endorsing one of three options: (a) "The 'Crows' TED talk," (b) "The person talking about the TED talk," or (c) "I don't remember." Finally, the listeners answered a series of open-ended questions, answered several demographic questions, completed several exploratory measures, and were debriefed and dismissed.

## Results

We excluded 53 listeners who reported that they had answered the questions with regard to Joshua Klein, who gave the TED Talk about crows, rather than with regard to the speaker who had watched that TED Talk. This left 263 participants (165 males, 97 females, and 1 who did not report his or her gender; mean age = 24.05 years,  $SD = 3.09$  years) in the data set. Including the excluded participants did not significantly change the results.

Our three main measures (i.e., enjoyableness, interest- ingness, and effectiveness) were highly correlated in all four conditions of our 2 (speaker's belief: familiar or novel)  $\times$  2 (listener's experience: familiar or novel) design (all  $\alpha s > .86$ ), so we averaged these measures to create an *actual-reaction index* and submitted that index to a 2 (speaker's belief: familiar or novel)  $\times$  2 (listener's experience: familiar or novel) between-participants analysis of variance (ANOVA). The analysis revealed a main effect of listener's experience (familiar:  $M = 4.35$ ,  $SD = 1.71$ ; novel:  $M = 3.80$ ,  $SD = 1.41$ ),  $F(1, 259) = 8.00$ ,  $p = .005$ ,  $\eta_p^2 = .030$ , but no main effect of speaker's belief (familiar:  $M = 4.07$ ,  $SD = 1.57$ ; novel:  $M = 4.02$ ,  $SD = 1.58$ ),  $F(1, 259) = 0.14$ ,  $p = .71$ ,  $\eta_p^2 = .001$ , and no Listener's Experience  $\times$  Speaker's Belief interaction,  $F(1, 259) = 0.59$ ,  $p = .44$ ,  $\eta_p^2 = .002$ . In other words, listeners reacted more positively to stories about experiences with which they were actually familiar than to stories about experiences with which they were not familiar, but they did not react more positively to stories told by speakers who believed the listeners were familiar with the experience than to stories told by speakers who believed the listeners were not familiar with the experience. This pattern of results supports the easy-listening account (which suggests that listeners like familiar stories because they are better able to fill in the informational gaps) and fails to support the better-telling account (which suggests that listeners like familiar stories because those stories are objectively better).

We also submitted listeners' reports of how they felt after hearing the story to a 2  $\times$  2 ANOVA, which revealed a main effect of listener's experience; listeners felt better after hearing a story that was actually familiar rather than actually novel (familiar:  $M = 5.16$ ,  $SD = 1.11$ ; novel:  $M = 4.56$ ,  $SD = 1.21$ ),  $F(1, 259) = 16.88$ ,  $p < .001$ ,  $\eta_p^2 = .061$ . There was no main effect of speaker's belief (familiar:  $M = 4.92$ ,  $SD = 1.17$ ; novel:  $M = 4.72$ ,  $SD = 1.24$ ),  $F(1, 259) = 2.51$ ,  $p = .11$ ,  $\eta_p^2 = .01$ , and no Listener's Experience  $\times$  Speaker's Belief interaction,  $F(1, 259) = 1.70$ ,  $p = .19$ ,  $\eta_p^2 = .005$ .

The better-telling account suggests that the stories told by speakers who expected listeners to be familiar with the experience were objectively better than the stories told by speakers who expected listeners to be unfamiliar with the experience. We looked for direct evidence of this by showing three trained coders each of the 30 videotaped stories, one at a time, and then asking them to make three

ratings after seeing each story. First, the coders rated a key feature of the story's content, namely, whether the story contained more fact or more opinion. We reasoned that speakers who thought their listeners were unfamiliar with the video they were describing might offer a list of dull facts about it (e.g., "The video showed crows being trained by experts"), whereas speakers who thought their listeners were familiar with the video they were describing might offer interesting opinions about it (e.g., "I thought the part about picking up litter was so interesting, and it made me wonder why we don't use crows to do it"). Second, the coders rated a key feature of the delivery, namely, whether the speaker was more or less engaging in his or her presentation. We reasoned that speakers who believed their listeners were familiar, rather than unfamiliar, with the video they were describing might be more intimate, more casual, friendlier, livelier, and so on, simply because they felt that they were addressing someone who had had the same experience that they did. Third, and finally, we asked the coders to guess which condition the speaker had been in. We could not ask the coders about every possible difference between the stories, of course, but we reasoned that if there were any important differences that we had not asked about, those differences would at least allow the coders to guess which condition the speaker had been in.

Although the coders' ratings showed adequate inter-rater reliability (all intraclass correlation coefficients  $> .7$ ), an analysis of those ratings revealed no differences between conditions on any measure (all  $ps > .48$ ). In other words, speakers in the familiar and novel conditions were equally likely to offer their personal opinions rather than to merely relate facts about the video, they were equally engaging in their delivery of the story, and the coders could not even tell whether a given speaker believed the listener was familiar or unfamiliar with the video. Although one should always interpret null findings with caution, it seems fair to say that there is no evidence to suggest that familiar stories were objectively better than novel stories, as the better-telling account requires.

## Study 4: Can the Novelty Penalty Be Caused by Informational Gaps?

### Method

There is something about a familiar story that causes listeners to enjoy it more than they enjoy a novel story. But what? The better-telling account suggests that speakers do a better job of delivering better stories when they know their listeners are already familiar with the experience the speakers are describing. The results of Study 3 provide no support for this account. The easy-listening account suggests that one reason why listeners enjoy familiar stories more than novel stories is that they can fill

in the informational gaps more easily in the former than in the latter. Simply put, according to this account, listeners find familiar stories more enjoyable because they find them more clear, and they find them more clear because they are able to supply the information that speakers naturally leave out. This account makes two predictions that we tested in Study 4. First, it predicts that the tendency for listeners to enjoy familiar stories more than novel stories should be greatest when the number of informational gaps is high. After all, if listeners impose a penalty on novel stories because those stories contain gaps that listeners cannot fill in, then the more of those gaps a story contains, the greater the penalty that listeners should impose. Second, the easy-listening account predicts that listeners should perceive familiar stories to be clearer than novel stories, and that their perceptions of a story's clarity should determine the positivity of their reactions to it.

To test these predictions, we made two important changes to the methods we used in Studies 1 and 3. First, in order to precisely manipulate the number of informational gaps in each story, we composed the stories ourselves rather than asking speakers to compose them. Second, in order to focus specifically on the effects of a story's content, we eliminated all effects of its delivery. Speakers were told that they would transmit the text of the stories to listeners electronically and that listeners would then read the stories instead of listening to speakers tell them. Thus, all listeners who were in the same condition were exposed to exactly the same story. In Study 4, then, speakers predicted how listeners who had or had not seen the "Crows" video would respond to a

story about that experience that had a small, medium, or large number of informational gaps, and listeners who had or had not seen the "Crows" video then read and responded to one of those three stories.

**Procedure for speakers.** For this part of the study, we prespecified a target sample size of at least 200 participants. Two hundred one people (118 males, 83 females; mean age = 32.56 years,  $SD = 11.21$  years) participated as speakers via Amazon Mechanical Turk in exchange for \$0.50. Although the speakers in Study 4 did not actually speak, we refer to them as speakers for the sake of consistency.

The speakers learned that they would be shown a story about the "Crows" video, would answer some questions about it, and would then deliver the story electronically to some listeners. We created a story that contained seven statements, as shown in Table 1, and we randomly assigned each speaker to one of three conditions. Speakers in the *high-gap condition* read a version of the story that was missing Statements 1 through 6; speakers in the *medium-gap condition* read a version of the story that was missing Statements 2, 4, and 6; and speakers in the *low-gap condition* were shown a version of the story that was not missing any statements. All the speakers were told that some of the listeners to whom they would deliver these stories had seen the "Crows" video (*familiar condition*) and that others had not (*novel condition*).

We then asked the speakers a series of questions. In both the instructions and the questions, we referred to the story as a "video analysis" rather than a "story" so that the speakers would not hold it to any particular narrative

**Table 1.** Statements Constituting the Stories Used in Study 4

Statement number	Statement
1	Josh is a researcher. He was at a cocktail party when his friend began complaining about crows. "They're such obnoxious pests," the friend said. Josh wasn't so sure about this. He wanted to know the truth so he spent the next 10 years researching and learning about crows. What Josh found was that crows are much more intelligent than people believe.
2	Crows are capable of displays of intelligence that other birds and even most other animals aren't.
3	Here are some of Josh's interesting findings: Crows crack nuts by dropping them on city streets so that cars drive over and crack the shells.
4	Crows hang out on the sidewalk and wait for the "walk" sign before going onto the street and retrieving the nuts. If you give crows a piece of a wire and a container with unreachable food at the bottom, crows will bend the wire to form a hook to remove food from a container. If you hurt a crow, it can remember your face for years, and will sound an alarm call if you go near it. Crows have the same brain to body size ratio (a marker of intelligence) as a chimpanzee.
5	Josh argues that thinking of crows as pests like cockroaches or rats is the wrong approach.
6	Rather, we can make use of their intelligence, for example by training crows to pick up garbage after stadium sporting events or having crows sift through landfills to find expensive components from discarded electronics. Instead of treating animals like pests, we can come up with a way to share the world with them.
7	One of the overarching often-misunderstood themes of Josh's research is that assumptions should be questioned. We treat crows in these ways, think of them as simple, and spend our lives thinking about ourselves. We think of humans as different from the subjects of Josh's research, but how different are we?



standard. The first set of questions measured how enjoyable the speakers thought the story would be to the listeners. Using a 7-point Likert scale with endpoints labeled *not very much* and *very much*, the speakers answered two questions: “Imagine the listener has already seen the video about crows. If you send the video analysis to the listener, how much will they enjoy it?” and “Imagine the listener has not already seen the video about crows. If you send the video analysis to the listener, how much will they enjoy it?” Next, the speakers were told that they could write as much as they wished in response to the following question: “You just told us how much you thought the listener would enjoy the video analysis if the listener had or had not seen the crows video. Why did you answer the way you did?” Next, using a 7-point Likert scale with endpoints labeled *not very much* and *very much*, the speakers answered the question, “How much did you yourself enjoy the video analysis?”

The next set of questions measured how interesting the speakers thought the story would be to the listeners. Using a 7-point Likert scale with endpoints labeled *not very interesting* and *very interesting*, the speakers answered two questions: “Imagine the listener has already seen the video about crows. If you send the video analysis to the listener, how interesting will the listener find the video analysis?” and “Imagine the listener has not already seen the video about crows. If you send the video analysis to the listener, how interesting will the listener find the Video Analysis?” The next set of questions measured how clear the speakers thought the story would be to the listeners. Using a 7-point Likert scale with endpoints labeled *not very clear* and *very clear*, the speakers answered two questions: “Imagine the listener has already seen the video about crows. If you send the video analysis above to the listener, how clear will the listener find the video analysis?” and “Imagine the listener has not already seen the video about crows. If you send the video analysis above to the listener, how clear will the listener find the video analysis?” Next, the speakers were told that, in fact, the experimenter did not need them to transmit a story after all. The speakers then answered a series of open-ended questions, answered several demographic questions, and were debriefed and dismissed.

**Procedure for listeners.** For this part of the study, we prespecified a target sample size of at least 300 participants. Three hundred sixty people (200 males, 160 females; mean age = 36.03 years,  $SD = 29.4$  years) participated as listeners via Amazon Mechanical Turk in exchange for \$1.00. The listeners were told that they would watch either the “Crows” or the “Sodas” video, would read a story about one of those videos (though not necessarily the one they had watched), and would

then answer some questions. They were then randomly assigned to watch either the “Crows” video (*familiar condition*) or the “Sodas” video (*novel condition*). After watching the video, each listener was randomly assigned to the *high-gap condition*, the *medium-gap condition*, or the *low-gap condition*. Listeners in each gap condition were shown the same story that speakers in that gap condition had seen. When they finished reading the story, the listeners were asked the following questions about the story (which was referred to as a “video analysis”): “How much did you enjoy the analysis?” “How interesting did you find the analysis?” and “How clear did you find the analysis?” They answered these questions using the same scales that the speakers had used to answer the corresponding questions. The listeners then answered an open-ended question about why they gave the responses they did: “You just told us what you thought of the analysis. Why did you answer the way you did?” In response, the listeners wrote as much as they wished. Finally, the listeners answered a series of open-ended questions, answered several demographic questions, and were debriefed and dismissed.

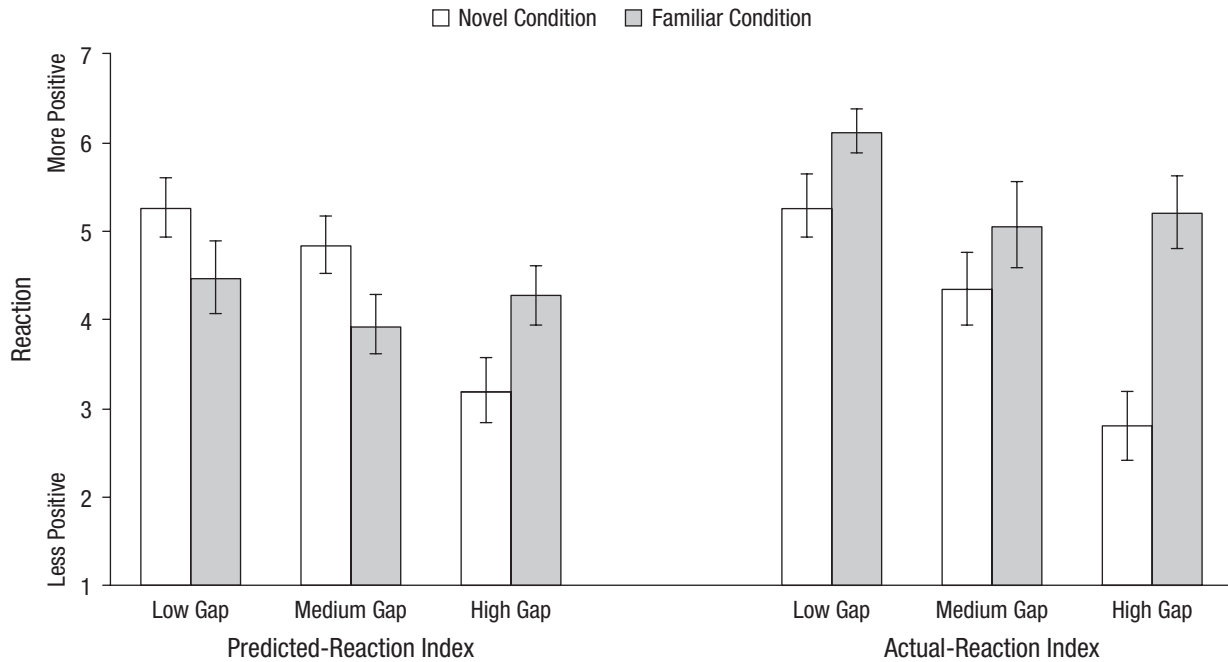
## Results

We conducted two sets of analyses to answer our primary questions—the first about the role that informational gaps play in causing the novelty penalty (i.e., did listeners impose a greater novelty penalty on stories that had a higher number of informational gaps?) and the second about the role that clarity plays in causing the novelty penalty (i.e., did listeners perceive familiar stories to be clearer than novel stories, and if so, did their perceptions of a story’s clarity determine their reactions to it?).

### *The role of gaps in the novelty penalty*

*Speakers’ predictions.* No speakers were excluded from the data set, and speaker’s open-ended written responses explaining their predictions for listeners’ enjoyment were never analyzed. Not surprisingly, speakers enjoyed reading the low-gap story ( $M = 5.57$ ,  $SD = 1.42$ ) more than the medium-gap story ( $M = 4.99$ ,  $SD = 1.45$ ),  $t(130) = 2.34$ ,  $p = .02$ , mean difference = 0.59, 95% CI = [0.09, 1.08], Cohen’s  $d = 0.40$ , and they enjoyed reading the medium-gap story ( $M = 4.99$ ,  $SD = 1.45$ ) more than the high-gap story ( $M = 3.75$ ,  $SD = 1.69$ ),  $t(136) = 4.59$ ,  $p < .001$ , mean difference = 1.23, 95% CI = [0.70, 1.76], Cohen’s  $d = 0.79$ . But how much did they expect listeners to enjoy these stories?

The measures of predicted enjoyableness were highly correlated with the measures of predicted interestingness in all six conditions of our 2 (familiarity: familiar or novel)  $\times$  3 (gap: high, medium, or low) design ( $.67 < \alpha < .94$ ), so we



**Fig. 2.** Results of Study 4: mean predicted and actual reactions to the low-, medium-, and high-gap stories in the novel and familiar conditions. Error bars show the 95% confidence intervals around the means.

averaged the two measures to create a *predicted-reaction index*, which we submitted to a 2 (familiarity: familiar or novel)  $\times$  3 (gap: high, medium, or low) mixed-effects ANOVA. The analysis revealed an unsurprising main effect of gap,  $F(2, 198) = 20.21, p < .001, \eta_p^2 = .170$ ; no main effect of familiarity,  $F(1, 198) = 2.31, p = .13, \eta_p^2 = .012$ ; and a Familiarity  $\times$  Gap interaction,  $F(2, 198) = 24.51, p < .001, \eta_p^2 = .198$ . To statistically compare the familiar and novel conditions for each of the three stories, we conducted a series of within-participants  $t$  tests. We used a sequential Holm-Bonferroni procedure to correct for multiple comparisons (Abdi, 2010), and all reported  $p$  values remained significant after this correction.

As the left panel of Figure 2 shows, the results for speakers in Studies 1 through 3 were replicated for stories that had small and medium numbers of informational gaps. Specifically, the speakers expected listeners to award a novelty bonus to both the low-gap story (novel:  $M = 5.27, SD = 1.28$ ; familiar:  $M = 4.48, SD = 1.63$ ),  $t(62) = -3.45, p = .001$ , mean difference =  $-0.79$ , 95% CI =  $[-1.25, -0.33]$ , Cohen's  $d = 0.54$ , and the medium-gap story (novel:  $M = 4.84, SD = 1.31$ ; familiar:  $M = 3.94, SD = 1.37$ ),  $t(68) = -4.18, p < .001$ , mean difference =  $-0.89$ , 95% CI =  $[-1.32, -0.46]$ , Cohen's  $d = 0.67$ . However, the speakers expected listeners to impose a novelty penalty on the high-gap story (familiar:  $M = 4.28, SD = 1.28$ ; novel:  $M = 3.20, SD = 1.43$ ),  $t(68) = 4.58, p < .001$ , mean difference =

$1.09$ , 95% CI =  $[0.61, 1.56]$ , Cohen's  $d = 0.80$ . In other words, the speakers expected listeners to react more positively to a novel than to a familiar story except when the story was riddled with gaps, in which case they expected listeners to react more positively to a familiar than to a novel story. Were the speakers' expectations met?

*Listeners' reactions.* No listeners were excluded from the data set, and listeners' open-ended written responses explaining their reaction to the video analysis were never analyzed. As in Studies 1 and 3, actual enjoyableness and actual interestingness were highly correlated in all six conditions of our design ( $.89 < \alpha < .97$ ), so we averaged these measures to create an *actual-reaction index*, which we submitted to a 2 (familiarity: familiar or novel)  $\times$  3 (gap: high, medium, or low) between-participants ANOVA. The analysis revealed a main effect of gap,  $F(2, 354) = 38.32, p < .001, \eta_p^2 = .178$ ; a main effect of familiarity,  $F(1, 354) = 69.20, p < .001, \eta_p^2 = .164$ ; and a Familiarity  $\times$  Gap interaction,  $F(2, 354) = 11.61, p < .001, \eta_p^2 = .062$ . To compare the familiar and novel conditions for each of the three stories, we conducted a series of between-participants  $t$  tests. We used a sequential Holm-Bonferroni procedure to correct for multiple comparisons (Abdi, 2010), and all reported  $p$  values remained significant after this correction.

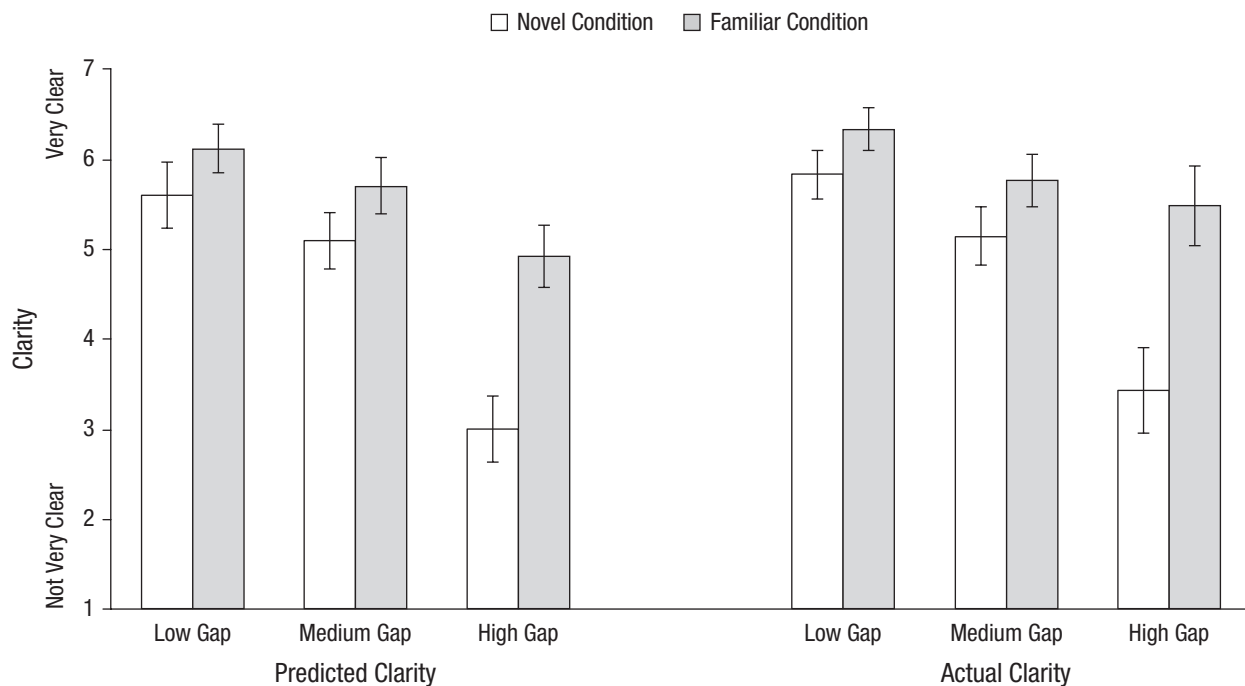
As the right panel of Figure 2 shows, listeners reacted more positively to familiar stories than to novel stories in all conditions, regardless of whether the stories were low-gap stories (familiar:  $M = 6.13$ ,  $SD = 0.95$ ; novel:  $M = 5.29$ ,  $SD = 1.40$ ),  $t(119) = 3.81$ ,  $p < .001$ , mean difference = 0.84, 95% CI = [0.40, 1.27], Cohen's  $d = 0.70$ ; medium-gap stories (familiar:  $M = 5.07$ ,  $SD = 1.84$ ; novel:  $M = 4.35$ ,  $SD = 1.59$ ),  $t(117) = 2.30$ ,  $p = .024$ , mean difference = 0.72, 95% CI = [0.10, 1.35], Cohen's  $d = 0.42$ ; or a high-gap stories (familiar:  $M = 5.22$ ,  $SD = 1.61$ ; novel:  $M = 2.82$ ,  $SD = 1.48$ ),  $t(118) = 8.50$ ,  $p < .001$ , mean difference = 2.40, 95% CI = [1.84, 2.95], Cohen's  $d = 1.55$ . As the Familiarity  $\times$  Gap interaction suggests, a familiar story had a greater advantage over a novel story when it was a high-gap story than when it was a medium- or low-gap story.

In short, although speakers expected listeners to award a novelty bonus to the low- and medium-gap stories and to impose a novelty penalty on the high-gap story, listeners actually imposed a novelty penalty on all the stories, regardless of how many gaps they had. Indeed, a story had to have so many gaps as to be nearly incomprehensible before speakers realized that listeners would impose a novelty penalty.

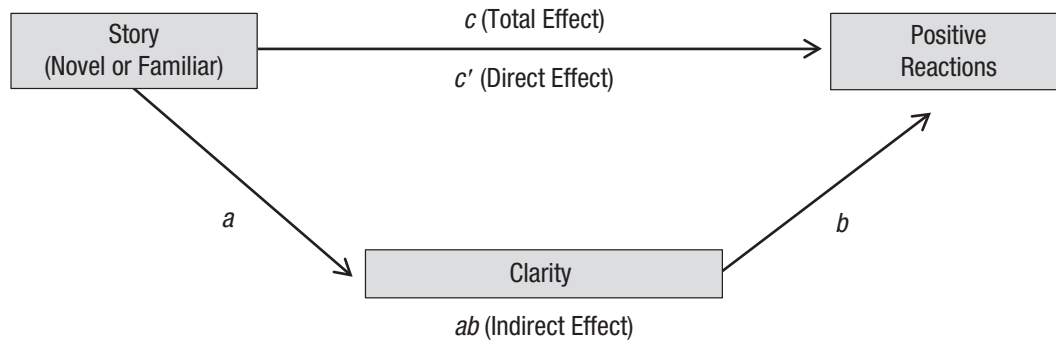
**The role of clarity in the novelty penalty.** The number of informational gaps in a story clearly determined

the size of the novelty penalty that listeners imposed. But why? Our reasoning is that informational gaps make stories difficult to comprehend or unclear, that it is harder for listeners to fill in those gaps when stories are novel than when they are familiar, and that this is one of the reasons why listeners impose a novelty penalty. Our data allowed us to test this reasoning directly. We measured the *predicted clarity* of the stories by asking the speakers in each condition to predict how clear the familiar story would be to listeners and how clear the novel story would be to listeners. We measured the *actual clarity* of the stories by asking the listeners in each condition to report how clear the story they read had been.

We submitted the speakers' predicted-clarity judgments to a 2 (familiarity: familiar or novel)  $\times$  3 (gap: high, medium, or low) mixed-effects ANOVA, which revealed a main effect of gap,  $F(2, 198) = 49.40$ ,  $p < .001$ ,  $\eta_p^2 = .333$ ; a main effect of familiarity,  $F(1, 198) = 89.97$ ,  $p < .001$ ,  $\eta_p^2 = .312$ ; and a Familiarity  $\times$  Gap interaction,  $F(2, 198) = 17.53$ ,  $p < .001$ ,  $\eta_p^2 = .150$ . We submitted the listeners' actual-clarity judgments to an identical between-participants ANOVA, which revealed a main effect of gap,  $F(2, 354) = 39.00$ ,  $p < .001$ ,  $\eta_p^2 = .181$ ; a main effect of familiarity,  $F(1, 354) = 48.86$ ,  $p < .001$ ,  $\eta_p^2 = .121$ ; and a Familiarity  $\times$  Gap interaction,  $F(2, 354) = 10.78$ ,  $p < .001$ ,  $\eta_p^2 = .057$ . Not surprisingly, as Figure 3 shows, the speakers and listeners



**Fig. 3.** Results of Study 4: mean predicted and actual clarity ratings of the low-, medium-, and high-gap stories in the novel and familiar conditions. Error bars show the 95% confidence intervals around the means.



**Fig. 4.** Mediation diagram for Study 4: clarity as a mediator of the relationship between story type (novel or familiar) and predicted or actual reactions to the story.

agreed that a higher number of informational gaps decreases a story's clarity, that familiarity increases a story's clarity, and that familiarity has its greatest effect on clarity when the number of gaps is high.

Did the perceived clarity of the story mediate the relationship between the story's familiarity and the predicted and actual reactions to the story? To find out, we conducted mediation analyses using the MEMORE macro (Montoya & Hayes, in press) for the within-participants reports of speakers and the PROCESS macro (Hayes, 2012) for the between-participants reports of listeners. We also performed supplementary analyses, including a moderated mediation analysis (with the PROCESS macro) and structural equation modeling in R (with the lavaan package; Rosseel, 2012). The results were similar regardless of the method of analysis, so for the sake of simplicity, we report just one mediation model for each combination of role (speaker or listener) and gap (high, medium, or low). All reported results are based on 10,000 bootstrapped samples. Figure 4 shows the mediation model, and Table 2 presents the coefficient estimates,

standard errors, and  $p$  values for the total effect, direct effect, and indirect effect for each mediation model.

As Table 2 shows, the results for the total effect ( $c$ ) indicate that the familiarity of the story influenced both listeners' reactions and speakers' predictions of those reactions. But why? The results for the indirect effect ( $ab$ ) show that familiarity had its effect via clarity. Speakers predicted that listeners would find familiar stories clearer than novel stories and that this would influence their reactions; and, in fact, listeners did find familiar stories clearer, and this did influence their reactions. But if the speakers in the low-gap and medium-gap conditions knew that listeners would find familiar stories clearer, and if they knew that clearer stories would receive more positive reactions, why did they mistakenly expect listeners to award a novelty bonus, as indicated by the negative total effect ( $c$ )? The answer is that when perceived clarity was included as a mediator, it acted as a suppressor variable, and the direct effect ( $c'$ ) became more negative than the total effect ( $c$ ). This suggests that although the speakers in the low-gap and medium-gap conditions realized that a lack

**Table 2.** Mediation Analyses From Study 4: Clarity as a Mediator of the Relationship Between Story Type (Novel or Familiar) and Positive Reactions to the Story

Number of gaps	Total effect ( $c$ )		Direct effect ( $c'$ )		Indirect effect ( $ab$ )			
	Coefficient	$p$	Coefficient	$p$	Coefficient	95% CI	$z$	$p$
Speakers (predicted clarity)								
Low	-0.79 (0.23)	< .01	-1.03 (0.23)	< .001	0.24 (0.12)	[0.04, 0.49]	2.05	< .05
Medium	-0.89 (0.21)	< .001	-1.23 (0.21)	< .001	0.34 (0.14)	[0.09, 0.62]	2.71	< .001
High	1.09 (0.24)	< .001	-0.25 (0.28)	> .05	1.33 (0.22)	[0.92, 1.79]	5.24	< .001
Listeners (actual clarity)								
Low	0.84 (0.22)	< .001	0.52 (0.19)	< .01	0.32 (0.15)	[0.07, 0.65]	2.42	< .05
Medium	0.72 (0.32)	< .05	0.23 (0.27)	> .05	0.49 (0.18)	[0.15, 0.86]	2.49	< .05
High	2.40 (0.28)	< .001	1.24 (0.24)	< .001	1.16 (0.24)	[0.72, 1.66]	5.17	< .001

Note: Standard errors are given inside parentheses. The 95% confidence intervals (CIs) are based on 10,000 bootstrapped samples.

of clarity would negatively affect listeners' reactions, they did not realize that this effect would outweigh the positive effects of novelty. By contrast, the speakers in the high-gap condition correctly expected listeners to impose a novelty penalty—and when perceived clarity was included as a mediator, it fully mediated these predictions. Taken together, these results suggest that the speakers recognized that lack of clarity would be a problem for listeners, but severely underestimated just how big that problem would be. Only when the problem was extremely large did the speakers realize that listeners would enjoy hearing a familiar story more than a novel one.

## Discussion

Participants in our studies expected listeners to award speakers a novelty bonus, and instead listeners imposed a novelty penalty. But why? Why do speakers underestimate the difficulty of telling novel stories, and why do listeners prefer hearing familiar ones?

Research suggests at least three reasons why speakers might underestimate the difficulty of telling novel stories. First, speakers may underestimate the difficulty of conveying information simply because they overestimate how well they understand the information to be conveyed. People are often overconfident about their abilities (Kruger & Dunning, 1999), and the ability to communicate is no exception. For example, people who have an intuitive understanding of how a zipper or a bicycle works tend to overestimate how easily and effectively they will be able to communicate that understanding to others (Rozenblit & Keil, 2002). The speakers in our studies may have overestimated how much listeners would enjoy hearing them describe a video (e.g., "I'll tell them all about the soda business!") simply because they overestimated how well they themselves understood it (e.g., "I'm confident that I know the difference between a dealership and a distributorship").

Second, even when speakers have a solid understanding of the information they hope to convey, they still may not realize just how little of their background knowledge listeners share (Keysar & Henly, 2002) and therefore may not realize how difficult it will be for listeners to fill in the informational gaps in their speech (Clark & Carlson, 1981; Epley, Keysar, Van Boven, & Gilovich, 2004; Keysar, 1994; Keysar & Bly, 1995; Kruger, Epley, Parker, & Ng, 2005; Wilkes-Gibbs & Clark, 1992). If speakers fail to consider the fact that listeners do not share their background knowledge, then they may not recognize the challenge that novelty poses. For example, speakers who saw the "Crows" video knew exactly what the birds looked like. If they did not consider how much of their own understanding of the video was based on having actually seen the birds, then they may not have realized how difficult it

would be for listeners who had not seen the birds to understand their stories.

Third, and finally, speakers may underestimate the difficulty of telling novel stories because they are rarely criticized for doing it poorly. Human conversations do not unfold like Platonic dialogues in which ambiguous utterances are followed by artful interrogations. Rather, conversations are conspiracies of politeness—social rituals with strong norms that prevent listeners from telling speakers they are lost (P. Brown & Levinson, 1987; Schegloff, Jefferson, & Sacks, 1977; Tesser & Rosen, 1975). Well-socialized listeners may express confusion with blank stares and puzzled expressions (Clark & Schaefer, 1987; Clark & Wilkes-Gibbs, 1986), but they rarely interrupt. "Most people, most of the time, think that what they say is pretty clear" (Keysar, 2007, p. 71), and one reason for this is that listeners are often too polite to tell them otherwise. In short, speakers may underestimate the difficulty of telling novel stories because (a) they overestimate how well they understand what they hope to convey, (b) they overestimate how much of their understanding is already shared by their listeners, and (c) listeners rarely tell them that these estimates are wrong.

Research also suggests several reasons why listeners might enjoy hearing familiar stories more than novel ones. First, despite our shorthand label, "familiar stories" are not stories that listeners have already heard, but rather, they are stories about experiences that listeners have already had. Different people notice and remember different things about their experiences, so even when a speaker talks about an experience the listener has had, the story is likely to contain plenty of novel information. Indeed, novel information about familiar topics appears to have special appeal across a variety of domains (Colman, Sluckin, & Hargreaves, 1981; Uzzi, Mukherjee, Stringer, & Jones, 2013).

Second, unlike novel stories, familiar stories activate listeners' memories of their own past experience and are therefore likely to elicit rich emotions. Novel stories may provide new information (e.g., "Cucumber soda comes from Ireland"), but familiar stories resurrect the listener's own emotional reactions to that information (e.g., "I loved that part about the cucumber soda with the cute little Leprechaun on the bottle!"). Novel stories must produce emotions that familiar stories need only reawaken.

Third, human conversation often has less to do with transmitting new information than with fostering social bonds (Baumeister, Zhang, & Vohs, 2004; G. Brown & Yule, 1983; P. Brown & Levinson, 1987; Dunbar, 2004), and there are few bonds as powerful as common experience (Boothby, Clark, & Bargh, 2014; Pinel, Long, Landau, Alexander, & Pyszczynski, 2006; Shteynberg & Apfelbaum, 2013). When speakers tell familiar stories, they remind listeners of their common identity, and

people typically find such connections rewarding. Furthermore, people take pleasure in knowing that others see the world as they do (Echterhoff, Higgins, & Levine, 2009; Hardin & Higgins, 1996), and familiar stories may be more likely than novel stories to produce this sense of shared reality.

Fourth, and finally, familiar stories give listeners a unique opportunity to compare their reactions with another person's reactions, and therefore to learn something about themselves. This may be why people who are left in a room with someone who saw the same video they saw and someone who saw a more interesting video tend to chat with the first person and ignore the second (Cooney, Gilbert, & Wilson, 2014). In short, listeners may enjoy hearing familiar stories because they (a) contain significant amounts of novel information, (b) evoke rich personal memories, (c) allow speakers and listeners to bond over common experiences, and (d) allow listeners to gain information about themselves via social comparison.

## Coda

Once upon a time, people discovered that they could use language to tell each other stories about things they had seen, places they had been, and people they had met. It probably did not take them long to realize that stories about novel experiences are highly informative but difficult to tell, that stories about familiar experiences are less informative but easier to follow, and that the best stories lie somewhere in the vast middle. But where? Although the precise location of that point will surely vary across time and circumstance, our studies suggest that it is often closer to the familiar end of the continuum than people imagine.

## Action Editor

Matthew A. Goldrick served as action editor for this article.

## Author Contributions

All the authors developed the study concepts, contributed to the study designs, and drafted and approved the manuscript. G. Cooney collected and analyzed the data.

## Acknowledgments

We thank Hannah Birnbaum, Michael Kardas, Ethan Ludwin-Peery, Adam Mastroianni, Camden McRae, Diego Reinero, Danielle Tilford, and Ava Zhang.

## Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

## Open Practices

All measures, materials, and data are available at [https://github.com/guscooney/novelty\\_penalty](https://github.com/guscooney/novelty_penalty). The complete Open Practices Disclosure for this article can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797616685870>.

## Note

1. The protocols for all the studies were approved by Harvard University's Committee on the Use of Human Subjects.

## References

- Abdi, H. (2010). Holm's sequential Bonferroni procedure. In N. J. Salkind, D. M. Dougherty, & B. Frey (Eds.), *Encyclopedia of research design* (Vol. 2, pp. 573–577). Thousand Oaks, CA: Sage.
- Baumeister, R. F., Zhang, L., & Vohs, K. D. (2004). Gossip as cultural learning. *Review of General Psychology, 8*, 111–121.
- Boothby, E. J., Clark, M. S., & Bargh, J. A. (2014). Shared experiences are amplified. *Psychological Science, 25*, 2209–2216.
- Brown, G., & Yule, G. (1983). *Discourse analysis*. Cambridge, England: Cambridge University Press.
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage*. Cambridge, England: Cambridge University Press.
- Clark, H. H., & Carlson, T. B. (1981). Context for comprehension. In J. Long & A. D. Baddeley (Eds.), *Attention and performance IX* (pp. 313–330). Hillsdale, NJ: Erlbaum.
- Clark, H. H., & Schaefer, E. F. (1987). Collaborating on contributions to conversations. *Language and Cognitive Processes, 2*, 19–41.
- Clark, H. H., Schreuder, R., & Buttrick, S. (1983). Common ground and the understanding of demonstrative reference. *Journal of Verbal Learning and Verbal Behavior, 22*, 245–258.
- Clark, H. H., & Wilkes-Gibbs, D. (1986). Referring as a collaborative process. *Cognition, 22*, 1–39.
- Colman, A. M., Sluckin, W., & Hargreaves, D. J. (1981). The effect of familiarity on preferences for surnames. *British Journal of Psychology, 72*, 363–369.
- Cooney, G., Gilbert, D. T., & Wilson, T. D. (2014). The unforeseen costs of extraordinary experience. *Psychological Science, 25*, 2259–2265.
- Dunbar, R. I. M. (2004). Gossip in evolutionary perspective. *Review of General Psychology, 8*, 100–110.
- Dunbar, R. I. M., Marriott, A., & Duncan, N. D. C. (1997). Human conversational behavior. *Human Nature, 8*, 231–246.
- Echterhoff, G., Higgins, E. T., & Levine, J. M. (2009). Shared reality: Experiencing commonality with others' inner states about the world. *Perspectives on Psychological Science, 4*, 496–521.
- Epley, N., Keysar, B., Van Boven, L., & Gilovich, T. (2004). Perspective taking as egocentric anchoring and adjustment. *Journal of Personality and Social Psychology, 87*, 327–339.
- Hardin, C. D., & Higgins, E. T. (1996). Shared reality: How social verification makes the subjective objective. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation*

- and cognition. Vol. 3. *The interpersonal context* (pp. 28–77). New York, NY: Guilford Press.
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling*. Retrieved from <http://www.afhayes.com/public/process2012.pdf>
- Kellermann, K. (2004). Topical profiling: Emergent, co-occurring, and relationally defining topics in talk. *Journal of Language and Social Psychology, 23*, 308–337.
- Keysar, B. (1994). The illusory transparency of intention: Linguistic perspective taking in text. *Cognitive Psychology, 26*, 165–208.
- Keysar, B. (2007). Communication and miscommunication: The role of egocentric processes. *Intercultural Pragmatics, 4*, 71–84.
- Keysar, B., & Bly, B. (1995). Intuitions of the transparency of idioms: Can one keep a secret by spilling the beans? *Journal of Memory and Language, 34*, 89–109.
- Keysar, B., & Henly, A. S. (2002). Speakers' overestimation of their effectiveness. *Psychological Science, 13*, 207–212.
- Klein, J. (2008). *Joshua Klein: A thought experiment on the intelligence of crows*. Retrieved from [https://www.ted.com/talks/joshua\\_klein\\_on\\_the\\_intelligence\\_of\\_crows](https://www.ted.com/talks/joshua_klein_on_the_intelligence_of_crows)
- Krauss, R. M., & Fussell, S. R. (1991). Perspective-taking in communication: Representations of others' knowledge in reference. *Social Cognition, 9*, 2–24.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*, 1121–1134.
- Kruger, J., Epley, N., Parker, J., & Ng, Z.-W. (2005). Egocentrism over e-mail: Can we communicate as well as we think? *Journal of Personality and Social Psychology, 89*, 925–936.
- Loewenstein, G. (1994). The psychology of curiosity: A review and reinterpretation. *Psychological Bulletin, 116*, 75–98.
- Mesoudi, A., Whiten, A., & Dunbar, R. I. M. (2006). A bias for social information in human cultural transmission. *British Journal of Psychology, 97*, 405–423.
- Montoya, A. K., & Hayes, A. F. (in press). Two condition within-participant statistical mediation analysis: A path-analytic framework. *Psychological Methods*.
- Pinel, E. C., Long, A. E., Landau, M. J., Alexander, K., & Pyszczynski, T. (2006). Seeing I to I: A pathway to interpersonal connectedness. *Journal of Personality and Social Psychology, 90*, 243–257.
- Quine, W. V., & Ullian, J. S. (1978). *The web of belief*. New York, NY: Random House.
- R Core Team. (2013). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from <http://www.r-project.org/>
- Rossee, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software, 48*, 1–36.
- Rozenblit, L., & Keil, F. (2002). The misunderstood limits of folk science: An illusion of explanatory depth. *Cognitive Science, 26*, 521–562.
- Schegloff, E. A., Jefferson, G., & Sacks, H. (1977). The preference for self-correction in the organization of repair in conversation. *Language, 53*, 361–382.
- Scheipl, F., Greven, S., & Kuechenhoff, H. (2008). Size and power of tests for a zero random effect variance or polynomial regression in additive and linear mixed models. *Computational Statistics & Data Analysis, 52*, 3283–3299.
- Shteynberg, G., & Apfelbaum, E. P. (2013). The power of shared experience: Simultaneous observation with similar others facilitates social learning. *Social Psychological & Personality Science, 4*, 738–744.
- Slatkin, E. (2009). *Obsessives - Soda Pop*. Retrieved from [www.youtube.com/watch?v=gPbh6Ru7VVM](http://www.youtube.com/watch?v=gPbh6Ru7VVM)
- Teigen, K. H. (1985). The novel and the familiar: Sources of interest in verbal information. *Current Psychology, 4*, 224–238.
- Tesser, A., & Rosen, S. (1975). The reluctance to transmit bad news. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 8, pp. 193–232). New York, NY: Academic Press.
- Uzzi, B., Mukherjee, S., Stringer, M., & Jones, B. (2013). Atypical combinations and scientific impact. *Science, 342*, 468–472.
- Wilkes-Gibbs, D., & Clark, H. H. (1992). Coordinating beliefs in conversation. *Journal of Memory and Language, 31*, 183–194.