Empirical Research Paper

Speak Up! Mistaken Beliefs About How Much to Talk in Conversations

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Abstract

We hypothesized that people would exhibit a *reticence bias*, the incorrect belief that they will be more likable if they speak less than half the time in a conversation with a stranger, as well as *halo ignorance*, the belief that their speaking time should depend on their goal (e.g., to be liked vs. to be found interesting), when in fact, perceivers form global impressions of each other. In Studies 1 and 2, participants forecasted they should speak less than half the time when trying to be liked, but significantly more when trying to be interesting. In Study 3, we tested the accuracy of these forecasts by randomly assigning participants to speak for 30%, 40%, 50%, 60%, or 70% of the time in a dyadic conversation. Contrary to people's forecasts, they were more likable the more they spoke, and their partners formed global rather than differentiated impressions.

Keywords

conversation, meta-perception, social perception, interpersonal perception, affective forecasting

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Human beings are a uniquely social species, with their well-being closely tied to their amount and quality of interactions with other people (Diener & Seligman, 2002; Siedlecki et al., 2014). First impressions are especially critical; making a good one leads to job offers, new friendships, and second dates, whereas making a bad one increases the likelihood that people will be jobless, friendless, and loveless (Van Lange & Columbus, 2021).

Given the critical importance of initial meetings with strangers, one might think that people are highly skilled at navigating such interactions. And in many ways people are; most people are good enough conversationalists to get jobs and make friends. Research on ingratiation, for example, finds that people are fairly successful at getting others to like them, with such tactics as agreeing with others' opinions and presenting oneself in a favorable light (Gordon, 1996; Jones, 1964; Jones & Wortman, 1973). But people are far from perfect at knowing how to manage initial encounters, as anyone knows who has endured awkward conversations at parties or disastrous first dates. Here, we explore one reason why: People may have mistaken beliefs about one of the most basic components of conversation, namely how much of the time they should speak versus listen.

Imagine, for example, that you are chatting with a new work colleague for the first time. To get this person to like you, what percentage of the time should you speak versus listen in the upcoming conversation? What if your goal is to come across as especially interesting: How much should you speak in that case? For reasons we will detail, we hypothesized that people want to listen more than speak when their goal is to be liked, but speak more than listen when their goal is to be interesting. We further hypothesized that these preferences are not entirely correct. Specifically, we hypothesized that there is a *reticence bias*, whereby people believe they will be liked in a conversation if they speak less than half of the time, when in fact they will be liked more if they speak half or more of the time.

Second, we hypothesized that people's belief that their speaking time should depend on their goal (to be likable vs. interesting) is also incorrect, because in fact, perceivers form global impressions of each other (i.e., liking and interest judgments are correlated more than people anticipate). We will refer to this as *halo ignorance*, because it reflects the fact that people do not realize that other people form global impressions (the halo effect), and that the same talking-time strategy can increase both liking and interest.

The Reticence Bias

The reticence bias, we suggest, is rooted in the fact that people lack confidence in their conversational abilities. Social anxiety is one of the most common mental health problems

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(Harvard Medical School, 2007). When asked to rate how effectively they could perform 20 daily activities in comparison to their peers, people rated having a conversation with someone new as the *only* activity out of 20 in which their performance would be below average (Welker et al., 2022). People are harsh critics of their own conversational abilities (Boothby et al., 2018).

Why are people so hard on themselves? One reason is that they have little objective information to go by. Conversation partners do not wear their feelings on their sleeves, making it difficult to tell how they really feel about us (e.g., Blumberg, 1972; Swann et al., 1992). As a result, people have difficulty "reading" the impression they are making on other people (Carlson & Kenny, 2012; Epley & Eyal, 2019; Ickes, 2003; Kenny, 2019). In a speed dating study, for example, the average correlation between how much people thought a particular partner liked them, and how much that partner actually liked them, was only .20 (P. Eastwick, personal communication, June 17, 2020).

Without valid external information, people often assume that they come across more negatively in a conversation than they actually do, a phenomenon known as the *liking gap* (Boothby et al., 2018; Carlson & Kenny, 2012; Huang et al., 2017; Stopa & Clark, 2000). One reason for this is that people assume that others are paying more attention to their shortcomings than they actually are (Savitsky et al., 2001). Further, people compare how they did in a conversation to their ideal of how the conversation could have gone, or to past conversations that went better, failing to realize that their conversation partner does not have access to these standards (Chambers et al., 2008). For all of these reasons, people often underestimate how well a conversation with a stranger will go (Epley & Schroeder, 2014). We suggest that because they have such a dim view of themselves as conversationalists, people may believe that the best strategy to be liked is to lay low and let the other person do most of the talking.

Another reason people might prefer to listen more than speak is that they believe that their conversation partners would prefer to talk about themselves. This belief has been reinforced in many self-help books, such as Dale Carnegie's (1936) *How to Win Friends and Influence People*, one of the best-selling books of all time (e.g., Garner, 2011). Carnegie gave the following advice about how to converse with strangers:

> Ask questions that the other person will enjoy answering. Encourage them to talk about themselves and their accomplishments. Remember that the people you are talking to are a hundred times more interested in themselves . . . than they are in you. (Carnegie, 1936, p. 144)

Note that, Carnegie's advice has two components: how much to speak and what to talk about. He recommends that when people talk, they should draw the other person out and get them talking about themselves (the topic should be the other person), with the implication that overall, people should listen more than speak. But talking time and topic do not necessarily go hand in hand; one could ask good questions of a conversation partner, while speaking for 40% or 60% of the time. In fact, research suggests that question asking and talking time have independent effects on people's liking. In one set of studies, participants who were randomly assigned to ask their partner many questions were better-liked than those who were randomly assigned to ask their partner few questions (Huang et al., 2017), even though those who asked many questions spoke or wrote as much as did those who asked few questions (M. Yeomans, personal communication, June 23, 2020). High-question askers were liked more because they were perceived as more responsive to their partner, confirming Carnegie's advice to focus on the other person in a conversation.

Other studies have found that people are liked better if they speak more than listen. In one correlational study, the more people spoke during a 5-minute conversation, the less boring they were perceived to be by the other person; further, participants in a subsequent study who were rated as less boring were also considered more likable (Leary et al., 1986). In an experimental study, two participants had a 12-minute conversation over Skype, with one randomly assigned to be the questioner (asking the other person a series of personal questions) and the other assigned to be the speaker (who answered the questions; Sprecher et al., 2012). That is, unlike in the Huang et al. (2017) studies, one person (the speaker) did most of the talking while the other (the questioner) listened. Contrary to Carnegie's advice, the questioners liked the speakers more than the speakers liked the questioners, possibly because the questioners learned more about the speakers. This result is consistent with the finding that in initial conversations with strangers, pairs that speak longer, and learn more about each other, like each more than pairs who speak for shorter periods of time (Finkel et al., 2015).

These findings are at odds with people's (hypothesized) belief about how much they *should* speak to be liked. That is, previous research suggests that people will be liked better when they speak more rather than less in a conversation, at least under some circumstances. But, because they are underconfident in their conversational abilities, and perhaps because they confuse "being a good listener" with "don't talk much," people may predict that they should speak less rather than more—demonstrating the reticence bias.

Halo Ignorance

To this point, we have been concerned with people's preferred talking time when they want to be liked by their conversation partner. Do they have the same theories when their goal is to be found interesting? Our hunch was that people would recognize that they should speak more with that goal in mind because, perhaps intuitively, people might realize

they cannot be interesting if they are not saying much; they need to contribute more substance to engage the other person and capture their interest. In other words, people may believe that their speaking time should depend on their goal—they should listen more than speak if they want to be liked, but speak more than listen if they want to be interesting.

This theory about speaking time assumes that other people form differentiated impressions of us; that is, that how much they like us is at least partially independent of how interesting they think we are. It further suggests that people hold conflicting beliefs about impression formation, namely that they have to prioritize liking at the expense of being found interesting (by listening more than speaking), or prioritize being found interesting at the expense of liking (by speaking more than listening). But there is reason to believe that this theory of differentiated impression formation is incorrect. Years of research on the halo effect show that people tend to form global impressions of others, generally positive or generally negative impressions that are not highly differentiated (Lance et al., 1994; Leary et al., 1986; Nisbett & Wilson, 1977). We thus expected that participants would exhibit *halo ignorance* by (a) assuming that their conversation partner would make relatively independent judgments of liking and interest; (b) predicting that they should speak less to maximize liking and speak more to maximize interest; (c) but that in fact, their conversation partners would form global impressions (i.e., liking and interest ratings would be correlated), (d) and that both liking and interest judgments would be higher when participants spoke more. Finally, on an exploratory basis, we asked participants to predict how much they would speak when their goal was to enjoy themselves or to maximize their partner's enjoyment.

To summarize, we hypothesized that:

1. People will underestimate how much they should talk in conversations if they want to be liked, exhibiting a *reticence bias*.
2. People will have differentiated theories about how much to talk to accomplish different goals, whereas others will form global evaluations that are undifferentiated (the *halo ignorance* hypothesis).

The Present Studies

We conducted three studies (all approved by the Institutional Review Board at the university where the research was conducted; none preregistered) to test the reticence bias and halo ignorance. All manipulations, measures, and exclusions are reported; supplementary materials, the Qualtrics programs used to run the studies, and the raw data can be found at: https://osf.io/uajw3/.

As an initial test of our hypotheses, we asked 186 participants on mTurk to imagine that they were having a 10-minute conversation with someone "who is the same age and gender as you who you have not met before," and to estimate the percentages of the time they would speak versus listen if they had various goals. On average, participants reported that they would speak less than half of the time if their goal was to be liked ($M = 40.77\%$, $SD = 14.73$) and if their goal was to enjoy themselves ($M = 42.08\%$, $SD = 16.65$), both of which were significantly lower than 50%, ts(185) = −8.54, −6.49, respectively, p values $< .001$. (See the supplemental materials for details of the pilot study and other results). Thus, as anticipated, participants believed that they should speak less than the other person if they wanted to be liked and enjoy themselves.

Studies 1 and 2 attempted to replicate these findings, and test the additional hypothesis that people have different theories about how much they should talk to be found interesting. We predicted that people would prefer to speak less than half of the time when their goal is to be liked, but more than half of the time when their goal is to be found interesting. In Study 3, we tested the accuracy of people's predictions by randomly assigning participants to speak for different percentages of time in a dyadic conversation. We did so by having a computer cue participants about how long to speak and what topic to address. This approach had clear advantages, in that it allowed us to control how much people spoke and what they spoke about. It also had clear disadvantages, in that participants knew that it was a computer controlling speaking time, which may limit how much we can generalize the results to more naturalistic conversations. We believed it was best to begin with a design that allowed for strong causal conclusions about the effects of speaking time; we address issues of generalizability in the General Discussion.

Study 1: Forecasted Speaking Time for Liking, Interest, and Enjoyment I

Overview

Participants imagined participating in a laboratory experiment with another undergraduate at their university who they had not met before. They first imagined having a brief conversation in which they and the other student took turns answering four conversation prompts. They were then told that they would have a second conversation with the other student in which they could choose the percentage of the time each person would speak and what topic(s) each person would focus on when they spoke (i.e., themselves or the other person). Participants made these choices while imagining having three different goals: to be well-liked, to be interesting, and to enjoy the conversation as much as possible.

Participants

Participants were undergraduates who received course credit for their participation. We aimed to collect data from 100 participants. Though we were only able to collect data from 95 participants, given participant pool constraints, the fact

that it was a within-participant design gave us adequate power: There was 98% power to detect an effect of $f = .25$ (for the difference in forecasted speaking times between goals; calculated in G*Power assuming a correlation among repeated measures of .1; Faul et al., 2007). Sixty-two percent of the sample identified as female and 38% identified as male. Fifty-four percent identified as White/Caucasian; 32.5% identified as Asian/Asian American; 3% identified as Hispanic/Latinx; 2% identified as Black/African American; 8.5% identified as multiracial.

Procedure

Participants completed a Qualtrics survey on-line. After consenting to participate and confirming that they were alone and not distracted, participants were asked to imagine participating in a laboratory experiment with another undergraduate at their university, named Taylor, who they had not met before (no further information about Taylor was provided, e.g., gender). At the beginning of this experiment, they were told, they and Taylor would spend 5 minutes getting to know each other by taking turns answering the following conversation prompts:

> Why did you choose to come to [name of university]?
>
> What's your favorite class so far?
>
> How do you like your living situation?
>
> What clubs or extracurricular activities are you involved in or thinking about joining?

Next participants were asked to imagine that, after a quick break, the rules of the conversation would change: They would get to decide the percentage of time that they versus Taylor would speak and what each person would speak about: commenting on their own or the other person's previous responses. In other words, participants chose a number from 0% to 100% for each of four possibilities: the percent of time *they* would want to expand on the responses *they* gave in their previous conversation with Taylor, the percent of time *they* would want to comment on *Taylor's* previous responses, the percent of time they would want *Taylor* to comment on *their* previous responses, and the percent of time they would want *Taylor* to expand on *Taylor's* previous responses. The order of these questions was randomized, and the four percentages were required to sum to 100%. For exploratory purposes, we then asked participants to report their preferences in a matrix format; these items can be found in the supplementary materials.

Goal manipulation. Participants answered all of the questions just described three times while imagining each of three different goals (presented in random order): That their goal was (a) to get Taylor to like them, (b) to make Taylor think they were interesting, and (c) to enjoy themselves as much as possible. Participants then completed a manipulation check question to confirm that they remembered the goal that they were supposed to have in mind when answering the questions. Finally, participants reported demographic information, reported any suspicions they may have had, and read an explanation of the study.

Results and Discussion

Goal to be liked. Table 1 displays the percentage of time participants wanted to speak versus listen, about themselves or the other person, when their goal was to be liked. Consistent with the pilot study, the average percentage of time that participants said they would prefer to speak, $M = 43.40\%$ ($SD = 12.91$) was significantly lower than 50%, $t(94) = -4.98$, $p < .001$, $d = -.51$, 95% CI [−.71, −.33]. As expected, this estimate was not conflated with who they thought the conversation should be about. Independent of who spoke, participants believed that the topic should be more about Taylor than themselves, $M = 58.64$ ($SD = 13.23$), which was significantly higher than 50%, $t(94) = 6.37$, $p < .001$, $d = .65$, 95% CI [.47, .84]. A 2 (Speaker) × 2 (Topic) repeated measures analysis of variance (ANOVA), run using the rstatix R package, revealed significant main effects for Speaker, $F(1, 94) = 24.84$, $p < .001$, and Topic, $F(1, 94) = 40.53$, $p < .001$ (Kassambara, 2021). Importantly there was no interaction, $F(1, 94) = .044$, $p = .835$, which is consistent with the idea that people hold independent beliefs about how much they should talk to be liked, and who the conversation should be about.

Goal to be interesting. As expected, participants had different preferences when their goal was to be interesting (see middle panel of Table 1). In fact, their preferences about talking time were the opposite of those when their goal was to be liked: The average percentage of time that participants said they would prefer to speak, $M = 57.55$ ($SD = 11.93$), was significantly greater than 50%, $t(94) = 6.17$, $p < .001$, $d = .63$, 95% CI [.44, .86]. Independent of who spoke, participants reported that they should be the topic of the conversation more than Taylor, $M = 57.77$ ($SD = 13.98$), which was also significantly greater than 50, $t(94) = 5.41$, $p < .001$, $d = .56$, 95% CI [.37, .77]. Again, these effects were additive; a 2 (Speaker) × 2 (Topic) repeated measures ANOVA revealed significant main effects of Speaker, $F(1, 94) = 38.05$, $p < .001$, and Topic, $F(1, 94) = 29.32$, $p < .001$, but no interaction, $F(1, 94) = 2.26$, $p = .136$.

Goal to enjoy themselves. Also consistent with the pilot study, participants' preferences for how much to speak and what to speak about, when their goal was to enjoy themselves, were in between those for the other goals (see bottom panel of Table 1). Participants believed that they should speak for about the same

Table 1. The Mean Percent (and Standard Deviation) of Time Participants Wanted Each Person To Speak About Each Topic, by Conversational Goal.

Goal: To be liked			
	Who speaks		
Topic	You	Taylor	Sum
You	17.52 (9.54)	23.84 (10.93)	**41.36 (13.23)**
Taylor	25.88 (11.30)	32.76 (12.87)	**58.64 (13.23)**
Sum	**43.40 (12.91)**	**56.60 (12.91)**	
Goal: To be interesting			
	Who speaks		
Topic	You	Taylor	Sum
You	33.49 (11.76)	24.27 (10.19)	**57.77 (13.98)**
Taylor	24.05 (11.22)	18.18 (9.35)	**42.23 (13.98)**
Sum	**57.55 (11.93)**	**42.45 (11.93)**	
Goal: To enjoy yourself			
	Who speaks		
Topic	You	Taylor	Sum
You	27.14 (10.90)	25.46 (9.74)	**52.60 (12.77)**
Taylor	21.13 (8.71)	26.27 (10.68)	**47.40 (12.77)**
Sum	**48.26 (10.22)**	**51.74 (10.22)**	

amount of time as Taylor; the main effect of speaker was not significant, $F(1, 94) = 2.75$, $p = .101$; that is, forecasted speaking time did not differ from 50%, $t(94) = -1.66$, $p = .101$, $d = -.17$, 95% CI [−.37, .04]. They believed the topic should be more about them than Taylor; the main effect of Topic was significant, $F(1, 94) = 3.94$, and forecasted speaking time *did* differ from 50%, $t(94) = 1.98$, $p = .050$, $d = .20$, 95% CI [.00, .38]. These effects were qualified, however, by a significant Speaker × Topic interaction, $F(1, 94) = 8.13$, $p = .005$. A Tukey HSD test showed that this interaction was driven by participants' desire to spend less time speaking about Taylor than on any of the other options. Thinking of things to say about the other person, and communicating them politely, may have been perceived as the most difficult of the four possibilities, and therefore the least enjoyable.

As mentioned, participants also made specific predictions about who they wanted to speak and about what using a matrix format. The results on these measures were consistent with those reported above; for example, when the goal was to be liked, the most popular choice was having Taylor expand on their earlier comments, whereas when the goal was to be interesting, the most popular choice was for people to expand on their own earlier comments. The details of these results are reported in the Supplementary Materials.

Study 1 supported the idea that people believe they should listen more than speak when their goal is to be liked, but speak more than listen when their goal is to be interesting, and that this belief is independent of whether the topic was about them or the other person. Are they right? To find out, in Study 3, we asked college students to engage in two-person conversations and manipulated how long each person spoke. Before presenting that study, however, we report the results of another forecasting study that asked people to imagine the exact procedures of Study 3 and to predict how much they would be liked and found interesting. We expected to replicate Study 1, such that participants would think they would be liked if they spoke less than 50% of the time, but appear interesting if they spoke more than 50% of the time. Because participants imagined being in the exact procedure used in Study 3, such a result would set the stage to test the accuracy of these predictions.

Study 2: Forecasted Speaking Time for Liking, Interest, and Enjoyment II

Overview

Participants were asked to imagine that they were participating in a laboratory experiment with another undergraduate at their university who they had not met before, and that they would have a conversation in which they and the other student would take turns answering four conversation prompts. They were told that the conversation would be guided by a computer program, which would indicate who should speak, which conversation prompt they should answer, and for how long. The computer, participants were told, would assign them to speak for 30%, 40%, 50%, 60%, or 70% of the total conversation time. Participants indicated the percentage of time they would prefer to speak while imagining having the same three goals as in Study 1: to be liked, to be interesting, or to enjoy themselves as much as possible. Then, participants imagined having been randomly assigned to each of the five speaking time conditions and, for each condition, forecasted the extent to which they thought they and their partner would like each other, find each other interesting, and enjoy the conversation.

Participants

Participants were college students who received course credit for their participation. We aimed to collect data from 100 participants, to achieve similar power as in Study 1. After that goal was reached, and before the link was disabled and the data downloaded, 10 additional participants took part; thus we ultimately collected data from 110 participants. Sixty-three percent of the sample identified as female and 37% identified as male. Fifty-eight percent identified as White/Caucasian; 23% identified as Asian/Asian American; 6.5% identified as Black/African American; 4.5% identified

Table 2. Study 2: Mean Percentage of Speaking Time Preferred for Each Conversational Goal.

				Compared with 50%		
Conversational goal	*n*	*M*	*SD*	*t*	*p*	*d*, 95% CI
Be liked	110	44.64[a]	8.85	–6.36	<.001	–.61 [–.83, –.41]
Be interesting	110	53.45[c]	10.09	3.60	<.001	.34 [.15, .58]
Enjoy yourself	110	49.18[b]	11.18	–0.77	.445	–.07 [–.26, .11]

Note. Means with different superscripts differ at $p < .05$ with a post hoc Tukey HSD test.

as Hispanic/Latinx; 8% identified as multiracial or as another race or ethnicity.

Procedure

Participants completed a Qualtrics survey on-line. After consenting to participate and confirming that they were alone and not distracted, participants were asked to imagine participating in a laboratory experiment with another undergraduate at their university who they had not met before. Upon arriving in the lab, they were told, they would have a conversation with the other participant in which they would take turns answering the same four conversation prompts used in Study 1. Thus, when each participant spoke, they would be talking about themselves. Before engaging in this conversation, they were told that they would have 3 minutes to silently brainstorm how they would respond to each question.

Speaking time conditions. Participants then learned that after the brainstorming period, the experimenter would place a laptop computer on the table in front of them and their partner, and that a computer program would guide them through their upcoming conversation by assigning them to speaking time conditions. One person, they learned, would speak for either 30%, 40%, 50%, 60%, or 70% of the time in the conversation, whereas the other person would speak for the remaining time. Thus, if they spoke for 30% of the time, their partner would speak for 70% of the time. They were shown samples of the prompts they would receive if they were assigned to speak 30% of the time, namely that their prompt would say:

> [YOUR NAME], what has been your favorite class so far?
>
> (you have 30 seconds to respond)

Whereas, on a subsequent prompt, the computer would give these instructions:

> [YOUR PARTNER'S NAME], what has been your favorite class so far?
>
> (you have 70 seconds to respond)

After learning about these speaking time conditions and answering comprehension check questions, participants were asked the percentage of time they would prefer to speak if their goal was (1) to get their partner to like them; (2) to get their partner to think they were interesting, and (3) to enjoy themselves as much as possible, in random order. For each goal, participants indicated whether they preferred to speak 30%, 40%, 50%, 60%, or 70% of the time.

Next participants were asked to imagine that the computer had randomly assigned them to speak for 30%, 40%, 50%, 60%, or 70% of the time (in random order). For each percentage, participants forecasted the extent to which they would like their partner, find their participant interesting, and enjoy themselves. They then forecasted their partner's liking, interest, and enjoyment. Finally, for exploratory purposes, participants forecasted how confident both they and their partner would feel (these measures are reported in the supplementary materials). All forecasts were made on 5-point scales, with responses ranging from *1 = Not at all* to *5 = An extreme amount*. Finally, participants reported demographic information, reported any suspicions they may have had, and read an explanation of the study.

Results and Discussion

The results replicated Study 1: When participants' goal was to be liked, they preferred to speak less than half the time, $M = 44.64\%$ ($SD = 8.85$), whereas when their goal was to be interesting, they preferred to speak more than half of the time, $M = 53.45$ ($SD = 10.09$).[1] And, once again, when their goal was to enjoy themselves, they preferred to speak about half of the time, $M = 49.18$ ($SD = 11.18$). A one-way within-participants ANOVA revealed a significant effect of goal, $F(2, 218) = 23.25$, $p < .001$, $f = .46$, 95% CI [.32, .60], and all three means were significantly different from each other with a Tukey HSD post hoc test (Table 2; Ben-Shachar et al., 2021; Kassambara, 2021; Lenth, 2021). Further, there were minimal correlations between the goals; correlations were $r = .04$, $t(108) = 0.40$, $p = .688$ for liking and enjoyment, $r = .07$, $t(108) = 0.77$, $p = .442$ for interest and enjoyment, and $r = .19$, $t(108) = 2.00$, $p = .048$ for liking and interest.

After choosing the percentage of time they wanted to speak for each goal, participants predicted how much their partner would like them, find them interesting, and enjoy themselves, as well as how much they would like their partner, find their

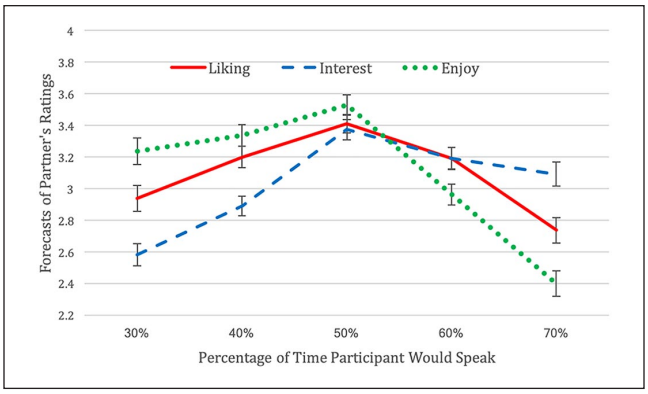

Figure 1. Study 2: Participants' forecasts about how much their partner would like them, find them interesting, and enjoy themselves when participants spoke for various amounts of time.
Note. The error bars are the standard errors.

participant interesting, and enjoy themselves, under each of the five speaking time conditions (i.e., if the computer had assigned them to speak for 30%, 40%, 50%, 60%, and 70% of the time). Given the current interest in how well people understand the impression they make on others, we focus here on participants' forecasts about the other person's reactions to them. Participants' forecasts about their own reactions can be found in the supplemental materials.

Consistent with the halo ignorance hypothesis, participants had distinct theories about how much they should talk to optimize being liked, found interesting, or having their conversation partner enjoy themselves (Figure 1). A 3 (Goal: liking, interest, enjoyment) × 5 (Speaking Time: 30%, 40%, etc.) repeated measures ANOVA (with the Greenhouse-Geisser correction; Kassambara, 2021) revealed a significant main effect of goal, $F(2.00, 18.00) = 3.78$, $p = .024$, a significant main effect of speaking time, $F(3.37, 367.29) = 27.23$, $p < .001$, and a significant interaction between the two variables, $F(5.13, 558.69) = 28.56$, $p < .001$. Specifically, consistent with the prior results, participants were more likely to endorse low speaking times (e.g., 30% or 40%) if their goal was to be liked, and more likely to endorse high speaking times (e.g., 70%) if their goal was to be interesting. In the supplemental materials, we report further evidence that people had nuanced theories about how to achieve their conversational goals. That is, a factor analysis of participants' forecasts revealed two factors, suggesting that they were making somewhat independent forecasts about their partner's liking, interest, and enjoyment.

Study 3: Effects of Talking Time on Liking, Interest, and Enjoyment

Overview

Participants, run in pairs, followed the procedure described to participants in Study 2: They had a 7-minute conversation in which they took turns answering four conversation prompts. The conversation was guided by a computer program that indicated which person should speak, which question they should answer, and how long they would have to answer the question. This program randomly assigned participants to speak for 30%, 40%, 50%, 60%, or 70% of the time. After the conversation, participants reported how interesting, likable, and enjoyable they found their partner. They also estimated their partner's impressions, but here we will focus on how likable, interesting, and enjoyable participants came across because this is what the participants in our previous studies were asked to predict.

Participants

Participants were college students who received course credit for their participation. Ultimately, we were able to collect data from 118 participants before the COVID-19 pandemic. Because we were studying interactions between strangers, we dropped one pair of participants who were roommates (the results are slightly stronger when they are included). Of the remaining 116 participants, 77% of the sample identified as female and 23% identified as male. Fifty-three percent identified as White/Caucasian; 29% identified as Asian/Asian American; 7% identified as Black/African American; 2.5% identified as Hispanic/Latinx; 8.5% identified as multiracial or as another race or ethnicity.

Procedure

Two undergraduates participated in each study session, and each session was led by one of five female experimenters. Once both participants arrived, they were introduced and asked if they knew each other. After giving written consent, participants stored their cell phones and all other personal belongings for the duration of the experiment.

Following the procedures described in Study 2, the experimenter told participants that to get to know each other better, they would have a conversation in which they would take turns answering four conversation prompts. The experimenter handed each participant a sheet of paper with the prompts, left the room, and gave them 3 minutes to silently brainstorm how they would answer them (the prompts were the same as described in Studies 1 and 2). The experimenter then returned and placed a laptop on the table in front of the participants. She told them that the computer would guide their conversation by indicating who should speak, which conversation prompt to answer, and how long they would have to answer the question. The experimenter entered participants' first names into the program, which were displayed in the prompts; for example, a prompt might read:

> TAYLOR, what has been your favorite class so far?
>
> (you have 30 seconds to respond)

Further, the experimenter told participants that the computer would randomly assign them to speaking time conditions, and it might assign them to speak for the same or different amounts of time. They were told that only the person instructed to answer a prompt should speak during that time. At the end of each speaking turn, the computer would "ding" and provide a new prompt to signal that it was now the other person's turn to speak, such as:

ALEX, what has been your favorite class so far?

(you have 70 seconds to respond)

Given that there were four questions to be answered, and 100 seconds allotted for each question, the conversations always lasted for 6.67 minutes total, but participants spoke for varying amounts of this time (i.e., either 30%, 40%, 50%, 60%, or 70%). In other words, there were three types of sessions (randomly assigned): One in which one participant spoke for 30% of the time (because they had 30 seconds to answer each question) and the other spoke for 70% of the time (because they had 70 seconds to answer each question); one in which one participant spoke for 40% of the time and the other spoke for 60% of the time; and one in which both participants spoke for 50% of the time.

After the conversation, the experimenter took the participants to separate rooms, where they each completed the dependent measures delivered via a Qualtrics survey. The measures were the same ones that participants in Study 2 forecasted. Namely, each participant reported how interesting, likable, and enjoyable they found their partner, allowing us to test the accuracy of participants' predictions about these impressions in Study 2. Further, participants also made predictions about their partner's liking, interest, and enjoyment. Items about one's self versus one's partner were presented in a counterbalanced order, and within each question block, questions about liking, interest, and enjoyment were presented in a random order. Then, participants answered other exploratory questions about how confident both they and their partner felt and the extent to which they had various goals in the conversation (i.e., the goals of being well-liked, coming across as interesting, and enjoying the conversation). All of these responses were reported on 5-point scales with responses ranging from *1 = Not at all* to *5 = An extreme amount*. The results of these items are reported in the supplementary materials. Participants then answered two manipulation check questions asking what percentage of the time they thought they spoke during the conversation and what percentage of the time they thought the conversation was about them. Finally, participants reported demographic information and any suspicions they may have had. Once both participants finished, they were brought back to the same room and fully debriefed.

Results and Discussion

Evidence for the halo ignorance bias. Figure 2 displays how interesting, likable, and enjoyable participants came across, by speaking time condition (the percentage of time they spoke), and it is clear that the three ratings were not as independent as participants in Study 2 forecasted they would be (Figure 1). A multi-level model with a random intercept for each dyad (run using the lme4 package in R) revealed a significant effect of rating type, $F(2, 277.50)=3.67$, $p = .027$, reflecting the fact that their partners' ratings of enjoyment were slightly lower than their ratings of liking and interest (Bates et al., 2021). The main effect of speaking time was also marginally significant, $F(4, 108.64) = 2.24$, $p = .070$, reflecting the fact that all three ratings (liking, interest, enjoyment) were lower when people spoke 30%−40% of the time than when they spoke for 50% of the time or more. Importantly, the Rating × Speaking Time interaction was not significant, $F(8, 277.50) = 0.43$, $p = .905$. Contrary to participants' forecasts in Studies 1 and 2, how much participants spoke did not have different effects on how much they were liked versus found interesting.

Further, a factor analysis on participants' liking, interest, and enjoyment ratings, with an oblique (promax) rotation, revealed the presence of only one factor, in contrast to the two factors that emerged in the Study 2 forecasts (see supplementary materials). These results are consistent with the halo ignorance hypothesis: Actual ratings in Study 3 reflected a halo effect, in that ratings of how interesting, likable, and enjoyable participants came across were highly correlated (see Table S8 in the supplementary materials for factor analysis results), whereas forecasters in Study 2 predicted that these ratings would diverge.

The means in Figure 2 also indicate that forecasters were not very accurate about the optimal amount of time to speak in a conversation. As seen in Figure 1, forecasters had strong theories about the effects of speaking time on their partners' liking, interest, and enjoyment ratings (e.g., many of the standard errors are non-overlapping). However, as seen in Figure 2, speaking time had different effects on these ratings than participants anticipated (e.g., many of the standard errors overlap). Next we compare participants' forecasts in the pilot study and Studies 1 and 2 with how participants were actually rated in Study 3.

Actual versus forecasted liking. In the pilot study and Studies 1 and 2, participants reported that if their goal was to be liked, they would prefer to speak significantly less than 50% of the time. Further, when looking at the forecasts from Study 2, a one-way within-subjects ANOVA revealed a significant effect of Speaking Time on participants' forecasts of liking, $F(3.24, 353.54) = 15.69$, $p < .001$, $f = .38$, 95% CI [.27, .47], as well as a significant quadratic trend, $b = -1.86$, $SE = 0.25$, $t(436) = -7.56$, $p < .001$, showing that although participants thought they should speak less to be liked, they

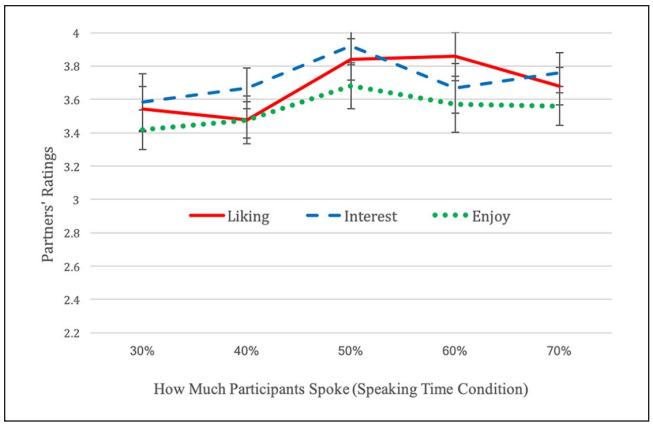

Figure 2. Study 3: How much participants' partners actually liked them, found them interesting, and enjoyed themselves when participants spoke for various amounts of time.
Note. The error bars are the standard errors.

knew that they would need to speak up at least a little bit to achieve this goal (Figure 1). However, as seen in Figure 2, participants in the pilot and Studies 1 and 2 were mistaken: Participants who spoke more in Study 3 tended to be more well-liked by their partners. Specifically, a multi-level model with a random intercept for each dyad revealed a significant linear trend, $b = 0.68$, $SE = 0.33$, $t(56) = 2.05$, $p = .045$, reflecting the fact that the more participants spoke, the more they were liked.

Actual versus forecasted ratings of interest. Participants in Studies 1 and 2 forecasted that if their goal was to be found interesting, they would speak significantly more than 50% of the time. Further, a one-way within-subjects ANOVA on participants' forecasts in Study 2 revealed a significant effect of Speaking Time on forecasts of interest, $F(3.35, 365.30) = 24.19$, $p < .001$, $f = .47$, 95% CI [.36, .56], as well as a significant quadratic trend, $b = -1.48$, $SE = 0.23$, $t(436) = -6.43$, $p < .001$. These results suggest that although participants thought speaking more would make them more interesting, they also believed that there would be a slight decrease in their partners' interest if they completely dominated the conversation. However, the results of Study 3 suggest that these forecasts were not entirely correct. Specifically, a multilevel model that included a random intercept for each dyad revealed that the main effect of speaking time on interest ratings was not significant, $F(4, 58.69) = 0.91$, $p = .467$, $f = .25$, 95% CI [.00, .43]. In other words, Study 2 participants forecasted that they would be more interesting if they spoke more (at least up to a certain point), but in Study 3, participants were found equally interesting regardless of how much they spoke.

Actual versus forecasted ratings of enjoyment. Study 2 participants forecasted that if their goal was to enjoy the conversation, they would speak for about half of the time. Although we neglected to ask participants how much they would prefer to speak to maximize their partner's enjoyment, we did ask them to forecast how much their partner would enjoy the conversation under the different speaking time conditions. As seen in Figure 1, participants in Study 2 forecasted that their partners would enjoy the conversation the most when they spoke for 40%−50% of the time (note that this is consistent with participants' theories about how to be likable). Specifically, there was a significant effect of Speaking Time on participants' forecasts of their partners' enjoyment, $F(3.24, 352.76) = 42.44$, $p < .001$, $f = .62$, 95% CI [.51, .72], and a significant quadratic trend, $b = -2.08$, $SE = 0.25$, $t(436) = -8.29$, $p < .001$. However, as seen in Figure 2, participants' partners enjoyed the conversation equally in all five speaking time conditions, $F(4, 62.56) = 0.55$, $p = .700$, $f = .19$, 95% CI [.00, .34].

Finally, as noted earlier, research shows that overall, people underestimate how much others like them (e.g., Boothby et al., 2018). We found a similar liking gap: Participants significantly underestimated how much their partner liked them $b = -0.59$, $SE = 0.07$, $t(171) = -8.57$, $p < .001$, found them interesting, $b = -0.70$, $SE = 0.07$, $t(114) = -9.57$, $p < .001$, and enjoyed the conversation, $b = -0.46$, $SE = 0.07$, $t(114) = -6.49$, $p < .001$. A table of these results can be found in the supplementary materials (Table S16).

General Discussion

The present studies found evidence for a *reticence bias*, whereby participants believed that they would be liked in a conversation if they spoke less than half of the time (in the pilot and Studies 1–2), when in fact they were more well-liked when they were randomly assigned to speak up more (in Study 3). We also found evidence for *halo ignorance*, whereby participants forecasted that they should speak less to maximize liking and speak more to maximize interest, when in fact conversation partners in Study 3 formed relatively global impressions of each other. Put differently, forecasters mistakenly predicted they would have to prioritize liking at the expense of being interesting (by listening more than speaking), or prioritize being interesting at the expense of liking (by speaking more than listening). In fact, these goals are not mutually exclusive; in Study 3, ratings of liking and interest were highly correlated.

A limitation of these findings is that in Study 3, talking times were imposed on participants. This had the advantage of allowing us to randomly assign participants to different talking times, but it had the disadvantage of limiting the generalizability of the results. In natural conversations people choose how much to speak, and knowing that one's partner chose to hog the stage for 70% of the time may not be viewed positively. One way to address this is to look at the correlation between speaking time and liking, interest, and enjoyment in natural conversations, and as mentioned earlier, there are studies that find a positive correlation (e.g., Leary et al., 1986; Sandstrom et al., 2016). However,

a recent study found a negative correlation between speaking time and how much participants were liked (G. Cooney, Conversation turn duration, personal communication, July 21, 2021). These conflicting findings illustrate a problem with such correlational results, namely that they may confound speaking time with what people talk about. We probably like someone more if they spend 60% of the time talking about us than if they spend 60% of the time droning on about their recent trip to Mexico (Cooney et al., 2017).

Indeed, a strength of the present studies is that they found that talking time matters, controlling for what people are talking about. In Study 1, forecasters believed they would be liked more if they spoke for less than 50% of the time, regardless of whether they were talking about themselves or their conversation partner (Table 1). In Study 2, participants forecasted how much they would be liked if they spoke for varying times about themselves on four topics (e.g., what their favorite class was), and in Study 3, participants actually spoke for varying times about themselves on those same four topics. And, as seen, forecasters thought they would be liked the most if they spoke for less than 50% of time on those topics, whereas participants in Study 3 were liked the most if they spoke for 50% or more of the time on those topics.

Establishing the generalizability of these results would be challenging; one would need to randomly assign participants to various talking times in a naturalistic conversation (perhaps by having one member of the dyad be an experimental accomplice) and hold constant or manipulate the topic of the conversation. Until such evidence is available, we should be cautious about generalizing our results beyond the type of conversation people had in Study 3. We can conclude that (a) the *belief* that one should speak less than half of the time to be liked appears to be widespread, as indicated by the results of the pilot and Studies 1–2, as well as an unpublished study in which participants made forecasts about a more naturalistic conversation (Hirschi et al., 2020); (b) these beliefs are wrong in at least one context, namely when participants are randomly assigned to speaking times as in Study 3.

Another concern is whether participants' forecasts about speaking time were influenced by self-presentational concerns. Perhaps participants knew that they would be liked if they spoke 50% or more of the time, but gave a lower answer so as not to appear immodest. Such an interpretation, however, does not explain why participants in Studies 1 and 2 said they would prefer to talk more than half of the time if their goal was to appear interesting; nor does it explain why people said they would prefer to speak less than half of the time if their goal was to enjoy themselves (because this goal is about their personal reactions and not about how others view them). Rather, consistent with studies on the liking gap, we believe participants' reticence was a function of their lack of confidence in how they come across in conversations with strangers. Note that in that literature, participants underestimate their liking even when offered incentives to be accurate (Boothby et al., 2018), suggesting that self-presentational concerns were not at play.

A further limitation of the present findings is that with the exception of the pilot study, the participants were all American college students. It is possible that the reticence bias is limited to young adults, who may be especially insecure about their speaking abilities. There are two sources of evidence, however, that are inconsistent with this conclusion. First, the pilot study included participants from ages 19 to 67, and there was not a significant correlation between their age and their preferred talking times. Second, Boothby et al. (2018) found the liking gap not only among college students, but also among participants in a community workshop in the United Kingdom (average age = 30 years), suggesting that insecurities about one's performance in conversations with strangers are not limited to the former population. Nonetheless, it will take further research to determine how generalizable the reticence bias and halo ignorance are. This clearly applies to the role of culture as well. It is possible, for example, that the effects of talking time on liking, interest, and enjoyment are different in East Asian cultures or other social contexts with lower relational mobility, given that such contexts are associated with less self-disclosure (Schug et al., 2010).

It is also possible that the effects of talking time on liking, interest, and enjoyment differ at various relationship stages. The focus of the present research is the "surface contact" stage of relationships in which previously unacquainted individuals interact. In long-term relationships, it may be perfectly acceptable for one person to spend most of the time listening to their partner at one point in time, knowing that their partner will likely reciprocate by being the listener in future conversations.

We also want to note that although our research shows people are wrong about the optimal amount of time to speak to achieve their conversational goals, speaking time is not the only relevant strategy for accomplishing one's goals. As other research has highlighted, it is also important to disclose about one's self (Aron et al., 1997; Kardas et al., 2022), use at least some of one's talking time to ask open questions (Huang et al., 2017; Van Quaquebeke & Felps, 2018), and when not speaking, to listen well (Lloyd et al., 2015; Lopez-Rosenfeld et al., 2015; Weger et al., 2010). Further, it is possible that these additional strategies could moderate the effects we found in Study 3. For example, a person who speaks up, self-discloses, asks thoughtful questions, and listens well might be particularly well-liked, and it will be important for future research to test how conversational strategies such as these interact to promote liking (e.g., Ames et al., 2012).

Finally, further work is needed to isolate the precise mechanisms underlying the reticence bias and halo ignorance. We hypothesized that the reticence bias is rooted in people's lack of confidence in their conversational abilities, which leads them to believe it is best to speak less than their conversation partner. One might think that people would learn from experience that this is wrong; after all, in Study 3, participants liked conversation partners who spoke up more. People do not seem to draw the conclusion that this applies to them as well, instead inferring that whereas others are more likable when they speak up, they are liked better when

they speak less. An interesting question for future research is how to get people to connect these dots, realizing that just as others are more likable when they speak up, the same applies to them (see also Sandstrom et al., 2021).

It is also curious that our participants had not learned from experience that they form global impressions of other people they have met for the first time, instead of believing that they needed to employ different conversational strategies to be likable versus interesting. That is, one might think that halo ignorance would be cured by recognizing that our first impressions of others are not highly differentiated, and realizing that the same is probably true of their impressions of us. Such a lesson, however, would require a degree of self-insight that apparently is not common. People may not recognize the extent to which their impressions of others are subject to a halo effect, and even if they did, they might not infer from this that others form generalized impressions of them (Nisbett & Wilson, 1977). Again, an interesting avenue of future research would be to explore how to get people to learn these lessons.

In closing, we note that the findings of the present studies suggest a refinement of Dale Carnegie's oft-quoted advice to be a good listener to be liked in a conversation. Although it may be true that we should draw people out and get them to talk about themselves, that doesn't mean we should cede the floor and speak less than they do.

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Data Availability

The raw data from the studies can be found at: https://osf.io/uajw3/

Supplemental Material

Supplemental material is available online with this article.

Note

1. The results are similar when subsetting the data to include only the questions that participants saw and answered first. This reduces the possibility that differences emerged due to demand characteristics.

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