How time flies: The effects of conversation characteristics and partner attractiveness on duration judgments in a social interaction ☆

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HIGHLIGHTS

• Immediate duration judgments were short when people focused on the dominant speaker.
• Delayed duration judgments were long when people focused on the dominant speaker.
• Different processes mediate people's immediate and delayed duration judgments.
• Duration judgments are both a cause and an effect of partner's attractiveness.

ARTICLE INFO

ABSTRACT

A theory of information processing proposed by Wyer and Srull (1989) is used to conceptualize the characteristics of a get-acquainted conversation that influence perceptions of its duration. These perceptions are partly determined by whether persons focus their attention on things their partner says or on things they personally say, and this, in turn, depends on their partner's physical attractiveness. Participants' estimates of a conversation's duration immediately after it occurs are based on their enjoyment of the conversation and were shorter when the person on whom they had focused talked a lot than when (s)he said very little. After a 2–3 day delay, however, they base their estimates on the amount of the conversation they could remember and estimate that it lasted longer in the former condition than in the latter. These conclusions were confirmed in both simulated conversations and an actual interaction between partners of the opposite sex. Thus, individuals' immediate and delayed estimates of the duration of an interaction can be opposite in direction, and this difference is driven by both the characteristics of the conversation (i.e., speaker dominance) and social and motivational factors that could influence people's focus of attention (i.e., the attractiveness of their conversation partner).

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Introduction

Perceptions of duration are an integral feature of social experience. Some dinner parties seem to drag on for hours on end. Others pass so quickly that it is time to leave before we know it. One reason for this difference seems obvious. In some cases, nothing of interest seems to be going on and we feel bored. At other times, we become engrossed in the stories that are told, debates on the state of the economy and discussions of who will win the World Cup. Time seems to pass more quickly when it is filled with many different events than when it is not.

However, suppose we have occasion to think about the dinner party several days later, after our feelings about it have largely dissipated.

Then, we may infer its duration from the number of things we remember having occurred, assuming that the more things that took place, the longer it probably took. In this case, therefore, we might infer that the interesting dinner party lasted *longer* than the boring one. Moreover, if events of longer duration are perceived to be less enjoyable (Sackett, Meyvis, Nelson, Converse, & Sackett, 2010), we might even infer that the interesting party was less fun than the one we had initially considered to be boring! In short, the number of events that compose an experience can have opposite effects on estimates of its duration, and judgments of the experience itself, when these estimates are made after a delay than when they are made immediately.

The factors that influence perceptions of time duration in a social context, and the consequences of these perceptions, have never been examined to our knowledge. However, Ahn, Liu, and Soman (2009) partially confirmed the aforementioned intuitions in a nonsocial context. Participants viewed a series of pictures for a period of 3 min. In some conditions, six pictures were presented for 30 s each. In a second condition, 30 slides were presented for 6 s each. When participants were

asked immediately after the slide presentation to estimate its duration, they judged it to be longer when a few pictures were presented than when many were presented. After a delay of three days, however, the reverse was true.

Although these findings are provocative, several questions arise in evaluating their implications for social interaction situations. For one thing, participants in most of Ahn et al.'s (2009) studies passively observed a single sequence of independent stimuli with no clear objective in mind except to comprehend what they said. In a social interaction, however, individuals are often exposed to a diverse set of interrelated stimulus events (e.g., statements and behaviors) from several different sources. Moreover, the events that occur can be generated by the individuals themselves as well as by others. Finally, the events to which individuals attend in a social interaction are likely to depend on their processing objectives (to form an impression of others, to make a good impression on others or simply to learn about the topics described). These factors could influence not only individuals' perception of the duration of the interaction but also their enjoyment of it and their attraction to the parties involved. A conceptualization of time perception in social interaction situations must take these factors into account.

We provide such a conceptualization and report evidence bearing on its implications. In two experiments, college students either imagined themselves participating in an audiotaped get-acquainted situation in which the relative amount of time that they and their partner spent talking was varied. The relative attention they paid to the statements they personally made and the statements their partner made was manipulated either by instructions or by varying the partner's physical attractiveness (thus motivating them either to form an impression of their partner or to create a good impression of themselves). In a third experiment, participants actually engaged in a get-acquainted conversation with one another. All three experiments confirmed the assumption that people's immediate and retrospective estimates of a conversation's duration, and their reactions to the conversation, are influenced in opposite ways by their objectives at the time the conversation took place and the aspects of the interaction to which they attended.

Theoretical development

William James (1890) was among the first to observe that "…in general, a time filled with varied and interesting experiences seems short in passing but long as we look back. On the other hand, a tract of time empty of experiences seems long in passing but in retrospect short" (p. 624). Numerous theories of time estimation have been proposed (for a review, see Block, 1990). These estimates can be influenced by emotions and arousal (Droit-Volet & Meck, 2007; Gruber & Block, 2003), mental engagement (Chaston & Kingstone, 2004), motivation (Conti, 2001), and the use of an "internal clock" (Burle & Casini, 2001; Glicksohn, 2001; Treisman, 1984). However, little research and theorizing deal directly with estimates of time duration, and none to our knowledge account for the difference between estimates of time in passing and estimates of time in retrospect.

In fact, most empirical research on time duration estimates has been restricted to a consideration of retrospective judgments (Huttenlocher, Hedges, & Prohaska, 1988). For instance, the conveyor belt model proposed by Murdock and his colleagues supposes that events are encoded in memory in the temporal order in which they occurred (Murdock, 1974; Murdock & Anderson, 1975; see also Huttenlocher, Hedges, & Bradburn, 1990). Similarly, the time tagging model proposed by Yntema and Trask (1963) assumes that individuals assign temporal tags to these events at the time the events are experienced, and these tags provide the basis for reconstructing the period of time that occurred. This tagging seems unlikely to occur spontaneously, however, in the absence of a goal that requires it (but see Burle & Casini, 2001, for a conceptualization that assumes the spontaneous "ticking" of an internal clock). Rather, individuals may have an implicit theory that

the duration of an experience increases with the number of events that occur. Therefore, their estimates of the experience's duration are likely to increase with the number of events they recall at the time of judgment (Orstein, 1969). Thus, as Zauberman, Levav, Diehl, and Bhargave (2010) found, a past experience that is punctuated by a large number of intervening effects seems more distant. Ahn et al.'s (2009) findings noted earlier are also consistent with this possibility. However, Ahn et al. (2009) also found that the effects were reversed when individuals made judgments immediately after the stimuli were presented. The processes that underlie immediate estimates were not clearly stated.

In short, these findings exemplify James's observation that the duration of a past experience seems to increase with the number of things that occurred. As James also observed, however, estimates of an experience's duration at the time it occurs seem to be a function of the amount of "empty space". That is, estimates should be greater when the number of events that occur is small. Time seems to drag when nothing is going on but flies by when we are having fun (Kellaris & Kent, 1992).

To our knowledge, Ahn et al.'s (2009) research is the first to demonstrate empirically the difference between retrospective and immediate time duration estimates. As we have noted, however, the implications of this research for perceptions of time in a social situation of the type that occurs outside the laboratory are unclear. By applying the theory of social information processing proposed by Wyer and Srull (1989), we were able to conceptualize the factors that underlie immediate and retrospective differences in processing when information comes from several different sources (including the participants themselves) and is processed with different goals in mind. Although features of this theory were used by Ahn et al. (2009) to conceptualize retrospective estimates, more general implications of the theory were not articulated. After reviewing features of the theory that bear most directly on these matters, we discuss more specifically its implications for estimates of time duration in a social context.

Basic assumptions

To account for differences in judgments based on the information that people receive at different points in time, Wyer and Srull (1989) postulate two storage units. One, the Work Space, is conceptually similar to working memory, and is a temporary store of both (a) the external information that enters the processing system and is comprehended at an initial stage of processing and (b) the results of goal-directed processing that occur at later stages. This material is retained in the Work Space for only a short time, however. If the goal to which it is relevant has been attained, the Work Space is cleared to make room for more immediately relevant objectives. When this occurs, any material that has not been transferred to long-term memory is lost.

Permanent Storage (analogous to long-term memory) theoretically consists of a number of content-addressable "storage bins," each pertaining to a particular referent. Information is stored in a referent bin only if it is relevant to a goal that individuals happen to be pursuing. Thus, only a subset of information contained in the Work Space is transmitted to Permanent Storage. If information does not enter into higher-order goal-directed processing, it is lost once the Work Space is cleared.

When individuals are called upon to make a judgment, they first search the Work Space for judgment-relevant information. Therefore, if the search is performed a short time after the information has been received and processed, it is likely to be identified and used. After a delay, however, the Work Space may be cleared. Then, only the information that was transmitted to Permanent Storage is available for use in making judgments.

Numerous studies support implications of these assumptions (for a review, see Wyer & Srull, 1989). Several studies (Carlston, 1980; Srull & Wyer, 1980), for example, support the assumption that although judgments a short time after information is processed are based on both the concepts that have been used to encode the information and

other features of the information (i.e., the contents of the Work Space), only the encodings are transferred to Permanent Storage. Therefore, the relative effect of these encodings on judgments increases over time. Evidence that information in Permanent Storage is stored in different locations, depending on its relevance to the goal being pursued, is supported by research on the impact of information that one has been told to disregard (Wyer & Budesheim, 1987).

Time perception in a social context

To see the implications of the conceptualization for reactions to a social interaction, suppose individuals listen to a conversation between a male and a female student with the objective of forming an impression of the female. Both protagonists' contributions to the conversation are temporarily stored in the Work Space along with thoughts and feelings that are spontaneously generated in the course of listening to the conversation (e.g., feelings of enjoyment or boredom). However, only statements the female has made, which are relevant to listeners' impression of her, are transferred to Permanent Storage. Other conversation-relevant cognitions (e.g., the statements the male makes, and the listeners' affective reactions to the conversation as a whole) are not retained. (For evidence that affective reactions are less likely to be retained in memory than semantically coded knowledge, see Robinson & Clore, 2002.)

Thus, suppose the listeners are asked to judge the duration of the conversation a short time after it occurs. Then, they may base their estimate on their subjective reactions to the conversation, which are still in the Work Space and likely to be salient. Consequently, they may judge the conversation to be longer if the speaker to whom they attended talked very little and they found the conversation boring than if she talked a lot and they found it interesting and enjoyable (Kellaris & Kent, 1992). After a delay and the Work Space is cleared, however, only the information that has been transferred to Permanent Storage (that is, the statements made by the female) can be retrieved and used. Therefore, if listeners estimate the conversation's duration after a delay, they must base their estimates on the amount of information they can recall (Ahn et al., 2009). In doing so, they are likely to invoke an implicit theory that the duration of an interval increases with the number of things that occurred (Zauberman et al., 2010; see also Wyer & Srull, 1989), and to judge the conversation to have been longer when the female speaker had talked a lot (and more statements were retrieved from Permanent Storage) than if she had said very little.

One implication of this analysis is that when one protagonist dominates a conversation and the other says very little, individuals' estimates of the conversation's duration depend on both when they make their estimates (immediately or after a delay) and the protagonist to which they had attended when the conversation occurred. As indicated presently, this is of particular interest when the person making estimates is one of the protagonists.

Social motivation in social interaction

When individuals engage in a social interaction, their attention is often focused outward, on the things their interaction partner is saying or doing (Jones & Nisbett, 1971). This attention may be influenced in part by their intrinsic interest in the topics being discussed. In a get-acquainted conversation, it may also be motivated by the protagonists' desire to form an impression of what one another is like. However, other motives can operate as well. As suggested by Snyder's (1974, 1987) conception of self-monitoring and research on impression management (Schlenker, 1975; Schlenker, Forsyth, Leary, & Miller, 1980), individuals are often motivated to *make* a good impression on others and thus to say or do things that others find interesting or amusing. In this case, protagonists may focus their attention on their *own* contributions to the interaction independently of their partner's actions (cf. Briggs & Cheek, 1988; Snyder, 1987).

Although self-monitoring can be chronic (Snyder, 1974, 1987), it can also be influenced by situational factors. To examine its effect, we selected a factor that was particularly likely to exert an influence in get-acquainted conversations between college students of the opposite sex: physical attractiveness. The impact of physical attractiveness on the favorableness of person impressions is well known (cf. Berscheid & Walster, 1974). Thus, if individuals perceive their conversation partner to be attractive, they may spontaneously form a favorable initial impression of him or her and consequently to be motivated to make a good impression themselves (Mori, Chaiken, & Pliner, 1987; see also Sigall & Aronson, 1969). Snyder, Tanke, and Berscheid (1977) obtained indirect evidence of this tendency. They found that male participants in a get-acquainted telephone conversation elicited warmer and friendlier responses from their female partner when they believed that she was attractive than when they believed that she was unattractive. The partner's attractiveness motivated the male participants to make a favorable impression on her. Consequently, they thought about the things they personally said, tailoring them in a way that would accomplish their objective. Moreover, they were successful, as evidenced by their partner's positive reactions.

In the context of Wyer and Srull's conceptualization, these considerations have implications for the aspects of a conversation that participants retain and later use as a basis for their duration estimates. First, suppose college students engage in a get-acquainted conversation with a student of the opposite sex. If their partner is unattractive, they may be relatively unmotivated to make a good impression and are unlikely to engage in self-monitoring (Snyder et al., 1977). That is, they may attend primarily to things their partner says without thinking extensively about their own contributions to the interaction. To this extent, they are likely to enjoy the conversation when the partner talks a lot but to be bored when he or she says very little. Therefore, if the students are asked shortly after the conversation ends to estimate its duration, they are likely to base their judgment on their enjoyment of it, which is salient to them, and may judge the conversation to be shorter when their partner had talked a lot. As we have discussed, however, only statements the partner makes are likely to be retained in Permanent Storage. After a delay, therefore, when these feelings have dissipated, they are likely to base their duration estimates on the number of conversation events (i.e., their partner's statements) they can retrieve. To this extent, they should estimate the conversation to be longer when their partner had dominated the conversation.

In contrast, suppose the students' conversation partner is attractive. In this case, they may be motivated to make a good impression on the partner and consequently may pay more attention to the things they personally say that might influence this impression. Consequently, these statements may be more likely to be transmitted to Permanent Storage than their partner's statements. Therefore, suppose they are asked about the conversation immediately after it occurred. In this case, they should estimate that it lasted a shorter time, and should judge it to be more enjoyable, if they have personally talked a lot during the conversation than if they have said very little. After a delay, however, they should estimate that the conversation took longer in the former case than the latter.

As we have noted, this conceptualization assumes that individuals' affective reactions to the conversation (as reflected in their enjoyment) remain in memory a shorter time than the content of the conversation that gave rise to these reactions. This assumption is consistent with Robinson and Clore's (2002) contention that if affective reactions have not become semantically coded at the time they occur, they are likely to dissipate quickly, whereas semantically coded content is retained for a longer period of time. Levine (1997) and Levine and Pizarro (2004) also note that episodic memory (which includes memories of emotional reactions) becomes less accessible over time and individuals reconstruct them on the basis of semantic memories. Thus, our assumption seems viable.

The implications of our analysis were investigated in two experiments. In one study, participants imagined themselves engaging in an

audiotaped conversation with a member of the opposite sex that they believed to be either physically attractive or relatively unattractive. In one condition, the participant ostensibly talked much more than their partner and in a second condition, the partner dominated the conversation. In a second experiment, participants actually engaged in a conversation with a partner they perceived to be either attractive or not. In both experiments, we predicted that participants who perceived their partner to be unattractive would estimate the conversation to be shorter immediately after the conversation occurred, but to be longer after a delay of several days, if their partner had talked a lot than if (s)he had talked relatively little. When participants perceived their partner to be attractive, however, we expected that they would estimate the conversation to be shorter when they were asked immediately after the conversation occurred, but to be longer after a delay, if they had *personally* dominated the conversation than if they had not.

Social consequences of time perception

As we noted earlier, individuals who enjoy a conversation are likely to perceive the time to go very quickly (Kellaris & Kent, 1992). By the same token, if individuals perceive a conversation to go quickly, they are likely to enjoy it (cf. Sackett et al., 2010). In the conditions we considered, reciprocal effects of time estimates and enjoyment may depend on when the judgments are made. That is, participants' immediate duration estimates are likely to be based on their enjoyment of the conversation, which is greater when the protagonist on whom they focused their attention dominated the conversation. If a memory trace of their enjoyment has not been transferred to Permanent Storage, however, it may not be activated after a delay and must be inferred from perceptions of the conversation's duration. In this case, individuals may infer that they enjoyed the conversation more when it passed quickly, or when the protagonist to whom they had attended talked *less*.

Time estimates could influence not only people's enjoyment of the conversation but also their reactions to the partner. This possibility was evaluated in the first experiment to be reported. In this study, participants listened to a conversation in which they were explicitly told to focus their attention on either what their partner was saying or on what they imagined themselves saying. Unlike the other studies we conducted, the partner's attractiveness was not indicated but was inferred by the participants after the conversation was over. We expected that participants' immediate duration estimates would be shorter when the person on whom they focused their attention (themselves or their partner) talked a lot and their estimates of their partner's attractiveness would be greater in this condition. In contrast, their estimates of duration after a delay would be longer when the person on whom they focused their attention had talked a lot, and their estimates of their partner's attractiveness (presumably based on their enjoyment of the conversation) would be less in these conditions.

Experiment 1

This experiment tested our basic hypothesis that individuals' estimates of the duration of a conversation immediately after it occurred would be shorter when the person on whom they focused their attention dominated the conversation than when (s)he did not, but that their estimates after a delay would be longer in the former condition. In addition, it provided insight into the consequences of these duration estimates on reactions to the conversation and the protagonists.

Method

Overview and design

Participants listened to an audiotaped conversation between a male and a female student. They were told to imagine themselves as the speaker of the same sex and either (a) to form an impression of the other (opposite-sex) speaker (*other-focus* conditions) or (b) to think

about the impression the other was likely to form of them (*self-focus* conditions). In *self-dominant* conditions, the same-sex protagonist did most of the talking whereas in *other-dominant* conditions, the opposite-sex protagonist talked more. After listening to the conversation, participants estimated its duration, their enjoyment of the conversation, the number of topics they discussed, and the attractiveness of the other speaker. Then, two days later, they were contacted by e-mail and asked to repeat these ratings.

Twenty-nine male and 30 female Hong Kong undergraduates participated for course credit. They were assigned randomly to conditions of a 2 (speaker dominance: self vs. other) × 2 (attention focus: self vs. other) between-subjects design. The time of judgment (immediate vs. delayed) served as an additional within-subjects variable.

Construction of the conversation

We audiotaped two versions of a 6-minute get-acquainted conversation between a male and a female undergraduate student. (For a transcript, see Appendix A.) One student was ostensibly a Hong Kong native and the other came from Mainland China. The protagonists generally exchanged information about their life at the university and their hometowns. One speaker was dominant in each conversation, talking approximately 75% of the time, whereas the other uttered short phrases and conveyed relatively little information. The script used by male and female protagonists was reversed in the two tapes. The content of each conversation was essentially identical except for the sex of the protagonist who took each role. However, the male protagonist talked more in one tape and the female talked more in the other.

Procedure

Participants were instructed that (a) we were interested in the way that people respond to one another in conversations, (b) to understand this, we had recorded a number of conversations between undergraduate students at another local university and (c) we would like them to listen to one of the conversations over earphones. We went on to indicate that when people listen to a conversation, they often think about it from the perspective of one of the speakers—usually a speaker of the same sex. On this pretense, participants were asked to imagine that they were the protagonist of the same sex and were talking to the protagonist of the opposite sex. In *self-dominant* conditions, they heard the tape in which the same-sex speaker talked more, and in *other-dominant* conditions, they heard the tape in which the opposite-sex speaker talked more.

Finally, we manipulated participants' focus of attention. In *other-focus* conditions, we asked participants to focus their attention on the person to whom they imagined speaking (i.e., the opposite-sex partner) and form an impression of this person. In *self-focus* conditions, we asked them to focus on themselves and think about the impression their partner might form of them.

After listening to the tape, participants completed a short survey concerning their reactions to the conversation. First, they indicated the length of the conversation (in minutes and seconds) as accurately as possible. They also reported its subjective duration along a scale from −5 (*very short*) to 5 (*very long*).

After making these estimates, participants were instructed that people may form impressions towards the speakers on the basis of conversations they overhear. On this pretense, they were given four pictures of the opposite sex, two of which were attractive and two of which were unattractive, and were asked to identify the one that most resembled their impression of what their partner in the conversation might look like. (The attractiveness of the pictures was validated on the basis of pretesting. Twenty male participants' ratings of the attractive and unattractive female photographs were 3.12 and −1.34, respectively, $F(1,18) = 11.31$, $p < .001$, along a scale from −5 (*not at all*) to 5 (*very*). Twenty females' ratings of the attractive and unattractive male photographs were 3.34 and −1.58, respectively, $F(1,18) = 16.54$, $p < .001$.)

After choosing a picture, participants made direct ratings of the partner's attractiveness along a scale from 0 (*not at all*) to 10 (*very*). Participants then listed the number of topics they recalled having been discussed during the conversation. In addition, they reported how much they enjoyed the conversation and how interesting it was along scales from 0 (*not at all*) to 10 (*very much*). Responses to these two items were averaged to provide an overall index of enjoyment ($\alpha = .93$).

Finally, participants indicated who talked more in the conversation along a scale from -5 (*I talked more*) to 5 (*the other talked more*), indicated how much attention they paid to their partner in the conversation along a scale from 0 (*very little*) to 10 (*very much*), and reported whether they felt the conversation was natural and how easy the speakers found it to talk to one another along scales from 0 (*not at all*) to 10 (*very*).

Participants were then dismissed with instructions that we would like them to respond to some additional questions about the study over e-mail as the questions to be asked had not yet been prepared. On this pretense, we sent them a questionnaire two days later that was identical to the one they had completed in the first session. Five participants who participated in immediate-judgment conditions did not respond to our email request. The missing responses of these participants, who were distributed over the four experimental conditions, were replaced by cell means. (Supplementary analyses in which participants with missing data were dropped from the analyses led to identical statistical conclusions.)

Results

Preliminary analyses were performed on each dependent variable as a function of speaker dominance (self vs. other), attention focus (self vs. other), time of judgment (immediate vs. delay) and participant sex. The effects involving participant sex were generally nonsignificant, difficult to interpret, and did not compromise the conclusions to be drawn. For simplicity, therefore, this variable is generally ignored in reporting the data to follow.

Manipulation checks

Participants reported talking more than their partner in self-dominant conditions ($M = -3.55$) but talking less than their partner in other-dominant conditions ($M = 3.60$; $F(1, 57) = 315.24$, $p < .001$). Furthermore, they reported paying more attention to their partner in other-focus conditions than in self-focus conditions (5.86 vs. 3.53, respectively; $F(1, 57) = 28.33$, $p < .001$). No other effects were significant in either analysis. Furthermore, there were no differences in perceptions of the naturalness of the conversation ($M = 5.93$) or in how easy it was for the speakers to talk to one another ($M = 5.19$).

We hypothesized that immediate time duration estimates would be less when participants focused their attention on the speaker who dominated the conversation (i.e., in self-dominant, self-focus conditions and other-dominant, other-focus conditions) than when they focused on the speaker who said very little, and that these effects would be mediated by participants' enjoyment of the conversation. However, we expected that delayed duration estimates would be greater in the former conditions than in the latter, and that these estimates would be mediated by the amount of the conversation that participants were likely to recall. To evaluate these hypotheses, we conducted planned comparisons of the two conditions in which participants focused on the dominant speaker with the two conditions in which they focused on the nondominant speaker. (The statistical significance of these comparisons is equivalent to that of the interaction of speaker dominance and attention focus.) For completeness, we report complete data pertaining to the effects of speaker dominance, attention focus and time of judgment in Table 1. In the discussion to follow, however, we generally restrict our discussion to the aforementioned contrasts and their contingency on time of judgment. These contrasts are summarized in Table 2.

Table 1
Time estimates, enjoyment and number of topics recalled as a function of speaker dominance and attention focus—Experiment 1.

	Immediate judgments		Delayed judgments	
	Self focus	Other focus	Self focus	Other focus
Numerical time estimates (in sec)				
Self dominant	268(86)[a]	352(111)[b]	333(71)[b]	336(89)[b]
Other dominant	473(117)[c]	363(92)[b]	308(88)[a,b]	457(111)[c]
Subjective time estimates				
Self dominant	−0.28(1.27)[a]	0.51(1.21)[b]	0.38(0.67)[b]	0.43(1.07)[b]
Other dominant	2.96(1.41)[c]	0.67(1.35)[b]	−0.12(0.89)[a]	2.48(1.81)[c]
Enjoyment				
Self dominant	5.75(1.27)[a]	4.27(1.51)[b]	3.62(1.35)[b]	4.11(1.59)[b]
Other dominant	3.53(0.98)[c]	4.03(1.21)[b]	3.86(0.93)[b,c]	4.53(1.41)[b]
Number of topics recalled				
Self dominant	4.32(1.12)[a]	3.21(0.98)[b]	3.64(1.19)[b]	4.13(1.41)[a]
Other dominant	4.10(1.09)[a]	3.30(0.72)[b]	3.24(0.82)[b]	4.41(1.05)[a]

Note. Standard deviations are given in parentheses; cells with unlike superscripts differ at $p < .05$.

Time estimates

The effects of focusing attention on the dominant speaker on numerical and subjective time duration estimates are shown in the first two sections of Table 2. These effects were similar in each case. That is, participants' numerical time estimates in immediate-judgment conditions

Table 2
Planned contrasts associated with main dependent variables—Experiments 1 and 2.

	Focus on dominant speaker[a]	Focus on non-dominant speaker[b]	Diff
Experiment 1			
Numerical time estimates			
Immediate	315(84)	412(122)	−97*
Delayed	395(102)	322(97)	73*
Subjective time estimates			
Immediate	0.19(1.33)	1.74(1.58)	−1.55*
Delayed	1.43(1.82)	0.16(1.07)	1.27*
Enjoyment			
Immediate	4.89(1.78)	3.90(1.13)	0.99*
Delayed	4.07(1.26)	3.98(1.55)	0.09
Number of topics recalled			
Immediate	3.81(1.23)	3.66(1.39)	0.15
Delayed	4.02(1.02)	3.68(1.67)	0.34*
Experiment 2			
Numerical time estimates			
Immediate	311(76)	402(107)	−91*
Delayed	375(95)	311(82)	64*
Subjective time estimates			
Immediate	0.31(0.91)	1.58(1.52)	−1.27*
Delayed	1.55(1.04)	0.60(0.79)	0.95*
Enjoyment			
Immediate	4.60(1.95)	4.00(1.27)	0.60*
Delayed	4.16(1.56)	4.01(1.19)	0.15
Number of topics recalled			
Immediate	3.69(1.01)	3.82(0.92)	−0.13
Delayed	3.86(1.22)	3.27(1.13)	0.59*

Note. Standard deviations are in parentheses.
* $p < .05$.
[a] In Experiment 1, the average of judgments in self-dominant/self-focus conditions and other-dominant/other-focus conditions; in Experiment 2, the average of judgments in self-dominant/attractive partner and other-dominant/unattractive partner conditions.
[b] In Experiment 1, the average of judgments in self-dominant/other-focus conditions and other-dominant/self-focus conditions; in Experiment 2, the average of judgments in self-dominant/unattractive partner and other-dominant/attractive partner conditions.

were shorter when they focused their attention on the dominant speaker than when they focused on the nondominant speaker (315 s vs. 412 s, respectively; $F(1, 51) = 9.36$, $p < .01$). After a delay, however, their estimates were longer in the former condition (395 s vs. 322 s, respectively; $F(1, 51) = 5.09$, $p < .05$). Similarly, individuals' subjective time estimates were also shorter in immediate-judgment conditions when they focused on the dominant speaker (0.19 vs. 1.74; $F(1, 51) = 10.25$, $p < .01$) whereas their delayed estimates were relatively longer (1.43 vs. 0.16, respectively; $F(1, 51) = 11.03$, $p < .01$). The effect of time of judgment on the magnitude of these contrasts was significant in each case ($F(1, 51) = 13.91$, $p < .01$, and $F(1, 51) = 8.76$; $p < .01$, in analyses of numerical and subjective estimates, respectively).

Enjoyment

We assumed that participants' enjoyment of the conversation in immediate-judgment conditions would be a function of their subjective reactions to the conversation at the time it occurred and would therefore increase with the dominance of the protagonist on whom they focused their attention. In contrast, their enjoyment after a delay was expected to be determined by the amount of conversation-relevant information that had been transmitted to Permanent Storage. The planned comparisons shown in the third section of Table 2 partially confirm this assumption. The effect of focusing on the dominant speaker on enjoyment estimates was significantly contingent on time of judgment ($F(1, 51) = 4.52$, $p < .05$). That is, participants in immediate-judgment conditions enjoyed the conversation more when they focused their attention on the dominant speaker than when they did not (4.80 vs. 3.80, respectively; $F(1, 51) = 7.36$, $p < .01$). Under delayed-judgment conditions, however, the difference we predicted was not evident. Rather, participants in these conditions reported greater enjoyment when they had focused their attention on the other ($M = 4.33$) than when they had focused on themselves ($M = 3.75$), $F(1,51) = 4.24$, $p < .05$, and this was true regardless of which speaker was dominant (see Table 1). We discuss this deviation from prediction presently.

Topic recall

We expected that participants' time estimates under delayed judgment conditions would be a function of the amount of conversation-relevant information that was accessible in memory and that this, in turn, would depend on whether they focused their attention on the protagonist who did most of the talking. The fourth section of Table 2 indicates that this is true. That is, participants' recall in immediate judgment conditions did not depend significantly on whether they focused their attention on the dominant speaker ($p > .10$). In delayed judgment conditions, however, they recalled more topics if they had focused on the dominant speaker than if they had not (4.02 vs. 3.68, respectively; $F(1, 51) = 4.25$, $p < .05$). The difference in the effects of attention to the dominant speaker in immediate versus delayed judgment conditions was significant ($F(1, 51) = 4.78$, $p < .05$).

Although the aforementioned data are consistent with prediction, Table 1 shows that participants recalled generally more topics in

Table 3
Estimates of partner's attractiveness as a function of speaker dominance and attention focus—Experiment 1.

	Immediate judgments		Delayed judgments	
	Self focus	Other focus	Self focus	Other focus
Probability of selecting an attractive photo				
Self dominant	71%[a]	33%[b]	64%[a]	47%[b]
Other dominant	29%[b]	40%[b]	93%[a]	20%[b]
Partner's attractiveness				
Self dominant	6.71(1.98)[a]	4.60(2.26)[c]	5.86(2.07)[d]	5.73(2.12)[d]
Other dominant	3.47(2.26)[b]	4.73(2.34)[c]	6.13(1.64)[a,d]	3.73(2.12)[b]

Note. Standard deviations are given in parentheses; cells with unlike superscripts differ at $p < .05$.

immediate judgment conditions when they focused on themselves than when they focused on the other (4.21 vs. 3.22, respectively; $F(1, 55) = 11.42$, $p < .01$), whereas in delayed-judgment conditions, the reverse was true (3.44 vs. 4.27, respectively; $F(1, 55) = 8.36$, $p < .01$). The reason for this unexpected effect is not clear. However, it does not seriously comprise our conceptualization.

Mediation analyses

To confirm our assumptions concerning the different factors that mediate time estimates at each point in time, a series of regression analyses were performed under immediate and delayed judgment conditions separately along the lines proposed by Baron and Kenny (1986). In immediate-judgment conditions, the interactive effects of speaker dominance and attention focus had significant effects on both time estimates ($\beta = .39$, $p < .01$) and enjoyment ($\beta = .42$, $p < .05$) but not on the number of topics recalled ($\beta = .15$, $p > .25$). However, when both the interaction contrast and enjoyment were entered into the prediction of time estimates, the effect of enjoyment was significant ($\beta = .41$, $p < .01$), and the effect of the interaction was substantially reduced ($\beta = .19$, $p > .32$). The mediating effect of enjoyment was confirmed by a Sobel test (Sobel, 1982, $Z = 2.32$, $p < .05$).

In delayed-judgment conditions, the interactive effects of speaker dominance and attention focus had significant effects on both time estimates ($\beta = .25$, $p < .05$) and number of topics recalled ($\beta = .27$, $p < .05$) but not on enjoyment ($\beta = .16$, $p > .42$). However, when both the interaction contrast and the number of topics recalled were entered into the prediction of time estimates, the effect of number of topics remained reliable ($\beta = .32$, $p < .07$), and the effect of the interaction was substantially reduced ($\beta = .15$, $p > .41$). The mediating effect of number of topics recalled was confirmed by a Sobel test ($Z = 2.57$, $p < .05$).

Attractiveness estimates

We expected that participants' perceptions of their partner's physical attractiveness would parallel their time duration estimates. Data relevant to these possibilities, shown in Table 3, were evaluated on the basis of comparisons employed in previous analyses. In immediate-judgment conditions, participants were more likely to choose an attractive picture when they had focused on the dominant speaker than when they had not (56% vs. 31%, respectively; $\chi^2 = 7.35$, $p < .05$), and estimated their partner to be more attractive in the former condition (5.72 vs. 4.03, respectively; $F(1, 51) = 8.26$, $p < .01$). In delayed-judgment conditions, however, participants were relatively less likely to choose an attractive picture when they had focused on the dominant speaker (42% vs. 70%, respectively, $\chi^2 = 8.64$, $p < .05$), and judged their partner as less attractive in this condition (4.80 vs. 5.93, respectively; $F(1, 51) = 4.71$, $p < .05$). The interactive effects of speaker dominance and attention focus on judgments in immediate versus delayed judgment conditions were significantly different in analyses of both proportions ($\chi^2 (1) = 4.68$, $p < .05$) and ratings ($F(1, 51) = 13.55$, $p < .01$).

The effects of experimental manipulations on time duration estimates mediated these effects. The interaction contrast of speaker dominance and attention focus in immediate-judgment conditions was significantly related to both attraction to the partner ($\beta = .43$, $p < .01$) and numerical time estimates ($\beta = .39$, $p < .01$). When the interaction contrast and time estimates were both entered into the prediction of partner attractiveness, however, the effect of time estimates remained significant ($\beta = .54$, $p < .01$) whereas the effect of the interaction was substantially reduced ($\beta = .21$, $p = .06$). Correspondingly, the interaction contrast of speaker dominance and attention focus in delayed-judgment conditions was related to both partner attractiveness ($\beta = .33$, $p < .05$) and time estimates ($\beta = .25$, $p < .05$), but when both this interaction and time estimates were included in the predictor of attractiveness, the interaction effect was reduced to marginal significance ($\beta = .21$, $p = .08$) whereas the effect of time estimates remained reliable ($\beta = .54$, $p < .01$), but the mediating effects of time estimates

were further confirmed by a Sobel test (in immediate conditions: $Z = 2.92$, $p < .01$; in delayed conditions: $Z = 1.67$, $p = .07$). Thus, although participants' time duration estimates were based on different criteria in immediate- and delayed-judgment conditions, their estimates of their partner's attractiveness were influenced by their time estimates in both conditions.

Discussion

Determinants of duration estimates

To summarize, participants enjoyed the conversation more, and estimated the conversation to pass more quickly, when the person to whom they attended talked a lot than when (s)he talked very little. After a delay, however, participants based their judgment on the number of events that came to mind at the time and, therefore, estimated the conversation to take longer in the first condition than in the second.

Although planned comparisons statistically confirmed these conclusions, one qualification is worth noting. Table 1 indicates that the effects of speaker dominance on immediate duration estimates were more evident when participants focused their attention on themselves, whereas its effects after a delay were more evident when they focused on their partner. These contingencies might indicate that the effects of the two different bases for time estimates are not mutually exclusive. Enjoyment data in Table 1 suggest that participants were generally more sensitive to their feelings about the conversation when they focused their attention on themselves than when they focused on the other. Consequently, they may have been relatively more inclined to use these feelings as a basis for their immediate time estimates. Perhaps, in contrast to our assumption these feelings were spontaneously encoded semantically and a memory trace of this encoding was transmitted to Permanent Storage along with the content of the conversation. Consequently, these feelings might also have had an influence on participants' retrospective time estimates, partially overriding the effects of topic recall. Although this post-hoc explanation of the contingency seems plausible, the contingency was not evident in other experiments to be reported.

Consequences of duration estimates

In addition to confirming our assumptions concerning the determinants of participants' duration estimates, this experiment provided evidence of the consequences of these estimates. Although participants' time duration estimates were influenced by different factors in immediate- and delayed-judgment conditions, these estimates mediated their perceptions of their partner's attractiveness in both cases.

The evidence that participants' enjoyment of the conversation was not influenced by attention focus and speaker dominance in the same way that partner attractiveness was affected indicates that they were based on different criteria. Table 1 indicates that the number of topics recalled in delayed-judgment conditions, like enjoyment ratings, was greater when participants had focused on the other speaker than when they had focused on themselves. Thus, telling participants to focus their attention on the other (who, incidentally, was of the opposite sex) apparently increased their recall of the conversation content as a whole, and perhaps their enjoyment was influenced by this recall. Be that as it may, the results suggest that enjoyment was based on different considerations after a delay than it was immediately.

Experiment 2

We speculated that people's perceptions of their conversation partner's attractiveness may be a determinant of their reactions to the conversation as well as a consequence. That is, participants' perceptions of their partner's attractiveness could influence their communication objectives and consequently could affect the relative attention they pay to themselves and to the partner during the conversation. To this extent, these perceptions could influence their time duration estimates in a manner analogous to the influence of attention focus that we observed in Experiment 1.

To investigate this possibility, participants listened to the same audiotaped conversation we employed in Experiment 1. Rather than explicitly directing them to focus on one or the other protagonist, however, we gave participants either an attractive or an unattractive photograph of their partner. We expected that participants would focus their attention primarily on their partner when the partner was not particularly attractive and would respond much as participants responded in other-focus conditions of Experiment 1. When their partner was attractive, however, we expected participants to think about the impression they were making on their partner and to focus their attention to a relatively greater extent on what they imagined themselves to be saying, as in self-focus conditions of the first experiment. To this extent, participants' immediate time duration estimates should be shorter when either (a) they personally dominated the conversation and the other was attractive or (b) the other dominated the conversation and the other was unattractive than under other conditions. In contrast, their retrospective time estimates should generally be *longer* in the former conditions than in the latter.

Method

Participants and design

Thirty-four male and 41 female Hong Kong undergraduate students participated for a payment of HK$40 (the equivalent of US$5). They were randomly assigned to conditions of a 2 (speaker dominance: self vs. other) × 2 (partner attractiveness: attractive vs. unattractive) between-subjects design, with time of estimation (immediate vs. delay) serving as an additional, within-subjects variable.

Immediate judgment conditions

As in Experiment 1, participants were told that (a) our study was concerned with how persons react to conversations that they overhear in the course of daily life, (b) to understand this, we had recorded a number of conversations between students at another local university, and (c) we would like them to listen to one of these conversations and to imagine themselves as the protagonist of the same sex. After these instructions, however, we indicated that because it might help them to imagine themselves engaging in the conversation, we would give them a picture of their conversation partner. On this pretense, we gave them either an attractive or an unattractive photograph of the other (in fact, one of the pictures from which participants in Experiment 1 made selections of what their partner looked like).

Then, after listening to the tape, participants completed a questionnaire similar to that employed in the first experiment. First, they estimated the length of the conversation (in minutes and seconds) and reported subjective time estimates along a scale from −5 (*very short*) to 5 (*very long*). Second, they listed the topics they remembered being discussed in the conversation. Third, they reported how much they enjoyed the conversation and how interesting it was along scales from 0 (*not at all*) to 10 (*very much*). Responses to these two items were averaged ($\alpha = .92$).

Participants then rated the other's physical attractiveness along a scale from 0 (*not at all*) to 10 (*very*) and indicated who had talked more (themselves or the other) along a scale from −5 (*I talked more*) to 5 (*the other talked mo*re). Finally, they indicated whether they felt the conversation was natural, how easy it was for them to imagine being in the conversation, and how easy the speakers had found it to talk to one another along scales from 0 (*not at all*) to 10 (*very*).

Finally, participants were dismissed but were told they would be contacted to do another questionnaire two days later under instructions similar to those employed in Experiment 1. Three participants did not respond to our email request and so their missing responses under delayed-judgment conditions were replaced by cell means. (Analyses

in which these participants were completely eliminated from consideration did not alter the conclusions to be drawn.)

Results and discussion

Data were analyzed as a function of speaker dominance, partner attractiveness, time of judgment and participant sex. Effects involving participant sex were generally not significant ($p > .10$) and will not be reported.

Manipulation checks

Participants perceived their partner to be more physically attractive when they had seen an attractive photo than when they had seen an unattractive one (7.53 vs. 2.11, respectively; $F(1, 73) = 483.80, p < .001$) and this was true of both male participants (7.59 vs. 2.12) and female participants (7.48 vs. 2.10). They also imagined themselves to have talked more when the same sex protagonist had dominated the conversation than when the opposite sex protagonist had dominated (-3.69 vs. 3.67, respectively, $F(1,73) = 595.34, p < .001$). No other differences were significant ($p > .10$). Finally, participants reported that the conversation was natural ($M = 6.19$), that it was easy to imagine themselves talking in the conversation ($M = 6.93$) and that the conversation was easy to conduct ($M = 6.72$). These judgments did not vary over experimental conditions ($F < 1$ in all cases).

Participants' time duration estimates and the factors we assumed to mediate them are shown in Table 4 as a function of speaker dominance, partner attractiveness and time of judgment. As in Experiment 1, our hypotheses were evaluated on the basis of planned contrasts of the two conditions in which listeners were likely to focus their attention on the dominant speaker (i.e., in self-focus conditions when the partner was attractive and in other-focus conditions when the partner was unattractive) with the other two conditions. These contrasts are shown in the bottom half of Table 2. As can be seen, the pattern of these contrasts is almost identical to the analogous contrasts observed in Experiment 1.

Time duration estimates

Participants estimated the conversation to be generally shorter when their partner was attractive ($M = 298$ s) than when (s)he was unattractive ($M = 401$ s; $F(1, 67) = 27.45, p < .01$), and this was true of both immediate estimates (297 s vs. 417 s, respectively) and delayed estimates (301 s vs. 385 s, respectively). Of greater relevance is the planned comparison of conditions in which participants focused on the dominant speaker (in attractive partner, self-dominant and unattractive partner, other-dominant conditions) with conditions in which they focused on the nondominant speaker. These comparisons, shown in the bottom half of Table 2, confirm our expectations. That is, participants' immediate estimates were less in the former conditions than in

the latter (311 s vs. 402 s, respectively; $F(1, 67) = 14.45, p < .01$) whereas delayed estimates were relatively greater in the former conditions (375 s vs. 311 s, respectively; $F(1, 67) = 22.56, p < .001$). The difference in duration estimates under immediate- and delayed-judgment conditions (in effect, the 3-way interaction of speaker dominance, partner attractiveness and time of judgment) was significant ($F(1, 67) = 7.23, p < .01$).

Subjective estimates had a virtually identical pattern. Participants judged the conversation to be generally shorter when their partner was attractive than when she was not (0.19 vs. 1.58, respectively; $F(1, 67) = 7.52, p < .05$). However, immediate duration estimates were less when participants were disposed to focus on the dominant speaker than when they were not (0.31 vs. 1.58, respectively; $F(1, 67) = 5.67, p < .05$) whereas delayed estimates were greater in the former condition (1.55 vs. 0.60, respectively; $F(1, 67) = 4.38, p < .05$). The difference in this contrast under immediate and delayed conditions was also significant ($F(1, 67) = 6.27, p < .05$).

Accuracy

Although we had no a priori expectation for the effects of our manipulations on accuracy, these effects may be of incidental interest. Participants typically underestimated the duration of the conversation (360 s) when their partner was attractive (mean difference $= -61$ s) but overestimated its duration when their partner was unattractive (mean difference $= 41$ s) and these differences were evident in both immediate judgment conditions (-63 s vs. 57 s, respectively) and delayed judgment conditions (-59 s vs. 25 s, respectively). Thus, participants were apparently more interested in the conversation when they perceived their partner to be attractive, and their shorter time estimates were a reflection of this greater involvement (Kellaris & Kent, 1992).

Enjoyment

Participants generally enjoyed the conversation more when their partner was ostensibly attractive ($M = 4.59$) than when (s)he was not ($M = 3.80$; $F(1, 67) = 7.38, p < .01$). As shown in Table 2, however, participants in immediate judgment conditions rated the conversation as more enjoyable when they had focused on the dominant speaker than when they did not (4.60 vs. 4.00, respectively; $F(1, 67) = 6.50, p < .01$), whereas the corresponding difference in delayed-judgment conditions was negligible (4.16 vs. 4.01, respectively). The difference in the effects under immediate- and delayed-judgment conditions was reliable ($F(1, 67) = 9.36, p < .01$).

Topic recall

The effects of speaker dominance and attention focus (i.e., partner attractiveness) on the number of topics recalled were also analogous

Table 4
Time estimates, enjoyment and number of topics recalled as a function of speaker dominance and partner attractiveness—Experiment 2.

	Immediate judgments		Delayed judgments	
	Attractive partner	Unattractive partner	Attractive partner	Unattractive partner
Numerical time estimates (in sec)				
Self dominant	270(56)[a]	482(121)[b]	357(97)[c]	377(72)[c]
Other dominant	324(81)[c]	352(95)[c]	245(88)[a]	393(91)[c]
Subjective time estimates				
Self dominant	−0.35(0.93)[a]	2.88(1.85)[b]	1.33(0.71)[c,d]	1.12(0.84)[c,d]
Other dominant	0.29(1.26)[c]	0.67(0.86)[c]	−0.52(0.73)[a]	1.76(1.21)[d]
Enjoyment				
Self dominant	5.22(2.18)[a]	3.63(0.98)[b]	4.67(1.91)[c]	3.94(0.88)[b]
Other dominant	4.37(1.46)[c]	3.98(1.71)[b,c]	4.08(1.56)[c]	3.65(1.24)[b]
Number of topics recalled				
Self dominant	4.16(1.19)[a]	3.44(0.98)[b]	4.09(1.18)[a]	3.39(1.41)[b]
Other dominant	4.20(0.89)[a]	3.22(0.72)[b]	3.15(0.82)[b]	3.63(1.05)[b]

Note. Standard deviations are given in parentheses; cells with unlike superscripts differ at $p < .05$.

to those obtained in the first experiment. Participants in immediate-judgment conditions listed more topics when their partner was attractive than when (s)he was not (4.18 vs. 3.33; $F(1, 67) = 11.81$, $p < .01$), but no effects involving speaker dominance were evident ($p > .10$). Under delayed-judgment conditions, however, participants recalled more topics when they had focused on the dominant speaker (i.e., in attractive partner, self-dominant and unattractive partner, other-dominant conditions) than when they had not (3.86 vs. 3.27, respectively; $F(1,67) = 4.89$, $p < .05$). The difference in effects observed in immediate- and delayed-judgment conditions was reliable ($F(1, 67) = 10.56$, $p < .01$).

Mediation analyses

To confirm our assumptions concerning the factors that mediate immediate and delayed duration estimates, these estimates were reanalyzed under immediate- and delayed-judgment conditions separately using the same method as used in Experiment 1. In immediate-judgment conditions, the interactive effects of speaker dominance and partner attractiveness had significant effects on both time estimates ($\beta = .30$, $p < .01$) and enjoyment ($\beta = .42$, $p < .01$) but not on the number of topics recalled ($\beta = .15$, $p > .24$). However, when the interaction contrast and enjoyment were entered into the prediction of time estimates, the effect of enjoyment was significant ($\beta = .37$, $p < .01$) but the effect of the interaction was substantially reduced ($\beta = .17$, $p > .22$). The mediating effect of enjoyment was confirmed by a Sobel test ($Z = 1.97$, $p < .05$).

In delayed-judgment conditions, the interactive effects of speaker dominance and partner attractiveness had significant effects on both time estimates ($\beta = .51$, $p < .01$) and number of topics recalled ($\beta = .38$, $p < .01$) but not on enjoyment ($\beta = .07$, $p > .55$). However, when the interaction contrast and the number of topics recalled were entered into the prediction of time estimates, the effect of number of topics remained significant ($\beta = .50$, $p < .01$) and the effect of the interaction was substantially reduced ($\beta = .14$, $p > .34$). The mediating effect of number of topics recalled was confirmed by a Sobel test ($Z = 2.13$, $p < .05$).

Discussion

Participants' focus of attention on the conversation protagonists in Experiment 1 was directly manipulated. However, Experiment 2 showed that similar differences can result from situational factors that spontaneously motivate individuals either to form an impression of their partner or, alternatively to create a good impression themselves. Thus, as Table 2 indicates, the interactive effects of partner attractiveness and speaker dominance on immediate and delayed duration judgments in this experiment were virtually identical to the effects of attention focus and speaker dominance in Experiment 1. Moreover, the effects of these variables on enjoyment mediated their immediate duration estimates, whereas the number of topics they recalled mediated their retrospective estimates. The importance of these differences would be increased, however, by demonstrating their impact in an actual social interaction situation. Experiment 3 accomplished this.

Experiment 3

Participants in Experiment 3 engaged in a get-acquainted conversation over Skype with a member of the opposite sex. In anticipation of the conversation, each participant was given either an attractive or an unattractive photograph of his or her partner. We anticipated that participants' perceptions that their partner was attractive would increase their motivation to create a good impression and that this motivation, in turn, would increase their attention to the things they personally said that might affect this impression. We therefore expected this manipulation to influence their time duration estimates in a manner analogous to that observed in Experiment 2.

An obvious complication in evaluating this possibility arises from the fact that the two protagonists' contributions to the conversation are not independent. This could potentially introduce complexities in interpreting the effects we observed. We nevertheless assumed for simplicity that protagonists' own contribution to the conversation, and the attention they paid to things they personally said, would increase with their motivation to create a good impression and that this motivation, in turn, would increase with the partner's physical attractiveness. If this is so, participants should enjoy the conversation more, and should judge it to be shorter immediately after it occurred, when their partner was attractive than when (s)he was not. After a delay, however, they should have better memory for things they personally said under this condition and would consequently judge the conversation to be longer than they would otherwise.

Method

Participants and design

Thirty-two male and 32 female Hong Kong university students participated for payment of HK$40 (approximately US$5). Male and female participants signed up for different experiments and reported for the experiment at separate locations in different parts of the building. This ensured that they did not see one another either before or after the study. They participated in opposite-sex pairs and were randomly assigned to conditions of a 2 (male attractiveness: attractive vs. unattractive) × 2 (female attractiveness: attractive vs. unattractive) between-subjects design.

Stimuli and procedure

One male and one female took part in each experimental session. Before coming to the experiment, participants were contacted by email and told that because part of the study involved an exchange of photographs, they should bring a picture of themselves to the laboratory. Upon arriving, participants were told that the study was concerned with how people's conversations with one another affect the impressions they form and that to this end, they would be asked to carry on a short conversation with a student of the opposite sex. They were told that in order to control for the effects of people's facial expressions and bodily movements, they would talk over a speaker to one another over Skype without a visual display, but that to make the situation as realistic as possible, they would exchange photographs with one another so that they could more easily imagine what one another looked like. On this pretense, the experimenter collected the photograph they had brought and left the room, ostensibly to give it to the other participant. Upon returning, the experimenter gave the participant a photo that in fact was one of the pictures we used to manipulate partners' attractiveness in Experiment 2. With this preamble, we indicated that when they were told to begin, partners should introduce themselves and then carry on the conversation much as they would if they met one another for the first time in the library or while eating lunch.

After conversing for 8 min, participants were told to stop talking and were administered a questionnaire concerning their reactions to the conversation. The questionnaire was similar to that administered in previous experiments. Participants first estimated the duration of the conversation in minutes and seconds and reported their subjective reaction to the time along a scale from −5 (*very short*) to 5 (*very long*). Second, they indicated the number of topics they had personally initiated during the conversation and described briefly each topic that they remembered. Third, they reported how enjoyable and interesting they considered the conversation to be along scales from 0 (*not at all*) to 10 (*very*) (averaged to provide an index of enjoyment, $\alpha = .84$), and reported how favorable an impression they wanted their conversation partner to have of them along a scale from −5 (*not favorable at all*) to 5 (*very favorable*).

Finally, participants estimated the physical attractiveness of their partner along a scale from 0 (*not at all*) to 10 (*very*) and indicated

how easy it was to think of things to talk about along a scale from 0 (*not easy at all*) to 10 (*very easy*). They were also asked if they knew the identity of their conversation partner. None did.

Participants were then dismissed with an indication that they would be contacted two days later. At that time, they completed the questionnaire a second time as in other experiments.

Results

An overall analysis of data in which the attractiveness of the opposite sex partner was included as an independent variable along with participant sex would require that participant sex be treated as a between-subjects variable. As we have noted, the behavior of conversation partners under the conditions we constructed was very unlikely to be independent. However, overall analyses of our dependent measures as a function of male attractiveness, female attractiveness, time of judgment and participant sex (treating the latter as a within-pair factor) typically yielded effects of participant sex, the time of judgment and the partner's attractiveness that were independent of participants' own attractiveness (based on the picture their partner was given); $p < .10$. To evaluate our hypotheses, therefore, we reanalyzed the data for male and female participants separately as a function of their own attractiveness, the partner's attractiveness, and time of judgment. As will be seen, the effects on males' and females' judgments were generally very similar.

Manipulation checks

Manipulations were verified on the basis of participants' estimates immediately after conducting the conversation. Participants rated their partner as more physically attractive when they had received an attractive photo than when they had received an unattractive photo and this was true of both males (7.88 vs. 4.62, respectively; $F(1, 28) = 54.24$, $p < .001$) and females (6.50 vs. 5.06 respectively; $F(1, 28) = 20.35$, $p < .001$).

We assumed that (a) the partner's attractiveness would have a positive influence on participants' motivation to create a good impression and (b) this motivation, in turn, would influence the relative amount of time that participants spent talking. These assumptions were also confirmed. In the first regard, participants reported greater motivation to make a good impression when their partner was attractive than when (s)he was unattractive, and this was true of both males (1.68 vs. 0.12, respectively; $F(1, 28) = 24.56$, $p < .001$); and females (1.75 vs. −0.56, respectively; $F(1, 28) = 36.74$, $p < .001$).

To confirm the second assumption, two independent judges' estimates of the actual amount of time that each participant talked (mean agreement = 95.2%) were averaged. The proportion of the total time (480 s) that males talked was then analyzed as a function of partner attractiveness. Participants talked more when they perceived their partner to be attractive than when they did not, and this was true of both males (50.4% vs. 44.1%, respectively; $F(1, 28) = 9.53$, $p < .01$) and females (56.2% vs. 49.2%, respectively; $F(1, 28) = 12.89$, $p < .01$). In other words, both males and females were more motivated to create a good impression, and consequently talked more, when they perceived their partner to be attractive.

Enjoyment and topic recall

We expected that participants would perceive the conversation to be more enjoyable when their partner was attractive than when (s)he was not. At the same time, because they were more motivated to make a good impression in this condition, they should be more inclined to pay attention to and remember the topics they personally introduced for discussion. These expectations were generally confirmed.

Males' and females' enjoyment of the conversation was analyzed separately as a function of participants' own attractiveness, their partner's attractiveness, and time of judgment. The interaction of partner attractiveness and time of judgment was significant in each case

($F(1, 28) = 109.60$, $p < .05$, and $F(1, 28) = 45.69$, $p < .01$, for males and females, respectively). Planned comparisons corresponding to these interactions, shown in the first section of Table 5, indicate that in immediate-judgment conditions, both males and females reported enjoying the conversation more when their partner was attractive. In delayed-judgment conditions, however, they enjoyed the conversation *less* under these conditions.

Corresponding analyses of the number of topics that participants recalled initiating also yielded an interaction of partner attractiveness and time of judgment ($F(1, 28) = 58.37$, $p < .01$, and $F(1, 28) = 4.09$, $p < .05$, for males and females respectively). Contrasts implied by these interactions, shown in the second section of Table 5, indicate that partners' attractiveness had no effect on topic recall in immediate judgment conditions. After a delay, however, both male and female participants reported initiating significantly more topics when their partner was attractive than when (s)he was not.

Time estimates

Experiment 2 indicated that participants' time estimates immediately after the conversation were mediated by their enjoyment of the conversation, whereas their estimates after a delay were largely a function of the amount of the conversation they recalled (as inferred from the number of topics they remembered having been discussed). If this is so, participants' immediate time estimates in the present experiment should be less when their conversation partner was attractive (and they enjoyed the conversation to a greater extent), whereas their estimates after a delay should be greater in this condition (when the number of topics they recalled initiating was greater).

The top half of Table 6 summarizes males' and females' numerical time estimates as a function of their own attractiveness, their partner's attractiveness, and time of judgment. Analyses of these data yielded a significant interaction of time of judgment and partner attractiveness both for male participants ($F(1, 28) = 124.44$, $p < .001$) and females ($F(1, 28) = 36.08$, $p < .001$), each of which was independent of participants' own attractiveness (in each case, $p > .10$). Planned comparisons, shown in the third section of Table 5, indicate that as expected,

Table 5

Planned contrasts associated with effects of main dependent variables—Experiment 3.

	Attractive partner	Unattractive partner	Diff
Male participants			
Enjoyment			
Immediate	6.43(1.96)	4.41(0.99)	2.02*
Delayed	4.22(1.25)	7.41(1.36)	−3.19*
Number of topics recalled			
Immediate	3.98 (0.97)	4.00(1.05)	0.02
Delayed	4.69(1.51)	2.38(1.21)	2.31*
Numerical time estimates			
Immediate	388(57)	562(82)	−174*
Delayed	563(76)	371(52)	192*
Subjective time estimates			
Immediate	0.25(2.05)	3.32(1.01)	−3.07*
Delayed	4.00(1.73)	1.44(1.26)	2.56*
Female participants			
Enjoyment			
Immediate	6.38(1.39)	4.59(0.98)	1.79*
Delayed	4.85(1.12)	6.50(1.24)	−1.65*
Number of topics recalled			
Immediate	4.50(1.22)	3.00(1.05)	1.50
Delayed	5.31(1.78)	3.12(1.56)	2.19*
Numerical time estimates			
Immediate	415(84)	525(65)	−110*
Delayed	542(91)	415(72)	127*
Subjective time estimates			
Immediate	0.69(1.06)	3.25(1.75)	−2.56*
Delayed	3.50(1.34)	1.75(1.12)	1.75*

* $p < .05$.

Table 6

Numerical and subjective time estimates as a function of participant sex, own attractiveness, partner's attractiveness and time of judgment—Experiment 3.

	Immediate estimates		Delayed estimates	
	Attractive partner	Unattractive partner	Attractive partner	Unattractive partner
Numerical estimates (s)				
Male participants				
Attractive self	398(64)[a]	557(108)[b]	557(80)[b]	402(42)[a]
Unattractive self	377(51)[a]	566(51)[b]	569(76)[b]	340(42)[a]
Female participants				
Attractive self	394(86)[a]	491(72)[b]	588(92)[b]	288(55)[c]
Unattractive self	485(66)[b]	558(80)[b]	495(89)[b]	502(86)[b]
Subjective estimates				
Male participants				
Attractive self	0.62(2.06)[a,c]	3.25(1.34)[b]	4.00(0.76)[b]	1.88(0.99)[c]
Unattractive self	−0.12(2.10)[a]	3.38(0.52)[b]	4.00(1.23)[b]	1.00(1.41)[c]
Female participants				
Attractive self	0.00(0.54)[a]	2.87(0.65)b	4.12(0.64)[c]	2.00(1.93)[b]
Unattractive self	1.38(3.24)[b]	3.62(0.52)[b,c]	2.88(1.13)[b]	1.50(1.69)[b]

Note. Standard deviations are given in parentheses; cells with unlike superscripts differ at $p < .05$.

participants' immediate time estimates were significantly less when their partner was attractive than when (s)he was unattractive, whereas their delayed time estimates were significantly greater.

Subjective time estimates, shown in the bottom half of Table 6, have a very similar pattern. The interaction of partner attractiveness and time of judgment was significant in analyses of both males' estimates ($F(1, 28) = 97.76$, $p < .001$) and females' estimates ($F(1, 28) = 32.90$, $p < .001$). Planned comparisons, summarized in the last section of Table 5, indicate that both males' and females' immediate time estimates were significantly less when their partner was attractive, whereas their delayed estimates were significantly greater.

One additional effect may be worth noting. Analyses of females' time estimates yielded an unexpected interaction of time of judgment and their *own* attractiveness (as evidenced by the photograph their partner was shown). This interaction, which was apparent in both numerical estimates ($F(1, 28) = 13.31$, $p < .01$) and subjective estimates ($F(1, 28) = 6.64$, $p < .01$), indicates that when their partner perceived them to be attractive, females estimated the conversation to be shorter immediately after it occurred but to be longer after a delay. As noted earlier, males were inclined to dominate the conversation when their partner was attractive. Although the effect of their partner's behavior was not reflected in females' reported enjoyment or the number of topics they recalled, this behavior could nevertheless have led them to perceive the time to pass more quickly and to remember more of the conversation's content, influencing their delayed estimates as well.

Accuracy

The accuracy of participants' numerical estimates may be of incidental interest. In comparison to the actual length of the conversation (480 s), participants' immediate judgments underestimated the duration of the conversation when their partner was ostensibly attractive but overestimated its duration when their partner was unattractive, and this was true of both male participants (-92 s vs. 82 s, respectively) and female participants (-40 s vs. 45 s, respectively). After a delay, however, they overestimated the duration of the conversation when their partner was attractive than (s)he was not, and this was also true of both male participants (83 s vs. -109 s, respectively) and females (62 s vs. -85 s, respectively). Thus, participants may have been more involved in the conversation when their partner was attractive and estimated the time to pass more quickly (Kellaris & Kent, 1992), consistent with results of Experiment 2. After a delay, however, when their estimates were based on other considerations (e.g., the amount of the conversation they recalled), this was not true.

Mediation analyses

To provide a clearer indication of the factors that mediate immediate and delayed duration estimates, we conducted mediation analyses for male and female participants separately. Specifically, in immediate-judgment conditions, the interactive effects of male attractiveness and female attractiveness significantly affected both male participants' time estimates ($\beta = .32$, $p < .01$) and their enjoyment ($\beta = .45$, $p < .01$), but did not affect the number of topics they recalled ($\beta = .12$, $p > .43$). However, when the interaction contrast and enjoyment were entered into the prediction of time estimates, the effect of enjoyment was significant ($\beta = .49$, $p < .01$), and the effect of the interaction was substantially reduced ($\beta = .20$, $p > .09$). The mediating effect of enjoyment was confirmed by a Sobel test ($Z = 2.00$, $p < .05$). In delayed-judgment conditions, the interactive effects of male attractiveness and female attractiveness significantly affected both time estimates ($\beta = .51$, $p < .01$) and number of topics recalled ($\beta = .47$, $p < .05$) but not enjoyment ($\beta = .14$, $p > .29$). However, when the interaction contrast and the number of topics recalled were entered into the prediction of time estimates, the effect of number of topics remained significant ($\beta = .43$, $p < .05$), and the effect of the interaction was reduced ($\beta = .13$, $p > .38$). The mediating effect of number of topics recalled was confirmed by a Sobel test ($Z = 1.96$, $p < .05$).

Similar effects hold for female participants. Specifically, in immediate-judgment conditions, the interactive effects of male attractiveness and female attractiveness significantly affected both female participants' time estimates ($\beta = .28$, $p < .05$) and their enjoyment ($\beta = .41$, $p < .01$), but did not affect the number of topics they recalled ($\beta = .08$, $p > .73$). However, when the interaction contrast and enjoyment were entered into the prediction of time estimates, the effect of enjoyment was significant ($\beta = .56$, $p < .01$), and the effect of the interaction was substantially reduced ($\beta = .19$, $p > .24$). The mediating effect of enjoyment was confirmed by a Sobel test ($Z = 2.36$, $p < .05$). In delayed-judgment conditions, the interactive effects of male attractiveness and female attractiveness significantly affected both time estimates ($\beta = .28$, $p < .01$) and number of topics recalled ($\beta = .47$, $p < .01$) but not enjoyment ($\beta = .18$, $p > .15$). However, when the interaction contrast and the number of topics recalled were entered into the prediction of time estimates, the effect of number of topics remained significant ($\beta = .53$, $p < .01$), and the effect of the interaction was reduced ($\beta = .13$, $p > .48$). The mediating effect of number of topics recalled was confirmed by a Sobel test ($Z = 2.12$, $p < .05$).

In summary, enjoyment but not topic recall mediated the effects of male attractiveness and female attractiveness on immediate judgments whereas number of topics recalled but not enjoyment mediated their effects on delayed estimates.

Discussion

Despite the inherent complexity of interaction behavior in a natural conversation, our results provide support for our conceptualization of the factors that determine perceptions of the conversation's duration. That is, protagonists were motivated to create a favorable impression on their partner when they perceived the partner to be physically attractive. Consequently, they were inclined (a) to dominate the conversation (as evidenced by the actual amount of time they spent talking) and (b) to focus their attention on the things they personally said (as indicated by their recall of the number of topics they initiated). As a consequence of their greater involvement in the conversation, they reported enjoying the conversation more when they were asked immediately after it occurred and estimated that the time passed quickly. After a delay, however, when their affective reactions to the conversation had dissipated, they were more likely to base their judgments on the amount of the conversation they could remember, and thus estimated that it lasted a long time.

Furthermore, although participants reported more enjoyment of the conversation immediately after it occurred when their partner

was attractive, their enjoyment of the conversation after a delay was less in this condition. This difference is consistent with our expectation that after a delay, participants' reports of their enjoyment are a consequence of their perception of the conversation's duration and not a determinant of it. This difference was not evident in Experiment 2, in which partner attractiveness and speaker dominance had no effect on enjoyment in delayed judgment conditions (see Table 2). As speculated earlier, it is conceivable that in Experiment 2, participants retained a memory trace of their enjoyment that had a negative effect and thus offset the effects of time duration estimates.

General discussion

Individuals' estimates of the duration of an experience immediately after it occurs and their estimates after a longer period of time can often be opposite in direction, and neither estimate may provide an accurate indicator of the actual time that elapsed. This difference in immediate and delayed duration estimates was identified in a controlled laboratory setting using a restricted set of stimulus materials (Ahn et al., 2009). However, the evidence of similar effects in complex social situations of the sort people encounter in daily life is of both theoretical and empirical importance. For one thing, it indicates that both immediate and delayed estimates of the duration of an experience depend on the particular aspects of the experience to which individuals attend. Consequently, social and motivational factors that influence people's focus of attention to these aspects can have an impact on both their perceptions of duration and the judgments they base on these perceptions.

Wyer and Srull's (1989) social information processing model provides a conceptualization of these effects. By postulating two separate memory units (the Work Space and Permanent Storage) and specifying the sequence in which these units are searched for judgment-relevant information, the conceptualization takes account of the fact that different criteria are used as a basis for judgments a short time after information is presented and judgments after a delay. Moreover, it implies that after a delay, only information that was relevant to individuals' objective at the time the information was received is likely to be used as a basis for judgments. Thus, when individuals' goal at the time they either hear or participate in a conversation leads them to devote their primary attention to only one of the conversation protagonists, they enjoy the conversation more when this protagonist dominated the conversation and used these feelings as a basis for estimating the conversation's duration. Consequently, they may estimate that the conversation was shorter when the protagonist to whom they attended talked a lot than when(s) talked very little. However, only this protagonist's statements are retained in Permanent Storage. Therefore, after their feelings about the conversation have dissipated, they rely upon the number of statements that they recall this protagonist having made as a basis for their duration estimates. As a result, they infer that the conversation lasted longer when this protagonist had talked a lot.

These considerations imply that factors that were initially a determinant of participants' time duration estimates immediately after the conversation occurred may be a consequence of these estimates after a delay. Furthermore, the influence of these factors may be opposite in direction in the two conditions. Thus, although participants' estimates of their partner's attractiveness in Experiment 1 were a function of their enjoyment of the conversation immediately after the conversation took place, and consequently increased with the dominance of the speaker to whom they attended, their estimates after a delay were determined by the effects of the conversation's duration and were less when this person had dominated the conversation.

Correspondingly, participants' enjoyment of the conversation in Experiment 3 were greater immediately after it occurred when their partner was attractive (and they personally dominated the conversation), but the enjoyment they reported after a delay was less in this

condition. As we noted, the effect of these factors on delayed estimates of enjoyment was not evident in the first two experiments. Nevertheless, enjoyment was affected in a different way than it was affected immediately after the conversation, being generally greater in Experiment 1 when they had focused on their conversation partner (see Table 1) and greater in Experiment 2 when their partner was attractive (Table 4). These effects may have offset the effects of the conversation's duration. Be that as it may, enjoyment was based on different criteria after a delay than it was immediately.

These findings provide more general insight into both the determinants and consequences of individuals' reactions to a social interaction in which they participate. On the one hand, they confirm the evidence in previous research (Mori et al., 1987; Snyder et al., 1977) that persons' physical attractiveness can have an impact on individuals' reactions to them and indicate that this impact is reflected by both the amount that individuals personally contribute to the interaction (see Experiment 3) and the aspects of the interaction to which they attend (e.g., the things they personally say or the things their partner says). However, individuals' objectives when they engage in an interaction can have opposite effects on their estimates of the interaction's duration, perceptions of their enjoyment of it, and their attraction to the parties of the interaction, when they are asked after a delay than when they are asked immediately after it occurred.

Previous research on individuals' reactions to conversations may be worth noting in this context. Wyer, Budesheim, and Lambert (1990), for example, found that participants who listened to a conversation between two persons about a third person formed impressions of the speakers rather than of the person they were discussing and based their evaluations of the target on these impressions. Another study showed that communicators' statements that violated normative conversational principles of politeness or modesty were better remembered and affected judgments of the violators (Wyer et al., 1990). Finally, when a conversation partner (a) is unresponsive to questions (i.e., answering without elaborating) or (b) does not ask questions in return, this increases their participants' difficulty of conversing with this person and decreases their enjoyment of the conversation. Consequently, the partner is evaluated more negatively (Wyer, Swan, & Gruenfeld, 1995). A consideration of these communication characteristics, in combination with those that influence duration estimates, might provide the seeds of a more comprehensive understanding of social communication and its impact on reactions to the parties involved (for further discussion of this possibility, see Greene & Burleson, 2003).

The evidence that perceptions of duration depend on the particular events that happen to come to mind at the time of judgment could have more general implications. For example, a past event can sometimes feel as if it occurred long ago. At other times, the same event can feel as if it occurred "only yesterday." This difference could depend on the particular sequence of events that occurred in the interim and happen to come to mind. People have different areas of life experience and may store knowledge about them in different memory locations (e.g., "bins;" as conceptualized by Wyer & Srull, 1989). For example, they may have a "professional" track containing events that have occurred in their career, and a "social" track that includes experiences with girlfriends, married life and children. To this extent, if a person has had a humdrum professional career but a varied social life, his or her recall of a particular life experience (e.g., a trip to Hawaii) could seem either recent or remote, depending on which set of experiences the person happens to have thought about more recently. Although this possibility is speculative, it and other implications of our conceptualization may be worth considering.

Appendix A

A sample of the transcript for the audiotaped conversation (female talked more) used in Experiment 1 and Experiment 2.

Get-acquainted conversation

[*Tom and Mary met before class; they had a get-acquainted conversation with each other.*]

Tom: Hello, nice to meet you. I'm Tom.

Mary: Hi, Tom, I'm Mary. I think we met before at the orientation for new students, right? There were too many people there, and no one had much chance to get acquainted.

Tom: Hmm…yeah. Well, we can talk more today. (laughs)

Mary: Sure, Where are you from? I'm actually from Guangzhou, but my parents moved to Beijing a couple of years ago. It's a great city. I really like being in the political center of the country. It's also fun to be around all of the historical sites.

Tom: Actually, I've never been there. I'm from Hong Kong.

Mary: Gee, that's too bad you haven't been there. Do you travel much?

Tom: No, not too much. I went to California for a year when I was an exchange student.

Mary: Wow, California, that's my dream place—the sunshine, beautiful beaches, Yosemite National park…You were lucky.

Tom: yeah, it was a nice experience…you seem to know more about California than I know about Beijing (l*aughs*).

Mary: (*laughs*). Not really. But I can tell you some places to visit if you get there. Let's see…the first place I'd recommend is the Forbidden City. That's where the emperor lived and is really the right place to start. It's really big…over 9000 rooms, I think. The palace was built over 600 years ago. But it kept getting burned down and rebuilt, so most of what you can see today dates from the Qing Dynasty. (*pause*) You'll need to wear comfortable shoes, by the way, as you have to walk a lot! (*pause*) I also recommend going with a guide. It's not too expensive and it helps to learn the stories behind the sites. (*pause)* I think you can rent a recorder as well, but they are sometimes all being used.

Tom: Sounds great…… I hope I can check it out someday on my own. I'd also like to go to Tiananmen Square.

Mary: Oh, right. That's even more important because of the massacre in 1989. Many people consider it to be the symbol of Beijing. It's right in the heart of the city, and it's where Chairman Mao proclaimed the establishment of the People's Republic of China. They have a ceremony where the National Flag is raised and lowered. It's well worth watching. (pause) But you have to go about 30 minutes early, I guess, in order to get a good spot.

Tom: oh…I think I've heard about it before.

Mary: Well, tell me if you have a chance to visit Beijing. If I'm there, I can be your local guide (*laughs*)….(*pause*)…So, tell me about California. Did you like it?

Tom: Yes, it was nice. I stayed with a family in Los Angeles. I went to Disneyland a couple of times and to Yosemite. But I never got up north.

Mary: Did you like Yosemite? I hear it's very beautiful. I guess you can take a tent and camp in the highlands as it's often too crowded in the valley. I'd really like that. You can apparently hike for miles. Hey, did you see any bears?

Tom: No…actually, it rained most of the time we were there, so it was pretty disappointing…

Mary: (*pause*) So, how do you like UST?

Tom: It's pretty good so far. I like the recreation facilities.

Mary: Me, too. I play a lot of badminton. It's sometimes hard to get a court, however. It's really beautiful here. Hong Kong is nice… But I guess you're probably used to it.

Tom: Well, it's not too pretty where I live in Quarry Bay. It's nice to get off the Island.

Mary: Yes, I never realized there was so much open space in Hong Kong. They say you can hike all day in the mountains outside Sai Kung…There's a trail that goes up the mountains and along the beaches and is really great.

Tom: Yes, Maclehose Trail, I think it's called. You can take a bus to where it starts.

Mary: I want to check it out. I like to go hiking a lot if it doesn't get too hot. I guess that October and November are the best times. But there are other things I want to see while I'm here. They say the Big Buddha is really nice. And I haven't been to the Peak yet.

Tom: Yes, the Big Buddha is in a monastery on top of a hill on Lantau Island.

Mary: Well, I guess we have to stop talking…Hey, by the way, several friends of mine are planning to go up the Peak next weekend if the weather is good. You've probably been up many times, but do you want to come with us? We want to stay up and see the view at night, which they say is fantastic.

Tom: Hmm. That sounds great. Can I give you a call? I have an exam coming up and I'm not sure how much I need to study, but it sounds like fun.

Mary: Sure: here's my email…Oh, here's the experimenter. Are we done?

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