Confirmation Bias as a Social Skill

Benoit Dardenne
Catholic University of Louvain at Louvain-la-Neuve, Belgium and Belgian National Fund for Scientific Research

Jacques-Philippe Leyens
Catholic University of Louvain at Louvain-la-Neuve, Belgium

The authors propose that when testing a hypothesis about a personality trait of another person, a preference for questions that match the hypothesis is a manifestation of a social skill. If so, socially skilled people should request matching questions when the context stresses their relevance. On the contrary, less skilled people should be relatively insensitive to this environmental cue. To test this pragmatic stance, participants varying in self-monitoring sought information to validate an introvert or an extrovert hypothesis concerning a high- or equal-status interviewee. As predicted, only high self-monitors in the high-status-interviewee context showed a preference for matching questions. Moreover, the preference was stronger for not rejecting than for accepting these matching questions. Results are discussed in light of a pragmatic perspective that points out the adaptive and socially useful value of what look like errors and biases from a strictly rationalist perspective.

People quickly develop hypotheses about what a person is like. Will these hypotheses influence their behaviors and their information search strategies? Considerable research has shown that people will gather data in a very rational way, leading to the discrimination between the hypothesis and the alternative(s). Conversely, other research has suggested that people will act in ways that tend to confirm the hypothesis they hold, leading them to perceive the hypothesis as truer than it is. The return of the pragmatic stance, which emphasizes that human action and understanding are guided by social interaction (Fiske, 1993), provides another framework for interpreting the debate concerning the rationality of human behavior. This article proposes that irrationality, and, more precisely, hypothesis-confirmation processes, could be partly explained as an expression of people's pragmatism.

Dardenne, Leyens, and Yzerbyt (1994; see also Skov & Sherman, 1986) have classified information search strategies into two main categories (see Table 1). The first strategy corresponds to the preponderance of the activated cognitive structure—that is, the hypothesis—over the remaining alternative cognitive structure(s). This first strategy has been named a *confirmatory* strategy. Two distinct classes of information-gathering behaviors can be identified under the label of this strategy: The first and, for our purpose, most important class of behaviors can be termed *matching*, and the second can be termed *biased*.

First, a confirmatory strategy is revealed by the selection or formulation of hypothesis-matching questions. For instance, when testing the introvert hypothesis, one could ask questions that are answered yes by a typical introvert (e.g., "Do you like to stay alone?"). This is a tendency for asking questions for which a yes answer would be interpreted as a confirmation of the presence of the hypothesized trait. These questions correspond relatively closely to Klayman and Ha's (1987) positive test strategy—"a tendency to test cases that are expected (or known) to have the property of interest rather than those

TABLE 1:   Classification of Information Search Strategies

Strategy	Definition	Example of Question for Introvert Hypothesis
Confirmatory		
Matching	Guided by the hypothesis	"Do you like to work alone?"
Biased		
Leading	Positive instances. Any answer tends to confirm the hypothesis.	"What situations have you been in where you wished that you could have been more talkative?"
Preservative	Asking about extremely likely features	"Will you feel ill-at-ease if you have to talk in front of 100 persons?"
Diagnostic	Maximum discrimination between the hypothesis and the alternative	"Do you dislike meeting new people?"

expected (or known) to lack the property" (p. 211)—and to Devine, Hirt, and Gehrke's (1990; see also Skov & Sherman, 1986) *hypothesis-true* questions, for which a yes answer would be seen as a confirmation of the hypothesis and a no answer as a disconfirmation of it.

Second, a confirmatory strategy also surfaces by way of biased questions (see Table 1). The classic studies by Snyder and Swann (1978; see also Snyder, 1981) documented a particular kind of biased question. In these experiments, subjects tested the introvert or extrovert hypothesis by selecting leading questions that often precluded the possibility for the interviewees to give an answer in complete agreement with their true personalities. More generally, any answer, from an extroverted as well as an introverted person (e.g., to the question "What would you do if you wanted to liven things up at a party?"), tended to confirm the hypothesized trait.

Other kinds of biased questions can also appear when testing a hypothesis. Skov and Sherman (1986; see also Hodgins & Zuckerman, 1993) showed that subjects tended to ask questions about features that were extremely likely under the hypothesis (i.e., preservative questions). For instance, to test the hypothesis that a person is aggressive, one could ask, "Would you be upset if somebody passes you by in a line?" Indeed, both aggressive and nonaggressive persons are extremely likely to be upset when passed by in a line.

Rather than using the confirmatory strategy, people can gather information that is most useful for discriminating between the hypothesis and the alternative. This is the *diagnostic* strategy. Trope and Bassok (1982, 1983; Bassok & Trope, 1984) suggested that people prefer to ask questions about features that are most differentially probable under the hypothesis and the alternative. In their studies, diagnostic questions were shown to be the most important factor explaining the information-gathering process.

Beyond diagnosticity, a subsidiary preference for matching questions and hypothesis-preservation questions has often been shown (Devine et al., 1990; Skov & Sherman, 1986). Leading questions have seldom been

investigated, in part because they are thought never to be spontaneously formulated (Higgins & Bargh, 1987). In those studies showing a preference for diagnostic questions, the purpose has often been to demonstrate that people gather information in the most rational way—that is, people seek the most useful information for choosing between the hypothesis and the alternative. On the other hand, in those studies stressing the preponderance of the confirmatory strategy, the purpose has generally been to demonstrate how much people's information seeking is far from rational. In any event, the hypothesis-testing literature has been narrowly focused on a rational approach. The subjects' task has generally been to solve an intellectual problem, and their solutions have been evaluated in regard to optimal rational criteria. Some studies have used unfamiliar groups and hypotheses (e.g., Skov & Sherman, 1986), whereas others have used familiar groups, but the task remained a problem-solving one (e.g., Trope & Bassok, 1982). The reasons underlying the preference for matching information have generally emphasized the similarity between this information-seeking process and general category-based information processing: subjects' lack of cognitive capacity, motivation, or time; the easiness of processing such information; and subjects' misperception of such information as diagnostic information. Finally, the preference for matching questions has often been explained as a heuristic form of information processing (for a review, see Dardenne et al., 1994).

With very few exceptions, then, the research on hypothesis testing has not considered social interaction. However, information-gathering strategies, and, particularly, the confirmatory strategy, could be motivated by interpersonal and social goals. Recently, Snyder (1992) proposed to distinguish between the function of getting to know the other person and the function of getting along with the other person. For Snyder, the expectancy confirmation process is likely to occur for both functions, depending on the role in the interaction. For the perceiver, the expectancy-confirmation process is likely to occur under the getting-to-know function (because,

for instance, it makes the target predictable), whereas for the target, such a process is most likely to occur under the getting-along function. For the perceiver, Snyder insisted, the default orientation is the expectancy-confirmation process resulting from the motivation of acquiring social knowledge. We propose, however, that the expectancy-confirmation process is also a way for the perceiver to express a getting-along motivation.

In line with Snyder (1992), Dardenne et al. (1994) reviewed the literature on information-gathering behaviors and proposed that people are guided by purposes other than just being accurate or productive. To understand the complex human thinker, one should take into account the social adjustive value of the decision (Leyens & Dardenne, 1994, in press; Leyens, Yzerbyt, & Schadron, 1994; see also Fiske, 1992, 1993). According to Leyens (1990), "people have biases which may not be optimal from a strictly scientific point of view, but which may have social advantages and values" (p. 4). In contrast to a strictly rationalist perspective, we suggest that what looks like an error could help people get along with one another.

In an early study along these lines, Leyens (1989) showed that questions that are at the same time leading and matching are formulated more often during an interview with a real person than before an interview (when the interviewee is not yet present). Being confronted with a real individual, people formulated those questions that researchers thought never to be used. Thus Leyens proposed that a confirmation strategy could have some pragmatic usefulness, in the sense of smoothing interaction between people and giving to the interviewees the impression that they have been understood.

At first glance, it could be argued that this proposition is at odds with the literature on stereotyping, which shows that people do not like to be categorized and are reluctant to use their categories too explicitly when perceiving another person, especially if the perceived person has been individualized (cf. Darley & Gross, 1983; Fiske & Taylor, 1991). However, in some contexts at least, confirmatory strategies can be interpersonally useful. For example, when a young woman displays behavioral cues or personality traits associated with introversion (e.g., that she prefers working alone and is known for her shyness), matching questions can be a way to have a smooth interaction with the person. Asking if she likes to spend the evening reading a novel (a question diagnostic of introversion) or even asking why she likes to spend the evening reading a novel (a leading question) could more certainly lead to a smooth and comfortable interaction than asking if she likes noisy and crowded parties or why she likes them (nonmatching questions). Of course, this analysis rests on the assumption that the working hypothesis is relatively accurate and thus on the perceived diagnosticity or usefulness of the prior indexes.

Bearing on this idea of the pragmatic usefulness of matching questions for the perceiver, Leyens, Dardenne, and Fiske (1995) asked their subjects to rate different types of interview questions (diagnostic or leading, matching or not matching the hypothesis) along several dimensions: the information that the questions were supposed to provide, the empathy that they were conveying on the part of the interviewer toward the interviewee, and the extent to which they allowed the interviewee to present himself or herself as a unique individual. They found that subjects considered the leading and the matching questions as likely to bring more information and to elicit more empathy than, respectively, diagnostic and nonmatching questions (see also van Avermaet, 1988). When the interviewer was described as knowing beforehand the personality of the interviewee (an impression-test setting), the leading questions were judged as most informative, but when the interviewer was described as not knowing the personality (an impression-formation setting), the matching questions were seen as most informative. Such an interaction did not occur for empathy: Irrespective of the knowledge about personality, the leading and matching questions were rated as the most empathic.

In this article, we take a social and interpersonal perspective on hypothesis-confirmation processes. For this reason, we provided the subjects with real evidence concerning the interviewees, so that it would be possible for them to be particularly sensitive to the interviewees' personalities. The subjects were required to learn more about the interviewees after an initial impression had been formed, such that what they had learned about the interviewees could provide a ground for matching questions (and more generally, confirmatory questions) to work as interpersonal skill. Note that studies using this method have successfully replicated the results of the typical hypothesis-testing studies (e.g., Leyens, 1989; Leyens & Maric, 1990).

Matching Strategy as Social Skill

In our view, a matching strategy can be very adaptive. It is a way to display empathy without dropping informativeness. One may say that socially skilled people employ their knowledge and actions flexibly to smooth interactions and get along with others. If so, socially skilled people would use such a strategy more often than would less socially skilled people. In a related way, it could be said that socially skilled people know what is appropriate to do with or say to others in specific social situations. In contrast, less socially skilled people who are relatively insensitive to social norms behave similarly across situations and thus may act in inappropriate ways.

Snyder (1974, 1979, 1987) constructed the Self-Monitoring Scale to assess the extent to which people control and regulate their self-presentation and expressive behavior. Because they are concerned with their public appearance, high-self-monitoring individuals are "highly responsive to social and interpersonal cues of situationally appropriate performance" (Snyder & Gangestad, 1986, p. 125). Low-self-monitoring individuals lack the ability or the motivation to do so. High-self-monitoring individuals are particularly sensitive to their partners and, in many ways, are more socially skilled, friendly, and adaptive than low-self-monitoring persons. For instance, in Ickes and Barnes's (1977) study of pairs of strangers waiting for an experiment, the higher self-monitoring member was inclined to talk first and to initiate a greater number of conversation sequences than the lower self-monitoring member. Another "lubricating" technique (to quote Snyder, 1987) used by the high self-monitors is to talk about the other person instead of being self-centered. In social interaction, high self-monitors are thus more active and initiatory, which are certainly components of social skill. They are also better at role-playing another person and reading nonverbal behaviors than are low self-monitors (Lippa, 1976; Snyder, 1979). High self-monitors are also likely to seek out information that is appropriate to the social norm. Low-self-monitoring individuals, in contrast, are less responsive to the social norms as well as to their partners. Being mainly internally oriented, they may act in a socially appropriate way but only because their personally motivated actions occasionally fit social norms.

Snyder (1979) interpreted these results to mean that "high Self-Monitoring individuals were particularly concerned about managing their social behavior in order to create, facilitate, and maintain a smooth and pleasing flow of conversation throughout the course of the social interaction" (p. 100). If a matching strategy is particularly helpful in creating and maintaining a smooth interaction, as we hypothesize, then people categorized as high self-monitors should display such a strategy more than people categorized as low self-monitors. We propose, then, that matching questions are one of the lubricating techniques of the high self-monitors.

Relative Status

If a matching strategy is a social skill, a pragmatic adaptation in the service of social interaction, this strategy should be sensitive to the relative status of the interviewee (high or equal to the status of the subject). Relative status is an important structural aspect of social interactions. To be sure, with a high-status person, one must be cautious in providing a good impression and ensuring a smooth interaction. To do so, one must be able to decode the situation and the social norms appro-

priately. Here again, people seem to differ in their abilities to function adequately in social situations; in short, their social skills differ.

People categorized as low self-monitors are typically inner oriented in their behavior and judgment. They are poorly responsive to the situational cues and rely instead on their personal way of thinking in deciding how to behave or judge (Snyder, 1987). For them, situational information does not matter that much. For instance, Fiske and Von Hendy (1992) showed that situational information did not influence low self-monitors' information processing (whereas information about their own dispositions did). Therefore, interviewee status—a situational information—should not be an appropriate or sufficient incentive for low-self-monitoring subjects to wish a smooth interaction and thus to display a consistent matching preference. In a social interaction with a high-status person, low self-monitors should still behave according to their internal selves. For some of them, their personal standards could include a consideration for the status of the other persons, but only occasionally.

On the contrary, people who are consistently responsive to environmental cues (i.e., high self-monitors) should be able, most of the time, to give an appropriate answer to the demand of the situation. For them, situational information does matter (Fiske & Von Hendy, 1992). The interviewee's relatively high status is one of the appropriate cues that can trigger the wish for a smooth interaction. Consequently, they should display a matching preference, and even more so or only when the interviewees have a higher status than their own. Indeed, with an equal-status interviewee, there may not be enough strong cues or incentives to trigger the necessity for a smooth interaction. Again, for some of them, even an interaction with a peer can lead to the desire for a smooth interaction, but only occasionally.

Matching Preference and Accepted or Rejected Questions

We also reasoned that for each subject, a matching preference could appear more strongly for the nonrejection of the matching questions than for the acceptance of matching questions. Imagine a child who can choose two cars from a pool of three splendid, attractive red fire trucks and three old yellow cars. If the child behaves as we hypothesize, she will eagerly choose two of the fire trucks. More important, the child will never choose two fire trucks as the ones she does not want. It has been well documented that the tendency of not losing valuable things is greater than the tendency to acquire things of the same value. For instance, gains are less attractive than equivalent losses are aversive, and people devote less cognitive effort to the former than to the latter (De Dreu, Emans, & Van de Vliert, 1992; Kahneman & Tversky, 1984; Taylor, 1991). Moreover, the motivation to mini-

mize losses is stronger than the motivation to maximize gains (see Lopes, 1987).

The framing of the task in terms of loss can be seen as a motivational factor that increases people's concern for the questions that meet their wish for a smooth interaction. Being aware of what they can lose, subjects should be particularly eager not to reject the questions they see as valuable. If matching questions are valuable, preference for them should be especially pronounced in the rejection task. Furthermore, the rejection framing should lead high self-monitors to display a preference for matching questions, even when interacting with an equal-status peer. If equal status alone is not a cue to trigger the desire for a smooth interaction, the rejection task should be an extra motivation not to lose valuable questions.

The predictions concerning low self-monitors are less clear. They are supposed to lack the motivation or the ability or both to be responsive to social and interpersonal incentives of situationally appropriate performance (Snyder, 1987). If they lack both motivation and ability, it is unlikely that they can be responsive to the situation. However, it seems even more unlikely that they are completely blind to situationally appropriate performance. Perhaps they only need to be more motivated— that is, the social and interpersonal incentives must be particularly strong to trigger a latent ability. In such a case, the additive effect of a high-status interviewee and the possibility of losing valuable questions could lead low self-monitors to display a preference for matching questions. Only under the additive influence of these two motivations would low self-monitors use the socially appropriate matching preference. In that case, for low self-monitors engaged in an interaction with a peer, there should be no matching preference at all (this being the weakest combination of the four cells).

METHOD

Subjects

Subjects were 109 students from the University of Louvain at Louvain-la-Neuve. Excluded were 5 subjects who did not follow the instructions and 8 subjects who did not complete the Self-Monitoring Scale (Snyder, 1974), leaving 96 subjects for the analyses.

Materials

Leyens et al. (1995) showed that nonmatching questions are judged as less empathic than matching questions. With this result in mind, we equalized characteristics of the questions that could induce the subjects to ask or to reject them for a reason other than their confirmatory status. On one hand, a main reason to select a question could be the perceived ease with which it is asked. This means that matching questions could be selected because they are easy to ask. On the other hand, a major reason to reject nonmatching questions could be that they are difficult to ask. The construction of the material aimed to provide a conservative test of our hypotheses, as well as to discard an alternative explanation for the data—namely, that easy questions (matching) are asked and difficult questions (nonmatching) are rejected.

We classified 56 questions from several studies (e.g., Leyens et al., 1995; Snyder & Swann, 1978) as diagnostic if they discriminated between an introverted and an extroverted person and could be answered yes or no (for instance, "Do you like to work alone?" and "Are you good at games where you have to be very expressive and theatrical, like charades?"). The questions were classified as leading if they assumed that the respondent was already classified as a member of the group mentioned in the hypothesis (for instance, "What kinds of situations make you feel ill-at-ease and awkward?" and "In what kind of situations is it easier for you to feel communicative and friendly?"). By this classification, a diagnostic question could not be leading, and a leading question could not be diagnostic. Matching questions, which could be leading or diagnostic, were defined as hypothesis true.

A total of 20 subjects rated the ease or difficulty of each question on a 9-point scale ranging from 1 (*Very easy to ask*) to 9 (*Very difficult to ask*). From the ratings, we selected 8 diagnostic and 8 leading questions, half matching the introvert hypothesis and the remaining ones matching the extrovert hypothesis. In terms of ease, the final list of 16 questions consisted of four equal subgroups, $F(1, 19) = 1.49$, *ns*: leading toward introversion ($M = 4.76$, range from 4.60 to 5.65); leading toward extroversion ($M = 4.92$, range from 4.40 to 5.60); diagnostic of introversion ($M = 5.09$, range from 4.60 to 6.05); diagnostic of extroversion ($M = 5.12$, range from 4.65 to 5.70).

Procedure and Design

Undergraduate participants were run in small groups of three to five. Subjects came to the laboratory and were seated in a large testing room. They were welcomed by the female experimenter. Subjects were then given written instructions concerning the aim of the study and their task. The instructions stated that they were recruited to participate in a research project aimed at studying the way people conduct an interview. Their task was to select questions to determine whether another person possesses a particular personality trait. At the same time, this person was described as an introvert or an extrovert. On a 20-point scale, the number 4 (introvert hypothesis) or the number 16 (extrovert hypothe-

sis) was circled. At the anchoring points of the scale, we gave a short definition of introversion (inner directed, timid, and reserved) and extroversion (other oriented, sociable, and outgoing).

The environmental cue was manipulated by means of the status of the to-be-interviewed person. In the high-status condition, the interviewee was introduced as an associate professor. In the equal-status condition, the interviewee was introduced as an undergraduate student. For all subjects, it was stressed that they must keep in mind the type of person to whom they were, suppos-edly, about to pose questions.

Subjects were then provided with 16 cards containing one question each and ordered in a random manner for each subject. Subjects reviewed the cards at their own rate and sorted the questions into two piles: questions they did not want to ask and those they wanted to ask. After this preliminary sorting, designed to facilitate the main task, the instructions stated that "frequently, we have no chance to ask all the questions we would like to ask because, for instance, time is precious." Subjects were instructed to review the accepted questions and to select "the most appropriate 4 questions to ask." When subjects had finished this task, we requested them to return to the rejected pile and to choose "the least appropriate 4 questions to ask."

After these orderings, subjects were asked to rate their own introversion-extroversion by circling a number from 1 (*introvert*) to 9 (*extrovert*). As a verification for the status manipulation, we asked the subjects to rate the interview-ees' status compared to their own, by circling a number from 1 (*lower than mine*) to 7 (*higher than mine*). Finally, the subjects were asked to complete the Self-Monitoring Scale (Snyder, 1974). Subjects were then debriefed and thanked for their participation.

The study had a Status (high or equal status of the interviewee) × Hypothesis (introversion or extrover-sion) × Self-Monitoring (high or low) × Lead (diagnostic or leading questions) × Question Type (introversion or extroversion confirming) design. Status, hypothesis, and self-monitoring were between-subjects variables; ques-tion type and lead were within-subject variables.

RESULTS

Self-Monitoring Levels

High- and low-self-monitoring individuals were cate-gorized based on a median split (9 with an observed range of 4 to 14). When a subject's score was equal to the median, we categorized that subject as a low self-monitor. Subjects were equally distributed across conditions, $\chi^2(3, N = 96) = 1.51, p > .67$.

The data concerning the subjects' introversion-extro-version were analyzed according to a 2 (status) × 2 (hypothesis) × 2 (self-monitoring) ANOVA. The only significant effect was that high self-monitors evaluated themselves as more extroverted ($M = 5.15$) than did low self-monitors ($M = 4.37$), $F(1, 88) = 6.96, p < .02$. This result conforms to the idea that high self-monitors are more extroverted than are low self-monitors (Ickes & Barnes, 1977; Lippa, 1976).

Manipulation Checks

The status of the associate professor was rated higher than that of the undergraduate student ($Ms = 4.9$ and 4.02, respectively), $t(94) = 4.30, p < .001$. We analyzed the total number of questions accepted by the subjects dur-ing the first sorting task. No main effects or interactions were significant; the grand mean was 8.71 (variance = 3.81).

Accepted and Rejected Questions

As in Devine et al. (1990), a preference for matching questions was revealed by a significant Question Type × Hypothesis interaction, indicating that overall, subjects preferred to ask hypothesis-true questions, $F(1, 88) = 6.03, p < .02$. When the trait to be tested was extroversion, subjects accepted a greater number of extroversion-confirming questions ($M = 2.18$) than when the trait was introversion ($M = 1.78$). When the trait to be tested was introversion, subjects accepted a greater number of introversion-confirming questions ($M = 2.22$) than when the trait was extroversion ($M = 1.82$). As predicted, the analysis also revealed a significant Question Type × Hy-pothesis × Self-Monitoring interaction, $F(1, 88) = 4.37, p < .04$. That is, the matching preference occurred only for those subjects who were categorized as high self-monitors, $F(1, 40) = 12.17, p < .001$ (see Table 2). Low self-monitors did not show any preference for hy-pothesis-true over alternative-true questions, $F(1, 52) < 1$.

We also obtained a marginally significant Question Type × Hypothesis × Self-Monitoring × Status interac-tion, $F(1, 88) = 2.98, p < .09$. As shown in Table 2, this four-way interaction shows that for low self-monitors, neither status induced a matching preference, $Fs(1, 22) < 1$. In contrast, and as predicted, for the high self-monitors, the matching preference was absent in the equal-status condition, $F(1, 20) < 1$, but strongly present in the high-status condition, $F(1, 18) = 11.49, p < .005$.[1] As predicted, the preference for hypothesis-true ques-tions appeared only for those individuals categorized as high self-monitors if the questions were to be asked to a high-status interviewee.

The analysis also revealed that the subjects accepted more leading ($M = 2.19$) than diagnostic questions ($M = 1.81$), $F(1, 88) = 3.97, p < .05$.[2] This main effect was qualified by a significant Lead × Hypothesis interaction,

TABLE 2: Mean Number of Extroversion- and Introversion-Confirming Questions Accepted for Testing the Extrovert or Introvert Hypothesis, as a Function of Status and Self-Monitoring

| | High Self-Monitoring | | | Low Self-Monitoring | | |
Status	Extroversion-Confirming Questions	Introversion-Confirming Questions	n	Extroversion-Confirming Questions	Introversion-Confirming Questions	n
High						
Extrovert hypothesis	2.67	1.33	12	1.71	2.29	14
Introvert hypothesis	1.37	2.62	8	1.81	2.19	16
Equal						
Extrovert hypothesis	2.18	1.82	11	2.23	1.77	13
Introvert hypothesis	1.82	2.18	11	2.00	2.00	11

NOTE: The higher the score, the higher the acceptance.

$F(1,88) = 11.26$, $p < .001$. This interaction indicated that subjects accepted more leading questions when the hypothesis was introversion ($M = 2.5$) than when it was extroversion ($M = 1.88$) but that they accepted more diagnostic questions when the hypothesis was extroversion ($M = 2.12$) than when it was introversion ($M = 1.5$). No other significant effects were found.

The analyses concerning the rejected questions essentially mirrored the analyses for the accepted questions. For this reason, we will consider these rejected questions only in the analyses concerning the matching preference as acceptance or rejection.[3]

Matching Preference as Acceptance or Rejection

To further investigate the preference for matching questions, we created an ad hoc intrasubject index. When subjects are requested to select the questions to ask, this index corresponds to the number of matching accepted questions minus the number of nonmatching accepted questions. When subjects are requested to choose the questions they would not like to ask, this index corresponds to the number of nonmatching rejected questions minus the number of matching rejected questions. In both the acceptance and rejection conditions, a positive number provides a direct estimation of the preference for matching questions. A positive number indicates a preference for matching over nonmatching questions. This intrasubject index of preference for matching questions was submitted to a 2 (status) × 2 (self-monitoring) × 2 (hypothesis) × 2 (acceptance/rejection conditions) ANOVA, with the last variable as a within-subject factor.[4]

As expected, the preference for matching questions was more important when subjects were asked to reject questions (0.87) than when they had to accept them (0.40), $F(1,88) = 4.88$, $p < .03$. This main effect was qualified by an Acceptance/Rejection Conditions × Hypothesis interaction, $F(1, 88) = 3.96$, $p = .05$. The greater matching preference, when the questions were rejected,

was only due to the introvert hypothesis. Indeed, in the case of introversion, the difference between rejection and acceptance was 0.88, $t(49) = 3.07$, $p < .005$. When the trait to be tested was extroversion, the difference was only 0.09, $t(45) < 1$.

The analysis also revealed a significant main effect for self-monitoring; high self-monitors exhibited greater preference for matching questions (2.14) than did low self-monitors (0.63), $F(1, 88) = 4.46$, $p < .04$. As expected, the Acceptance/Rejection Conditions × Self-Monitoring × Status interaction was significant, $F(1, 88) = 4.52$, $p < .04$. There was no more rejection than acceptance of matching questions for high-self-monitors/high-status-subjects or low-self-monitors/equal-status-subjects, $t(23)$ and $t(19) < 1$, respectively. As shown in Table 3, the former displayed a matching preference for both acceptance and rejection, as confirmed by a significant departure from 0, $ts(19) > 2.68$, $ps < .02$. Concerning the latter, there was no matching preference at all, $ts(23) < 1$. On the contrary, and very important, the preference for matching questions in the rejection condition was greater than in the acceptance condition when the subjects were low self-monitors in the high-status condition, $t(29) = 2.45$, $p < .02$, or high self-monitors in the equal-status condition, $t(21) = 2.61$, $p < .02$. No other significant effects were found.

DISCUSSION

The data for the accepted questions confirmed our main predictions. High-self-monitoring individuals are more sensitive to the environmental cues when requesting information than are low self-monitors. Whereas high self-monitors select a greater number of matching questions than nonmatching questions when confronted with a high-status interviewee, an equal-status interviewee does not seem to trigger a matching preference. In contrast, when the subjects are low self-monitors, no matching preference emerges.

TABLE 3:   Index of Matching Preference in the Acceptance/Rejection Conditions, as a Function of Self-Monitoring and Status of the Interviewee

Condition	High Self-Monitoring		Low Self-Monitoring	
	High Status (n = 19)	Equal Status (n = 21)	High Status (n = 29)	Equal Status (n = 23)
Acceptance	1.30	0.36	−0.07	0.25
Rejection	1.50	1.18	0.87	0.17

Importantly, the intrasubject index for the rejected questions showed matching preferences where there were none for the accepted questions. Adopting a rejection criterion showed that matching questions were less often rejected than nonmatching questions when the subjects were high self-monitors but in the equal-status-interviewee condition, as well as when subjects were low self-monitors but in the high-status-interviewee condition.

This study and the studies of Leyens (1989) and Leyens et al. (1995) provide converging evidence that matching and leading questions are useful at both the informative and the interpersonal levels. Some research has suggested that a matching preference does not lead by itself to a perceived confirmation of the hypothesis (e.g., Shaklee & Fischhoff, 1982). Moreover, these questions can lead to a strong disconfirmation and can be the only ones to allow a nonambiguous falsification (Klayman & Ha, 1987). Not only are they judged to be quite informative but they also appear to have very important social and interpersonal uses. In sum, a confirmatory strategy may be very important in the interaction between people and is far from being noninformative.

In this study, the social skills of each subject were evaluated by the Self-Monitoring Scale (Snyder, 1974). One could argue, however, that Machiavelli was also a skillful impression manager and that, like him, high self-monitors were perhaps just trying to manipulate and control their partners to get some favors. Some authors have addressed the issue of the overlap between self-monitoring and Machiavellianism. The self-monitoring score is uncorrelated (−.09; Snyder, 1974) or weakly correlated (.24; Ickes, Reidhead, & Patterson, 1986) with Machiavellianism as measured by Christie and Geis's (1970) Mach V Scale. It thus seems safe to conclude that the two traits do not tap the same dispositional construct. As proposed by Ickes et al. (1986), high-self-monitoring individuals are concerned with an accommodative form of impression management. The impression management tactics of high self-monitors are directed toward "win[ning] approval from or avoid[ing] conflict with others by bringing one's own behavior into line with whatever goals, purposes, and expectations these others

appear to have" (Ickes et al., 1986, p. 59). This means that high-self-monitoring individuals, in contrast to Machiavelli, play the role dictated by others to get along and be liked by others and to smooth the interaction (Snyder, 1974).

What does it mean to smooth the interaction? One answer could be given according to the principle of cooperation and coordination, as well as the conversational logic and the so-called Gricean maxims (Grice, 1975; Schwarz, 1994). For instance, the *communication game* approach (McCann & Higgins, 1992) emphasizes the cultural conventions for appropriate language use and the social exchange goals of communication other than information transmission. These social exchange goals point to the social relationship and to the get-along-to-be-liked goals. A nonmatching strategy could stop the conversation-cooperation or, at least, it could run counter to a smooth interaction by breaking, among other things, the maxim of sensitivity, which states that the message must be adapted to the listener's characteristics (see Dardenne et al., 1994).

A second answer, although closely related to the first one, comes from studies in which some criteria of the smoothness of the interaction were more closely scrutinized. We have already mentioned the studies by Leyens (1989) in which the latency times between the end of an answer and the beginning of the next question were longer for the most diagnostic questions than for biased and matching questions. A closer look at these data even show that questions biased toward the hypothesis displayed the shortest latency time and thus were less likely to be preceded by an embarrassing silence. This kind of facilitation of the conversation, along with the empathy displayed by interviewers using biased and/or matching questions (Leyens et al., 1995) as well as the results presented in this study, suggests that these questions could be fruitful in ensuring a smooth interaction.

The study by Leyens et al. (1995) was concerned with the interpersonal usefulness of the confirmatory questions from an observer's point of view. The study reported here suggests that socially skilled people, as defined by the Self-Monitoring Scale (Snyder, 1974), more often use the matching questions than the nonmatching ones. From the actor's point of view, matching questions seem to be useful at the interpersonal level. To have a complete understanding of the true dynamic of the interaction, it is now necessary to investigate the interviewee's point of view. For example, will the interviewee judge the hypothesis-testing situation as particularly pleasant, rewarding, and smooth when conducted with a majority of matching questions? Is such an interview more likely to be followed up by a relationship, a friendship, or even a date? To the extent that human beings are social beings, these questions are of great

importance. Similarly, people's motivations and goals are likely to play a major role in this picture. We address this issue in the following section.

Motivated Confirmation

During the 1980s, the general view of the human perceiver was overloaded by the cognitive-miser descriptive analogy (Fiske & Taylor, 1984). Because people are limited in their cognitive capacity, they take shortcuts as often as they can. Errors and biases stem from the cognitive system. For instance, hypothesis-true information is easier to process than alternative-true questions; it is also (mis)perceived as more diagnostic and valid, and matching information is more representative of the features mentioned in the hypothesis (Dardenne et al., 1994). In this conception, motivation is at best remedial and is never seen as promoting a preference for matching questions.

The study of social perception, and the frequently reported biases such as the confirmation strategy, has too often been construed and interpreted in a get-to-know context rather than in a get-along-with context (Snyder, 1992). However, to quote Hilton and Darley (1991),

> Recently, there has been a resurgence of interest in understanding the impact that perceivers' goals have on person perception. The perceiver, having frequently been portrayed as an unconstrained, accuracy-seeking (although frequently not accuracy-finding) observer, is now seen as a goal- and event-driven interactant who must expend scarce cognitive resources to accomplish specific ends. (p. 235)

As a matter of fact, Fiske and her colleagues (e.g., Neuberg & Fiske, 1987) examined the effect of the situation on the impressions formed. Accountability of conducts, potentially a frequent natural setting, leads to a complex impression-formation process but not necessarily to a more accurate one (Tetlock & Boettger, 1989). Stereotypes as energy-saving devices have been demonstrated (Macrae, Milne, & Bodenhausen, 1994). Impression formation and even person memory are now investigated as a process occurring through conversations and relationships between people (e.g., Frey & Smith, 1993; Ruscher & Hammer, 1994). Finally, personality and working self-concept as moderating variables are gaining in justified attention (e.g., Fiske & Von Hendy, 1992).

It must be granted that there are now several proposals in the literature that take into account a pragmatic perspective when explaining the old litany of errors and biases (Leyens & Fiske, 1994). They are sometimes similar to the functionalist theories of attitudes (cf. the social adjustive function of attitudes, Katz, 1960). We will mention two of them very briefly. The *motivated tactician* approach to human perceivers emphasizes the multiple cognitive strategies available to them and stresses the importance of motivation, emotion, and needs, as well as the sophistication in the understanding of cognitive structure and process (Fiske & Taylor, 1991). For instance, this pragmatic perspective leads to the conclusion that people are good-enough perceivers; that traits, stereotypes, and stories help people make sense of the world; and that "thinking is for doing" (Fiske, 1992, 1993). In his social contingency model, Tetlock (1992) proposed a politician metaphor, which points to the feeling of being held accountable and which tries to identify the strategies that people have developed for coping with everyday decisions. The (ideal) politicians help people get along with one another but, first, help people get along with the politicians themselves.

From this new perspective, most of the impression-formation or test processes are interpreted as motivated by the target, a third party, or the self. In our study, we showed that the information-gathering behavior depends on how much people are tuned into or motivated by the smoothness of the interaction. For some people, a smooth interaction is of primary importance under appropriate circumstances. Environmental cues, for instance, the status of the target, motivates these people to ensure a smooth interaction. This is not to say that people who are less tuned into the environment will not be sensitive at all to the quality of the interaction. These people are tuned into the smoothness of the interaction under appropriate environmental cues—they are not blind—but one needs to use a very sensible criterion to reveal it.

Motivated reasoning is at the core of a great deal of research (see Higgins & Sorrentino, 1990; Kunda, 1990). Motivation may affect reasoning, information-gathering behaviors, and impression construction generally through reliance on a set of nonrational cognitive processes. Errors and biases can sometimes result from cognitive laziness. However, they can also result from trying to attain interpersonal goals. By focusing almost exclusively on a purely cognitive analysis, one might miss the fact that people interact with other people (La Haye, 1991). What look like errors and biases from a strictly rationalist perspective are, in fact, very pragmatic and thus are far from being mistakes (Funder, 1987). The revival of the pragmatic perspective in personality and social psychology means that people's cognitions and behaviors are studied as the products of social beings who get along with other persons.

NOTES

1. To report the critical comparisons, one could have chosen the direct t instead of the F of the interaction. In fact, the two statistics lead to exactly the same result. This is due to the design, which fixes the number of accepted questions to a marginal total of four.

2. This main effect should be interpreted carefully. Our main purpose in this experiment was not to pit diagnosticity against leading or matching tendencies. Consequently, although we are confident that our diagnostic questions are indeed diagnostic at an acceptable level, we did not know the extent to which these questions were highly diagnostic. Diagnosticity could be assessed either by a Bayesian method or by a judge's rating. However, it has been shown that people have a great difficulty in dealing with some ingredients of the Bayesian formula—namely, the base rates of yes and no answers (Kahneman & Tversky, 1973). Moreover, van Avermaet (1988) found that the subjective diagnosticity for diagnostic questions is not greater than for leading questions.

3. We are well aware of the structural dependency between the data we obtained for the accepted and the rejected questions. Nevertheless, we are quite confident that this aspect of the design did not influence the pattern of data to a considerable extend. First, the minimal level of analysis, which was the Question Type × Hypothesis interaction, concerned a total of eight questions from which four had to be accepted and four had to be rejected. Second, the median number of matching questions that was accepted and rejected is four, with a range from two to seven for introversion-confirming questions and a range from two to six for extroversion-confirming questions. That is, no subject used the entire range of questions. Third, our data are strong enough to face a structural dependency (see also Note 4).

4. Excluding the lead variable enabled us to perform an analysis in which there was no absolute dependence between the indexes. That is, a subject could have chosen and rejected four matching questions, because the available stock was eight matching and eight nonmatching questions. Including a second within-subject factor would have led to the impossibility of accepting and rejecting independently the same number of questions, for instance, those questions biased toward the hypothesis. Nevertheless, we conducted the same analysis including the lead questions within-subject variable. None of the main effects or interactions were modified by this variable, providing a perfect replication in all aspects.

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