

Are You Listening to Me? The Negative Link Between Extraversion and Perceived Listening

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Abstract

Extraverts are often characterized as highly social individuals who are highly invested in their interpersonal interactions. We propose that extraverts' interaction partners hold a different view—that extraverts are highly social, but not highly invested. Across six studies (five preregistered; $N = 2,456$), we find that interaction partners consistently judge more extraverted individuals to be worse listeners than less extraverted individuals. Furthermore, interaction partners assume that extraversion is positively associated with a greater ability to modify one's self-presentation. This behavioral malleability (i.e., the “acting” component of self-monitoring) may account for the unfavorable lay belief that extraverts are not listening.

Keywords

extraversion, listening, self-monitoring, sociability, interaction

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Extraversion captures individuals' sociability or the extent to which they approach the social world with enthusiasm (Cattell, 1990; John et al., 2008). Extraverted people tend to be gregarious and outgoing, whereas introverted people tend to be reserved and withdrawn (Goldberg, 1993; Wiggins, 1995). A highly extraverted individual seeks out, and gains energy from, social interactions, often choosing to initiate conversation, even with others who are unfamiliar (Campbell & Rushton, 1978; Hirsh et al., 2009). For extraverted people, being engaged in social interaction can engender, and reinforce, positive emotions, whereas being deprived of social interaction can elicit feelings of isolation and loneliness (e.g., Diener & Lucas, 1999; Lucas et al., 2000; Lucas & Fujita, 2000; Tellegen, 1985; Watson & Clark, 1997).

Both scientific and lay descriptions of extraversion suggest that extraverts are keenly interested in interacting with other people. But, what do their interaction partners believe—that extraverts listen with rapt attention when others are speaking, or that an extravert's interest in social interaction is largely one-sided? In this research, we suggest that observers associate extraversion with *poor* listening skills. That is, extraversion sends a strong signal of interest in social interaction, but a weak signal of interest in an interaction partner. To account for this negative association, we highlight the role of malleable self-presentation, a key component of the self-monitoring trait. We expect that highly extraverted people will come across to others as “acting”—although they express energy and enthusiasm in social interaction, their

interaction partners might not interpret this as a genuine cue for listening.

Perceptions of Listening

Following others (e.g., Itzchakov et al., 2018), we conceptualize listening as a multidimensional construct that includes affective processes (e.g., exhibiting empathy and engagement), cognitive processes (e.g., attention and comprehension), and behavioral processes (e.g., nodding and asking questions). We focus on the cognitive component—that is, attending to and absorbing what others have to say in conversation. Paying close attention can have a significant, positive effect on an individual speaker (Itzchakov et al., 2017). People who interact with high-quality listeners tend to feel less defensive and anxious (Johnson, 1971); instead, they feel more relaxed and at ease (Itzchakov et al., 2017). In addition, high-quality listening can boost a speaker's mood (e.g., Hale et al., 1998), raise their self-awareness (e.g., Pasupathi & Rich, 2005), improve their work performance (e.g., Bergeron & Laroche, 2009; Lloyd et al., 2015), and

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benefit their relationships (Bodenmann, 2005; Kuhn et al., 2018).

Identifying high-quality listening can be challenging. An individual speaker must evaluate listening by drawing inferences about the listener, the context, and their shared history (Bavelas et al., 2000; Bodie, 2012; Van Quaquebeke & Felps, 2018). These subjective evaluations can be distorted by various forms of perceptual bias, including stereotyping (Borisoff & Purdy, 1991), halo effects (Thorndike, 1920), and egocentrism (Epley et al., 2002). Furthermore, in a single interaction, the actual quality of listening can fluctuate—waxing and waning as the listener appears to lose interest at one point in the conversation only to regain it later. Further suggesting that listening is largely in the eye of the beholder, recent work has identified an important distinction between actually *being* heard and *feeling* heard (Bodie et al., 2014; Collins et al., n.d.).

Although the accuracy of listening perceptions is unclear, consensus exists about what people look for in a “good listener.” Speakers examine a focal listener’s posture, gesticulations, and physiognomy, searching for meaningful nonverbal cues that imply interest, attention, and understanding (Rogers & Roethlisberger, 1991). People also look for specific behaviors, including eye contact and other nonverbal signals of engagement (Bodie et al., 2012): to wit, a furrowed brow might indicate concentration, whereas an averted gaze might indicate distraction (Imhof, 2003). Lay beliefs also suggest that listeners signal engagement through verbal behavior—by expressing backchannels (“uh-huh,” “hmm”), asking follow-up questions, and limiting interruptions (Ames et al., 2012; Bodie et al., 2012; Halone & Pecchioni, 2001; Huang et al., 2017; Thomas & Levine, 1994). Together, this work suggests that evaluations of listening are meaningful, but highly subjective.

Communication scholars and instructors often advocate for “active” forms of listening in interpersonal interaction, partly because passivity can signal disinterest and partly because listeners might help direct speakers in shaping their narratives. Indeed, some research goes so far as to describe interaction partners as “co-narrators” in conversation, helping to “illustrate the story” with their own verbal and nonverbal reactions (Bavelas et al., 2000). Such co-narration can be helpful, but it can also be harmful if it distracts, overshadows, or stymies the narrator, thereby undermining their performance (Bavelas et al., 2000; Pasupathi, 2001; Pasupathi & Rich, 2005). In a sense, conversation can be a form of collaboration, and thus people may be sensitive to whether their interaction partners are more or less agentic—aiming to take control of the conversation rather than share the spotlight.

The Link Between Extraversion and Listening

A typical extravert can be described “as a communicative, sociable, outgoing, and energetic person who thrives on social contact” (Akert & Panter, 1988, p. 966). Relative to

introverts, extraverts are more desirous of conversation and spend more time in social situations (John & Srivastava, 1999; Paunonen & Ashton, 2001). Extraverts tend to have more relationships with other people than do introverts (Feiler & Kleinbaum, 2015) and tend to initiate these relationships more often (Shipolov et al., 2014). Not surprisingly, then, extraverts tend to be more popular among their peers (Anderson et al., 2001). In one comprehensive meta-analysis, extraversion emerged as “the most consistent correlate” of leadership attributions and effectiveness among the Big Five personality traits, indicating that extraverted people have greater influence in social settings (Judge et al., 2002, p. 765).

Some scholars dispute the claim that social interaction is essential to extraversion. According to Lucas and colleagues (Lucas et al., 2000), sociability does not capture the core of the extraversion construct; rather, reward sensitivity, described as “an incentive motivational state that facilitates and guides approach behavior to a goal” (Depue & Collins, 1999, p. 495), links together all aspects of extraversion. These researchers suggest that extraverts are more sociable than introverts because extraverts are more sensitive to rewards and social situations are more rewarding. Ashton et al. (2002) further refined this view, positing that the need for social attention, specifically, not reward sensitivity, generally, best captures the central feature of extraversion. They suggest that extraverts might not seek balanced social interactions; instead, extraverts prefer social interactions in which they occupy a stage and play the leading role. According to this view, extraverts are invested in their social interactions only to the extent that the interaction satisfies their strong desire for attention. This implies that extraverts might not be interested in what their interaction partners say, but finding ways to steer the conversation toward themselves.

Past research on the association between extraversion and other personality traits reinforces this view that extraverts might not be viewed as engaged listeners. Conceptualizations of extraversion often include a blend of warmth and dominance in social interactions (Carrigan, 1960; John, 1989; John & Srivastava, 1999), with extraverted behavior characterized using terms such as “lively” and “energetic” (warmth) as well as terms such as “bold” and “assertive” (dominance). Furthermore, extraversion correlates with grandiose narcissism, a trait that captures attitudes of entitlement, high self-esteem, exhibitionism, and the need to be admired by others (Miller et al., 2011; Zajenkowski & Szymaniak, 2019). These associations suggest that extraverts prioritize their own concerns over others’, which may be an indication of poor listening skills.

Lay Beliefs About Extraversion, Listening, and Self-Monitoring

We examine what people believe about the listening ability of an extraverted individual. Does an interaction partner

believe that an extravert is attending to what their partner has to say, or does the partner feel that the conversation is self-focused—that extraverts are more interested in talking rather than listening? Gauging whether someone else is listening can be a difficult task, as we have noted. Speakers rely on limited information they gather from the target individual's actions, statements, and context—and their evaluations are often biased by irrelevant details (Gawronski et al., 2003). We propose that extraversion, despite corresponding to a high level of sociability, might not signal a sincere level of attentiveness; instead, people might assume that extraverts' ebullience in social interactions reflects their ability to present a socially desirable image rather than a desire to be social.

Our prediction that observers believe extraversion to be *negatively* associated with listening resonates with research on the link between extraversion and self-monitoring—the degree to which people regulate their self-presentation, social behavior, and affective displays to suit situational cues (Snyder, 1974). Extraversion has some positive association with self-monitoring (e.g., Flynn et al., 2006; Study 3, $r = .26$). In fact, in early analyses of the Self-Monitoring Scale (SMS), one factor was initially labeled “extraversion” (Briggs & Cheek, 1988; Briggs et al., 1980; Furnham & Capon, 1983). However, extraversion and self-monitoring remain distinct personality constructs (Barrick et al., 2005; Snyder, 1979; Snyder & Monson, 1975). For example, although extraverts tend to have stronger encoding skills than introverts (similar to high self-monitors)—that is, they can enact a particular emotion on demand (Buck et al., 1974; Riggio et al., 1985)—their ability to decode nonverbal signals seems less robust (Cunningham, 1977; Rosenthal et al., 1979; cf. Funder & Harris, 1986).

To gauge whether extraverts are listening, interaction partners may rely on their assessment of other traits, such as self-monitoring. Two separate factors comprise self-monitoring—a sensitivity to the expressive behavior of others and the ability to modify one's self-presentation (Lennox & Wolfe, 1984). The first factor represents the extent to which an individual “is particularly sensitive to the expression and self-presentation of relevant others” in social interaction (Snyder, 1979, p. 89), whereas the second factor captures the “acting” component that is essential to self-monitoring (Lennox & Wolfe, 1984; Snyder, 1979). This acting component reflects how high self-monitors modify their self-presentation to suit the demands of various situations (Gangestad & Snyder, 2000). To be clear, high self-monitors do not view their behavioral malleability as disingenuous. Instead, high self-monitors feel they are behaving in an “authentic” manner when adapting their behavior (see Pillow et al., 2017).

Although high self-monitors may believe that modifying their self-presentation to suit situational demands reflects their good intentions, interaction partners might not agree. An individual speaker who senses a lack of fidelity between the listener's public behavior and private attitudes (what they

say and do, vs. what they think and feel) might assume that the listener is “acting” engaged rather than paying close attention and exhibiting a sincere interest. We suggest that people interacting with extraverts infer a positive correlation between extraversion and self-monitoring, specifically the “acting” component, and use this inference to judge the quality of the extravert's listening behavior. In short, extraverts are believed to be good actors, but not good listeners.

Overview of Studies

We tested our predictions in six studies (five preregistered, $N = 2,456$). In Study 1, an exploratory study, we collected round-robin ratings of students enrolled in a semester-long workshop on interpersonal leadership skills. Students rated their own extraversion and the listening behavior of several classmates. In Study 2, we extend this initial test to a sample of (familiar) strangers. Next, in Studies 3a and 3b, we adopt a tightly controlled experiment, manipulating information about a target individual's level of extraversion in explicit ways and asking participants to evaluate the target's listening skills. In Study 4, we investigate whether this pattern persists across varying levels of extraversion and whether observers' ratings of the ability to modify self-presentation affects observers' ratings of a target's listening ability. Finally, in Study 5, we asked participants to rate an extraverted or introverted person on both their listening behavior and multiple components of their self-monitoring personality to test whether the ability to modify one's self-presentation, specifically, may account for the lay belief about extraversion and listening. Following the recommendations provided by Simmons et al. (2018), for each study we report all data exclusions, manipulations, and measures and collected at least 100 participants per condition. All data and study materials are available online (https://osf.io/2t6fu/?view_only=d0346e0ddd3847738cc7d21821183649).

Study 1

In Study 1, we tested our hypothesis that people believe extraverts are poor listeners, using a sample of students who spent time working together in small groups as part of their coursework.

Method

Participants were first-year MBA students enrolled in a U.S. business school. As part of the curriculum, all first-year students take a leadership skills course that meets weekly for 3 hr. At various times, the students work through role-play exercises that focus on a particular leadership skill (e.g., giving performance feedback, resolving conflict). Students complete these interactive exercises in preassigned, six-person groups called “squads” that remain intact throughout the entire course.

Participants. We emailed 199 MBA students inviting them to complete a short online survey. We informed students that their participation was voluntary—their course grade would not be affected in any way and they would not receive compensation for participating. A total of 147 people (62% male) completed the survey, for a response rate of 73.9%. A sensitivity analysis indicated that our sample size provides 80% power to detect a small effect (Cohen's $f^2 = 0.06$) with $\alpha = .05$.

Procedure. Participants rated the listening skills of the other members of their squad. For each member, participants answered the following four questions: "If you were having a conversation with [squad member], to what extent would he or she . . ." (a) listen to what you have to say, (b) give you a chance to speak, (c) remember what you had said the next time you see them, and (d) be focused on things other than the conversation at hand. The name of each squad member was piped into each item to ensure accurate reporting.

After answering these questions, participants were then asked about their own level of extraversion, using the extraversion subscale ($\alpha = .91$) of the extended 240-item NEO Personality Inventory (Costa & McCrae, 1992a). This 48-item subscale is further broken down into six facets (each represented by eight questions): warmth ($\alpha = .84$), gregariousness ($\alpha = .84$), assertiveness ($\alpha = .80$), activity ($\alpha = .63$), excitement seeking ($\alpha = .66$), and positive emotions ($\alpha = .85$).

Results

In line with previous work that used round-robin ratings (Anderson & Kilduff, 2009; Heyman et al., 2021; Schaumberg & Flynn, 2012), we analyzed the data using a social relations model (SRM) at the squad level with the TripleR package for R (Schönbrodt et al., 2012). This approach allows us to separate the variance in round-robin judgments into three components: (a) variance explained by the perceiver (i.e., the rater), (b) variance explained by the actor (i.e., the person being rated), and (c) variance explained by the unique dyadic relationship between each particular actor and perceiver (Kenny & La Voie, 1984).

First, we calculated the variance in listening ability explained by the aforementioned three components. Perceiver variance accounted for a nonsignificant portion of the variance (0.1%, $p = .49$), whereas target variance (29.4%, $p < .001$) and relationship variance (70.5%, $p < .001$) each accounted for a substantial and significant portion of the variance. These results suggest that perceivers were generally able to agree on a given target's listening ability, but that there was an additional uniquely dyadic effect that was not captured by simply looking at perceiver or actor ratings alone.

We then used the target scores calculated by the SRM (representing the degree to which each participant was seen

as a good listener) as the dependent measure in a series of regressions with the extraversion subscale of the NEO Personality Inventory and its six facets as independent measures (each run as a separate regression). We found a significant, negative relationship between an individual's self-reported extraversion and group members' ratings of that individual's listening behavior ($\beta = -0.37$, $b = -0.28$, 95% confidence interval (CI) = $[-0.42, -0.15]$, $p < .001$). Breaking down extraversion into the six separate facets, the negative relationship with perceived listening was significant for each facet: gregariousness ($\beta = -0.31$, $b = -0.14$, 95% CI = $[-0.22, -0.06]$, $p < .001$), assertiveness ($\beta = -0.16$, $b = -0.15$, 95% CI = $[-0.26, -0.05]$, $p = .003$), excitement seeking ($\beta = -0.20$, $b = -0.12$, 95% CI = $[-0.22, -0.01]$, $p = .032$), warmth ($\beta = -0.25$, $b = -0.14$, 95% CI = $[-0.23, -0.04]$, $p = .007$), positive emotions ($\beta = -0.25$, $b = -0.12$, 95% CI = $[-0.21, -0.03]$, $p = .007$), and activity ($\beta = -0.23$, $b = -0.16$, 95% CI = $[-0.28, 0.03]$, $p = .016$).

Discussion

Study 1 presented preliminary evidence in support of our proposed negative relationship between extraversion and perceived listening. Participants were asked about the listening behavior of fellow group members with whom they interact on a regular basis and reported that more extraverted individuals (rated independently by the target individual) were worse listeners. These findings offer a high level of external validity, given that the interactions in this context are naturally occurring. However, one of the limitations of these data is that participants' interactions with one another, rather than their lay beliefs about extraversion, might have influenced their impressions. In Study 2, we address this limitation by examining zero-acquaintance relations, in which each party observes each other, but never engages in direct conversation.

Study 2

In Study 2, we seek to extend the results of Study 1 to a sample of strangers. Sample size, exclusion criteria, measures, hypotheses, and main analyses were preregistered (<https://aspredicted.org/xn2p6.pdf>).

Method

Participants. We recruited 718 U.S.-based adults through Prolific to participate in this study. Following the criteria outlined in our preregistration, we excluded 63 participants who either failed to follow our instructions or failed our attention check, leaving a final sample of 655 participants (36% male, $M_{\text{age}} = 35$ years, $SD_{\text{age}} = 12$). A sensitivity analysis indicated that our sample size provides 80% power to detect a small effect (Cohen's $f^2 = 0.01$) with $\alpha = .05$.

Procedure. For the purpose of Study 2, we drew upon Milgram's (1972) concept of "familiar strangers"—people whom we observe regularly, but never interact with directly. A familiar stranger can be someone who occupies the same physical space (i.e., a bus stop or a café), but has never been engaged in conversation with the focal actor.

We instructed participants to identify a familiar stranger—someone whom they have "seen at least a few times in the past 2 months, but have never interacted with." Once participants identified this individual, they were asked whether they encounter this stranger *regularly* (yes/no), and whether they had ever *directly interacted with them* (e.g., *had a conversation*; yes/no). If they reported either (a) not encountering this person regularly, or (b) directly interacting with this person, the participant was asked to think of someone else. If the second person they identified also did not meet our criteria, the participant did not complete the rest of the survey ($n = 52$).

Once participants had successfully identified a familiar stranger, they were asked to think about this individual as they completed the questions in the remainder of the survey. To this end, we asked participants to provide a term that would help them remember the familiar stranger (e.g., "Train Lady"), which we then included in subsequent items.

Participants reported their perceptions of the familiar stranger's extraversion using the seven-item extraversion subscale of the Big Five Inventory (BFI; John & Srivastava, 1999), specifically the extent to which they believed this person is "talkative," "reserved" (reverse coded), "full of energy," "generates a lot of enthusiasm," "tends to be quiet" (reverse coded), "has an assertive personality," "is sometimes shy, inhibited" (reverse coded), and "is outgoing, sociable" ($\alpha = .89$), on a scale from 1 (*disagree strongly*) to 5 (*agree strongly*).

Participants were also asked to imagine having a conversation with this familiar stranger and to predict the extent to which this person would "pay close attention to you," "listen attentively to what you had to say," "give you plenty of chances to speak," "remember specific details of what you said for when they see you again," "thoughtfully absorb the details of what you shared," and "frequently steer the conversation toward him or herself" (reverse coded; $\alpha = .81$), on a scale from 1 (*definitely not*) to 5 (*definitely yes*). Participants completed these two scales (extraversion and listening) in random order.

Finally, for exploratory purposes, participants provided ratings of the familiar stranger's extraversion, with the same 48-item extraversion subscale of the extended 240-item NEO Personality Inventory ($\alpha = .95$; Costa & McCrae, 1992a) used in Study 1, accounting for the same six facets: warmth ($\alpha = .88$), gregariousness ($\alpha = .88$), assertiveness ($\alpha = .78$), activity ($\alpha = .78$), excitement seeking ($\alpha = .82$), and positive emotions ($\alpha = .84$).

Results

Replicating the results of Study 1, we find that participants' ratings of a familiar stranger's extraversion was significantly negatively related to their perceptions of this person's listening ability, $\beta = -0.11$, $b = -0.09$, 95% CI = $[-0.15, -0.03]$, $p = .004$.

Ratings using the individual facets of the NEO extraversion subscale revealed contrasting associations. Unlike Study 1, both the warmth ($\beta = 0.33$, $b = 0.29$, 95% CI = $[0.23, 0.36]$, $p < .001$) and positive emotion subscales ($\beta = 0.20$, $b = 0.18$, 95% CI = $[0.11, 0.25]$, $p < .001$) were positively associated with perceived listening. However, the activity ($\beta = -0.09$, $b = -0.08$, 95% CI = $[-0.16, -0.009]$, $p = .03$) and excitement seeking subscales ($\beta = -0.15$, $b = -0.15$, 95% CI = $[-0.22, -0.07]$, $p < .001$) were negatively associated with perceived listening. The assertiveness subscale showed a marginal negative relationship with perceived listening ($\beta = -0.07$, $b = -0.07$, 95% CI = $[-0.16, 0.01]$, $p = .09$), whereas the gregariousness subscale showed no relationship ($\beta = -0.05$, $b = -0.05$, 95% CI = $[-0.11, 0.02]$, $p = .16$).

Discussion

The results of Study 2 replicate and extend those of Study 1: people believe that extraversion is associated with worse listening ability, even among (familiar) strangers. In this case, the results cannot be attributed to the content of conversations between the rater and the target individual because the two never interacted. That said, the correlational design used in both studies does not allow for causal claims about the effect of extraversion on perceived listening. To address this limitation, we examined the presumed link between extraversion and listening further in a pair of tightly controlled experiments.

Studies 3a and 3b

In Studies 3a and 3b, we turn to a controlled setting to test the association between extraversion and perceived listening using experimental methods that offer more internal validity. In each study, participants were asked to imagine what it would be like to interact with someone either high or low in extraversion and then evaluate the target individual's listening skills. All sample sizes, exclusion criteria, measures, hypotheses, and main analyses were preregistered (Study 3a: <https://aspredicted.org/xz6pw.pdf>; Study 3b: <https://aspredicted.org/73vs3.pdf>).

Method

Participants. We recruited two samples of 450 U.S.-based adults (total $N = 900$) for Studies 3a and 3b through Prolific Academic. In Study 3a, we excluded 85 participants who

Table 1. Effect of Extraversion on Perceived Listening Skills Across Studies 3a and 3b.

Study	Listening skills		Comparison	Cohen's <i>d</i>
	High extraversion <i>M</i> (<i>SD</i>)	Low extraversion <i>M</i> (<i>SD</i>)		
3a	3.00 (0.64)	3.96 (0.41)	$t(325.87) = 17.37^{**}$	1.79, 95% CI = [1.55, 2.03]
3b	3.27 (1.04)	3.88 (0.76)	$t(400.45) = 7.02^{**}$	0.67, 95% CI = [0.48, 0.87]

Note. CI = confidence interval.

* $p < .05$. ** $p < .001$.

failed our attention check, our manipulation check, or both, leaving a final sample of 365 participants (49% male, $M_{\text{age}} = 33$ years, $SD_{\text{age}} = 10$). In Study 3b, we excluded 11 participants who failed our attention check, leaving a final sample of 439 participants (47% male, $M_{\text{age}} = 30$ years, $SD_{\text{age}} = 10$). A sensitivity analysis indicated that our sample size provides 80% power to detect a small effect (Cohen's $d = .29$ in Study 3a, and Cohen's $d = .27$ in Study 3b) with $\alpha = .05$, two-tailed.

Procedure. We presented participants with descriptions of a target individual whose level of extraversion varied across conditions (manipulated between-subjects). These descriptions were adapted from the *APA Dictionary of Psychology*. In Study 3a, participants imagined they were using a friend-finding app called "friend.ly." They learned that new members on friend.ly must complete a series of questionnaires that assess various traits ("extraverted," "outdoorsy," and "foodie"). Extraversion was defined as "an orientation of one's interests and energies toward the outer world of people and things rather than the inner world of subjective experience. Extraverts are relatively outgoing, gregarious, sociable, and openly expressive." In contrast, outdoorsy was defined as "a fondness of and appreciation for the outdoors" and foodie was defined as "a particular interest in and passion for food." Participants then viewed the profile of someone who scored either high or low on "extraversion," and medium on "outdoorsy" and "foodie."

In Study 3b, participants were asked to write a story about an individual who was described as either "very extraverted . . . someone who is outgoing, sociable, and most comfortable around people" or an individual who was "not very extraverted . . . someone who is reserved, solitary, and most comfortable being alone." Participants were given a starting prompt: "We sat down to dinner, and the conversation began . . ." and an open-ended text box to provide the remainder of the story. Participants had to spend at least 3 min writing their story, and the length of the story had to be at least 150 characters. Participants wrote an average of 666 characters ($SD = 265$), with the shortest story written in 155 characters and the longest in 1,561 characters. Approximately 1% of the written stories (4/439) did not follow the assigned prompt.

In both studies, participants evaluated the listening skills of the target individual, using the same scale described in Study 2. The scale for each item ranged from 1 (*definitely not*) to 5 (*definitely yes*).

Results

Table 1 presents a summary of the results for Studies 3a and 3b.

In each study, we find a significant effect of the extraversion condition on participant-rated listening: target individuals described as high in extraversion were rated as significantly worse listeners than target individuals described as low in extraversion (Figure 1). We observe this effect using two different manipulations of extraversion (a purported profile in a friend-finding app and a brief free-response narrative) in two separate samples, which provides robust support for our main hypothesis.

Discussion

The results of Studies 3a and 3b support, and complement, the results of Studies 1 and 2: Extraverts are perceived as worse listeners than introverts. By using rigorously controlled experiments, we strengthen the replicability of this finding and offer causal evidence of the presumed link between extraversion and listening. Unlike Studies 1 and 2, the judgments of extraverted people in Studies 3a and 3b could not be affected by other information, such as individual characteristics (e.g., demographics), which might introduce confounds. Instead, the only variable information participants could rely on when forming their impressions was the target individual's level of extraversion.

One limitation of Studies 1 to 3b is that the association between extraversion and listening could be driven by high levels of extraversion or low levels of extraversion (i.e., introversion)—a confound sometimes referred to as a "donut design" (Mullen & Monin, 2016). We note the terms "extrovert" and "introvert" have specific connotations, which suggests that the lay belief about listening behavior may be driven more by one than the other. To address this possibility, we examine the effect of extraversion on perceived listening across several levels of extraversion in Study 4. We expect

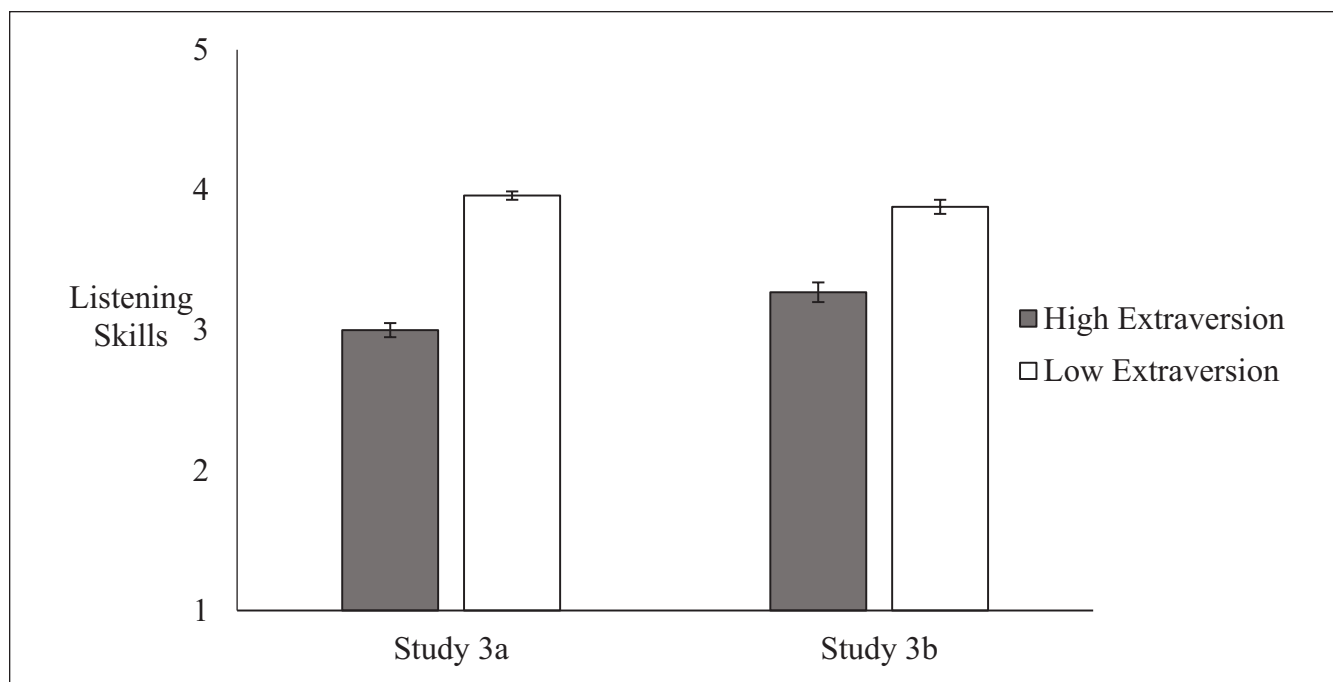


Figure 1. Differences in perceived listening skills between individuals high versus low in extraversion. Note. Bars represent condition-level means, and error bars represent condition-level standard errors.

that the association between extraversion and perceived listening is linear. Furthermore, we aim to explore the presumed association between the “acting” component of self-monitoring and extraversion. We expect to find a positive association, such that more extraverted people are seen as better actors.

Study 4

In Study 4, we explored the link between extraversion and perceived listening by operationalizing a broader range of extraversion levels. Rather than adopt the two-condition design of Studies 3a and 3b, we adopted a five-condition design in which we presented participants with a target individual’s score on the extraversion subscale of the BFI (John & Srivastava, 1999), ranging from 1 (*extremely introverted*) to 5 (*extremely extraverted*). Participants were asked to imagine interacting with this individual and then evaluate both their listening skills and their ability to modify their self-presentation. All sample sizes, exclusion criteria, measures, hypotheses, and main analyses were preregistered (<https://aspredicted.org/u25yy.pdf>). A sensitivity analysis indicated that our sample size provides 80% power to detect a small effect (Cohen’s $f^2 = 0.02$) with $\alpha = .05$.

Method

Participants. We recruited 601 U.S.-based adults through the Prolific platform. As outlined in our preregistration, we

excluded 88 participants who failed our attention check, leaving a final sample of 513 participants (47% male; $M_{\text{age}} = 33$, $SD_{\text{age}} = 12$).

Protocol. Participants were asked to evaluate another individual, “Jamie” (a name chosen for its gender neutrality). Specifically, they read, “In our previous survey, Jamie responded to the questionnaire below.” Then, participants viewed the seven-item extraversion subscale of the BFI (John & Srivastava, 1999) and were told that responses to these questions indicated an individual’s level of extraversion such that individuals who scored 5 (*extremely extraverted*) would describe themselves as “extremely talkative, full of energy, generates a lot of enthusiasm, and has an assertive personality,” whereas those who scored 1 (*extremely introverted*) would describe themselves as “extremely reserved, quiet, and shy.” Finally, participants were told Jamie’s score on this extraversion scale—the value of which varied depending on their randomly assigned condition: 1 (*extremely introverted*; $n = 105$), 2 (*moderately introverted*; $n = 109$), 3 (*neutral: neither introverted or extraverted*; $n = 102$), 4 (*moderately extraverted*; $n = 100$), or 5 (*extremely extraverted*; $n = 97$).

After reading about Jamie’s extraversion score, participants were asked to imagine having a conversation with Jamie and evaluate Jamie’s listening skills using the same six-item measure of listening described in Studies 3a and 3b. In addition, participants evaluated Jamie’s listening skills using the Other-Report version of the Active Empathic

Listening Scale (AELS; Bodie, 2011). This scale consists of 11 items (“Jamie is sensitive to what others are not saying,” “Jamie is aware of what others imply but do not say,” “Jamie understands how others feel,” “Jamie listens for more than just the spoken words,” “Jamie assures others that they will remember what they say,” “Jamie summarizes points of agreement and disagreement when appropriate,” “Jamie keeps track of points others make,” “Jamie assures others they are listening by using verbal acknowledgements,” “Jamie assures others that they are receptive to their ideas,” “Jamie asks questions that show an understanding of others’ positions,” and “Jamie shows others they are listening by body language [e.g., head nods]”; $\alpha = .90$) rated on a scale from 1 (*never or almost never true*) to 7 (*always or almost always true*).

Finally, participants evaluated Jamie’s *ability to modify their self-presentation*, in seven “acting” items; “In social situations, they have the ability to alter their behavior if they feel that something else is called for”; “They have the ability to control the way they come across to people, depending on the impression they wish to give them”; “When they feel that the image they are portraying isn’t working, they can readily change it to something that does”; “They have trouble changing their behavior to suit different people and different situations they find themselves in” (reverse-coded); “They have found that they can adjust their behavior to meet the requirements of any situation they find themselves in”; “Even when it might be to their advantage, they have difficulty putting up a good front” (reverse-coded); “Once they know what the situation calls for, it’s easy for them to regulate their actions accordingly”; $\alpha = .87$; Lennox & Wolfe, 1984) on a scale from 0 (*certainly, always false*) to 5 (*certainly, always true*).

Results

Extending the results of Studies 3a and 3b, we find that a target individual’s level of extraversion (range = 1–5) was significantly negatively related to participants’ perceptions of their listening skills, $\beta = -0.68$, $b = -0.40$, 95% CI = $[-0.44, -0.36]$, $SE = 0.02$, $p < .001$. Once again, more extraverted individuals were viewed as worse listeners. We find a similar pattern for participants’ perceptions of a target individual’s active empathic listening skills, $\beta = -0.20$, $b = -0.13$, 95% CI = $[-0.19, -0.07]$, $p < .001$. Conversely, we find that a target individual’s level of extraversion is significantly positively related to participants’ ratings of their *ability to modify their self-presentation*, $\beta = 0.52$, $b = 0.33$, 95% CI = $[0.28, 0.38]$, $p < .001$. This finding suggests that extraverts were not only seen as poor listeners in social situations, but they were also seen as good “actors” (see Figures 2 and 3).

To explore the linearity of these effects, we first conducted a multiple regression, predicting perceived listening skills from the mutually orthogonal linear, quadratic, cubic, and quartic effects of extraversion within a single model. We

find a significant negative linear effect of extraversion on perceived listening skill, $\beta = -0.15$, $b = -12.68$, 95% CI = $[-13.84, -11.52]$, $p < .001$. We also find a significant quadratic effect ($\beta = -0.16$, $b = -1.30$, 95% CI = $[-2.47, -0.14]$, $p = .03$), and cubic effect ($\beta = 3.24$, $b = 2.67$, 95% CI = $[1.51, 3.83]$, $p < .001$), but no significant quartic effect ($\beta = 0.92$, $b = 0.76$, 95% CI = $[-0.41, 1.92]$, $p = .20$). Similarly, we find a significant negative linear effect of extraversion on the perceptions of active empathic listening skills, $\beta = -4.44$, $b = -4.13$, 95% CI = $[-5.95, -2.31]$, $p < .001$. We find no significant quadratic ($\beta = -0.19$, $b = -0.18$, 95% CI = $[-2.00, 1.64]$, $p = .85$), cubic ($\beta = 0.12$, $b = 0.11$, 95% CI = $[0.71, 1.93]$, $p = .90$), or quartic effects ($\beta = -0.12$, $b = -1.04$, 95% CI = $[-2.85, 0.78]$, $p = .26$).

Similarly, we explored the linearity of the effect of extraversion on perceptions of *ability to modify self-presentation*. We find a significant positive linear effect of extraversion on *ability to modify self-presentation*, $\beta = 1.17$, $b = 10.45$, 95% CI = $[8.98, 11.92]$, $p < .001$. We also find a significant quadratic effect ($\beta = -3.74$, $b = -3.34$, 95% CI = $[-4.81, -1.87]$, $p < .001$), and cubic effect ($\beta = -2.21$, $b = -1.97$, 95% CI = $[-3.44, -0.50]$, $p = .009$), but no significant quartic effect ($\beta = 1.89$, $b = 0.17$, 95% CI = $[-1.30, 1.64]$, $p = .82$).¹

Discussion

The results of Study 4 replicate those of Studies 1, 2, 3a, and 3b: people associate higher levels of extraversion with worse listening skills. In this case, we find clear evidence of a linear association by examining multiple levels of both extraversion and introversion. Furthermore, we extended our investigation to include perceptions of one’s ability to modify their self-presentation to suit the demands of a social situation and find that extraverts are perceived to be better than introverts in this regard. This suggests that at least one aspect of self-monitoring, the “acting” component, may be closely associated with extraversion. In Study 5, we examine whether this aspect of self-monitoring may operate as a psychological mechanism: People perceive extraverts to be worse listeners because they assume that extraverts are good at modifying their self-presentation (and not because they are less sensitive to social cues).

Study 5

In Study 5, we explored whether the effect of perceived extraversion on presumed listening skill is mediated by inferences about self-monitoring. Specifically, we hypothesized in our preregistration that one particular component of self-monitoring—the “ability to modify one’s self-presentation” (i.e., acting)—may account for the link between extraversion and listening. Furthermore, we predicted that this “acting” component acts as a stronger mediator of the extraversion–listening association than does “sensitivity to the expressive behavior of

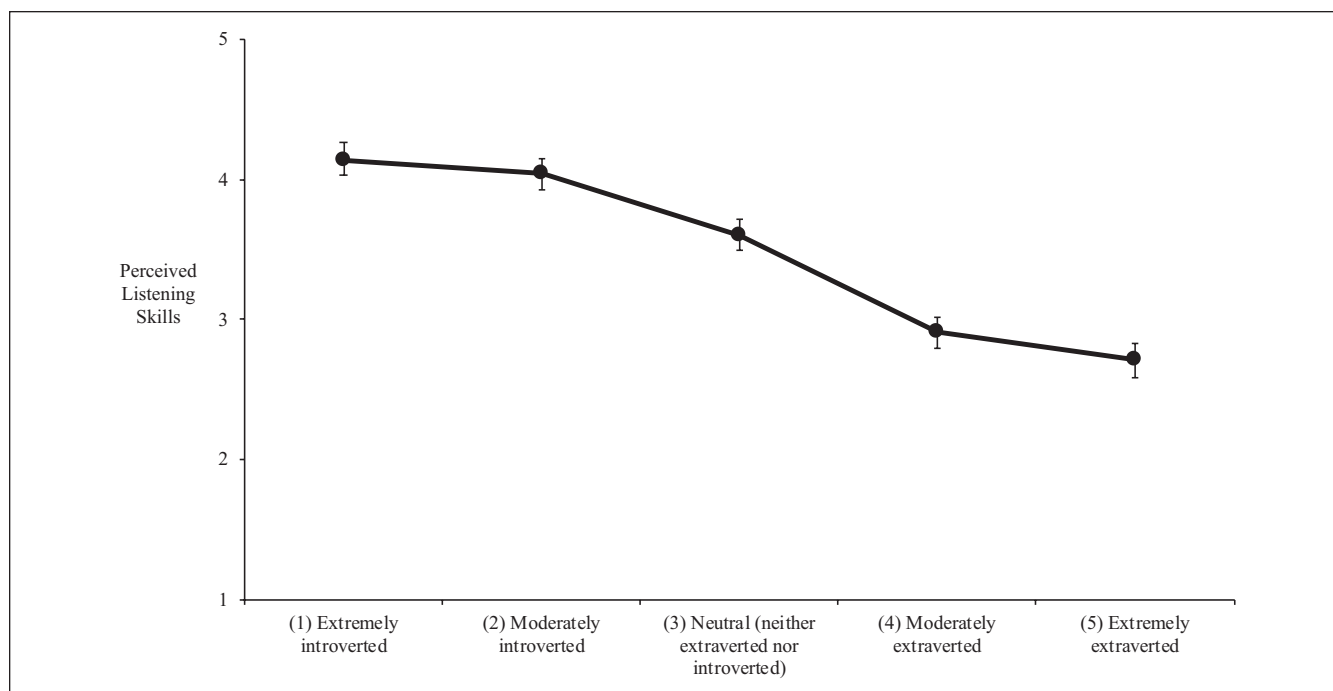


Figure 2. Effect of extraversion on perceived listening skills.

others.” All sample sizes, exclusion criteria, measures, hypotheses, and main analyses were preregistered (<https://aspredicted.org/ur9t6.pdf>). A sensitivity analysis indicated that our sample size provides 80% power to detect a small effect (Cohen’s $d = .31$), with $\alpha = .05$, two-tailed.

Method

Participants. We recruited 400 U.S.-based adults through Prolific. We excluded 63 participants who failed our attention check, leaving a final sample of 337 participants (52% male; $M_{\text{age}} = 30$ years, $SD_{\text{age}} = 11$).

Protocol. Participants were asked to evaluate another individual based on a brief personal narrative. Specifically, they were told, “In this survey, we want you to think about Person A. Person A wrote the following description of themselves.” The description either referred to attributes of an extraverted person (“I see myself as someone who is outgoing, sociable, and very talkative. I am not very reserved. I am also very full of energy and I tend to generate a lot of enthusiasm. Other people would describe me as assertive. They would never describe me as quiet.”) or an introverted person (“I see myself as someone who is shy, inhibited, and not very talkative. I am very reserved. I am not very full of energy and I don’t tend to generate a lot of enthusiasm. Other people would describe me as quiet. They would never describe me as assertive”). These descriptions were created using the items from the extraversion subscale of the BFI (John & Srivastava, 1999).

After reading the randomly assigned description, participants were asked to evaluate the target individual’s listening skills using the same six-item scale described in Studies 2 to 4. In addition, participants were asked to evaluate this individual’s level of self-monitoring. Participants evaluated the extent to which each of 13 statements described Person A on a scale from 0 (*certainly, always false*) to 5 (*certainly, always true*; Lennox & Wolfe, 1984). This scale measures two separate facets of self-monitoring: 1 = *ability to modify self-presentation* (Study 3), and 2 = *sensitivity to expressive behavior of others* (six items; for example, “Person A is often able to read people’s true emotions correctly through their eyes”). Put differently, the first subscale captures the “acting” component of self-monitoring, whereas the second subscale captures the social acuity, or other-directedness, component.

Results

As in our previous studies, we find that target individuals described as high in extraversion ($M = 3.06$, $SD = 0.42$) were perceived to be significantly worse listeners than target individuals described as low in extraversion ($M = 3.33$, $SD = 0.39$), $t(332.42) = 5.98$, $p < .001$, Cohen’s $d = 0.65$, 95% CI = [0.43, 0.87].

Next, we find that target individuals described as high in extraversion ($M = 3.48$, $SD = 0.84$) were rated significantly higher on their *ability to modify self-presentation* than individuals low in extraversion ($M = 2.58$, $SD = 0.72$), $t(326.23) = -10.55$, $p < .001$, Cohen’s $d = -1.15$, 95% CI = [-1.38, -0.92]. In contrast, evaluations of the target individual’s

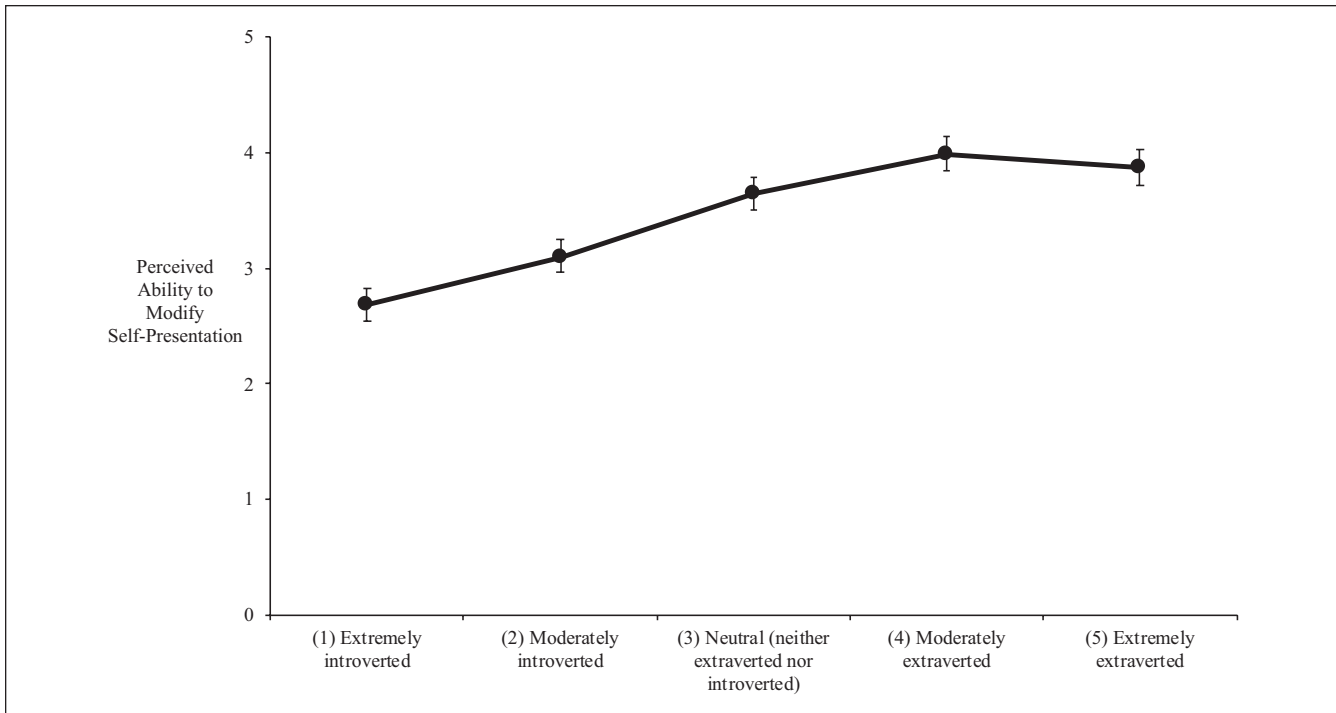


Figure 3. Effect of extraversion on perceptions of ability to modify self-presentation.

sensitivity to the behavioral expression of others did not differ between those described as high ($M = 3.62$, $SD = 0.85$) compared with those described as low ($M = 3.68$, $SD = 0.89$) in extraversion, $t(334.43) = 0.66$, $p = .51$, Cohen's $d = 0.07$, 95% CI = $[-0.14, 0.29]$.

Finally, to test whether higher extraversion drove lower perceptions of listening skills through inferences about the *ability to modify self-presentation*, *sensitivity to expressive behavior of others*, or both, we fit a path model using the lavaan package in R (Rosseel, 2012). The results of the path model are shown in Figure 4. There was a nonsignificant unmediated direct effect of extraversion level on perceived listening skills, $\beta = -0.09$, $b = -0.07$, 95% CI = $[-0.22, 0.13]$, $p = .41$. Higher extraversion was associated with significantly higher perceptions of the target individual's *ability to modify self-presentation* ($\beta = .70$, $b = 0.90$, 95% CI = $[0.65, 1.17]$, $p < .001$), but was not associated with perceptions of their *sensitivity to expressive behavior of others* ($\beta = -0.16$, $b = -0.17$, 95% CI = $[-0.44, 0.13]$, $p = .22$). Furthermore, both perceptions of the individual's *ability to modify self-presentation* ($\beta = -0.28$, $b = -0.18$, 95% CI = $[-0.33, -0.05]$, $p = .009$) and their *sensitivity to expressive behavior of others* ($\beta = 0.25$, $b = 0.19$, 95% CI = $[0.004, 0.33]$, $p = .02$) significantly correlated with perceived listening skills (though in opposite directions). This resulted in a significant indirect path through *ability to modify self-presentation* ($\beta = -0.20$, $b = -0.16$, 95% CI = $[-0.33, -0.04]$, $p = .02$; 60% of total effect), but not through *sensitivity to expressive behavior of others* ($\beta = -0.04$, $b = -0.03$, 95%

CI = $[-0.11, 0.02]$, $p = .31$; 12% of total effect). Thus, it appears that the “acting” component of self-monitoring, in particular, is more strongly associated with the negative link between extraversion and listening.²

General Discussion

Personality scholars, similar to members of the general public, associate extraversion with interpersonal interaction. Adjectives used to describe extraverted people, including friendly, genial, and sociable (Gough & Heilbrun, 1980; John, 1989; Costa & McCrae, 1992b), imply that extraverts value their social interactions, and especially their conversations, with other people. At the same time, researchers use items such as “is talkative” and “is full of energy” (John & Srivastava, 1999) and adjectives such as “communicative,” “effusive,” and “garrulous” (Cattell, 1943; Goldberg, 1993; McCrae & Costa, 2008) to capture extraversion. However, social interactions are bilateral, not unilateral, forms of interpersonal communication. Simply being talkative, or even highly enthusiastic, does not necessarily signal that one is attending to, or invested in, an interaction partner.

We identified a robust lay belief that high levels of extraversion correspond to *worse* listening behavior in interpersonal interactions. That is, despite the tendency for people to see extraverts as highly sociable, they tend to see this sociability as highly one-sided. We find strong evidence of this lay belief across a series of six studies. First, we find a strong, negative correlation between self-reported extraversion and

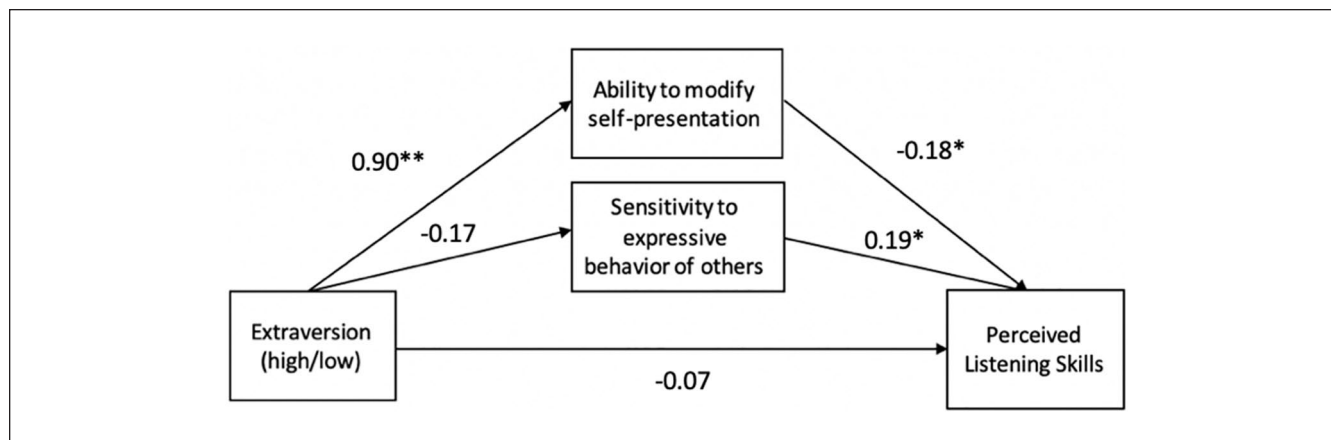


Figure 4. Effect of extraversion on perceived listening skills mediated by perceptions about ability to modify self-presentation. * $p < .05$. ** $p < .001$.

other-reported listening behaviors using a sample of interaction partners in a naturally occurring setting (Study 1). Students enrolled in an experiential course that focused on developing interpersonal skills rated more extraverted students as worse listeners. Ratings of extraversion (self-reported) and listening behavior (other-rated) were measured independently, providing compelling evidence of this lay belief. In a follow-up study (Study 2), we employed Milgram's concept of familiar strangers (people whom we regularly observe but do not engage in conversation) and found once again that extraverts are presumed to be worse listeners.

We then conducted a pair of experiments (Studies 3a and 3b) that manipulated information about extraversion in different ways. The results are clear—people assumed that an individual high on extraversion would listen less (e.g., pay less attention to their interaction partner, and retain less of what their interaction partner says) than would an individual low on extraversion. In the next study (Study 4), we verify that this association is linear (rather than being driven primarily by lay beliefs about high or low levels of extraversion). Furthermore, we find that people associate extraversion with the trait of self-monitoring, and, in particular, the component that captures self-presentation, or acting. In a final study (Study 5), we examine this perception of behavioral malleability as a mechanism underlying the presumed link between extraversion and listening. We find that extraverts are seen as having greater acting ability, but are not seen as having greater social acuity.

Contributions

Our findings contribute to the study of extraversion by examining *how people think about extraversion*. In the past, scholars have debated whether extraverts are primarily driven by reward sensitivity, generally, or the need for social attention, specifically (Ashton et al., 2002; Lucas et al., 2000). Greater

sensitivity to social rewards might imply that extraverts derive pleasure from balanced social interactions, whereas the need for social attention might imply that extraverts derive pleasure from shifting that balance toward themselves. We cannot resolve this debate about whether extraverts are driven more by one need or the other. Rather, what we can add to this debate is what people believe to be true about extraverts. According to our findings, people presume that extraverts possess a self-focus in their social interactions.

Previous research has also attempted to unpack the relationship between extraversion and self-monitoring by cleaving the two traits apart to avoid conflation (Briggs & Cheek, 1988). Here, we offer a different perspective—that observers may cleave these two traits together. That is, people link extraversion to poor listening behavior based on their inferences about how extraversion relates to the “acting” component of self-monitoring (Lennox & Wolfe, 1984; Snyder, 1974, 1979). To observers, this signal of malleable self-presentation suggests that extraverts are more interested in “looking the part” than attending to what others have to say. Highlighting this implicit association might shed light on how people draw inferences about the interrelationships among multiple personality traits—in this case, relying on trait-specific information they can easily observe (i.e., extraversion) to gauge the influence of other traits they cannot (i.e., self-monitoring; see Levesque & Kenny, 1993).

Limitations and Future Directions

We tested the lay belief that more extraverted individuals are worse listeners, but perhaps the next test should examine whether this belief is valid. Assessing listening behavior in some objective manner has proven challenging (Itzhakov et al., 2017, 2018; Janusik, 2007). Should one assess the quantity of information absorbed by the listener, or the length of time the information is retained? Would those measures

capture evidence of listening or evidence of memory (see Thomas & Levine, 1994)? In reality, most interaction partners have little means to assess listening objectively—instead having to infer a listener’s cognitive state from their observations and preexisting assumptions. Thus, although it might be an interesting exercise to test the validity of the lay belief that extraverts are worse listeners, it might not matter much. Instead, people may continue to rely on their lay beliefs to judge whether the other party is listening or merely pretending to listen.

Perhaps a more promising direction for future research to consider is the influence of culture, which shapes lay beliefs about interpersonal interactions. Our prediction regarding the presumed relationship between extraversion and listening may take a different form in a non-American culture, especially one that does not venerate extraverts over introverts (Cain, 2012). In Morocco, Indonesia, and Nigeria, for example, extraversion tends to be highly counter-normative (McCrae et al., 2005). Our predictions may be stronger in these cultural contexts, where extraversion is viewed with skepticism and associated with undesirable traits. In contrast, when examining cultural contexts where extraversion is even more typical and highly valued than in the United States (e.g., Brazil), our effects may weaken. These citizens may be more willing to give extraverts the benefit of the doubt because their sociability and interest in interaction partners come across as sincere, rather than feigned.

A significant limitation of our studies is the use of an ad hoc, subjective measure of perceived listening. We note that past research has not settled on a uniform listening measure, partly because some conceptualizations of listening are broader than others. For example, measures of listening often include items such as “X cares about me,” “X makes me comfortable so I can speak freely” (Lloyd et al., 2015), and “X understands how I feel” (Bodie, 2011), which associate listening more broadly with the concepts of responsiveness, empathy, and perspective taking. Our ad hoc measure hones in on the cognitive aspect of listening: the extent to which people attend to and absorb what others share in conversation. Future research might test whether our findings replicate with alternative measures that have less of a cognitive focus and more of an affective or behavioral focus.

Future research might also identify what extraverts are doing that reinforces the lay belief that they are not listening. For example, eye contact is positively associated with listening in many Western cultures, often conveying a signal of interest and attention (Akechi et al., 2013). Yet, extraverted people tend to exhibit more eye contact than do introverted people (Roslan et al., 2019). Perhaps basic nonverbal cues, such as eye contact, fail to undermine the lay belief that extraverts are worse listeners. Instead, the belief may be grounded in specific behaviors that signal disinterest (e.g., a fixed facial expression) and distraction (e.g., checking one’s watch). Perhaps what matters to observers is whether they can detect evidence of “acting” (e.g., a non-Duchenne

smile)—an indication that their interaction partner is exhibiting false interest and enthusiasm rather than genuinely experiencing these feelings.

Researchers might also examine whether extreme levels of extraversion correspond to different listening cues. The results of Study 4 suggest that both high and low levels of extraversion contribute to the overall lay belief that links extraversion and listening, but perhaps introverts and extraverts manifest engagement (or a lack thereof) in different ways. Along a similar vein, we suggest that extraversion corresponds to self-monitoring in observers’ minds, but perhaps it also corresponds to dominance. Observers might interpret meekness cues from an introvert (e.g., lowered gaze, withdrawn pose) as a sign of submission and a confident smile from an extravert as a subtle challenge. That is, observers might be sensitive to evidence of “acting” *because* they are sensitive to whether dominant motives are being masked by extraverts. Our facet-level extraversion data offer mixed support for this idea. In Study 2, warmth and gregariousness (low-dominance facets) showed a positive association with presumed listening, whereas activity and excitement seeking (high-dominance facets) had a negative association (all facet associations were negative in Study 1).

Future research might explore the role of talkativeness, which is a reliable facet of trait extraversion. Although extraverted people tend to use more words in their conversations, they do not take more speaking turns (Thorne et al., 2007), which suggests that being talkative does not preclude the opportunity to listen to what others have to say (the conversation may simply last longer). Indeed, in lay people’s accounts of talkativeness in interpersonal interaction, the term “talkative” refers to the “ease with which talk unfolded, rather than the amount of talk per se” (Thorne, 1987). Perhaps interaction partners use specific behavioral cues of talkativeness, such as volume, initiation of speech, interruptions, displays of positive affect, or paralinguistic gesticulations (e.g., Scherer, 1979), to gauge whether their interaction partner is listening. Future research might explore whether such specific behavioral cues strengthen or weaken the lay belief that more extraverted people are worse listeners.

Finally, we do not explore the implications of the lay belief linking extraversion with poor listening skills. This belief may make people less inclined to trust extraverted individuals, specifically in situations that involve a high level of interdependence. For example, listening has been identified as the “holy grail” in sales roles because most consumers are wary of a salesperson who comes across as overly garrulous (Itani et al., 2019). Furthermore, when choosing someone with whom one can feel safe despite being vulnerable—a counseling therapist, a romantic partner, or an executive coach—strong listening skills will be seen as highly desirable, if not absolutely required. Although some past research has linked extraversion to cooperative behavior in economic games involving trust (e.g., Hirsh & Peterson, 2009), future research might explore whether people

presume they can trust extraverts in situations that necessitate interpersonal listening skills.

Conclusion

Extraversion is strongly associated with sociability. However, we find that people do not interpret this sociability as reciprocal. Rather, they see it as unidirectional—believing that extraverts are more concerned with sending information than receiving information in their social interactions. At the heart of this lay belief that extraverts are poor listeners appears another lay belief: extraverts are good actors, presenting high levels of energy and enthusiasm that hide the fact they are not actually listening.

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Supplemental Material

Supplemental material is available online with this article.

Notes

1. Note that the form of these analyses deviate from that outlined in our preregistration. We made this change to our analyses at the request of the editor.
2. We note that this mediation analysis is suggestive, rather than conclusive. As others have noted, mediation analyses cannot account for a causal relationship (e.g., Bullock et al., 2010).

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