Journal of Nonverbal Behavior
https://doi.org/10.1007/s10919-023-00444-7

ORIGINAL PAPER

Nonverbal Expressivity, Physical Attractiveness, and Liking: First Impression to Established Relationship

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Accepted: 18 September 2023

Abstract
This study compared the effects of attractiveness and expressivity on liking at three important stages in a relationship: (a) at zero-acquaintance, (b) after a five-minute getting-to-know-you conversation, and finally (c) after becoming well-acquainted with one another. We formed unacquainted groups of participants ($N=81$) and over a period of nine weeks (40+hours of total contact) had them engage in group activities spanning work, play, eating, and conflict. At zero acquaintance, attractive targets were liked more, a direct replication of prior literature. After the first conversation, this effect was still present. Self-reported expressivity also predicted liking after a five-minute conversation. By nine weeks of acquaintanceship, both self-reported expressivity and observer-rated expressiveness predicted liking in addition to attractiveness. We interpret this finding to suggest that these nonverbal behavioral qualities that are chronically embedded throughout one's behavioral stream must be notable given their effects on liking remained predictive even after interactants learned about their group members' other characteristics over the course of a relationship.

Keywords Physical Attractiveness · Expressiveness · Liking · First Impressions · Relationships

Introduction

For a long time, the attractiveness halo was believed to be one of the most powerful stereotypes influencing perceptions and inferences of others (Berscheid & Walster, 1974; Hartley, 1992; Lemay et al., 2010). The "*what is beautiful is good*" stereotype was first identified in

Gratitude is expressed to the research assistants who were responsible for data collection.

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Published online: 04 October 2023

the 1970's (Dion et al., 1972) and since then the favorable inferences and outcomes associated with attractiveness have been widely documented (Bull & Rumsey, 2012; Eagly et al., 1981; Feingold, 1990; Langlois et al., 2000). Beautiful people are assumed to be happier, to have socially desirable traits, and to be more successful at virtually everything than their unattractive counterparts (e.g., Eagly et al., 1981; Hatfield & Sprecher, 1986). However, some have argued that the attractiveness halo may not be as strong or pervasive as initially described (e.g., Feingold, 1992; Lucker et al., 1981). In fact, well before personality and social psychologists began to focus their attention on beauty, Allport (1961) argued that the most important determinant of a first impression was a person's *expressive behavior*, not their physical attractiveness (e.g., Allport & Vernon, 1933; Estes, 1938). Since then, however, more theorizing and research has been paid to understanding the effect of one's beauty than to their chronic nonverbal behavioral style.

The present investigation addresses this dearth of research on nonverbal expressivity. We examined the impact of both nonverbal expressivity and physical attractiveness on relationship formation and did so over the course of a developing nine-week relationship. Specifically, we examined the extent to which a person's nonverbal expressivity and attractiveness impacted first impressions of being liked by a stranger. Then, we assessed how the impacts of expressivity and attractiveness on liking changed as people became well-acquainted with targets. We were interested in examining how the stereotypic effects of physical attractiveness and behavioral expressiveness on liking would be impacted by nine weeks of social interaction with the target. Would they remain, weaken, or even strengthen? Knowing the trajectory of these stereotyping effects as a relationship develops between individuals enables a more valid determination of their relevance for relationship satisfaction and liking.

What is Nonverbal Expressivity?

One of the difficulties inherent in studying expressivity is that this term refers to different things for different researchers (Riggio & Riggio, 2002). It can refer to the transparency of a person's internal state while they are experiencing and *spontaneously* reacting to emotionally evocative stimuli when they believe no one is watching them (Buck, 1979; Friedman et al., 1980; Sabatelli & Rubin, 1986). It can refer to the extent one's nonverbal expressions, gestures, and body movements charismatically command the attention of others (Friedman et al., 1988; Riggio & Friedman, 1986). It can even refer to the *skill* one has for transmitting messages nonverbally (in that way is equivalent to one's natural acting ability; Borod et al., 2004; Noller, 2001). Thus, expressivity is sometimes treated as a trait, a chronic style of movement and expression, or as a communication ability.

Notably, these operationalizations of expressivity can be differentiated methodologically. Self-reported expressivity (the perceived apparent transparency of one's spontaneous emotional states) can be assessed using self-report scales such as Friedman and colleagues' (1980) Affective Communication Test (ACT). The ACT was one of the first psychology measures that attempted to assess empirically one's perception of their own mastery of nonverbal expressivity (that theoretically contributes to them being perceived by others to be charismatic and interpersonally effective). The ACT relies on the respondents' implicit theories regarding the impact their nonverbal behavior has on others by asking questions such as, "I can easily express emotion over the telephone." The assumption is that expressive individuals have more interpersonal influence on others. Accordingly, Friedman and

colleagues (1980) reported that physicians who were high scorers on the ACT received an increased number of patient visits. Scores on the ACT were also predictive of the number of academic lectures delivered. Finally, to confirm the validity of self-reports it was reported that high scorers on the ACT were also rated by their close friends as being more nonverbally expressive (Friedman et al., 1980).

Other researchers have operationalized expressivity exclusively in terms of how nonverbally expressive they are with their bodies and gestures and how vocally animated and variable their voice appears to others (e.g., Bernieri et al., 1996; Grahe & Bernieri, 1999). This aspect of expressivity is less psychological than the trait assessed by the ACT and focuses instead on the quantity, amplitude, and diversity of an individual's facial expressions, body movements, gestures, and vocalizations. In a study on dyadic rapport among young adults, dyadic rapport was significantly associated with observer-rated expressiveness (Vicaria, 2017).

Finally, expressivity can be operationalized as an acting ability or skill of transmitting intentional emotional messages. As such, it has been assessed by tasking an actor with communicating various messages and asking a receiver to attempt to identify the emotional intent of each message (Noller, 1980, 2001). The extent to which a perceiver correctly infers the emotional intent of the message reveals the target's expressivity in terms of their ability to communicate nonverbally. An innovative methodology was designed and utilized by Noller (1980) to examine the relationship between effective communication ability and marriage satisfaction in married couples. Couples were tasked with communicating either positive, negative, or neutral emotional messages to their romantic partners using content standard statements. For example, a wife would be given an encoding task that specified one of three possible emotional messages to communicate to her husband such as,

Situation You and your husband are sitting alone on a winter evening. You feel cold.

Intention You wonder if it's only you who are cold or if he is cold too. (or, You want him to warm you with physical affection; or, You're feeling that he is being inconsiderate in not having turned up the heat by now and you want him to turn it up straight-away.)

Statement: "I'm cold: aren't you."

The husband would be shown a video of her making this statement and would select which of the three intentions they thought she was attempting to communicate. Noller (1980) reported that the couples who were more satisfied in their relationships (compared to unsatisfied couples) were also more effective communicators (meaning their spouses were more accurate at identifying the intended valence of each message).

Although the three operationalizations of expressivity described above are conceptually distinct from each other, they are rarely discriminated and are typically used to either validate each other or as proxies for one another. We propose that although these constructs are all related to how expressive one is, they each reflect a distinct construct that can be discriminated from the others in terms of their impact on interpersonal processes. We believe that if researchers treat these as distinct constructs and use them more precisely in their theory building and testing, then our understanding of interpersonal processes with respect to expressivity will be greatly improved. To illustrate the utility of this approach, we made the effort to assess each of the three aspects of nonverbal expressivity described above to

examine the potentially different ways in which each was related *independently* to interpersonal liking.

Nonverbal Expressivity and Impression Formation

The finding that expressive people are liked more is not as well-known as the physical attractiveness halo, but it has been replicated often (e.g., Bernieri et al., 1996; Friedman et al., 1980; Friedman et al.,1988; Riggio & Riggio, 2002; Vicaria, 2017; Vicaria et al., 2015). A brief review of some of the relevant literature is summarized in Table 1. The published effect sizes for expressivity and likability have ranged from $r = .22$ to $r = .53$, which is notably similar to the effect size estimates reported in meta-analyses on the relationship between physical attractiveness and likability (e.g., Eagly et al., 1981; Feingold, 1990; Langlois et al., 2000). Given its replicability and robustness, some have advocated that the expressivity-liking effect be given the same status within social psychology as the physical attractiveness stereotype by referring to it as the "expressivity halo" (Bernieri et al., 1996).

An important limitation of the empirical work on this question is that most of the research has focused on first impressions (e.g., Sabatelli & Rubin, 1986) rather than on relationship satisfaction across time. For example, in many studies, participants have either passively evaluated visual images of strangers or evaluated people they have met for the very first time. Within the social psychology literature, this stage of a relationship is commonly referred to as "Zero-Acquaintance" (e.g., Albright et al., 1988; Brown & Bernieri, 2017;

Table 1 Average Effect Sizes of the Influence of Expressivity on Liking

Study	*N*	Expressivity Measure	Liking Measure	Effect Size (*r*)
Friedman et al. (1980)	25	Self-rated expressivity	Physician popularity	0.52
Chaplin et al. (2000)	112	Self-rated expressivity	First impression composite	0.37
Friedman et al. (1988)	54	Self-rated expressivity	Liking composite	0.41
Ambady et al. (1995)	90	Self-rated expressivity	Liking composite	0.22
Riggio and Friedman (1986)	62	Self-rated expressivity Observer-rated Expressiveness	Rated likability	0.25 0.30
Vicaria (2017)	59	Observer-rated Expressiveness	18-item rapport scale	0.27
Bernieri et al. (1996)	50	Observer-rated Expressiveness	29-item rapport scale	0.22
Boyatzis and Satyaprasad (1994)	34	Observer-rated Expressiveness	Informant rated popularity	0.29
Sabatelli and Rubin (1986)	30	Observer-rated Expressiveness	Interpersonal attractiveness composite	0.44
Weisbuch et al. (2009)	37	Observer-rated Expressiveness	Liking composite	0.34
Total[a]				0.33

Note.[a]Effect size calculated by transforming Pearson's *r*'s into Fisher's *z*, averaging across the studies, and then back transforming to Pearson's *r*'s

Kenny, 1994; Kenny & West, 2008) or "First Impression" research (Ambady & Skowronski, 2008). Although these research paradigms are well suited to examine stereotype effects on the perception and construal of strangers, they are not well suited to examine the impact that such stereotypes have on relationship outcomes. Only a longitudinal design where assessments are made from zero-acquaintance all the way to an established relationship can best determine whether an established relationship outcome can be influenced by a first impression based on a target's nonverbal expressivity.

Study Overview

The present study advances our understanding of the impact one's nonverbal expressivity has on interpersonal liking by employing a nine-week longitudinal design where participants' liking for their interaction partners was measured at three time periods: zero-acquaintance, after a five-minute getting-to-know-you conversation, and after nine weeks of acquaintanceship.

We hypothesized that attractiveness would predict liking immediately at zero-acquaintance because evaluations of both liking and attractiveness are relatively instantaneous (South Palomares & Young, 2018; Willis & Todorov, 2006). Zero-acquaintance in the present context was operationalized to be as devoid of communicative behavior as possible, which limited perceiver judgments to be based only on appearance cues, not behavior cues (Albright et al., 1988; Brown & Bernieri, 2017; Kenny & West, 2008). Therefore, we hypothesized that expressivity would be a predictor of liking only *after* the first getting-to-know-you conversation (i.e., not a factor at zero-acquaintance but only after people got a chance to talk to each other). In fact, both attractiveness and expressivity were expected to predict liking after this first conversation based on previous research as well as what we know about the predictive utility of thin slices of behavior (i.e., behavior lasting five minutes or less) on interpersonal outcomes (Ambady & Rosenthal, 1992; Ambady et al., 2000).

The final and most important research question we addressed was whether attractiveness and expressivity (which are both features that are chronically embedded throughout the behavioral stream; Ambady et al., 2000) would predict liking for partners in established relationships. This is because by that time it seems more likely that other attributes would be more predictive of liking than mere nonverbal appearance and style of movement. In order to examine these questions, we observed groups that were initially formed through random assignment of strangers and tracked them for nine weeks. We assessed the extent to which physical attractiveness and three types of expressivity predicted how well a person was liked by their group members initially and then ultimately after they all had become well-acquainted with each other.

Method

Participants and Power

Data for this report came from a larger project that investigated the impact of personality traits and interpersonal skills on relationship formation (Brown & Bernieri, 2017; Fultz & Bernieri, 2018, 2022; Stosic et al., 2022; Fultz et al., 2022). The data and materials used in

this report may be accessed at https://osf.io/dx6wh/. Participants were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 2017). Participants began the study unacquainted with one another. They were arranged into groups of five to seven and met four times a week for nine weeks to work on project-related activities. They spent approximately 50 hours working together and socializing with each other by the time their final ratings of their group members were made.

Participants completed numerous psychological assessments and inventories that were not included in the analyses described in the present report (e.g., the NEO-PI-R; Costa & McCrae, 1992; the Davis Interpersonal Reactivity Index; Davis, 1983) but are discussed in detail in the references above. The groups were supervised during their three one-hour long meetings in the lab each week. In addition, groups were given weekly assigned activities to complete as a group outside of the lab in locations of their choosing without observation or experimenter guidance. The assigned activities were intended to have high ecological validity in that they represented typical things friends and groups of people do together (e.g., preparing a meal, playing games, taking a trip together, etc.). Participants became well-acquainted as a result of these weekly outings.[1]

Over the course of five years 182 university students participated in this project however, only 81 (47 women) of them generated the data required for the analyses performed for this report. Participants ranged in age from 18 to 54 years (Median = 20, SD = 5.07). Most (61 participants) were White (76%), two were Native American or Alaska Native (2%), three were Black or African American (4%), four were Hispanic or Latino (5%), four were Asian American or Pacific Islander (5%), and seven selected 'Other' (8%).

The sample size we employed was larger than 80% of samples employed in published studies on the relationship between expressivity and liking. In terms of its statistical power, it exceeded the approximate $N = 70$ that is needed to detect the median effect size observed in this literature of $r = .33$ at a power level of at least 80% (Erdfelder et al., 1996). Given the nested nature of the data (i.e., participants were arranged in groups and rated each other using a round robin format), multilevel models were used to test the hypothesized relationships. Therefore, the units of analysis for our models increased to 1404 observations (81 participants assessed by 4–6 group members over 3 time periods).[2]

Measures

Primary Outcome

How much a participant was liked by members of their group was our primary dependent variable. This was assessed on an 8-point scale by confidentially asking participants, "How much will you/do you like group member ___?" at three distinct times throughout the course of the project. The first was at zero-acquaintance. For the zero-acquaintance rating, participants were instructed not to communicate verbally or nonverbally (e.g., smile, wink, eyebrow raise, head nod, etc.) with their group members until after they had completed their ratings of each person. The second liking judgment occurred immediately after they had completed their first conversation one-on-one with their group member. Each participant

[1] If a participant missed a meeting, a make-up was scheduled so they could complete any missing self-reports. No participants missed the activities relevant to this investigation.

[2] The authors wish to thank the reviewers for suggesting this analysis.

completed four to six of these five-minute long getting-to-know-you conversations over a period of two days according to a round-robin schedule that depended on the number of people within their group and immediately rated their conversational partner after the interaction. The liking assessment at this time might be best described as their first impression of liking given it was based on their first conversation with each other. The final set of ratings occurred nine weeks later after group members had become well-acquainted with one another. Every participant made liking ratings for every other group member and had liking ratings made of them by these very same individuals they spent the nine weeks with.

Predictors

Self-Reported Expressivity. We assessed participants' expressivity employing three distinct data sources that constituted the three previously described operationalizations of the construct. First, participants completed a 13-item *self-report* scale designed to assess trait differences in nonverbal expressiveness and charisma: the Affective Communication Test (ACT; Friedman et al., 1980). Items include, "When I hear good dance music, I can hardly keep still," and "My laughter is soft and subdued (R)." These items are rated on a 9-point scale ranging from −4 to 4, with 0 as the midpoint and anchors as "not at all true of me" to "very true of me." The reported Cronbach's alpha for this scale is 0.77. In the present sample, the alpha was 0.81. People who score higher on this measure are more likely to have acting experience, more likely to have been elected to some position (e.g., political office), and more likely to engage in social events associated with expressive charismatic individuals (Friedman et al., 1980).[3]

Observer-Rated Expressiveness. We also assessed participant's expressivity via *observer judgments* of their nonverbal expressivity while engaging in an acting task. Participants were given nine different scenes, each with a specific scripted statement along with one of three different (emotionally positive, emotional neutral, or emotionally negative) interpersonal messages that they were asked to communicate nonverbally given the standard content of the verbal statement. This activity was adopted from one developed by Noller (1980, 2001) to assess the nonverbal communication skills of married individuals. We simply rewrote the interpersonal contexts, verbal statements, and emotional messages to represent the social situations and context that university students might experience with each other. For example, in one of the nine scenes they acted out, participants were asked to imagine that they are at a party where they meet someone and say, "What are you doing here?" Some participants were told that they should act like they are delighted to see this person and want to talk with them further (positive message). Others were told that this person is someone that they do not like and should communicate their displeasure at the fact that they were there (negative message). Others were told that they neither liked nor disliked the person but were surprised by the unexpected encounter with them (neutral mes-

[3] At this point, the authors would like to acknowledge a critical point raised by reviewers. Trait extraversion is reported to be strongly correlated with the ACT. An interesting research question (although, not one we initially set out to address) is whether the ACT is predictive of liking when trait extraversion is controlled for. While charisma (measured by the ACT) is theoretically tied to extraversion, theorists have argued it is a unique construct in and of itself with unique implications for social exchanges beyond what is accounted for by extraversion (Friedman, 1983). Data was collected on trait extraversion and given this we opted to include trait extraversion as a predictor in models presented in the supplementary materials for interested readers. Details relating to the measure and a summary of results are also presented in the appendix.

sage). Participants acted out the nine different scenes in front of their 4–6 group members three separate times (using a positive, negative, and neutral intent; for a total of 27 scenes).

A number of research assistants ($N = 15–26$) who did not know the targets assessed each video clip/scene twice; once rating the target's *facial* and *body* expressivity with the sound muted, and then rating their *vocal* expressivity using three items (rate of speech, projection, and overall vocal expressivity) while listening to the soundtrack of the videos (no video). All nine of the clips generated by each participant were assessed for each of the five types of expressivity described above (i.e., face, body, rate of speech, vocal projection, and overall vocal expressivity). Ratings were made on a 1 (not very expressive) to 7 (very expressive) scale. We then took the average rating across the raters and nine scenes portrayed. The Spearman-Brown effective reliability coefficients ranged from 0.93 to 0.97 for each of the five expressivity items rated. One variable (rate of speech) correlated negatively with the other four expressivity variables, so it was dropped. The remaining four variables (face, body, vocal projection, and overall vocal expressivity) were averaged into a final "observer-rated expressiveness" composite (Cronbach's alpha = 0.81).

Performance Expressivity. This measure estimated each target's ability to accurately transmit an emotional and interpersonal message nonverbally. For example, in the acting task described above from which the observer ratings of expressiveness were derived, the participant's group members watched them enact each scene and were asked to identify which of the three emotional messages the participant was acting out. The more accurately group members could discern what the participant was trying to communicate the higher their performance expressivity score. The actual value of this measure was the proportion of correctly identified communications made by group members. For example, if six group members watched a target act out nine different scenes then there would be (6×9) 54 judgments. If only 27 of those 54 judgments were correct, then the participant performance expressivity score would be 50%.

We complemented this emotional message task with a pantomime task that measured how effectively a person could nonverbally communicate elaborate interpersonal contexts. Participants were given a context and event to act out silently (e.g., *You enter your locked apartment and find a surprise party for your birthday. You are thrilled/irritated/surprised that anyone could get in to your locked apartment without a key*.). They would act out the scene in front of their group members who attempted to correctly identify what they were pantomiming. For example, were they acting out a surprise birthday celebration where they were delighted or were they not so happy about the surprise? Or were they acting out a scenario where they came home to find water in their apartment due to do leaky pipe? Each scenario with the corresponding options the group members were to select from when trying to identify the pantomime are provided in the appendix.

As was true in the previous task, there were objectively correct answers for every scene acted out. A performance score could be calculated that represented how effectively they pantomimed their assigned scenes. A target's performance score was calculated as the percentage of group member judgments that accurately described what the participant was attempting to pantomime.

Although performance on these two tasks correlated modestly ($r = .21$), we assumed they might reflect different aspects of a more general nonverbal expressivity communication skill. Since we had no theoretical basis to prefer or declare that one expressivity skill was better or more relevant than the other with respect to the expressivity-liking hypothesis, we

decided to use a composite measure for expressivity performance. Both tasks were scored as a percentage of accurately transmitted nonverbal messages, which meant that we could simply average them. Performance expressivity is therefore a general ability to accurately communicate emotional, interpersonal, and social content nonverbally.

Attractiveness. It was essential that we measured physical attractiveness in a way that would not be confounded by relationship liking and, to the extent possible, expressivity. To protect against this, we recruited seven additional research assistants to provide attractiveness judgments. None of these raters were used to assess expressivity. They did, however, rate the targets performing the acting task described above. Additionally, these research assistants never met or interacted with the participants. In this way, our attractiveness measure was not confounded by how much the rater knew and liked the target.

Physical attractiveness ratings were made on a 72-point scale.[4] It was explained to research assistants that a rating of 36 was average, and that scores of 18 and 54 represented the 25th and 75th percentile. The scale was designed to avoid ceiling effects that may result whenever people are asked to evaluate others on characteristics high on social desirability. With a 72-point rating scale, a rater could rate every single participant as being physically attractive with ratings greater than 54 and still have 18 points on the scale with which to capture the variability of attractiveness among the different targets. We also speculated that by avoiding the common cultural convention of a 10-point attractiveness scale, the evaluation task would feel more novel and might reduce the heuristic emotional response that might come from using the, "on a scale of 1 to 10, how attractive is he/she?" method.

Perceptions of attractiveness were averaged across raters to create a general attractiveness composite. The Spearman-Brown effective reliability coefficient was 0.83, indicating that the raters agreed on the level of physical attractiveness of each participant.

Results

The primary question for us was whether expressivity predicted liking *after* physical attractiveness (the attractiveness-halo) was statistically accounted for. We delineated three distinct constructs that we felt researchers might conflate when discussing expressivity: (a) the self-reported expressivity trait (i.e., charisma) that is measured by the ACT, (b) an individual's expressive nonverbal behavioral style that was measured by having non-interacting observers rate each participants' expressiveness from thin slice video clips of them performing an acting task (referred to as "observer-rated expressiveness"), and (c) the extent to which a person can accurately communicate a message exclusively using nonverbal channels (referred to as "performance expressivity"). More importantly, we investigated these issues over the course of a developing interpersonal relationship by assessing these effects at three critical points in one's relationship with another; zero-acquaintance, first impressions after their first conversation with someone, and then nine weeks later after they had become well-acquainted with one another.

Descriptive statistics appear in Table 2 by gender. Men and women targets did not significantly differ in any of the predictor variables. There were no differences between men and women raters in how much they liked their group members during zero-acquaintance and

[4] One of the raters made the ratings on a 1–8 scale. Because of this, we centered the ratings before averaging into a composite.

Table 2 Descriptive Statistics

	Overall (N=81)		Men (N=34)		Women (N=47)		Women-Men difference		
	M	*SD*	*M*	*SD*	*M*	*SD*	*t*	*p*	$r_{(pb)}$
Participant Attributes									
Physical Attractiveness[a]	-0.10	0.63	−0.06	0.55	−0.13	0.70	-0.51	0.61	−0.06
Self-Reported Expressivity (ACT)	72.85	14.95	69.85	13.41	75.02	15.77	1.55	0.13	0.17
Observer-Rated Expressiveness[b]	3.83	0.51	3.76	0.57	3.89	0.46	1.13	0.26	0.13
Performance Expressivity[c]	75.88	8.27	74.20	9.64	77.10	6.97	1.57	0.12	0.17
Extraversion[d]	123.46	17.89	121.53	12.37	124.85	18.31	0.82	0.41	0.09
Average Liking Reported for All Group Members									
Liking (Zero-Acquaintance)[e]	4.74	0.96	4.85	1.02	4.66	0.94	0.85	0.39	0.10
Liking (Five Minutes)[e]	5.25	0.98	5.14	0.99	5.32	0.97	0.81	0.42	0.09
Liking (Nine Weeks)[e]	5.32	0.86	5.05	0.96	5.52	0.73	2.47	0.02	0.27

Note. [a]Centered value of ratings made by non-interacting raters. [b]Rated on a 1 to 7 scale. [c]Percent correct. [d]Relevant analyses are provided in the supplementary materials. [e]Rated on a 0 to 8 scale

after the five-minute getting-to-know-you interactions. However, after nine weeks, women reported liking their group members significantly more than men did.

Interrelationships Between Predictors of Liking

Given all our predictor variables (i.e., target attributes) have been theoretically and empirically linked to liking, issues of multicollinearity needed to be considered. We are proposing that we do not have three interchangeable measures of expressivity but in fact measured three distinct, if not orthogonal, expressivity constructs that might each contribute independently to liking, possibly in different ways over the course of a developing relationship.

We calculated the intercorrelations of our set of target attributes that we thought would be predictors of liking and controlled them for target gender.[5] Performance expressivity did not correlate significantly with individual's self-reported expressivity trait as measured by the ACT suggesting that they are measuring distinctly different, although theoretically related, constructs. However, performance expressivity did correlate significantly with observer-rated expressiveness ($r(79)=0.53$, $p<.001$). This was not unexpected given the only way one can communicate a message effectively (i.e., performance) without talking is to be nonverbally expressive. Importantly, observer-rated expressiveness correlated positively with self-reported expressivity as measured by the ACT ($r(79)=0.40$, $p<.001$). This result replicated a similarly operationalized convergent validity effect for the ACT scale reported by Friedman et al. (1980) and establishes the theoretical relationship between these constructs, even if they are discovered to be distinct. Although two of the three expressivity interrelationships were statistically significant, we felt the amount of orthogonal variance remain-

[5] Although we did not find any significant gender differences in our predictor variables, there is some evidence women are slightly more expressive, on average. For example, Friedman and colleagues (1980) reported that women consistently scored higher on the ACT. For this reason, we opted to take the conservative approach and control for gender.

ing within them would be sufficient to warrant a test of their independent contributions to liking. Finally, none of the above three expressivity measures were correlated significantly with a person's physical attractiveness, which was rated by a completely different set of independent raters who never met the participants and who had rated their attractiveness by watching thin-slice videos of them.

At this point it may be helpful to remind the reader of the different (non-confounded) sources of data for each variable being investigated. Self-reported expressivity was operationalized as a participants score on the ACT, which is a self-reported instrument measuring a personality trait that can be referred to as charisma. Observer-rated expressiveness and physical attractiveness were ratings made by the lab's research assistants several years after the face-to-face interactions had been recorded on video. The people making these ratings never met the participant. Additionally, the research assistants who rated physical attractiveness were not allowed to rate expressiveness (and vice versa). However, the critical dependent variable, liking, came from group members who met and got to know the participants over the course of a nine-week practicum experience. The only other variable these group members contributed to was performance expressivity, which was the success (i.e., performance) with which a participant could communicate nonverbally a set of emotional messages to their fellow group members. Whereas it is likely that a person's liking for another may be confounded with their perceptions of that other's physical attractiveness and expressivity (i.e., a within-perceiver bias), that is not an issue in this investigation due to the way expressivity and attractiveness was operationalized.

Analytic Overview: Predicting Liking of Partner

We performed multilevel models that tested the expressivity-liking hypothesis at three different levels of time in the developing relationship. Perceivers were nested within their groups (there were 5–7 people in any given group). Intercepts and slopes were modeled as randomly varying across perceivers. The key result in every analysis was whether expressivity independently and significantly predicted liking when physical attractiveness was also in the model. Specifically, we regressed perceiver ratings of liking onto target gender, target attractiveness, and three ratings of target expressivity: self-report expressivity, observer-rated expressiveness, and performance expressivity. Interaction effects involving attractiveness, self-report expressivity, and observer-rated expressivity and time were also estimated. As stated earlier, we expected attractiveness, but not expressivity, to be a significant predictor at zero-acquaintance because no interaction behavior had occurred yet. Expressivity, for the most part, is an attribute of dynamic behavior that manifests while someone is behaving. Unlike physical attractiveness, it takes time to reveal and perceive. Therefore, we expected expressivity to be an important contributor of liking after five minutes given the previous research cited in Table 1, but were uncertain as to whether and how it would influence liking for partner well after two people became well-acquainted with one another.

To maximize the interpretability of our findings, we conducted the multilevel model three times where the variable of 'time' was scaled at different levels (i.e., a different reference category was employed for each model). We opted to take this approach so that the main effects reported in each model would represent the associations between each predictor and liking at each time point (zero-acquaintance, five minutes, and after nine weeks).

Tables 3 and 4, and 5 report the results from the multilevel models with reference levels of zero-acquaintance, five minutes, and nine weeks, respectively.

Zero-Acquaintance. Table 3 provides the parameter estimates for each predictor where zero-acquaintance is employed as the reference level. For this model, target gender was a significant predictor of liking, indicating that women were better liked by raters than men, on average. There was also one effect of time: liking significantly increased from zero-acquaintance to nine weeks. Consistent with prior research, the physical attractiveness of

Table 3 Predicting Partner Liking of Target from Targets' Gender, Attractiveness, Self-Reported Expressivity, Observer-Rated Expressiveness and Performance Expressivity over Time and also as a Function of Time (Reference Category: Zero-Acquaintance; df = 1303)

	Null Model		Full Model					
	Est.	SE	*SPE*	SE	*t*	*p*	*Lower CL*	*Upper CL*
Level 2								
Main Effects								
Intercept	5.07	0.10	−0.08	0.23				
Gender			0.22	0.05	4.72	<0.001	0.13	0.32
Time (Five Minutes vs. Zero Acquaintance)			−0.25	0.29	-0.87	0.39	−0.81	0.31
Time (Nine Weeks vs. Zero Acquaintance)			0.79	0.29	2.75	0.006	0.22	1.35
Attractiveness[a]			0.08	0.04	2.16	0.031	0.01	0.17
Self-Reported Expressivity (ACT)			−0.001	0.003	-0.43	0.67	−0.01	0.004
Observer-Rated Expressiveness			0.02	0.05	0.46	0.65	−0.06	0.11
Performance Expressivity			−0.008	0.03	-0.27	0.78	−0.06	0.05
Interaction Effects Involving Time								
Time (Five Minutes vs. Zero Acquaintance)Attractiveness[a]			−0.001	0.05	-0.01	0.98	−0.10	0.10
Time (Nine Weeks vs. Zero Acquaintance)*Attractiveness[a]			0.09	0.05	1.74	0.08	−0.01	0.20
Time (Five Minutes vs. Zero Acquaintance)*Self-Reported Expressivity (ACT)			0.008	0.004	2.14	0.032	0.001	0.02
Time (Nine Weeks vs. Zero Acquaintance)* Self-Reported Expressivity (ACT)			−0.01	0.004	-1.47	0.14	−0.01	0.002
Time (Five Minutes vs. Zero Acquaintance)* Observer-Rated Expressiveness			0.06	0.06	1.08	0.28	−0.05	0.17
Time (Nine Weeks vs. Zero Acquaintance)* Observer-Rated Expressiveness			0.10	0.06	1.80	0.07	−0.01	0.22
Variance components								
Level 1 residual variance, s^2	1.32		0.63					
Level 2 residual variance, t^2	0.58		0.27					

$ICC^b = t^2 / (t^2 + s^2) = 0.58/(0.58 + 1.32) = 0.31$

Note. Six observations were not included because of missing values.

[a]Average attractiveness ratings made by non-interacting raters

[b]Intraclass correlation

Table 4 Predicting Partner Liking of Target from Targets' Gender, Attractiveness, Self-Reported Expressivity, Observer-Rated Expressiveness and Performance Expressivity over Time and also as a Function of Time (Reference Category: Five Minutes; df = 1303)

	Null Model		Full Model					
	Est.	SE	*SPE*	SE	*t*	*p*	*Lower CL*	*Upper CL*
Level 2								
Main Effects								
Intercept	5.07	0.10	−0.32	0.23				
Gender			0.22	0.05	4.72	< 0.001	0.13	0.31
Time (Zero Acquaintance vs. Five Minutes)			0.25	0.29	0.87	0.39	−0.31	0.81
Time (Nine Weeks vs. Five Minutes)			1.03	0.29	3.62	0.0003	0.47	1.59
Attractiveness[a]			0.08	0.04	2.14	0.032	0.007	0.16
Self-Reported Expressivity (ACT)			0.007	0.003	2.40	0.016	0.001	0.01
Observer-Rated Expressiveness			0.08	0.05	1.81	0.07	−0.007	0.17
Performance Expressivity			−0.008	0.03	-0.27	0.78	−0.06	0.05
Interaction Effects Involving Time								
Time (Zero Acquaintance vs. Five Minutes)*Attractiveness[a]			0.001	0.05	0.01	0.98	−0.10	0.10
Time (Nine Weeks vs. Five Minutes)*Attractiveness[a]			0.09	0.05	1.75	0.08	−0.01	0.20
Time (Zero Acquaintance vs. Five Minutes)*Self-Reported Expressivity (ACT)			−0.008	0.004	-2.14	0.03	−0.02	−0.001
Time (Nine Weeks vs. Five Minutes)* Self-Reported Expressivity (ACT)			−0.01	0.004	-3.60	0.0003	−0.02	−0.01
Time (Zero Acquaintance vs. Five Minutes)* Observer-Rated Expressiveness			−0.06	0.06	-1.08	0.28	−0.17	0.05
Time (Nine Weeks vs. Five Minutes)* Observer-Rated Expressiveness			0.04	0.06	0.73	0.47	−0.07	0.15
Variance components								
Level 1 residual variance, s^2	1.32		0.63					
Level 2 residual variance, t^2	0.58		0.27					

$ICC^b = t^2 / (t^2 + s^2) = 0.58/(0.58 + 1.32) = 0.31$

Note. Six observations were not included because of missing values.

[a]Average attractiveness ratings made by non-interacting raters

[b]Intraclass correlation

the target was also significantly associated with liking. None of the expressivity measures were significantly associated with liking (indicating that at zero-acquaintance, expressivity had no effect on liking). Interestingly, there was a time by self-reported expressivity (ACT) interaction. An examination of means revealed that as time moved from zero-acquaintance to the five-minute interaction, high scorers on the ACT were better liked by perceivers than low scorers. We also opted to derive the intraclass correlations that represent the agreement among group members for liking of a specific target within each time period. For

Table 5 Predicting Partner Liking of Target from Targets' Gender, Attractiveness, Self-Reported Expressivity, Observer-Rated Expressiveness and Performance Expressivity over Time and also as a Function of Time (Reference Category: Nine Weeks; df = 1303)

	Null Model		Full Model					
	Est.	SE	*SPE*	SE	*t*	*p*	*Lower CL*	*Upper CL*
Level 2								
Main Effects								
Intercept	5.07	0.10	0.71	0.23				
Gender			0.22	0.05	4.72	< 0.001	0.13	0.32
Time (Zero Acquaintance vs. Nine Weeks)			−0.79	0.29	-2.75	0.006	-1.35	−0.23
Time (Five Minutes vs. Nine Weeks)			-1.03	0.29	-3.62	< 0.001	-1.59	−0.47
Attractiveness[a]			0.17	0.04	4.49	< 0.001	0.10	0.25
Self-Reported Expressivity (ACT)			−0.01	0.003	-2.38	0.018	−0.01	−0.001
Observer-Rated Expressiveness			0.12	0.05	2.70	0.007	0.03	0.21
Performance Expressivity			−0.008	0.03	-0.27	0.78	−0.06	0.05
Interaction Effects Involving Time								
Time (Zero Acquaintance vs. Nine Weeks)*Attractiveness[a]			−0.09	0.05	-1.74	0.082	−0.20	0.01
Time (Five Minutes vs. Nine Weeks)*Attractiveness[a]			−0.09	0.05	-1.75	0.08	−0.20	0.01
Time (Zero Acquaintance vs. Nine Weeks)*Self-Reported Expressivity (ACT)			0.0056	0.004	1.47	0.14	−0.002	0.01
Time (Five Minutes vs. Nine Weeks)* Self-Reported Expressivity (ACT)			0.01	0.004	3.60	< 0.001	0.006	0.02
Time (Five Minutes vs. Nine Weeks)* Observer-Rated Expressiveness			−0.10	0.06	-1.80	0.071	−0.22	0.009
Time (Five Minutes vs. Nine Weeks)* Observer-Rated Expressiveness			−0.04	0.06	-0.73	0.46	−0.16	0.07
Variance components								
Level 1 residual variance, s^2	1.32		0.63					
Level 2 residual variance, t^2	0.58		0.27					

$ICC^b = t^2 / (t^2 + s^2) = 0.58/(0.58 + 1.32) = 0.31$

Note. Six observations were not included because of missing values.

[a]Average attractiveness ratings made by non-interacting raters

[b]Intraclass correlation

zero-acquaintance, the intraclass correlation that measures the consensus level of agreement among group members in their liking for a specific target was ICC = 0.48.

First-Impression. The results for liking were similar when the five-minute interaction was used as the reference category. As was the case at zero-acquaintance, both target gender and attractiveness significantly predicted liking. Women were better liked by raters than men, and attractive targets were better liked. We also found that target liking increased significantly from the five-minute interaction to nine weeks of acquaintanceship. Providing

support for our hypothesis, self-reported trait expressivity (assessed with the ACT) was significantly associated with perceiver liking of targets. There were no effects of observer-rated expressiveness or performance expressivity. Finally, there was another significant interaction effect between time (five minutes vs. nine weeks) and self-reported expressivity. A comparison of means revealed that as time moved from five minutes to nine weeks, the difference in liking between high and low scorers on the ACT disappeared (i.e., low scorers on the ACT were approximately liked as well as high scorers). The intraclass correlation reflecting the agreement of group members in their liking of a target after five minutes was ICC = 0.40.

Well-Acquainted. To some extent, the two analyses just reported merely replicate the "Getting-to-know-you" literature that has identified that our first impression of another is determined in part by that person's physical attractiveness and charisma. Our next analysis examined whether these effects remained well after people became more acquainted with their group members. Although there is good reason to find attractiveness and expressivity to play a part in first impressions, one would expect that relationship satisfaction and liking becomes more driven by a person's other attributes over time while these two superficial attributes diminish in their importance. However as can be seen in Table 5, physical attractiveness continued to be significant predictors of liking even after two people became well-acquainted with one another.

The most important, and unexpected, finding was that self-reported trait expressivity (i.e., charisma) went from positively associated with one's first impression of liking another to negatively (and significantly) predicting relationship liking after nine weeks. The more charismatic a person self-reported they were, the less they were liked by group members after getting to know them for nine weeks. In contrast, observer-rated expressiveness (e.g., general animated movement and vocal tone as assessed by outside others) became positively associated with liking another after nine weeks. This indicates that although not a significant predictor of liking at first sight, a person's expressiveness plays an increasingly important factor in how well someone is liked over time, that is independent and distinct from the expressivity trait being measured by the ACT. Performance expressivity, or how skilled someone was at nonverbally communicating messages, had no association with liking at nine weeks. The intraclass correlation coefficient for liking the same person after nine weeks declined to ICC = 0.22, which would be expected to occur to the extent that people form unique personal relationships with individuals over time. In other words, one would expect a sample of people to develop increasingly differentiated relationships with the same target person over time.

Discussion

The present findings confirm what psychologists have suspected for nearly 100 years. We are attracted to beautiful, expressive people. Our findings highlight the importance of both nonverbal expressiveness and physical attractiveness in interpersonal attraction. Moreover, these two constructs impact our impressions independently and are thus involved in *distinct* person perception processes. The implications of this are potentially important because it suggests that that even after accumulating knowledge about another's attitudes, behaviors, and beliefs and after experiencing or even suffering the consequences their actions had on

us, our liking of our friends and colleagues are still apparently impacted by their appearance and nonverbal expressive style. Perhaps this is why or how thin slices of the behavioral stream are such powerful predictors of interpersonal outcomes (Ambady et al., 2000). Even when people are in established, long term relationships, there must be psychologically diagnostic information chronically embedded throughout the behavioral stream. However, by delineating the general construct of expressivity into three distinct constructs (distinguished methodologically), our results also revealed the unexpected finding that while a person's general level of nonverbal expressiveness leads to positive relationships as people become well-acquainted with one another, the expressive trait assessed by the ACT does not and perhaps could be harmful to relationship outcomes (i.e., liking).

Theories Explaining the Role of Attractiveness in Relationships

A lot of what is known about the relationship between attractiveness and liking involves studies of stereotype effects and first impressions as opposed to relationship development. It is obvious why people might like physically attractive individuals at first. There is even some evidence to indicate that physically attractive people are more socially skilled (Goldman & Lewis, 1977), providing some explanation for why they may be better liked later in an acquaintanceship. Aside from the results reported here, there is little data on how the processes involved in the attractiveness-liking effect evolve or change over a developing relationship. However, there is well established theory from which one can derive how such a process might evolve.

Several studies have speculated on this exact effect and describe how a person's a priori beliefs can eventually bring about their reality over time through a cycle of face-to face interactions (e.g., Snyder & Swann, 1978). A tremendous amount of empirical research has been generated by the idea that beliefs and expectations about another will lead that person to act in ways which will confirm those expectations (Rosenthal, 1976; Jussim & Harber, 2005). When applied to physical attractiveness, the first step in these models involves a perceiver's prior beliefs - a stereotype from which expectations can be derived. In this case, the stereotype is that beautiful people have more positive characteristics and the corresponding expectation is that this person will be liked in a future relationship. In the second stage of this model, a perceiver treats their interaction partner in accordance with their beliefs and expectations. For example, one would expect that people will be more attentive to, interpersonally sensitive to, and more supportive of, others who have favorable personalities. This positive behavior leads to positive reactions from partners and reciprocated positive behaviors, which constitutes the third stage in this process (e.g., Zebrowitz et al., 1996). The sequence of stages repeats with the perceivers now perceiving generally positive behavior from their partner, which confirms their initial expectations that they will like them.

This process was famously illustrated in a study of men who were led to believe they were talking to either a very attractive (or less attractive) woman on the telephone (Snyder et al., 1977). Not only did the attractiveness of the photo influence the evaluations of her phone behavior and personality, it led to a self-fulfilling prophecy effect that increased the positivity of the female target's actual behavior during the conversation. In other words, the speech behavior of women who were talking with men who *thought* they were speaking to an attractive woman became more vocally attractive because of the men's belief.

In a more recent exploration of the relationship between attractiveness and interpersonally affiliative behavior, Lemay and colleagues (2010) conducted a series of three studies. They pos-

tulated that, (a) "perceivers desire to form close bonds with beautiful people" (p. 339) and (b) "perceivers project, or subjectively construct reciprocation of, this interpersonal orientation" (p. 339). They argued that, in contrast to the model described by Snyder and colleagues (1977), the desire to affiliate with attractive others is "driven by affective processes that are independent of inferences regarding targets' interpersonal qualities" (p. 341). In other words, perceivers do not desire to affiliate with physically attractive others because they perceive them as having positive qualities, but instead because perceivers project a heightened desire to bond on the part of the target themselves, which *then* results in the attribution of positive qualities.

Lemay and colleagues (2010) tested this model among strangers, dating or married couples, and finally three-person groups. They consistently found evidence that it is the perceiver's projection of an increase in desire for affiliation and bonding that results in positive attributions made on the part of the perceiver (which is different from Snyder's model which posits that the mediating force of beauty stereotypes results in the attribution of positive characteristics). The results described in the present study cannot disentangle or speak to these distinct mechanisms, but it is possible that because participants in the present study anticipated that they would be spending time together over the course of nine weeks, they projected affiliative motives on the part of their more attractive group members which resulted in the outcomes presented. Other researchers could carefully design a longitudinal investigation that is comparable to the present study but that also assesses bonding motives as a way to disentangle these mechanisms.

The Complex Association Between Charisma and Liking

Self-reported expressiveness (charisma) was positively associated with liking after the first getting-to-know-you interaction. This is consistent with prior research that has theorized on the role of the ACT in person perception processes (Friedman et al., 1980). The present investigation is one of the few that has examined the association between the ACT and liking from zero acquaintance to several weeks into acquaintanceship. Surprisingly, the association between self-reported expressivity and liking flipped direction by nine weeks of acquaintanceship (i.e., the positive association became negative).

This could potentially indicate the unique variance associated with the ACT (once other variables were controlled for) has more detrimental effects on perceptions by outside observers over the long term. Perhaps interactions with "charismatic" others are perceived as more forced or contrived than interactions with less charismatic people several weeks into acquaintanceship. Notably, this pattern of results has also been observed in investigations that have examined the longitudinal effects of narcissism on person-perception. Individuals scoring high on trait narcissism tend to be better liked initially but this effect decreases over time (e.g., Paulhus, 1998). It is possible that the unique variance associated with the ACT is tapping into a narcissism-adjacent construct. We recommend that future researchers attempt to replicate this effect by employing their own longitudinal designs incorporating narcissism.

Why Nonverbal Expressivity Increases Liking

In our study, observer-rated expressiveness predicted liking by the end of the acquaintanceship. We suspect the effect of expressivity on liking, especially in well-established relationships, has to do with the fact that expressive behavior is perceived to be more intense, more attention grabbing, and more meaningful (Sullins, 1989). Thus, expressive people are inherently more

interesting and engaging. This makes expressive people salient in social settings. Salience is a powerful moderator of correspondent inferences (Taylor & Fiske, 1978). The increased salience of expressive individuals then leads to stronger correspondent trait inferences (Higgins, 1996). In other words, expressive people may lead others to have more confident impressions of them and make the perceiver feel that the target is more easily read and understood (Ambady et al., 1995). Perceivers are, in fact, more confident in their judgments about the internal states of expressive people (Anders et al., 2016). This can be important to liking because the confidence one has in their judgments of others has been shown to be neurologically rewarding (Anders et al., 2016). This in turn can lead directly to a positive attitude (i.e., liking) of the expressive individual. Research by Anders and colleagues (2016), for example, has revealed a neural mechanism in the brain that attracts people to others whose mental states they can easily understand. In sum, expressive individuals may be liked more over the entire course of a relationship because their expressiveness increases the confidence of their partners' perceptions and understanding of them, which in turn is chronically rewarding.

The general notion that we like expressive people, not because we like expressivity but because they are less mysterious and unfamiliar to us is also supported by several other well-known theories of interpersonal attraction that connects liking to proximity, mere exposure, and social interaction (Berscheid & Reis, 1998; Insko & Wilson, 1977; Montoya et al., 2017). Each of these theoretical determinants of liking are consistent with the notion that the better we know and understand someone, the more we will like them. Likewise, the less expressive someone is, the more difficult they will be to judge accurately, and the less liked they will be by that judge. Indeed, the fact that people report a preference for attractive and expressive romantic partners suggests that the lay person is intuitively aware that attractive expressive people are more likable in the long run (Eastwick et al., 2014; Sprecher & Regan, 2002).

Performance Expressivity

Although self-reported expressivity and observer-rated expressiveness were significantly associated with liking toward the end of the acquaintanceship, performance expressivity (i.e., encoding ability) was not. In fact, performance expressivity was not significantly associated with liking at any time period. This is interesting because it indicates that an individual's ability to effectively communicate their affective states has no bearing on how much they are liked by outside others (at least during the first nine weeks of acquaintanceship). It is possible that this would change depending on the type of acquaintanceship being developed. While general acquaintances may not like others more based on their posed encoding ability, it is possible that professional colleagues or romantic partners would. Future investigations should explore these associations across different types of relationships.

The Power of First Impressions

It should be clear from our data that first impressions are powerful determinants of interpersonal outcomes. The additive independent effects of expressivity and attractiveness after the getting-to-know-you conversation was substantial in its ability to predict liking. What we did not expect was that after nine weeks of conversations, activities, work tasks, and even trips with others that the impact of nonverbal expressiveness and physical attractiveness did not get overshadowed by all the things a person said and did during all of these different social situations and activities.

There are some powerful implications that stem from the fact that expressivity and attractiveness (specifically, perceived by outside observers) are significantly predictive of liking within well-established relationships. Intuitively, what a person says to us, and what they do to us on a day-to-day basis should be the most important determinant of whether we like them or not. For example, if an individual was asked to explain why they are dissatisfied with a romantic partner, we think it is unlikely they would respond, "Because my partner is unattractive and unexpressive." Instead, we expect that people would give behavioral events, traits, and specific emotional reactions as the determinants for their level of attraction. We suspect that people love their partners because of what they do, not because of how beautiful and expressive they are. Yet, the results here suggest these factors play a role in determining how much we like our friends, colleagues, and perhaps partners. We encourage researchers to examine exactly how much of our relationship satisfaction with another is due to the same factors that determine our first impressions, and how much is due to personality, values, and other behavior.

Limitations and Future Directions

The present report comes with several limitations. The examination of the development of relationships between group members was a novel contribution to the literature involving the effects of attractiveness and expressivity on liking. Because relationship development processes are so complex and context specific, it was beyond the scope of this article to perform serious tests on any one theory. Therefore, our results regarding the determinants of liking between well-acquainted individuals with respect to their nonverbal expressiveness and physical attractiveness should be considered exploratory rather than confirmatory. Our data does not address the possible moderating effects of romantic relationships, status and power relationships, or whether the relationship is a professional, social, or intimate one. There are many more questions than there can be generalizations about what nonverbal attributes precisely determine the liking of an acquaintance after some period of time. All we hoped to establish within this study is the importance of specifying what a researcher or theorist means by their use of the term expressivity, and the suggestion that one's nonverbal behavioral style (e.g., animated and busy versus monotone and reserved) is an independent moderator and/or mediator of interpersonal attraction. We hope and encourage other researchers to test, extend, and apply these effects to a wider range of relationships for the purpose of validating the results reported here and perhaps revising our understanding of what they suggest.

Implications and Conclusions

The field of personality and social psychology has known for a long time that our introspections do not directly access our internal states or the reasons for them (Nisbett & Wilson, 1977). Therefore, people's responses to questions like, "what do you like/dislike most about your partner," and "why do you like/dislike them," may be honest and genuine but they should not be assumed to be valid. Over the past 40 years, we have become more and more aware that even complicated interpersonal behavior is determined to some extent by automatic processes occurring beyond our awareness (Bargh, 2007; Dijksterhuis & van Knippenberg, 1998). The present report falls nicely under the umbrella of these research programs and others because it provides an illustration of how internal states and processes can be embodied through or chronically embedded within the behavioral stream via nonverbal expressiveness (Ambady et al., 2000), which then

can be as diagnostic of interpersonal realities and outcomes as our best verbally based self-report scales claim to be (Ambady & Rosenthal, 1992).

One of our objectives in this report was to introduce readers to a first impression determinant that we felt many would not be familiar with; nonverbal expressivity, and to illustrate that it might not be as undifferentiated a construct as the existing literature might imply. We found that self-reported trait expressivity as measured by the ACT, which is often referred to as a charisma scale, predicted liking after an initial conversation but changed into a negative predictor of liking after people become well-acquainted. This developmental trend did not occur for observer-rated expressiveness, which appeared to be more positively associated with liking as the relationship developed. Another objective of this report was to compare these expressivity effects with those of physical attractiveness, perhaps the most widely known and written about determinant of first impressions and determined whether nonverbal expressiveness contributes additionally to liking in addition to the effects of beauty - it did, at least after participants actually spoke to one another. At that time, we found that both physical attractiveness and nonverbal expressiveness independently predicted liking of partners they had known for nine weeks.

The novel contribution of this work is that we were able to examine the effects of physical attractiveness and nonverbal expressiveness on liking all the way through nine weeks of acquaintanceship. Given most of the literature that has examined these effects has focused on liking at zero-acquaintance and after brief conversations, the extension to nine weeks of acquaintanceship presented here provides a unique insight into the development of more established relationships. We would encourage other researchers to engage in the longitudinal assessment of relationship development to examine the replicability of the effects we have presented here. Additionally, the incorporation of other relevant nonverbal cues into a similar model would expand our understanding of how powerfully nonverbal attributes can impact day-to-day psychological experiences and phenomena.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s10919-023-00444-7.

Author Contributions A.F. and M.S. wrote the main manuscript text. F.B. reviewed the manuscript.

Declarations

Competing Interests The authors declare no competing interests.

References

Albright, L., Kenny, D. A., & Malloy, T. E. (1988). Consensus in personality judgments at zero acquaintance. *Journal of Personality and Social Psychology*, *55*(3), 387–395. https://doi.org/10.1037/0022-3514.55.3.387.

Allport, G. W. (1961). *Patterns and growth in personality*. Holt, Rinehart, & Winston.

Allport, G. W., & Vernon, P. E. (1933). *Studies in expressive movement*. Hafner.

Ambady, N., & Rosenthal, R. (1992). Thin slices of expressive behavior as predictors of interpersonal consequences: A meta-analysis. *Psychological Bulletin*, *111*(2), 256–274. https://doi.org/10.1037/0033-2909.111.2.256.

Ambady, N., & Skowronski, J. J. (2008). *First impressions*. Guilford Press.

Ambady, N., Hallahan, M., & Rosenthal, R. (1995). On judging and being judged accurately in zero-acquaintance situations. *Journal of Personality and Social Psychology*, *69*(3), 518–529. https://doi.org/10.1037/0022-3514.69.3.518.

Ambady, N., Bernieri, F. J., & Richeson, J. A. (2000). Toward a histology of social behavior: Judgmental accuracy from thin slices of the behavioral stream. *Advances in Experimental Social Psychology*, *32*, 201–271. https://doi.org/10.1016/S0065-2601(00)80006-4.

American Psychological Association. (2017). Ethical principles of psychologists and code of conduct (2002, amended effective June 1, 2010, and January 1, 2017). https://www.apa.org/ethics/code/.

Anders, S., de Jong, R., Beck, C., Haynes, J. D., & Ethofer, T. (2016). A neural link between affective understanding and interpersonal attraction. *Proceedings of the National Academy of Sciences of the United States of America*, *113*(16), 2248–2257. https://doi.org/10.1073/pnas.1516191113.

Bargh, J. A. (Ed.). (2007). *Social psychology and the unconscious: The automaticity of higher mental processes*. Psychological Press.

Bernieri, F. J., Gillis, J. S., Davis, J. M., & Grahe, J. E. (1996). Dyad rapport and the accuracy of its judgment across situations: A lens model analysis. *Journal of Personality and Social Psychology*, *71*(1), 110–129. https://doi.org/10.1037/0022-3514.71.1.110.

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. T. Gilbert, & S. T. Fiske (Eds.), *The handbook of social psychology* (4th ed., pp. 193–281). McGraw-Hill.

Berscheid, E., & Walster, E. (1974). Physical attractiveness. *Advances in Experimental Social Psychology*, *7*, 157–215. https://doi.org/10.1016/S0065-2601(08)60037-4.

Borod, J. C., Yecker, S. A., Brickman, A. M., Moreno, C. R., Sliwinski, M., Foldi, N. S., Alpert, M., & Welkowitz, J. (2004). Changes in posed facial expression of emotion across the adult life span. *Experimental Aging Research*, *30*(4), 305–331. https://doi.org/10.1080/03610730490484399.

Boyatzis, C. J., & Satyaprasad, C. (1994). Children's facial and gestural decoding and encoding: Relations between skills and with popularity. *Journal of Nonverbal Behavior*, *18*(1), 37–55. https://doi.org/10.1007/BF02169078.

Brown, J. A., & Bernieri, F. J. (2017). Trait perception accuracy and acquaintance within groups: Tracking accuracy development. *Personality and Social Psychology Bulletin*, *43*(5), 716–728. https://doi.org/10.1177/0146167217695557.

Buck, R. (1979). Measuring individual difference in the nonverbal communication of affect: The slide-viewing paradigm. *Human Communication Research*, *6*(1), 47–57. https://doi.org/10.1111/j.1468-2958.1979.tb00290.x.

Bull, R., & Rumsey, N. (2012). *The social psychology of facial appearance*. Springer.

Chaplin, W. F., Phillips, J. B., Brown, J. D., Clanton, N. R., & Stein, J. L. (2000). Handshaking, gender, personality and first impressions. *Journal of Personality and Social Psychology*, *79*(1), 110–117. https://doi.org/10.1037/0022-3514.79.1.110.

Costa, P. T., & McCrae, R. R. (1992). *NEO personality inventory-revised (NEO PI-R)*. Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (1995). Domains and facets: Hierarchical personality assessment using the revised NEO personality inventory. *Journal of Personality Assessment*, *64*(1), 21–50. https://doi.org/10.1207/s15327752jpa6401_2.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, *44*(1), 113–126. https://doi.org/10.1037/0022-3514.44.1.113.

Dijksterhuis, A., & van Knippenberg, A. (1998). The relation between perception and behavior, or how to win a game of trivial pursuit. *Journal of Personality and Social Psychology*, *74*(4), 865–877. https://doi.org/10.1037/0022-3514.74.4.865.

Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology*, *24*(3), 285–290. https://doi.org/10.1037/h0033731.

Eagly, A. H., Ashmore, R. D., Makhijani, M. G., & Longo, L. C. (1981). What is beautiful is good, but … a meta-analytic review of research on the physical attractiveness stereotype. *Psychological Bulletin*, *110*(1), 109–128. https://doi.org/10.1037/0033-2909.110.1.109.

Eastwick, P. W., Luchies, L. B., Finkel, E. J., & Hunt, L. L. (2014). The predictive validity of ideal partner preferences: A review and meta-analysis. *Psychological Bulletin*, *140*(3), 623–665. https://doi.org/10.1037/a0032432.

Erdfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavior Research Methods Instruments & Computers*, *28*(1), 1–11. https://doi.org/10.3758/BF03203630.

Estes, S. G. (1938). Judging personality from expressive behavior. *Journal of Abnormal and Social Psychology*, *33*(2), 217–236. https://doi.org/10.1037/h0058565.

Eysenck, H. J., & Eysenck, S. B. (1964). *Manual for the Eysenck personality inventory*. Hodder and Stoughton.

Feingold, A. (1990). Gender differences in effects of physical attractiveness on romantic attraction: A comparison across five research paradigms. *Journal of Personality and Social Psychology*, *59*(5), 981–993. https://doi.org/10.1037/0022-3514.59.5.981.

Feingold, A. (1992). Good-looking people are not what we think. *Psychological Bulletin*, *111*(2), 304–341. https://doi.org/10.1037/0033-2909.111.2.304.

Friedman, H. S. (1983). On shutting one's eye to face validity. *Psychological Bulletin*, *94*(1), 185–187. https://doi.org/10.1037/0033-2909.94.1.185.

Friedman, H. S., Prince, L. M., Riggio, R. E., & DiMatteo, M. R. (1980). Understanding and assessing nonverbal expressiveness: The Affective Communication Test. *Journal of Personality and Social Psychology*, *39*(2), 333. https://doi.org/10.1037/0022-3514.39.2.333.

Friedman, H. S., Riggio, R. E., & Casella, D. F. (1988). Nonverbal skill, personal charisma, and initial attraction. *Personality and Social Psychology Bulletin*, *14*(1), 203–211. https://doi.org/10.1177/0146167288141020.

Fultz, A. A., & Bernieri, F. J. (2018). What an optimist looks like: Separating optimistic bias from social reality. *Psychology*, *9*(3), 1–14. https://doi.org/10.4236/psych.2018.93026.

Fultz, A. A., & Bernieri, F. J. (2022). Observer descriptions of the empathic person: A look at the Davis IRI and Hogan empathy scales. *Journal of Social Psychology*, *162*(1), 26–40. https://doi.org/10.1080/00224545.2021.1985416.

Fultz, A. A., Brown, J. A., & Bernieri, F. J. (2022). The boredom prone personality: A multitrait-multimethod approach. *Journal of Personality Assessment*. https://doi.org/10.1080/00223891.2022.2112205. Advance online publication.

Goldman, W., & Lewis, P. (1977). Beautiful is good: Evidence that the physically attractive are more socially skillful. *Journal of Experimental Social Psychology*, *13*(2), 125–130. https://doi.org/10.1016/S0022-1031(77)80005-X.

Grahe, J. E., & Bernieri, F. J. (1999). The importance of nonverbal cues in judging rapport. *Journal of Nonverbal Behavior*, *23*, 253–268. https://doi.org/10.1023/A:1021698725361.

Hartley, J. (1992). *The politics of pictures: The creation of the public in the age of popular media*. Routledge. https://doi.org/10.4324/9781315002095.

Hatfield, E., & Sprecher, S. (1986). *Mirror, mirror: The importance of looks in everyday life*. State University of New York Press.

Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins, & A. W. Kruglanski (Eds.), *Social psychology: Handbook of Basic Principles* (pp. 133–168). Guilford Press.

Insko, C. A., & Wilson, M. (1977). Interpersonal attraction as a function of social interaction. *Journal of Personality and Social Psychology*, *35*(12), 903–911. https://doi.org/10.1037/0022-3514.35.12.903.

James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). *An introduction to statistical learning: With applications in R*. Springer.

Jussim, L., & Harber, K. D. (2005). Teacher expectations and self-fulfilling prophecies: Knowns and unknowns, resolved and unresolved controversies. *Personality and Social Psychology Review*, *9*(2), 131–155. https://doi.org/10.1207/s15327957pspr0902_3.

Kenny, D. A. (1994). *Interpersonal perception: A social relations analysis*. Guilford Press.

Kenny, D. A., & West, T. V. (2008). Zero acquaintance: Definitions, statistical model, findings, and process. In N. Ambady, J. Skowronski, & N. Ambady (Eds.), *First impressions*. Guilford Press.

Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, *126*(3), 390–423. https://doi.org/10.1037/0033-2909.126.3.390.

Lemay, E. P. Jr., Clark, M. S., & Greenberg, A. (2010). What is beautiful is good because what is beautiful is desired: Physical attractiveness stereotyping as projection of interpersonal goals. *Personality and Social Psychology Bulletin*, *36*(3), 339–353.

Lucker, G. W., Beane, W. E., & Helmreich, R. L. (1981). The strength of the halo effect in physical attractiveness research. *Journal of Psychology*, *107*(1), 69–75. https://doi.org/10.1080/00223980.1981.9915206.

Montoya, R. M., Horton, R. S., Vevea, J. L., Citkowicz, M., & Laubner, E. A. (2017). A re-examination of the mere exposure effect: The influence of repeated exposure on recognition, familiarity, and liking. *Psychological Bulletin*, *143*(5), 459–498. https://doi.org/10.1037/bul0000085.

Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, *84*(3), 231–259. https://doi.org/10.1037/0033-295X.84.3.231.

Noller, P. (1980). Misunderstandings in marital communication: A study of couples' nonverbal communication. *Journal of Personality and Social Psychology*, *39*(6), 1135–1148. https://doi.org/10.1037/h0077716.

Noller, P. (2001). Using standard content methodology to assess nonverbal sensitivity in dyads. In J. Hall, & F. Bernieri (Eds.), *Interpersonal sensitivity: Theory and measurement* (pp. 243–264). Lawrence Erlbaum Associates.

Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, *74*(5), 1197–1208. https://doi.org/10.1037/0022-3514.74.5.1197.

Riggio, R. E., & Friedman, H. S. (1986). Impression formation: The role of expressive behavior. *Journal of Personality and Social Psychology*, *50*(2), 421. https://doi.org/10.1037/0022-3514.50.2.421.

Riggio, H. R., & Riggio, R. E. (2002). Emotional expressiveness, extraversion, and neuroticism: A meta-analysis. *Journal of Nonverbal Behavior*, *26*(4), 195–218. https://doi.org/10.1023/A:1022117500440.

Rosenthal, R. (1976). *Experimenter effects in behavioral research*. Irvington.

Sabatelli, R. M., & Rubin, M. (1986). Nonverbal expressiveness and physical attractiveness as mediators of interpersonal perceptions. *Journal of Nonverbal Behavior*, *10*, 120–133. https://doi.org/10.1007/BF01000008.

Snyder, M., & Swann, W. B. Jr. (1978). Behavioral confirmation in social interactions: From social perception to social reality. *Journal of Experimental Social Psychology*, *14*(2), 148–162. https://doi.org/10.1016/0022-1031(78)90021-5.

Snyder, M., Tanke, E. D., & Berscheid, E. (1977). Social perception and interpersonal behavior: On the self-fulfilling nature of social stereotypes. *Journal of Personality and Social Psychology*, *35*(9), 656–666. https://doi.org/10.1037/0022-3514.35.9.656.

South Palomares, J. K., & Young, A. W. (2018). Facial first impressions of partner preference traits: Trustworthiness, Status, and attractiveness. *Social Psychological and Personality Science*, *9*(8), 990–1000. https://doi.org/10.1177/1948550617732388.

Sprecher, S., & Regan, P. C. (2002). Liking some things (in some people) more than others: Partner preferences in romantic relationships and friendships. *Journal of Social and Personal Relationships*, *19*(4), 463–481. https://doi.org/10.1177/0265407502019004048.

Stosic, M. D., Fultz, A. A., Brown, J. A., & Bernieri, F. J. (2022). What is your empathy scale not measuring? The convergent, discriminant, and predictive validity of five empathy scales. *Journal of Social Psychology*, *162*(1), 7–25. https://doi.org/10.1080/00224545.2021.1985417.

Sullins, E. S. (1989). Perceptual salience as a function of nonverbal expressiveness. *Personality and Social Psychology Bulletin*, *15*(4), 584–595. https://doi.org/10.1177/0146167289154011.

Taylor, S. E., & Fiske, S. T. (1978). Salience, attention, and attribution: Top of the head phenomena. *Advances in Experimental Social Psychology*, *11*, 249–288. https://doi.org/10.1016/S0065-2601(08)60009-X.

Vicaria, I. M. (2017). *The roles of expressivity and interpersonal judgment accuracy in dyadic rapport across the lifespan* [Unpublished doctoral dissertation]. Northeastern University.

Vicaria, I. M., Bernieri, F. J., & Isaacowitz, D. M. (2015). Perceptions of rapport across the life span: Gaze patterns and judgment accuracy. *Psychology and Aging*, *30*(2), 396–406. https://doi.org/10.1037/pag0000019.

Weisbuch, M., Ivcevic, Z., & Ambady, N. (2009). On being liked on the web and in the real world: Consistency in first impressions across personal webpages and spontaneous behavior. *Journal of Experimental Social Psychology*, *45*(3), 573–576. https://doi.org/10.1016/j.jesp.2008.12.009.

Willis, J., & Todorov, A. (2006). First impressions: Making up your mind after a 100-ms exposure to a face. *Psychological Science*, *17*(7), 592–598. https://doi.org/10.1111/j.1467-9280.2006.01750.x.

Zebrowitz, L. A., Voinescu, L., & Collins, M. A. (1996). Wide eyed' and 'crooked-faced': Determinants of perceived and real honesty across the life span. *Personality and Social Psychology Bulletin*, *22*(12), 1258–1269. https://doi.org/10.1177/01461672962212006.