When traits meet the moment: State and perceived partner motivations interact with approach-avoidance temperament to predict social preferences in daily life

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Statements and Declarations

Data and Code Availability

Data and code to reproduce the results reported in this paper are available at:
https://osf.io/hmw4k/?view_only=b9cc8e46f3e8400192775b8b25688188

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Ethics approval statement

The study was carried out in accordance with the recommendations of "Ethical guidelines, The Association of German Professional Psychologists" ("Berufsethische Richtlinien, Berufsverband Deutscher Psychologinnen und Psychologen"). All participants gave written informed consent in accordance with the Declaration of Helsinki before they participated in the study. The protocol was approved by the local ethics committee (approval: GZEK 2024-69).

Preprint information

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Abstract

Social interactions are influenced by personality traits such as approach-avoidance motives. However, it remains unclear how traits, states, and interpersonal perceptions interact to shape everyday social experiences – and for whom their interactions are most consequential. Addressing this gap is critical for advancing personality-in-context models and identifying mechanisms underlying deficits in interpersonal functioning. A two-week Ecological Momentary Assessment was conducted with 136 participants (N = 3,991 social interactions), who reported on motivational states, partner perceptions, and interaction preferences. The combined model integrating traits, states, and perceptions best predicted interaction preferences. Higher approach-related traits, states, and perceptions predicted increased interaction preference, whereas avoidance-related traits, states, and perceptions predicted lower interaction preference. Exploratory analyses revealed that maladaptive interpersonal functioning amplified the negative effects of avoidance trait and state motives on social evaluations. Integrating trait and state perspectives offers valuable insights for understanding social functioning, particularly in individuals at risk for interpersonal difficulties.

Keywords: approach avoidance temperament; ecological momentary assessment; interpersonal functioning; personality; social interaction

Introduction

Social interactions play a central role in human well-being, contributing to emotional health and overall life satisfaction (Cacioppo & Cacioppo, 2014; Cohen, 2004; Kroencke et al., 2023; Thoits, 2011). However, individuals differ markedly in how they engage with, experience, and evaluate these interactions. Theories of social interaction emphasize that interpersonal experiences are shaped by a dynamic interplay between stable personality characteristics and situational factors (Fleeson, 2001; Fleeson & Jayawickreme, 2015; Reis, 2008). Broader person–situation frameworks such as the cumulative continuity principle (Caspi et al., 2005) and the TESSERA sequence (Triggering situation, Expectancy, State/State expression, and Reaction; Wrzus & Roberts, 2017) provide a process-oriented account of how people select, interpret, and modify situations over time, thereby linking momentary states with long-term personality development. The continuity principle highlights that individuals actively create environments consistent with their traits, whereas TESSERA specify micro-level feedback loops through which repeated state–situation couplings consolidate or change traits. While positive social engagement in social situations generally fosters psychological well-being, individuals with maladaptive personality traits frequently encounter social situations as sources of stress, misunderstanding, or withdrawal, patterns that contribute to chronic interpersonal difficulties and reduced social functioning (Hopwood, 2018; Hopwood et al., 2013; Wright et al., 2016).

One concept for understanding individual differences in social interactions is the approach-avoidance temperament (Elliot & Thrash, 2002). This conceptualization posits that behavior is guided by two fundamental motivations at the trait-level: the tendency to approach rewarding stimuli and the tendency to avoid threatening or aversive situations. These motivational tendencies have been associated with social outcomes such as levels of social engagement, relationship satisfaction, and susceptibility to interpersonal difficulties (Elliot, 2008; Gable, 2006). While these motivations operate across the full spectrum of functioning in the general population, extreme or inflexible patterns can signal maladaptive personality organization, extending even into clinical personality disorders. For example, persistent social avoidance may lead to chronic isolation, whereas dysregulated approach can precipitate interpersonal conflicts and boundary violations (Hopwood et al., 2013). These directional temperaments, however, do not tell us how skillfully people pursue their social goals. This is where the construct of interpersonal functioning is relevant, defined as the capacity to initiate, maintain, and repair relationships (Hopwood, 2018). It indexes the skill and flexibility with

which social behavior is enacted and is therefore conceptually distinct from approach–avoidance temperament. Deficits in interpersonal functioning can magnify motivational effects by heightening threat perception and narrowing behavioral repertoires. a process the TESSERA sequence characterizes as repeated maladaptive loops that ultimately consolidate into trait-level dysfunction.

However, trait-level motivations such as approach and avoidance temperament alone offer an incomplete picture. Social interactions are inherently dynamic, shaped not only by stable traits but also by a range of situational factors – both external context cues and internal motivational states – as well as real-time perceptions of others (Fleeson & Jayawickreme, 2015; Reis et al., 2017; Weiß et al., 2023). Complementing TESSERA, the vulnerability–stress–adaptation model (Karney & Bradbury, 1995; McNulty et al., 2021) shows that enduring vulnerabilities (e.g., avoidance temperament) interact with situational stressors to predict relationship processes, underscoring the value of studying cross-level interactions. For instance, even individuals high in avoidance temperament may display situational variability, i.e., engaging socially when contexts feel safe or rewarding. Similarly, perceptions of an interaction partner's openness or avoidance can significantly shape the subjective evaluation of an encounter, particularly in individuals prone to interpersonal sensitivity or maladaptive interpretations (Sadikaj et al., 2013).

In recent years, research has increasingly recognized the importance of integrating state-level motivations with trait models to better understand personality in situational context (Fleeson, 2001; McCabe & Fleeson, 2016). Ecological Momentary Assessment (EMA) has proven especially valuable in capturing these dynamic processes, allowing for real-time assessment of social behavior, affect, and motivation in naturalistic settings (Shiffman et al., 2008). EMA studies have demonstrated that fluctuations in social approach and avoidance states are closely linked to daily well-being (Machell et al., 2015; Updegraff et al., 2004). Building on our prior discussion of how rigid or extreme approach–avoidance temperament patterns constitute maladaptive personality functioning, these EMA investigations reveal that individuals at the maladaptive end of the spectrum exhibit heightened interpersonal reactivity, manifesting as stronger perceptions of rejection and greater fluctuations in desire for social contact (Sadikaj et al., 2011; Vize et al., 2024; Wrzus et al., 2021). Moreover, findings suggest that both one's own motivational states and the perceived motives of interaction partners play critical roles in shaping evaluation of social encounters (Pusch et al., 2022; Zygar-Hoffmann et al., 2020).

In consequence, advances in personality and social psychology emphasize the need to integrate state-level variability with trait-level perspectives to better predict behavior and subjective experiences (Fleeson, 2001; McCabe & Fleeson, 2016). Here, we use approach and avoidance temperament to refer to stable, trait-level approach-avoidance motivation, state-level approach and avoidance motivations to refer to how inclined individuals feel to engage or withdraw at any given moment, and perceived partner approach and avoidance motivations to capture how one appraises an interaction partner's openness or avoidant stance. While many situational factors (e.g., setting, stressors, group norms) can shape social encounters, we focus on these three components because they directly map onto approach–avoidance dynamics and have been shown to drive social behavior and evaluation (Pickett & Gardner, 2005). Crucially, our theoretical interest lies not only in their separate effects but in how they combine, i.e., interact, to determine whether people want to engage in a given social encounter. Despite abundant work on each component in isolation, there is no study that has simultaneously considered trait- and state-level approach-avoidance motivation, as well as perceived partner approach-avoidance motivation to predict subjective social outcomes.

To address this gap, we conducted a two-week EMA study investigating how the interaction between trait- and state-level approach-avoidance motivations, and perceived partner motivations predicts the subjective evaluation of social interactions in daily life. We hypothesized that considering these components simultaneously will better explain interaction preferences than examining traits or states in isolation. For the individual components, we hypothesized that higher trait approach temperament, higher state approach and higher perceived approach motivation predict an increase in interaction preference, whereas higher trait avoidance temperament, higher state avoidance and higher perceived avoidance motivation predict a decrease in interaction preference. Additionally, this study aims to explore how deficits in interpersonal functioning may moderate these processes, offering a more differentiated understanding of personality influences in everyday social experiences.

Method

Transparency and Openness.

We report how we determined our sample size, all data exclusions, all manipulations, and all measures in the study, and we follow JARS (Kazak, 2018). All data, analysis code, and research materials are available at

https://osf.io/hmw4k/?view_only=b9cc8e46f3e8400192775b8b25688188. Data were analyzed using *R*, version 4.4.1. This study's design and its analysis were preregistered at https://osf.io/9ckx6/?view_only=6532b86127f2414e88ad05df929c2921.

Participants

Between January and April 2025, 181 individuals started the EMA phase of the study (see below for details). We included participants who were at least 18 years old and fluent in German. As pre-registered, we included only participants in our analyses who took part in at least 50% (≥ 28) of the 56 possible prompts without failing the attention checks and who indicated in at least 25% (≥ 14) of all possible prompts that they had a social interaction since the previous prompt. From the 181 persons who installed the app, five did not answer a single prompt, 20 participants failed at least one exclusion criterion and 20 failed both criteria, which resulted in a final data set of 136 individuals (mean age = 27.85, *SD* = 7.32 years, range 19-64; 104 women, 30 men, 1 diverse, 1 did not want to indicate). These participants responded on average to 49.6/56 prompts (i.e., 89% compliance; *SD* = 6.98, range = 28-56). Of these, 29.3 prompts on average (*SD* = 8.58) targeted direct personal social interactions (*n* = 3991 social prompts). We preregistered 135 participants and calculated the sample size using the *ema.powercurvefunction* from the *R*-package EMATools (Kleiman, 2017). The resulting sample size was based on an intra-class coefficient (ICC) of 0.37 (Weiß et al., 2023), an expected mean completion rate of ≥ 75% and 90% power. Participants earned €0.25 for each prompt answered and an additional €6 for completing the intake survey, which included demographic information, trait questionnaires, and an explanation of the study procedure, resulting in a maximum total fee of €20. The study was carried out in accordance with the recommendations of "Ethical guidelines, The Association of German Professional Psychologists" ("Berufsethische Richtlinien, Berufsverband Deutscher Psychologinnen und Psychologen"). All participants gave written informed consent in accordance with the Declaration of Helsinki before they participated in the study. The protocol was approved by the local ethics committee (approval: GZEK 2024-69).

Procedure

First, participants completed a series of online questionnaires, collecting detailed data on socio-demographic characteristics, as well as several trait measures (see below). Second, participants entered a 14-day EMA phase using the m-Path smartphone application (m-path.io).

During this period, participants received four daily prompts at randomized times between 10–11 a.m., 1–2 p.m., 4–5 p.m., and between 7–8 p.m., directing them to complete a short questionnaire tailored to their recent experiences. If a social interaction has occurred since the previous prompt, participants evaluated the most recent interaction, reflecting on its quality and features of the interaction partner(s), their approach and avoidance state as well as the perceived approach and avoidance state of their interaction partner(s). If no social interaction took place, they completed an alternative questionnaire of equal length to avoid response biases. This version inquired about their current emotions, and whether they would have liked to interact with others later that day. The list of EMA items can be found in the OSF repository (https://osf.io/hmw4k/?view_only=b9cc8e46f3e8400192775b8b25688188).

Measures

Trait questionnaires

Participants were asked to answer the following trait measures: the MacArthur Scale as a measure of subjective social status (Adler et al., 2000), the German version of the Approach-Avoidance Temperament Questionnaire (ATQ; Paelecke & Weiß, 2025) and the Level of Personality Functioning Scale, Brief Form 2.0 (LPFS-BF; Spitzer et al., 2021). In the current manuscript, we focused exclusively on the *interpersonal* subscale (LPFS-BF Interpersonal). In addition, we assessed the modified version of the Personality Inventory for DSM-5 – Brief Form Plus (Bach et al., 2020) and a friendship goals questionnaire (Elliot et al., 2006) for exploratory purposes. The order of the trait measures was randomized across participants.

EMA Survey

For the analysis presented in this manuscript, the following EMA items were relevant. First, participants were asked whether they had engaged in a social interaction within the past 60 minutes, with response options: “Yes, the interaction took place in direct personal contact,” “Yes, the interaction took place online/via phone,” or “No.” Subsequent items were administered only if participants indicated that a direct, in-person social interaction had occurred. Alternative items, which were not pertinent to this analysis, are available in the OSF repository. Participants were then asked whether they interacted with one or multiple individuals, and to specify the nature of their interaction partner(s) – choosing from romantic partner, colleague(s), family member(s), friend(s), acquaintance(s), or stranger(s).

Additionally, they rated the physical attractiveness of their interaction partner(s) using a slider ranging from 0 ("not at all") to 100 ("extremely").

The following items, all rated on sliders from 0 to 100, focused specifically on the social interaction. To assess state approach, participants rated how motivated and interested they felt using two items. Similarly, perceived approach by the interaction partner was evaluated by asking how motivated and interested the partner appeared to them. State avoidance was measured with two items assessing how much participants wished to avoid the interaction and how much they would have preferred to be alone. For perceived avoidance by the partner, participants rated the extent to which they believed these two aspects applied to their interaction partner.

To reduce the number of items in the EMA survey, we pre-selected three positive and three negative items from the PANAS (Watson et al., 1988) based on their highest correlations with approach and avoidance temperament (see Paelecke & Weiß, 2025). Positive affect was measured using the items "enthusiastic," "happy," and "determined," while negative affect was assessed with "worried," "nervous," and "anxious." Finally, interaction preference was captured by asking participants how much they liked interacting with the person (0 = "not at all"; 100 = "extremely").

Analyses

To test our pre-registered hypotheses, we used linear mixed-effects models to examine the predictors of interaction preference. To account for repeated measures, all models included a random intercept for participants. In all models, state positive affect, state negative affect, and physical attractiveness of the interaction partner were included as control variables.

Five confirmatory models were tested. The **trait-only** model included trait-level approach and avoidance temperament as fixed effects. The **state-only** model focused on situational factors, incorporating state approach and state avoidance. The **perceived state-only** model examined the influence of perceived partner behavior, using perceived state approach and perceived state avoidance as predictors. The **combined** model integrated both trait- and state-level, including interactions between trait approach, state approach, and perceived state approach, as well as between trait avoidance, state avoidance, and perceived state avoidance. Finally, the **maladaptive** model tested whether deficits in interpersonal functioning (i.e., LPFS-BF Interpersonal) moderated the effects of trait approach temperament and trait avoidance temperament by including their interactions.

In addition, an **exploratory** mixed-effects model was tested to examine whether deficits in interpersonal functioning (LPFS-BF Interpersonal) further moderated the relationships between trait temperament, state-level motivations, and interaction preferences. This model included four-way interactions between interpersonal functioning (LPFS-BF Interpersonal), trait approach and avoidance temperament, and state-level (perceived) approach and avoidance. The same covariates and random intercept structure were applied. In all linear mixed effects models, continuous within-person variables were person-centered (centered-within [cw]) and continuous between-person variables were grand mean-centered (centered-between [cb]; Bolger & Laurenceau, 2013). All results that were not preregistered were labelled as exploratory in the results section.

Results

Participants reported mainly on interactions with family members (25%), followed by partners (24%), friends (20%), colleagues (14%) and strangers (8%). Descriptive statistics for all relevant variables are presented in **Table 1**. Overall, participants reported moderate levels of trait approach and avoidance temperament, with relatively low levels of deficits interpersonal functioning. State-level approach motivation and perceived partner approach were generally high across interactions, whereas (perceived) avoidance motivations were lower. The mean rating for interaction preference was relatively high, indicating that participants typically evaluated their social interactions positively. To illustrate that there was substantial variance in our data, we illustrated the approach and avoidance state variables as well as the interaction preference by interaction partner in **Figure 1**.

Table 1. Descriptive statistics for between-person (trait) and within-person (state) variables.

Variable	n	M	SD	Min	Max
Between-Person Variables					
MacArthur Scale	136	5.63	1.47	3.00	9.00
ATQ Approach	136	5.02	0.87	2.83	6.83
ATQ Avoidance	136	4.30	1.35	1.00	7.00
LPFS-BF Interpersonal	136	1.74	0.52	1.00	3.00
Within-Person Variables					
Attractiveness	3,991	39.33	38.30	0.00	100.00
State positive affect	3,991	60.09	22.52	0.00	100.00
State negative affect	3,991	14.28	17.63	0.00	100.00
State approach	3,991	70.66	22.76	0.00	100.00
Perceived state approach	3,991	71.09	22.67	0.00	100.00

Variable	n	M	SD	Min	Max
State avoidance	3,991	22.59	25.79	0.00	100.00
Perceived state avoidance	3,991	17.77	20.87	0.00	100.00
Interaction preference	3,991	74.84	23.66	0.00	100.00

Note. M = Mean; SD = Standard Deviation. Between-person variables reflect aggregated trait-level data (n = 136 participants). Within-person variables reflect prompt-level assessments across interactions (n = 3,991 observations). ATQ = Approach-Avoidance Temperament Questionnaire; LPFS-BF = Level of Personality Functioning Scale – Brief Form.

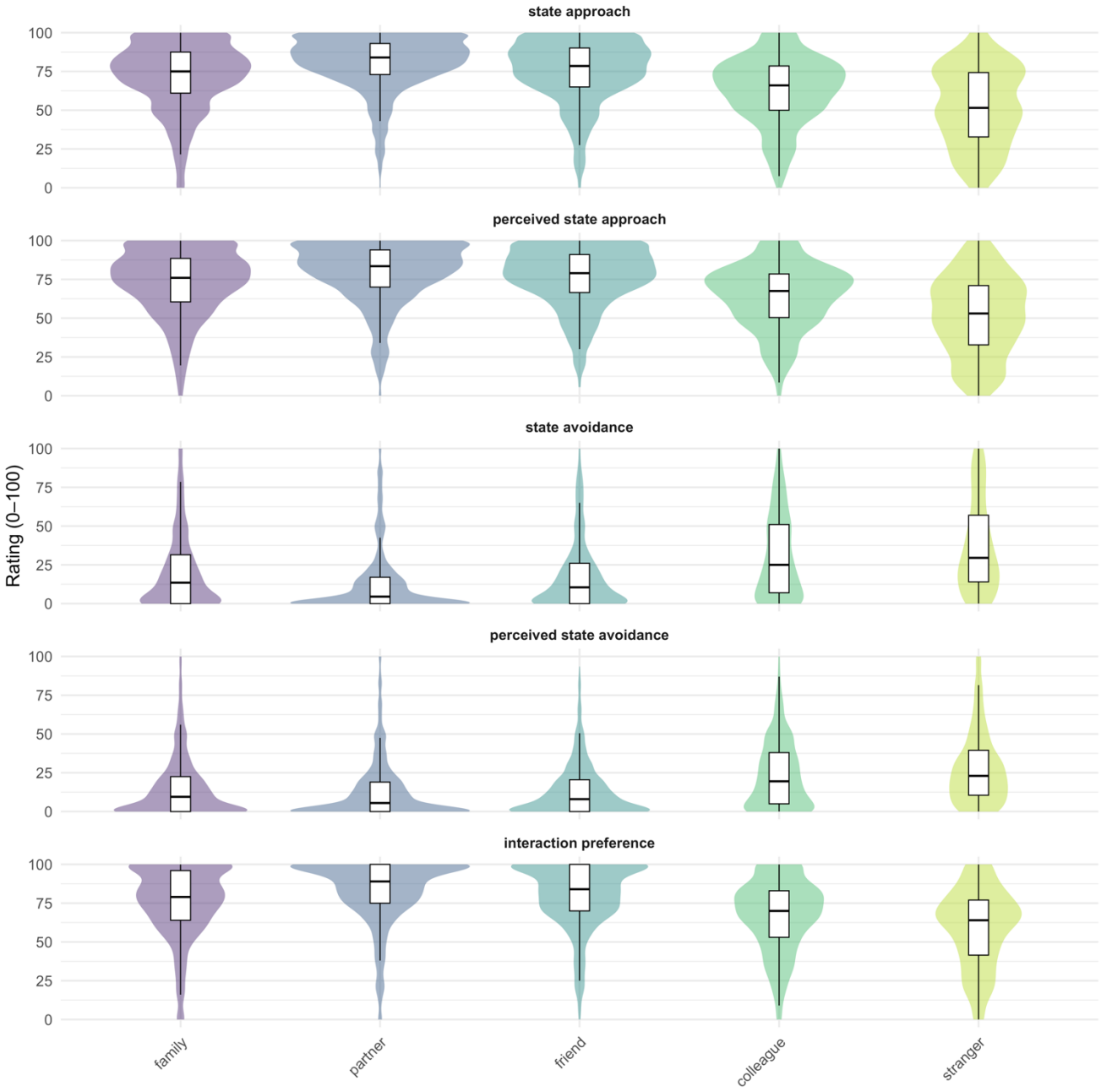

Figure 1. Distributions of state approach, state avoidance, perceived partner motivations, and interaction preference across different interaction partner types. Violin plots display the distribution and density of ratings (0–100 scale) for each variable, separated by most frequent partner type (family, partner, friend, colleague, stranger). Boxplots within violins indicate median and interquartile range.

As shown in **Figure 2**, trait approach was positively associated with state approach motivation and perceived partner approach (*r*s = .45), as well as with interaction preference (*r* = .40). In contrast, deficits in interpersonal functioning (LPFS) were negatively correlated with state approach (*r* = –.28) and interaction preference (*r* = –.35).

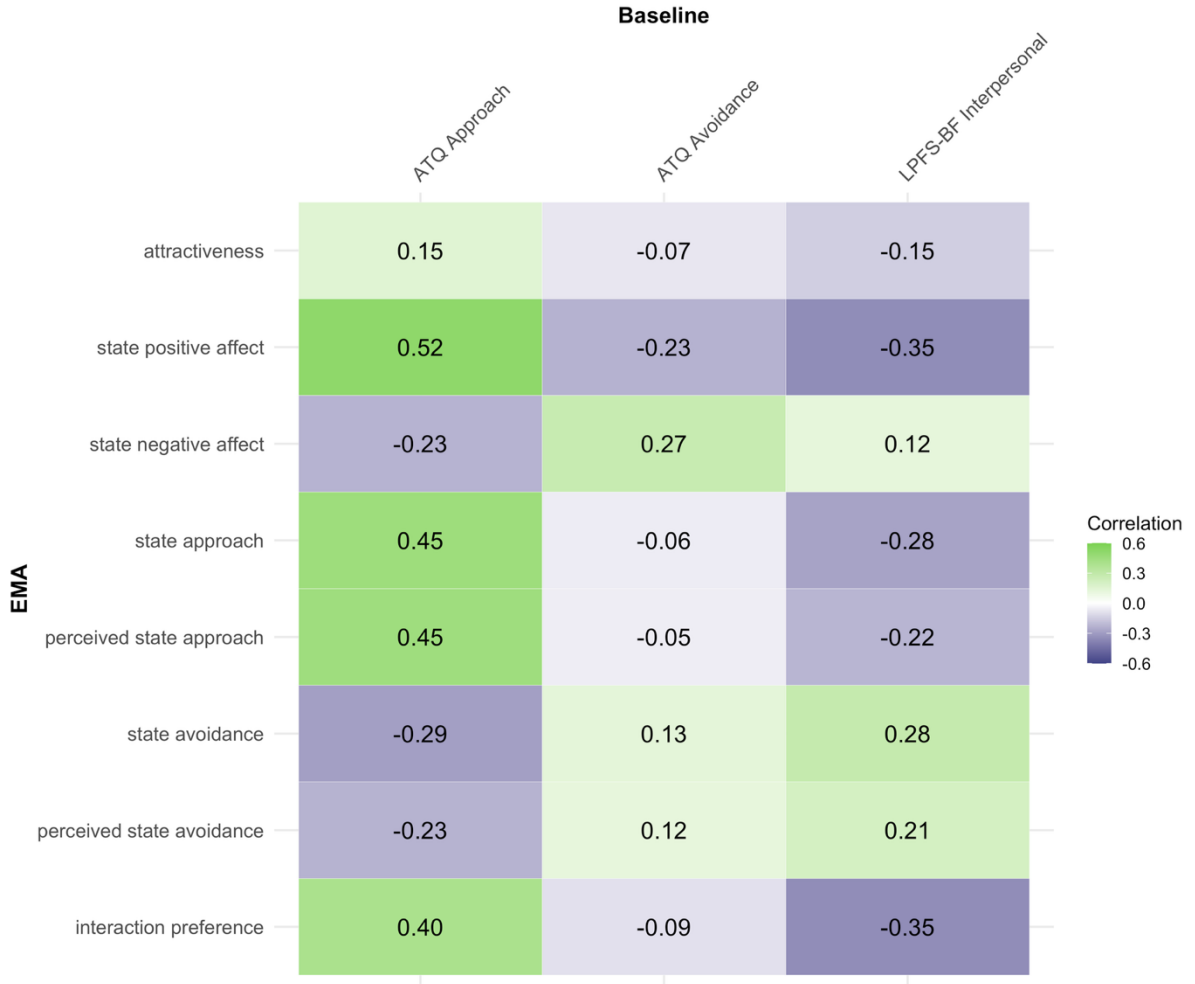

Figure 2. Associations between baseline trait measures and aggregated EMA variables. The heatmap displays Pearson correlation coefficients between baseline variables and person-aggregated EMA variables. All correlations of r ≥ .21 are statistically significant at p < .05 (two-tailed).

Are traits, states, and perceived states better alone or together?

To evaluate whether simultaneously considering traits, states, and perceived states better explains interaction preferences compared to each component alone, the preregistered mixed-effects models were compared using Akaike Information Criterion (AIC) and explained variance (R^2). As shown in **Table 2**, the combined model (AIC = 32,293) provided the best overall fit, compared to models focused solely on traits (AIC = 34,321), states (AIC = 32,394), perceived states (AIC = 33,516), and the one including maladaptive traits (AIC = 34,313).

The combined model also accounted for the largest proportion of variance in interaction preferences (Marginal R^2 = .531) compared to the trait-only (R^2 = .325), state-only (R^2 = .489),

perceived state-only (R^2 = .387), and maladaptive trait models (R^2 = .341). While the exploratory model showed a slightly higher marginal R^2 (.540), its higher AIC (32,359) suggests it was less parsimonious relative to the combined model.

Table 2. Model comparison using AIC and R^2 values.

Model	AIC	Marginal R^2	Conditional R^2
Trait Only	34,321	0.325	0.482
State Only	32,394	0.489	0.687
Perceived State Only	33,516	0.387	0.582
Maladaptive	34,313	0.341	0.484
Combined	**32,293**	**0.531**	**0.695**

Note. AIC = Akaike Information Criterion; Marginal R^2 reflects variance explained by fixed effects; Conditional R^2 reflects variance explained by both fixed and random effects. The combined model demonstrated the best overall fit (lowest AIC) while explaining a substantial proportion of variance.

A detailed summary of the confirmatory models' results is presented in **Table 3**. For the combined model, results showed that trait approach temperament was positively associated with interaction preference (B = 4.97, 95% CI [3.01, 6.94], p < .001). Both state approach motivation (B = .32, 95% CI [.28, .36], p < .001) and perceived partner state approach (B = .10, 95% CI [.07, .14], p < .001) also predicted higher interaction preference. In contrast, state avoidance (B = –.32, 95% CI [–.35, –.29], p < .001) and perceived partner state avoidance (B = –.04, 95% CI [–.08, –.01], p = .024) were associated with lower interaction preference. Trait avoidance was not a significant predictor (p = .307).

A small but significant interaction emerged between state approach and perceived state approach (B = –.00, 95% CI [–.00, –.00], p = .020, **Figure 3**), suggesting a diminishing return: The effect of state approach on interaction preference was slightly weaker when perceived partner state approach was already high. No other two- or three-way interactions statistically significant (all values of $p \geq .055$).

Table 3. Fixed effects estimates, confidence intervals, and significance levels for mixed-effects models predicting interaction preferences.

Model	Trait Only	State Only	Perceived State Only	Combined	Maladaptive
Intercept	**74.33 [72.65, 76.01]**	**74.24 [72.41, 76.07]**	**74.25 [72.42, 76.08]**	**74.59 [72.89, 76.30]**	**75.16 [73.31, 77.01]**
ATQ-AP cb	**5.02 [3.08, 6.96]**			**4.97 [3.01, 6.94]**	**3.99 [2.03, 5.96]**
ATQ-AV cb	-.68 [-1.93, .57]			-.66 [-1.91, .60]	.22 [-1.16, 1.61]
state PA cw	**.64 [.60, .67]**	**.14 [.10, .17]**	**.39 [.36, .43]**	**.12 [.09, .16]**	**.64 [.60, .67]**
state NA cw	**-.06 [-.11, -.02]**	-.03 [-.07, .00]	**-.04 [-.08, -.00]**	-.03 [-.07, .00]	**-.06 [-.11, -.02]**
attractiveness cw	**.11 [.09, .13]**	**.04 [.02, .05]**	**.07 [.05, .09]**	**.03 [.02, .05]**	**.11 [.09, .13]**
state approach cw		**.40 [.37, .43]**		**.32 [.28, .36]**	
state avoidance cw		**-.34 [-.36, -.31]**		**-.32 [-.35, -.29]**	
perceived state approach cw			**.29 [.25, .32]**	**.10 [.07, .14]**	
perceived state avoidance cw			**-.21 [-.25, -.18]**	**-.04 [-.08, -.01]**	
ATQ-AP cb × state approach cw				.03 [-.01, .06]	
ATQ-AP cb × perceived state approach cw				-.01 [-.04, .03]	
state approach cw × perceived state approach cw				**-.00 [-.00, -.00]**	
ATQ-AV cb × state avoidance cw				-.02 [-.03, .00]	
ATQ-AV cb × perceived state avoidance cw				-.00 [-.02, .02]	
state avoidance cw × perceived state avoidance cw				.00 [-.00, .00]	
ATQ-AP cb × state approach cw × perceived state approach cw				.00 [-.00, .00]	
ATQ-AV cb × state avoidance cw × perceived state avoidance cw				-.00 [-.00, .00]	
LPFS-BF Int. cb					**-5.24 [-9.13, -1.36]**
ATQ-AP cb × LPFS-BF Int. cb					-.09 [-3.66, 3.48]
LPFS-BF Int. cb × ATQ-AV cb					**-2.48 [-4.83, -.14]**

Note. Estimates are unstandardized coefficients with 95% confidence intervals in brackets. cb = centered between-person; cw = centered within-person; ATQ-AP = Approach Temperament; ATQ-AV = Avoidance Temperament; LPFS-BF Int. = Interpersonal subscale of the Level of Personality Functioning Scale – Brief Form; NA = negative affect; PA = positive affect. Blank cells indicate that the predictor or interaction term was not included in the respective model. All bold marked cells are significant at an alpha level of $p < .05$*.

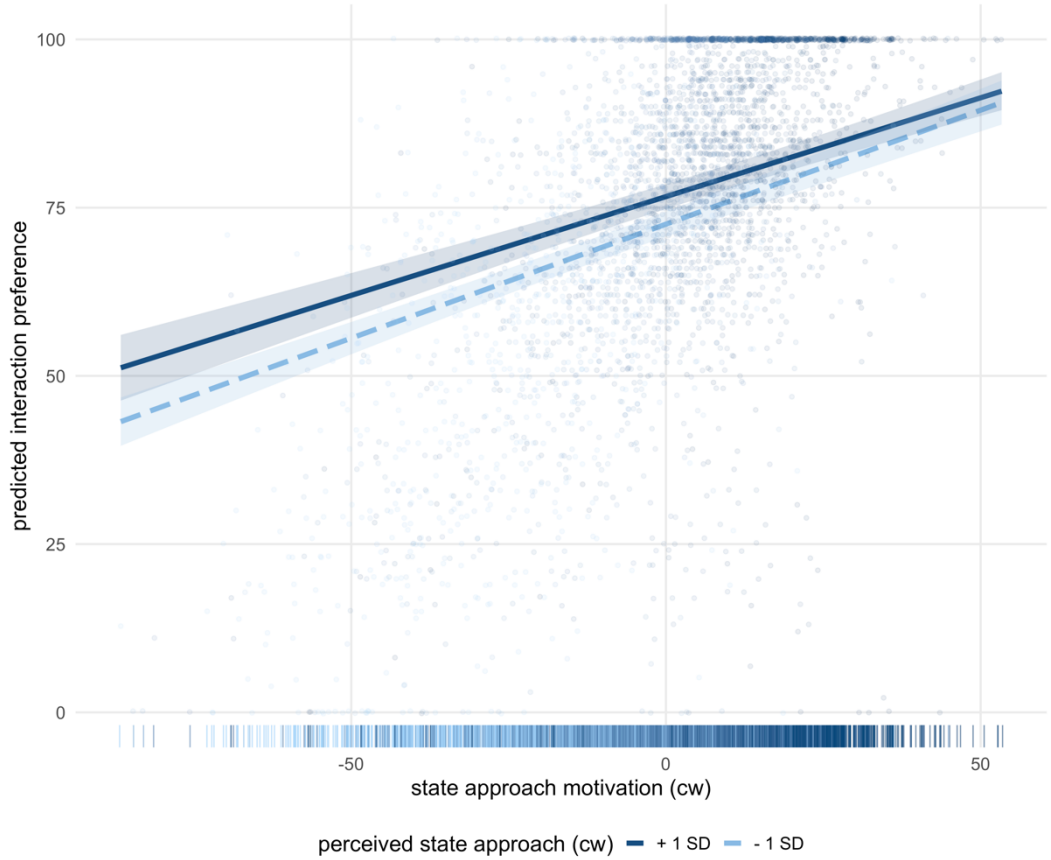

Figure 3. Interaction between state approach motivation and perceived partner approach predicting interaction preference. Shaded areas represent 95% confidence intervals. cw = centered within participants.

Of the covariates, positive affect (B = .12, 95% CI [.09, .16], p < .001) and partner attractiveness (B = .03, 95% CI [.02, .05], p < .001) were both associated with greater interaction preference, whereas negative affect was not a significant predictor (p = .069).

In the maladaptive trait model including deficits in interpersonal functioning, higher levels of such deficits (LPFS-BF Interpersonal) were significantly associated with lower interaction preferences (B = –5.24, 95% CI [–9.13, –1.36], p = .008). Additionally, a significant interaction was found between interpersonal functioning (LPFS-BF Interpersonal) and trait avoidance temperament (B = –2.48, 95% CI [–4.83, –0.14], p = .038, **Figure 4**), indicating that trait avoidance was more negatively associated with interaction preferences among individuals with higher levels of interpersonal dysfunction. No significant interaction emerged between interpersonal functioning and trait approach temperament (p = .961).

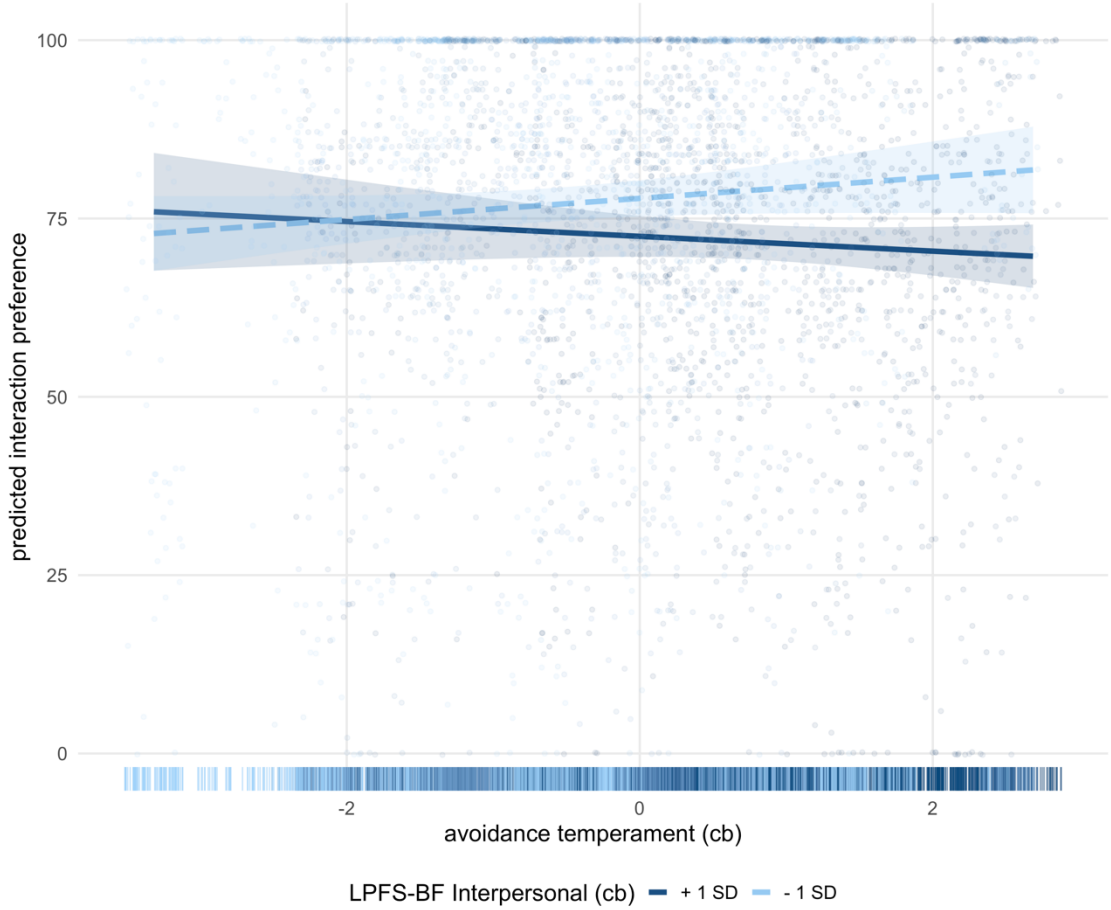

Figure 4. Interaction between avoidance temperament and maladaptive interpersonal functioning (LPFS-BF Interpersonal) predicting interaction preference. Shaded areas represent 95% confidence intervals. cb = centered between participants.

Exploratory Analyses

The exploratory model provided a modest improvement over the combined model, yielding a lower AIC (32,277 vs. 32,293; $\chi^2(15) = 46.12$, $p < .001$ for the likelihood ratio test comparing the exploratory model fit to the combined model) and explaining slightly more variance ($R^2 = .548$).

Consistent with the combined models tested before, higher trait approach temperament ($B = 3.84$, 95% CI [1.84, 5.83], $p < .001$), greater state approach motivation ($B = .31$, 95% CI [.27, .35], $p < .001$), and perceiving partners as more approach-oriented ($B = .11$, 95% CI [.07, .15], $p < .001$) predicted increased interaction preference. Conversely, state avoidance states ($B = –.30$, 95% CI [–.34, –.27], $p < .001$) and perceiving partners as avoidant ($B = –.04$, 95% CI [–.09, –.00], $p = .037$) predicted lower interaction preference. Moreover, deficits in interpersonal functioning (LPFS-BF Interpersonal) were associated with generally lower interaction preferences ($B = –5.95$, 95% CI [–9.88, –2.01], $p = .003$).

Beyond these, the exploratory model revealed additional interactions in how maladaptive interpersonal functioning, trait approach-avoidance temperament, and state-level motivation interact to shape social preferences. Importantly, deficits in interpersonal functioning amplified the negative impact of trait avoidance temperament on social evaluations, as indicated by an interaction between LPFS-BF Interpersonal and trait avoidance temperament (B = –2.51, 95% CI [–4.87, –.15], p = .037). Furthermore, individuals high in trait avoidance temperament evaluated interactions more negatively in moments characterized by heightened state avoidance when coupled with greater interpersonal dysfunction (LPFS-BF Interpersonal), reflected in a significant three-way interaction (B = –.03, 95% CI [–-.07, -.00], p = .043, **Figure 5**).

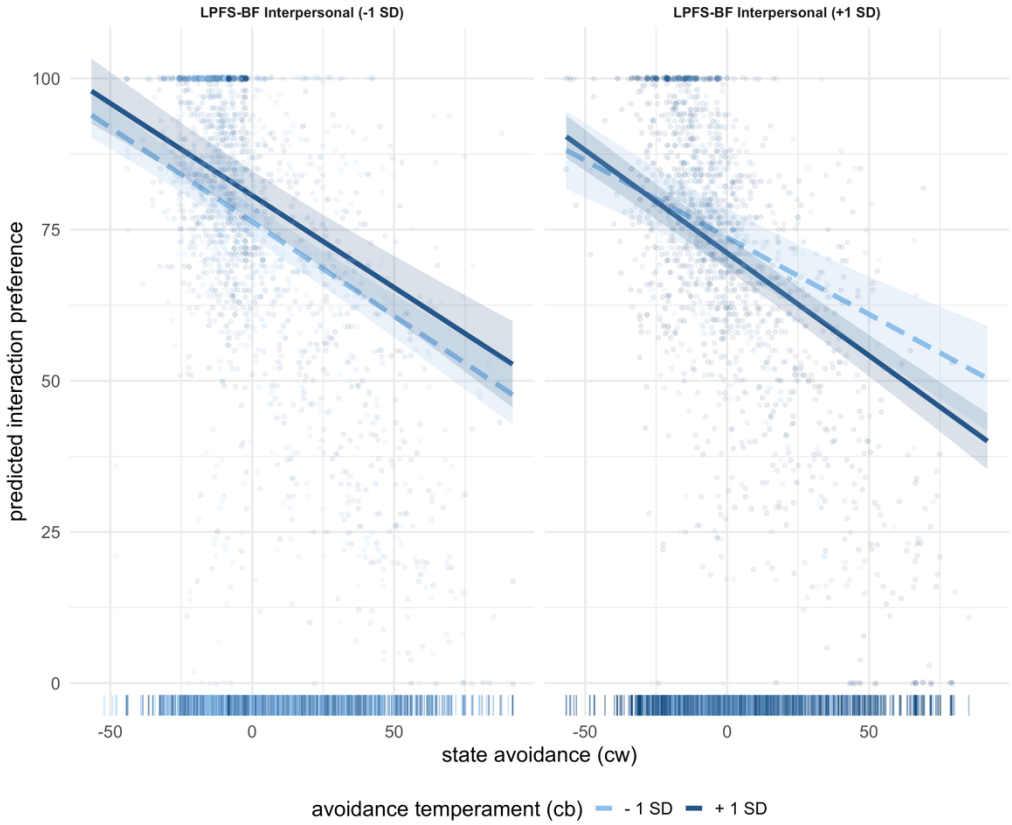

Figure 5. Three-way interaction between maladaptive interpersonal functioning (LPFS-BF Interpersonal), avoidance temperament, and momentary state avoidance predicting interaction preference. Shaded areas represent 95% confidence intervals. cb = centered between participants, cw = centered within participants.

In contrast, trait approach temperament increased interaction preferences particularly when individuals experienced higher state approach motivation (B = .04, 95% CI [.00, .07], p = .029, **Figure 6a**). Perceiving interaction partners as engaged improved interaction preference only for individuals with less deficits in interpersonal function (LPFS-BF Interpersonal, B = –

.11, 95% CI [–.18, –.04], p = .002, **Figure 6b**). No higher-order interactions reached significance (all values of $p \geq .096$).

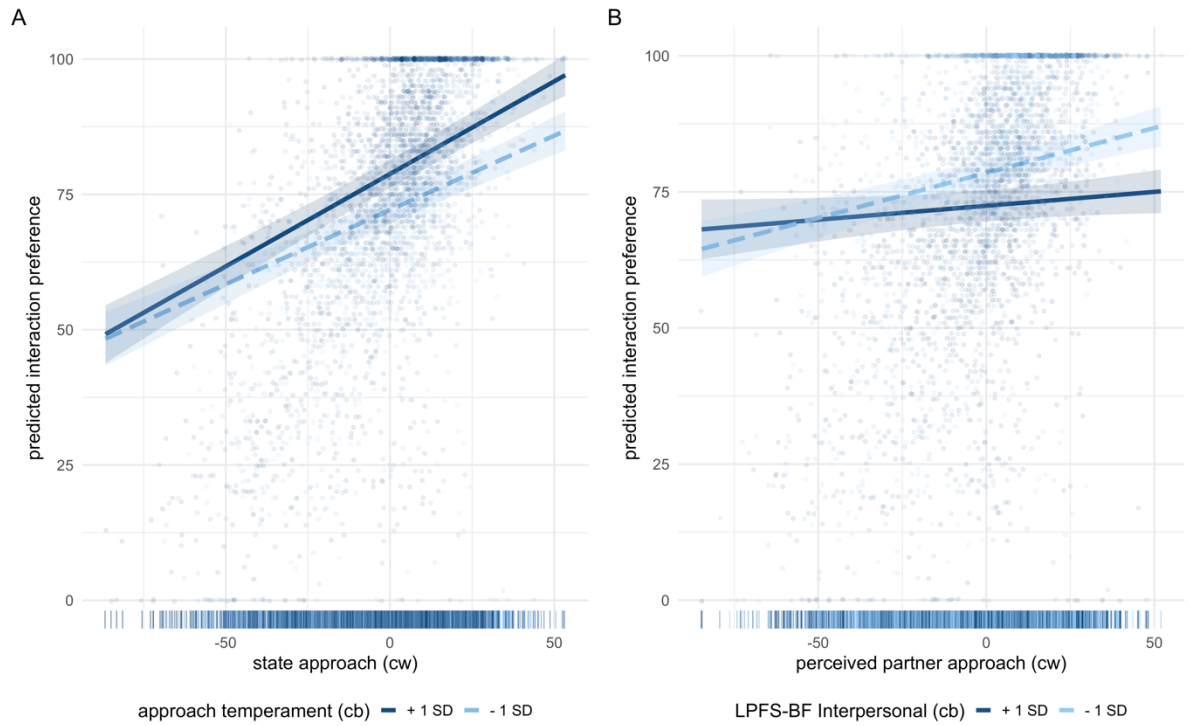

Figure 6. Interaction effects of personality traits, state motivations, and perceptions on social interaction preference. **(A)** Interaction between approach temperament and state approach motivation. **(B)** Interaction between perceived partner approach, and maladaptive interpersonal functioning (LPFS-BF Interpersonal). Shaded areas represent 95% confidence intervals. cb = centered between participants, cw = centered within participants.

Discussion

In this study, we present a novel, integrative approach to understanding social preferences by jointly modeling trait-level approach-avoidance temperament, motivational states, and perceived motivations of interaction partners in daily life. While prior research has examined these components separately, this is the first study to evaluate their unique and combined contributions using a high-resolution, two-week EMA design. Our findings demonstrate that both stable personality traits and states contribute to how individuals evaluate their social encounters. Combining trait, state, and perceived partner motivations provided the best explanatory power for predicting interaction preferences, supporting the notion that personality processes are inherently dynamic and context-dependent (Fleeson & Jayawickreme, 2015; McCabe & Fleeson, 2016).

Consistent with our preregistered hypotheses, higher trait approach temperament, greater state approach motivation, and perceiving partners as more approach-oriented were

associated with increased preference for social interactions. Conversely, avoidance states and perceiving partners as avoidant predicted lower interaction preference. These findings align with the approach-avoidance temperament (Elliot & Thrash, 2002, 2010), supporting the view that individuals' motivational orientations, both dispositional and situational, play a critical role in shaping social experiences. Importantly, our results highlight that trait-level processes do not operate in isolation but interact with state-level motives and perceptions. The interaction between state approach and perceived partner approach, albeit small, suggests that when partners were already perceived as highly engaged, additional increases in one's own approach motivation had a reduced impact on interaction preference. This finding reflects the dynamic interplay between self and other in social motivation, supporting theories of motivational interdependence (Pusch et al., 2022).

Beyond these confirmatory findings, our exploratory analyses revealed that deficits in interpersonal functioning further modulate these processes. Specifically, interpersonal dysfunction exacerbated the negative impact of trait avoidance temperament on social evaluations, particularly in moments characterized by heightened state avoidance. These findings are consistent with models of personality pathology, which emphasize that maladaptive traits exacerbate interpersonal sensitivity and negative reactivity in social contexts (Hopwood et al., 2013; Sadikaj et al., 2013). In contrast, approach-related motives were more adaptive. Individuals high in trait approach temperament benefited from elevated state approach motivation. Again, the positive influence of perceiving partners as engaged was attenuated in individuals with higher interpersonal dysfunction, suggesting that maladaptive functioning may bias perceptions, in the sense of limiting the capacity to benefit from positive social cues.

These findings underscore the importance of integrating trait and state perspectives in personality research. While trait dispositions provide a baseline tendency, it is the interaction with momentary experiences and interpersonal perceptions that determines real-life social outcomes. Our study supports the Whole Trait Theory (Fleeson & Jayawickreme, 2015), emphasizing that personality expression is a product of both stable traits and situational variability. Moreover, the moderating role of interpersonal dysfunction highlights how deficits in personality functioning can distort both motivational processes and social evaluations. This aligns with interpersonal theories of personality disorders, which posit that chronic dysfunction manifests through maladaptive patterns of perceiving and responding to others (Wright et al., 2016).

Limitations and outlook

Several limitations should be acknowledged. First, while EMA offers ecological validity, self-reported measures of perceptions and motivations are subject to bias. Future studies could incorporate objective behavioral markers or partner-reported data (i.e., dyadic EMA) to provide more robust findings. Second, although the sample was adequately powered, it consisted predominantly of young adults, which may restrict the applicability of results to other age groups or clinical populations. Third, while our analyses revealed significant interactions, some effect sizes were modest, particularly for higher-order interactions. These subtle dynamics warrant cautious interpretation and replication in larger samples.

Future studies should explore these dynamics in clinical populations with more extreme, i.e. maladaptive levels of personality traits to assess whether similar patterns emerge in more severe cases of interpersonal dysfunction. Additionally, leveraging longer EMA periods or experimental manipulations of social context could provide deeper insights into causal mechanisms. Another promising avenue involves examining emotion regulation strategies and their role in moderating approach-avoidance dynamics. Given the strong links between affect, motivation, and interpersonal functioning, integrating these domains could offer a more comprehensive understanding of social behavior in daily life.

Conclusion

This study demonstrates that social interaction preferences are shaped by a complex interplay of personality traits, state-level motivations, and interpersonal perceptions, with deficits in interpersonal functioning amplifying vulnerability to negative social evaluations. These findings highlight the value of dynamic, context-sensitive models of personality and underscore the potential for targeted interventions that enhance motivational flexibility and adaptive interpersonal perceptions in everyday social life.

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