The impact of personality traits on interpersonal dynamics at zero acquaintance

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The current study aimed to examine the relationship between personality traits and interpersonal states. Eighty undergraduate participants were administered personality trait inventories, then 40 dyads were video recorded doing collaborative tasks. These video recordings were coded for moment-to-moment communion and agency using Continuous Assessment of Interpersonal Dynamics. Actor-Partner Interdependence Modeling was used to understand the impact of personality traits on interpersonal dynamics (average, variability, slope, complementarity on agency and communion). The results showed that there were no relationships between personality traits and dynamics. There were two main limitations that may explain these results. First, behavior may have been influenced more by social norms to be friendly and take turns than personality traits, especially in this "strong situation". Second, it may be useful to aggregate behavior over multiple situations to capture variance attributable to traits. Future studies should aggregate behavior over multiple situations and/or change the situational constraints on behavior in order to determine the relationship between states and traits.

Keywords: agency, communion, personality traits, personality dynamics

Current personality models (Cervone & Little, 2019; DeYoung, 2015; Fleeson & Jayawickreme, 2015; Sosnowska et al., 2020; Wright et al., 2023; Wrzus & Roberts, 2017) aim to integrate the structure of personality with the dynamic interplay of personality and contextual factors. The structure of personality reflects stable between-person differences in patterns of thoughts, feelings, and behaviors (traits; Hopwood, 2018; Wiggins, 1973; 1997). Personality traits exhibit mean-level stability (Roberts & DelVecchio, 2000) and rank-order stability over time (Roberts et al., 2006). However, traits alone fail to account for the contextual factors related to the trait expression, nor do they account for how different components of personality interact dynamically (Hopwood, 2018).

While structure *describes* stable patterns of responding that are evident over time (Mõttus et al., 2020), personality dynamics provide *explanations* for the fluctuations of behavior, affect, and motives to manage situational demands, and for why specific personality states are enacted. Current theories, such as Cybernetic Big-Five Theory (DeYoung, 2015), Knowledge-and-Appraisal Personality Architecture (Cervone & Little, 2019), Whole Trait Theory (Fleeson & Jayawickreme, 2015), TESSERA framework (Wrzus & Roberts, 2017), and Contemporary Integrative Interpersonal Theory (Hopwood, Pincus, et al., 2021]) aim to integrate the structure and the dynamics of personality (Hopwood, 2018;

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Kuper et al., 2021). For example, motives (e.g., to be in control, to be intimate with others, to distance oneself) during a situation are thought to drive behavior, and over time recurrent patterns of behavior manifest as traits (Fleeson, 2007; Hopwood, Pincus, et al., 2021). Personality dynamics explain the interplay between personality processes and context that manifests in stable traits over time. The current study aims to understand the relationship between traits and momentary behavior, empirically linking these two time-scales (moment-to-moment measurement & trait measurement) of personality.

There are multiple theories that integrate personality structure and processes, and the present work focuses on Contemporary Integrative Interpersonal Theory (CIIT; Hopwood, Pincus, et al., 2021; Wright et al., 2023). CIIT aims to understand personality through the lens of interpersonal interactions and assumes that interpersonal situations are where the most frequent expressions of personality occur (Hopwood, Pincus, et al., 2021). CIIT considers the basic unit of study as self (actor), other (partner), and the interpersonal field that surrounds them (Hopwood et al., 2019; Pincus et al., 2020; Figure 1). Figure 1 is an illustration of the aspects of the actor and partner that are a focus of CIIT. Actor and partner each have a self system that describes interpersonal functioning (interpersonal circumplex [IPC]) and an affect system that describes emotional functioning (affective circumplex).

CIIT assumes that personality functioning at different levels of analysis can be organized around the dimensions of *agency* and *communion*, the two axes of the IPC (self system in Figure 1; Wright et al., 2023). Agency is on a continuum from dominance to submission while communion is on
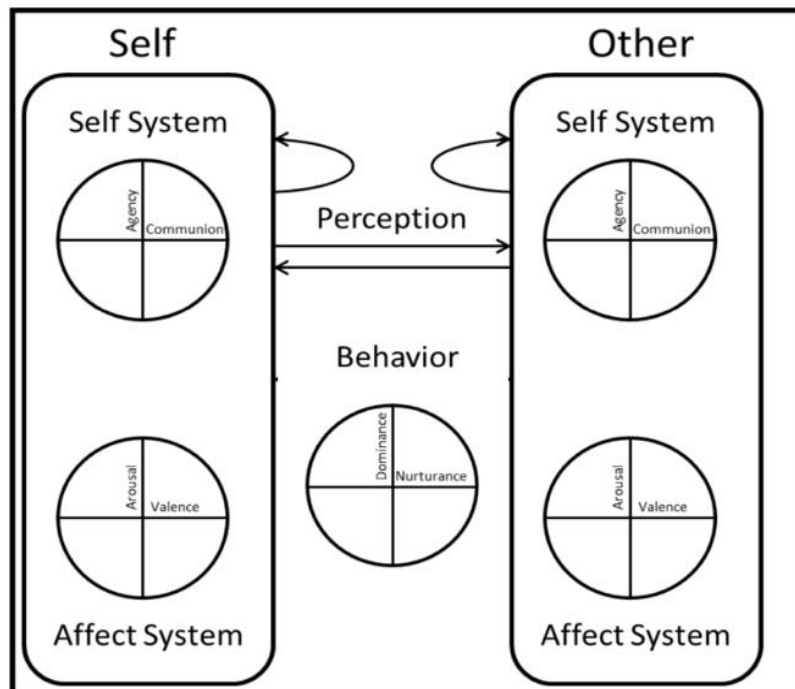
Figure 1. Illustration of the Interpersonal situation framework. From Hopwood, C.J, Wright, A.G.C., & Pincus, A.L. (2018). The Interpersonal Situation. DOI: 10.17605/OSF.IO/QJSCD

an orthogonal continuum from warmth to coldness. Agency and communion provide a language for understanding interpersonal motives, behaviors, and traits. In this model, an individual has their typical behavioral stance (traits), but they deviate from this given situational demands (states) (Sosnowska et al., 2019). In this way, CIIT combines both structure (stable between-person differences in motives and behavior) and dynamics (ever-fluctuating state manifestations of personality influenced by internal and external situation factors).

CIIT creates a framework within which falsifiable hypotheses about the interpersonal transaction cycle (Figure 2) can be operationalized and tested (Hopwood, Pincus, et al., 2021). The interpersonal transaction cycle is that the actor has a covert experience of the partner (e.g., perception and construal of the partner's behavior within their own mind), they enact behavior towards the partner, the partner has a covert experience of the actor's behavior, and they enact behavior towards the actor. This cycle happens continuously moment-to-moment in an interpersonal situation. The most well-studied pattern of behavior is complementarity (Sadler et al., 2009). Complementarity in communion means that warmth from one partner invites warmth from the other, and in agency it means that dominance invites submission and vice versa. Complementarity allows for the motives behind an interpersonal behavior to be satisfied (e.g., motive to be in control matched with submission from a partner; Horowitz et al., 2006).

Interpersonal assessment

The temporal resolution of assessments (e.g., moment-to-moment; interaction-level; trait) used to capture interper-

sonal functioning are key considerations for studying personality patterns (Hopwood, Bleidorn, et al., 2021; Kuper et al., 2021; Roche, 2022). Traits are often measured using self-report assessments that are thought to capture stable patterns of behavior. Ecological momentary assessment (EMA) studies, on the other hand, ask participants to report their interpersonal functioning throughout the day, often asking for one rating of the variables of interest (e.g., a rating of how friendly they were behaving, of how positive they felt during the interaction, of their motives during the interaction, etc.) per interaction. At the highest temporal resolution is moment-to-moment coding of interpersonal interactions. One such method, Continuous Assessment of Interpersonal Dynamics (CAID), takes ratings of actor and partner dominance and warmth every half-second, in order to look at the ebb and flow of states during an interaction (Lizdek et al., 2012). To do so, trained coders move a joystick continuously in circular space to indicate the dominance and warmth of an interactant, and a computer program records the x and y coordinates of the joystick's position every half second.

Moment-to-moment coding systems capture the interpersonal transaction cycle (Figure 2) second by second as it is unfolding. These dynamics can be impacted by different aspects of the interpersonal situation, such as the relationship between the interaction partners, the goal of the interaction, and the psychological symptoms of the interactants. Using CAID, researchers have found that most interactions are warm and dominant (Hopwood et al., 2020). Unfamiliar dyads (i.e., strangers) and collaborative tasks were associated with more complementarity on communion while familiar dyads (e.g., friends, roommates, couples) and conflict tasks were associated with more complementarity on
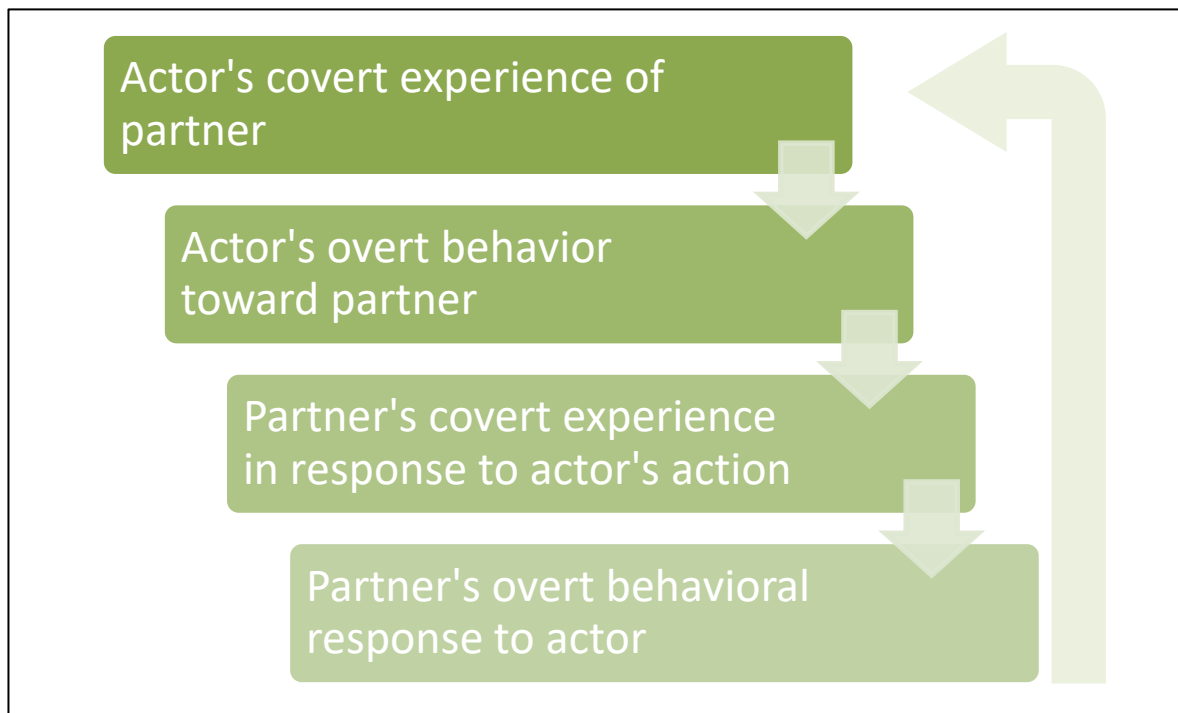
Figure 2. Interpersonal transaction cycle.

agency. Depression symptoms (Lizdek et al., 2016), personality pathology (Assaad et al., 2020), and ADHD symptoms (Nilsen et al., 2015) have all been shown to impact interpersonal dynamics during dyadic interactions. Overall, CAID is sensitive to aspects of the relationship between individuals, the demands of the task, and individual differences in psychopathology that can impact interpersonal dynamics.

There is evidence that and individual's interpersonal behavior is context dependent. That is, a person does not act the same across all situations. CAID has been used to examine therapy sessions, showing that 1) complementarity differs when the same client sees multiple therapists (Thomas et al., 2014), and 2) complementarity changes over the course of therapy for one therapist-client dyad (Altenstein et al., 2013). Thus, personality dynamics can explain within-person differences that arise from the interaction between habitual ways of responding and context.

A few studies have looked at the relationship between personality traits and behaviors at momentary timescales (e.g., Mainhard et al., 2012; Pennings & Hollenstein, 2020). Studies of students and teachers show a relationship between student-rated teacher traits and teacher interpersonal behavior as assessed by objective coders using CAID. Teachers rated as having high agency and communion ("favorable traits") spend more time enacting agentic and communal behavior than teachers with student-rated low agency and communion (Mainhard et al., 2012). Teachers with favorable traits also exhibited more frequent complementary behavior to their students (Pennings & Hollenstein, 2020).

Studies have investigated the relationship between trait-level personality and interaction-level thoughts, behaviors, and motives. Individuals who are higher on trait extraversion have been shown to be more sociable in interpersonal situations, especially low-effort, pleasant, and low-duty interactions (Breil et al., 2019). That study demonstrates the interaction between individual differences (trait extraversion) and context (low-effort, pleasant, low-duty interactions) in predicting behavior states (sociability) during interactions. Individual difference metrics related to impression management and concern about other's opinions have been related to motives to be perceived as likable, competent, physically attractive, and ethical, and to worry about how they were being perceived (Nezlek & Leary, 2002). Using EMA, Ringwald and colleagues (2021) investigated whether (maladaptive) Big 5 traits could be related to situation-level behavior. They found that disinhibition was negatively associated with average actor communion, negative affectivity was negatively related to actor agency, detachment was negatively related to the variability of actor agency and communion, and antagonism was positively related to actor agency and negatively related to actor communion. These studies attempt to create a cross-walk between traits and interpersonal states, though they did not use moment-to-moment assessment of personality.

Current study

The current study aims to look at the relationship between moment-to-moment observer-rated agency and communion and personality traits. Taking objective ratings of state behavior, removes recall bias (e.g., an individual does not have to remember and rate the past interaction themselves) and allows for a fine-grained assessment of how agency and communion change across a conversation. CIIT posits that interpersonal motives drive states which over time manifest in traits (Hopwood, Pincus, et al., 2021). The current study aims to understand how a person's and their interaction partner's fluctuating interpersonal states, as captured by objective behavior coding using CAID, are related to both actor and partner personality traits. This has implications for

Table 1. Hypothesized relationships between interpersonal dynamics and personality traits

	Average Agency	Average Communion	Variability in Agency	Variability in Communion	Linear Agency[1]	Linear Communion[1]	Agentic Complementarity	Communal Complementarity
Actor Traits								
Detachment		-	-			-		-
Antagonism	+				+		-	
Negative Affectivity		-		+				
Disinhibition			+	+			-	-
Psychoticism								
Partner Traits								
Detachment		-	-			-		-
Antagonism	-				-		-	
Negative Affectivity		-		+				
Disinhibition			+	+			-	-
Psychoticism								

Note: + indicates a hypothesis of a positive relationships. – indicates a hypothesis of a negative relationship. Blank cells indicate that we have no hypothesis about the relationship between these two variables. [1] Linear change in interpersonal behavior across the session

bridging the gap between trait profiles and the actual behavior in interpersonal situations.

Hypothesized actor effects. The "Big 5" trait model outlines five broad factors that are important for understanding personality, and the maladaptive versions of these are detachment (extraversion), antagonism (agreeableness), disinhibition (conscientiousness), psychoticism (openness to experience), and negative affectivity (neuroticism) (Krueger et al., 2012). *Detachment* involves restricted affectivity and withdrawal from interpersonal situations, behaviors that are situated on the coldness side of the communion axis on the IPC (American Psychiatric Association [APA], 2013). In fact, Wright and colleagues (2012) determined that the primary content of detachment was cold interpersonal problems (e.g., "I keep other people at a distance too much").

We predict that those high in detachment will be rated as colder during dyadic interactions on average than those low in detachment (Table 1).

In Table 1, hypotheses about positive relationships are indicated by + and hypotheses about negative relationships are indicated by -. Blank cells indicate that we have no hypotheses about these relationships. In addition, in a previous study (Ringwald et al., 2021), it was found that trait detachment was negatively related to communion across interactions, and trait detachment was negatively related to variability in agency across interactions. The present study aims to replicate of these prior findings on a moment-to-moment timescale.

We hypothesize that the ratings of communal behavior of individuals high in detachment will decrease over the course of the interaction, leading to non-complementarity on communion within the dyad (Table 1).

Antagonism involves behaviors that put one at odds with other people, including using cunning to get one's way and engaging in behavior that makes one noticed (APA, 2013). This trait has been associated with dominant and slightly cold problems (Wright et al., 2012). Du et al., (2021) found that agreeableness (low antagonism; Suzuki et al., 2015) was related to warm/submissive interpersonal traits, providing additional evidence that antagonism may capture cold/dominant traits.

We predict that those high in antagonism will be more dominant than those low in antagonism on average (Table 1).

This hypothesis is in line with research that shows those high in antagonism have higher average dominance than those low in antagonism (Ringwald et al., 2021). The present study aims to determine whether this holds true on a moment-to-moment time scale.

In line with this prediction, we believe that those high in antagonism will behave more dominantly over the course of an interaction, leading to non-complementarity on agency within the dyad (Table 1).

Detachment and antagonism are inherently interpersonal (Traupman et al., 2009) while psychoticism, negative affectivity, and disinhibition are not. *Psychoticism* involves odd

or unusual behaviors, *disinhibition* involves impulsivity, and *negative affectivity* involves high levels of negative and volatile emotions (APA, 2013). The lack of interpersonal content in psychoticism, negative affectivity, and disinhibition is reflected in the fact that these traits are not associated with interpersonal distress in one specific location on the IPC. However, Du and colleagues (2021) explored the relationship between Big 5 traits and interpersonal traits and found that neuroticism (related to negative affectivity; Suzuki et al., 2015) was related to cold/submissive traits, and conscientiousness ("opposite" of disinhibition) and openness (which may be related to psychoticism) were related to warm traits. Also, negative affectivity has been found to be related to higher variability in communion (Ringwald et al., 2021).

We predict that those scoring high in negative affectivity will behave more coldly and have more variability in communion than those low in negative affectivity. Disinhibition may be related to higher variability in communion and agency, as well as to less complementarity within the dyad, as individuals who lack restraint may respond rashly to their partner's interpersonal behavior. Additionally, we predict that those scoring high in disinhibition will behave more coldly (Table 1).

Due to the lack of evidence that psychoticism and openness capture the same construct, and Ringwald (2021) did not find any associations between psychoticism and interpersonal behavior, all psychoticism analyses are exploratory. All hypotheses for actor effects are in Table 1.

Hypothesized partner effects. Most individuals respond to interpersonal interactions with a complementary response that satisfies the motives of their interaction partner (Hopwood et al., 2020; Horowitz et al., 2006; Sadler & Woody, 2003). Thus, we predict that the actor's behavior will evoke complementary responses from their partner. For instance, since we predict that those high in trait detachment will behave colder during the interaction, we predict their partner will also behave colder. We also predict that traits that increase an actor's variability in agency/communion will increase their partners variability in agency/communion, as their partner will be aiming to complement the actor's interpersonal behavior second-by-second. Complementarity, a dyadic variable, will be affected by actor and partner traits in the same way.

Partner's level of detachment is predicted to be negatively related to the actor's level of communion, variability in agency, linear trend in communion (i.e., high detachment will lead to a negative trend in the communion across the situation), and communal complementarity during the interaction. Partner's antagonism may be negatively related to an actor's agency, linear trend in agency across the situation, and agentic complementarity. Partner's negative affectivity is predicted to be positively related to variability in communion and negatively related to average communion. Lastly, partner's disinhibition is predicted to be positively related to variability in agency and communion and negatively related to complementarity.

The study and hypotheses were pre-registered and can be found here: https://osf.io/fdhb2/?view_only=2c3c78d6457248219dec68cff59cbd40. Negative affectivity's relationship with average communion was not pre-registered, as this hypothesis was from Du and colleagues (2021), which was not published yet. These hypotheses were added before examining the data.

METHOD

Participants were undergraduates recruited from a large public university. The target sample size was 50 dyads (100 participants). A sample of this size was chosen due to the time restraints of 1) running participants through the protocol and 2) video coding the interactions of the participants in a reasonable time with the available personnel. Post-hoc power analyses are provided in the discussion. The COVID-19 pandemic curtailed recruitment, so only 86 participants were recruited. Participants were recruited from the undergraduate subject pool. Male and female participants signed up separately, and there were two participant slots for each same-gender study session. Two participants independently signed up for each study slot, and they were confirmed to be strangers before beginning the protocol. Forty-three same-gender dyads (21 female / 22 male) were recruited. Two dyads were missing video data, and one dyad had a member with missing baseline data, so three dyads were not included in analysis. Thus, forty dyads had complete video and baseline data and were included in the analysis (19 female/21 male). Members of each dyad are indistinguishable (Sadler et al., 2011), so for data analysis, each member of the dyad was randomly assigned to be Person A or Person B.

The eighty participants (47.5% female) had a mean age of 19.26 ($SD = 1.20$). Of them, 72.5% were white (3.75% African American; 25% Asian; 1.25% Native American or Alaska Native; 6.25% Hispanic or Latino). The study was approved by the Institutional Review Board of the university. All participants were given class credit for their participation.

After confirming that participants were strangers to each other, participants filled out demographic and personality questionnaires through Qualtrics, an online survey platform. Once the questionnaires were completed, participants were asked to participate in two 10-minute video-recorded dyadic tasks.

Personality measures

Traits
Self-reported personality was assessed through the Personality Inventory for the DSM-5 – short form (100 items; PID-5; Maples et al., 2015). The PID-5 measures maladaptive Big 5 personality trait-dimensions defined by the D*iagnostic and Statistical Manual of Mental Disorders (5th Edition)*: negative affectivity, disinhibition, detachment, antagonism, and psychoticism, on a scale of 0 to 3 (APA, 2013). Cronbach's alpha of these scales ranged from 0.87 (disinhibition) to 0.92 (antagonism) in the current study.

In order to calculate scores for each of the five trait domains, multiple facets are averaged together (i.e., *negative affectivity*: emotional lability, anxiousness, separation insecurity; *detachment*: withdrawal, anhedonia, intimacy avoidance; *antagonism*: manipulativeness, deceitfulness, grandiosity; *disinhibition*: irresponsibility, impulsivity, distractibility; *psychoticism*: unusual beliefs & experiences, eccentricity, perceptual dysregulation; Maples et al., 2015). In aggregating trait facets into domains, we are predicting that variance common to all of the facets is associated with behavior, rather than to variance specific to one facet. Studies have shown that personality facets often predict narrower outcomes better than domains (Dudley et al., 2006; Paunonen & Ashton, 2001), and item-level nuances may provide even greater predictive ability for certain outcomes (Seeboth & Mõttus, 2018; Stewart et al., 2022). Thus, posthoc analyses were conducted looking at the relationship between interpersonal dynamics and trait facets. Cronbach's alpha of facets ranged from 0.62 (irresponsibility) to 0.90 (distractibility) in the current study.

Additional self-report measures were collected but not used in the current analysis. These are: Brief Pathological Narcissism Inventory (Schoenleber et al., 2015); Experiences in Close Relationship Scale – Short Form (Wei et al., 2007); HEXACO-60 (Ashton & Lee, 2009); Inventory of Interpersonal Problems – Short Circumplex (Hopwood et al., 2008); Levels of Personality Functioning Scale – Self Report (Morey, 2017); Personality Assessment Inventory – Borderline Scale and Infrequency Scale (Morey, 1991); Schizotypal Personality Questionnaire – Brief Revised (Updated) (Davidson et al., 2016).

States: Continuous Assessment of Interpersonal Dynamics (CAID)

Participants were video-recorded during two 10-minute collaborative tasks, for a total of 20 minutes of interaction. Participants were asked to rank items for their utility for survival on the moon (https://www.experientiallearning.org/nasa-moon-survival-team-building-exercise/#what) and to pick a Thematic Apperception Test card and write a story about what was happening on the card (Murray, 1971). Both tasks required participants to collaborate to achieve a goal. Since these two tasks have similar collaborative objectives, the relationship between traits and dynamics was hypothesized to be the same for both interactions, and the CAID data were aggregated across both tasks by splicing the interactions together as if they were one long interaction.

Seven trained raters (research assistants) coded the video-recorded data to determine a participant's moment-to-moment agency and communion using CAID (Lizdek et al., 2012). Raters use a joystick to continuously rate each participant on the IPC (self system in Figure 1). While there are two discrete axes, behaviors are often a mix of agency and communion, and raters are instructed to move the joystick to capture both agency and communion simultaneously in a two-dimensional space. The DARMA software (Girard & Wright, 2018) employed in this study records the x,y coordinates of the joystick every half-second, yielding about 2,400 data points of agency and communion for each participant.

The seven research assistants were first trained using videos and CAID codes provided by prior investigators (Sadler et al., 2015; Thomas et al., 2014). All of these practice codes were of therapist-client dyads, and the research assistants compared these expert codes to their own codes. During a second training phase, the research assistants coded participant data and compared their codes to all others in the group. A weekly discussion led to consensus about the correct codes and the videos were re-coded for practice. At the end of training, the reliability of all seven coders was 0.65 for communion and 0.89 for agency (average consistency ICC).

Given the long length of time (~8 months) between the start of training and the start of coding participant data for data analysis, practice videos from the second phase of training (using participant videos) were re-coded for data analysis. Each video was assigned to three coders, and the reliability of each video's three codes was assessed to determine whether there were changes in reliability (drift) across the coding process. Additionally, the research assistants met every two weeks to review their codes and to discuss issues or questions with coding. For data analysis, the three codes per video were averaged for each of the eighty participants.

Data analyses

In order to determine whether personality traits were related to actor and partner average and variability in agency and communion, complementarity, and linear trends in agency and communion, Actor-Partner Interdependence Modeling (APIM) was used (Sadler et al., 2011). APIM is a modeling technique that takes into account the actor (Figure 3, "a") and partner effects (Figure 3, "b") on an outcome. Thus, the traits of Person A have an impact on both their own CAID outcomes and those of Person B, and Person B's traits have an impact on their own CAID outcomes and those of Person A. Predictors were the personality trait data (i.e., negative affectivity, detachment, disinhibition, psychoticism, antagonism) of each member of the dyad (Figure 3, orange boxes), and outcomes were the interpersonal behavior of each member of the dyad (i.e., average agency and communion, variability in agency and communion, linear trend in agency and communion, agentic and communal complementarity; Figure 3, blue boxes).

Within the dyads, there are no characteristics that differentiate the members of the dyad, so these dyads are "indistinguishable dyads". Each member of the dyad was randomly assigned to be either Person A or Person B in the dyad. APIM with indistinguishable dyads is shown in Figure 3. The orange boxes represent the measured traits of Person A and Person B in the dyad. The blue boxes represent measured CAID outcomes. "a" indicates the actor effects; "b" indicates the partner effects; "c" indicates the predictor variable variance; and "d" indicates the outcome residual variance. Actor effects ("a"), partner effect ("b"), variance of predictors ("c"), mean of predictors, intercepts of outcomes, and residual variance of outcomes ("d") were set to be equal for Person A and Person B, since the dyad was indistinguishable (Sadler et al., 2011). For example, the effect of Person A's trait on Person A's CAID outcome was the same as the effect of Person B's trait on Person B's CAID outcome ("a"). Additionally, the effect of Person A's trait on Person B's CAID outcome was the same as the effect of
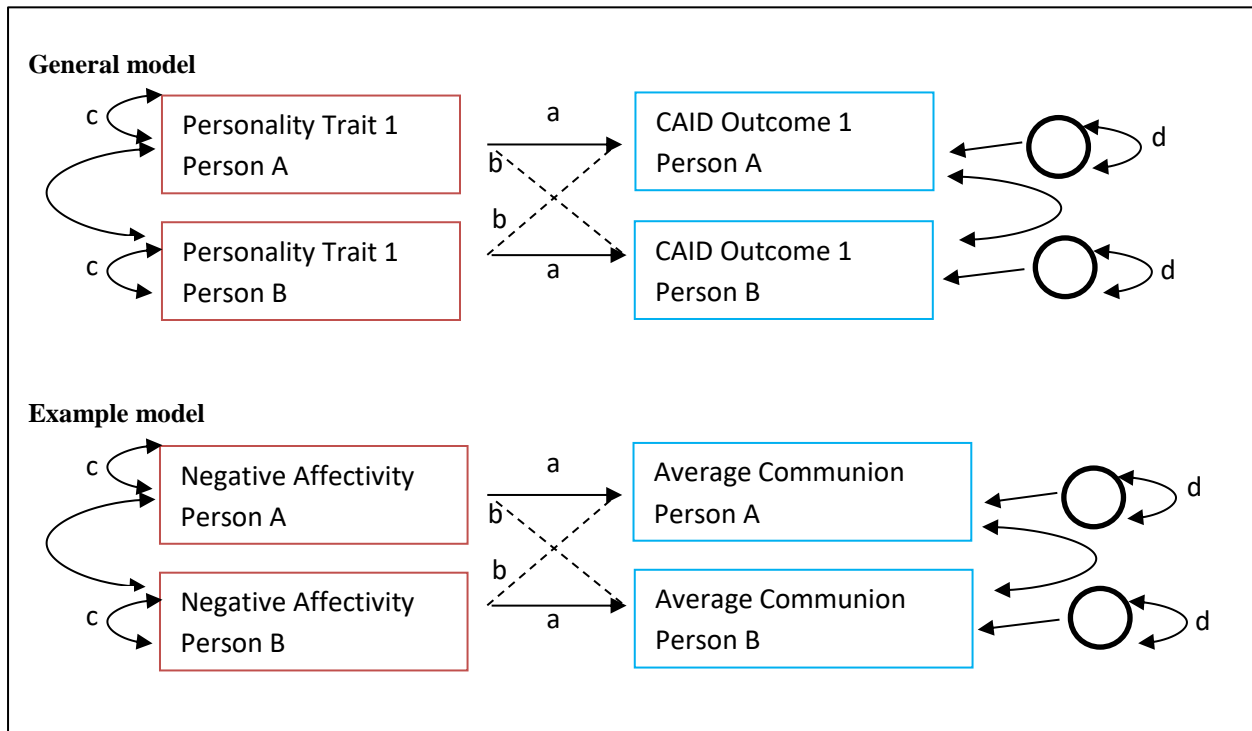
Figure 3. Illustration of the APIM model for indistinguishable dyads used in the current study. Orange variables are traits, rated by the actor, and blue variables are states rated by an objective observer. Dashed lines show partner effects, solid lines show actor effects. a = actor effect. b = partner effects. c = predictor variable variances. d = outcome residual variances. The means for personality traits and intercepts for CAID outcomes were also set to be equal for both dyad members. df = 0 for all models.

Person B's trait on Person A's CAID outcome ("b"). Covariance between personality traits were set to 0, as we would not expect two randomly assigned participants to have a relationship between their self-reported personality traits.

Complementarity (i.e., the reciprocal pattern of Person A and Person B's agentic behavior and the corresponding pattern of Person A and Person B's communal behavior across the interaction) was assessed. To this end, Pearson r was used to quantify the similarity in shape of the profiles (not elevation), using Person A and Person B's agency and communion codes Elevation may capture a general behavioral tendency rather than complementarity, which is why Pearson r is preferable to an intra-class correlation (which takes into account profile elevation; Markey et al., 2010). Linear trends of agency and communion were calculated by the slope of the linear regression of the time-series data for each individual.

Model fit indices
For APIM with indistinguishable dyads, the equalities (e.g., actor effects set to be the same for Person A and Person B; see Figure 3 and above for more information) imposed in the model are structural necessities, not testable hypotheses about the data. Thus, fit indices must be corrected so that they are invariant to the arbitrary re-assignment of participants (i.e., moving someone in the Person A group to the Person B group; Olsen & Kenny, 2006; Sadler et al., 2011). To do so, one runs an *interchangeable saturated model (I-SAT)*, where means and variances are set equal across Person A and Person B, as well as actor and partner paths. The calculations for finding corrected chi-square (Equation 1)

and degrees of freedom (Equation 2) are as follows:

(1)   Corrected chi-square = target model chi-square – I-SAT chi-square

(2)   Corrected df = target model df – I-SAT chi-square

In the current study, all of the models are the same as the I-SAT model, meaning the chi-square of our target model is equal to the chi-square of the I-SAT model. The degrees of freedom are also the same between our tested models and I-SAT models, meaning this is a just-identified model (*df* = 0). Thus, all models have an RMSEA of 0 and a CFI of 1, and one cannot test the fit of the model. However, one can interpret the parameter estimates, and a rigorous cutoff of 0.01 was used for the alpha value in this study, due to high number of models.

Missing data
Participants missing interaction data were excluded from the analysis (1 female dyad/1 male dyad). For one participant, there were missing baseline data (personality traits), so their dyad was excluded (1 female dyad). Five participants had missing data for one PID-5 domain item; for them, the mean of the three remaining facet items was used to replace the missing data.

All R codes used to clean the baseline data (traits) and CAID data, to derive the CAID metrics, to score the PID-5, and to run the APIM models can be found here: https://osf.io/fdhb2/?view_only=2c3c78d6457248219dec68cff59cbd40.

Table 2. Descriptive statistics for maladaptive personality traits and interaction-level variables

	N	Mean	SD
Maladaptive Personality Traits			
Negative Affectivity	80	1.15	0.65
Emotional Lability	80	0.75	0.74
Anxiousness	80	1.42	0.68
Separation Insecurity	80	1.26	0.86
Detachment	80	0.54	0.53
Withdrawal	80	0.67	0.66
Anhedonia	80	0.45	0.59
Intimacy Avoidance	80	0.49	0.60
Disinhibition	80	0.83	0.51
Irresponsibility	80	0.32	0.39
Impulsivity	80	0.89	0.68
Distractibility	80	1.30	0.83
Psychoticism	80	0.66	0.58
Unusual Bel & Exp	80	0.65	0.65
Eccentricity	80	0.92	0.82
Perceptual Dys	80	0.40	0.51
Antagonism	80	0.58	0.55
Manipulativeness	80	0.76	0.71
Deceitfulness	80	0.67	0.65
Grandiosity	80	0.32	0.51
Interaction-Level Variables			
Communion Mean	80	55.47	8.85
Agency Mean	80	37.80	28.74
Variability in Communion	80	18.41	5.12
Variability in Agency	80	55.07	10.70
Communion Linear Slope	80	-0.002	0.01
Agency Linear Slope	80	-0.008	0.03
Communal Complementarity	40	0.25	0.14
Agentic Complementarity	40	-0.47	0.12

Note: Unusual Bel & Exp = Unusual Beliefs and Experiences; Perceptual Dys = Perceptual Dysregulation

RESULTS

During the study protocol, participants were randomly assigned to be Person A or B for analyses. T-tests confirmed that members of the dyad were indistinguishable on all demographic variables, personality trait domains, and interaction variables except slope of agency ($slope_1 = 0.001$, $slope_2 = -0.017$, $p = 0.02$). Descriptive statistics for all variables are in Table 2.

Bivariate relationships

All maladaptive traits (see Table 3) were significantly intercorrelated except for the correlation between antagonism and detachment. As antagonism and detachment are thought to be rotations of the orthogonal axes of the interpersonal circumplex (self systems in Figure 1), this is expected (Traupman et al., 2009). Detachment was negatively correlated with mean in agency. There were no other significant correlations between state and trait measures.

Average communion was positively correlated with variability in communion. This means that the warmer participants' behavior was rated during the interaction on average,

the more variable their warm behavior was during the interaction as well. Average agency was also positively correlated with the variability and linear slope in agency. This means that the more dominant participants' behavior was rated on average, the more variable their dominant behavior was during the interaction, and their dominant behavior increased over the course of the interaction. Variability in agency and communion was positively associated with agentic and communal complementarity, respectively. This means that in dyads where participants' dominant behavior was more variable, the participants exhibited greater agentic complementarity. A similar pattern emerged for variability in communal behavior and communal complementarity.

Actor-partner interdependence models

Only two models had significant actor or partner paths (Table 4). The paths from actor antagonism to partner variability in agency and from actor psychoticism to partner variability in agency were positive and significant. That is, the higher the actor was in antagonism or psychoticism, the more variable their partner was in agency.

Post hoc actor-partner interdependence models

Facet-level APIMs can be found in the Appendix. Only a few paths reached the 0.01 significance level. The path from actor withdrawal to actor average agency was negative, meaning that those who are higher on withdrawal have lower average agency ($b_{standardized} = -0.26$, $p = 0.01$). Actor manipulativeness ($b_{standardized} = 0.28$, $p = 0.01$), unusual beliefs and experiences ($b_{standardized} = 0.26$, $p = 0.01$), and eccentricity ($b_{standardized} = 0.28$, $p = 0.01$) were all positively related to partner variability in agency. Eccentricity was negatively related to agentic complementarity ($b_{standardized} = -0.28$, $p = 0.01$).

DISCUSSION

This study aimed to understand the relationship between personality traits and interpersonal dynamics (states). Certain current theories understand personality traits as a density distribution of personality states (e.g., Fleeson, 2001; Sosnowska et al., 2020), with states fluctuating within and across situations, and traits describing the general tendency of one's behavior. In the current study, self-reported traits provided almost no information about the interpersonal behavior of individuals, contrary to our hypotheses.

The current study asked participants to collaborate on tasks for 20 minutes with a stranger, while being observed by a research assistant and video recorded. This situation is a "strong situation" (Judge & Zapata, 2015; Meyer et al., 2010). Strong situations place constraints on behaviors and thus on the expression of personality (Cooper & Withey, 2009). In this laboratory situation, participants were given explicit instructions to do a specific task, and they were video-taped and watched by the research assistant while interacting, potentially increasing the demand to enact socially appropriate behaviors. In line with this, most participants had average communion between 47 and 64 and average agency between 9 and 67 (out of a -1000 to 1000 available range). Thus, participants were generally slightly warm

Table 3. Correlations among PID-5 traits and interaction variables.

		1	2	3	4	5	6	7	8	9	10	11	12
Maladaptive Personality Traits													
1	Negative Affectivity												
2	Detachment	0.29**											
3	Disinhibition	0.50***	0.22*										
4	Psychoticism	0.43***	0.39***	0.36***									
5	Antagonism	0.34**	0.18	0.58***	0.45***								
Interaction-Level Variables													
6	Communion Mean	-0.12	-0.03	-0.08	-0.02	-0.02							
7	Agency Mean	-0.07	-0.24*	0.02	-0.04	-0.01	0.13						
8	Variability in Communion	-0.14	0.01	-0.09	0.04	-0.02	0.34**	0.11					
9	Variability in Agency	-0.12	-0.13	-0.15	-0.07	0.10	0.13	0.29**	0.18				
10	Communion Linear Slope	-0.21	-0.09	-0.19	-0.14	-0.02	0.20	0.03	0.10	0.21			
11	Agency Linear Slope	0.11	-0.13	0.08	-0.02	-0.05	-0.12	0.23*	-0.05	-0.08	-0.12		
12	Communal Complementarity	0.04	0.21	0.02	-0.05	-0.09	0.13	-0.06	0.33**	-0.10	0.15	0.16	
13	Agentic Complementarity	0.05	-0.05	0.02	-0.17	-0.10	-0.05	0.05	-0.06	-0.31**	-0.01	-0.12	-0.19

Note: Pearson product-moment correlations, two-tailed tests. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .0.001$; decimal points are omitted

and dominant. Participants were also complementary to their interaction partner (complementarity$_{agency}$ = -0.47; complementarity$_{communion}$ = 0.25). Buss (1989) argues that people express their traits more in familiar, informal, private situations (e.g., weaker situations), and their behaviors in such contexts are more in line with their habitual ways of behaving. In fact, individual differences (e.g., depressive symptoms [Lizdek et al., 2016]; personality pathology [Assaad et al., 2020]) have been shown to impact CAID dynamics in situations where familiar others (husband and wives) are asked to discuss a conflict, a familiar situation with multiple practiced behavioral strategies that may be enacted to reach the goal. In our laboratory task, behavior was constrained in such a way that only one behavioral pattern was enacted to reach the goal (e.g., communal behavior and trading off of agency). It may also be that some individual differences (e.g., depressive symptoms [Lizdek et al., 2016]; personality pathology [Assaad et al., 2020]) are stronger pulls on behavior, overcoming situational constraints to influence behavior. Our sample of college students had an average trait domain rating of 0.75 (out of a 0-3 range), indicating low levels of these maladaptive traits, which may not have been large enough influences to break with social norms and overcome the pulls of the situation.

Figure 4 illustrates the hypothesized relationship between states and traits. The blue circle on the right illustrates moment-to-moment behavior measurements, which aggregate over the interaction to provide an interaction-level metric (blue dot). The interaction-level metrics on the left aggregate to describe trait behavior (orange dot). However, when one looks at a singular interaction, especially one that is novel, public, short, and not chosen by the actor, the behaviors may be impacted more by social norms than by traits (Buss, 1989). What may be needed is to aggregate behavior over multiple situations, as "behavior specific to each situation would be cancelled out, leaving behavior attributable to enduring disposition" (Buss, 1989, p. 1383). This may be why Ringwald et al. (2021) found relationships between personality traits and behavior aggregated across many interactions over 10 days (19,274 interactions; 605 participants), while we did not.

Another consideration is the ability of broad personality trait domains to predict specific behaviors (Paunonen, 1998). Due to this, post-hoc facet-level APIMs were conducted to investigate this possibility. However, facet results were similar to domain-level results, and there were no more significant paths than would be expected by chance.

If personality traits *do* have a small impact on specific behaviors in one interpersonal situation, there may not have been enough power to detect the small effect size. Post-hoc power was computed using Ackerman and Kenny's (2016) APIMPowerR application. Standardized actor and partner effects would have to be at least 0.30 for a power of over .80 to detect the effect ($N = 40$). The average strength of the actor effect was 0.09 and the average strength of the partner effect was 0.11. The power for $b_{actor} = 0.09$ and $b_{partner} = 0.11$ with 40 dyads was 0.12 (actor) and 0.15 (partner). Interestingly, another study investigating personality traits and interpersonal dynamics found that those higher in openness (to experience) acted more friendly, and those higher in extraversion acted more dominantly and had more complementarity on dominance (Kurzius et al., 2022). The sample size of that study was 182, which allowed for a power of 0.80 for a mean effect size of 0.21. In the current study, the relationship between detachment and average dominance *almost* reached significance ($p = 0.03$), indicating that low power may have led to this null result. Kurzius and colleagues' (2022) study differed from the current study in a few other notable ways, including using adaptive personality traits (e.g., openness, extraversion, agreeableness, neuroticism, and conscientiousness) and asking participants to role play negotiations.

Limitations

There were four main limitations in the current study. First, the laboratory-based interpersonal situation was a "strong situation", and behavior may have been influenced more by social norms to be friendly and take turns than personality traits (Buss, 1989; Judge & Zapata, 2015). Second, there was a lack of variation and extremity in personality traits assessed, meaning that individuals may not have had strong

Table 4. Results from trait domain APIM models

	Actor effects					Partner effects			
	Average Communion								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity	0.02	-1.66	-0.12	1.52	0.28	-0.40	-0.03	1.52	0.79
Disinhibition	0.03	-2.21	-0.13	1.98	0.26	-2.95	-0.17	1.98	0.14
Detachment	0.00	-0.36	-0.02	1.92	0.85	0.80	0.05	1.92	0.68
Antagonism	0.01	-0.72	-0.04	1.88	0.70	-1.31	-0.08	1.88	0.49
Psychoticism	0.01	-0.36	-0.02	1.70	0.83	-1.59	-0.10	1.70	0.35
	Average Agency								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity	0.01	-3.03	-0.07	4.92	0.54	-1.44	-0.03	4.92	0.77
Disinhibition	0.00	0.75	0.01	5.95	0.90	-1.19	-0.02	5.95	0.84
Detachment	0.07	-11.70	-0.22	5.54	0.03	6.94	0.13	5.54	0.21
Antagonism	0.00	0.62	0.01	5.47	0.91	3.38	0.06	5.47	0.54
Psychoticism	0.01	-1.93	-0.02	5.49	0.72	-2.99	-0.10	5.49	0.59
	Variability in Communion								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity	0.02	-1.09	-0.14	0.88	0.22	-0.35	-0.04	0.88	0.69
Disinhibition	0.01	-0.99	-0.10	1.20	0.41	-0.28	-0.03	1.20	0.82
Detachment	0.00	0.04	0.00	1.14	0.97	-0.43	-0.04	1.14	0.71
Antagonism	0.00	-0.05	-0.01	1.13	0.97	0.37	0.04	1.13	0.74
Psychoticism	0.02	0.32	0.04	0.98	0.74	-1.16	-0.13	0.98	0.24
	Variability in Agency								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity	0.02	-2.03	-0.12	1.84	0.27	-0.66	-0.04	1.84	0.72
Disinhibition	0.03	-2.90	-0.14	2.45	0.24	1.25	0.06	2.45	0.61
Detachment	0.02	-2.79	-0.14	2.33	0.23	-0.42	-0.02	2.33	0.86
Antagonism	0.09	3.51	0.18	2.20	0.11	**5.66**	**0.29**	**2.20**	**0.01**
Psychoticism	0.09	-1.15	-0.06	1.98	0.56	**5.25**	**0.28**	**1.98**	**0.01**
	Communion Linear Slope								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity	0.05	0.00	-0.21	0.00	0.07	0.00	0.08	0.00	0.47
Disinhibition	0.06	0.00	-0.15	0.00	0.19	0.00	0.16	0.00	0.17
Detachment	0.01	0.00	-0.08	0.00	0.51	0.00	0.07	0.00	0.56
Antagonism	0.05	0.00	0.05	0.00	0.72	0.01	0.23	0.00	0.05
Psychoticism	0.04	0.00	-0.14	0.00	0.21	0.00	0.13	0.00	0.24
	Agency Linear Slope								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity	0.03	0.01	0.11	0.01	0.32	-0.01	-0.14	0.01	0.21
Disinhibition	0.02	0.00	0.05	0.01	0.64	-0.01	-0.13	0.01	0.23
Detachment	0.07	-0.01	-0.08	0.01	0.44	0.02	0.24	0.01	0.02
Antagonism	0.00	0.00	-0.06	0.01	0.55	0.00	-0.05	0.01	0.61
Psychoticism	0.00	0.00	-0.02	0.01	0.83	0.00	-0.04	0.01	0.75

	Communal Complementarity					**Agentic Complementarity**				
	R^2	b	$b_{standardize}$	SE	p_{actor}	R^2	b	$b_{standardize}$	SE	p_{actor}
Negative Affectivity	0.00	0.01	0.04	0.03	0.71	0.01	0.01	0.06	0.02	0.62
Disinhibition	0.00	0.01	0.03	0.04	0.80	0.00	0.01	0.02	0.03	0.85
Detachment	0.14	0.07	0.26	0.03	0.02	0.01	-0.01	-0.06	0.03	0.62
Antagonism	0.03	-0.03	-0.13	0.03	0.33	0.04	-0.03	-0.14	0.03	0.27
Psychoticism	0.00	-0.01	-0.05	0.03	0.67	0.06	-0.04	-0.17	0.02	0.11

Note: N = 40 dyads. All of the APIMs for indistinguishable dyads were the same as the I-SAT models and just-identified to the data. Chi-square = 0, df = 0, RMSEA = 0, and CFI = 1. **Bold = significant path**
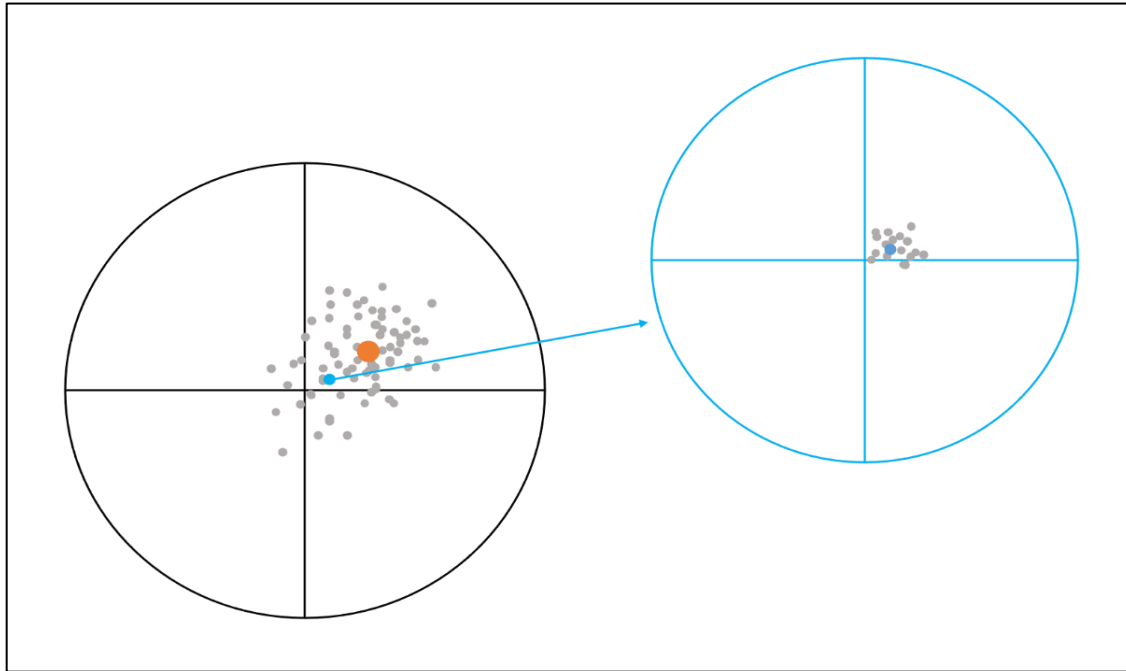
Figure 4. The relationship between interaction-level measurements (left) and situation-level (e.g., moment-to-moment) measurements (right). The orange dot indicates the average of all interaction level measurements, which is the trait-level measurement of behavior. The blue circle shows the moment-to-moment behavior during one interaction that leads to the interaction-level aggregate behavior measurement (blue dot).

enough trait "pulls" on a situation to break with social norms. Third, since the interactions analyzed were two collaborative tasks with strangers, this captures a very small snapshot of an individual's life. It may be more useful to aggregate behavior over multiple situations, to capture variance attributable to the personality of an individual and not the specific context of one interaction. Fourth, the sample size in the current study may have been too small to capture the relationships of interest, given that traits may only contribute a small amount to the variability in interpersonal behaviors in one specific situation.

Future considerations

Considering limitations of our current study, future studies should aggregate behavior over multiple situations and/or change the situational constraints on behavior in order to determine the relationship between trait and state personality. Given the theory that traits are density distributions of states, one may need to capture multiple states/interactions in order to understand one's set point of behavior (e.g., traits; Fleeson, 2001; Sosnowska et al., 2020). It is an open question how many different interactions are needed. Methodology is also important here. Either experience sampling assessments could be used, such as those that collect information in a person's daily life (e.g., EMA; Shiffman et al., 2008), or experimental protocols could be designed that vary the situational constraints. It is an empirical question as to how much situational variability is needed to capture stable patterns of responding. For instance, studies using CAID have shown that varying only the type of task (e.g., conflict vs. collaboration) can have an impact on behavior (Hopwood et al., 2020). Buss (1989) suggests that situations

that are familiar, private, have few constraints, and are relatively long may invite people to behave in their habitual ways. Future studies should investigate how much the experimental situation needs to be varied to examine behavior attributable to enduring dispositions, ranging from simply changing the type of task to changing the interaction partner, location, constraints on behavior, and duration.

Larger sample sizes should also be used in future studies. The effect sizes expected for the current study (traits → behaviors in *one* specific interaction) is quite small, so a larger sample size would be needed to find effects. Future studies are encouraged to employ paradigms that 1) are hypothesized to have larger effect sizes (e.g., traits → behaviors across *many* interactions) and 2) have larger sample sizes in order to be able to detect smaller effects.

Overall, the current study aimed to understand the relationship between interpersonal behavior captured at two levels of analysis (states and traits). Trait domains were not predictive of actor or partner interpersonal states in short collaborative tasks with strangers, but we provide suggestions for future research to explore the relationship between interpersonal behavior at different levels of analysis. We consider this an important, and largely unexplored, question in personality psychology.

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Appendix

Results from trait facet models.

	Actor effects					Partner effects			
	Average Communion								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity									
Emotional lability	0.02	-1.58	-0.13	1.33	0.23	-0.64	-0.05	1.33	0.63
Anxiousness	0.01	-0.81	-0.08	1.14	0.48	-0.75	-0.07	1.14	0.51
Separation insecurity	0.01	-0.68	-0.07	1.16	0.56	0.66	0.06	1.16	0.57
Disinhibition									
Irresponsibility	0.03	-2.53	-0.11	2.61	0.33	-3.96	-0.17	2.61	0.13
Impulsivity	0.02	0.46	0.04	1.45	0.75	-1.97	-0.15	1.45	0.17
Distractibility	0.03	-1.86	-0.18	1.18	0.12	-0.89	-0.08	1.18	0.45
Detachment									
Withdrawal	0.01	-1.12	-0.08	1.55	0.47	0.56	0.04	1.55	0.72
Anhedonia	0.01	-1.69	-0.11	1.74	0.33	-0.40	-0.03	1.74	0.82
Intimacy Avoidance	0.02	1.87	0.13	1.63	0.25	1.13	0.08	1.63	0.49
Antagonism									
Manipulativeness	0.00	0.02	0.00	1.41	0.99	-0.39	-0.03	1.41	0.78
Deceitfulness	0.01	-0.99	-0.07	1.59	0.53	-1.07	-0.08	1.59	0.50
Grandiosity	0.01	-0.99	-0.06	2.05	0.63	-2.10	-0.12	2.05	0.31
Psychoticism									
Unusual Bel & Exp	0.01	-0.12	-0.01	1.52	0.94	-1.53	-0.11	1.52	0.31
Eccentricity	0.01	-0.47	-0.04	1.21	0.70	-0.77	-0.07	1.21	0.53
Perceptual Dys	0.01	-0.12	-0.01	1.91	0.95	-1.69	-0.10	1.91	0.38
	Average Agency								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity									
Emotional lability	0.01	-3.99	-0.10	4.42	0.37	-1.41	-0.04	4.42	0.75
Anxiousness	0.01	-2.92	-0.09	3.78	0.44	-1.41	-0.04	3.78	0.71
Separation insecurity	0.00	1.00	0.03	3.62	0.78	0.58	0.02	3.62	0.87
Disinhibition									
Irresponsibility	0.03	-12.48	-0.17	7.62	0.10	2.57	0.03	7.62	0.74
Impulsivity	0.00	-1.16	-0.03	4.62	0.80	1.56	0.04	4.62	0.74
Distractibility	0.03	4.41	0.13	3.65	0.23	-3.32	-0.10	3.65	0.36
Detachment									
Withdrawal	0.11	**-1.09**	**-0.26**	**4.35**	**0.01**	6.42	0.15	4.35	0.14
Anhedonia	0.00	-2.47	-0.05	5.11	0.63	1.01	0.02	5.11	0.84
Intimacy Avoidance	0.10	-11.94	-0.25	4.93	0.02	8.28	0.17	4.93	0.09
Antagonism									
Manipulativeness	0.01	3.30	0.08	4.32	0.44	0.03	0.00	4.32	1.00
Deceitfulness	0.00	-0.07	0.00	4.62	0.99	2.85	0.06	4.62	0.54
Grandiosity	0.02	-4.05	-0.07	5.79	0.48	5.89	0.11	5.79	0.31
Psychoticism									
Unusual Bel & Exp	0.01	-3.53	-0.01	4.85	0.47	-2.26	-0.11	4.85	0.64
Eccentricity	0.01	1.80	-0.04	3.89	0.64	-3.16	-0.07	3.89	0.42
Perceptual Dys	0.01	-6.41	-0.01	6.15	0.30	-0.05	-0.10	6.15	0.99
	Variability in Communion								
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$P_{partner}$
Negative Affectivity									
Emotional lability	0.02	-0.99	-0.14	0.76	0.19	0.10	0.01	0.76	0.90
Anxiousness	0.03	-0.62	-0.10	0.65	0.34	-0.82	-0.14	0.65	0.21
Separation insecurity	0.01	-0.41	-0.07	0.68	0.54	0.23	0.04	0.68	0.73
Disinhibition									
Irresponsibility	0.02	-0.86	-0.07	1.58	0.59	1.29	0.10	1.58	0.42
Impulsivity	0.01	-0.68	-0.09	0.85	0.43	-0.01	0.00	0.85	0.99
Distractibility	0.01	-0.37	-0.06	0.70	0.60	-0.44	-0.07	0.70	0.53
Detachment									
Withdrawal	0.01	-0.71	-0.09	0.92	0.44	-0.39	-0.05	0.92	0.67
Anhedonia	0.01	-0.22	-0.03	1.04	0.83	-0.72	-0.08	1.04	0.49
Intimacy Avoidance	0.02	1.06	0.13	0.95	0.27	-0.03	0.00	0.95	0.98

Table continues on next page

	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$p_{partner}$
Antagonism									
Manipulativeness	0.00	-0.09	-0.01	0.83	0.92	0.34	0.05	0.83	0.69
Deceitfulness	0.00	0.02	0.00	0.95	0.98	0.30	0.04	0.95	0.75
Grandiosity	0.00	-0.12	-0.01	1.25	0.92	0.14	0.01	1.25	0.91
Psychoticism									
Unusual Bel & Exp	0.01	-0.22	-0.03	0.89	0.81	-0.91	-0.12	0.89	0.30
Eccentricity	0.01	0.21	0.03	0.70	0.76	-0.71	-0.11	0.70	0.31
Perceptual Dys	0.02	0.99	0.10	1.10	0.37	-1.18	-0.12	1.10	0.29
Variability in Agency									
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$p_{partner}$
Negative Affectivity									
Emotional lability	0.00	0.00	0.00	1.62	1.00	-0.20	-0.01	1.62	0.90
Anxiousness	0.10	-3.01	-0.24	1.32	0.02	-2.30	-0.19	1.32	0.08
Separation insecurity	0.02	-0.08	-0.01	1.40	0.95	1.59	0.13	1.40	0.26
Disinhibition									
Irresponsibility	0.03	-4.74	-0.17	3.23	0.14	0.67	0.02	3.23	0.83
Impulsivity	0.04	-2.31	-0.15	1.75	0.18	2.06	0.13	1.75	0.24
Distractibility	0.00	-0.85	-0.07	1.46	0.56	0.17	0.01	1.46	0.91
Detachment									
Withdrawal	0.05	-3.59	-0.22	1.86	0.05	-0.92	-0.06	1.86	0.62
Anhedonia	0.00	-0.97	-0.05	2.15	0.65	0.22	0.01	2.15	0.92
Intimacy Avoidance	0.00	-1.22	-0.07	1.99	0.54	-0.08	0.00	1.99	0.97
Antagonism									
Manipulativeness	0.11	3.38	0.22	1.61	0.04	**4.20**	**0.28**	**1.61**	**0.01**
Deceitfulness	0.06	2.27	0.14	1.89	0.23	4.09	0.25	1.89	0.03
Grandiosity	0.03	0.71	0.03	2.52	0.78	3.65	0.18	2.52	0.15
Psychoticism									
Unusual Bel & Exp	0.07	-0.44	-0.03	1.79	0.80	**4.36**	**0.26**	**1.79**	**0.01**
Eccentricity	0.08	-0.74	-0.06	1.41	0.60	**3.66**	**0.28**	**1.41**	**0.01**
Perceptual Dys	0.04	-1.55	-0.07	2.28	0.50	3.87	0.19	2.28	0.09
Communion Linear Slope									
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$p_{partner}$
Negative Affectivity									
Emotional lability	0.04	0.00	-0.18	0.00	0.12	0.00	-0.08	0.00	0.50
Anxiousness	0.03	0.00	-0.15	0.00	0.22	0.00	0.10	0.00	0.41
Separation insecurity	0.05	0.00	-0.15	0.00	0.19	0.00	0.16	0.00	0.15
Disinhibition									
Irresponsibility	0.02	0.00	-0.10	0.00	0.44	0.00	0.06	0.00	0.58
Impulsivity	0.01	0.00	-0.07	0.00	0.56	0.00	0.04	0.00	0.76
Distractibility	0.12	0.00	-0.20	0.00	0.08	0.00	0.25	0.00	0.02
Detachment									
Withdrawal	0.02	0.00	-0.10	0.00	0.38	0.00	0.09	0.00	0.46
Anhedonia	0.02	0.00	-0.01	0.00	0.94	0.00	0.13	0.00	0.26
Intimacy Avoidance	0.01	0.00	-0.07	0.00	0.56	0.00	-0.04	0.00	0.75
Antagonism									
Manipulativeness	0.06	0.00	0.08	0.00	0.53	0.00	0.25	0.00	0.02
Deceitfulness	0.07	0.00	-0.04	0.00	0.77	0.01	0.25	0.00	0.03
Grandiosity	0.00	0.00	0.04	0.00	0.76	0.00	0.05	0.00	0.66
Psychoticism									
Unusual Bel & Exp	0.03	0.00	-0.11	0.00	0.34	0.00	0.12	0.00	0.28
Eccentricity	0.02	0.00	-0.09	0.00	0.40	0.00	0.12	0.00	0.29
Perceptual Dys	0.04	0.00	-0.18	0.00	0.10	0.00	0.10	0.00	0.37
Agency Linear Slope									
	R^2	b	$b_{standardize}$	SE	p_{actor}	b	$b_{standardize}$	SE	$p_{partner}$
Negative Affectivity									
Emotional lability	0.01	0.00	0.06	0.01	0.60	0.00	-0.08	0.01	0.48
Anxiousness	0.02	0.00	0.07	0.00	0.55	0.00	-0.11	0.00	0.34
Separation insecurity	0.04	0.01	0.13	0.00	0.21	-0.01	-0.13	0.00	0.23
Disinhibition									
Irresponsibility	0.00	0.00	0.00	0.01	0.97	0.00	0.01	0.01	0.91
Impulsivity	0.01	0.00	-0.01	0.01	0.89	0.00	-0.10	0.01	0.38
Distractibility	0.05	0.01	0.13	0.00	0.20	-0.01	-0.16	0.00	0.12
Detachment									
Withdrawal	0.06	0.00	-0.04	0.01	0.68	0.01	0.23	0.01	0.02
Anhedonia	0.03	0.00	-0.02	0.01	0.81	0.01	0.15	0.01	0.15
Intimacy Avoidance	0.09	-0.01	-0.15	0.01	0.14	0.01	0.25	0.01	0.02

Antagonism									
Manipulativeness	0.00	0.00	-0.04	0.01	0.73	0.00	-0.03	0.01	0.77
Deceitfulness	0.01	0.00	-0.08	0.01	0.44	0.00	-0.01	0.01	0.93
Grandiosity	0.01	0.00	-0.05	0.01	0.65	-0.01	-0.11	0.01	0.30
Psychoticism									
Unusual Bel & Exp	0.00	0.00	-0.04	0.01	0.69	0.00	0.00	0.01	0.99
Eccentricity	0.00	0.00	-0.01	0.00	0.90	0.00	-0.02	0.00	0.83
Perceptual Dys	0.01	0.00	0.00	0.01	0.97	-0.01	-0.08	0.01	0.46

	Communal Complementarity					Agentic Complementarity				
	R^2	b	$b_{standardize}$	SE	p_{actor}	R^2	b	$b_{standardize}$	SE	p_{actor}
Negative Affectivity										
Emotional lability	0.03	0.02	0.13	0.02	0.23	0.00	-0.01	-0.04	0.02	0.71
Anxiousness	0.01	0.01	0.05	0.02	0.63	0.11	0.03	0.23	0.01	0.02
Separation insecurity	0.02	-0.01	-0.09	0.02	0.45	0.02	-0.01	-0.10	0.02	0.40
Disinhibition										
Irresponsibility	0.02	0.03	0.09	0.05	0.51	0.06	-0.05	-0.17	0.04	0.19
Impulsivity	0.01	0.01	0.06	0.02	0.60	0.00	-0.01	-0.03	0.02	0.78
Distractibility	0.00	-0.01	-0.04	0.02	0.76	0.04	0.02	0.13	0.02	0.26
Detachment										
Withdrawal	0.13	0.06	0.26	0.03	0.03	0.01	-0.01	-0.06	0.02	0.62
Anhedonia	0.04	0.04	0.15	0.03	0.24	0.00	0.00	0.01	0.03	0.93
Intimacy Avoidance	0.12	0.06	0.25	0.03	0.02	0.02	-0.02	-0.09	0.02	0.42
Antagonism										
Manipulativeness	0.01	-0.01	-0.07	0.02	0.54	0.12	-0.04	-0.25	0.02	0.03
Deceitfulness	0.08	-0.04	-0.20	0.03	0.12	0.02	-0.02	-0.09	0.02	0.48
Grandiosity	0.00	-0.01	-0.04	0.04	0.78	0.01	0.02	0.07	0.03	0.60
Psychoticism										
Unusual Bel & Exp	0.02	-0.02	-0.10	0.03	0.37	0.01	-0.02	-0.08	0.02	0.47
Eccentricity	0.00	0.00	0.00	0.02	0.98	0.16	**-0.04**	**-0.28**	**0.02**	**0.01**
Perceptual Dys	0.00	-0.01	-0.03	0.03	0.78	0.00	-0.01	-0.04	0.03	0.70

Note: Unusual Bel & Exp = Unusual Beliefs and Experiences; Perceptual Dys = Perceptual Dysregulation. $N = 40$ dyads. All of the APIMs for indistinguishable dyads were the same as the I-SAT models and just-identified to the data. Chi-square = 0, $df = 0$, RMSEA = 0, and CFI = 1. **Bold = significant paths.**