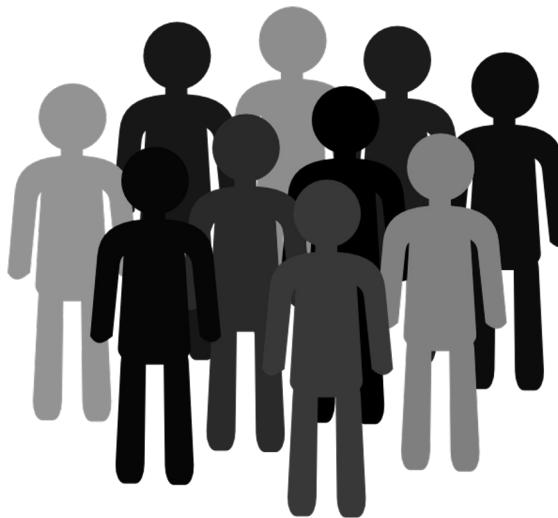
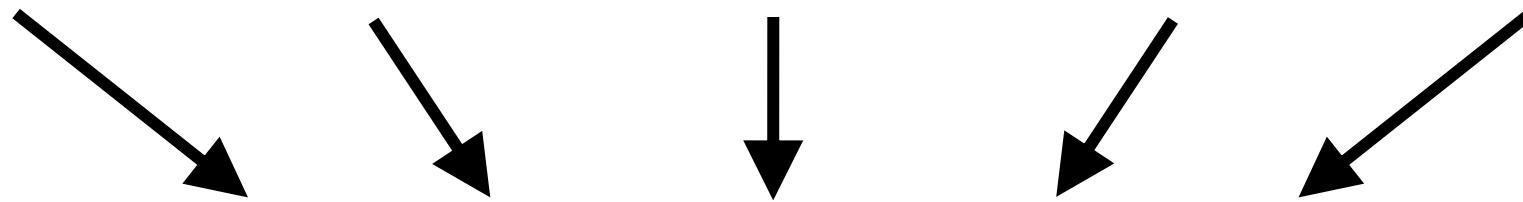


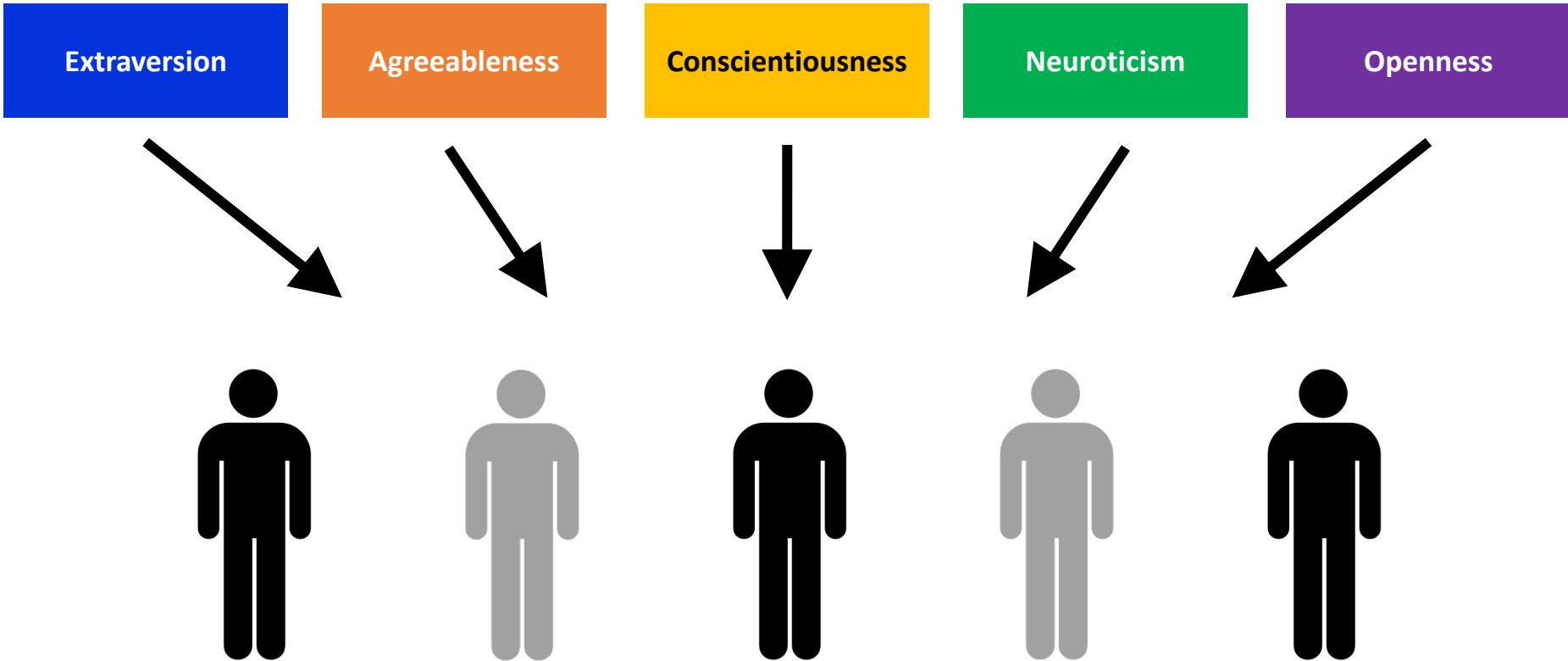
Measuring and Modeling Idiographic Persons and Nomothetic Populations in Personality

Emorie D Beck

Northwestern University Feinberg School of Medicine



Nomothetic



Idiographic

Aggregation

What is the structure of individual differences in a population?

Between-Person / Nomothetic

How are personality dimensions associated with long-term life outcomes?

How do personality dimensions change over time?

What are antecedents and consequences of changes in personality dimensions?

Aggregation

What is the structure of behaviors and experiences within a single person?

Between-Person / Nomothetic

How accurately can we predict the behaviors and experiences of a person?

How do we capture changes in personality and identity of a person?

Are there unique antecedents and consequences of changes in personality?

Idiographic

Aggregation

How do person-specific and population-level structures cohere?

**Between-Person /
Nomothetic**

Do individual differences in *if...then* contingencies predict outcomes?

Within-Person

Are there individual differences in changes in personality?

Idiographic

What is the dynamic association between changes and outcomes / events?

Questions

Description

Prediction

Explanation

Aggregation

Between-Person /
Nomothetic

Within-Person

Idiographic



European Journal of Personality, Eur. J. Pers. **34**: 1175–1201 (2020)
Published online in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/per.2311

Descriptive, Predictive and Explanatory Personality Research: Different Goals, Different Approaches, but a Shared Need to Move Beyond the Big Few Traits

RENÉ MÖTTUS^{1,2*}, DUSTIN WOOD³, DAVID M. CONDON⁴, MITJA D. BACK⁵, ANNA BAUMERT^{6,16},
GIULIO COSTANTINI⁷, SACHA EPSKAMP⁸, SAMUEL GREIFF⁹, WENDY JOHNSON¹,
AARON LUKASZEWSKI¹⁰, AJA MURRAY¹, WILLIAM REVELLE¹¹, AIDAN G.C. WRIGHT¹², TAL YARKONI¹³,
MATTHIAS ZIEGLER¹⁴ and JOHANNES ZIMMERMANN¹⁵



Abstract: We argue that it is useful to distinguish between three key goals of personality science—description, prediction and explanation—and that attaining them often requires different priorities and methodological approaches. We put forward specific recommendations such as publishing findings with minimum a priori aggregation and exploring the limits of predictive models without being constrained by parsimony and intuitiveness but instead maximizing out-of-sample predictive accuracy. We argue that naturally occurring variance in many decontextualized and multidetermined constructs that interest personality scientists may not have individual causes, at least as this term is generally understood and in ways that are human-interpretable, never mind intervenable. If so, useful explanations are narratives that summarize many pieces of descriptive findings rather than models that target individual cause–effect associations. By meticulously studying specific and contextualized behaviours, thoughts, feelings and goals, however, individual causes of variance may ultimately be identifiable, although such causal explanations will likely be far more complex, phenomenon-specific and person-specific than anticipated thus far. Progress in all three areas—description, prediction and explanation—requires higher dimensional models than the currently dominant ‘Big Few’ and supplementing subjective trait-ratings with alternative sources of information such as informant-reports and behavioural measurements. Developing a new generation of psychometric tools thus provides many immediate research opportunities. © 2020 European Association of Personality Psychology

Key words: cause; explanation; hierarchy; personality; prediction

Questions

Description

Prediction

Explanation

Aggregation

Between-Person /
Nomothetic

What is the structure of individual differences in a population?

How are personality dimensions associated with long-term life outcomes?

How do personality dimensions change over time?

What are antecedents and consequences of changes in personality dimensions?

How do personality dimensions change over time?

Psychological Bulletin
2006, Vol. 132, No. 1, 1–25

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0033-2909/06/\$12.00 DOI: 10.1037/0033-2909.132.1.1

Patterns of Mean-Level Change in Personality Traits Across the Life Course: A Meta-Analysis of Longitudinal Studies

Brent W. Roberts and Kate E. Walton
University of Illinois at Urbana–Champaign

Wolfgang Viechtbauer
University of Maastricht



The present study used meta-analytic techniques (number of samples = 92) to determine the patterns of mean-level change in personality traits across the life course. Results showed that people increase in measures of social dominance (a facet of extraversion), conscientiousness, and emotional stability, especially in young adulthood (age 20 to 40). In contrast, people increase on measures of social vitality (a 2nd facet of extraversion) and openness in adolescence but then decrease in both of these domains in old age. Agreeableness changed only in old age. Of the 6 trait categories, 4 demonstrated significant change in middle and old age. Gender and attrition had minimal effects on change, whereas longer studies and studies based on younger cohorts showed greater change.

Keywords: personality change, meta-analysis, mean-level change, personality development

Roberts et al., 2006

Description

Prediction

Explanation

Between Person

Within-Person

Idiographic

How do personality dimensions change over time?

The Big Five

Extraversion

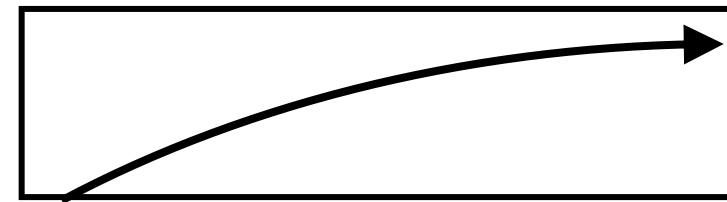
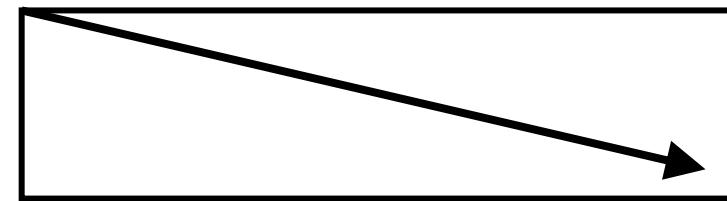
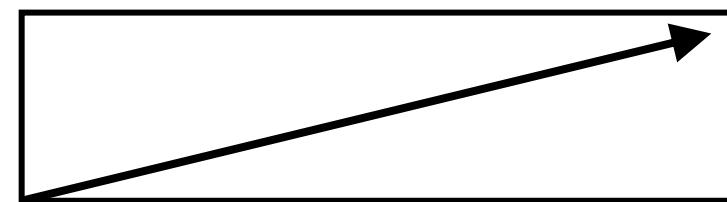
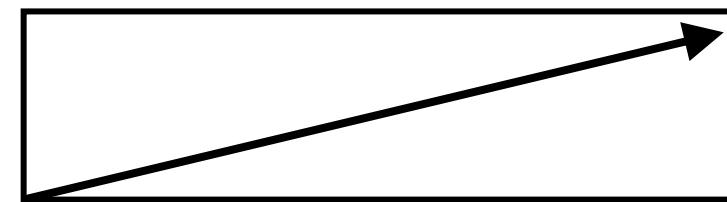
Agreeableness

Conscientiousness

Neuroticism

Openness

Normative Change



Roberts et al.,
2006

How do personality dimensions change over time?



European Journal of Personality, Eur. J. Pers. 34: 301–321 (2020)

Published online 5 May 2020 in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/per.2259

Trajectories of Big Five Personality Traits: A Coordinated Analysis of 16 Longitudinal Samples

EILEEN K. GRAHAM^{1*}, SARA J. WESTON², DENIS GERSTORF^{3,4}, TOMIKO B. YONEDA⁵, TOM BOOTH⁶, CHRISTOPHER R. BEAM⁷, ANDREW J. PETKUS⁷, JOHANNA DREWELIES³, ANDREW N. HALL¹, EMILY D. BASTARACHE¹, RYNE ESTABROOK¹, MINDY J. KATZ⁸, NICHOLAS A. TURIANO⁹, ULMAN LINDENBERGER¹⁰, JACQUI SMITH¹¹, GERT G. WAGNER^{4,10,12}, NANCY L. PEDERSEN¹³, MATHIAS ALLEMAND¹⁴, AVRON SPIRO III^{15,16,17}, DORLY J.H. DEEG¹⁸, BOO JOHANSSON¹⁹, ANDREA M. PICCININ⁵, RICHARD B. LIPTON⁸, K. WARNER SCHAIE²⁰, SHERRY WILLIS²¹, CHANDRA A. REYNOLDS²², IAN J. DEARY⁶, SCOTT M. HOFER⁵ and DANIEL K. MROCZEK¹

Abstract: This study assessed change in self-reported Big Five personality traits. We conducted a coordinated integrative data analysis using data from 16 longitudinal samples, comprising a total sample of over 60 000 participants. We coordinated models across multiple datasets and fit identical multi-level growth models to assess and compare the extent of trait change over time. Quadratic change was assessed in a subset of samples with four or more measurement occasions. Across studies, the linear trajectory models revealed declines in conscientiousness, extraversion, and openness. Non-linear models suggested late-life increases in neuroticism. Meta-analytic summaries indicated that the fixed effects of personality change are somewhat heterogeneous and that the variability in trait change is partially explained by sample age, country of origin, and personality measurement method. We also found mixed evidence for predictors of change, specifically for sex and baseline age. This study demonstrates the importance of coordinated conceptual replications for accelerating the accumulation of robust and reliable findings in the lifespan developmental psychological sciences. © 2020 European Association of Personality Psychology

Key words: personality change; lifespan development; coordinated integrative data analysis; IALSA; replication; open science



Graham et al., 2020

Description

Between Person

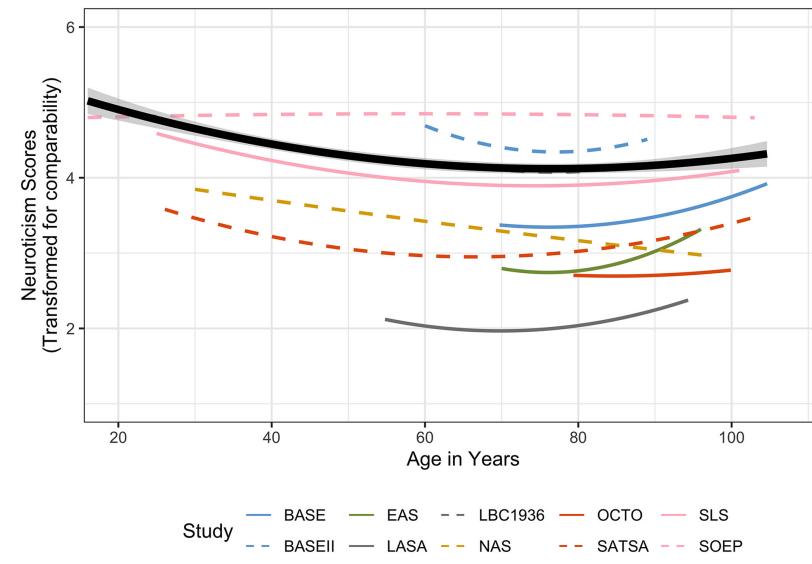
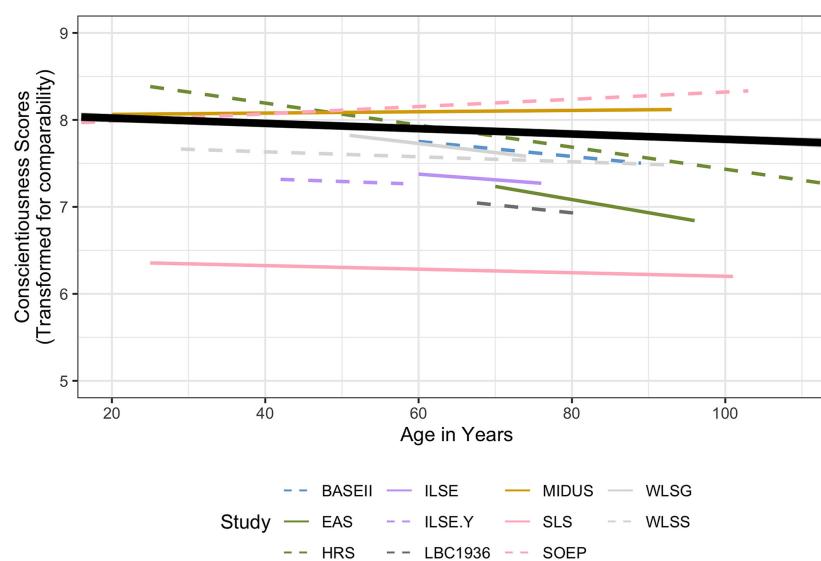
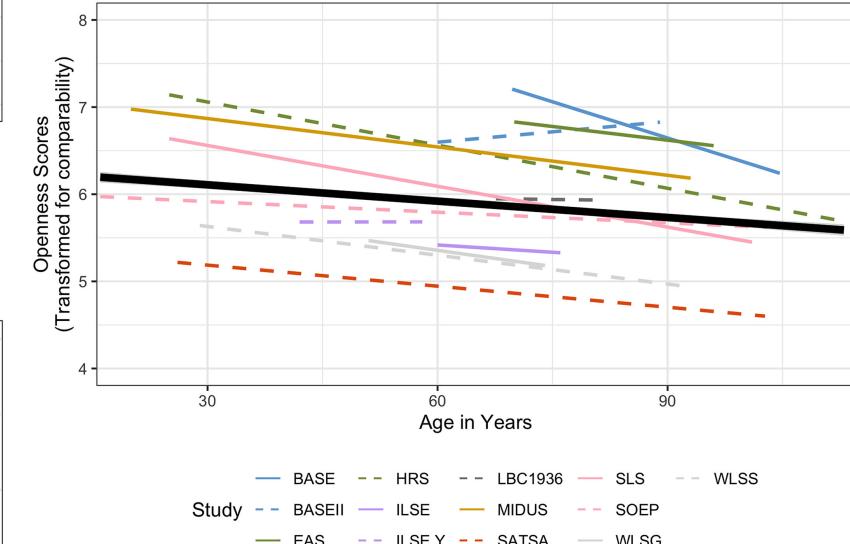
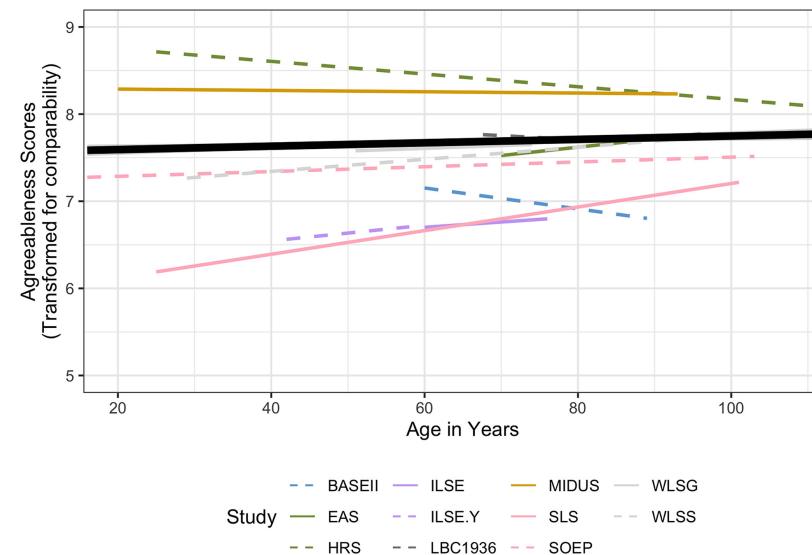
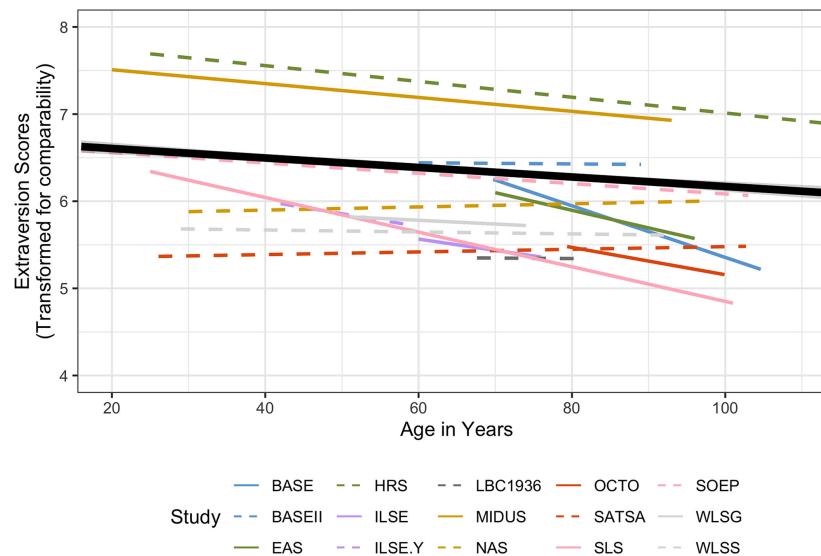
Prediction

Within-Person

Explanation

Idiographic

How do personality dimensions change over time?



Description		Prediction			Explanation
Between Person		Within-Person			Idiographic
Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness	
Marriage (+)	Marriage (+)	Marriage (+)	Unemployment (+)	Higher Education (+)	
Childbirth (+)	Volunteering (+)	Childbirth (+)	Health Events (-)	Mortality (-)	
Mortality (-)	Criminal Justice System Contact (-)	Mental Health Events (-)	Mental Health Events (-)	Volunteering (+)	

How are personality dimensions associated with long-term life outcomes?



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Journal of Personality and Social Psychology

2022, Vol. 122, No. 3, 523–553
<https://doi.org/10.1037/pspp0000386>



A Mega-Analysis of Personality Prediction: Robustness and Boundary Conditions

Emorie D. Beck¹ and Joshua J. Jackson²

¹ Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine

² Department of Psychological and Brain Sciences, Washington University in St. Louis

Decades of studies identify personality traits as prospectively associated with life outcomes. However, previous investigations of personality characteristic-outcome associations have not taken a principled approach to covariate use or other sampling strategies to ensure the robustness of personality-outcome associations. The result is that it is unclear (a) whether personality characteristics are associated with important outcomes after accounting for a range of background variables, (b) for whom and when personality-outcome associations hold, and (c) that background variables are most important to account for. The present study examines the robustness and boundary conditions of personality-outcome associations using prospective Big Five associations with 14 health, social, education/work, and societal outcomes across eight different person and study-level moderators using individual participant data from 171,395 individuals across 10 longitudinal panel studies in a mega-analytic framework. Robustness and boundary conditions were systematically tested using two approaches: propensity score matching and specification curve analysis. Three findings emerged: First, personality characteristics remain robustly associated with later life outcomes. Second, the effects generalize, as there are few moderators of personality-outcome associations. Third, robustness was differential across covariate choice in nearly half of the tested models, with the inclusion or exclusion of some of these flipping the direction of association. In summary, personality characteristics are robustly associated with later life outcomes with few moderated associations. However, researchers still need to be careful in their choices of covariates. We discuss how these findings can inform studies of personality-outcome associations, as well as recommendations for covariate inclusion.



Keywords: personality, prediction, propensity score matching, specification curve analysis, mega-analysis

Beck & Jackson, 2022

Description

Prediction

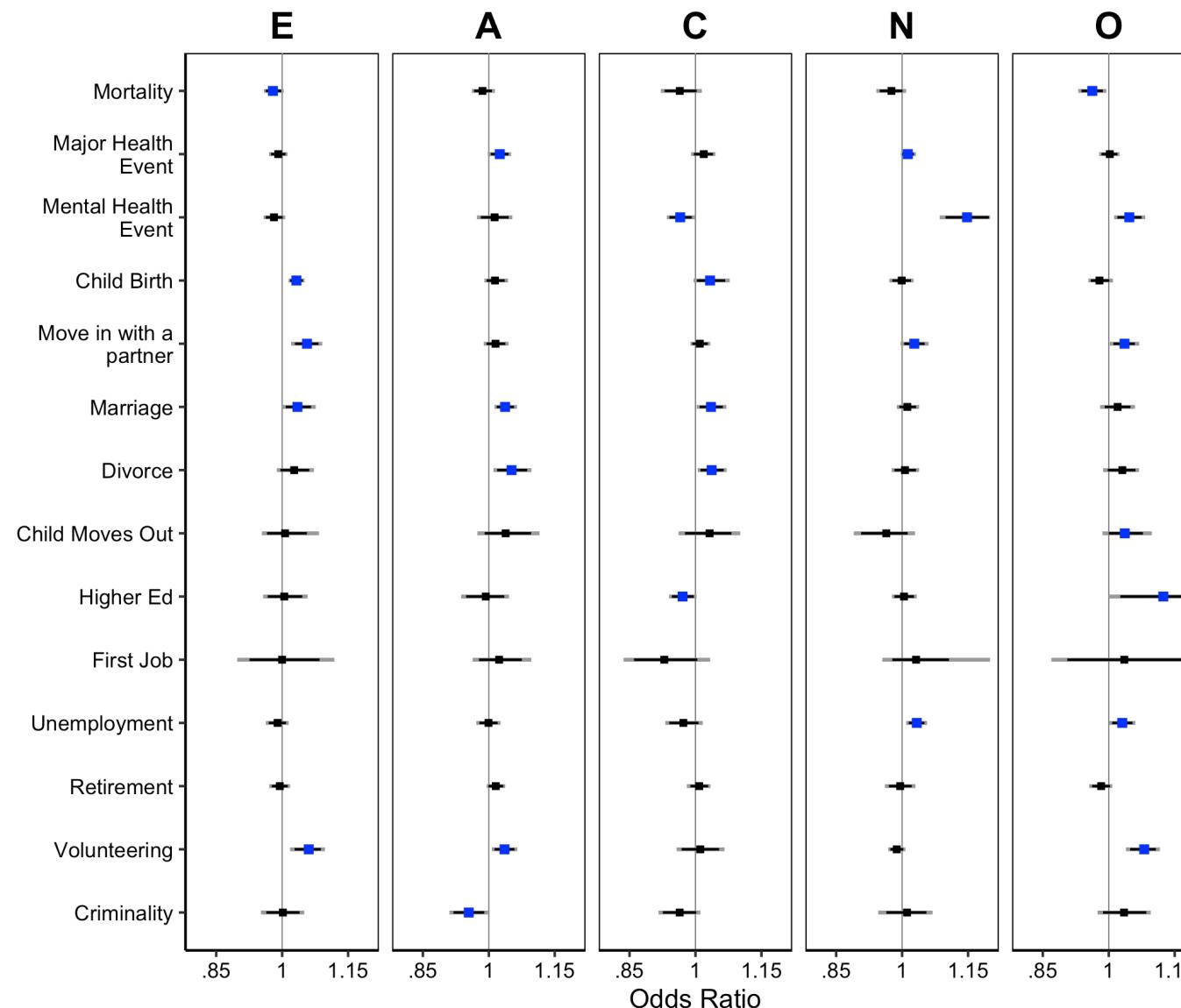
Explanation

Between Person

Within-Person

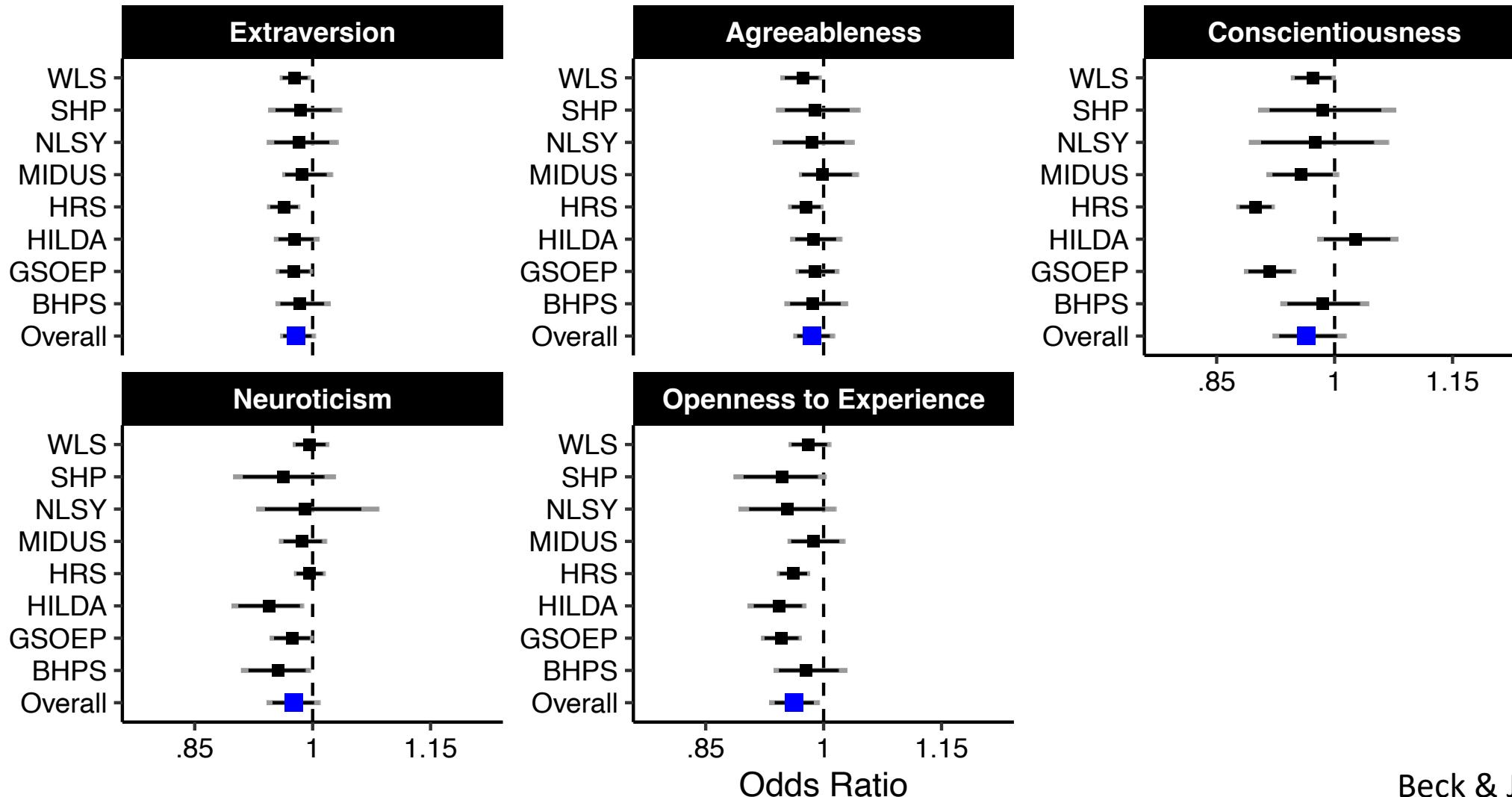
Idiographic

How are personality dimensions associated with long-term life outcomes?



How are personality dimensions associated with long-term life outcomes?

Mortality



Questions

Description

Prediction

Explanation

Aggregation

How do person-specific and population-level structures cohere?

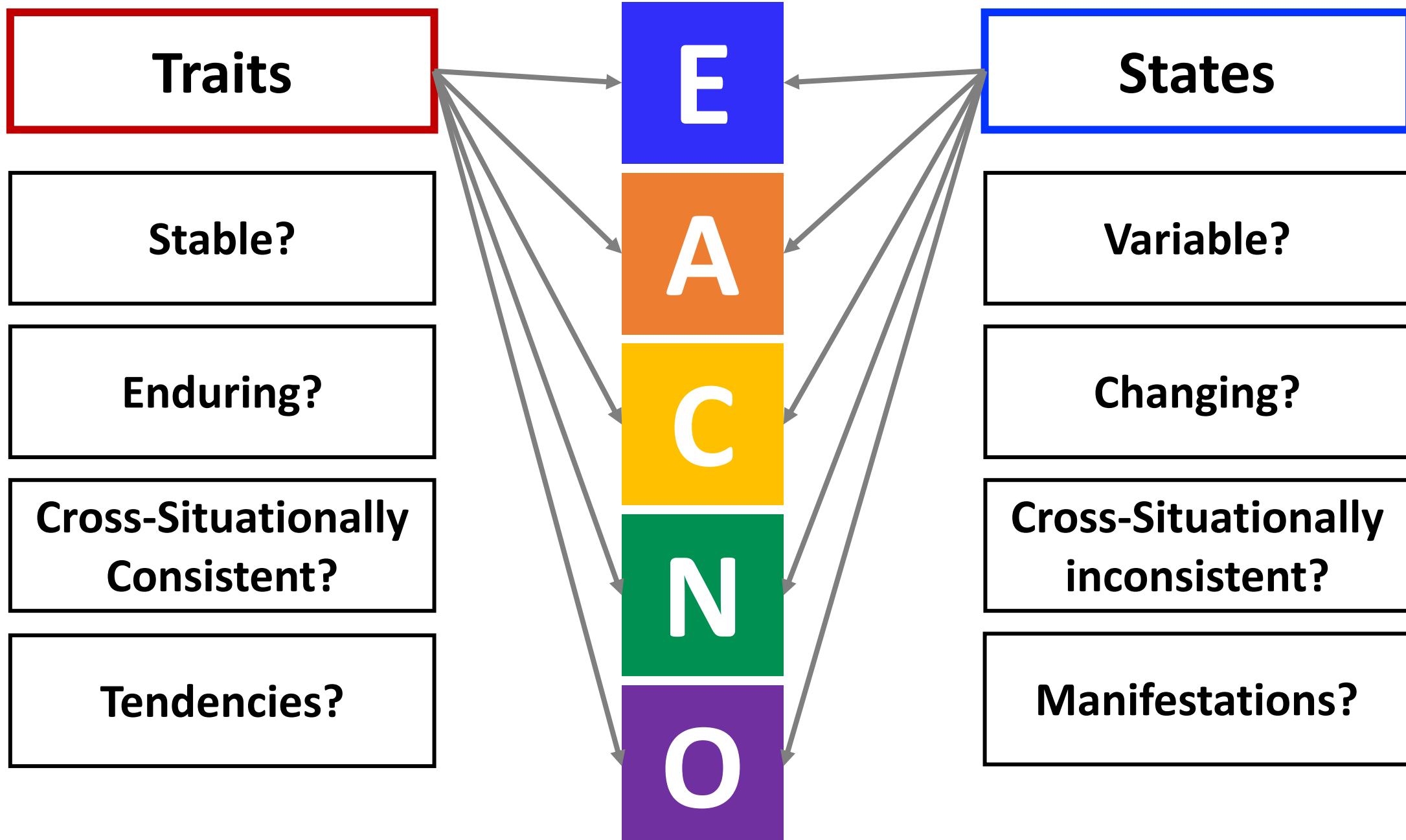
Do individual differences in *if...then* contingencies predict outcomes?

Within-Person

Are there individual differences in changes in personality?

What is the dynamic association between changes and outcomes / events?

The Big Five



Description

Prediction

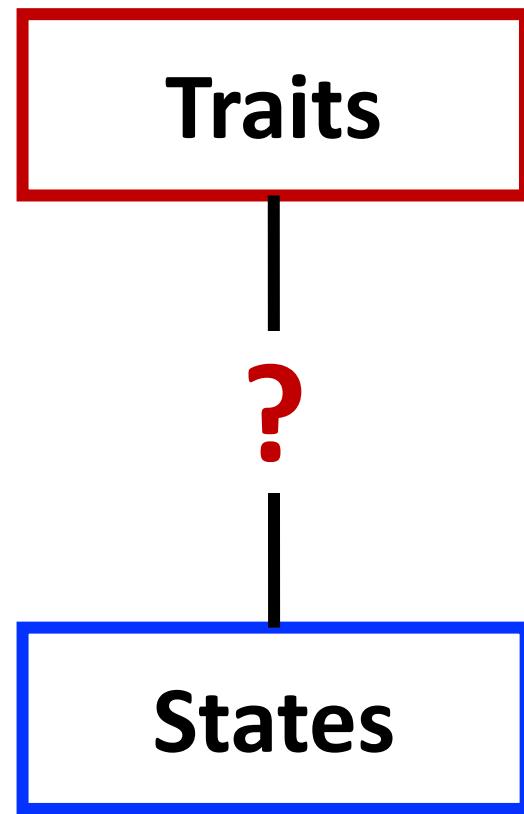
Explanation

Between Person

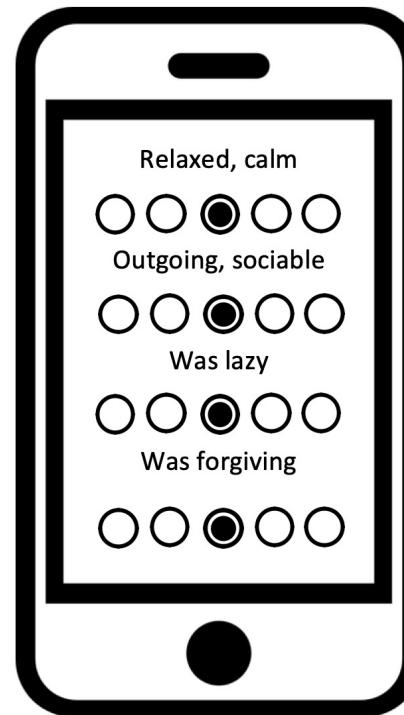
Within-Person

Idiographic

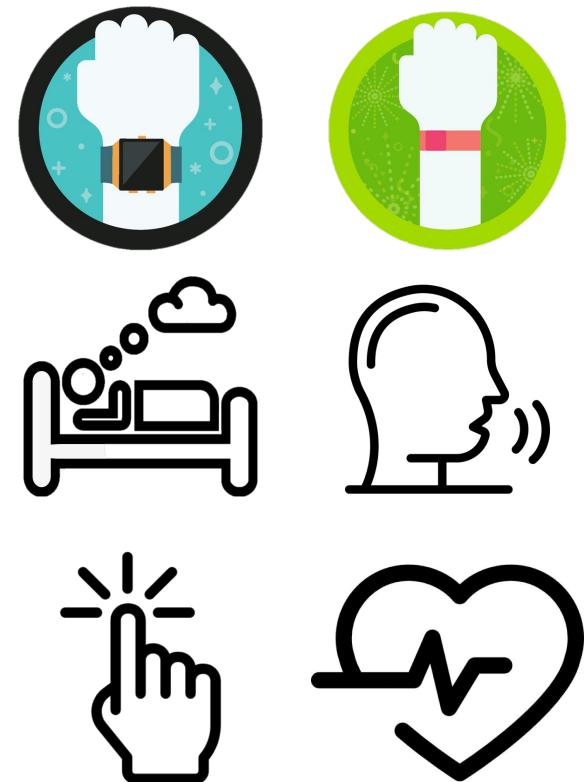
How are states and traits linked?



ESM / EMA



Mobile Sensing



How are states and traits linked?

Journal of Personality and Social Psychology
2001, Vol. 80, No. 6, 1011–1027

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0022-3514/01/\$5.00 DOI: 10.1037/0022-3514.80.6.1011

Toward a Structure- and Process-Integrated View of Personality: Traits as Density Distributions of States



William Fleeson
Wake Forest University

Three experience-sampling studies explored the distributions of Big-Five-relevant states (behavior) across 2 to 3 weeks of everyday life. Within-person variability was high, such that the typical individual regularly and routinely manifested nearly all levels of all traits in his or her everyday behavior. Second, individual differences in central tendencies of behavioral distributions were almost perfectly stable. Third, amount of behavioral variability (and skew and kurtosis) were revealed as stable individual differences. Finally, amount of within-person variability in extraversion was shown to reflect individual differences in reactivity to extraversion-relevant situational cues. Thus, decontextualized and noncontingent Big-Five content is highly useful for descriptions of individuals' density distributions as wholes. Simultaneously, contextualized and contingent personality units (e.g., conditional traits, goals) are needed for describing the considerable within-person variation.

Description

Prediction

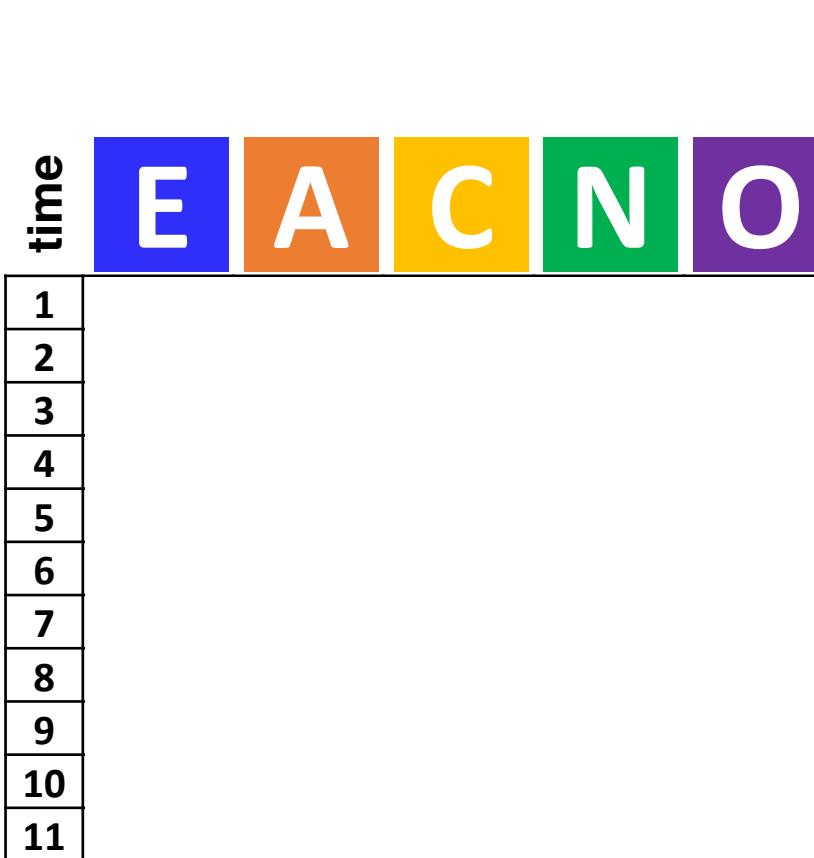
Explanation

Between Person

Within-Person

Idiographic

How are states and traits linked?



Description

Prediction

Explanation

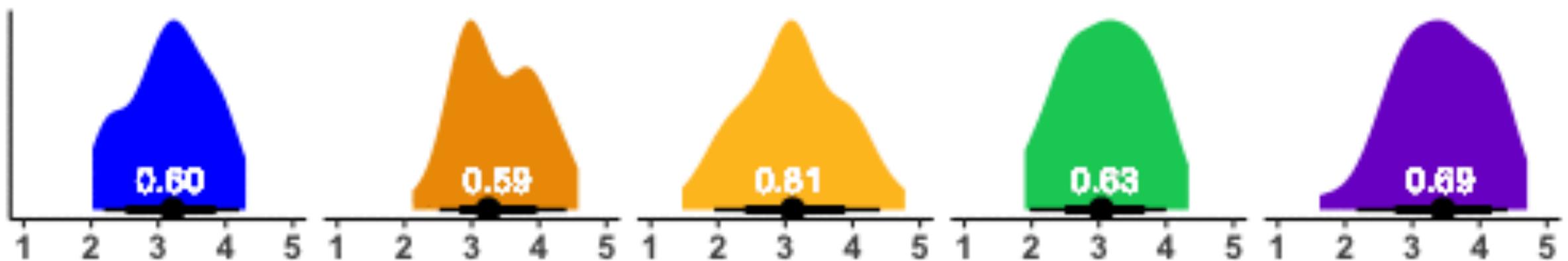
Between Person

Within-Person

Idiographic

How are states and traits linked?

10171



Extraversion

Agreeableness

Conscientiousness

Neuroticism

Openness

Description

Prediction

Explanation

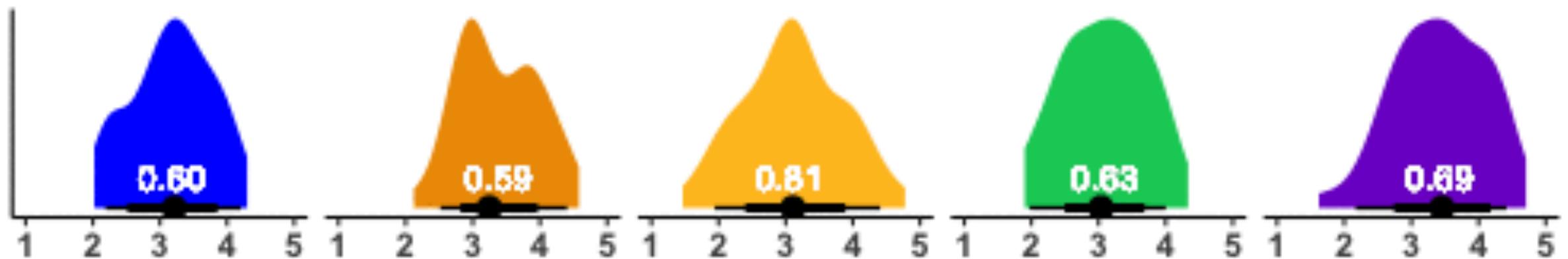
Between Person

Within-Person

Idiographic

How are states and traits linked?

10171



Extraversion

Agreeableness

Conscientiousness

Neuroticism

Openness

Description

Prediction

Explanation

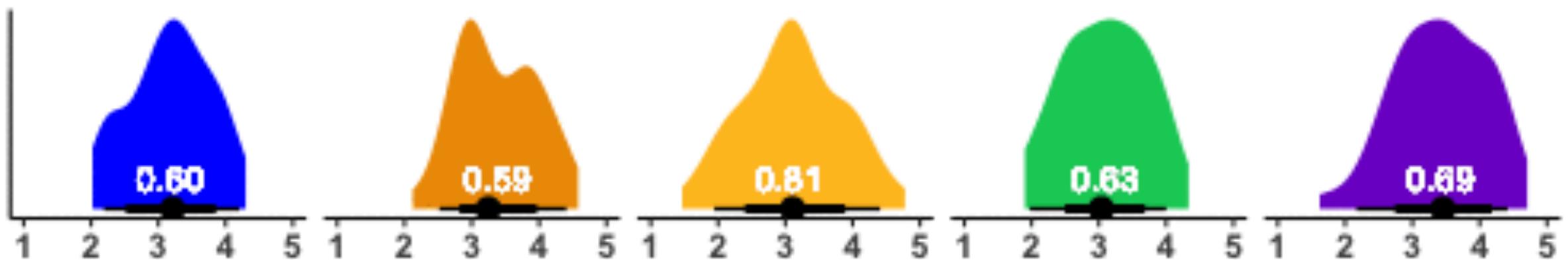
Between Person

Within-Person

Idiographic

How are states and traits linked?

10171



Extraversion

Agreeableness

Conscientiousness

Neuroticism

Openness

How are states and traits linked?



Journal of Personality and Social Psychology
2009, Vol. 97, No. 6, 1097–1114

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0022-3514/09/\$12.00 DOI: 10.1037/a0016786

The Implications of Big Five Standing for the Distribution of Trait Manifestation in Behavior: Fifteen Experience-Sampling Studies and a Meta-Analysis

William Fleeson
Wake Forest University

Patrick Gallagher
Duke University

One of the fundamental questions in personality psychology is whether and how strongly trait standing relates to the traits that people actually manifest in their behavior when faced with real pressures and real consequences of their actions. One reason this question is fundamental is the common belief that traits do not predict how individuals behave, which leads to the reasonable conclusion that traits are not important to study. However, this conclusion is surprising given that there is almost no data on the ability of traits to predict distributions of naturally occurring, representative behaviors of individuals (and that there are many studies showing that traits do indeed predict specific behaviors). The authors describe a meta-analysis of 15 experience-sampling studies, conducted over the course of 8 years, amassing over 20,000 reports of trait manifestation in behavior. Participants reported traits on typical self-report questionnaires, then described their current behavior multiple times per day for several days as the behavior was occurring. Results show that traits, contrary to expectations, were strongly predictive of individual differences in trait manifestation in behavior, predicting average levels with correlations between .42 and .56 (approaching .60 for stringently restricted studies). Several other ways of summarizing trait manifestation in behavior were also predicted from traits. These studies provide evidence that traits are powerful predictors of actual manifestation of traits in behavior.

Keywords: traits, consistency, person–situation debate, states, behavior



Description	Prediction					Explanation
Between Person	Within-Person					Idiographic

How are states and traits linked?

Table 6

Relationship of Big Five Trait Scores to Mean Big Five States in Each Study

Study	Extraversion	Agreeableness	Conscientiousness	Emotional stability	Intellect
1	.20	.52**	.18		
2	.40**	.62***	.65***	.74***	.66***
3	.45*	.50**	.33	.41*	.63**
4	.46**	.13	.55**	.66**	.28
5	.07		.55**	.07	
6	.02		.25	.42**	
7	.75**	.73**	.65**	.76**	.75**
8	.33	.51	.68*	-.01	.56
9	.63**	.62*	.59**	.63**	.71**
10	-.21				
11	.55	.72**	.20	.33	.32
12	.29*	.52**	.42**		
13	.70**	.73**	.73**	.63**	.59**
14	.59**	.38*	.33*	.41**	.32*
15	.49**	.60**	.60**	.58**	.62**
Meta-analysis	.38***	.50***	.44***	.49***	.53***
Mega-analysis	.42***	.54***	.48***	.53***	.56***

Note. Each line shows correlations from one study, except for the last two lines, which show the results of the meta-analysis and mega-analysis. Each correlation is the correlation between scores from a standard questionnaire assessment of the trait and the means of individuals' density distributions of corresponding states in everyday behavior. It can be interpreted as the correlation between how individuals report acting in general on a questionnaire and how they act on average in a few days of their everyday lives. Ns varied across studies from 12 to 63 participants and 9.8 to 169.9 reports per participant.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Description
Between Person

Prediction
Within-Person

Explanation
Idiographic



Running head: ACCURATE PREDICTION OF MOMENTARY COGNITION

Accurate prediction of momentary cognition from intensive longitudinal data

Hawks, Z.W. ^{1,2}, Strong, R. ^{1,2}, Jung, L. ¹, Beck, E.D. ³,

Passell, E.J. ¹, Grinspoon, E. ¹, Sliwinski, M. ⁴, Germine, L.G. ^{1,2}

¹ McLean Hospital – Belmont, MA, USA

² Harvard Medical School – Cambridge, MA, USA

³ Northwestern University Feinberg School of Medicine – Chicago, IL, USA

⁴ Penn State College of Health and Human Development – University Park, PA, USA

Questions

Description

Prediction

Explanation

Aggregation

What is the structure of behaviors and experiences within a single person?

How accurately can we predict the behaviors and experiences of a person?

How do we capture changes in personality and identity of a person?

Are there unique antecedents and consequences of changes in personality?

Idiographic

What is the structure of behaviors and experiences within a single person?



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Journal of Personality and Social Psychology:
Personality Processes and Individual Differences

2020, Vol. 118, No. 5, 1080–1100
<http://dx.doi.org/10.1037/pspp0000249>

Consistency and Change in Idiographic Personality: A Longitudinal ESM Network Study

Emorie D. Beck and Joshua J. Jackson
Washington University in St. Louis

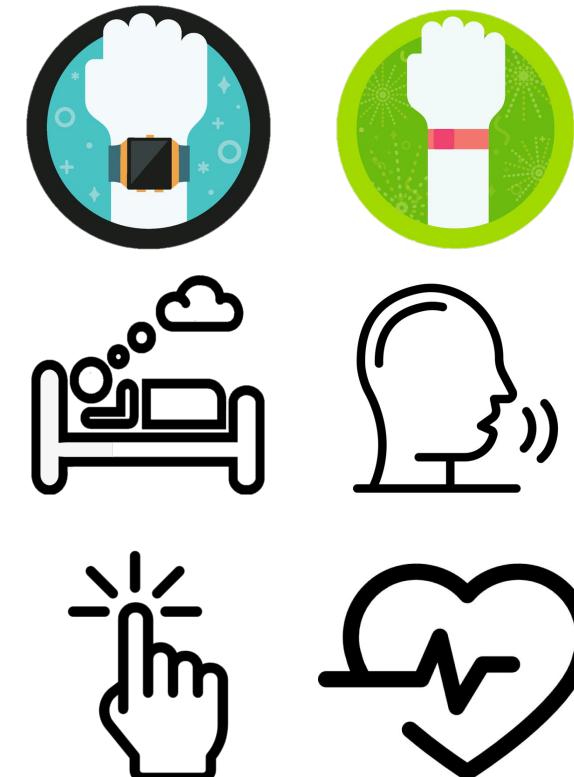
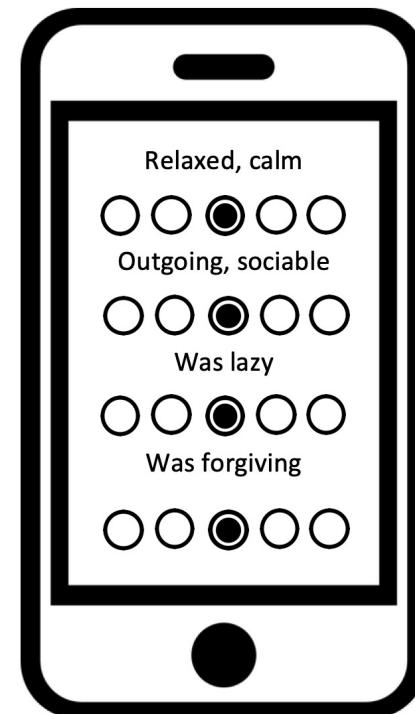
The study of personality development primarily focuses on between-person, nomothetic assessments of personality using assessments of personality traits. An alternative approach uses individual, idiographic personality assessment, defining personality in reference to one's self rather than to others. Nomothetic approaches to personality development identify high levels of consistency in personality, even over decades. But the developmental pattern of idiographic personality is unclear, partially due to difficulties in assessing personality idiographically. We examine a number of traditional and novel idiographic modeling techniques using 2 years of ESM data from the Personality and Interpersonal Roles Study (PAIRS; $N = 372$ participants, total assessments $N = 17,715$). We computed idiographic lagged (lag 1 autoregressive) and contemporaneous (concurrent) graphical VAR models, as well as several other idiographic models, for each subject at the individual level at both waves, which are represented as networks. The utility and interpretation of these newer idiographic personality models at an individual level is demonstrated by using two example subjects. Across all participants, idiographic personality models were heterogeneous in structure, indicating the value of an idiographic approach. Contemporaneous, but not lagged, idiographic models were consistent over time. Despite normative levels of consistency, both types of idiographic models exhibited a great range of individual differences in consistency where some people were completely stable across two years whereas others were very unlike their former selves. In sum, we demonstrate that novel idiographic modeling techniques provide a useful tool to address questions of personality dynamics that were not possible with more traditional idiographic assessments.

Keywords: personality, development, idiographic, longitudinal, networks

What is the structure of behaviors and experiences within a single person?

ESM / EMA

Mobile
Sensing



What is the structure of behaviors and experiences within a single person?



time

	E	A	C	N	O
1	4	2	3	2	4
2	2	3	4	1	4
3	3	3	2	2	4
4	3	1	3	2	3
5	4	4	3	2	2
6	4	1	2	3	4
7	2	2	2	2	1
8	4	2	3	3	4
9	3	2	2	1	2
10	4	2	3	3	3
11	3	1	3	2	5

E					
A	0.02				
C	-0.05	0.08			
N	0.64	-0.12	-0.10		
O	0.26	-0.27	0.43	0.07	

Contemporaneous: Within Time-Points

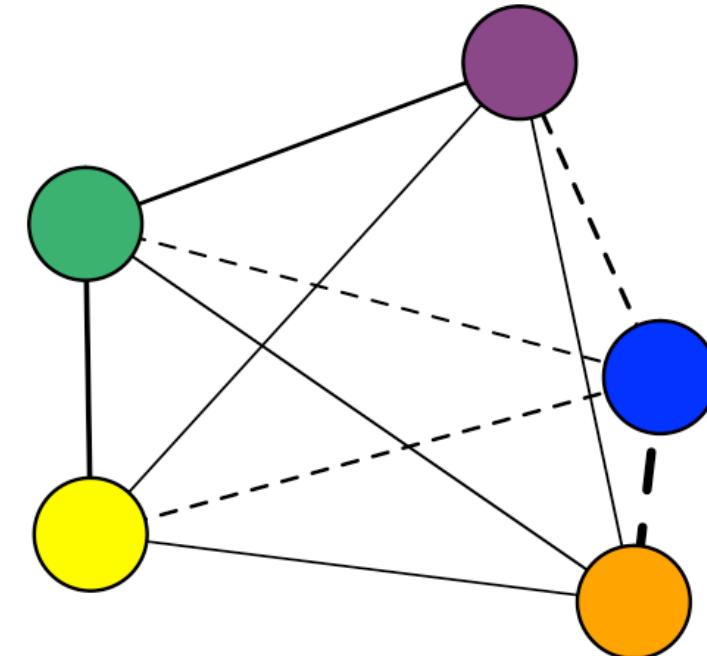
$$X_{it} \leftrightarrow X_{jt}$$

What is the structure of behaviors and experiences within a single person?



time

	E	A	C	N	O
1	4	2	3	2	4
2	2	3	4	1	4
3	3	3	2	2	4
4	3	1	3	2	3
5	4	4	3	2	2
6	4	1	2	3	4
7	2	2	2	2	1
8	4	2	3	3	4
9	3	2	2	1	2
10	4	2	3	3	3
11	3	1	3	2	5



Contemporaneous: Within Time-Points

$$X_{it} \leftrightarrow X_{jt}$$

Description

Between Person

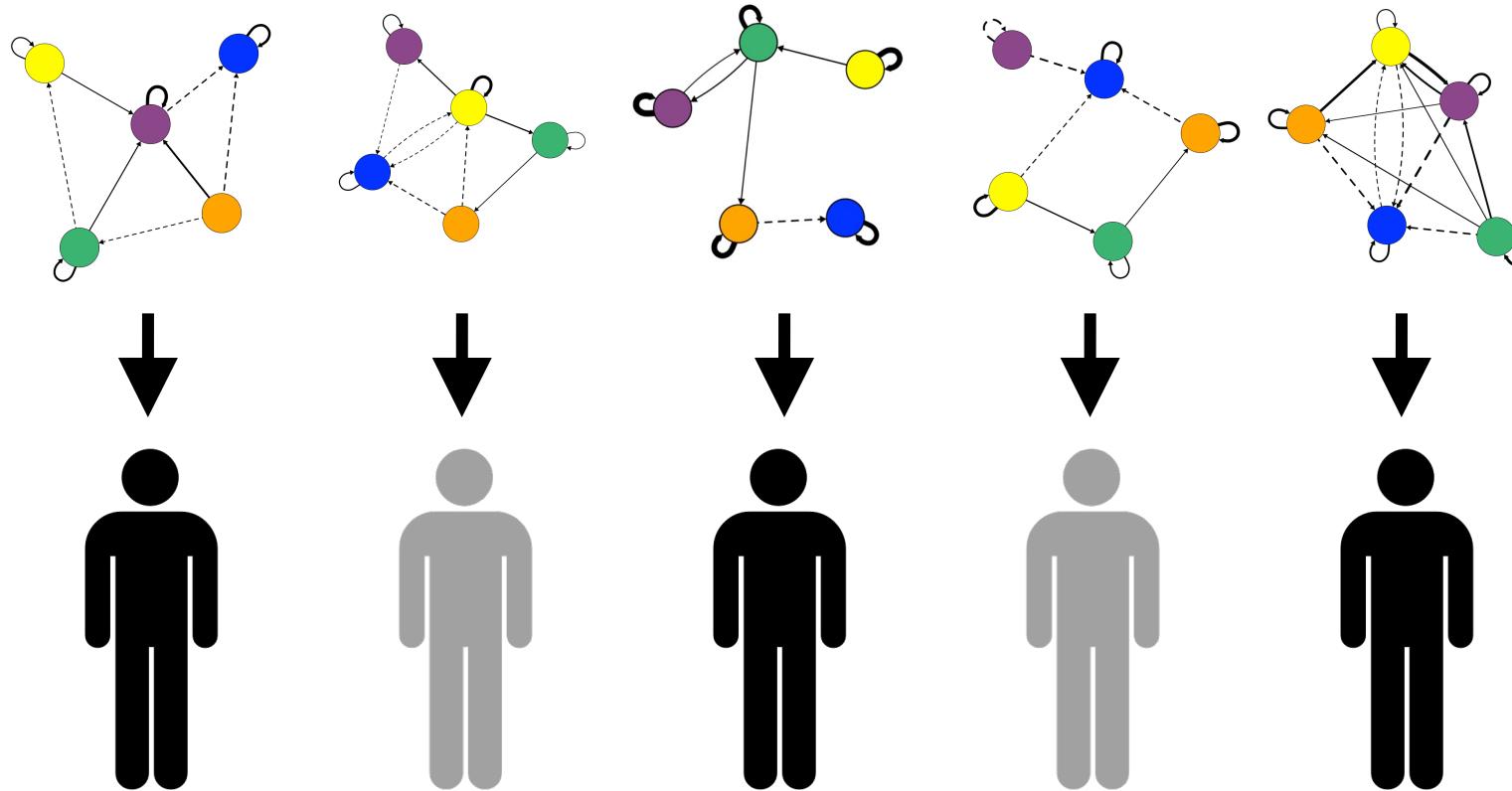
Prediction

Within-Person

Explanation

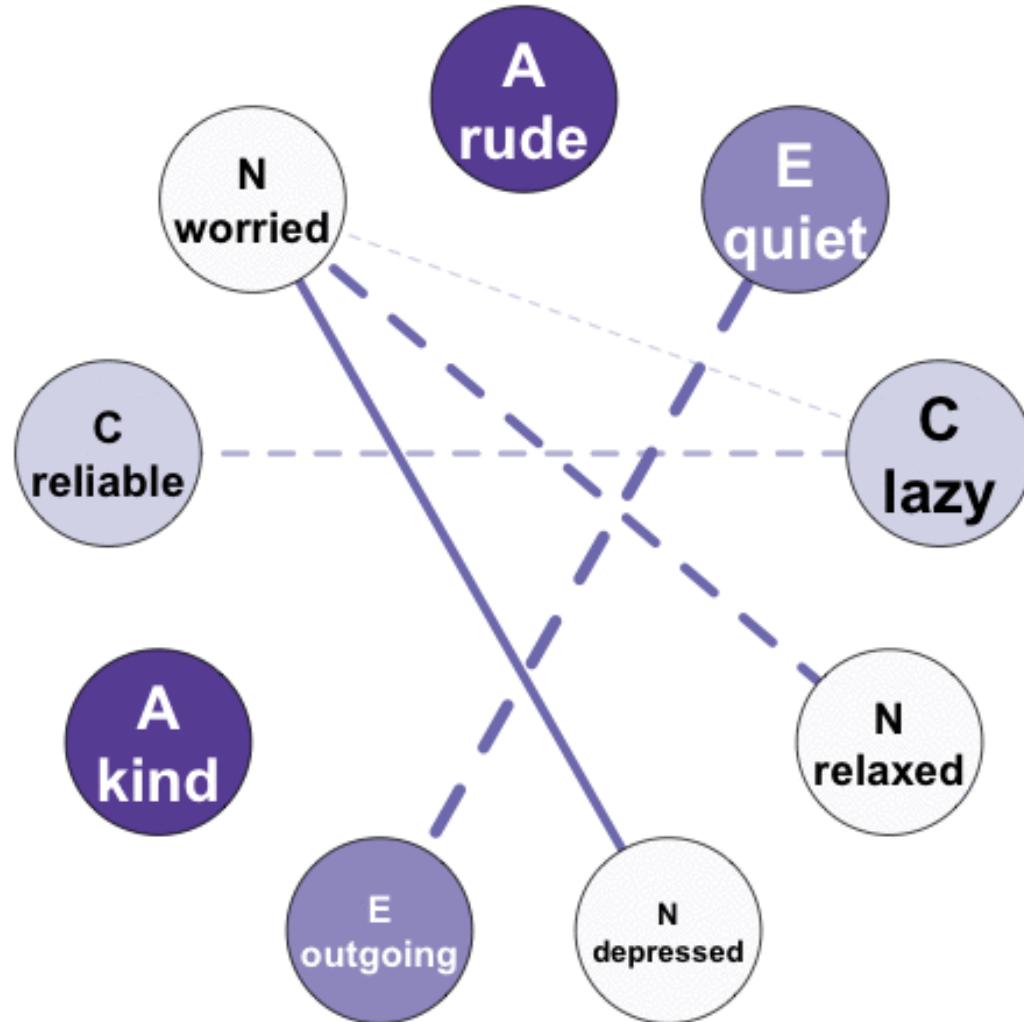
Idiographic

What is the structure of behaviors and experiences within a single person?



Idiographic

What is the structure of behaviors and experiences within a single person?



The structures differ across people.

What is the structure of behaviors and experiences within a single person?



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Journal of Personality and Social Psychology:
Personality Processes and Individual Differences

2020, Vol. 118, No. 5, 1080–1100
<http://dx.doi.org/10.1037/pspp0000249>

Consistency and Change in Idiographic Personality: A Longitudinal ESM Network Study

Emorie D. Beck and Joshua J. Jackson
Washington University in St. Louis

The study of personality development primarily focuses on between-person, nomothetic assessments of personality using assessments of personality traits. An alternative approach uses individual, idiographic personality assessment, defining personality in reference to one's self rather than to others. Nomothetic approaches to personality development identify high levels of consistency in personality, even over decades. But the developmental pattern of idiographic personality is unclear, partially due to difficulties in assessing personality idiographically. We examine a number of traditional and novel idiographic modeling techniques using 2 years of ESM data from the Personality and Interpersonal Roles Study (PAIRS; $N = 372$ participants, total assessments $N = 17,715$). We computed idiographic lagged (lag 1 autoregressive) and contemporaneous (concurrent) graphical VAR models, as well as several other idiographic models, for each subject at the individual level at both waves, which are represented as networks. The utility and interpretation of these newer idiographic personality models at an individual level is demonstrated by using two example subjects. Across all participants, idiographic personality models were heterogeneous in structure, indicating the value of an idiographic approach. Contemporaneous, but not lagged, idiographic models were consistent over time. Despite normative levels of consistency, both types of idiographic models exhibited a great range of individual differences in consistency where some people were completely stable across two years whereas others were very unlike their former selves. In sum, we demonstrate that novel idiographic modeling techniques provide a useful tool to address questions of personality dynamics that were not possible with more traditional idiographic assessments.



Keywords: personality, development, idiographic, longitudinal, networks

How do we capture changes in personality and identity of a person?



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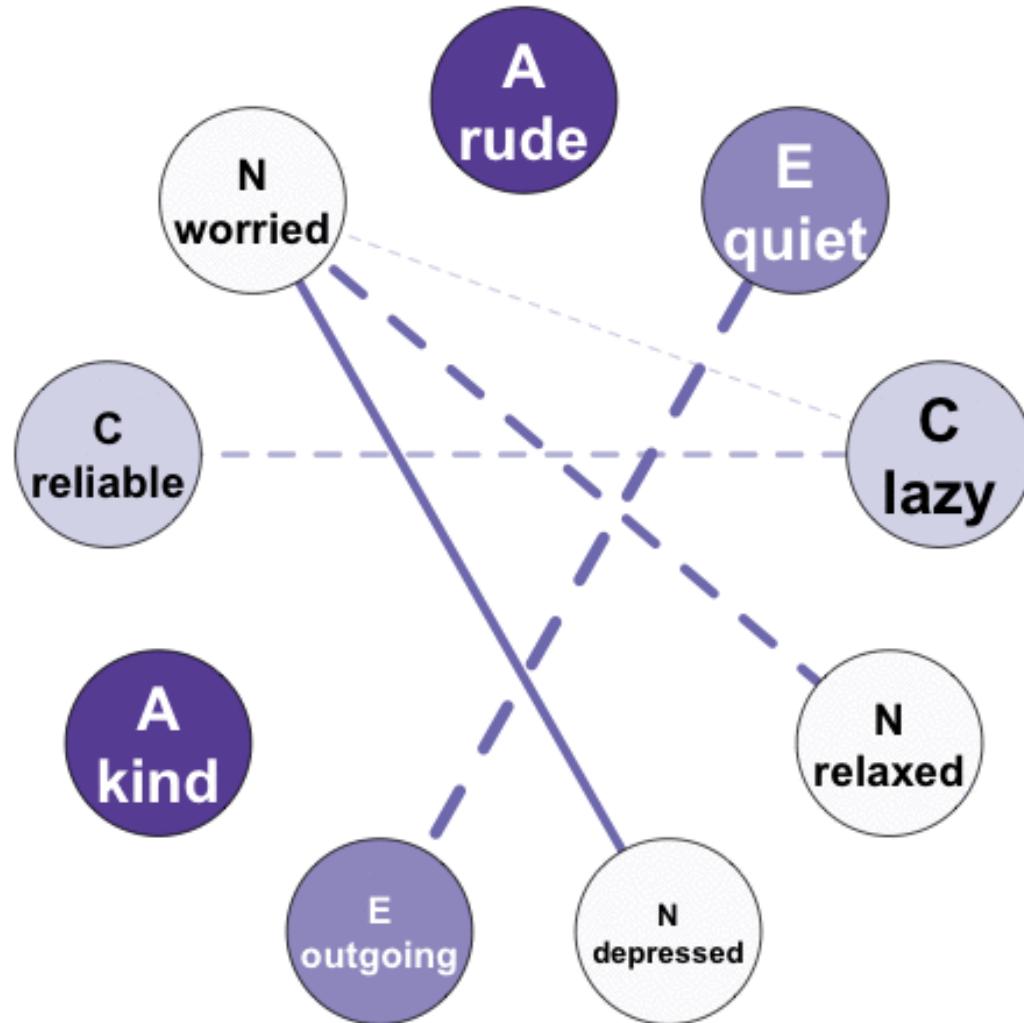
Consistency and Change in Idiographic Personality: A Longitudinal ESM Network Study

Emorie D. Beck and Joshua J. Jackson
Washington University in St. Louis

The study of personality development primarily focuses on between-person, nomothetic assessments of personality using assessments of personality traits. An alternative approach uses individual, idiographic personality assessment, defining personality in reference to one's self rather than to others. Nomothetic approaches to personality development identify high levels of consistency in personality, even over decades. But the developmental pattern of idiographic personality is unclear, partially due to difficulties in assessing personality idiographically. We examine a number of traditional and novel idiographic modeling techniques using 2 years of ESM data from the Personality and Interpersonal Roles Study (PAIRS; $N = 372$ participants, total assessments $N = 17,715$). We computed idiographic lagged (lag 1 autoregressive) and contemporaneous (concurrent) graphical VAR models, as well as several other idiographic models, for each subject at the individual level at both waves, which are represented as networks. The utility and interpretation of these newer idiographic personality models at an individual level is demonstrated by using two example subjects. Across all participants, idiographic personality models were heterogeneous in structure, indicating the value of an idiographic approach. Contemporaneous, but not lagged, idiographic models were consistent over time. Despite normative levels of consistency, both types of idiographic models exhibited a great range of individual differences in consistency where some people were completely stable across two years whereas others were very unlike their former selves. In sum, we demonstrate that novel idiographic modeling techniques provide a useful tool to address questions of personality dynamics that were not possible with more traditional idiographic assessments.

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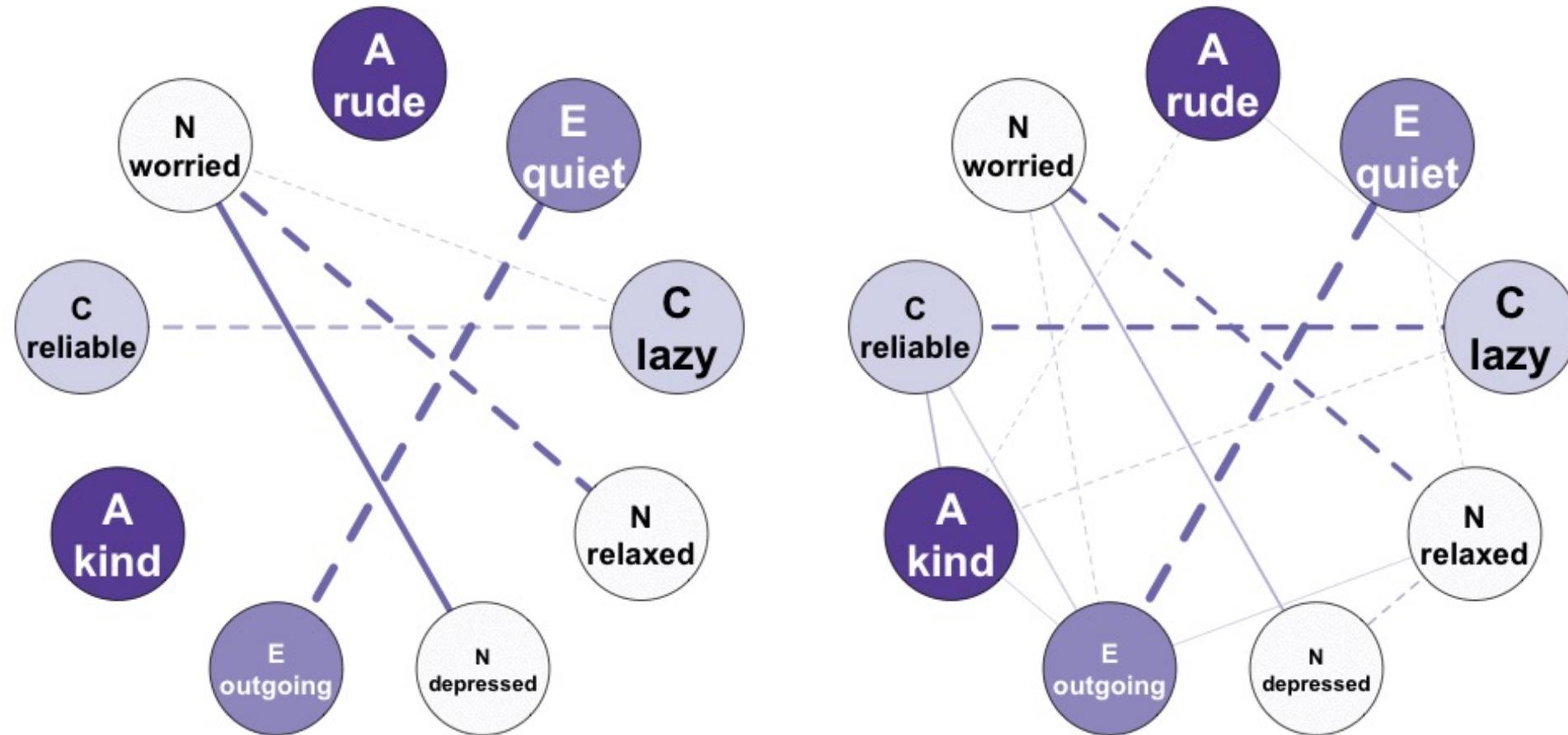
What is the structure of behaviors and experiences within a single person?



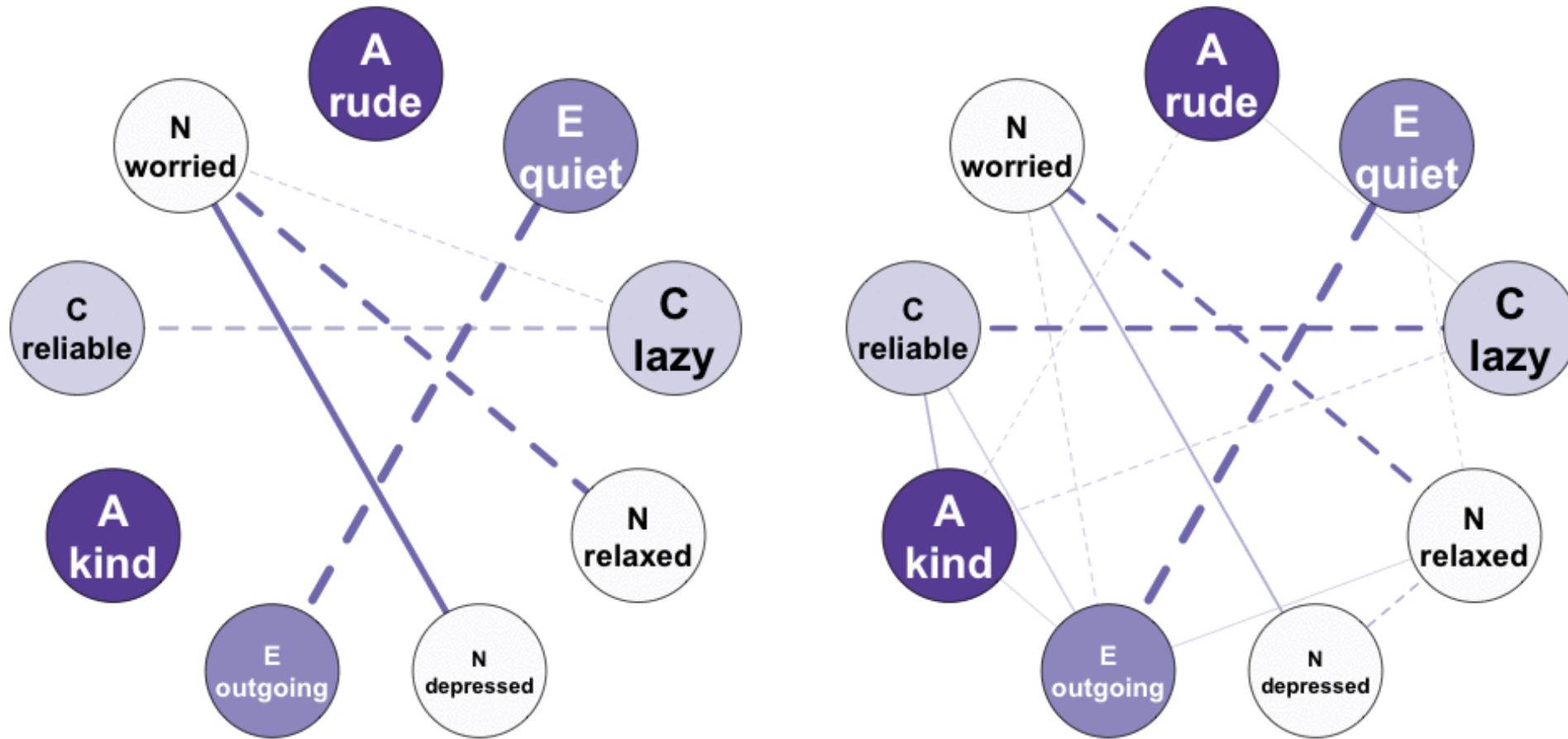
The structures differ across people.

But do they show expected longitudinal consistency?

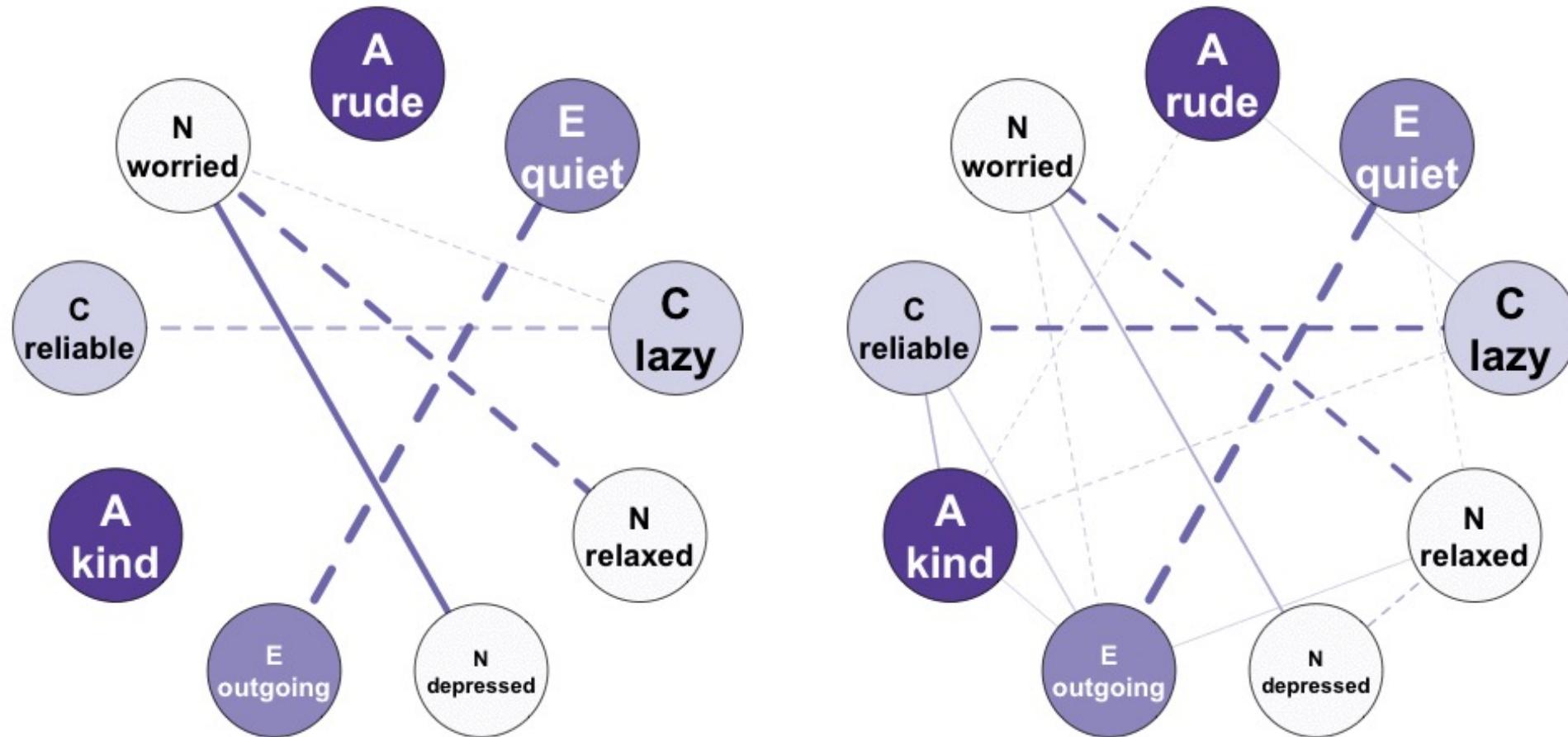
How do we capture changes in personality and identity of a person?



How do we capture changes in personality and identity of a person?



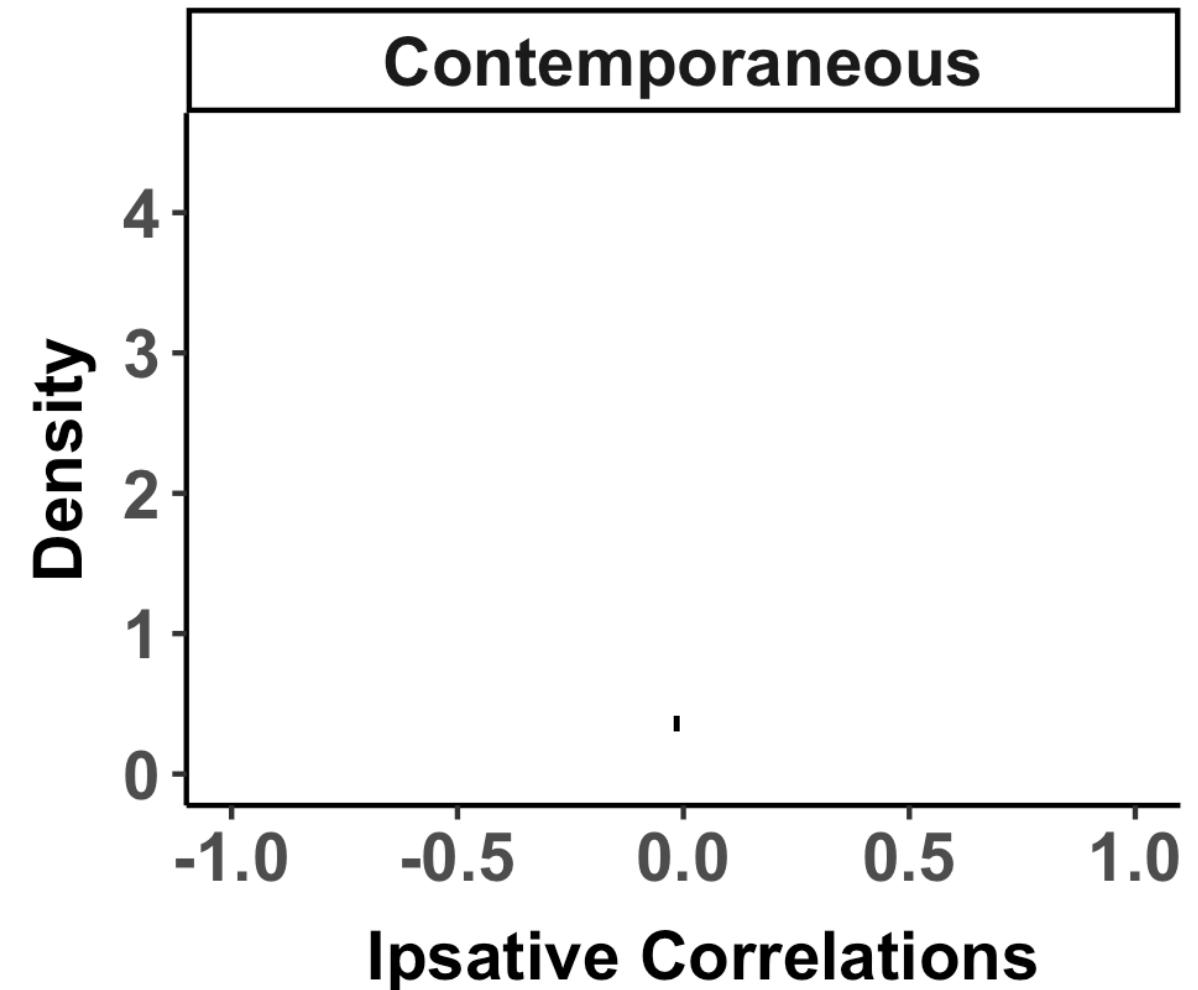
How do we capture changes in personality and identity of a person?



How do we capture changes in personality and identity of a person?

Ipsative Network Consistency

How consistent is
idiographic personality
across two
years?

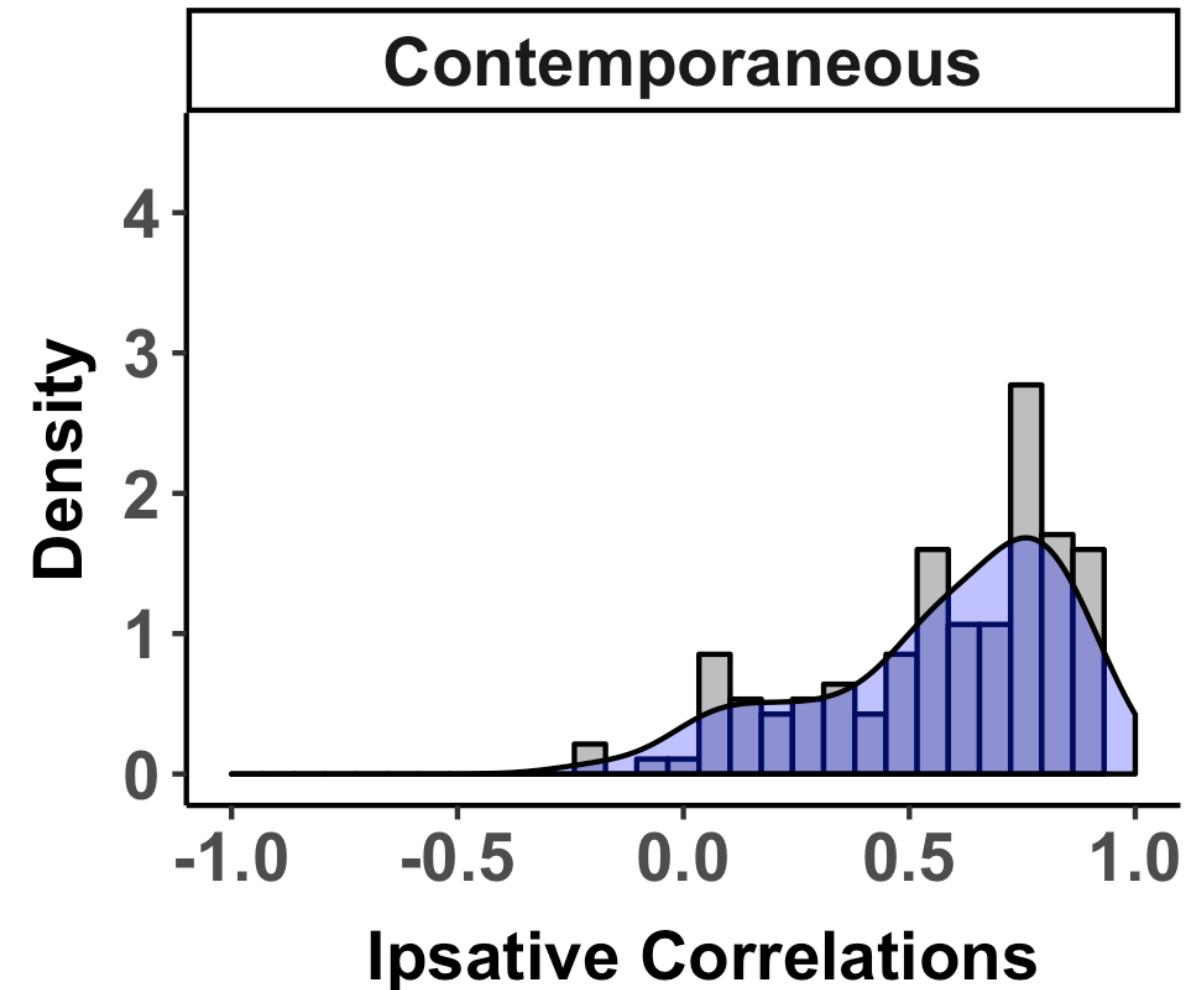


How do we capture changes in personality and identity of a person?

How consistent is idiographic personality across two years?

Idiographic Personality is consistent over two years.

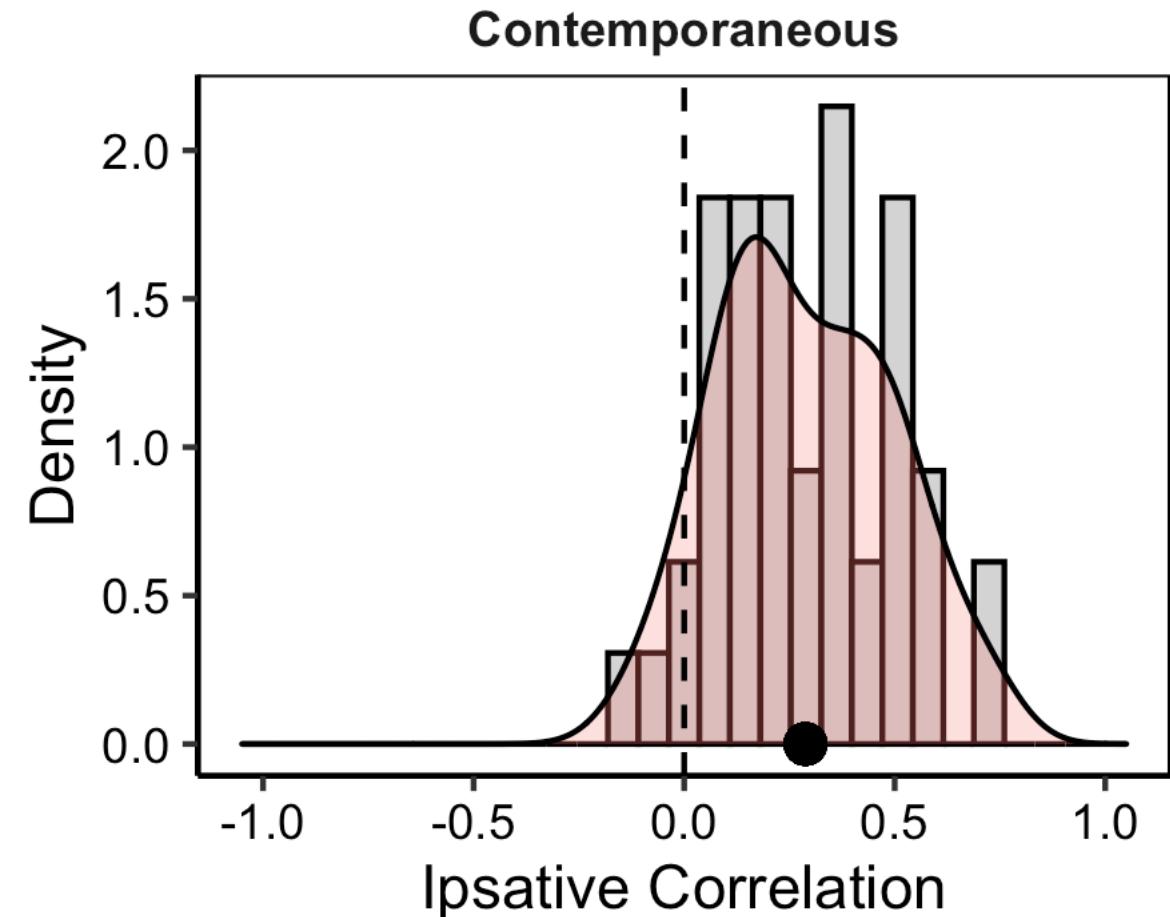
Ipsative Network Consistency



How do we capture changes in personality and identity of a person?

How consistent is idiographic personality across two years?

Idiographic Personality is consistent over two years AND global events.



Questions

Description

Prediction

Explanation

Aggregation

What is the structure of behaviors and experiences within a single person?

How accurately can we predict the behaviors and experiences of a person?

How do we capture changes in personality and identity of a person?

Are there unique antecedents and consequences of changes in personality?

Idiographic

Description

Prediction

Explanation

Between Person

Within-Person

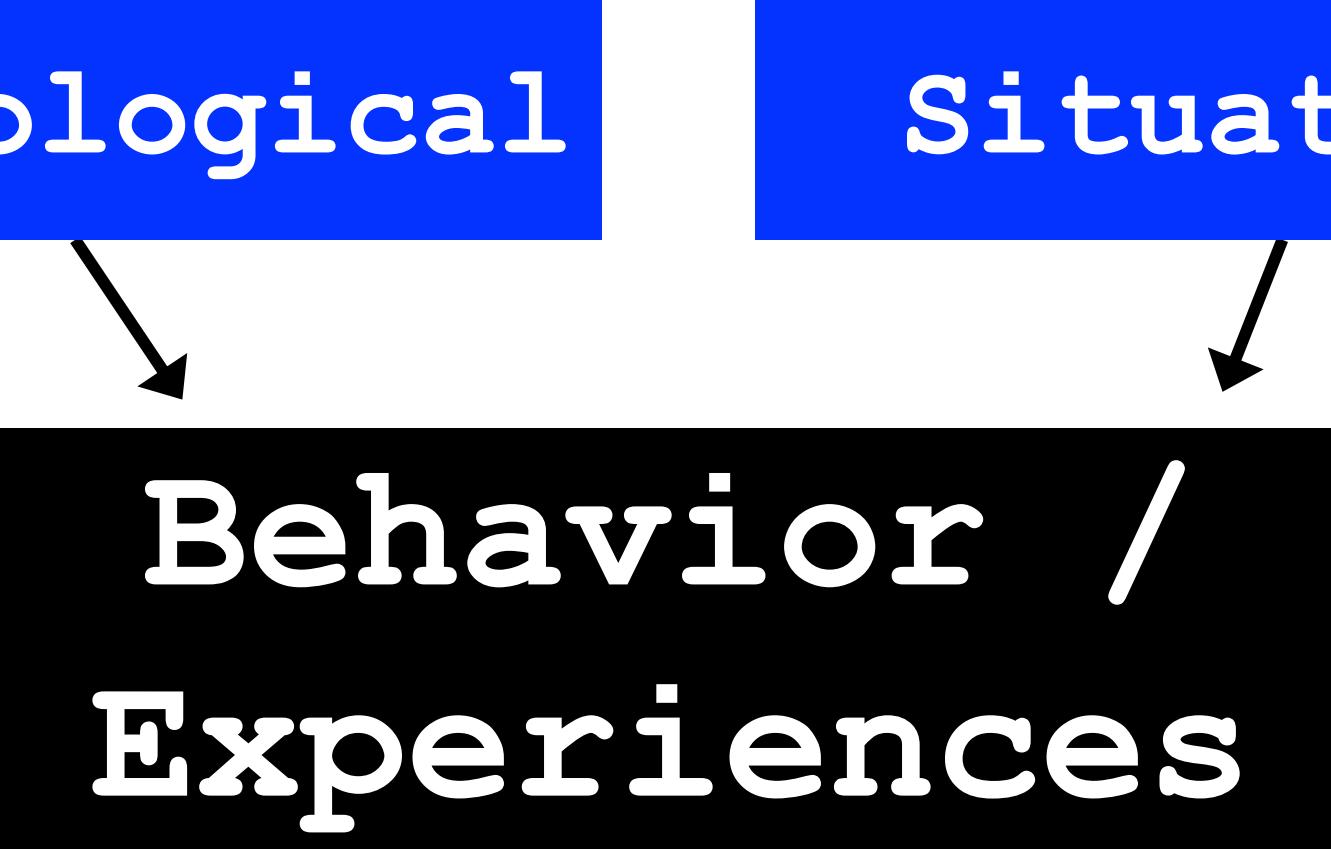
Idiographic

How accurately can we predict the behaviors and experiences of a person?

Psychological

Situations

Behavior /
Experiences



```
graph TD; A[Psychological] --> C[Behavior / Experiences]; B[Situations] --> C
```

A diagram illustrating the relationship between psychological factors, situational factors, and observed behavior/experiences. At the top, two blue boxes labeled "Psychological" and "Situations" are positioned side-by-side. Two black arrows point downwards from these boxes towards a larger black box at the bottom center. This bottom box contains the text "Behavior / Experiences".

How accurately can we predict the behaviors and experiences of a person?

Critical Assumption

Situations and experiences should have similar consequences across people.

People with similar levels of a personality characteristic should behave in similar ways.

How accurately can we predict the behaviors and experiences of a person?

Alternative Assumption

Situations and experiences should have *different* consequences across people.

People with similar levels of a personality characteristic *may not* behave in similar ways.

Description

Prediction

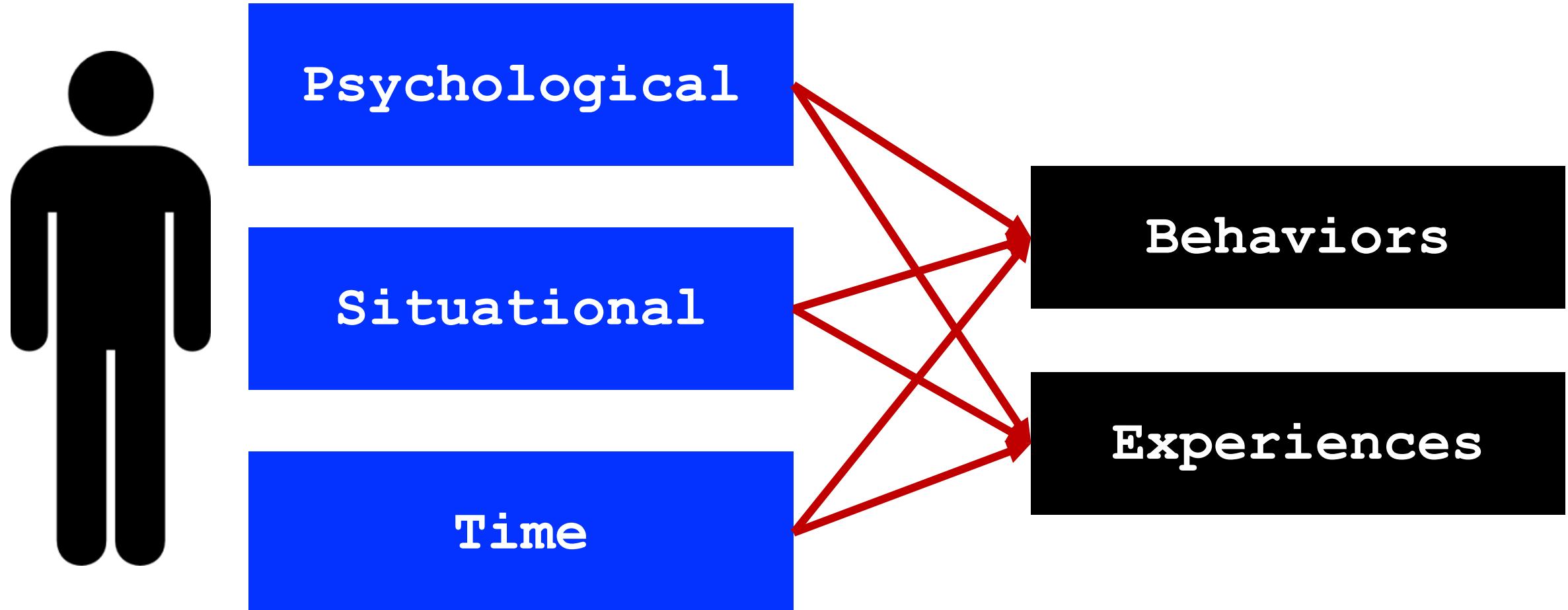
Explanation

Between Person

Within-Person

Idiographic

How accurately can we predict the behaviors and experiences of a person?

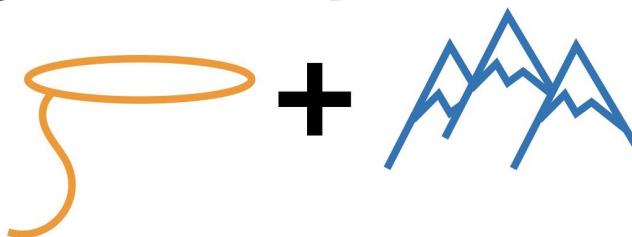


How accurately can we predict the behaviors and experiences of a person?

Analytic Plan

3 machine learning classification methods:

Elastic Net

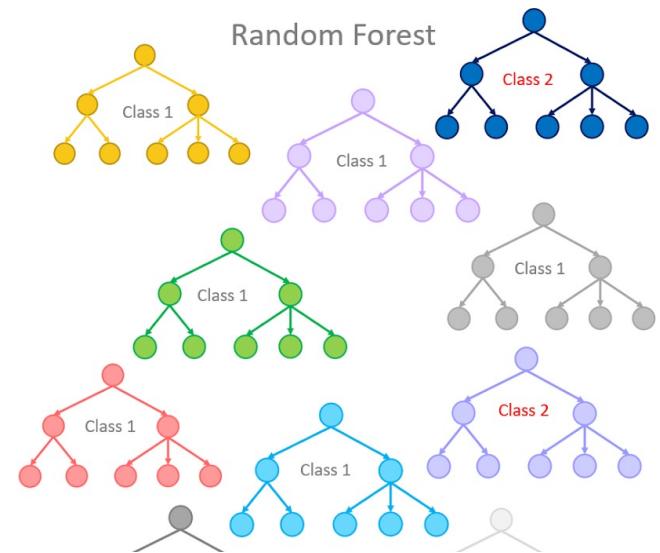


- Classification Accuracy
- Area under the receiver operating curve (AUC)

BISCWIT



Random Forest

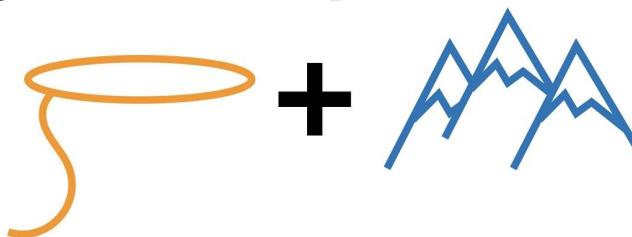


How accurately can we predict the behaviors and experiences of a person?

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3 machine learning classification methods:

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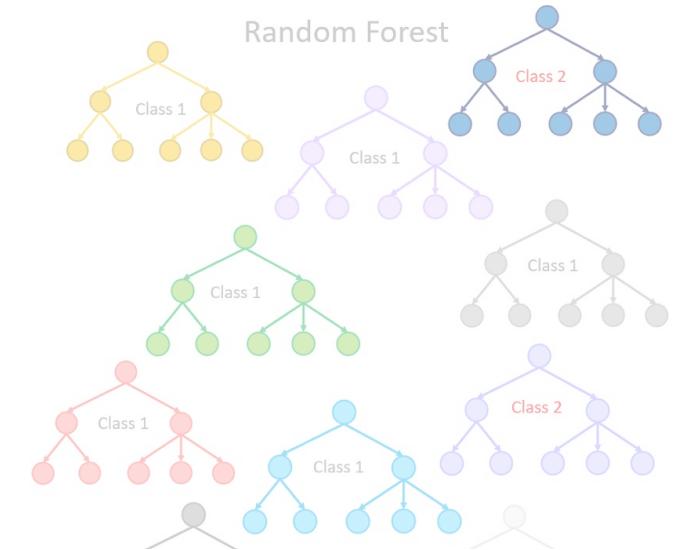


- Classification Accuracy
- Area under the receiver operating curve (AUC)

BISCWIT



Random Forest



Description

Prediction

Explanation

Between Person

Within-Person

Idiographic

How accurately can we predict the behaviors and experiences of a person?

Classification Accuracy

Elastic Net

Median (SD) N

Procrastination

Loneliness

Argument

Interacted

Studying

Sick

Tired

Classification Accuracy

Elastic Net

Classification accuracy was high, on average, with some variability across outcomes.

Sick

Tired



Description

Prediction

Explanation

Between Person

Within-Person

Idiographic

How accurately can we predict the behaviors and experiences of a person?



Description

Prediction

Explanation

Between Person

Within-Person

Idiographic

How accurately can we predict the behaviors and experiences of a person?

Elastic Net

Participant ID

Feature Category

- Time
- Situations
- Psychological



Description

Prediction

Explanation

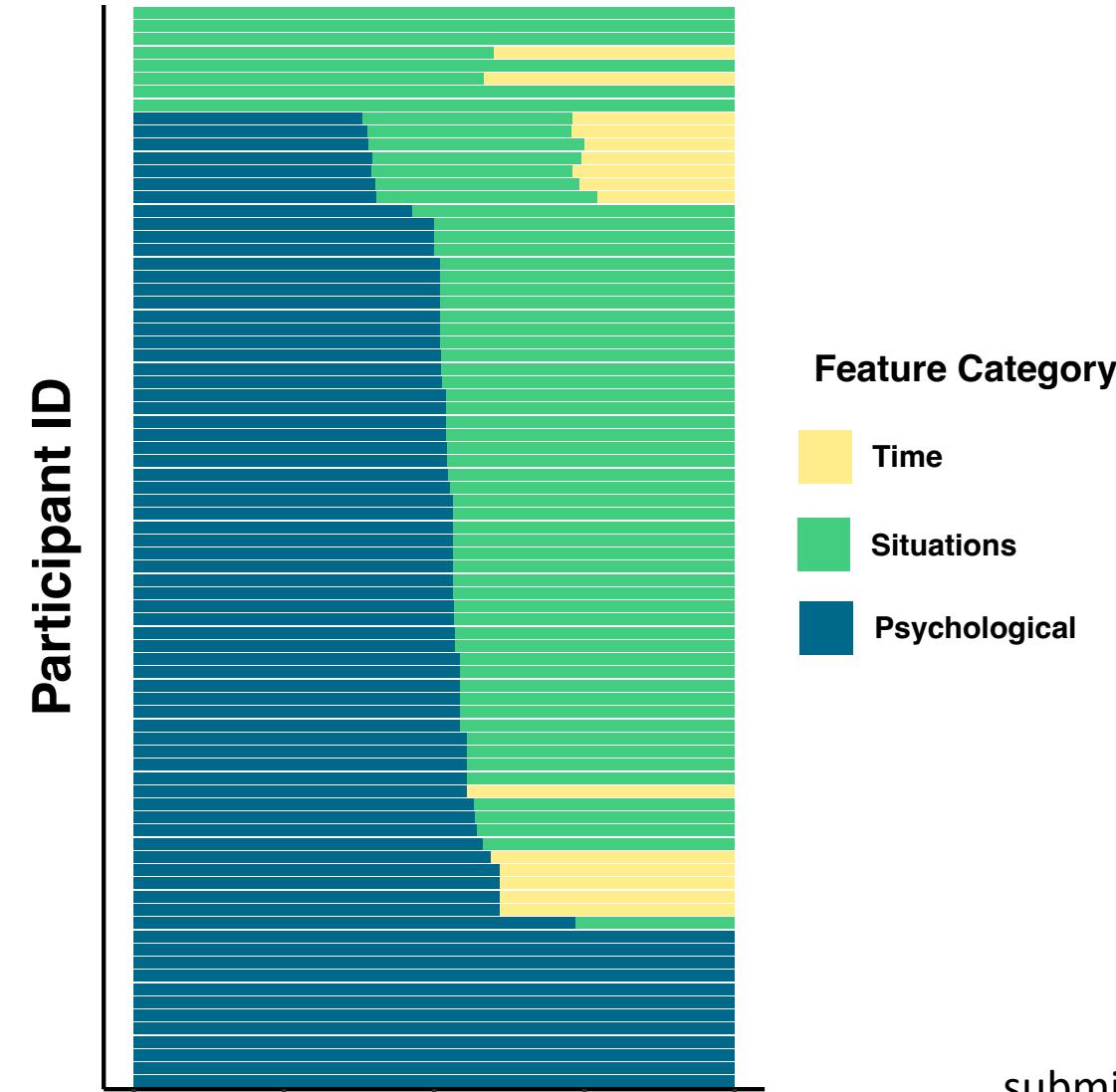
Between Person

Within-Person

Idiographic

How accurately can we predict the behaviors and experiences of a person?

Elastic Net

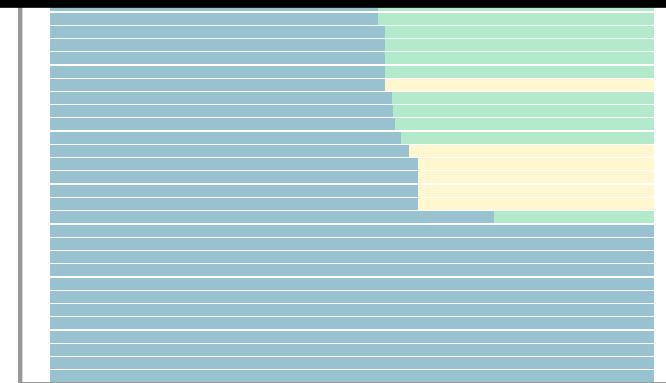


Beck & Jackson (revision submitted, *Psychological Science*)

How accurately can we predict the behaviors and experiences of a person?

Elastic Net

The relative contribution of person, situation, and timing features varies across people.



Description

Prediction

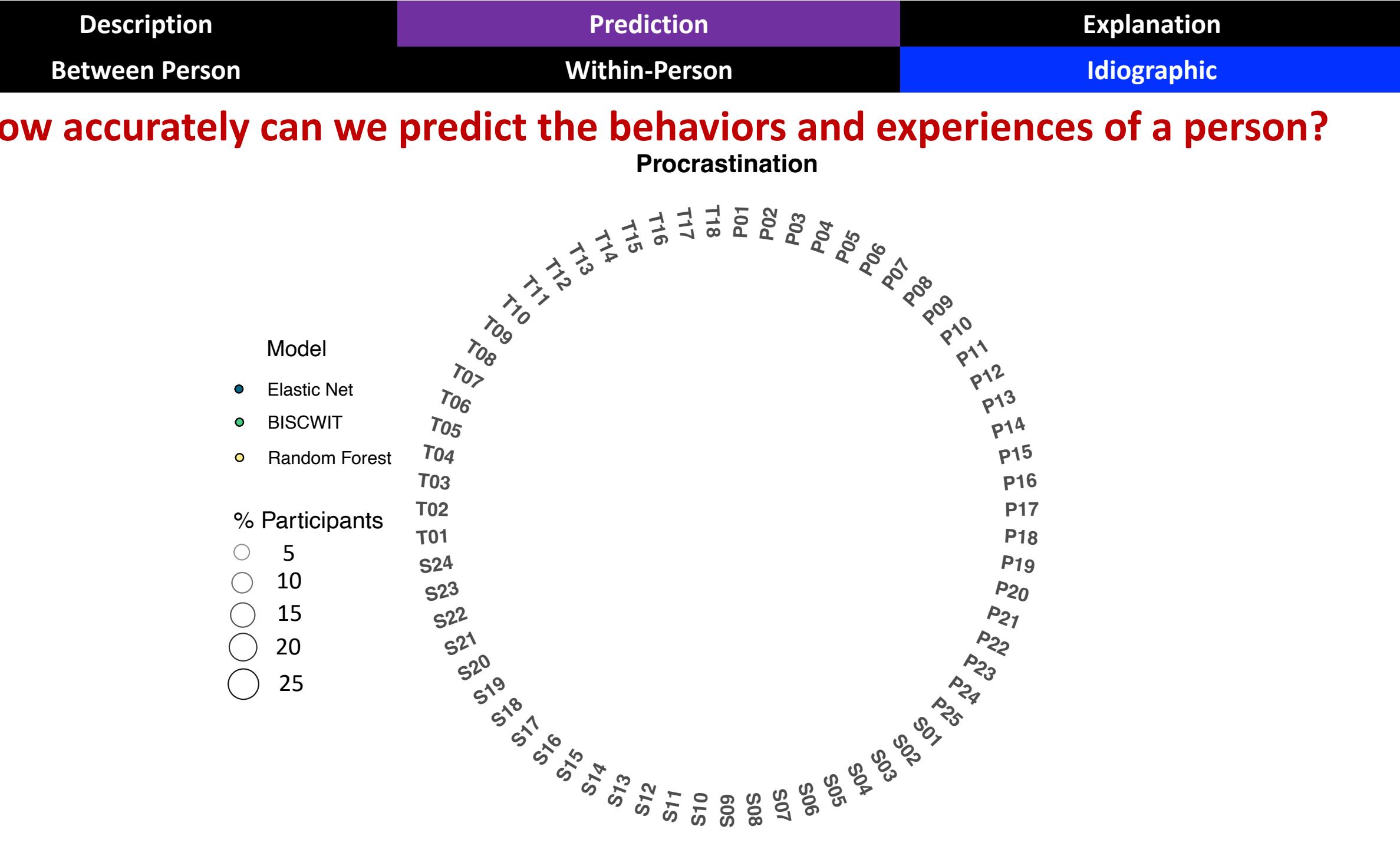
Explanation

Between Person

Within-Person

Idiographic

How accurately can we predict the behaviors and experiences of a person?



Description

Prediction

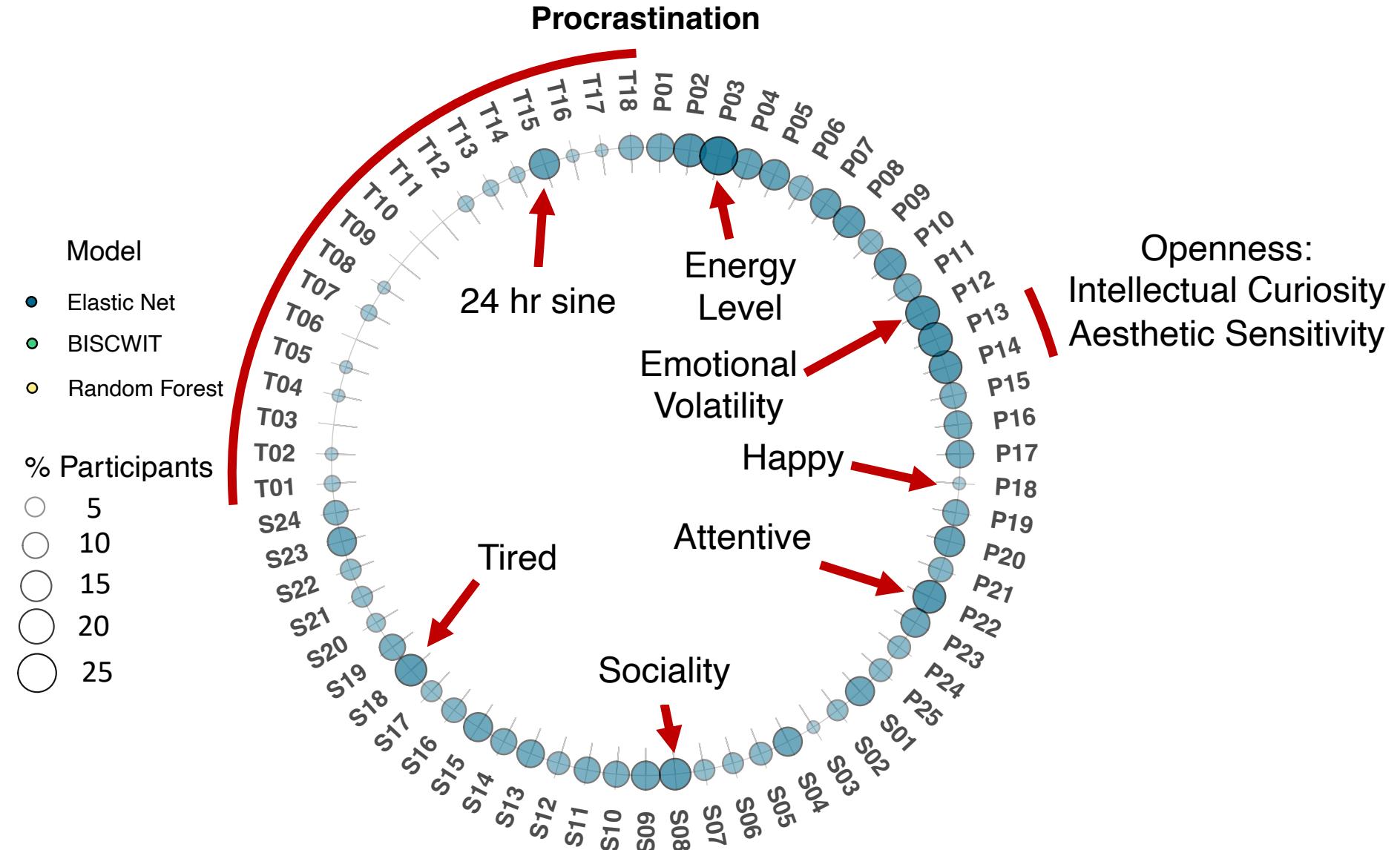
Explanation

Between Person

Within-Person

Idiographic

How accurately can we predict the behaviors and experiences of a person?



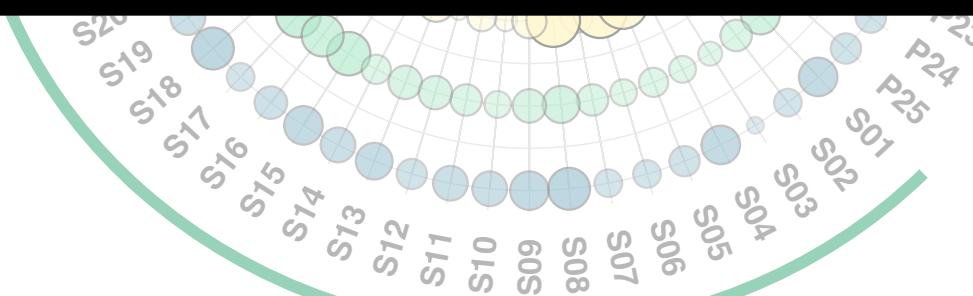
How accurately can we predict the behaviors and experiences of a person?

Procrastination

No one feature dominated the prediction of any outcome (max ~35%).

Behaviors & experiences have unique antecedents.

○ 25



Description

Prediction

Explanation

Between Person

Within-Person

Idiographic

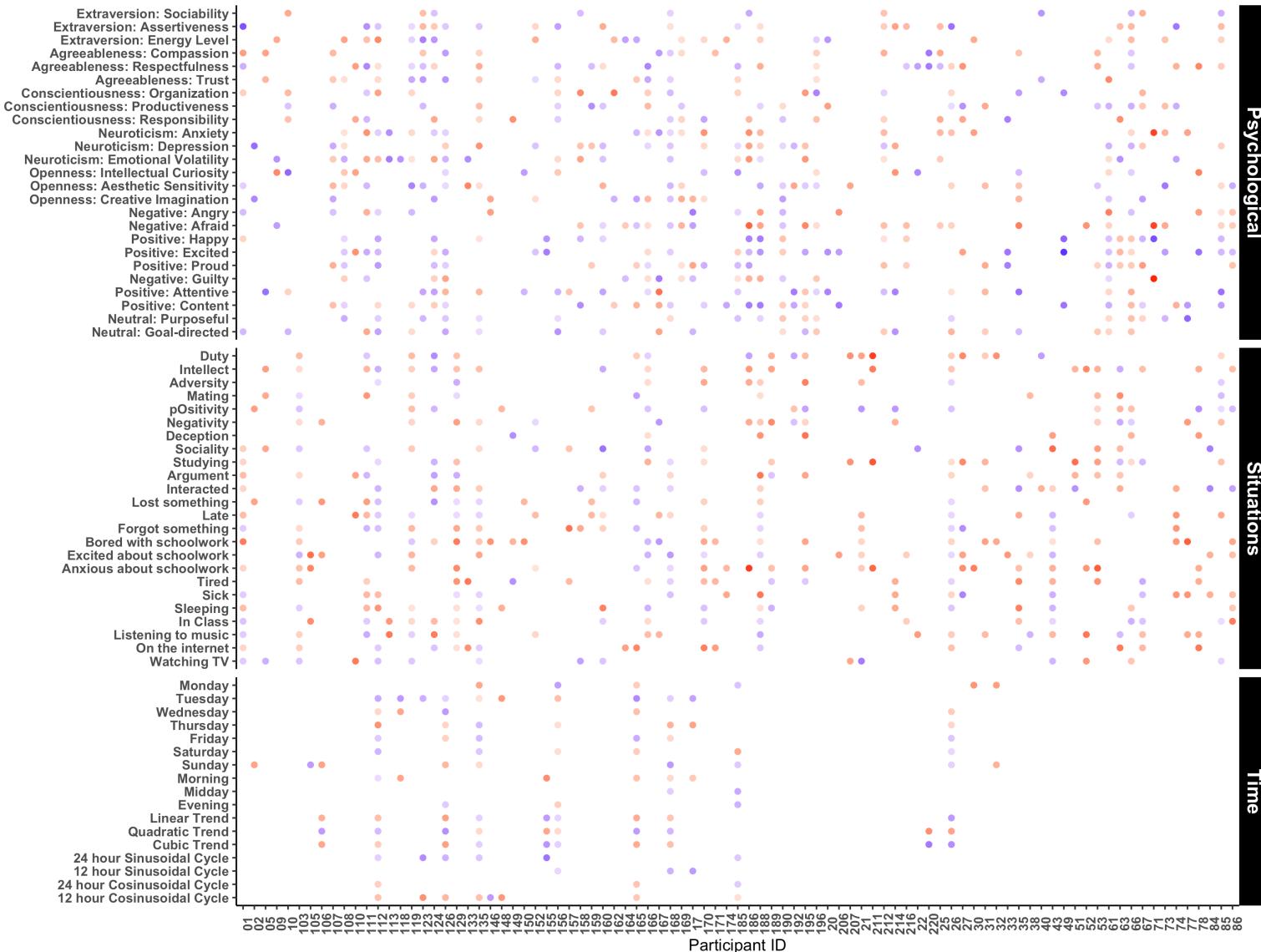
How accurately can we predict the behaviors and experiences of a person?

Coefficient



-0.3 0.0 0.3 0.6

BISCWIT Predicting Future Procrastinating Using Best Accuracy Models



Description

Prediction

Explanation

Between Person

Within-Person

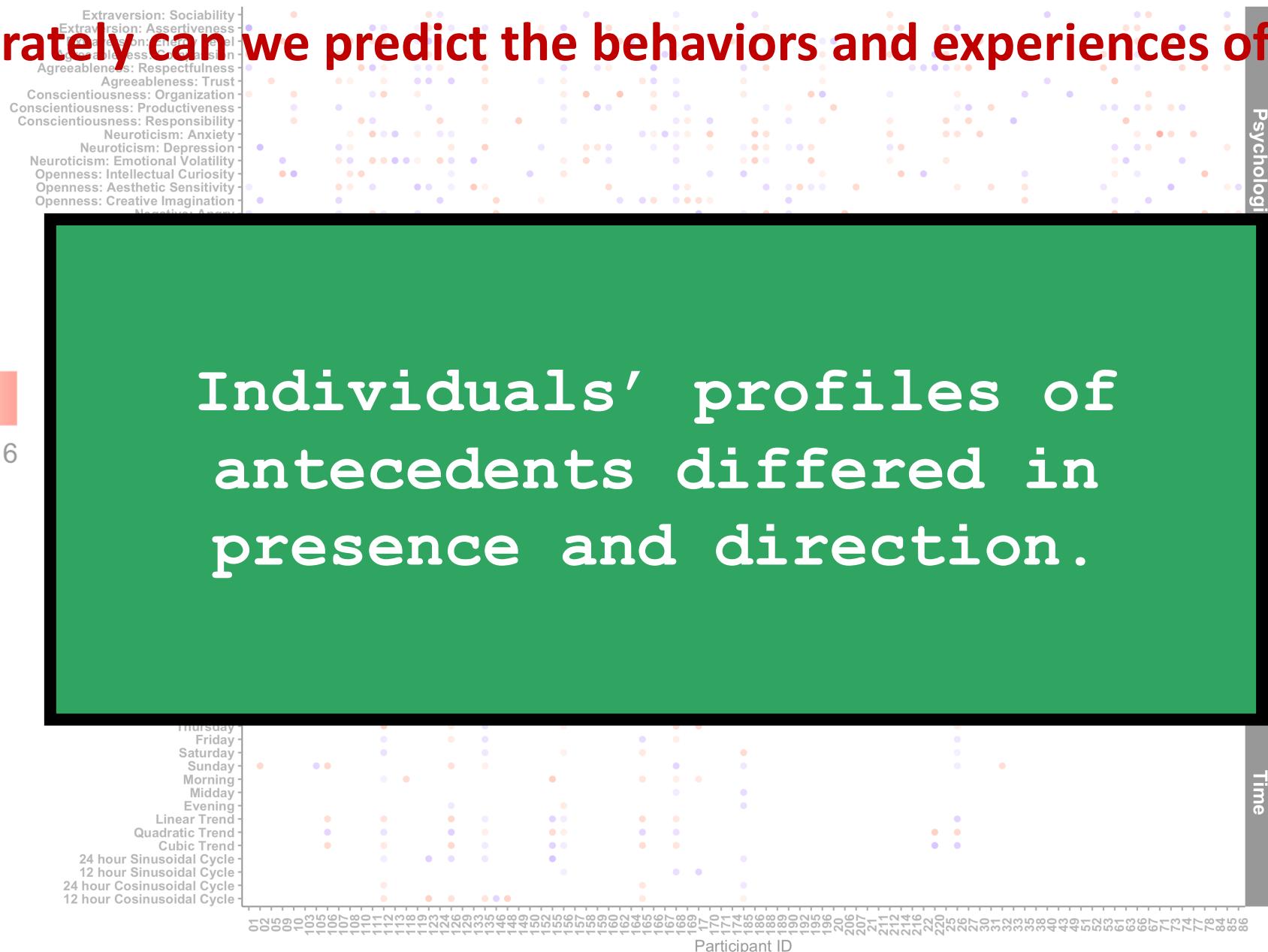
Idiographic

How accurately can we predict the behaviors and experiences of a person?

Coefficient



Individuals' profiles of antecedents differed in presence and direction.



Questions

Description

Prediction

Explanation

Aggregation

Between-Person /
Nomothetic

Within-Person

Idiographic

Questions

Description

Prediction

Explanation

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Between-Person /
Nomothetic

Within-Person

Idiographic