

The Chemistry Between Us:
Illuminating Complementarity Effects in Interpersonal
Assessment via Moment-to-Moment Analyses


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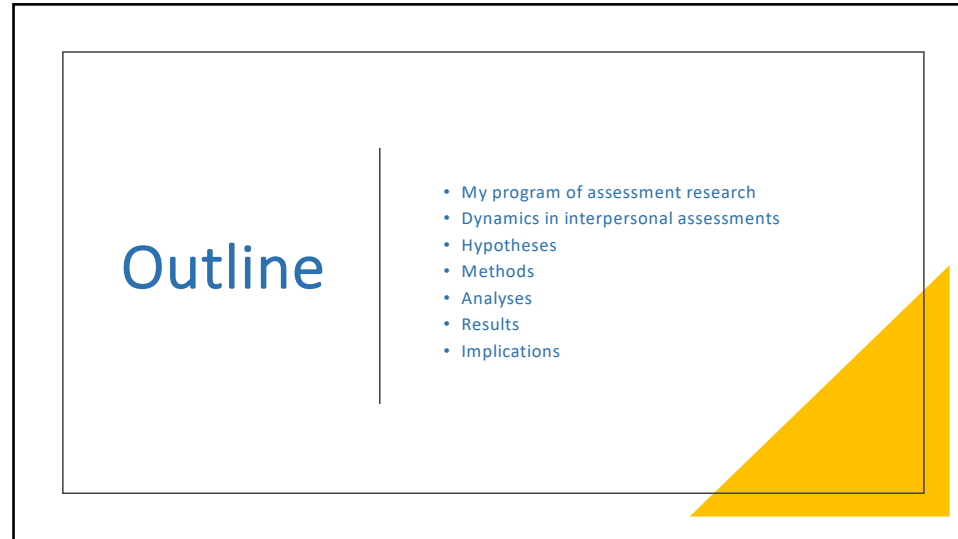


Objectives

Advance knowledge about interpersonal dynamics in interpersonal assessments

- How do interpersonal dynamics in these assessments **look like**?
 - Can **patterns** be deciphered?
- How do these interpersonal dynamics **unfold across time**?
- Do these interpersonal dynamics **affect** ...
 - candidate ratings in assessments?
 - predictions of job performance?

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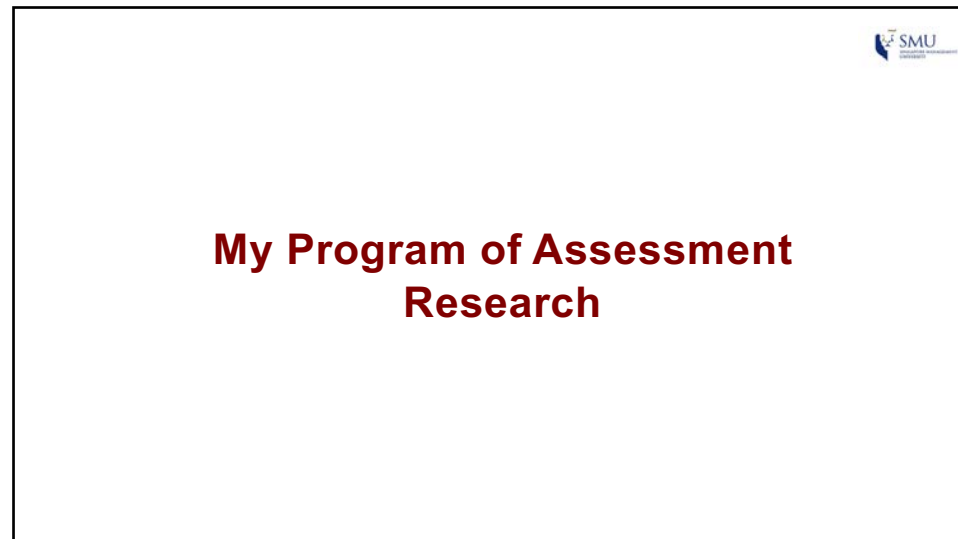


Outline

- My program of assessment research
- Dynamics in interpersonal assessments
- Hypotheses
- Methods
- Analyses
- Results
- Implications

A yellow triangle graphic is located in the bottom right corner of the slide.

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My Program of Assessment Research

SMU
Southern Methodist University

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My Program of Research

Talent acquisition
How to make companies attractive employers?

Talent assessment
How to best select people into companies?

Current projects:

- Meta-analysis selection methods
- Modular approach to selection
- Multiple, speeded assessments




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A. Meta-analysis on Selection & Assessment

Journal of Applied Psychology

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0893-3200/23

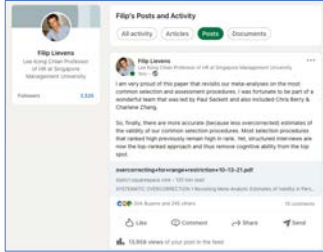
Revisiting Meta-Analytic Estimates of Validity in Personnel Selection:
Addressing Systematic Overcorrection for Restriction of Range

Paul R. Sackett¹, Charlene Zhang¹, Christopher M. Berry², and Filip Lievens³

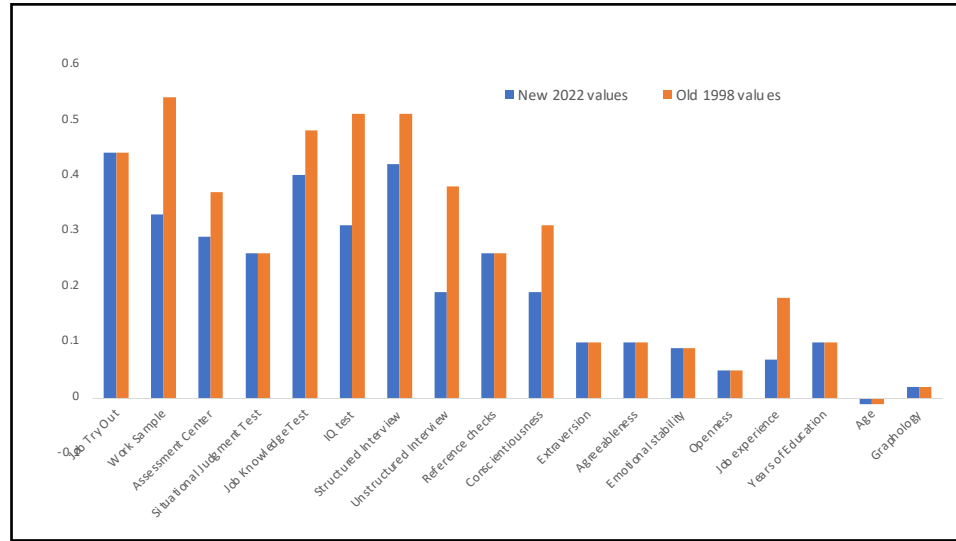
¹Department of Psychology, University of Minnesota
²Department of Management and Entrepreneurship, Kelley School of Business, Indiana University
³Lee Kong Chan School of Business, Singapore Management University

This paper systematically revisits prior meta-analytic conclusions about the criterion-related validity of personnel selection procedures, and particularly the effect of range restriction corrections on these validity estimates. Corrections for range restriction in meta-analyses of predictor-criterion relationships in personnel selection contexts typically involve the use of an artifact distribution. After outlining and critiquing five approaches that have commonly been used to create and apply range restriction artifact distributions, we conclude that each has significant issues that often result in substantial overcorrection and that deflate the validity of many selection procedures for predicting job performance has been substantially overestimated. Revisiting prior meta-analytic conclusions produces revised validity estimates. Key findings are that most of the same selection procedures that ranked high in prior summaries remain high in rank, but with mean validity estimates reduced by 10–20 points. Structured interviews emerged as the top-ranked selection procedure. We also pair validity estimates with information about mean Black-White subgroup differences per selection procedure, providing information about validity-diversity tradeoffs. We conclude that our selection procedures remain useful, but selection predictor-criterion relationships are considerably lower than previously thought.

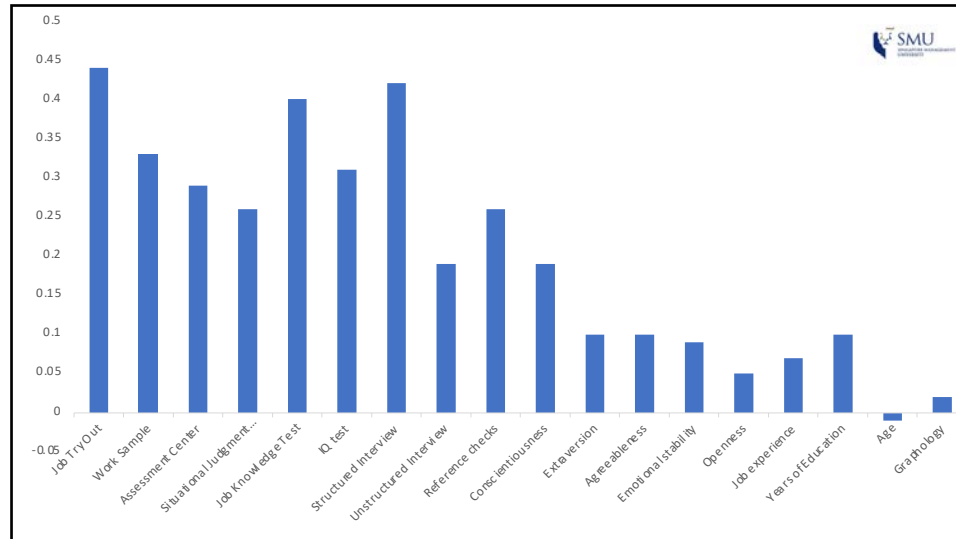
Keywords: selection procedures, validity, meta-analysis, range restriction, artifact distribution



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B. Modular Approach to Assessment



Key building blocks on which assessment methods vary.

Taxonomy: Super 7

1. Stimulus format
2. Response format
3. Consistency in stimulus presentation
4. Consistency in response evaluation
5. Contextualization
6. Information source
7. Instructions

Mixing & matching these features results in new assessment methods.



Example of Modular Approach to Assessment



Assessment center exercises

Limited sample of situations

Less standardized & structured

Emphasis on (non)-verbal behavior

Structured Interviews

Broader coverage of situations

More standardized & structured

Emphasis on reported behavior

Multiple, Speeded Assessments

C. Multiple, Speeded Assessments (“Flash” Role-plays)

Characteristics

1. Multiple (>10)
2. Interpersonal behavioral simulations
3. Short (< 3min)
4. Structured
5. Overall evaluation

Common theme: E.g., Charity event organization

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Recent Evidence: Proof of Concept

	<i>r</i> Multiple, Speeded Assessments
Cognitive ability	.27**
Extraversion	.38**
Agreeableness	.24*
Openness	.11
Emotional stability	.05
Conscientiousness	-.06
Situational Judgment Test	.32**
Job performance	.54**

N = 96

Multiple, Speeded Assessments Under Scrutiny: Underlying Theory, Design Considerations, Reliability, and Validity


Christyeh N. Herdt¹ and Filip Lievens^{1,2}
¹ Singapore Management University
² Ghent University

Recently, multiple, speeded assessments (e.g., “speeded” or “flash” role-plays) have made rapid inroads into the selection domain. So far, however, the conceptual underpinning and empirical evidence related to these short, fast-paced assessment approaches has been lacking. This raises questions whether these speeded assessments can serve as reliable and valid indicators of future performance. This article uses the notions of stimulus and response domain sampling to conceptualize multiple, speeded behavioral job simulations as a hybrid of established simulation-based selection methods. Next, we draw upon the thin slices of behavior paradigm to theorize about the quality of ratings made in multiple, speeded behavioral simulations. In two studies, various assessor pools assessed a sample of 96 MBA students in 18 3-min role-plays designed to capture situations in the junior management domain. At the individual speeded role-play level, reliability and validity were not ensured. Yet, aggregated across all assessors’ ratings of all speeded role-plays, the overall score for predicting future performance was high (.54). Validities remained high when assessors evaluated only the first minute (vs. full 3 min) or received only a context training (vs. traditional assessor training). Aggregating ratings of performance in multiple, heterogeneous situations that elicit a variety of domain-relevant behavior emerged as key requirement to obtain adequate domain coverage, capture both ability and personality (extraversion and agreeableness), and achieve substantial validities. Overall, these results show the importance of the stimulus and response domain sampling logic and send a strong warning to using “single” speeded behavioral simulations in practice.


Keywords: personnel selection, multiple, speeded assessments, behavioral job simulations, thin slices, generalizability theory, stimulus domain and response domain sampling

Supplemental materials: <https://doi.org/10.1037/0000003.supp>

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Dynamics in Interpersonal Assessments



Interpersonal skills

- Broad, trait-like
- Retrospective & static
- One-time measurement

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Herde, C.N., & Lievens, F. (accepted). The Chemistry Between Us: Illuminating Complementarity Effects in Interpersonal Assessment Methods Via Moment-to-Moment Analyses. *Journal of Applied Psychology*

https://static1.squarespace.com/static/5dd4c2c45ccc387bd8ffb210/t/64fc38e1d8379c14cee47532/1694251235212/230828_Complementarity+final.pdf

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Objectives

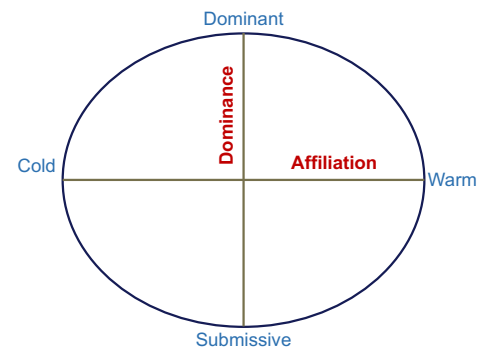


Advance knowledge about interpersonal dynamics in interpersonal assessments

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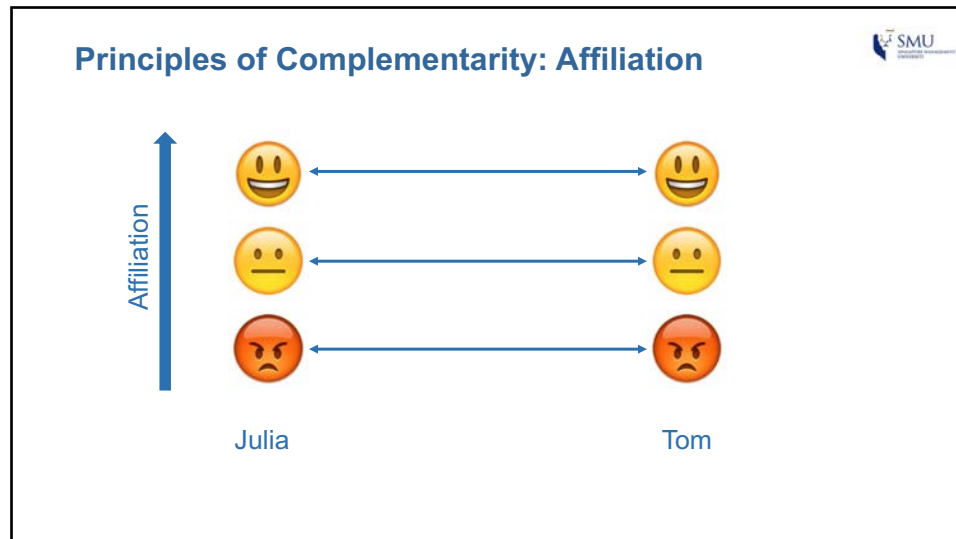
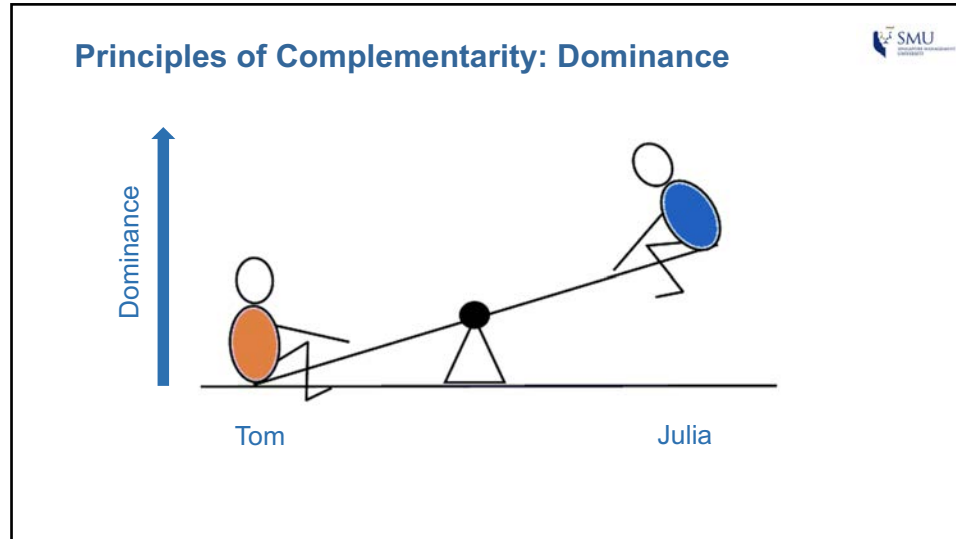
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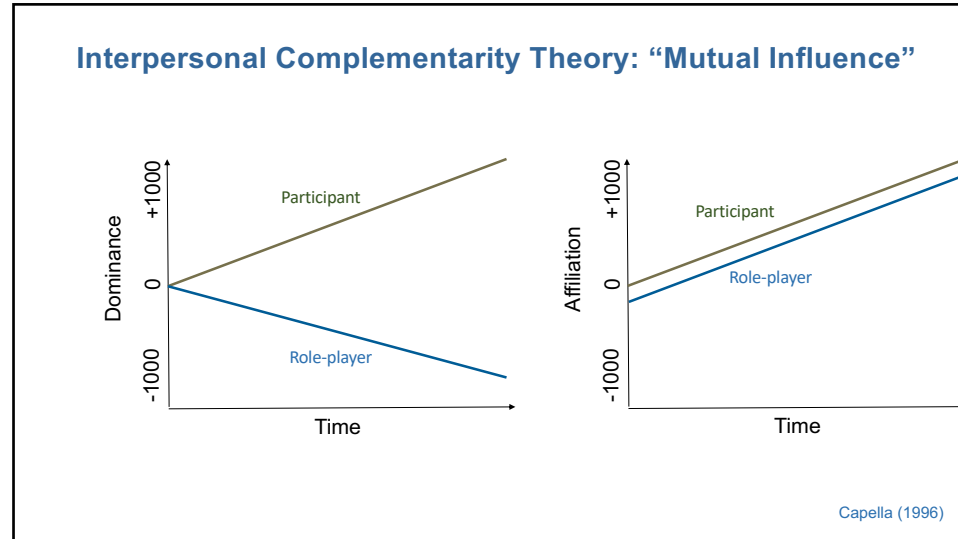
Interpersonal Theory (Circumplex)



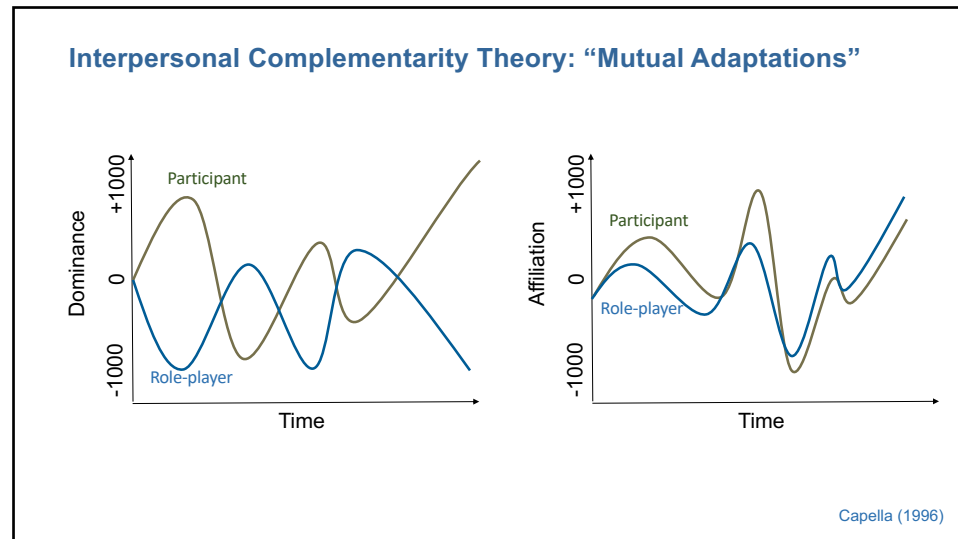
Carson (1969); Kiesler (1983)

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Hypotheses

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Rival Perspectives

Interpersonal Complementary Theory	Assessment Theory & Research
Evidence in everyday interactions.	Participants put best feet forward.
Complementarity serves clarity of hierarchy, sense of security; operates at subtle, instantaneous level.	More structure & standardization in simulations (role-player scripts, training, focus on behavior).
→ Complementarity effects: Present	→ Complementarity effects: Limited
→ Impact ratings & predictions	→ Do NOT impact ratings & predictions

???

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Hypotheses



- At overall temporal trend level (H1a) & momentary level (H1b), patterns of **dominance** complementarity are stronger than those of **affiliation** complementarity.
- Complementarity patterns at overall temporal trend level (H2a) & momentary level (H2b) are positively related to **in situ** (i.e., role-playing) assessors' evaluations of participants, whereas this is not the case for **ex situ** (i.e., remote) assessors.
- Complementarity patterns (in terms of influence & adaptations) in interpersonal simulations represent **criterion-relevant variance** (H3).


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Methods



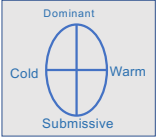
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Method



- 96 MBA students
 - 51% ♀
 - *M* age = 23.63 (*SD* = 1.85)
 - 19 different nations (66% Belgian)
 - 1 year junior managerial experience

4 role-plays
In situ (role-playing) assessors;
Ex situ (remote) assessors + coders






7 months

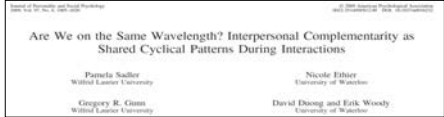
Criteria (supervisors)
Interpersonal adaptability
Task performance

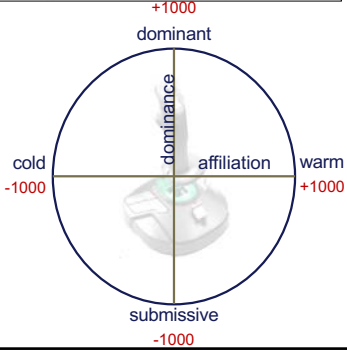
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Continuous Assessment of Interpersonal Dynamics (CAID)

- 17 Trained coders: 286 hours
 - Bachelor/Master students
 - 16 ♀
 - *M* age = 21.67 (*SD* = 1.35)
- Reliability & convergent/discriminant validity







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Analyses

Journal of Personality and Social Psychology © 2016 American Psychological Association
2016, Vol. 91, No. 4, 1040–1050 10.1037/xap0000122

Are We on the Same Wavelength? Interpersonal Complementarity as Shared Cyclical Patterns During Interactions

Pamela Sadler
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Nicole Ethier
University of Waterloo

Gregory R. Gunn
Wilfrid Laurier University

David Duong and Erik Woody
University of Waterloo

Est. Res. (2017), 12, 765–766
DOI: 10.1080/15240973.2016.1186019

SPECIAL FEATURE: BIRKBECK PRIZE FOR ECOLOGY

 **Filling the gaps**

Chun-Wai Chang · Masayuki Uchii · Chikako Hoshii
Empirical dynamic modeling for beginners

Feature Topic: New Approaches to Multilevel Methods and Statistics


Intensive Longitudinal Data Analyses With Dynamic Structural Equation Modeling

Organizational Research Methods
2011, Vol. 14(4), 278–290
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http://dx.doi.org/10.1080/15240973.2016.1186019
DOI: 10.1177/1524097316661144
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Le Zhou¹, Mo Wang², and Zhen Zhang³

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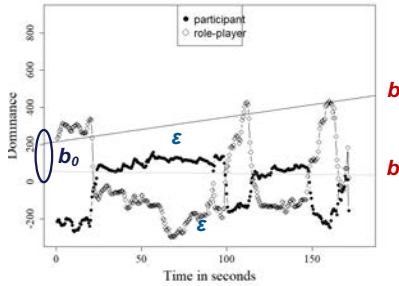


Decomposition of Time Series

b_0 : level of dominance at start

b : overall trend across interaction

ϵ : dynamic changes (controlling for trend)



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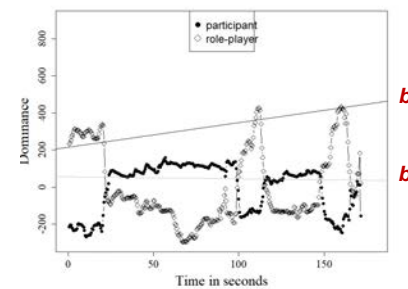
Results

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H1: Is Complementarity Present in Interpersonal Simulations?

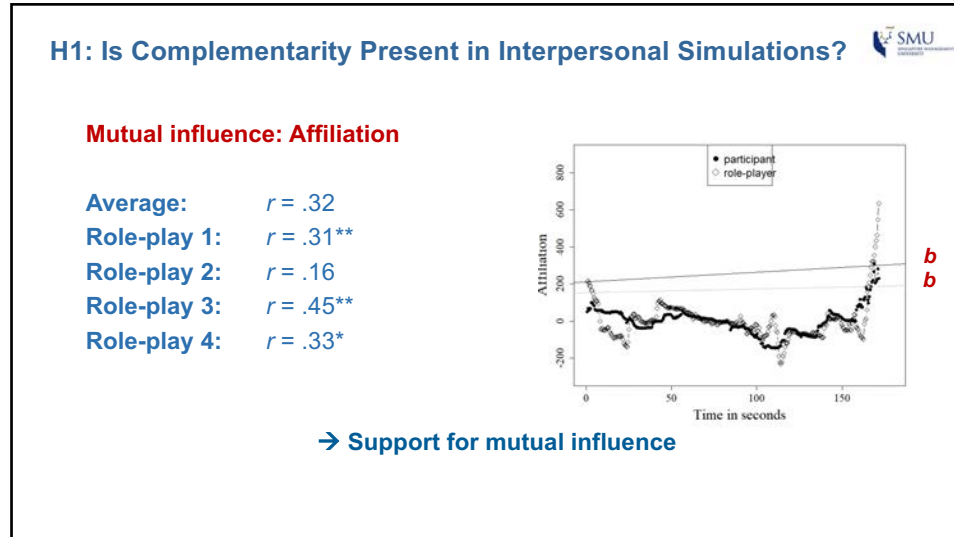
Mutual influence: Dominance

Average:	$r = -.17$
Role-play 1:	$r = -.07$
Role-play 2:	$r = -.13$
Role-play 3:	$r = -.28^{**}$
Role-play 4:	$r = -.21^*$

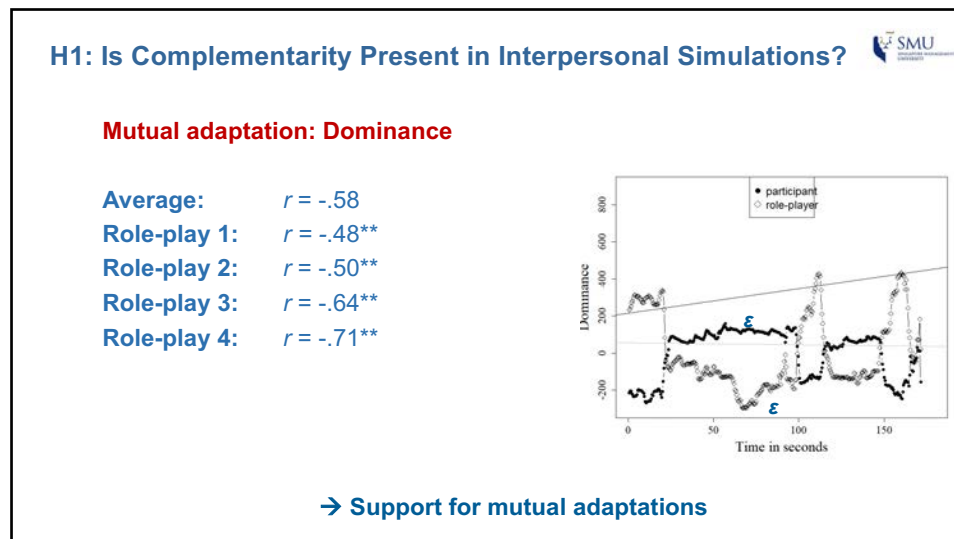


→ Partial support for mutual influence

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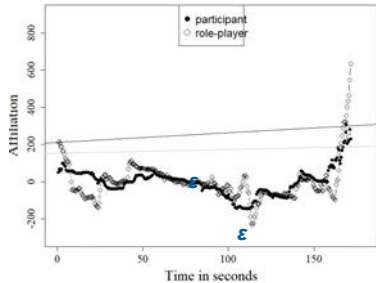


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H1: Is Complementarity Present in Interpersonal Simulations?

Mutual adaptation: Affiliation

Average: $r = .25$
 Role-play 1: $r = .24^{**}$
 Role-play 2: $r = .22^{**}$
 Role-play 3: $r = .23^{**}$
 Role-play 4: $r = .30^{**}$



→ Support for mutual adaptations

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H2: Are Complementarity Patterns Related to Role-play Ratings?

	In-situ ratings of candidate performance	Ex-situ ratings of candidate performance
Influence affiliation	.21*	.14
Influence dominance	-.22*	-.04
Adaptation affiliation	.21*	.13
Adaptation dominance	-.26*	-.14

Affiliation: positive values = higher complementarity
Dominance: negative values = higher complementarity

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H3: Are Complementarity Patterns Related to Job Performance?



	Supervisor rating interpersonal adaptability	Supervisor rating task performance
Influence affiliation	.23*	.00
Influence dominance	-.06	-.13
Adaptation affiliation	.11	-.16
Adaptation dominance	-.07	-.22*

Affiliation: positive values = higher complementarity

Dominance: negative values = higher complementarity

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H3: Complementarity Patterns: Noise or Substance?



	Zero-order correlation between role-play rating	Partial correlation (controlling for complementarity effects)
Interpersonal adaptability	.31**	.27**
Task performance	.34**	.34**

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Limitations

- No **actual** selection
 - Assessment of strengths & weaknesses
- **3-min** simulations
 - Do complementarity effects **flatten out over time**?
 - No support (Markey et al., 2010; Sadler et al., 2009)
 - Evidence for rapid emergence & impact

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Implications

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Theoretical Implications



- Advance theory about dynamics in interpersonal simulations.
 - Stress importance of **behavioral contingencies**.
 - Introduce notions of mutual “influence” & “adaptations”.
 - Complementary effects ⇔ biasing effects.
 - Insight into “**rapport building**”.


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Practical Implications



- Complementarity effects highlight role of **interactive** assessments.
 - <=> Asynchronous video assessments
 - <=> Chat GPT: <https://twitter.com/tiktokinvestors/status/1632421244120498178>
- Keep using **in situ** assessors?
- Feedback interventions
 - **Go beyond individual behavior & include contingencies.**

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Research Implications

- Promote **continuous** (moment-to-moment) measurement.

"If ESM produces data like a photo album & diary methods produce short movie summaries, then CRA [continuous rating assessment] provides an entire (albeit brief) movie" (Gabriel et al., 2017; p.34).

Article

It's About Time: The Promise of Continuous Rating Assessments for the Organizational Sciences

Allison S. Gabriel¹, James M. Diefendorff², Andrew A. Bennett¹, and Matthew D. Sloan²

Organizational Research Methods
17(2)
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DOI: 10.1177/1094988114673721
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Feature Topic: New Approaches to Multilevel Methods and Statistics

Intensive Longitudinal Data Analyses With Dynamic Structural Equation Modeling

Le Zhou¹, Mo Wang², and Zhen Zhang³


Organizational Research Methods
17(2), Vol. 17(2), 218-230
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Thank You for Your Attention!

Comments? Questions?



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