

PSICOSTAT

December 2nd, 2022

DISAMBIGUATING FINANCIAL WELL-BEING AND FINANCIAL STRESS AT DAILY LEVEL:

An application of Dynamic Structural Equation
Models

Angela Sorgente

Università Cattolica del Sacro Cuore, Milano



FINANCIAL WELLBEING (W)

Good and positive financial condition from an:

- Objective side (e.g., income)
- Subjective side (e.g., satisfaction)



FINANCIAL STRESS (S)

Condition of economic difficulty which has an:

- Objective side (e.g., expenses, debt)
- Subjective side (e.g., worry)

WHAT'S THEIR RELATIONSHIP?

S BEFORE W

- S predicts W (Fan & Henager, 2022; Mahdzan et al., 2019; Mokhtar & Husniyah, 2017; Sabri et al., 2013)
- S component of W (Dong-Ho, 2015; Nasyra et al., 2021)

W BEFORE S

W mediator between job insecurity and S (e.g., Choi et al., 2020)

SYNONYM

W = S (e.g., Mende & Van Doorn, 2015; Prawitz et al., 2006)

WHAT'S THEIR RELATIONSHIP?

Cross-sectional

S BEFORE W

- S predicts W (Fan & Henager, 2019; Mahdzan et al., 2019; Mokhtar & Husniyah, 2017; Sabri et al., 2015)
- S component of W (Domene et al., 2015; Nasyra et al., 2021)

W BEFORE S

W mediator between job insecurity and S (e.g., Choi et al., 2020)

W = S

W = S (e.g., Mende & Van Doorn, 2015; Prawitz et al., 2006)

THE CURRENT STUDY

Intensive longitudinal design

- To discover the direction of the relationship
- To investigate how much the two constructs are overlapped/intertwined, e.g., does the two constructs present the same dynamics?



THE CURRENT STUDY

Intensive longitudinal design

158 emerging adults (70.3% women) aged 20-30 years ($M = 25.09$; $SD = 2.46$)

14 consecutive days, online survey every evening (from 19.00 to 22.00)

Both objective and subjective sides of W and S



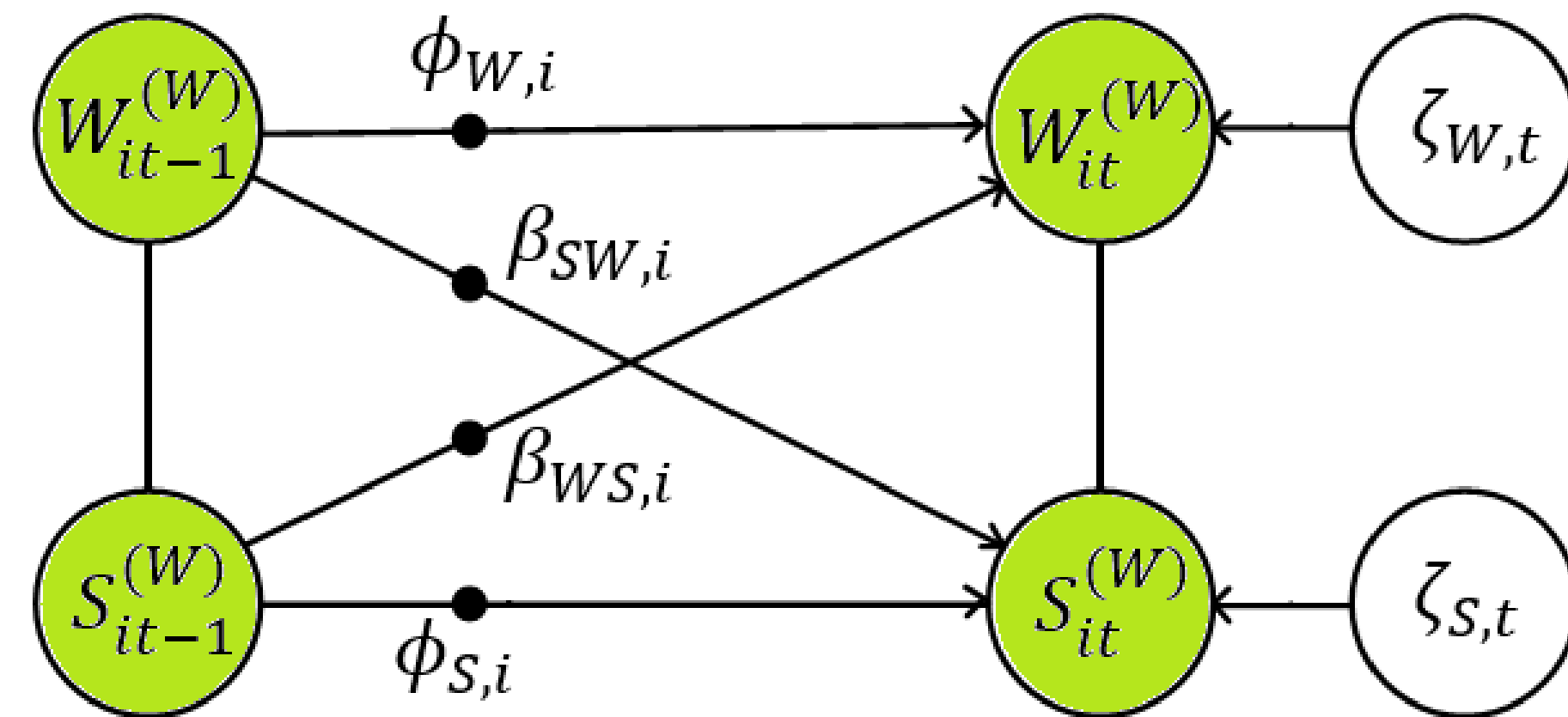
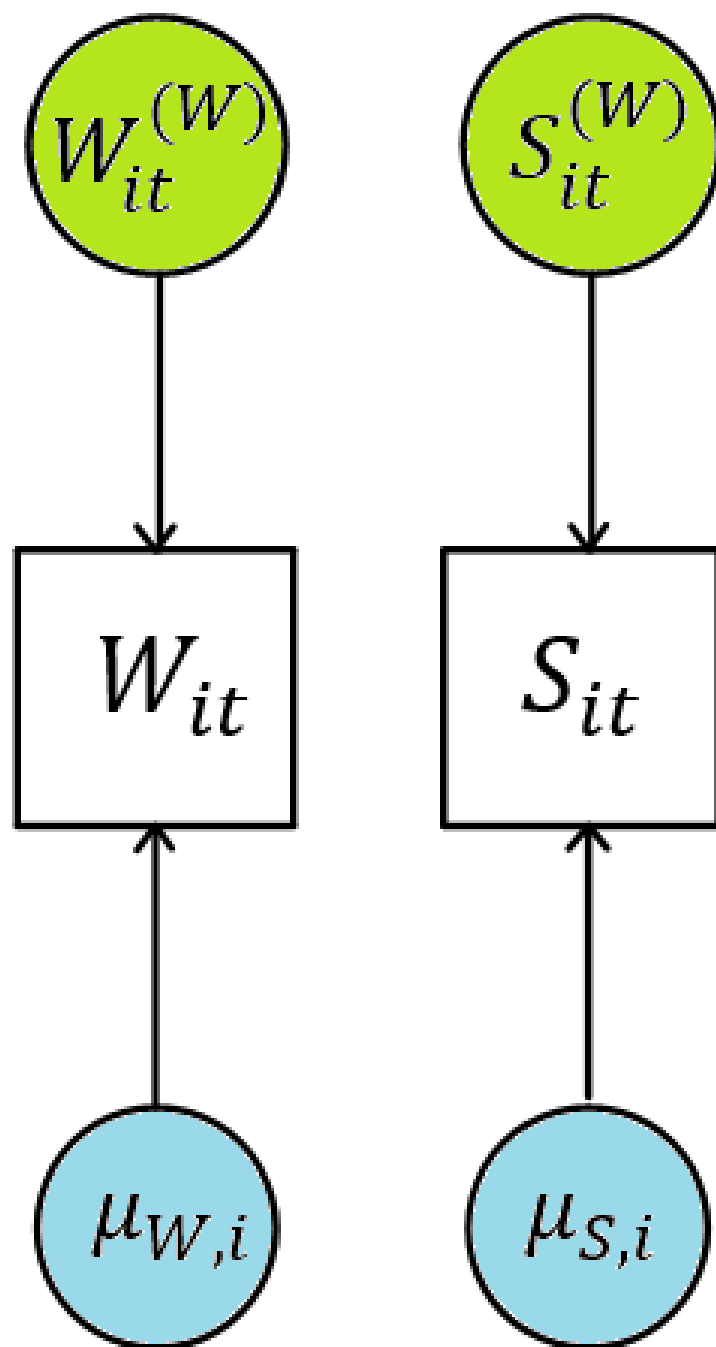
DSEM

Dynamic SEM (Asparouhov et al., 2018).

- $N = 1$ time series analysis
- multilevel approach (Level 1: measurement occasion; Level 2: person)
- SEM

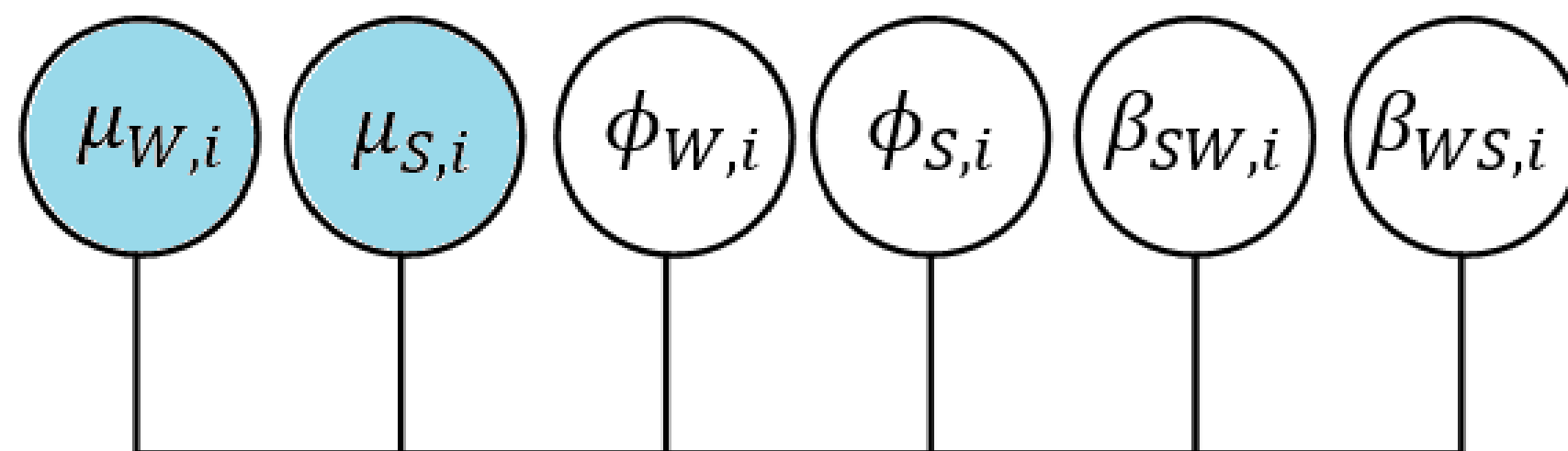
Asparouhov, T., Hamaker, E. L., & Muthén, B. (2018). Dynamic structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 25(3), 359-388.

Decomposition

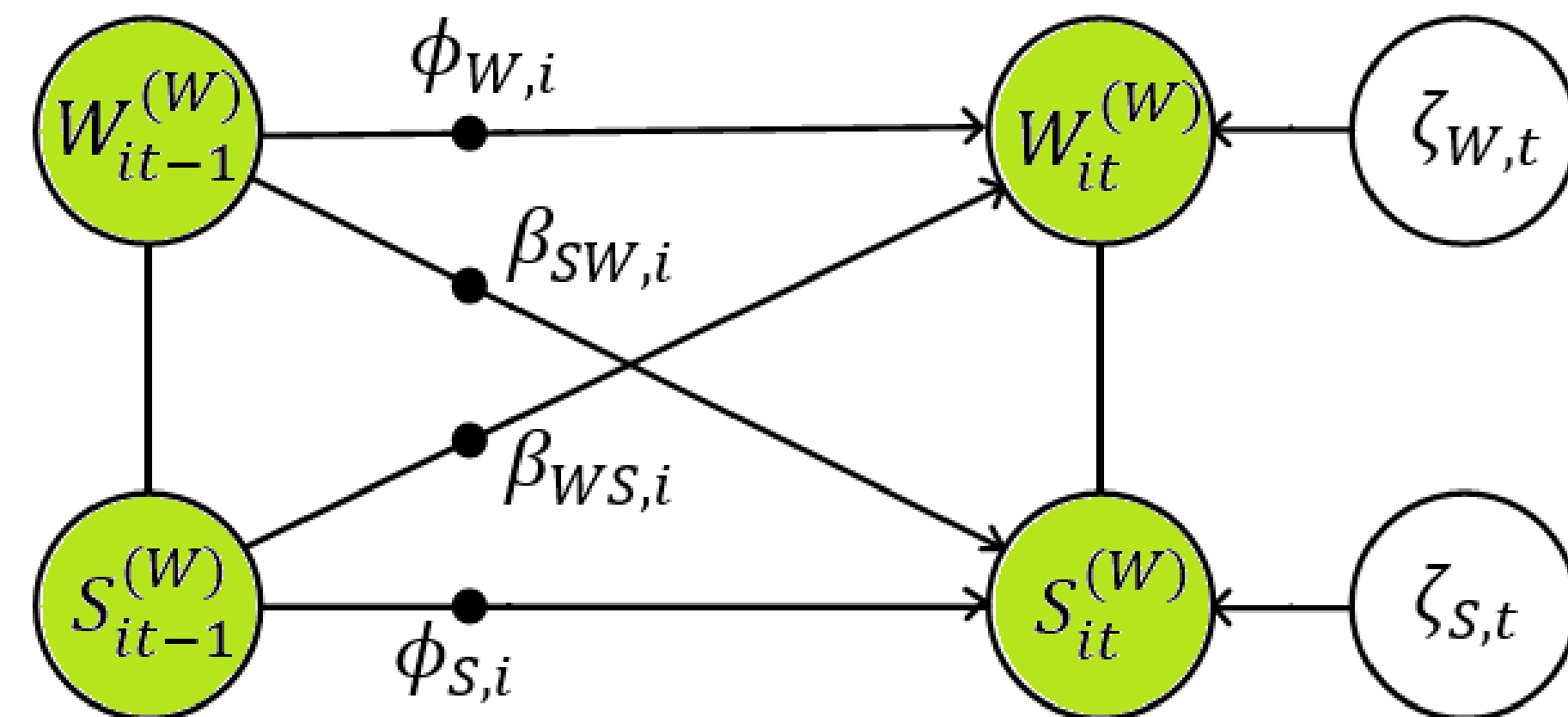
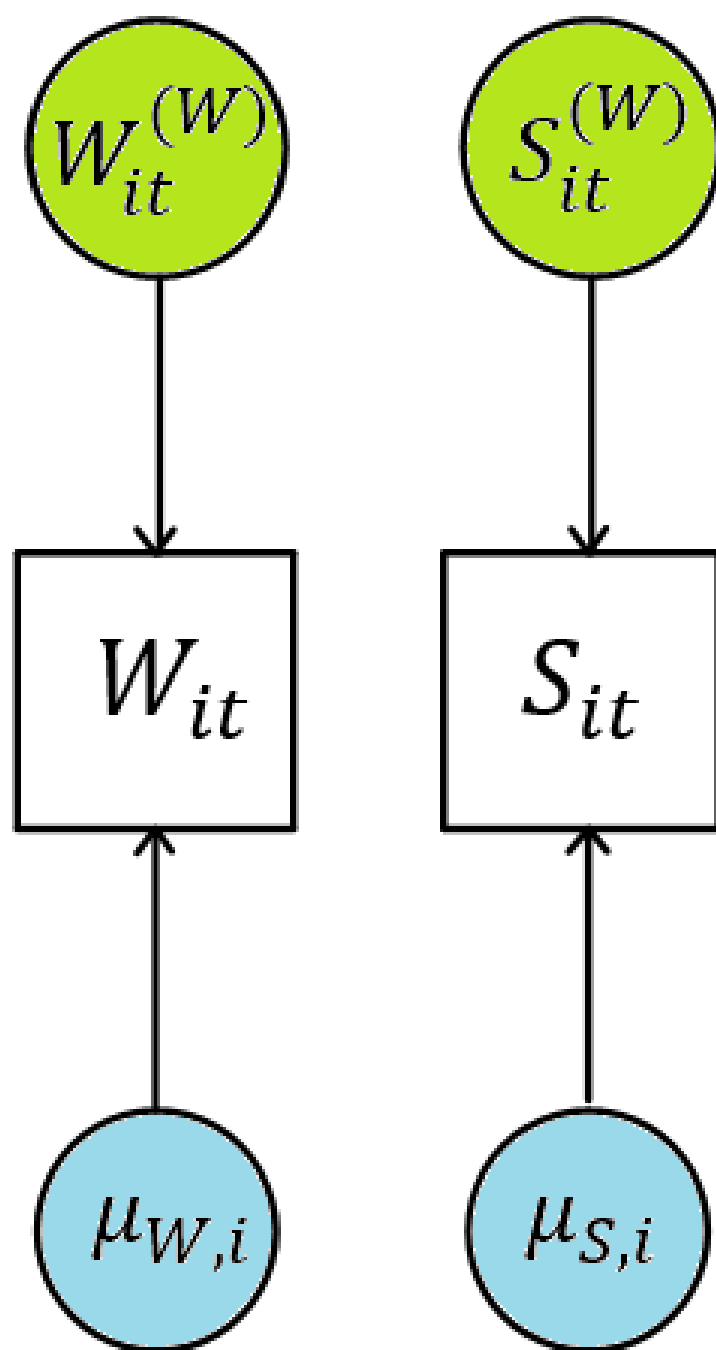


Within

Between

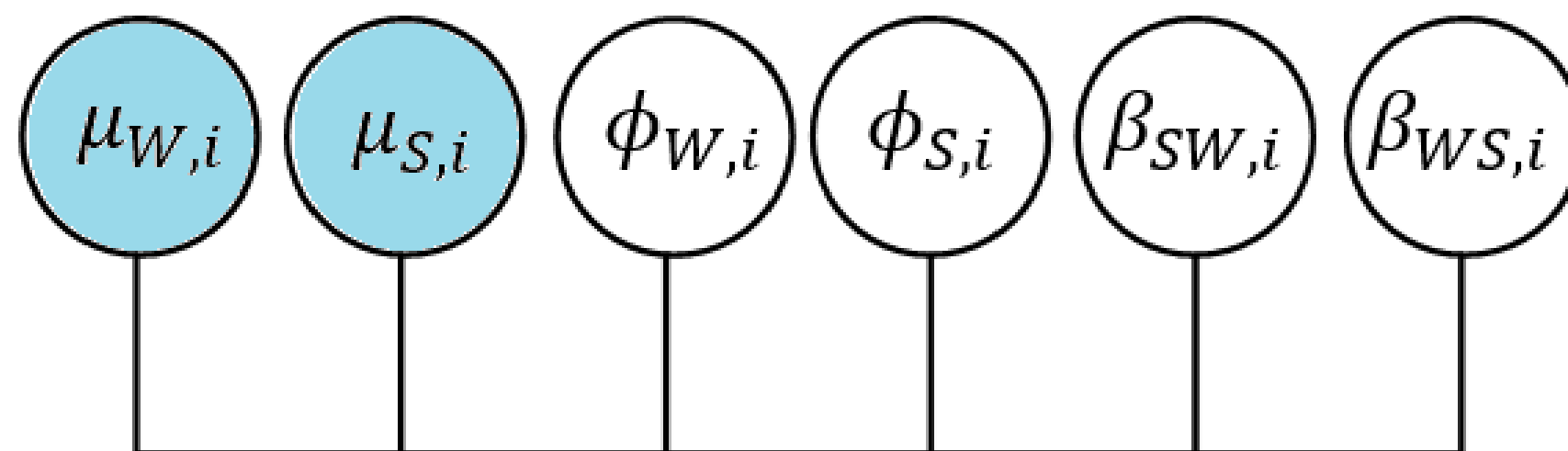


Decomposition

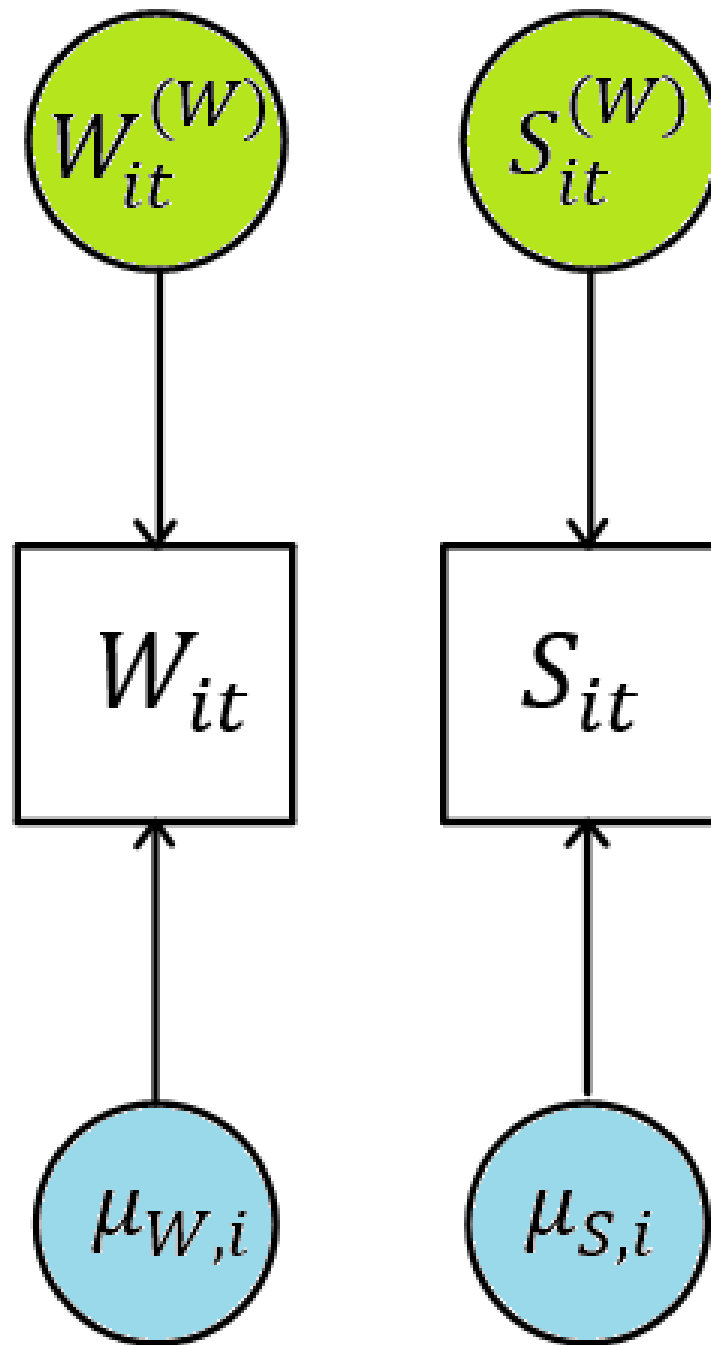


Within

Between



Decomposition



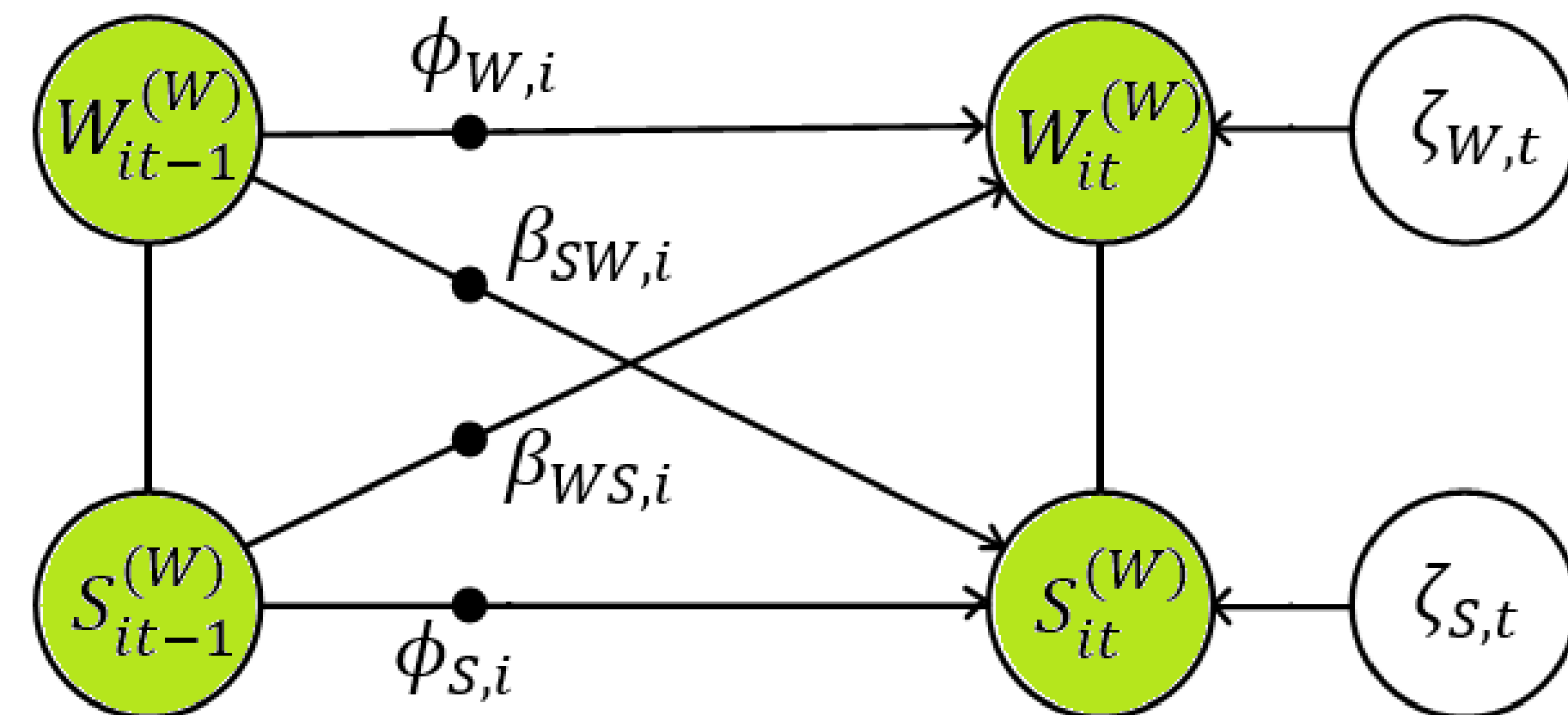
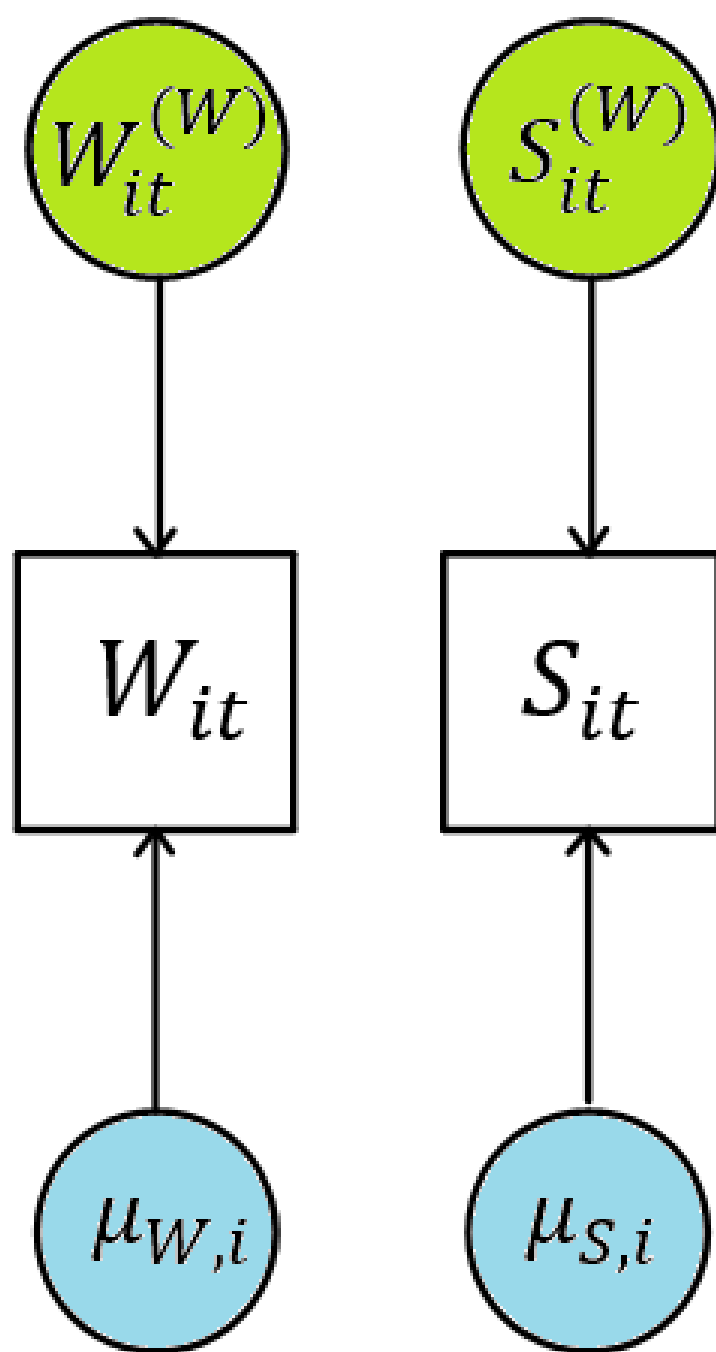
«Sono
soddisfatto/a
della mia
situazione
finanziaria delle
ultime 24 ore»

Within-part, which is formed by the within-person fluctuations over time around the within-person mean (differences between time points; state differences)

«Nelle ultime 24 ore,
quanto la tua vita
economica e
finanziaria ti ha
stressato?»

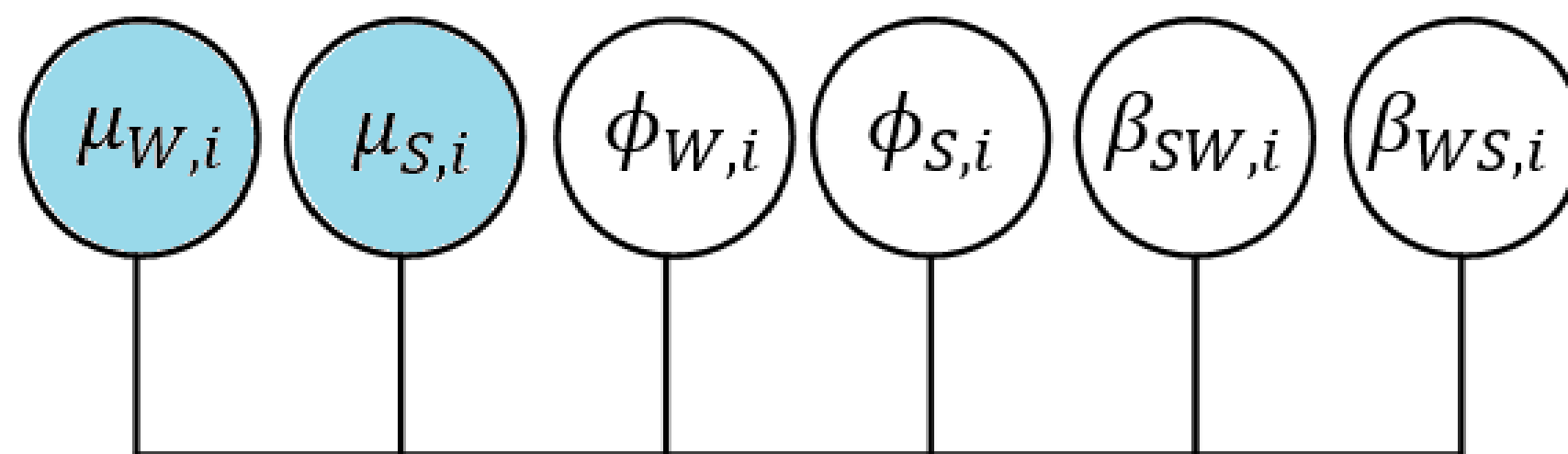
Between-part, which is formed by the within-person means (differences between participants; trait differences)

Decomposition

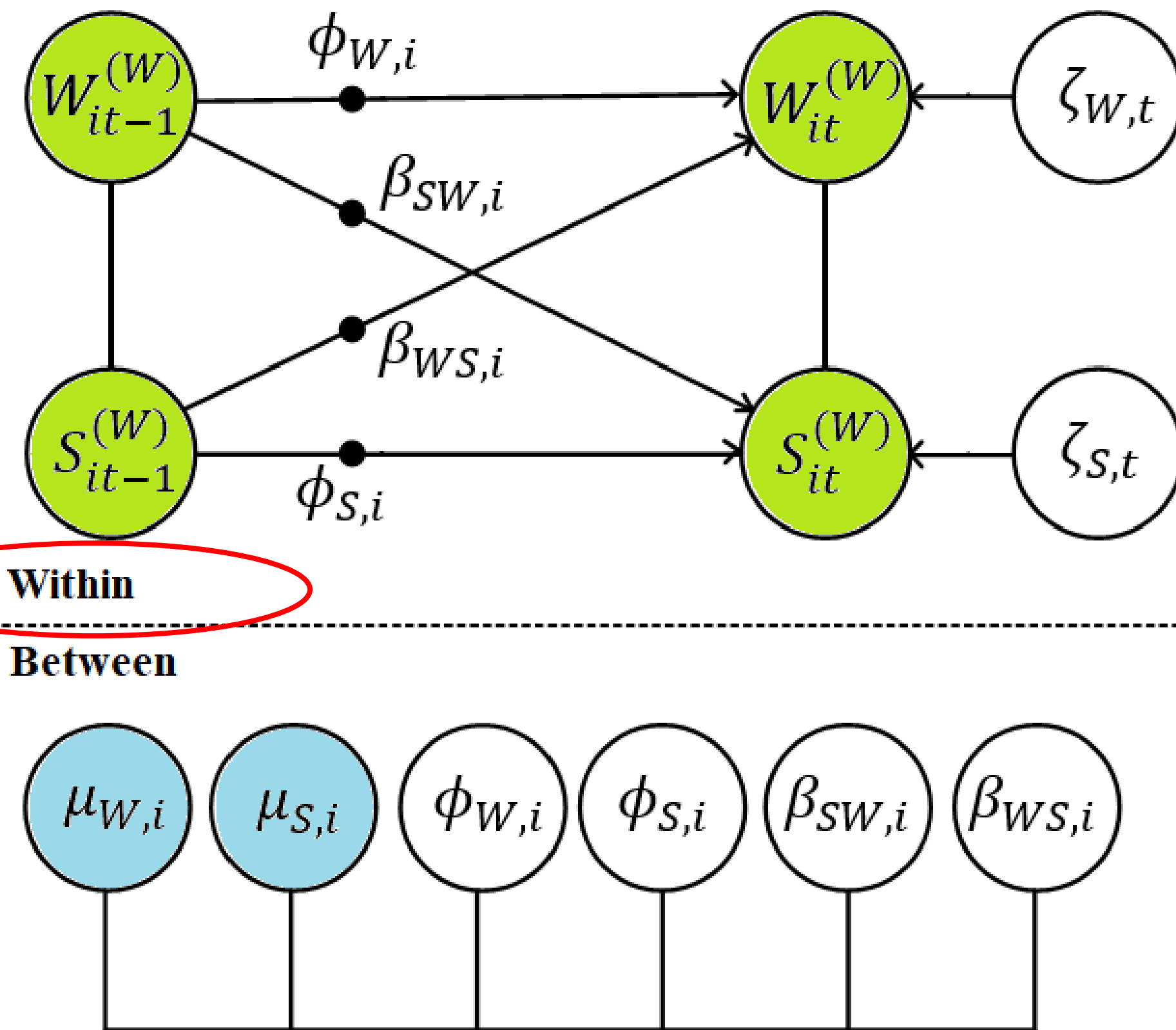
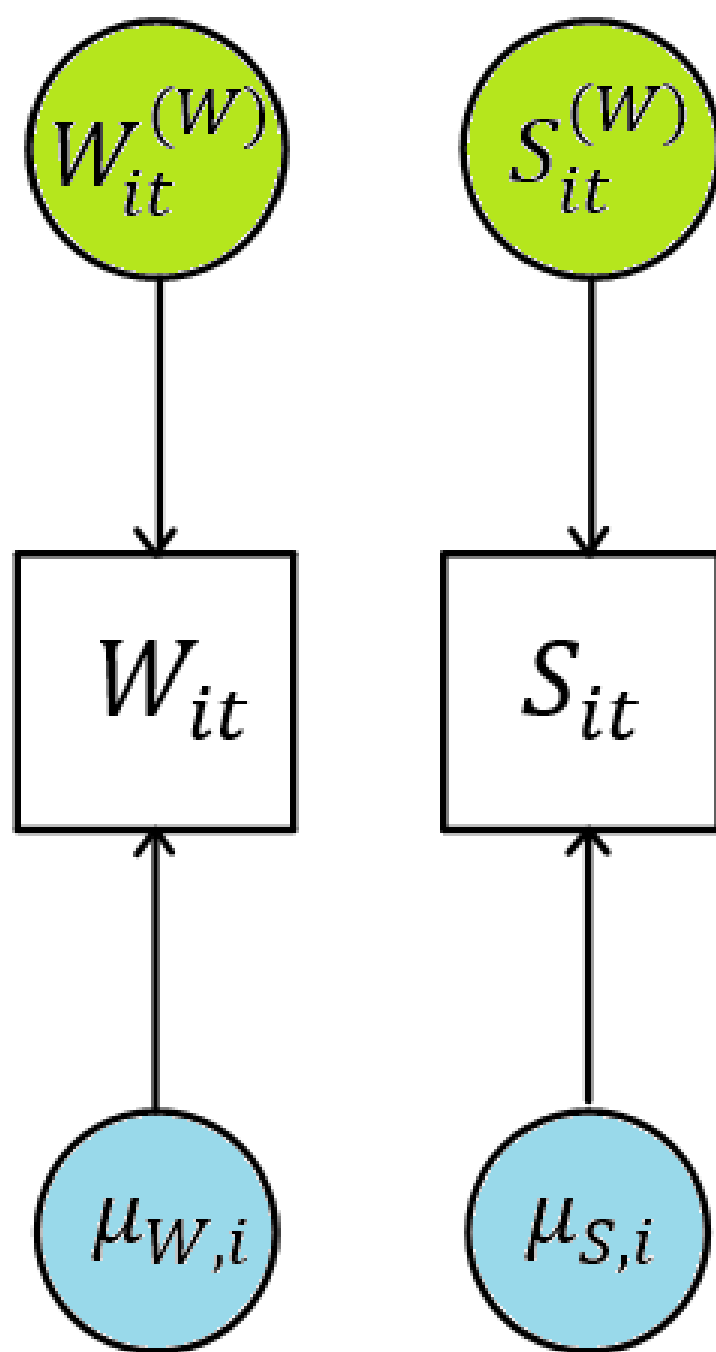


Within

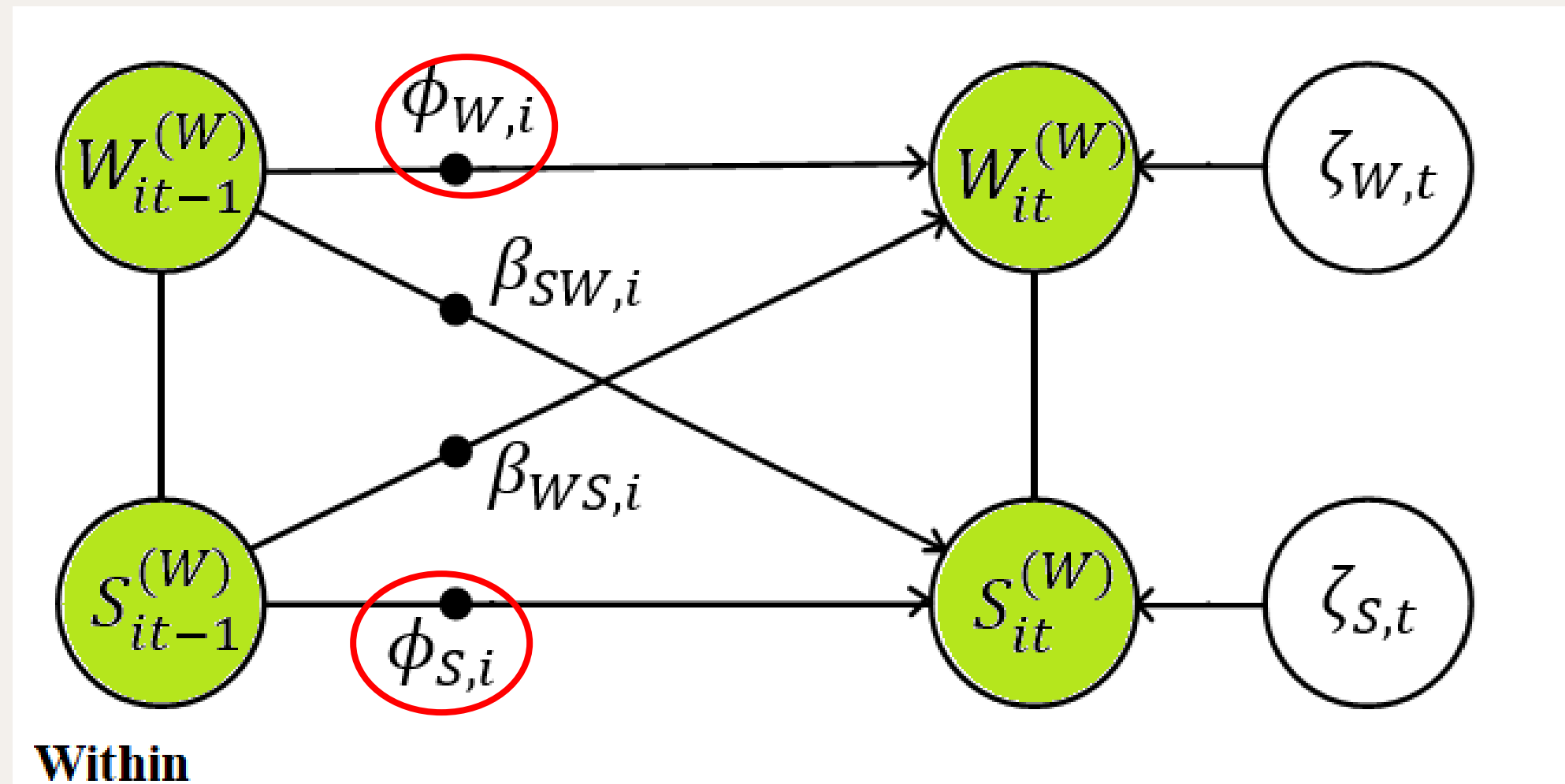
Between



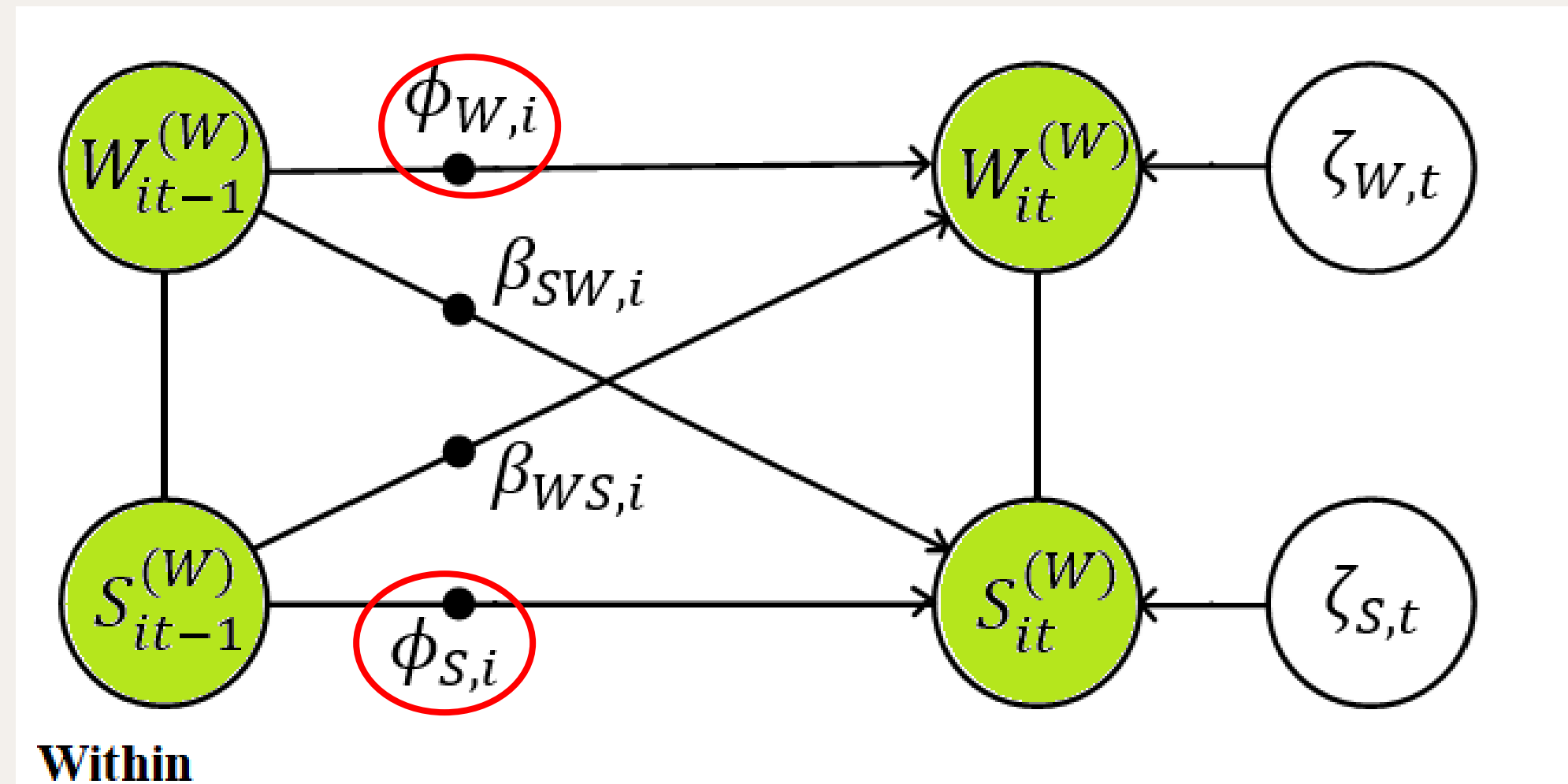
Decomposition



Autoregressive parameters:
The within-person
deviations are regressed on
themselves and each other
at the preceding occasion
(*stability*)



Autoregressive parameters:
The within-person
deviations are regressed on
themselves and each other
at the preceding occasion
(*stability*)

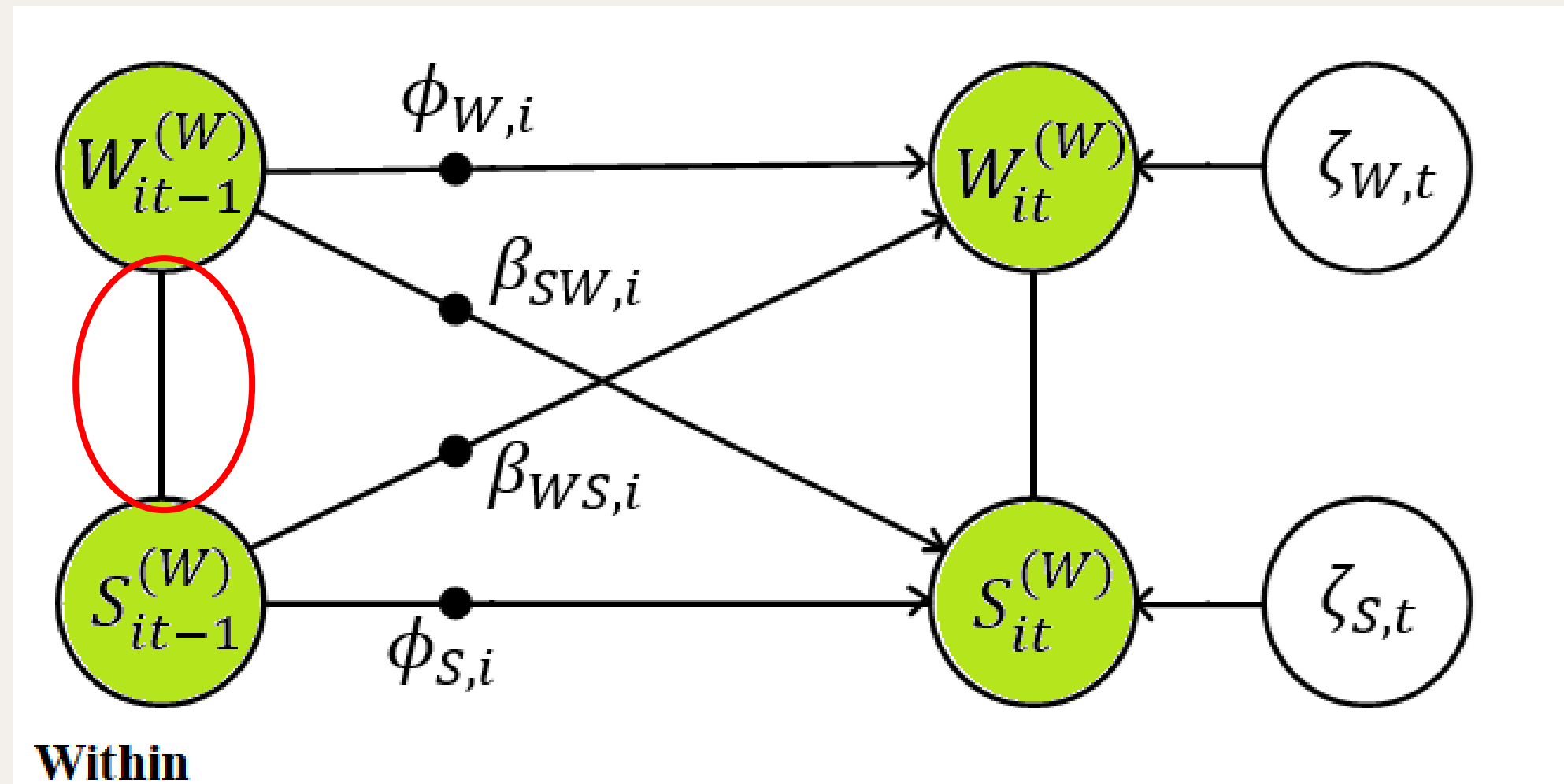


0.229 [0.147, 0.312] *

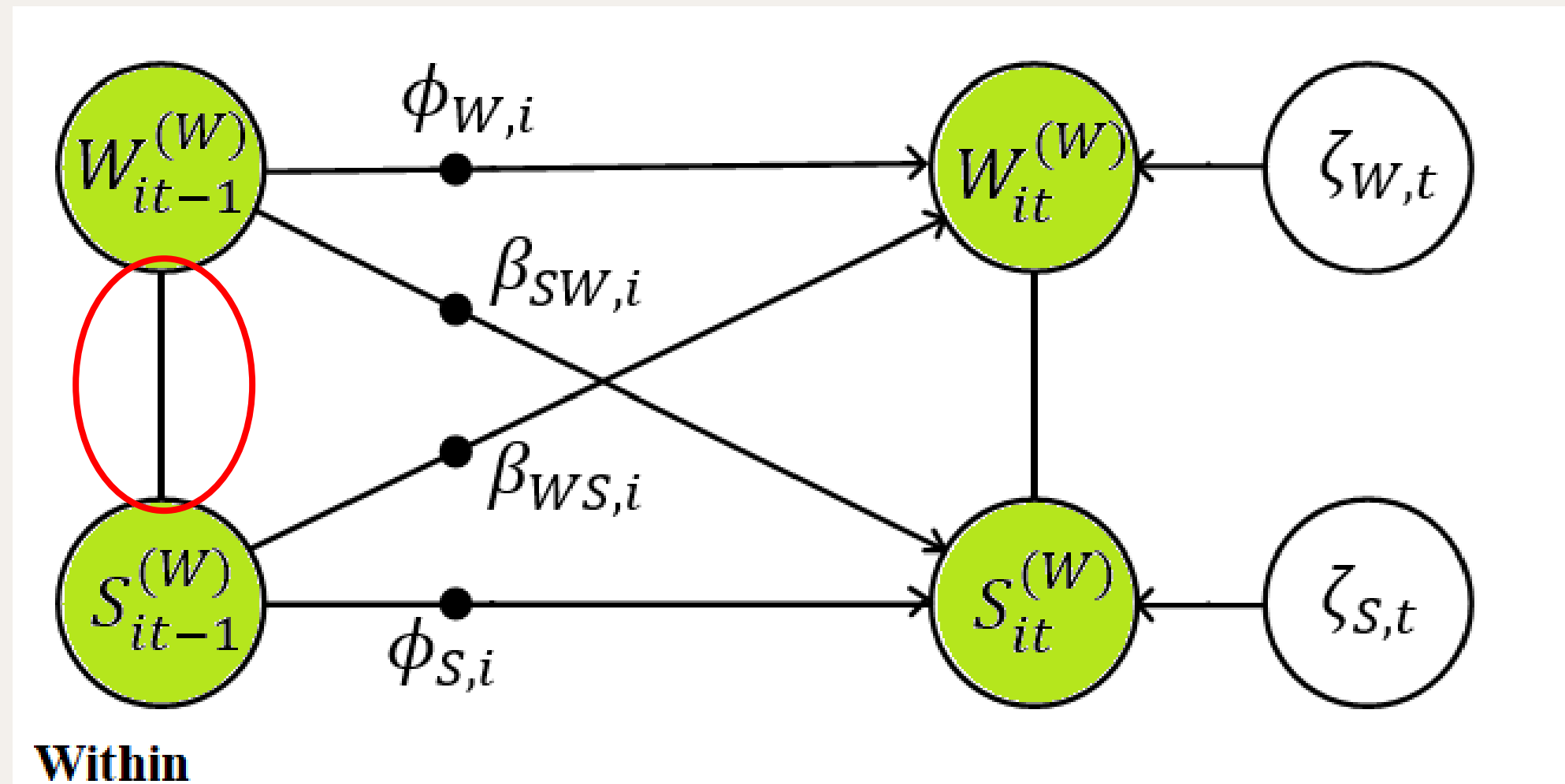
0.210 [0.133, 0.293] *

Positive
BUT
weak

Within-time covariance:
 $\text{Cov}(\mu_{W,i}, \mu_{S,i})$ is the
concurrent relationship
between W and S.



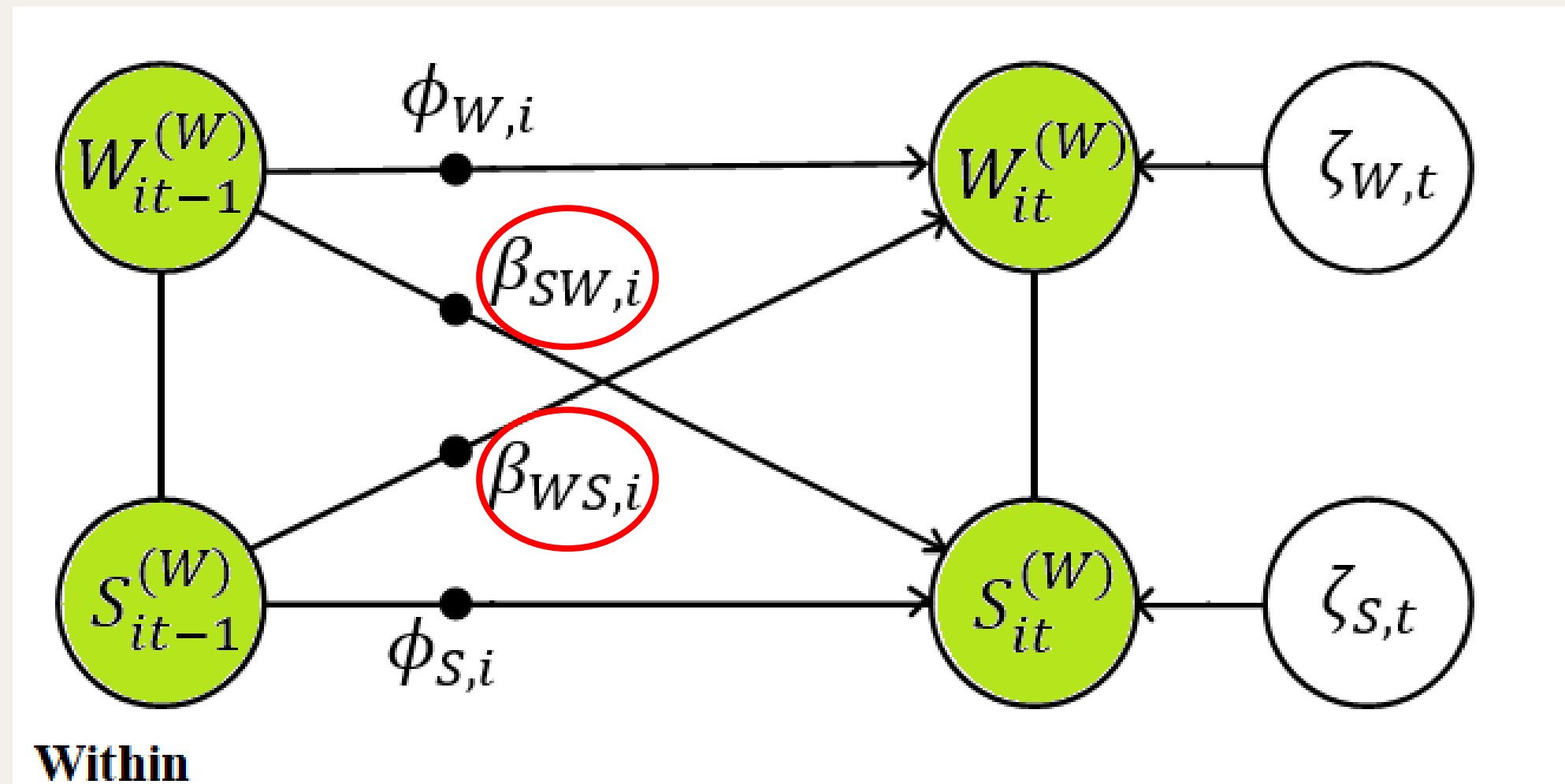
Within-time covariance:
 $\text{Cov}(\mu_{W,i}, \mu_{S,i})$ is the
 concurrent relationship
 between W and S.



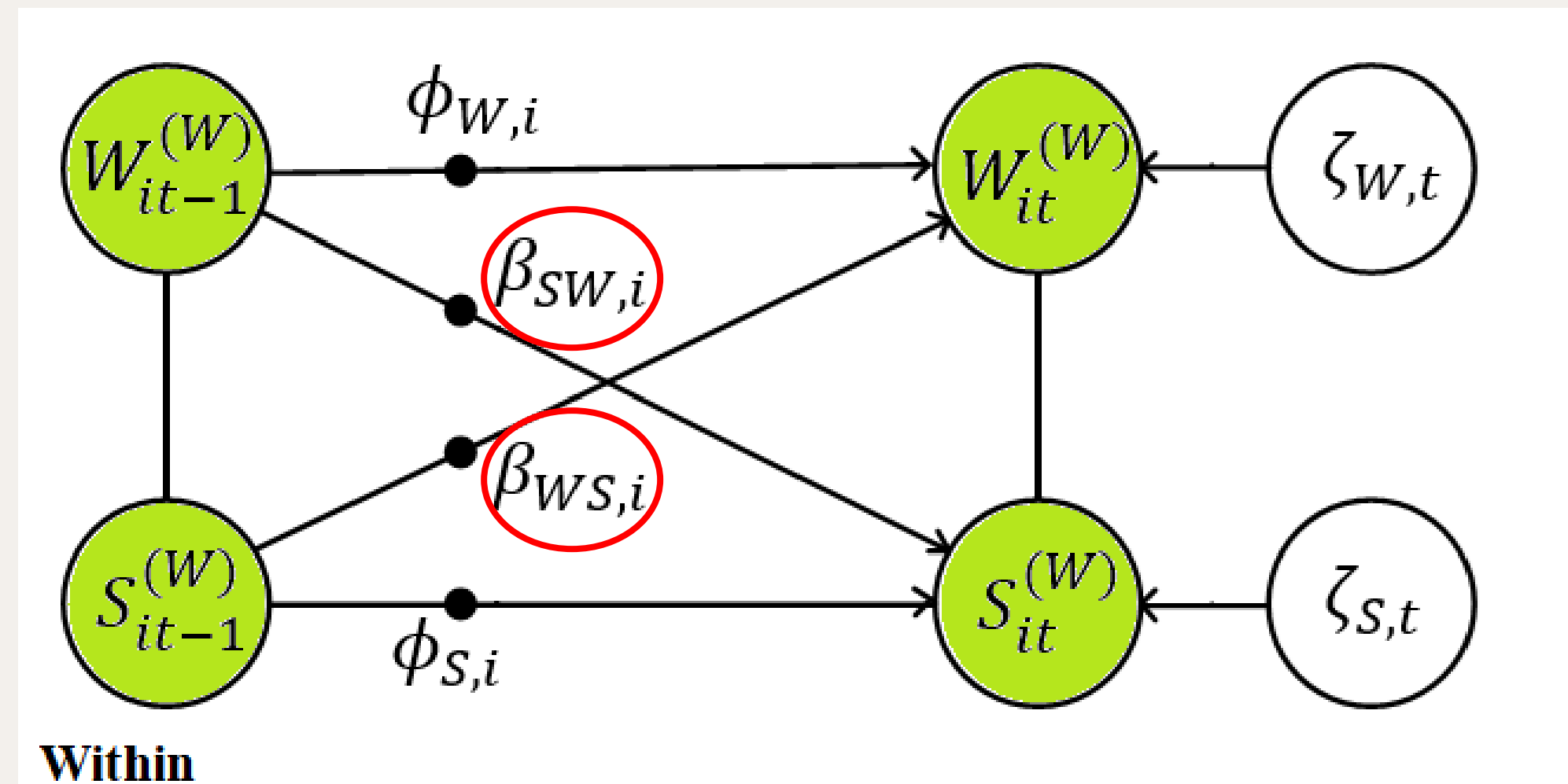
-0.203 [-0.232 -0.177]*

First clue:
 W and S are not the same construct

Cross-lagged regression parameters: $\beta_{SW,i}$ is the effect from W to S at the next occasion; and $\beta_{WS,i}$ is the cross-lagged regression coefficient from S to W at the next occasion.



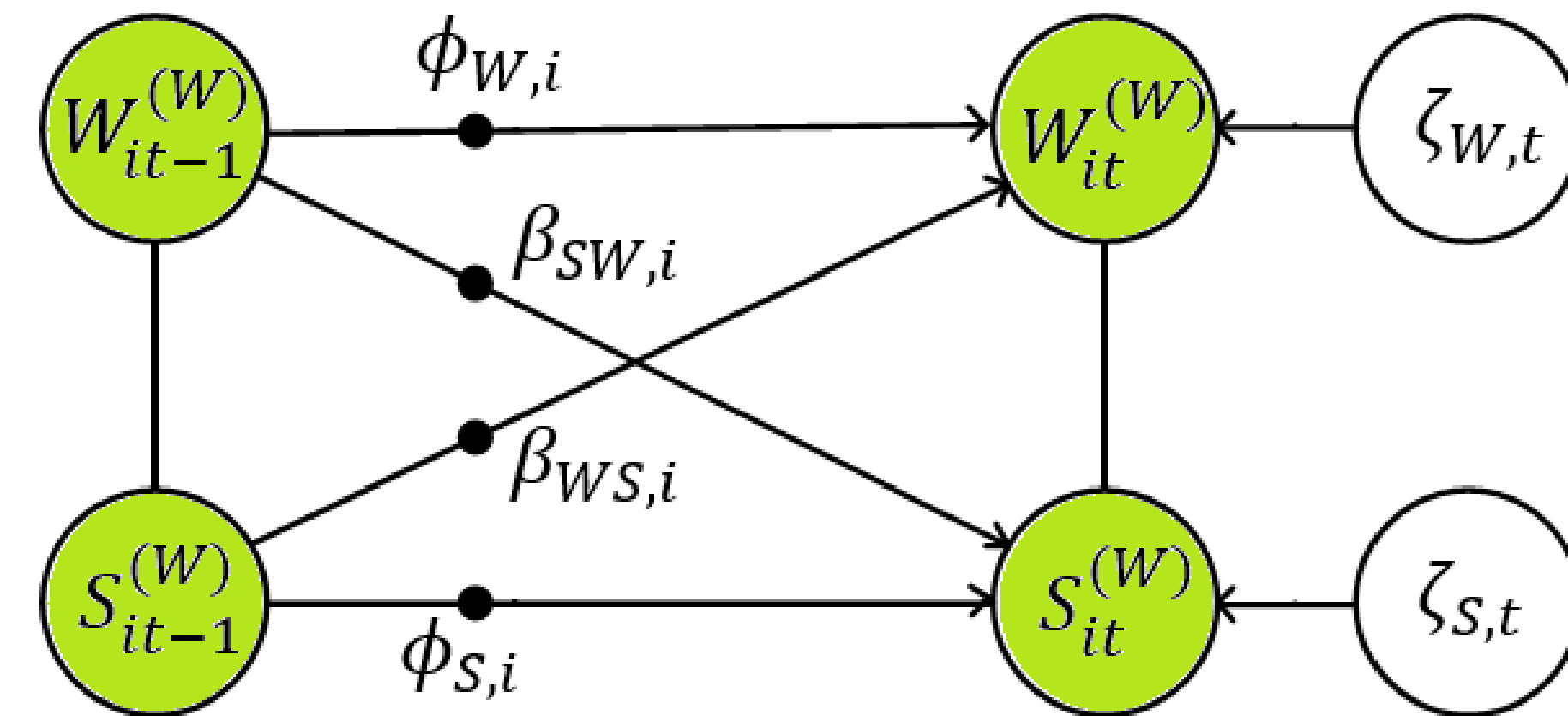
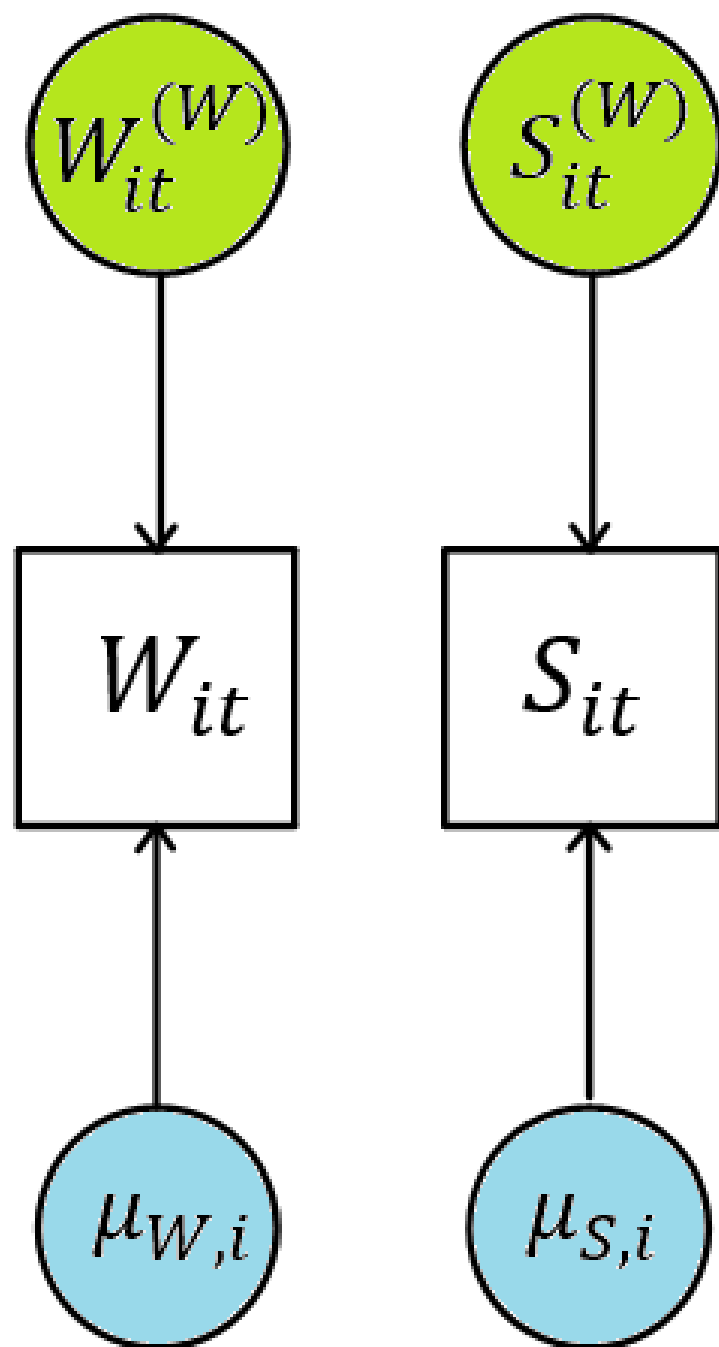
Cross-lagged regression parameters: $\beta_{SW,i}$ is the effect from W to S at the next occasion; and $\beta_{WS,i}$ is the cross-lagged regression coefficient from S to W at the next occasion.



-0.028 [-0.084, 0.027], *ns*

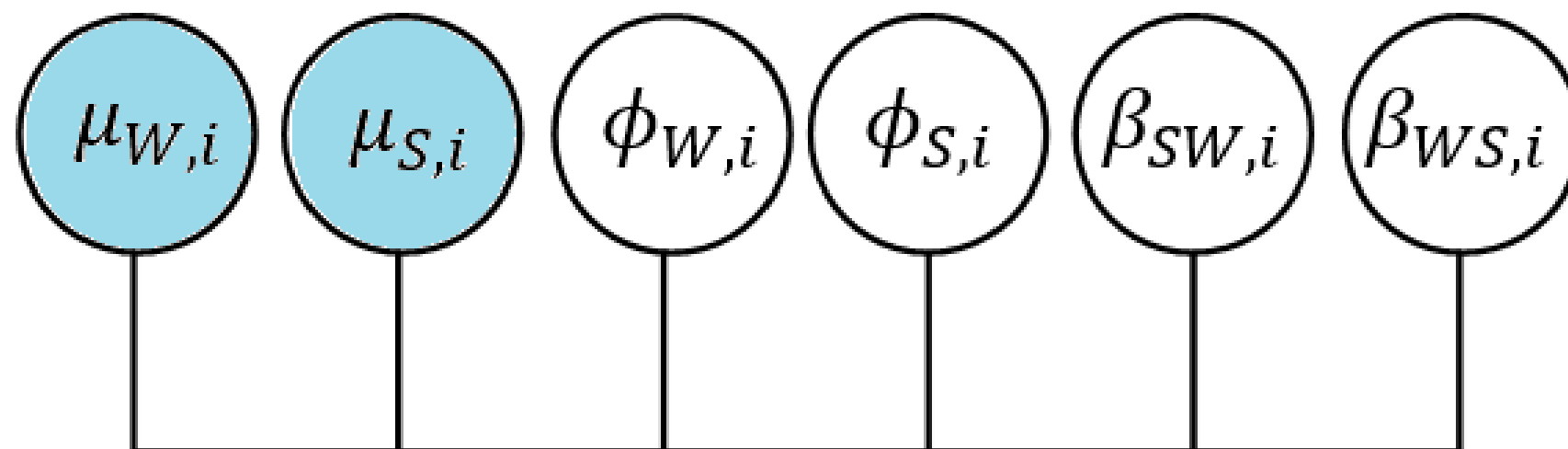
Second clue:
W and S are not the same construct

Decomposition

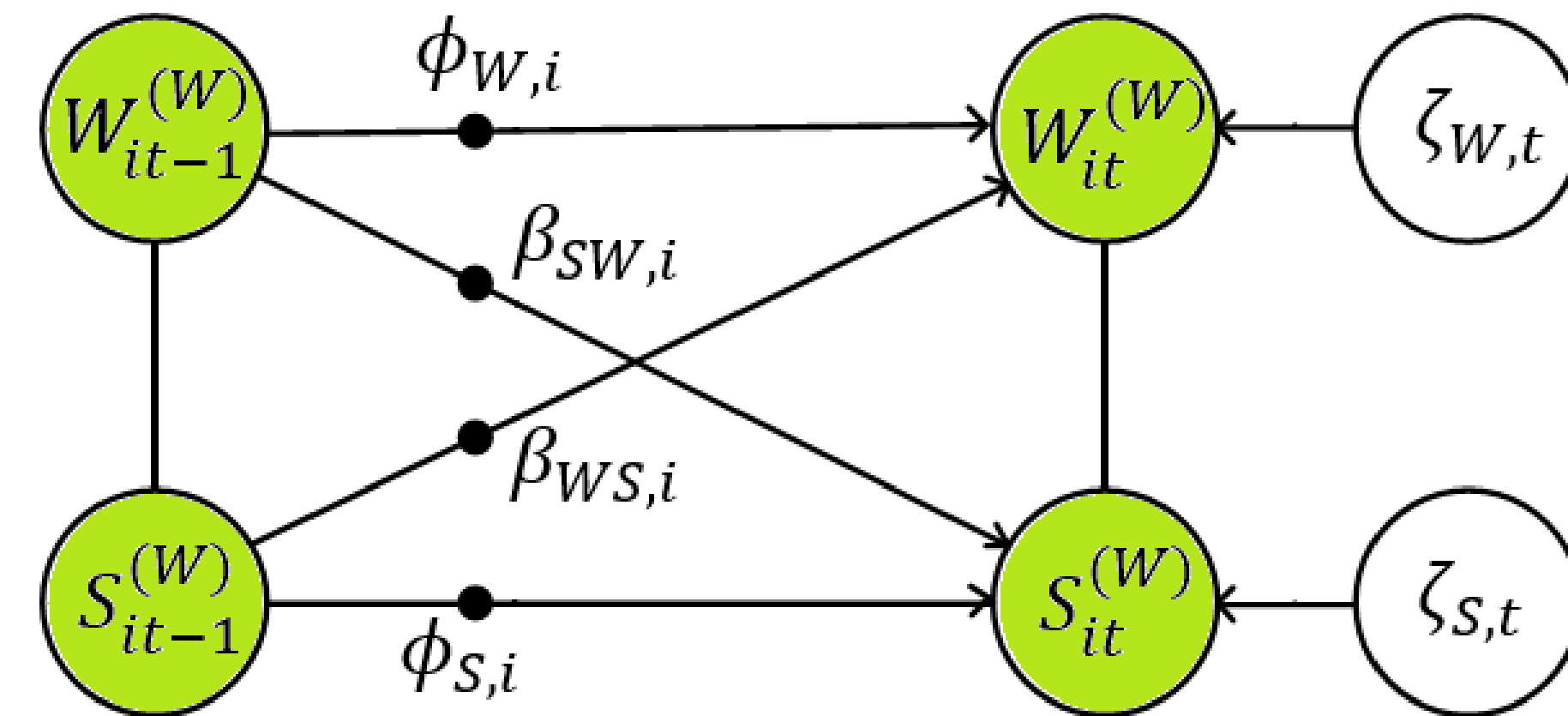
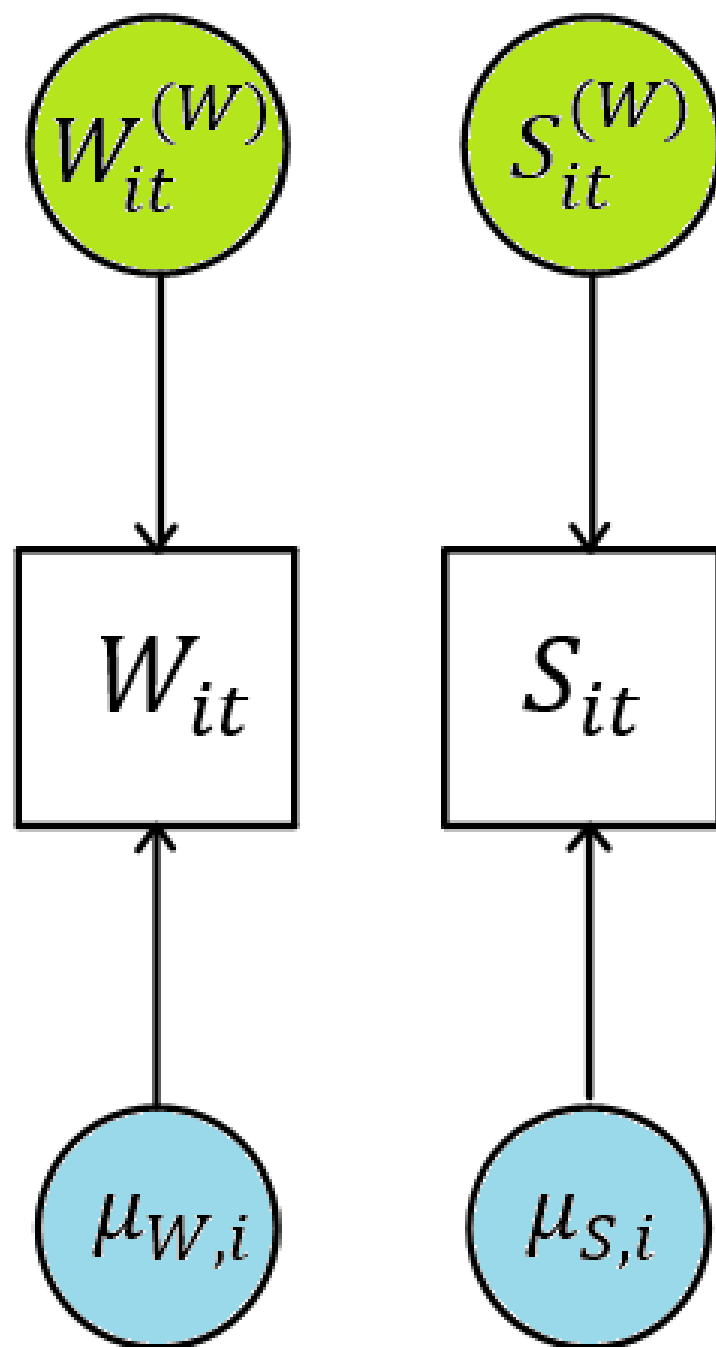


Within

Between

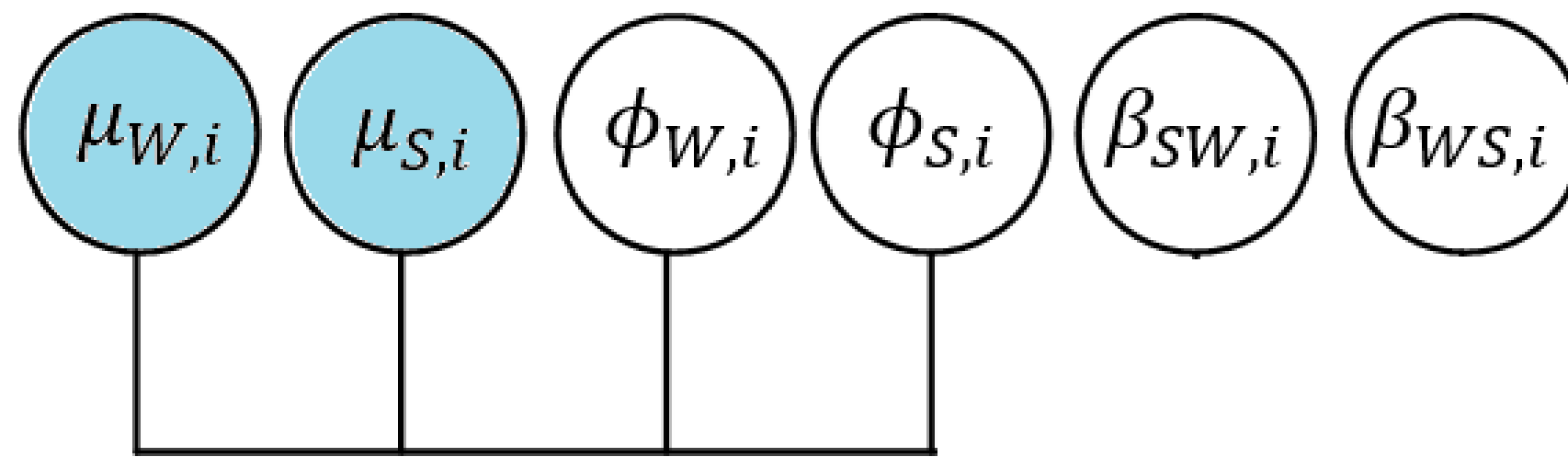


Decomposition



Within

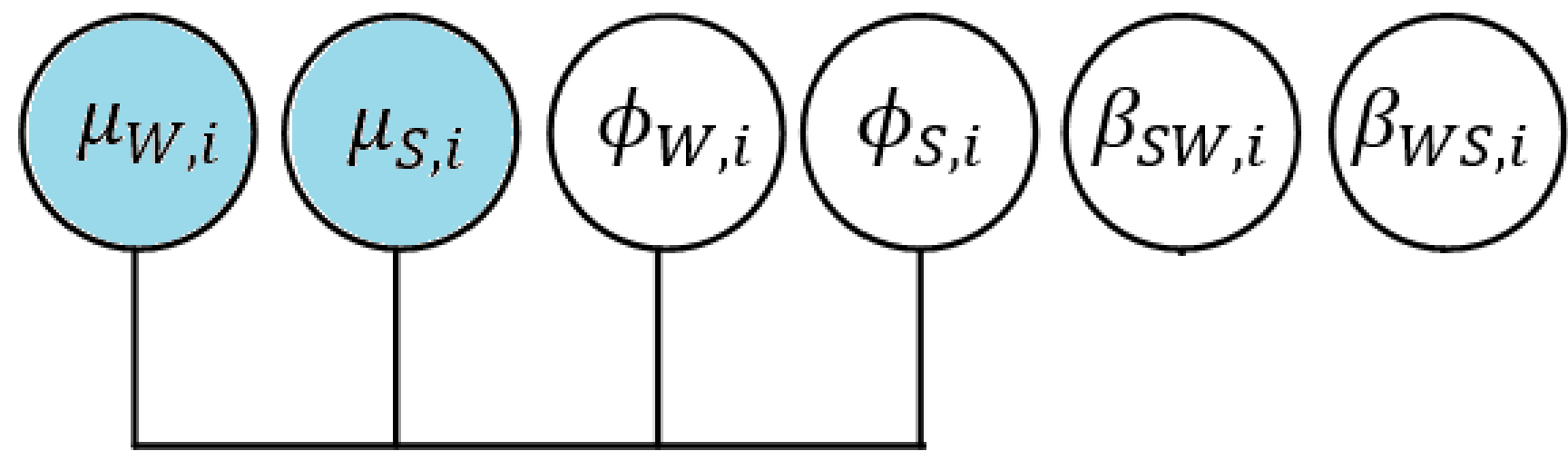
Between



	μ_W	μ_S	Φ_W
μ_S	-0.402 [-.575, -.275]*		
Φ_W	-0.056 [-0.137, 0.017], ns	-0.010 [-0.086, 0.062], ns	
Φ_S	-0.004 [-0.072, 0.060], ns	0.007 [-0.068, 0.081], ns	0.036 [0.005, 0.075]*

Third clue:
W and S are
not the same
construct

Between





WHAT HAVE WE LEARNED?

W and S are not the same construct:

- They do not present the same dynamic
- Moderate covariance at between-level

W and S are not associated over time:

- Event-contingent instead of interval-contingent

W and S two very dynamic constructs:

- What external variables generate their fluctuations?



THANK YOU!

angela.sorgente@unicatt.it

Hamaker, E. L., Asparouhov, T., Brose, A., Schmiedek, F., & Muthén, B. (2018). At the frontiers of modeling intensive longitudinal data: Dynamic structural equation models for the affective measurements from the COGITO study. *Multivariate Behavioral Research*, 53(6), 820-841.