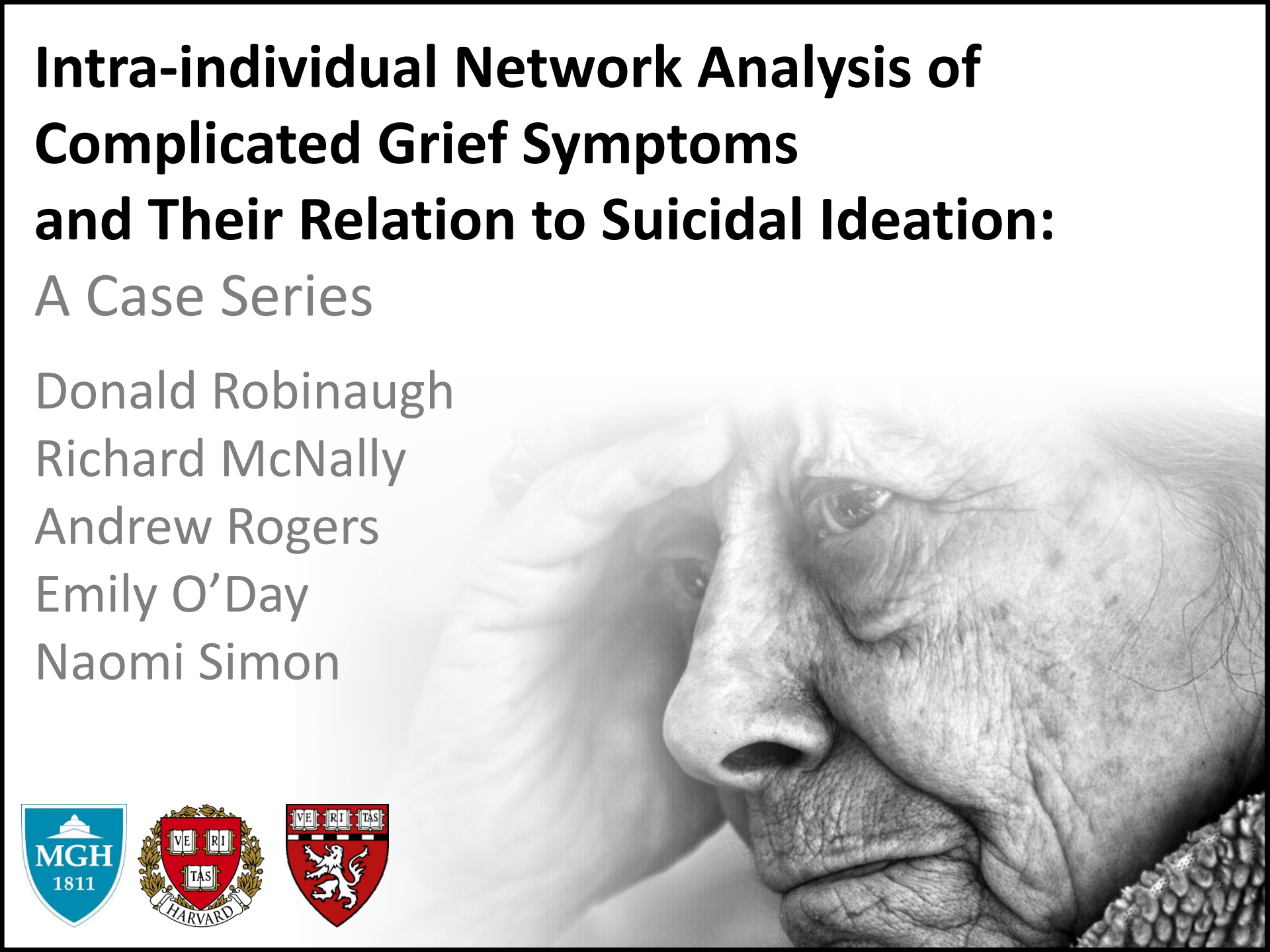
Intra-individual Network Analysis of Complicated Grief Symptoms and Their Relation to Suicidal Ideation:

A Case Series

Donald Robinaugh
Richard McNally
Andrew Rogers
Emily O'Day
Naomi Simon



Caution

This Study is A Work in Progress

Findings Are Preliminary

Grief. A Syndrome

Thoughts about the person (TP)

Thoughts about the death (TD)

Yearning (Y)

Emotional pain (EP)

Approach behavior (Ap)

Avoidance behavior (Av)

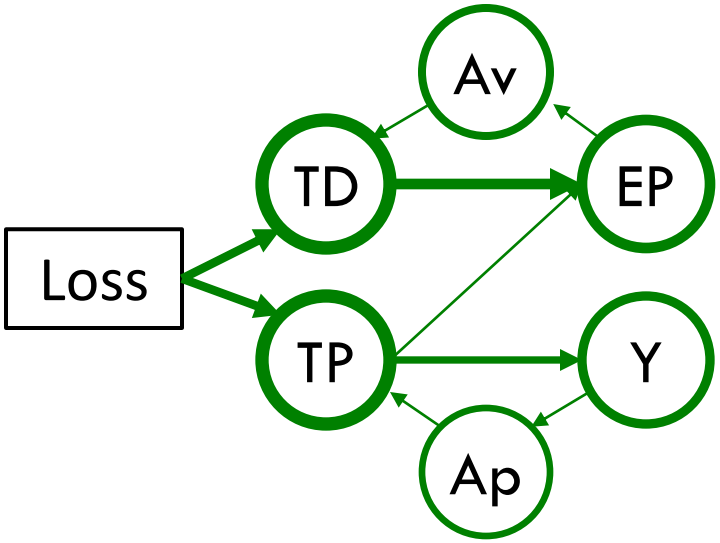
Grief

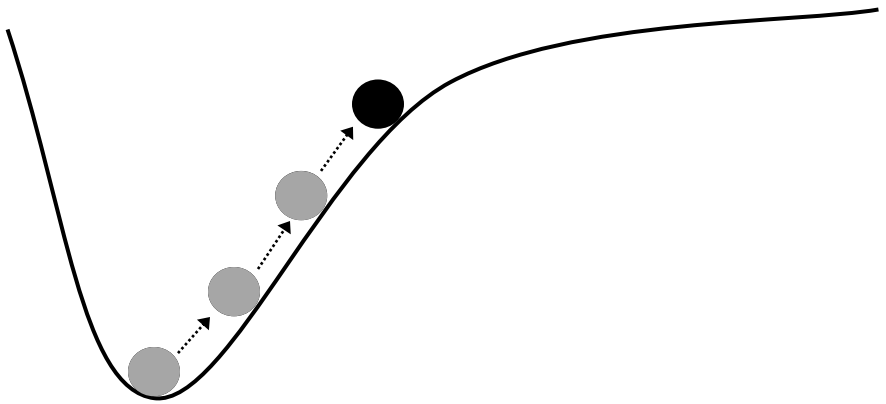
For most, grief subsides.

For some, grief persists.

Why does grief persist for some but not others?

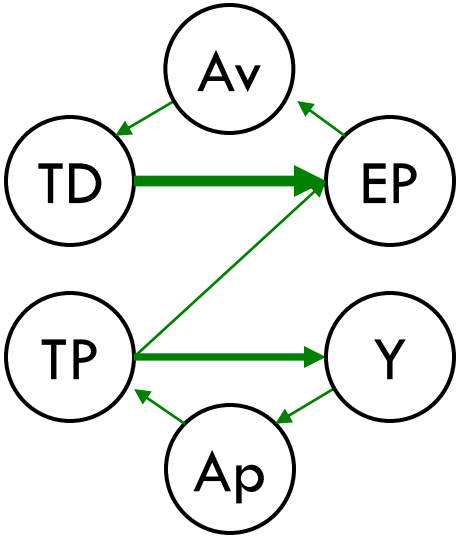
Why does grief persist for some but not others?

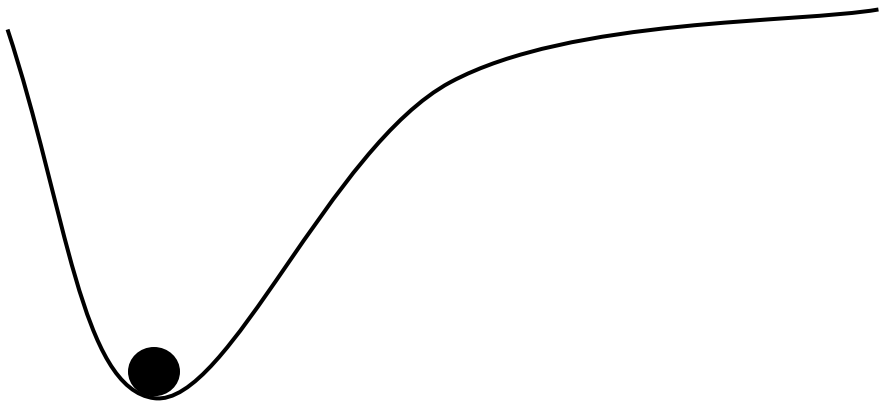




(Adapted from Borsboom, 2017)

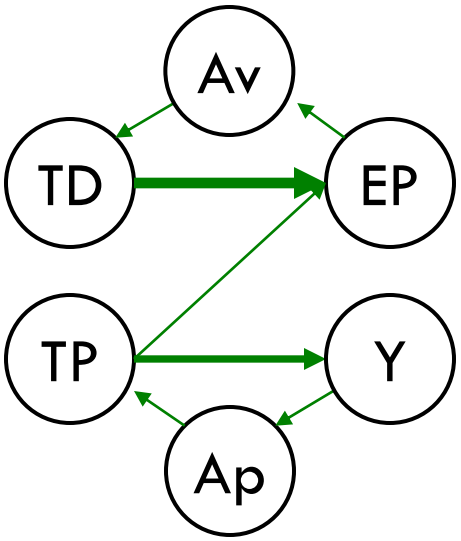
Why does grief persist for some but not others?

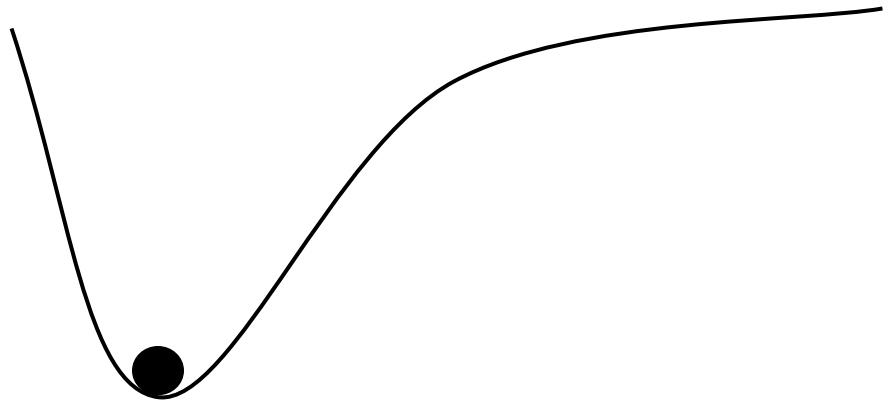


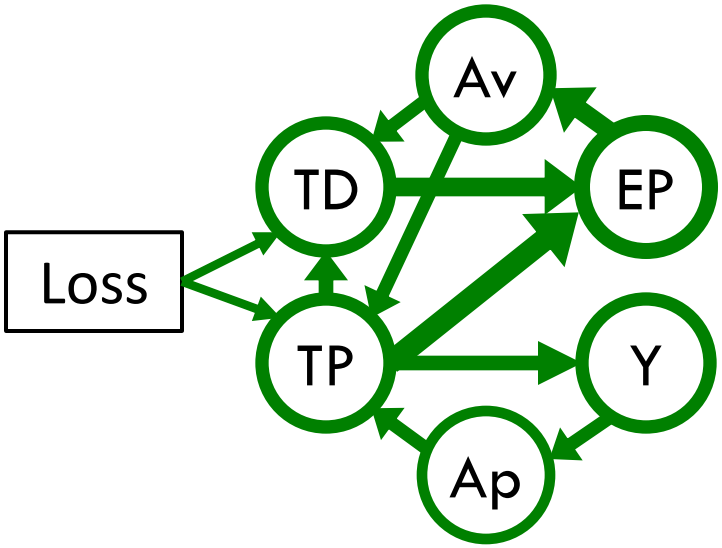


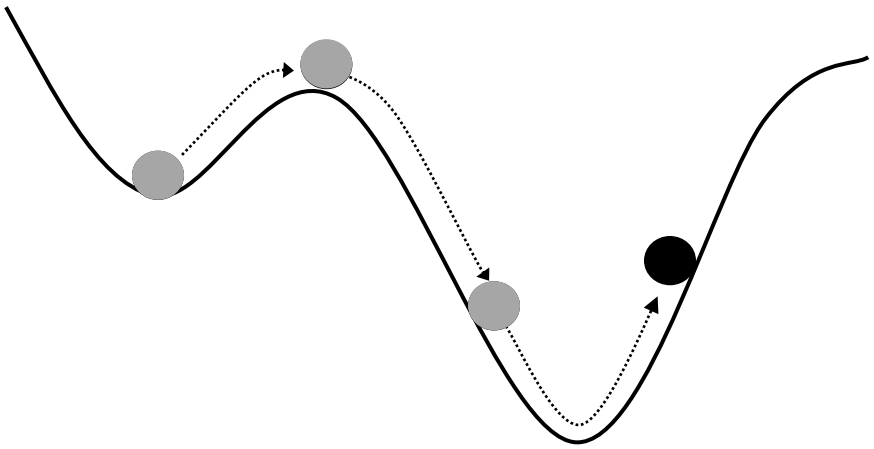
(Adapted from Borsboom, 2017)

Why does grief persist for some but not others?



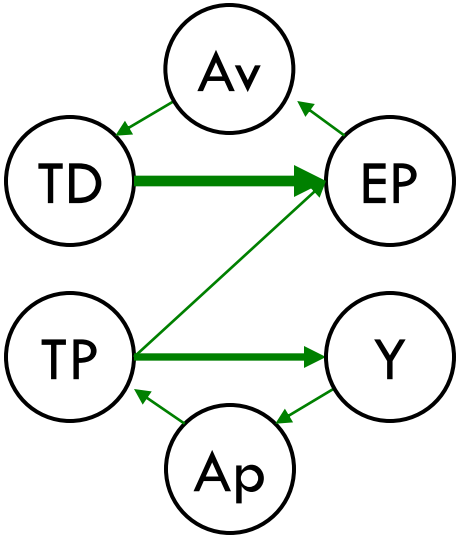


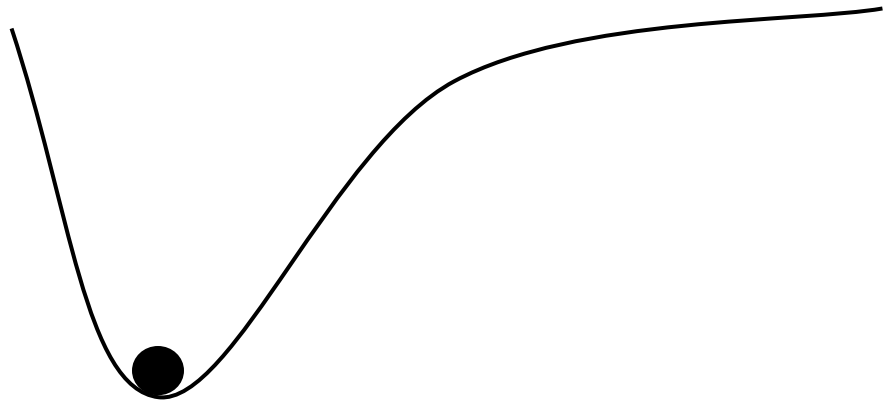


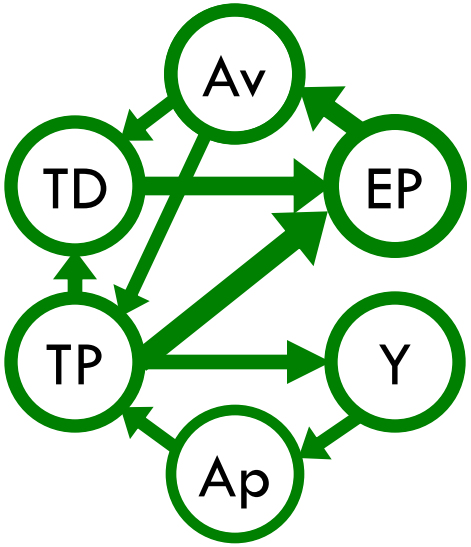


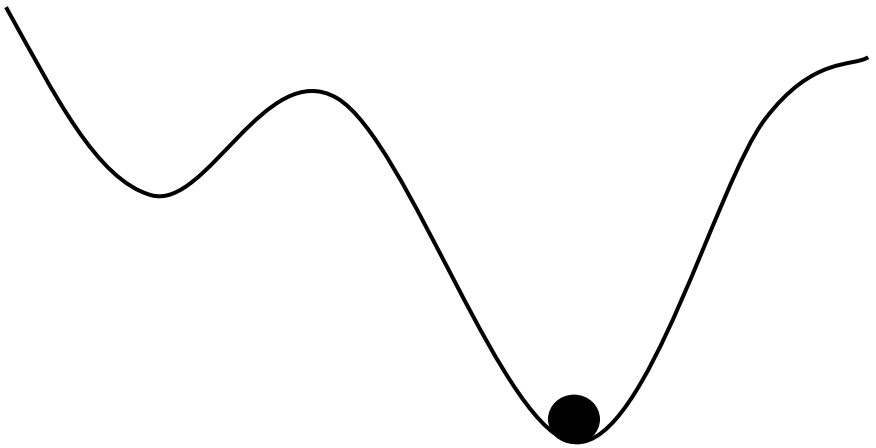
(Adapted from Borsboom, 2017)

Why does grief persist for some but not others?







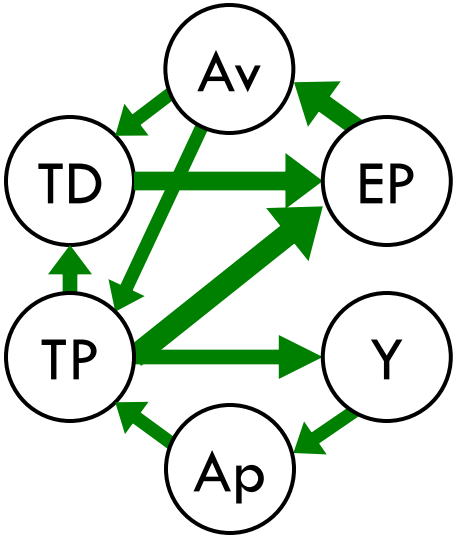


(Adapted from Borsboom, 2017)

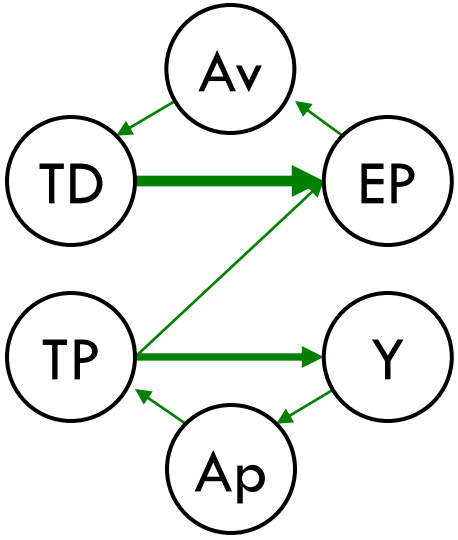
Intra-individual Networks. Rationale

If we want to understand complicated grief, we need to assess individual differences in network structure

Complicated Grief



Grief

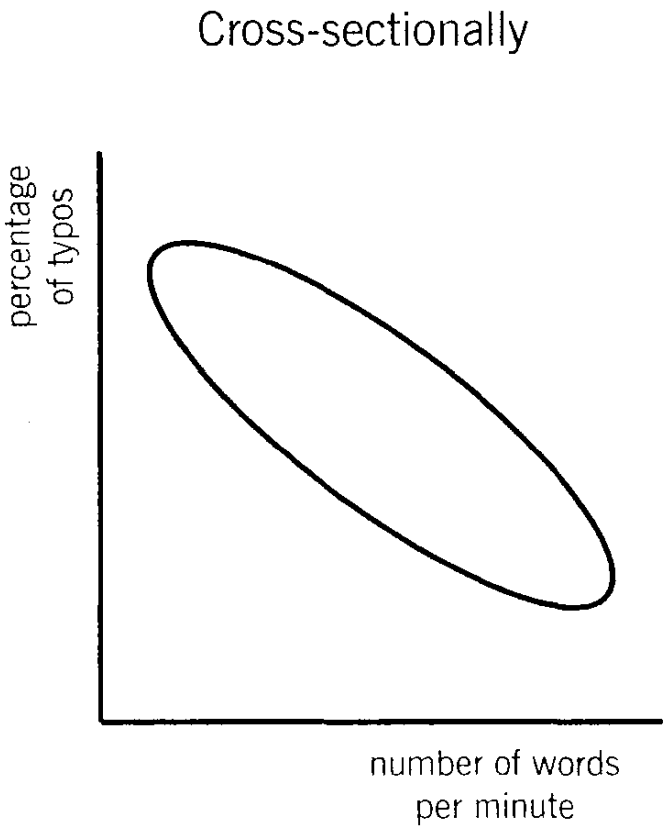


Intra-individual Networks. Rationale

Findings at the level of the population may not correspond to findings at level of the individual

Intra-individual Networks. Rationale

Findings at the level of the population may not correspond to findings at level of the individual

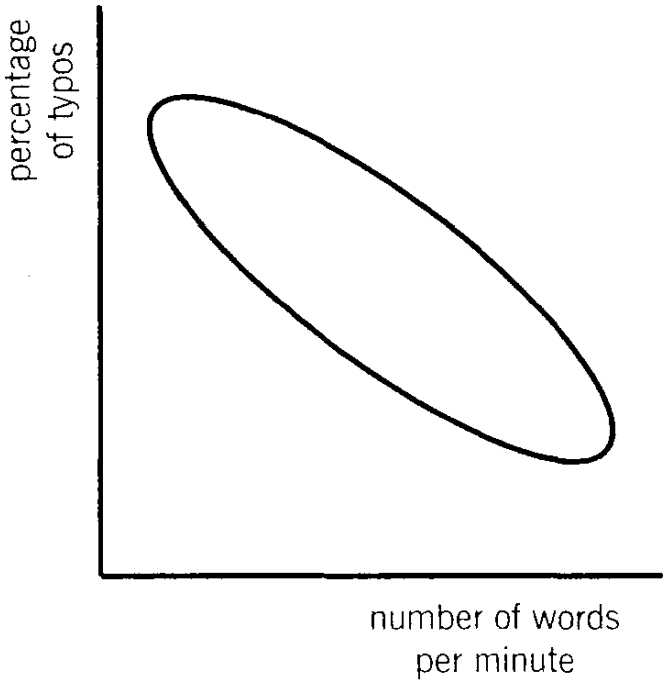


(Molenaar, 2004; Hamaker, 2012, p. 44)

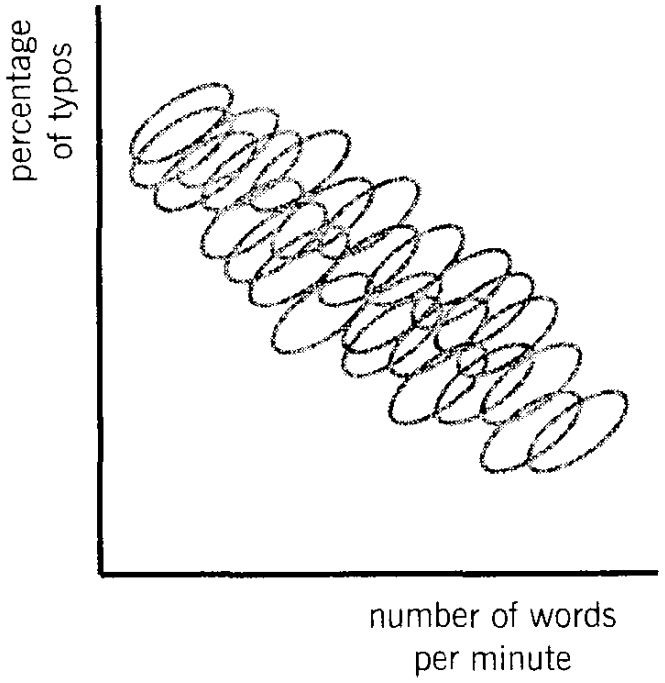
Intra-individual Networks. Rationale

Findings at the level of the population may not correspond to findings at level of the individual

Cross-sectionally

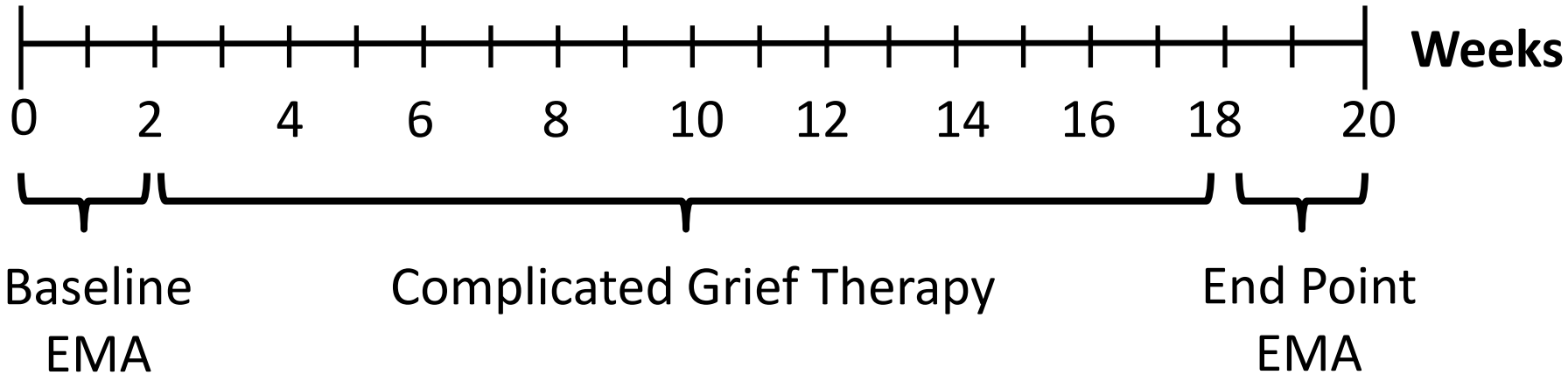


In general

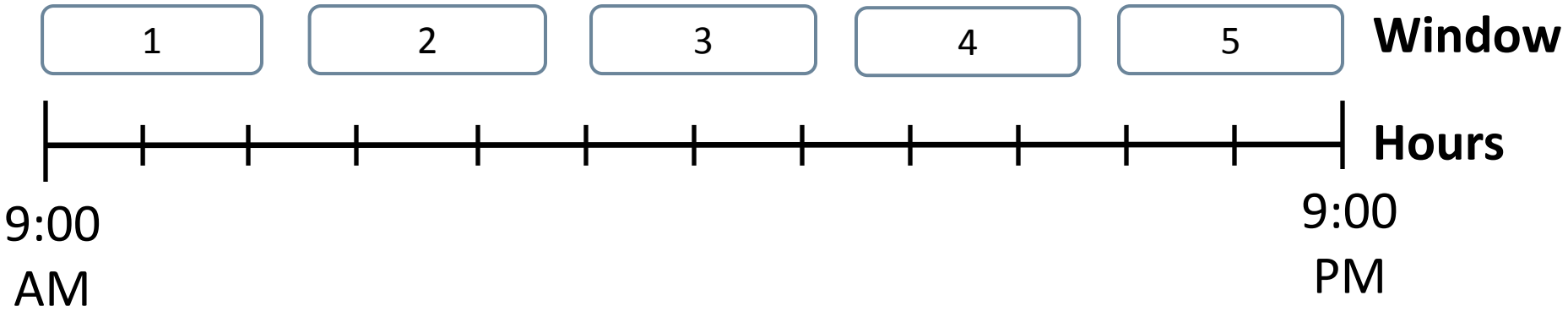


(Molenaar, 2004; Hamaker, 2012, p. 44)

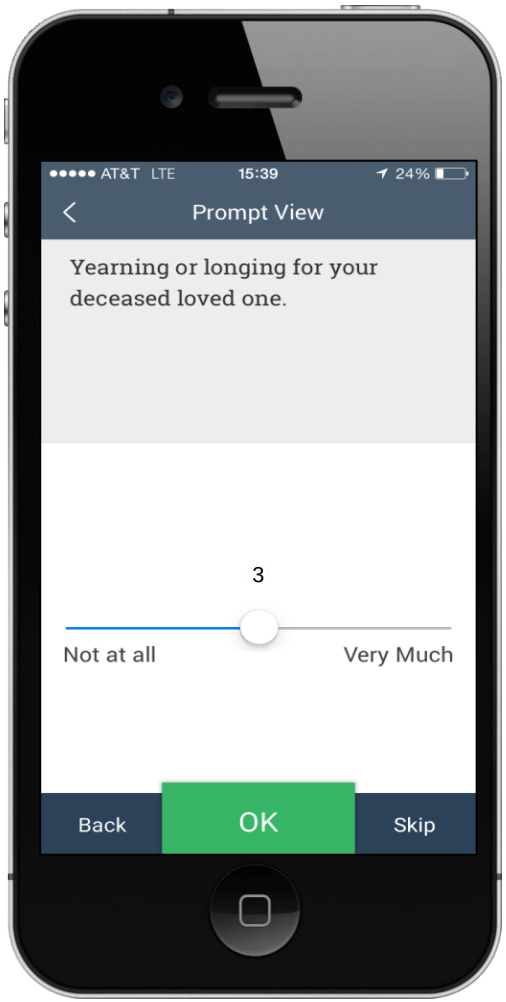
Pilot Study. Ecological momentary assessment



Pilot Study. Ecological momentary assessment



Pilot Study. Ecological momentary assessment



Complicated Grief Symptoms

Thoughts about the person (TP)

Thoughts about the death (TD)

Yearning (Y)

Emotional pain (EP)

Approach behavior (Ap)

Avoidance behavior (Av)

Suicidal ideation (SI)

Pilot Study. Subjects

	Kim
Relationship	Mother
Cause of Death	Cancer
Time Since Death	4 years
Inventory of CG	58
PTSD Checklist	59

Pilot Study. Subjects

	Kim	Alice
Relationship	Mother	Daughter
Cause of Death	Cancer	Homicide
Time Since Death	4 years	3 years
Inventory of CG	58	45
PTSD Checklist	59	26

Pilot Study. Network Analysis

R package: graphicalVAR

Edges defined using Vector Autoregressive Modeling

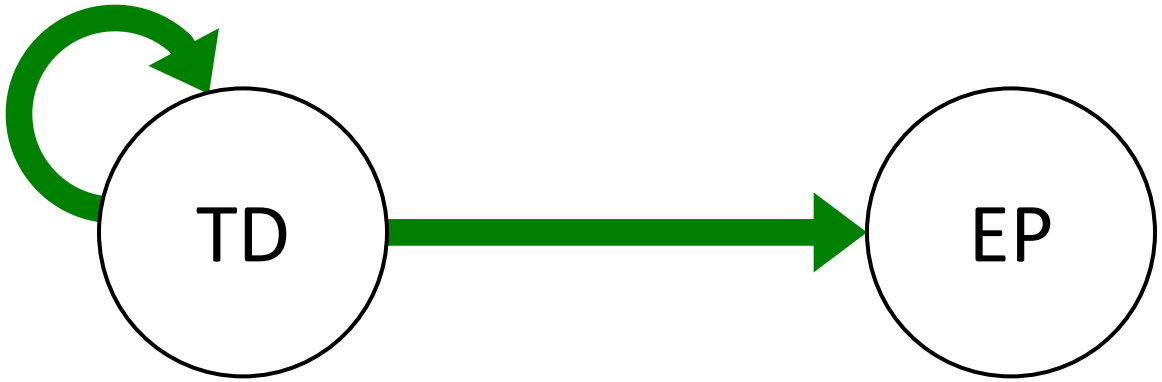
Each symptom at time *t* regressed on all elements in the network at time t-1.

(Epskamp, 2017)

Pilot Study. Network Analysis

Temporal network

Associations **between** time windows t-1 and t

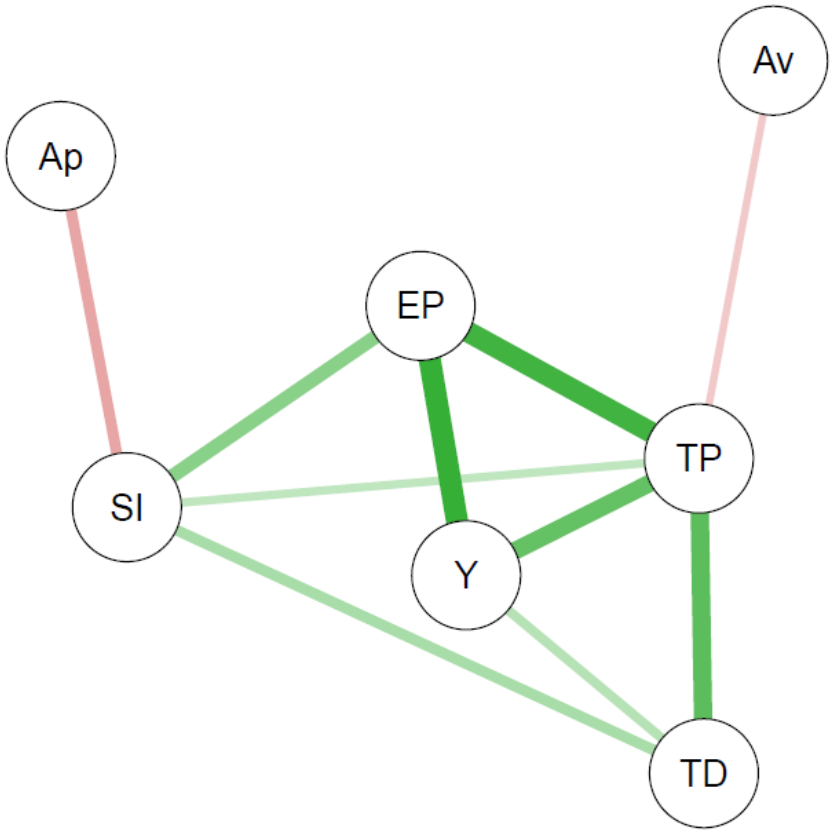


Pilot Study. Network Analysis

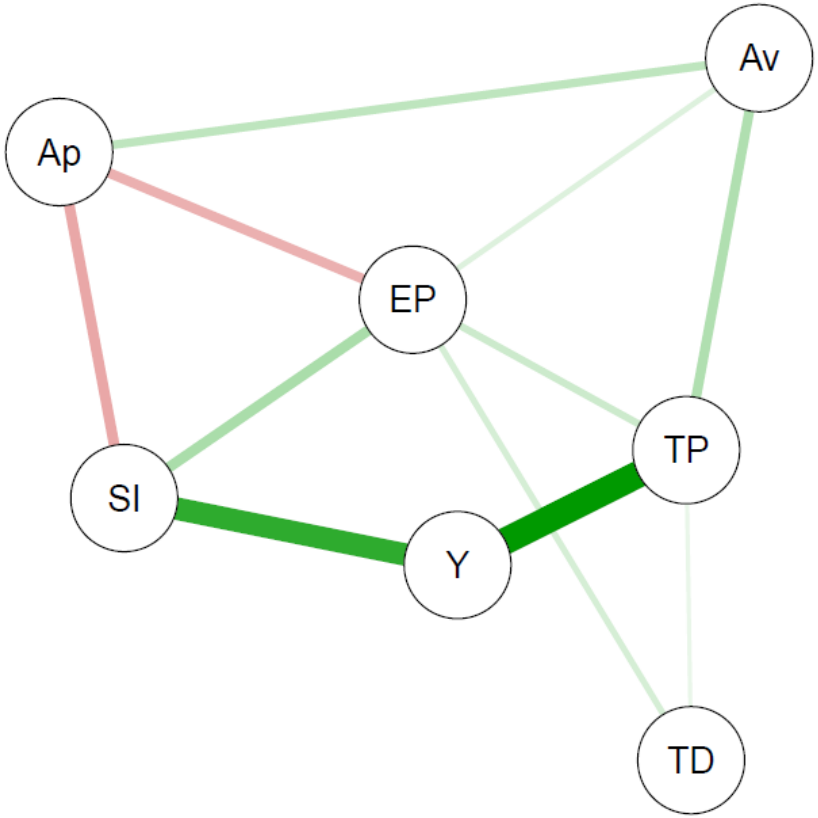
Contemporaneous network

Associations **within** a given time window t

Findings. Networks differ between individuals

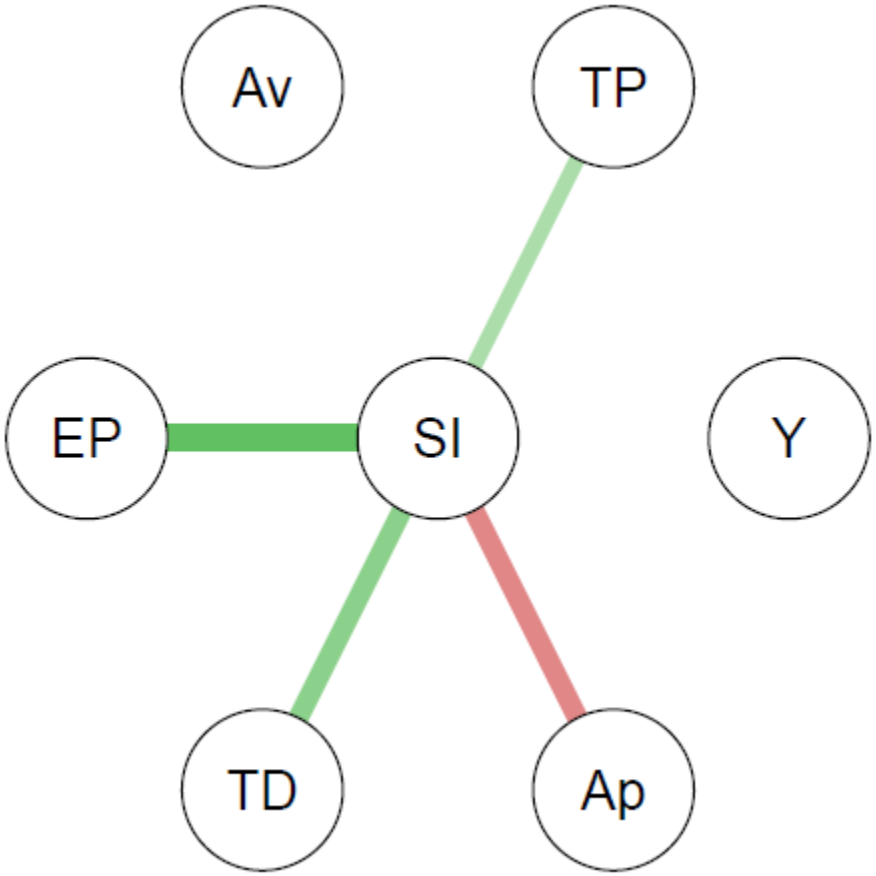


Kim



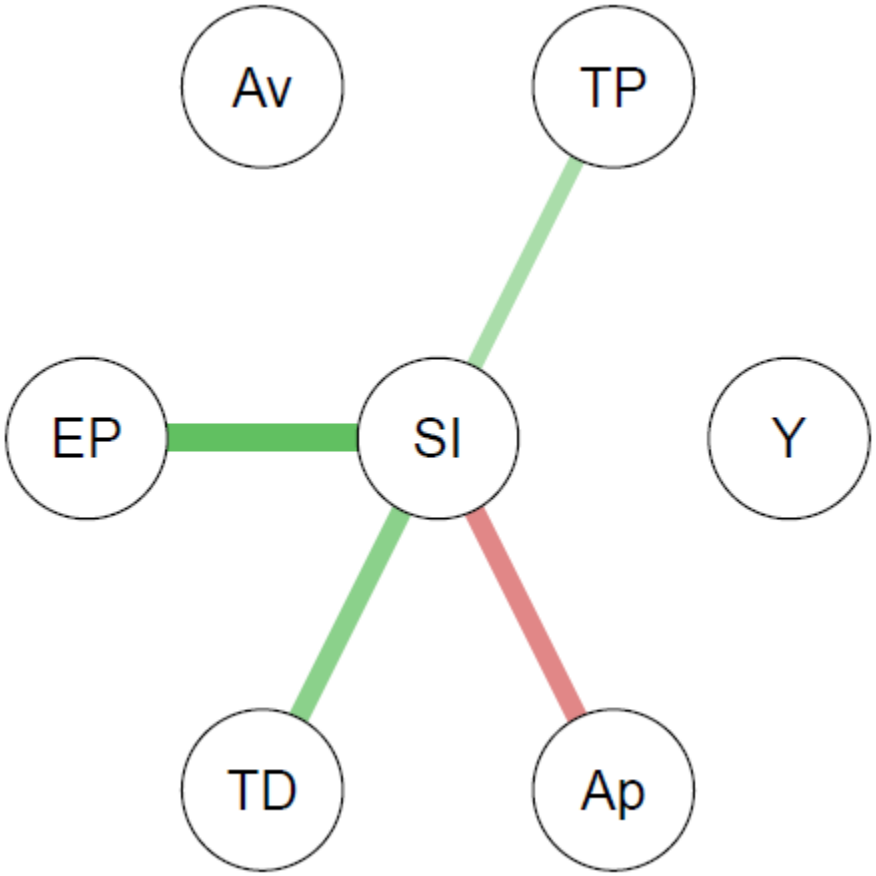
Alice

Findings. Networks differ between individuals

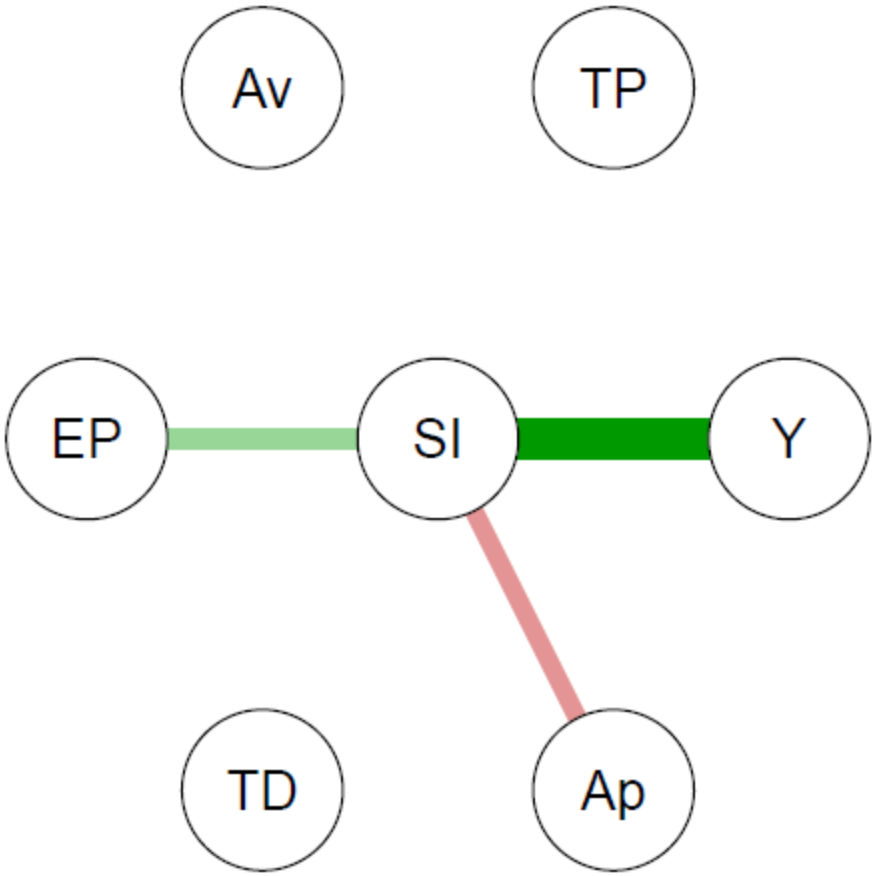


Kim

Findings. Networks differ between individuals

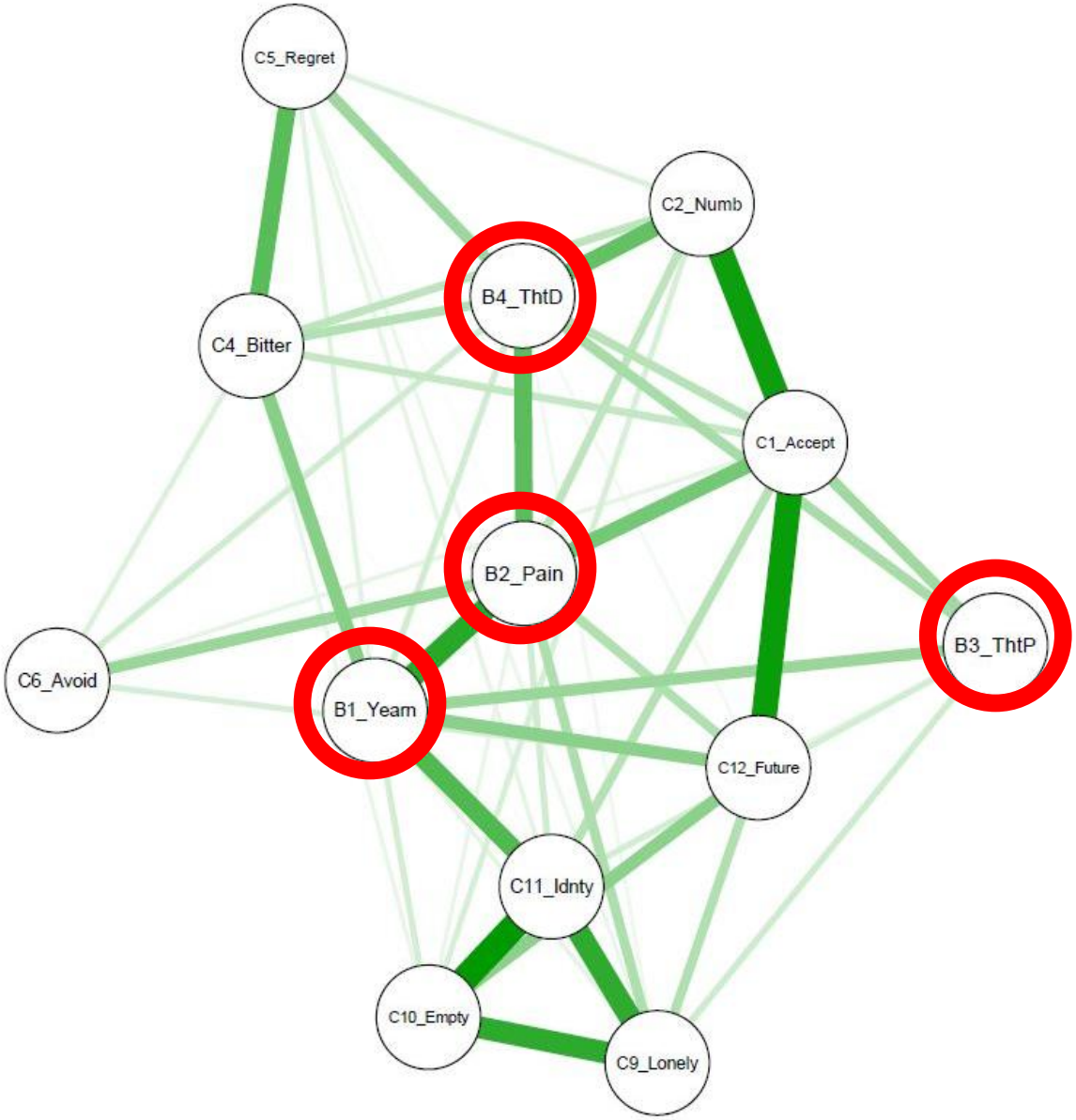


Kim



Alice

Findings. Individual may differ from population



Findings. Individual may differ from population

Suicidal Thoughts

Yearning

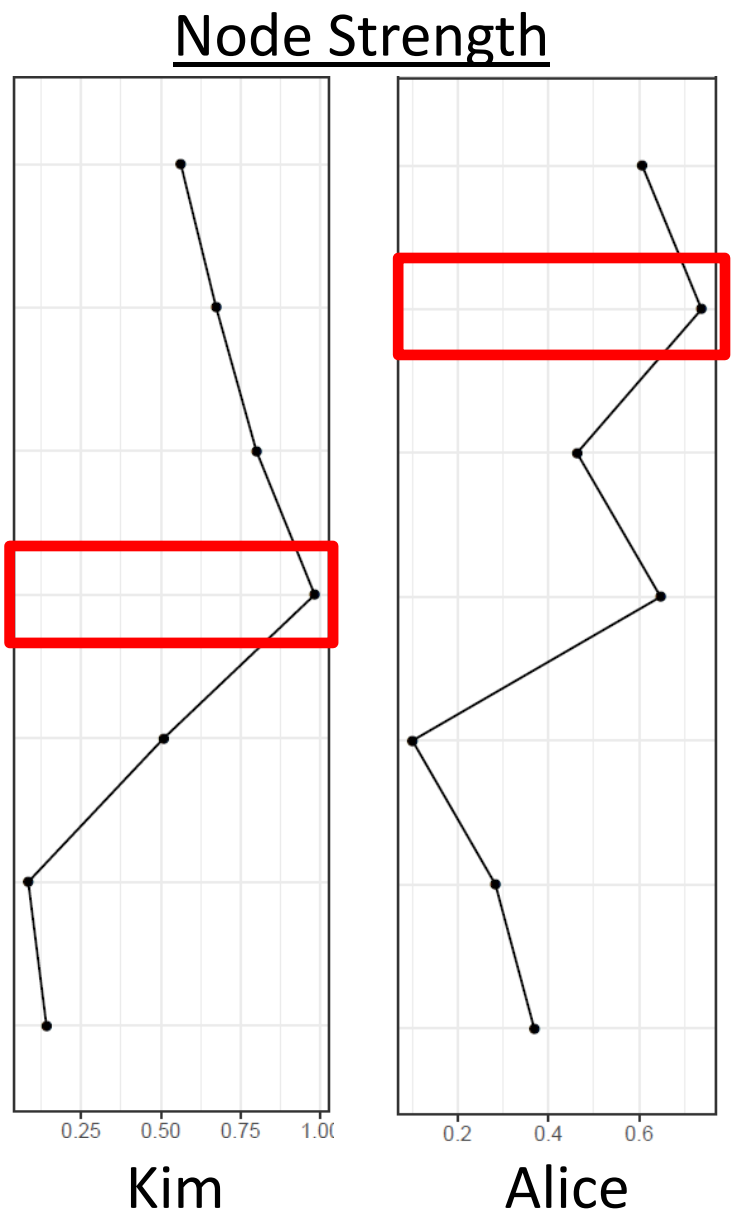
Emotional Pain

Thoughts: Person

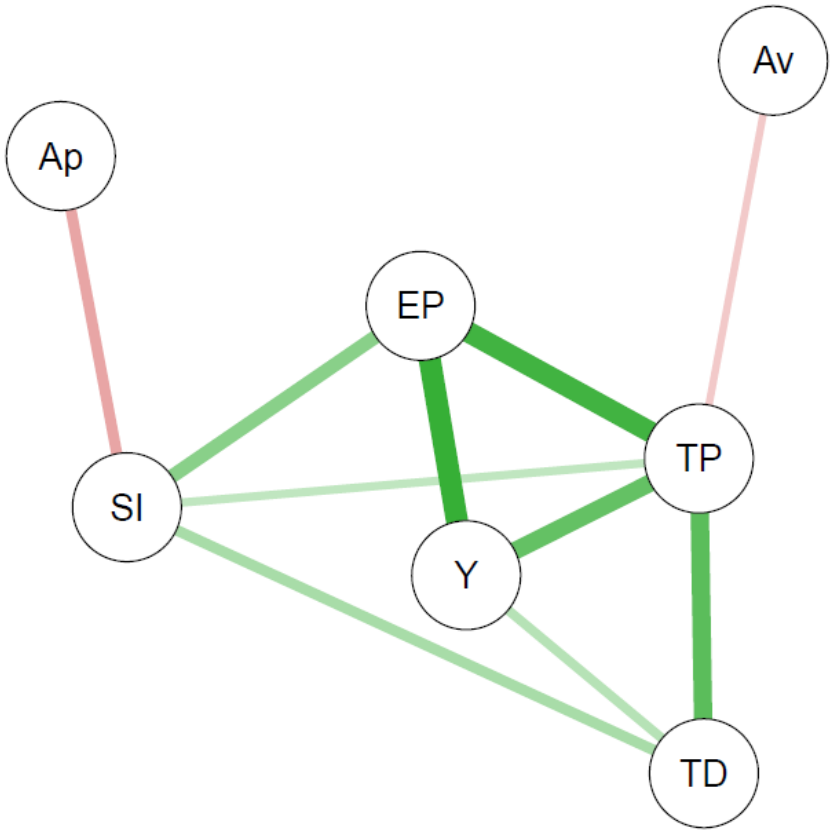
Thoughts: The Death

Avoidance Behavior

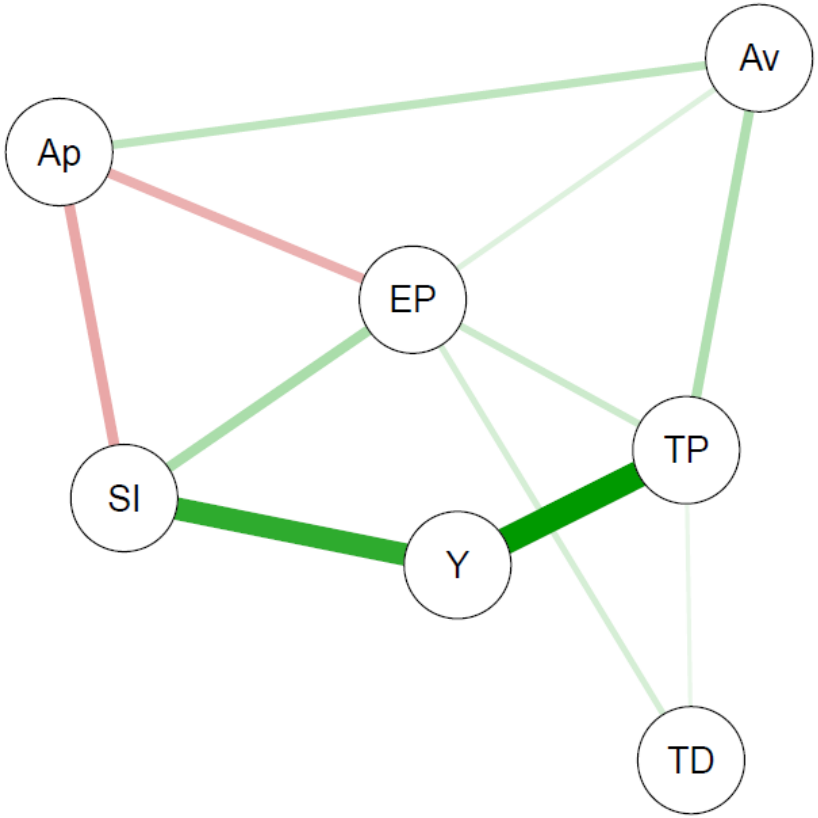
Approach Behavior



Findings. Individual may differ from population

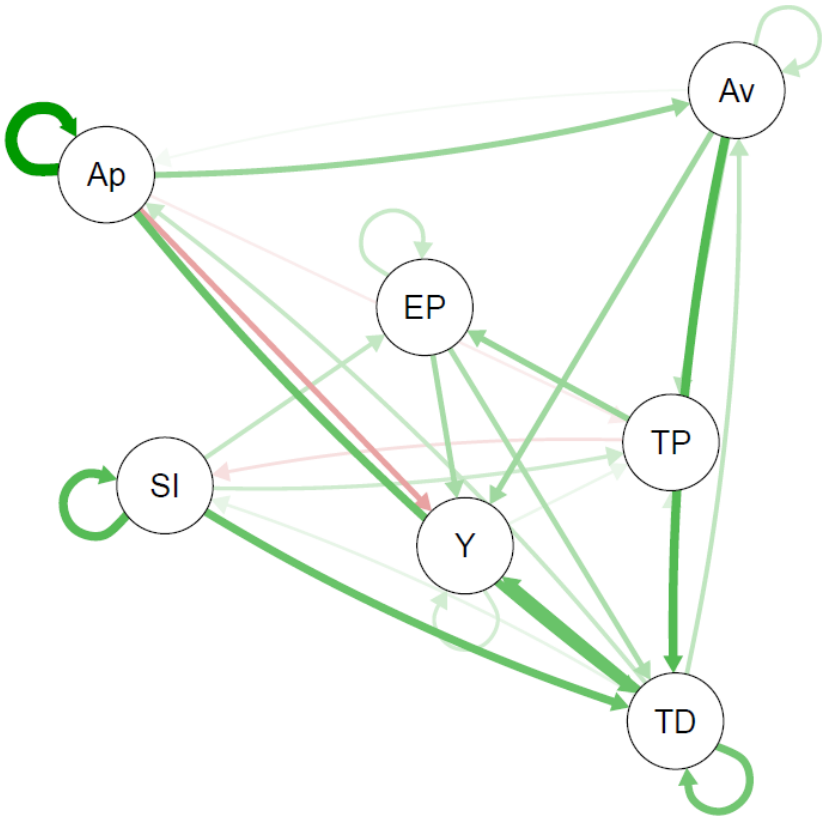


Kim



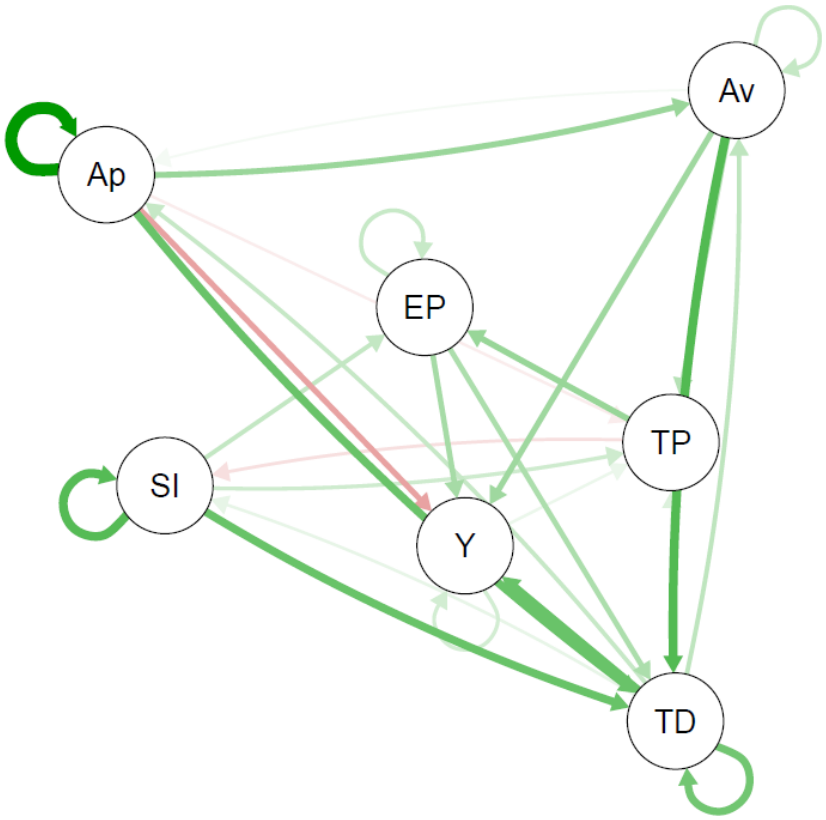
Alice

Findings. Temporal networks provide valuable new information

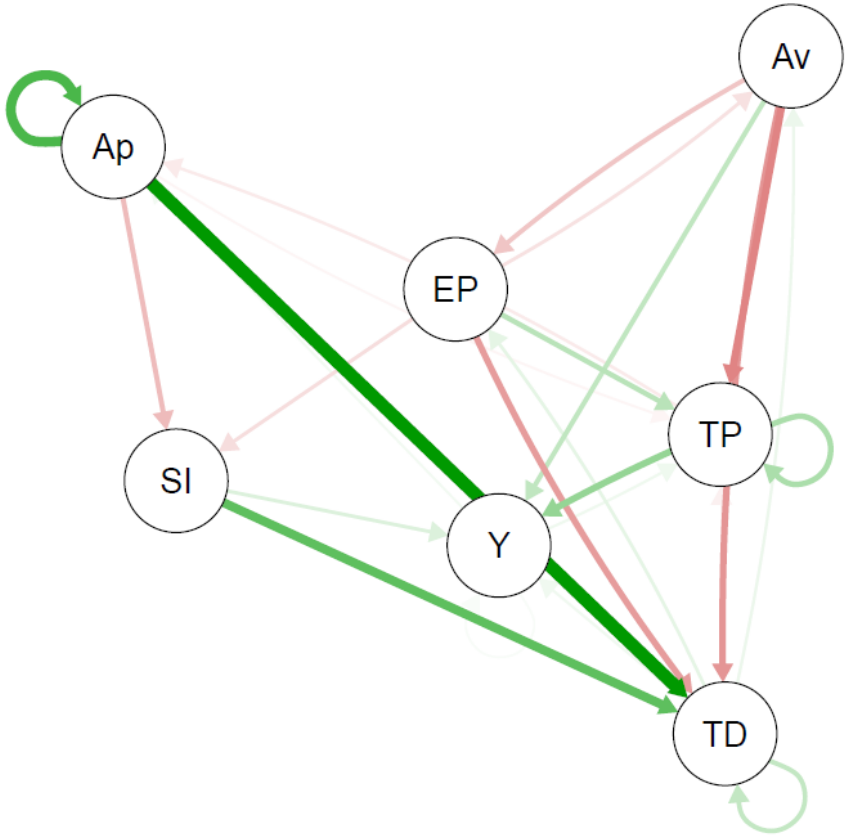


Kim

Findings. Temporal networks provide valuable new information



Kim



Alice

Conclusions. Intra-individual networks

Valuable information about temporal dynamics

Assess processes at appropriate level of analysis

Patient-specific network structure

- May be critical to understanding etiology
- Personalized treatment

Acknowledgments

Mentors, Collaborators, and Consultants

Naomi Simon, Rich McNally, Katherine Shear, Denny Borsboom, Laura Bringmann, Sacha Epskamp, Eiko Fried, & Claudia van Borkulo

Research Assistants

Emily O'Day, Andrew Rogers, & Madelyn Frumkin

Clinicians & Clinical Supervisors

Nicole LeBlanc, Ryan Jacoby, & Meredith Charney

Funding Support

American Foundation for Suicide Prevention
Charles A. King Trust Foundation

Thank You!