

Alone Together: Social Isolation and Loneliness in the Time of COVID-19

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Loneliness Is a Growing Public Health Issue for Older Adults

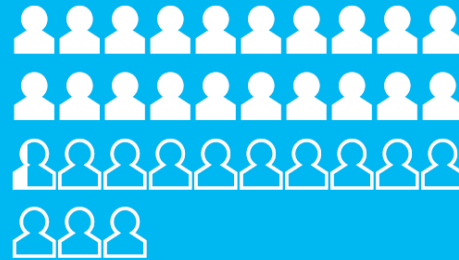
The Problem

1 in 3 U.S. adults age 45 and older are lonely.

Since 2010, approximately 5 million more midlife and older adults are lonely due to growth in this age group among the population.



35%
of adults age 45+
in the united states
ARE LONELY



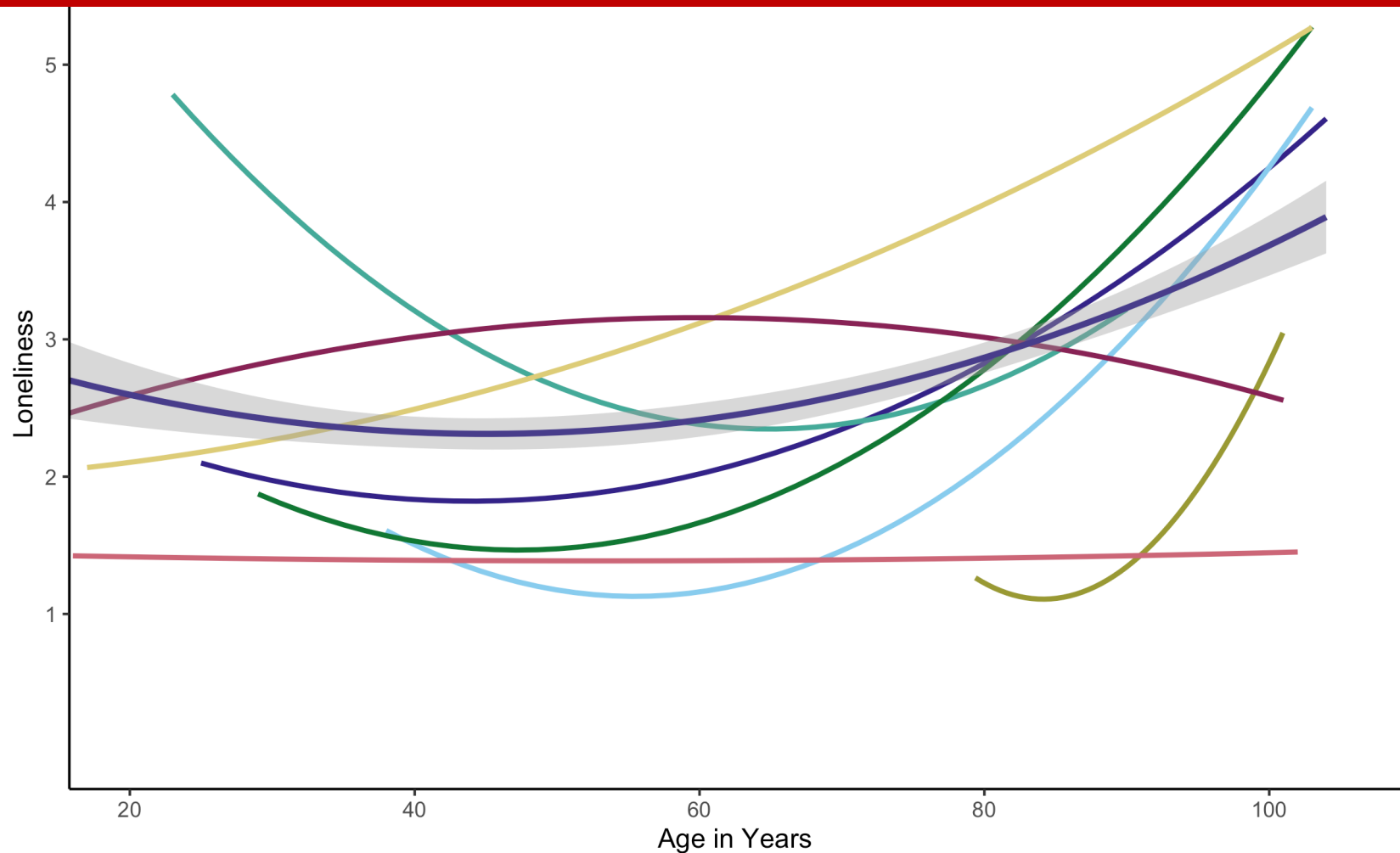
61%
of those surveyed
are lonely

Loneliness in Americans is up 7-percentage points from 54% in 2018 to 61% in 2019. Why?

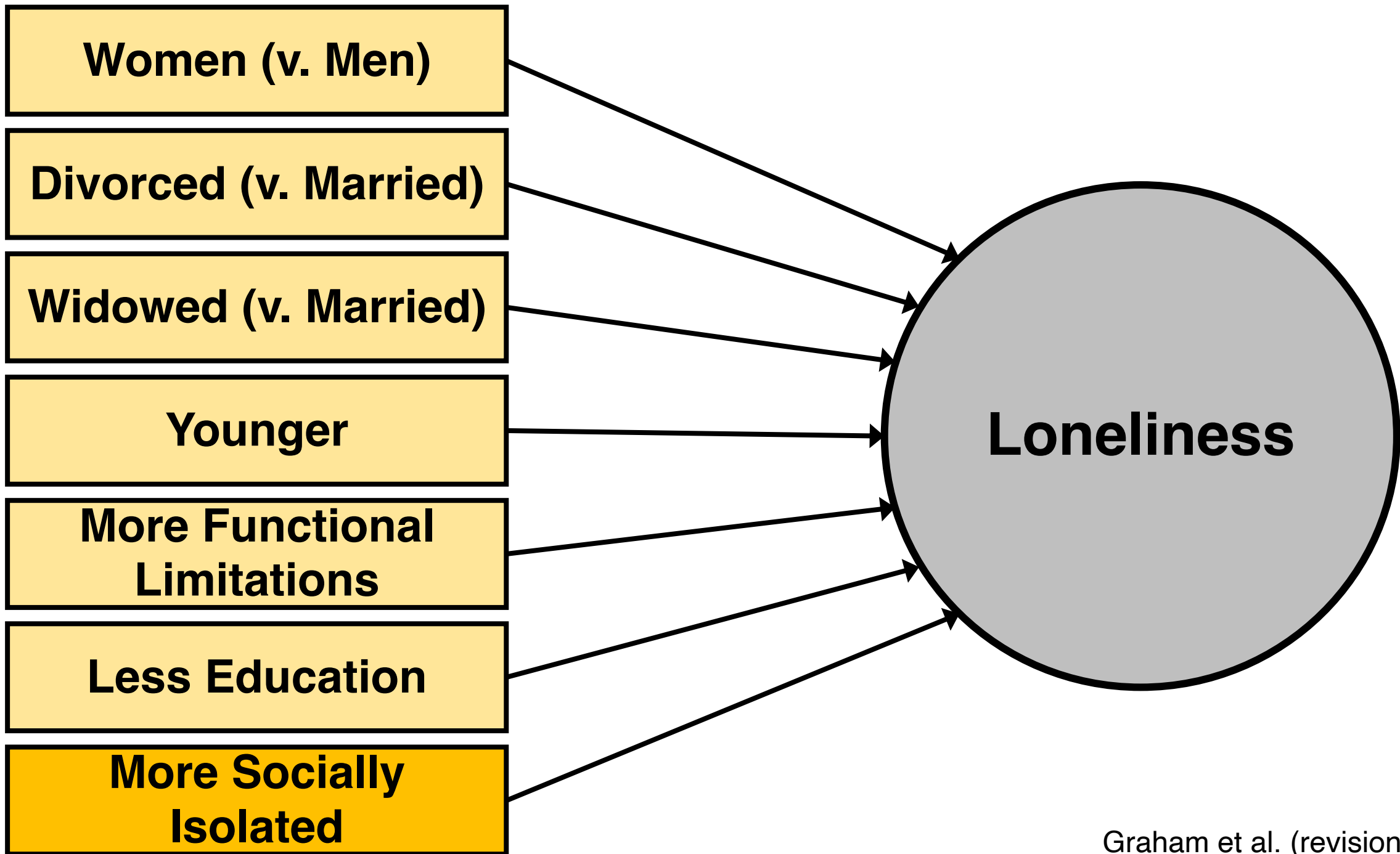
- Not enough social support
- Too few meaningful social interactions
- Poor physical and mental health
- Not enough balance in our lives



BUT Loneliness Shows U-Shaped Lifespan Changes



study HRS ELSA OCTOTWIN LISS
 SHARE SATSA GSOEP HILDA



Loneliness: Subjectively feeling alone. The discrepancy between one's desired and actual level of connection

Social Isolation: Objectively being alone, having few relationships, or infrequent contact

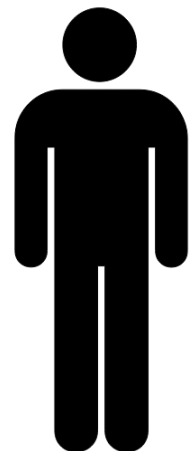


gettyimages

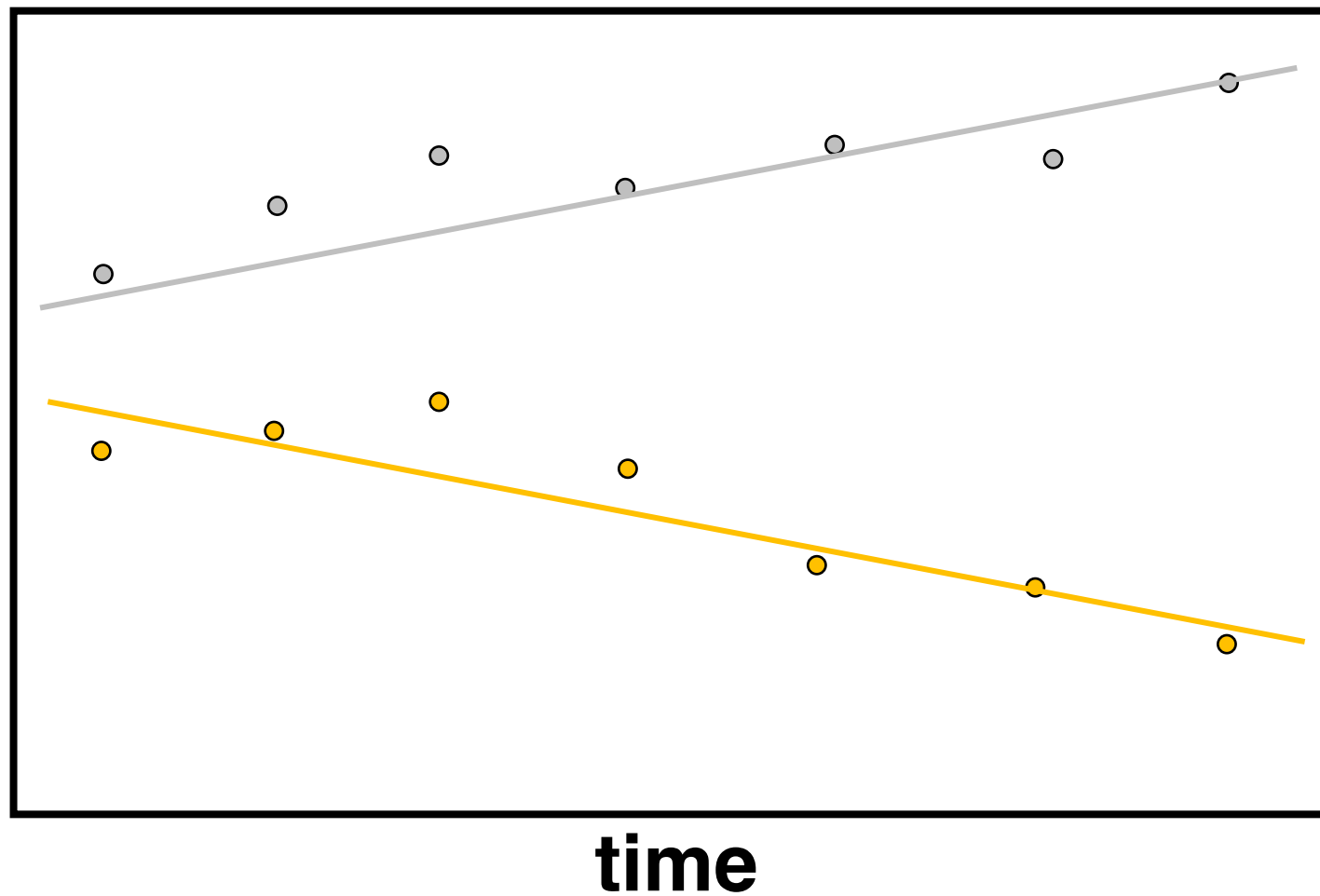
25 YEARS

Taltec Jean Michel / EyeEm

Social Asymmetry

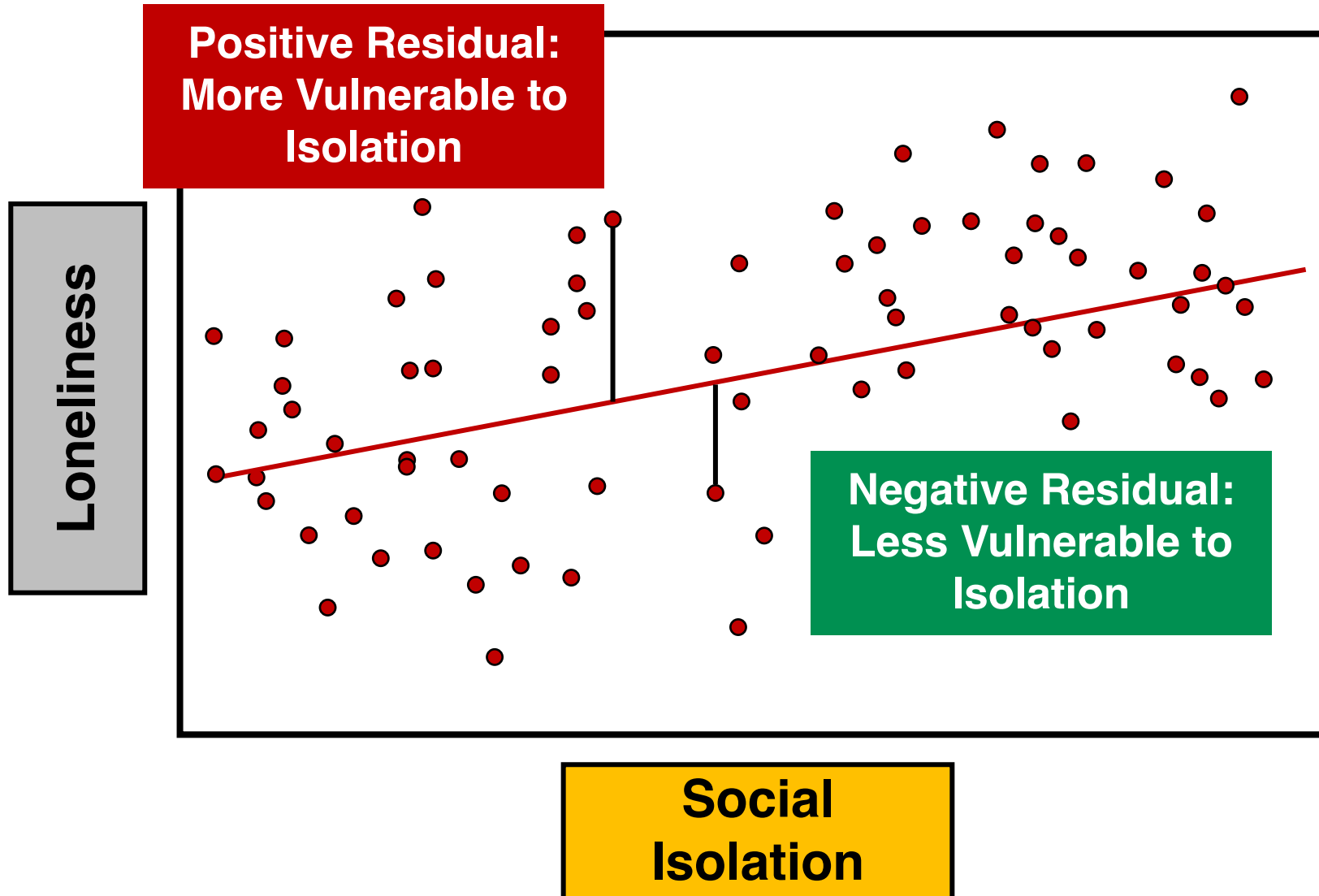


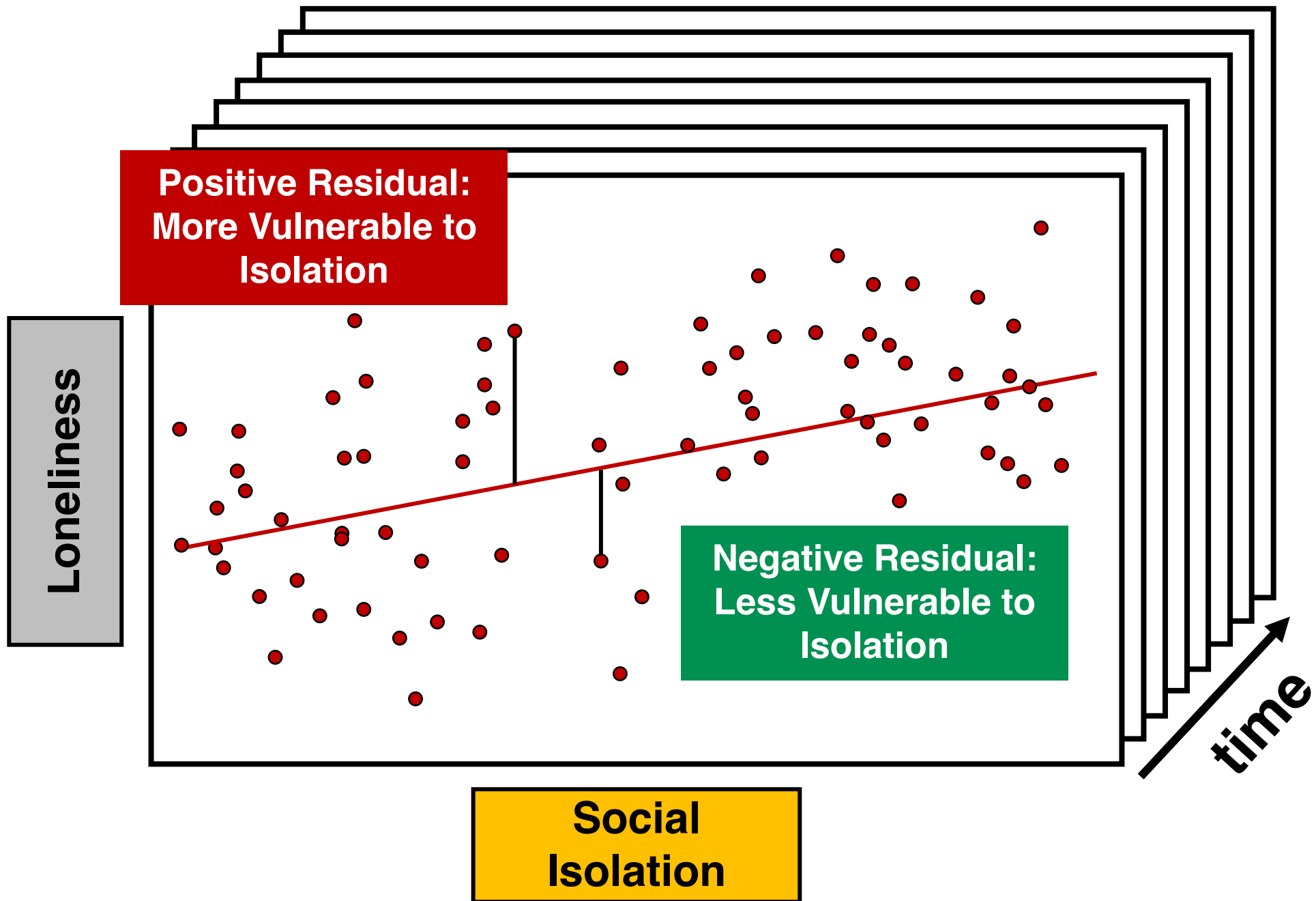
level



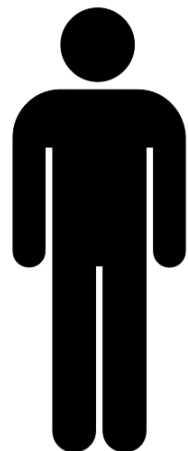
Loneliness

Social
Isolation

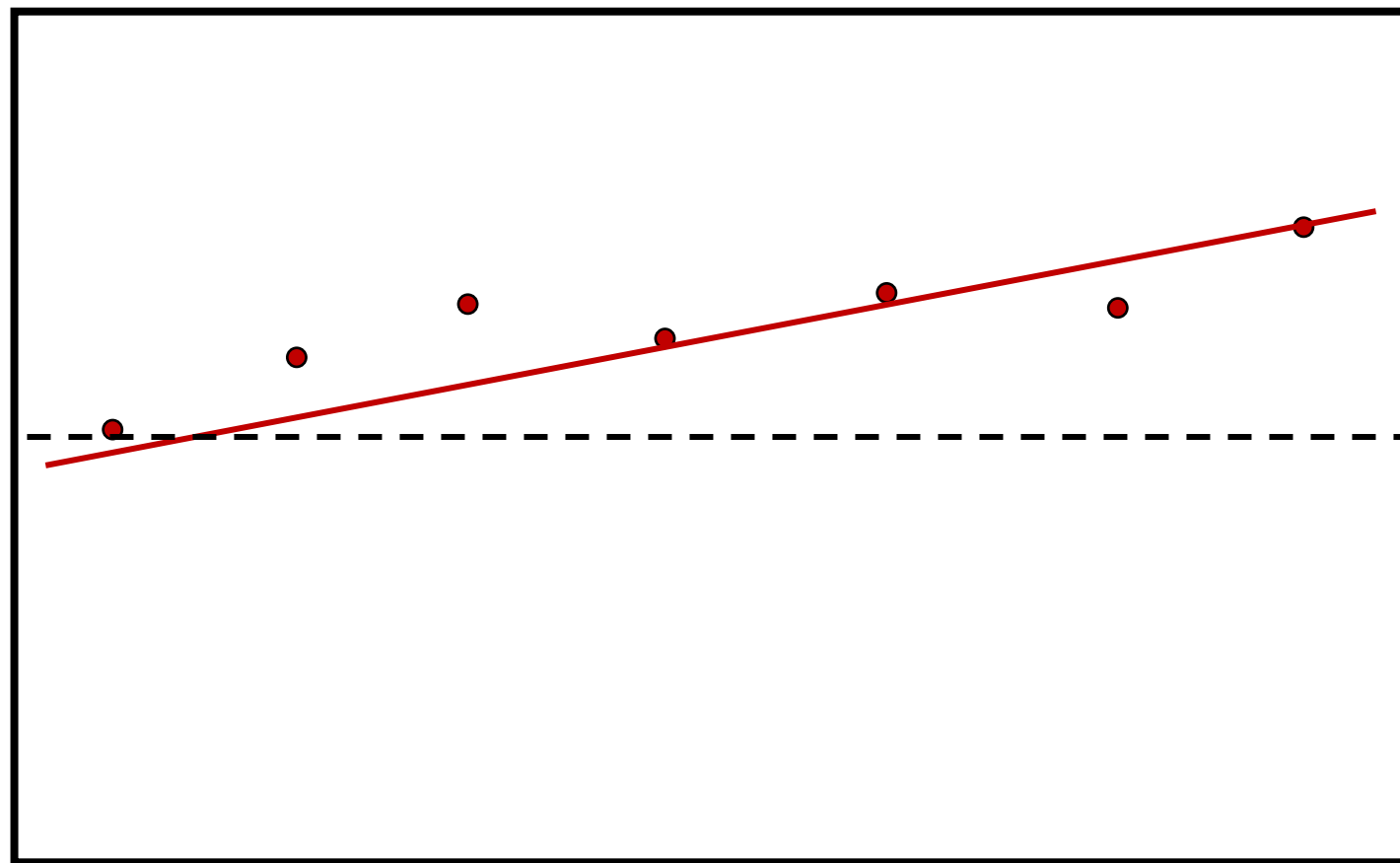




Social Asymmetry



level

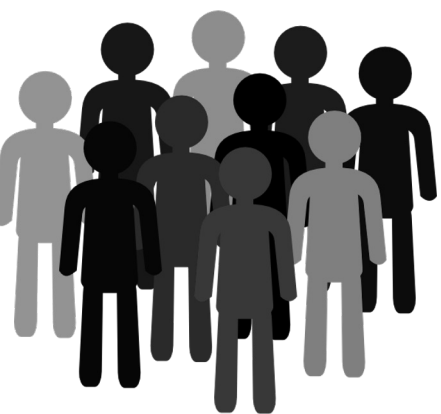


time

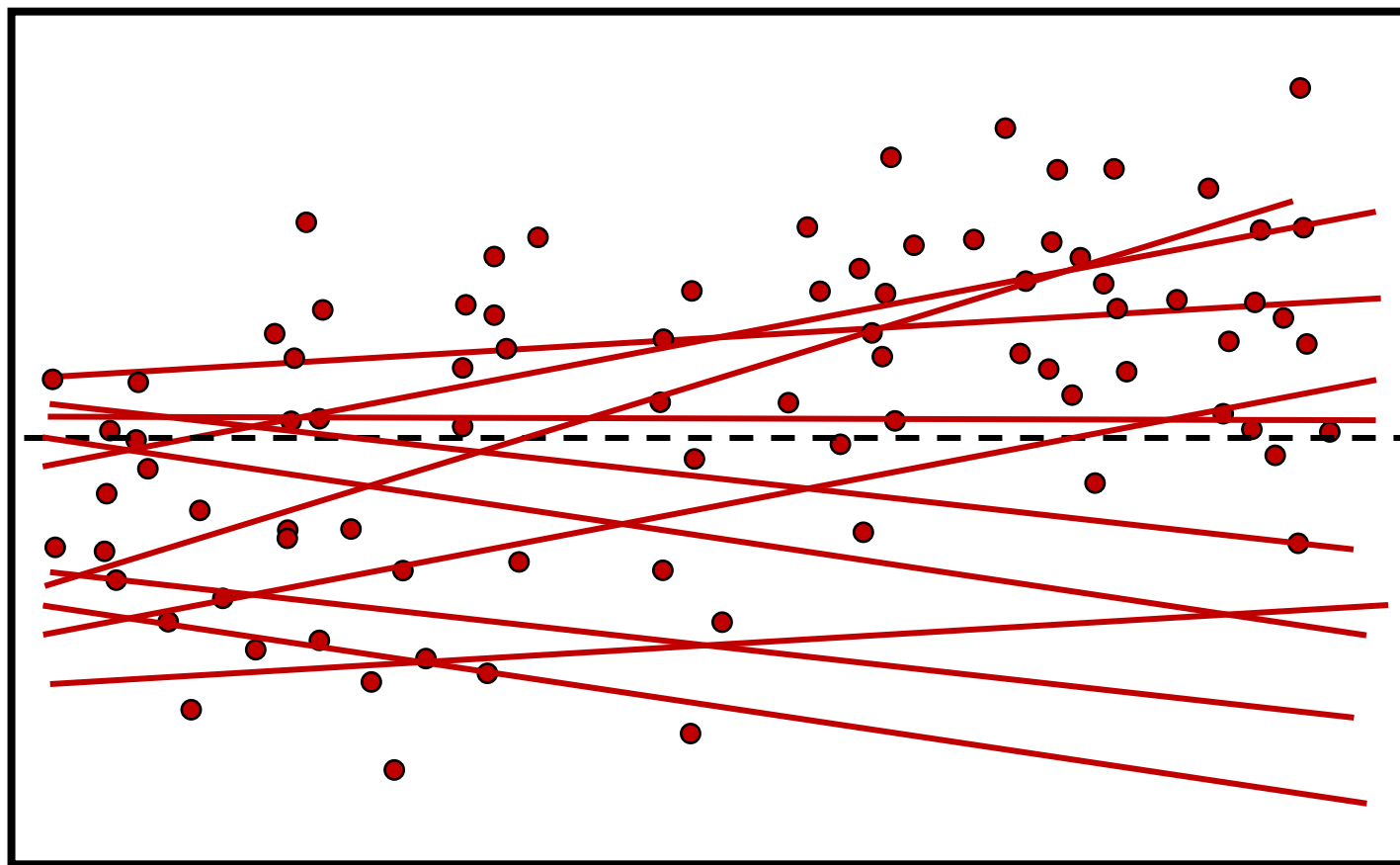
Vulnerability

Resilience

Social Asymmetry



level

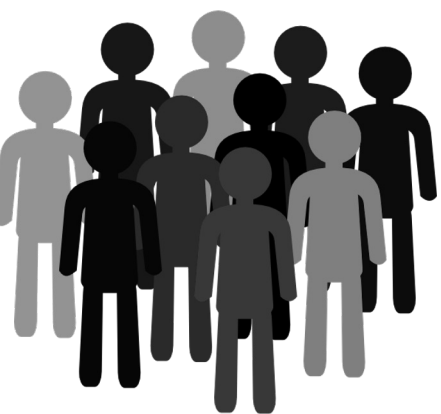


time

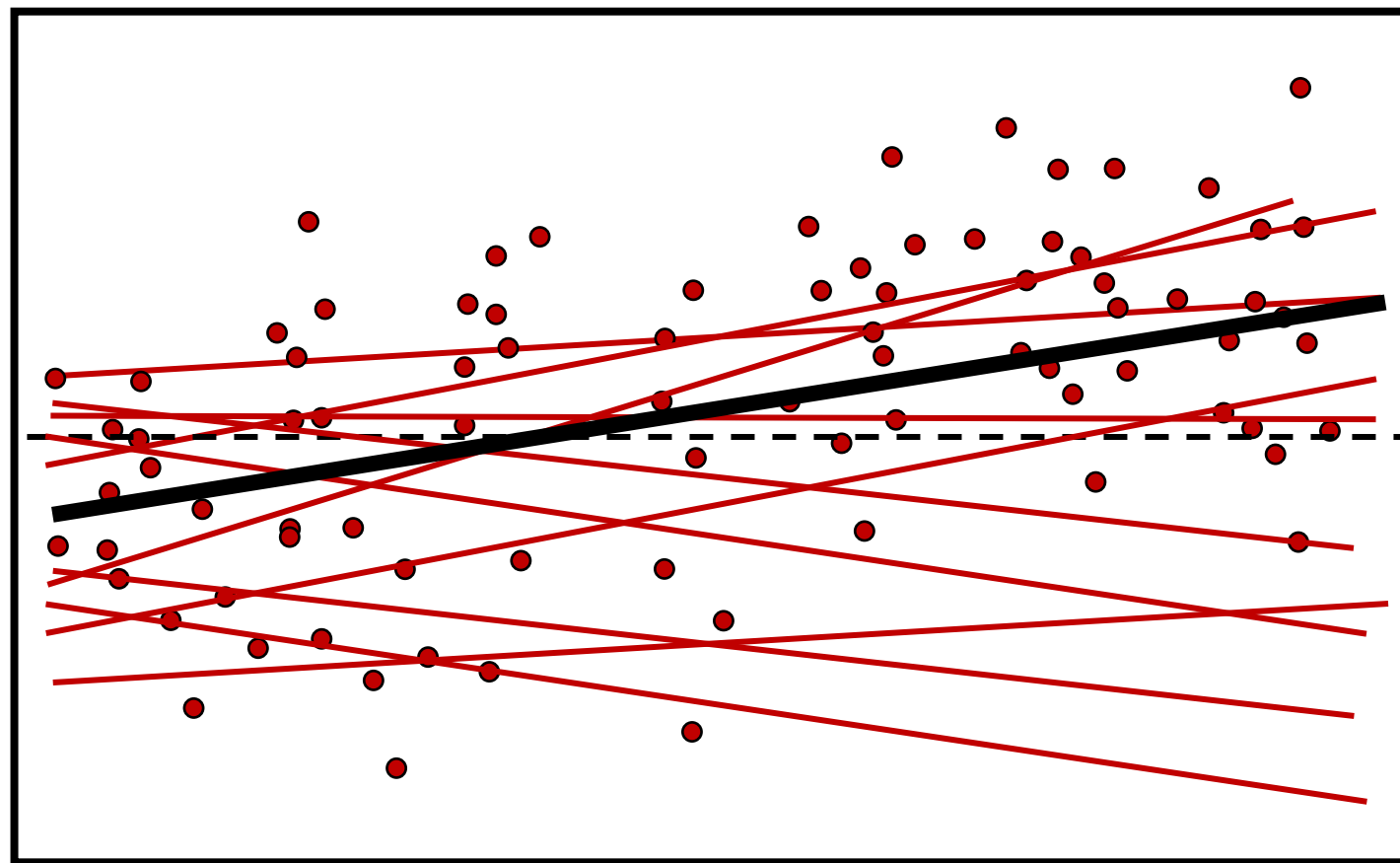
Vulnerability

Resilience

Social Asymmetry



level

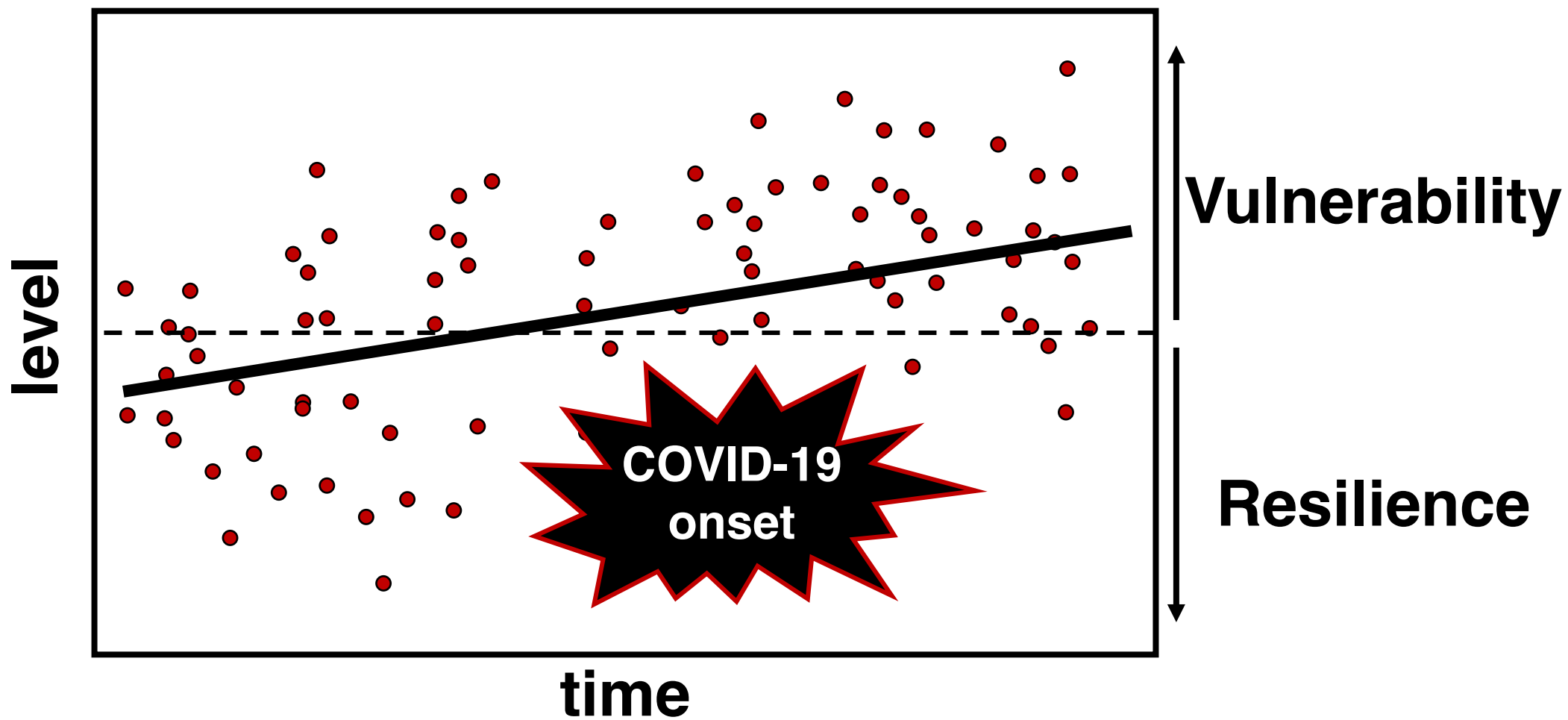


time

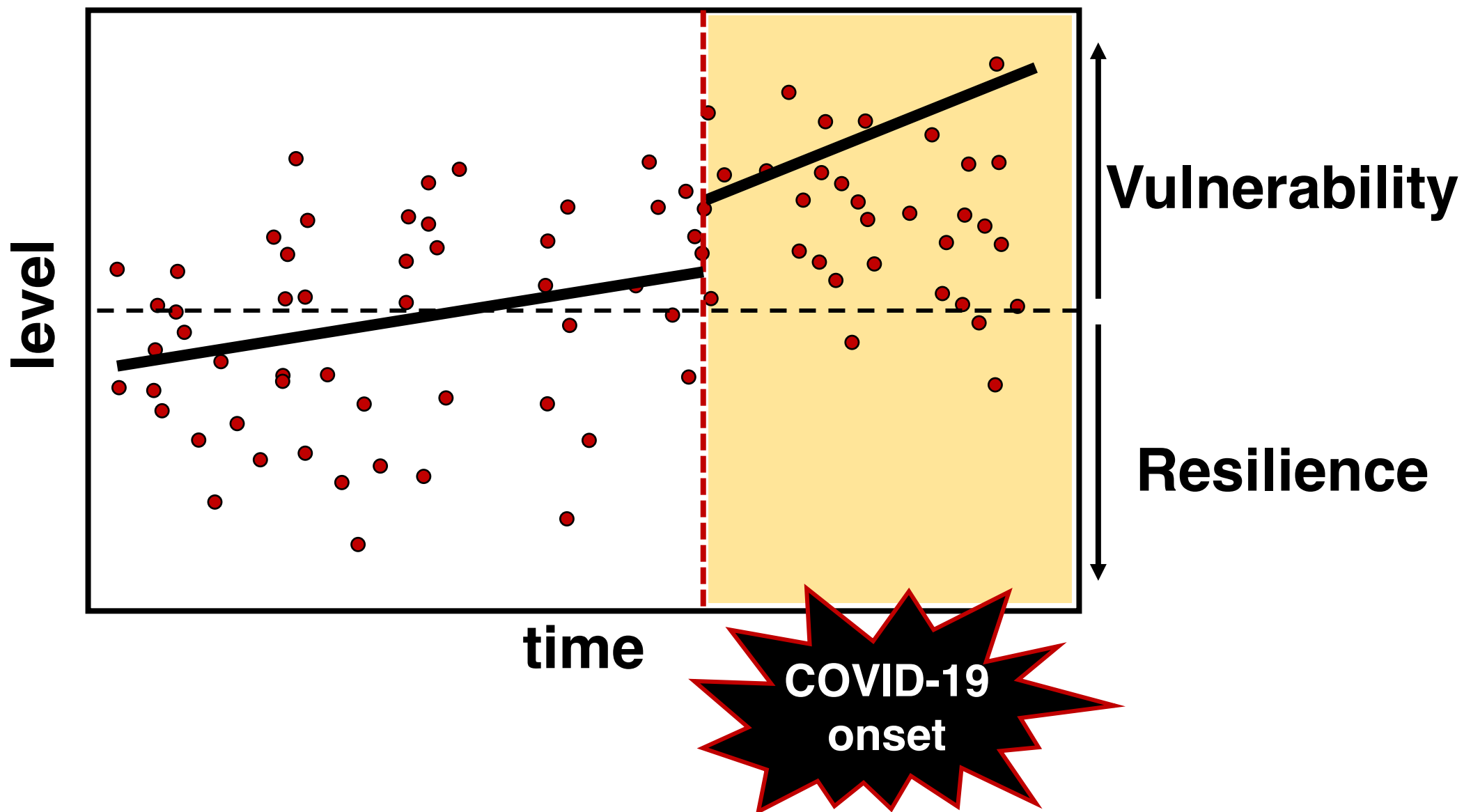
Vulnerability

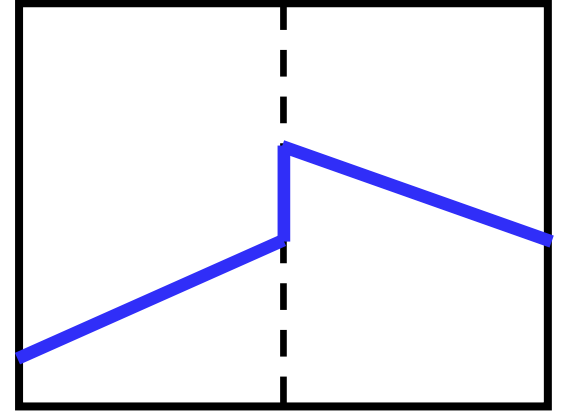
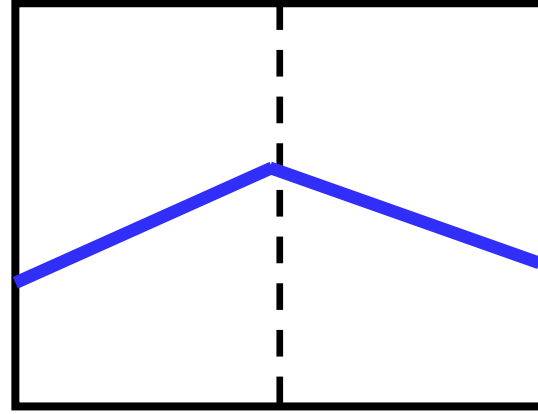
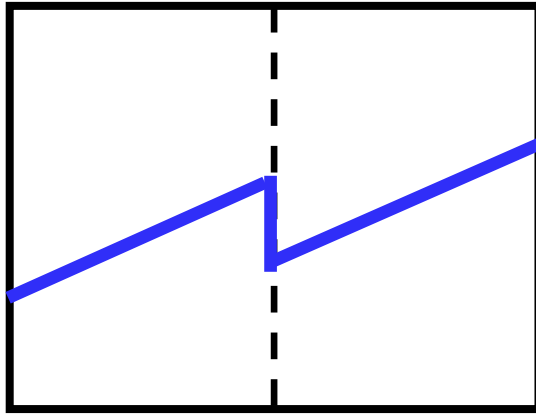
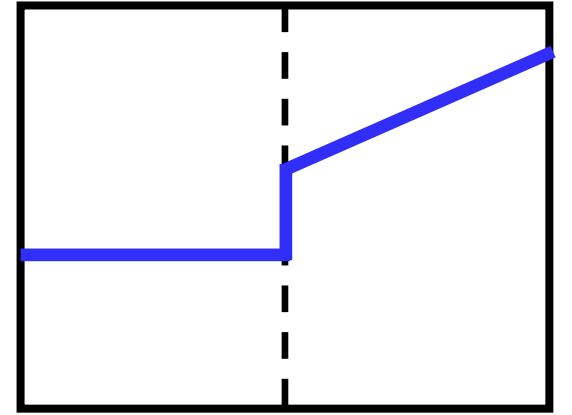
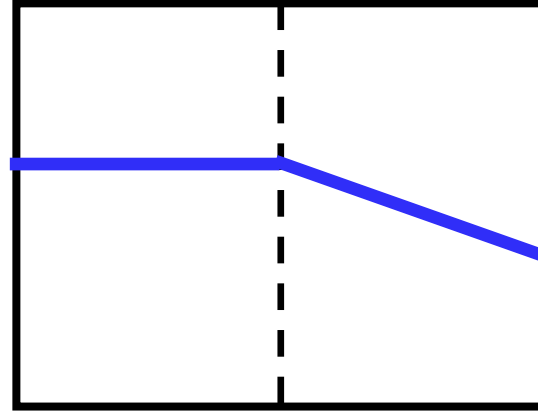
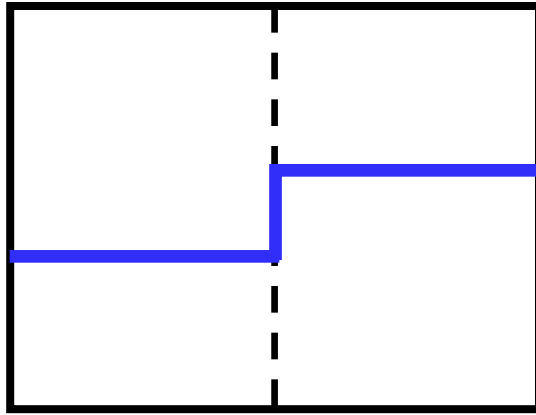
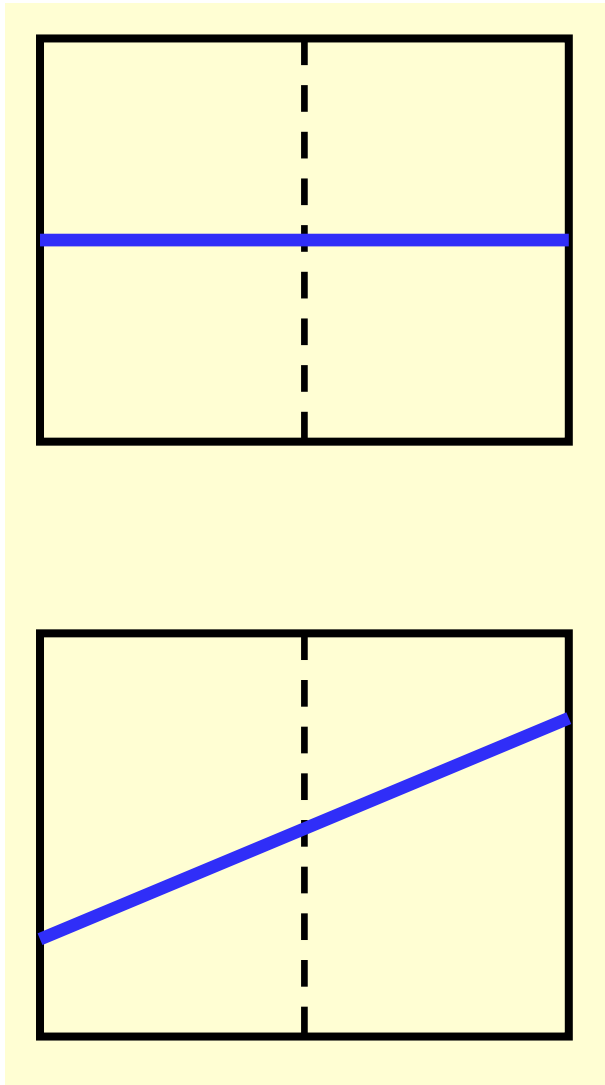
Resilience

Social Asymmetry



Social Asymmetry





Women (v. Men)

Divorced (v. Married)

Widowed (v. Married)

Younger

**More Functional
Limitations**

Less Education

And more!

**Social
Asymmetry**

```
graph LR; A[Women (v. Men)] --> F((Social Asymmetry)); B[Divorced (v. Married)] --> F; C[Widowed (v. Married)] --> F; D[Younger] --> F; E[More Functional Limitations] --> F; F[Less Education] --> F; G[And more!] --> F;
```

The diagram illustrates the concept of Social Asymmetry. On the left, a vertical stack of seven white rectangular boxes with black borders lists various factors: 'Women (v. Men)', 'Divorced (v. Married)', 'Widowed (v. Married)', 'Younger', 'More Functional Limitations', 'Less Education', and 'And more!'. Each box has a black arrow pointing from its right side to a large red circle on the right. The circle has a black outline and contains the text 'Social Asymmetry' in white, bold, sans-serif font. The arrows from the first three boxes point to the upper-left portion of the circle, while the arrows from the last four boxes point to the lower-left portion, all converging towards the center of the circle's left edge.

Research Questions

1

What is the trajectory of social asymmetry both before and after the onset of the COVID-19 restrictions?

2

Do people become more or less vulnerable to social isolation across the onset of COVID-19?

3

Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?

The Present Study

Samples

LISS

ELSA

BHPS / US

GSOEP


HRS

SHP

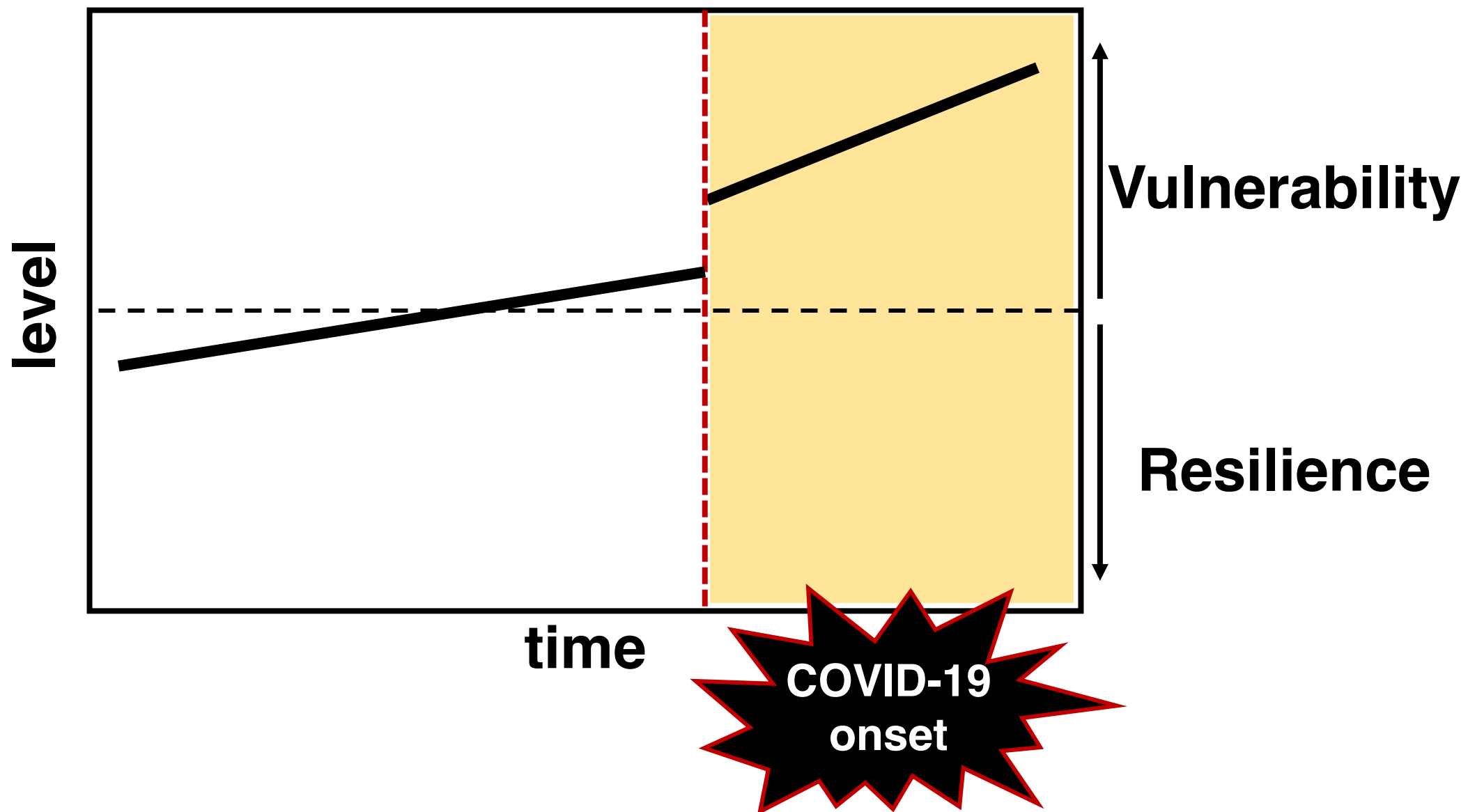
SHARE

We're working on it!

The Present Study

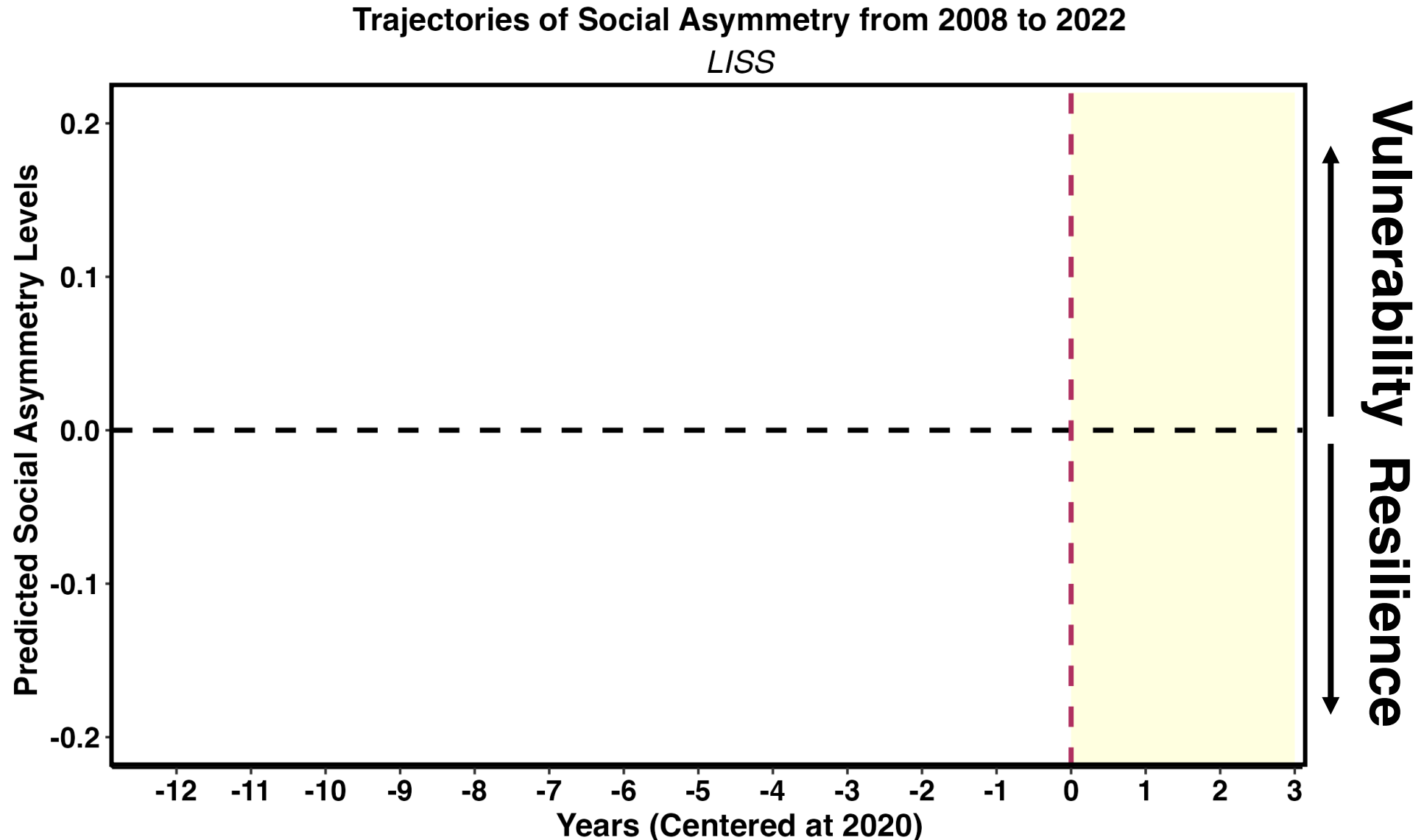
Samples	Outcomes	Covariates / Moderators	
LISS	Loneliness	Chronic Conditions	BMI
$M_{age} = 55.75 (18.79)$ 53% women $M_{educ} = 14.02 (4.68)$ $M_{occ} = 13.28 (5.58)$	Social Isolation	Gender	Smoking Status
		Education	Drinking Status
	Social Asymmetry	Marital Status	Functional Limitations
	Time in Study (centered at 2020)	Age	Income

Social Asymmetry

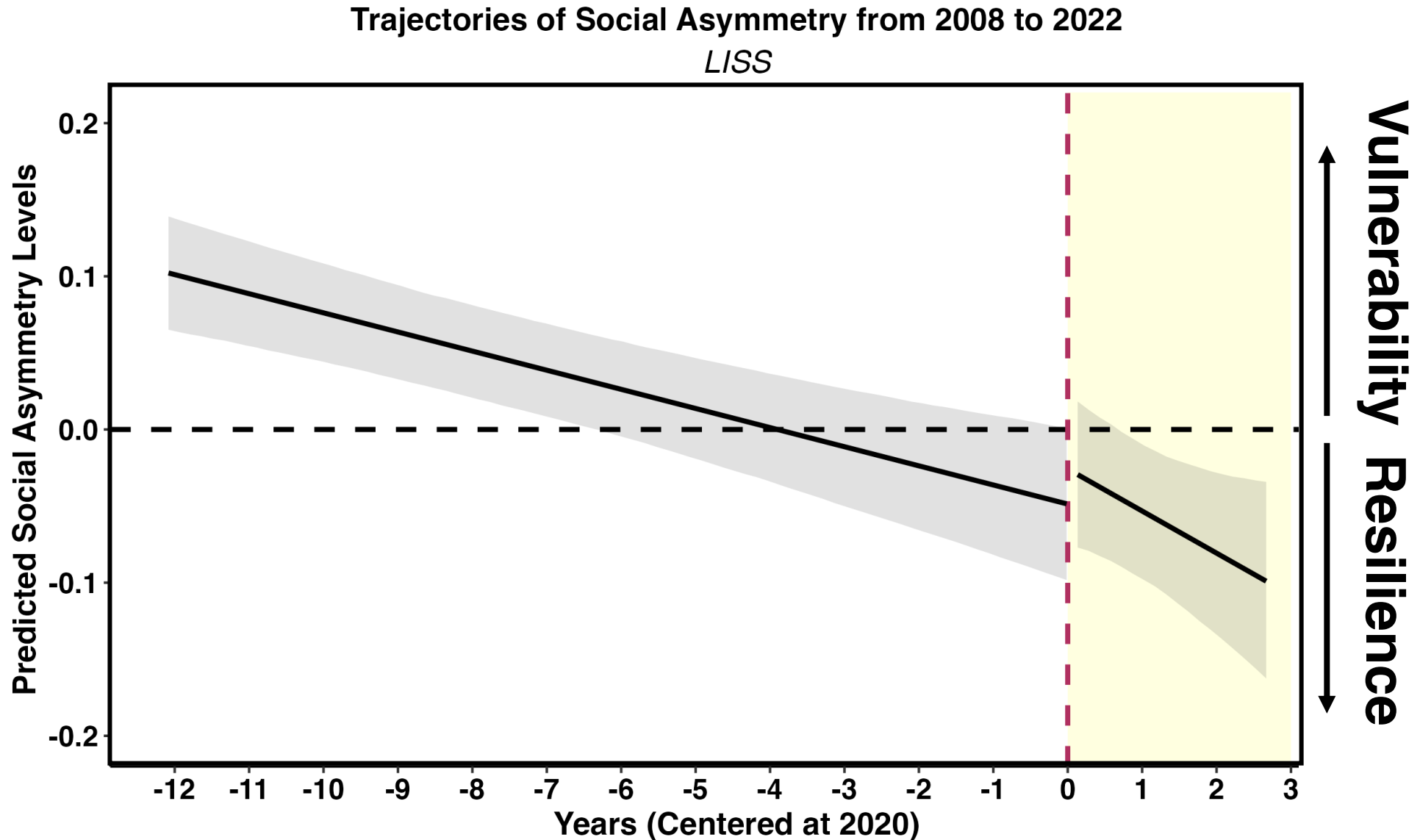


1

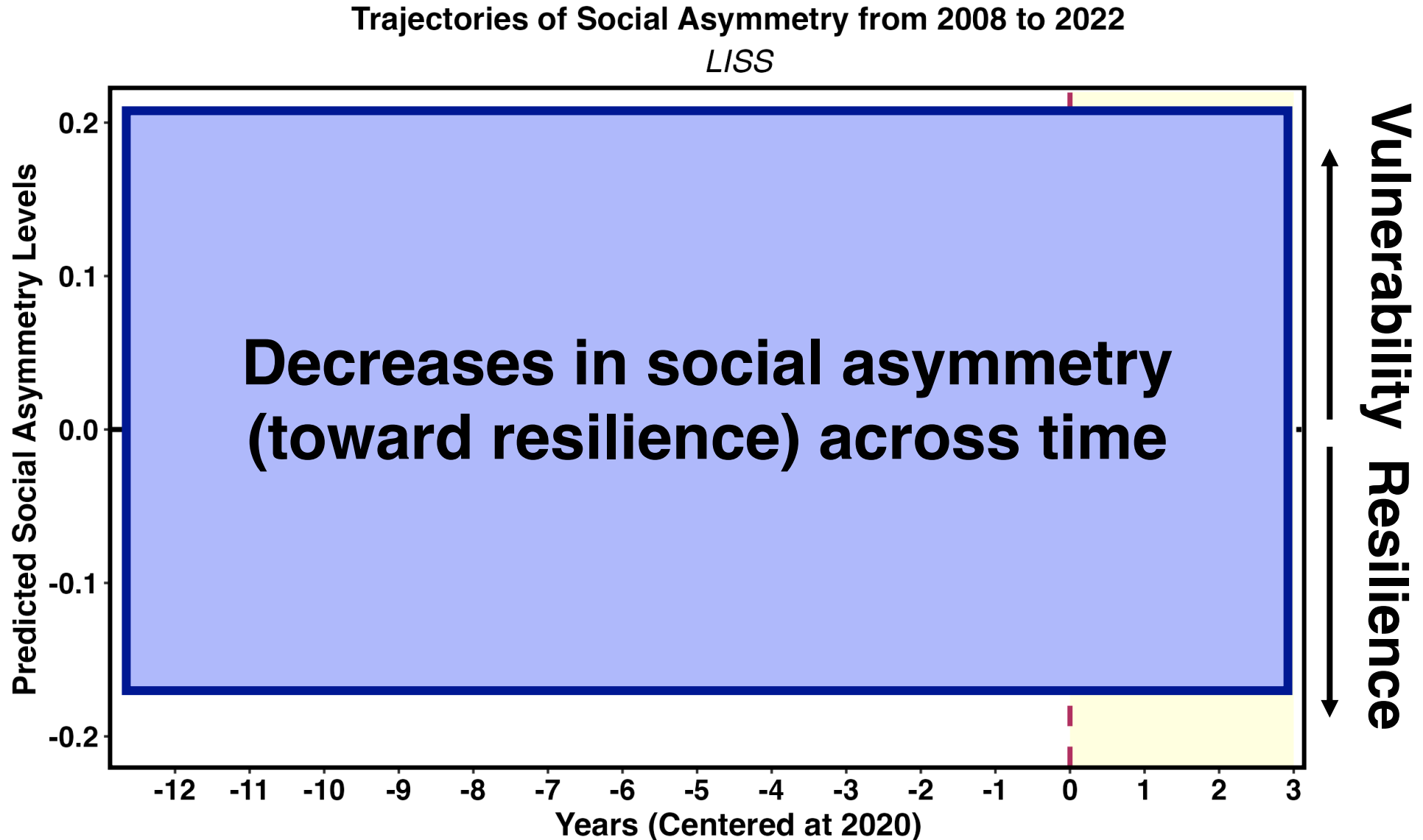
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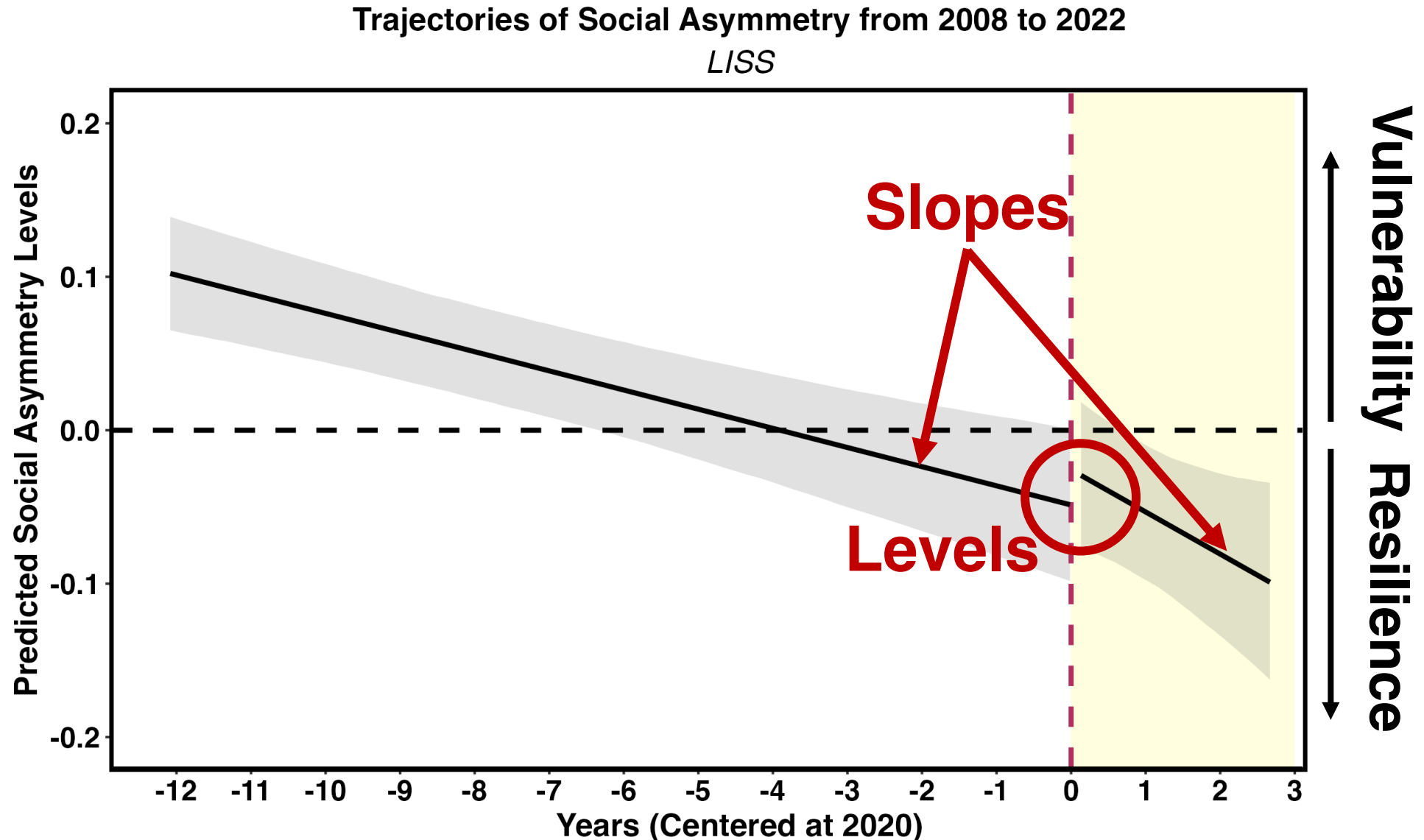
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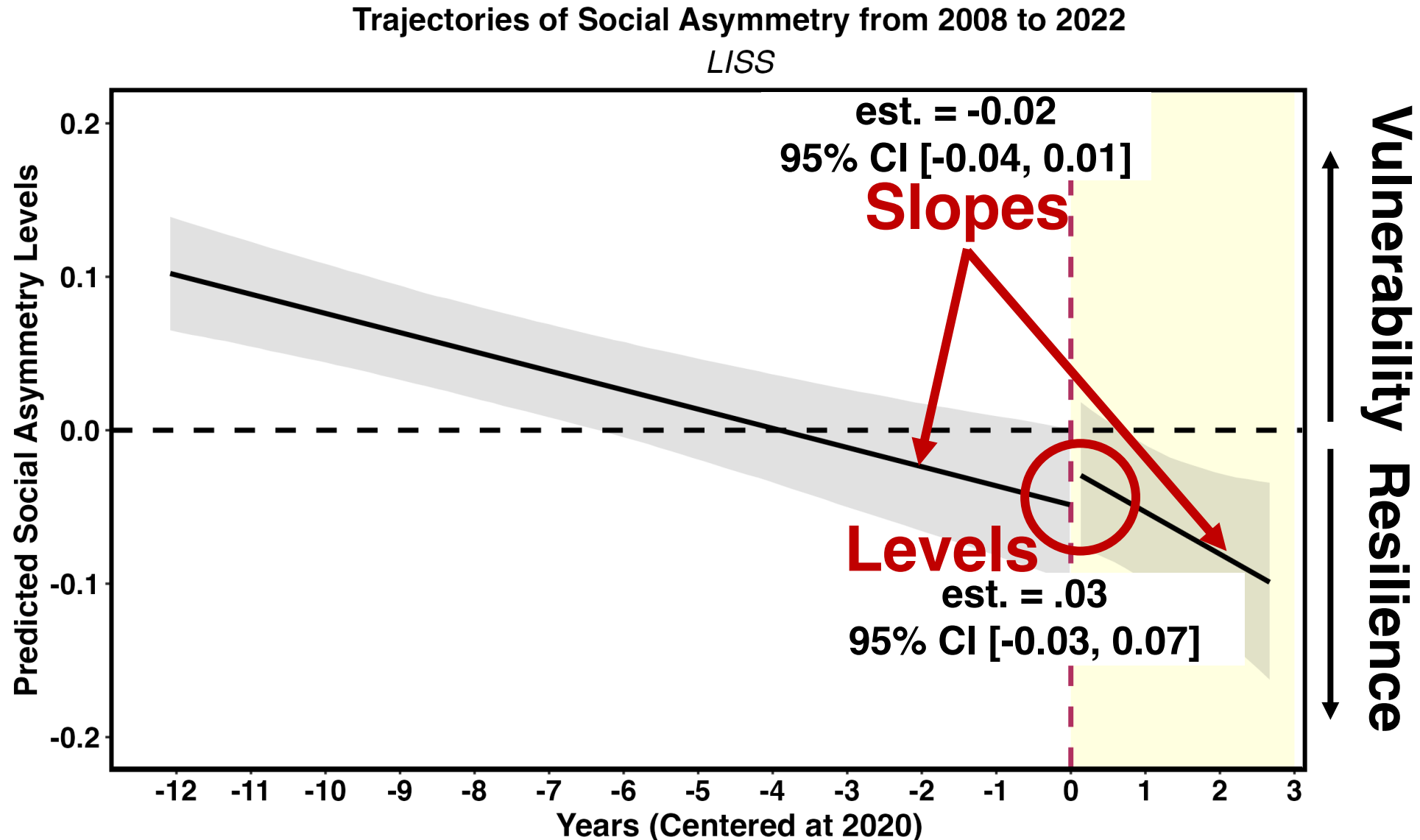
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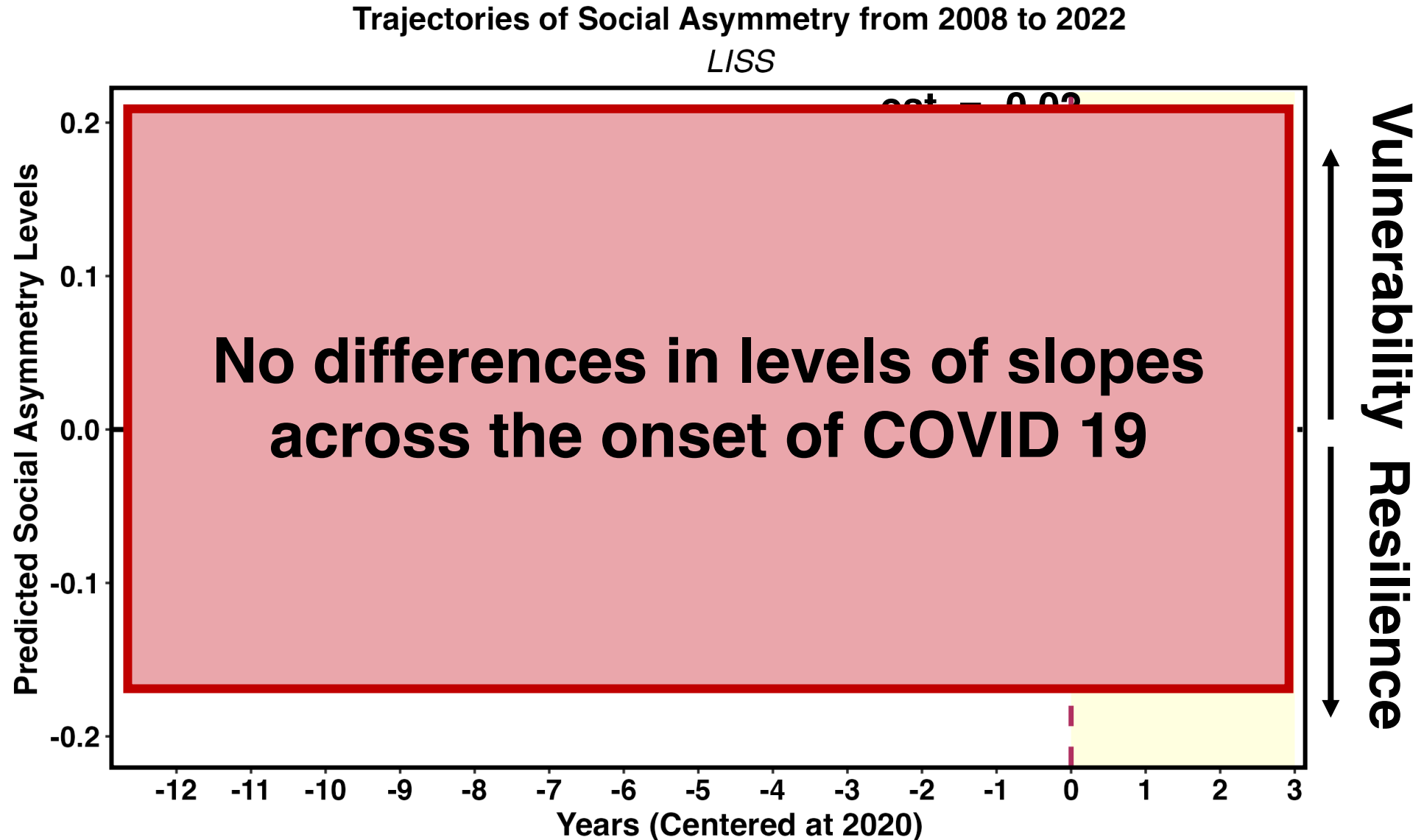
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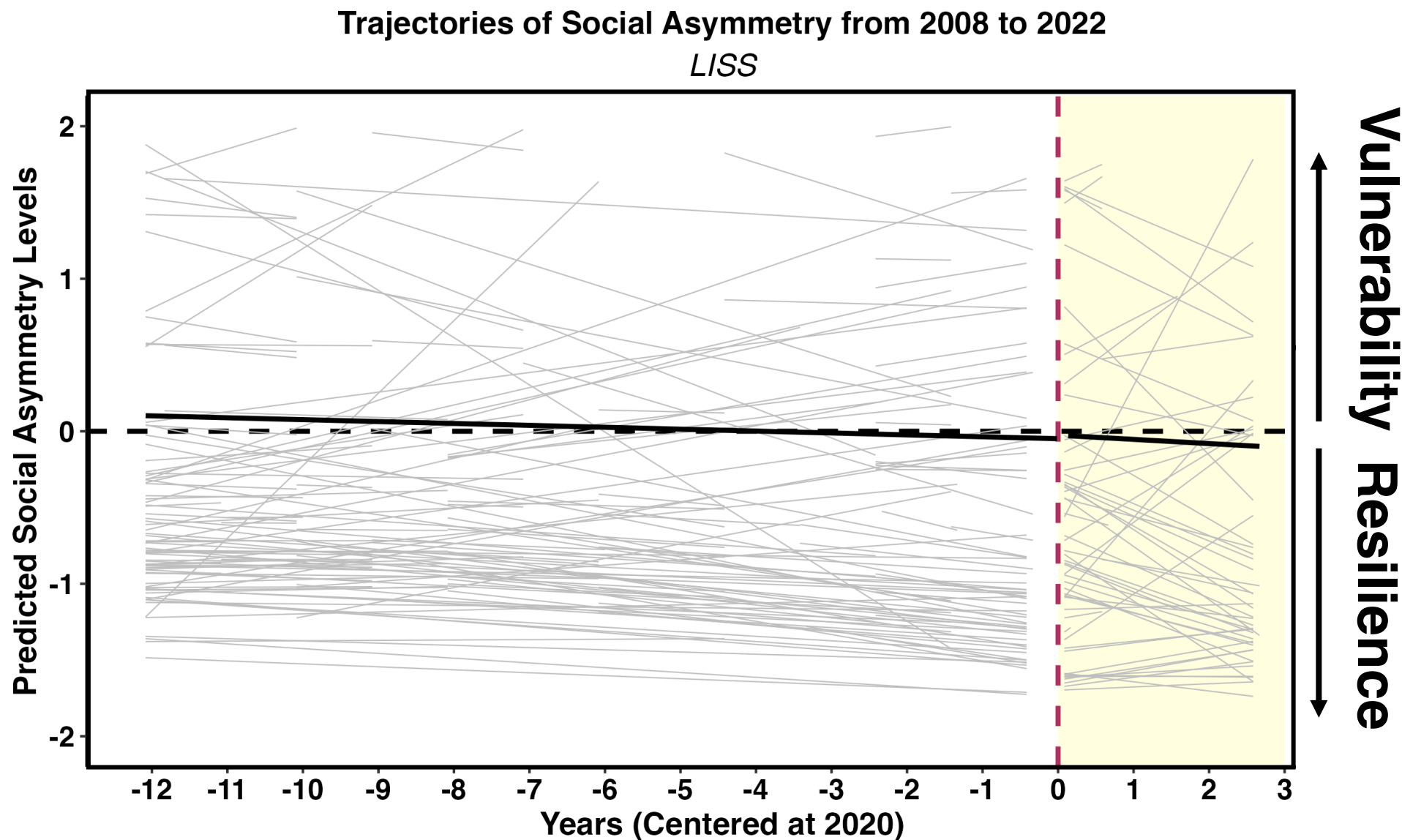
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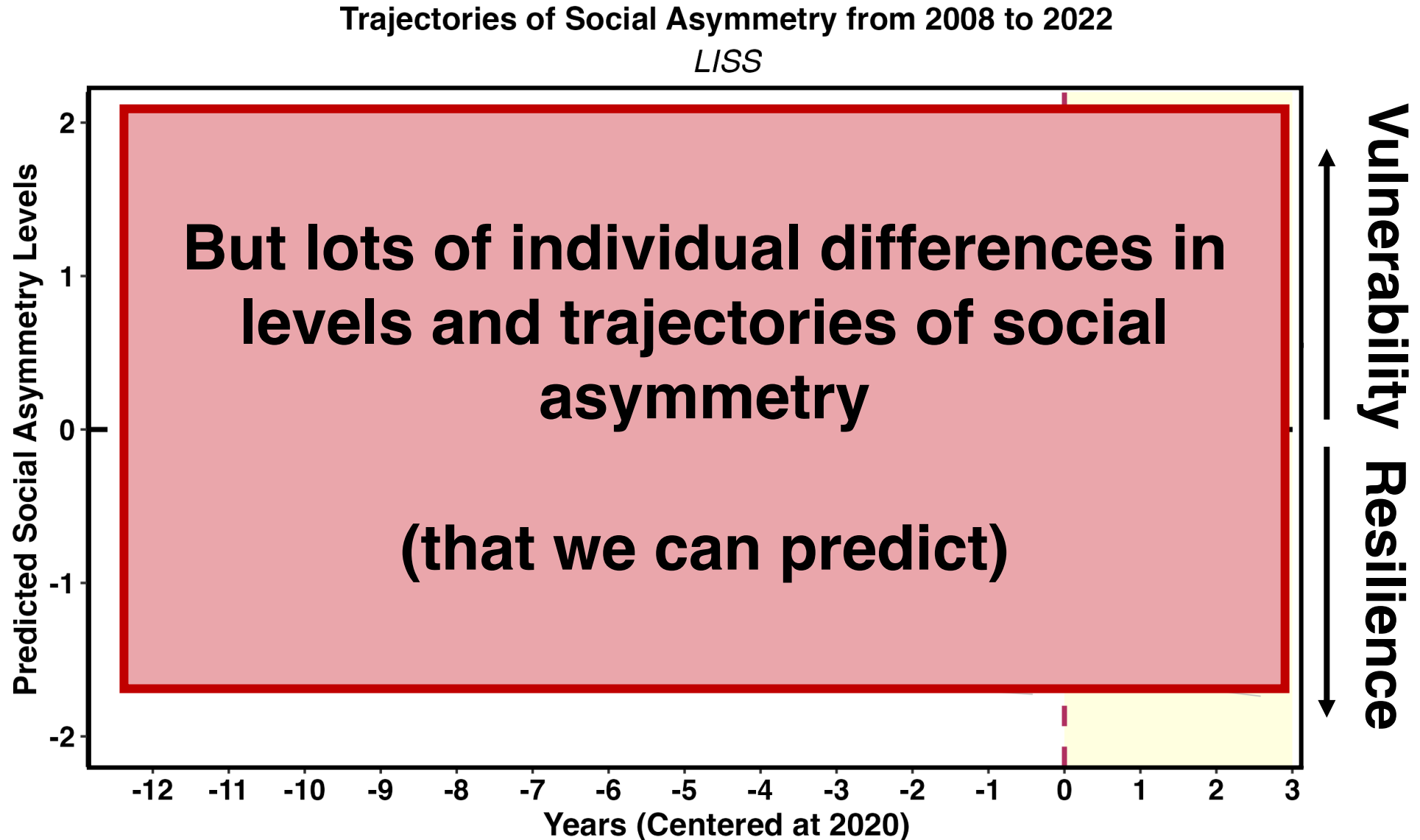
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Do people become more or less vulnerable to social isolation across the onset of COVID-19?

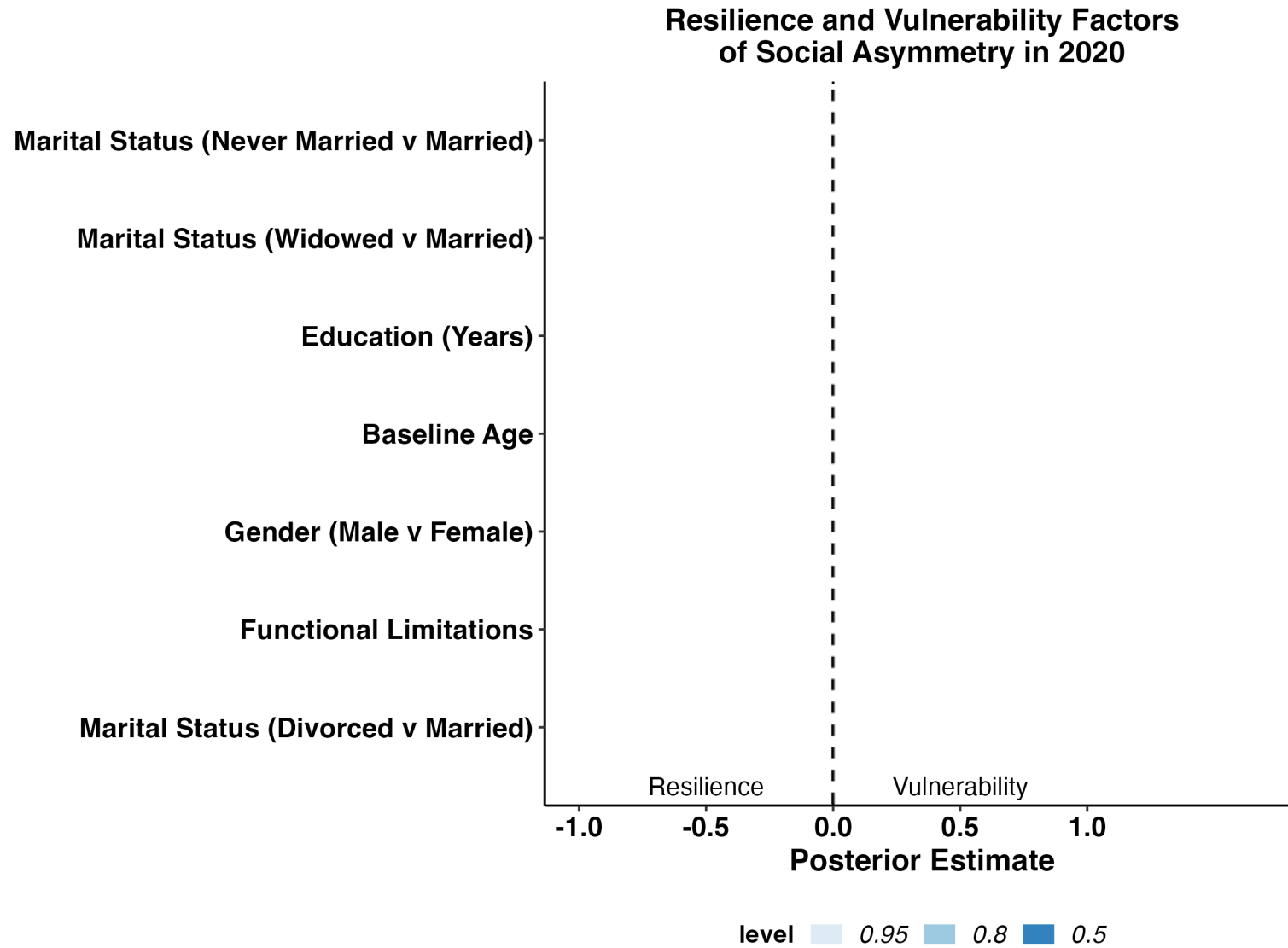


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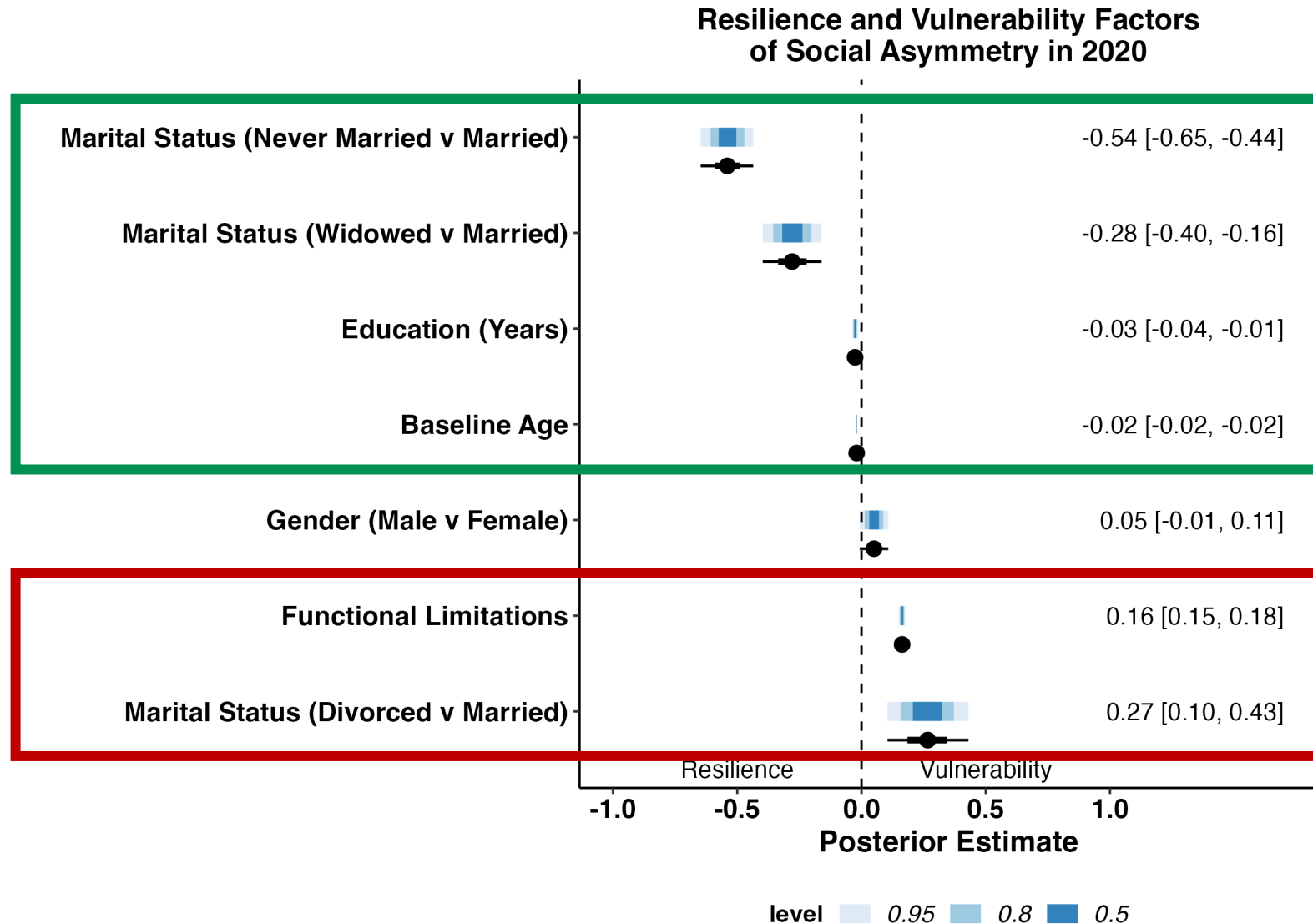


3

Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?



Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?



3

Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?

Resilience and Vulnerability Factors
of Social Asymmetry in 2020

**Widowed, unmarried, more educated,
and older people were more resilient.**

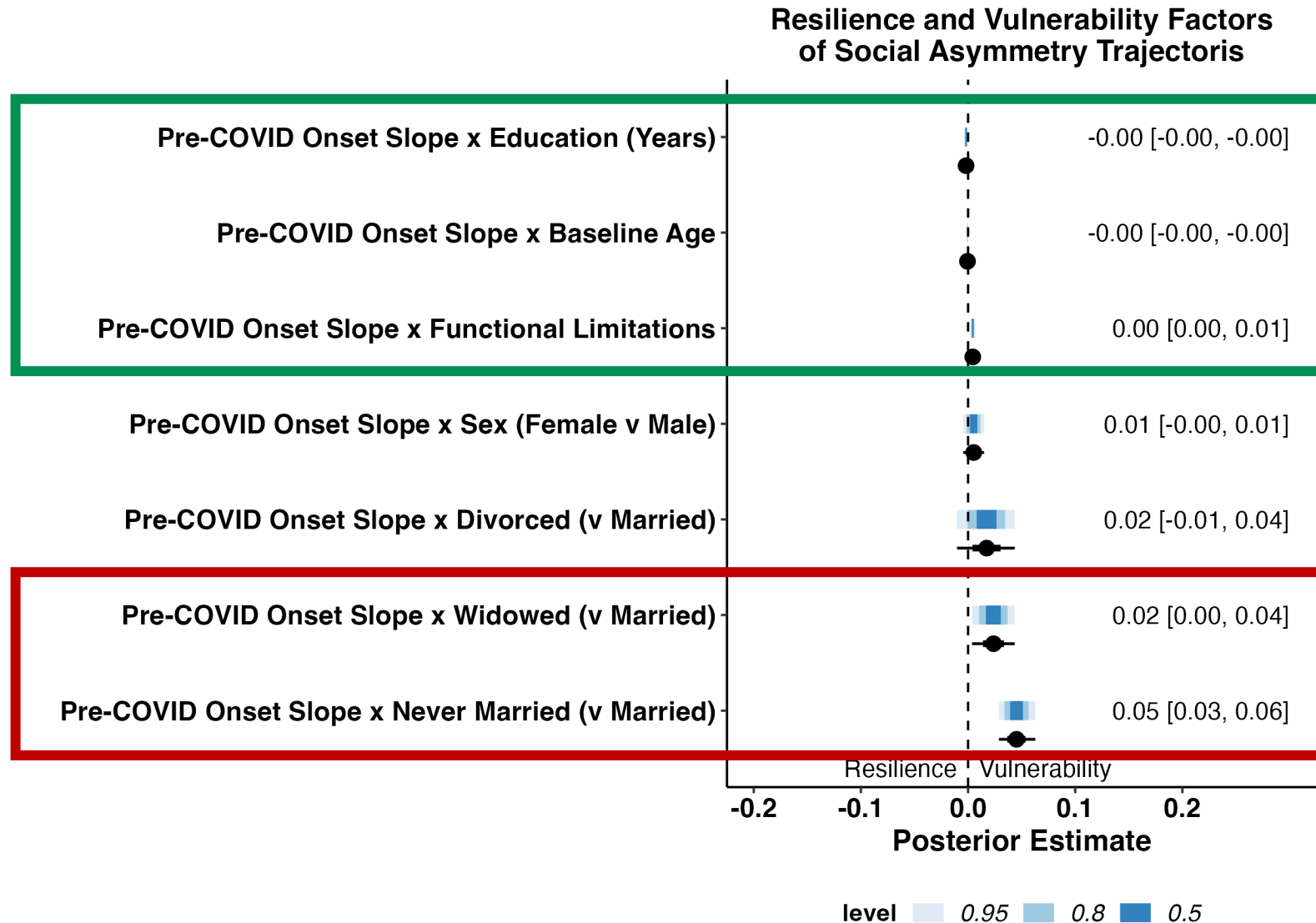
**Divorced people and those with
functional limitations were more
vulnerable.**

-1.0 -0.5 0.0 0.5 1.0
Posterior Estimate

level 0.95 0.8 0.5

3

Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?



3

Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?

Resilience and Vulnerability Factors
of Social Asymmetry Trajectories

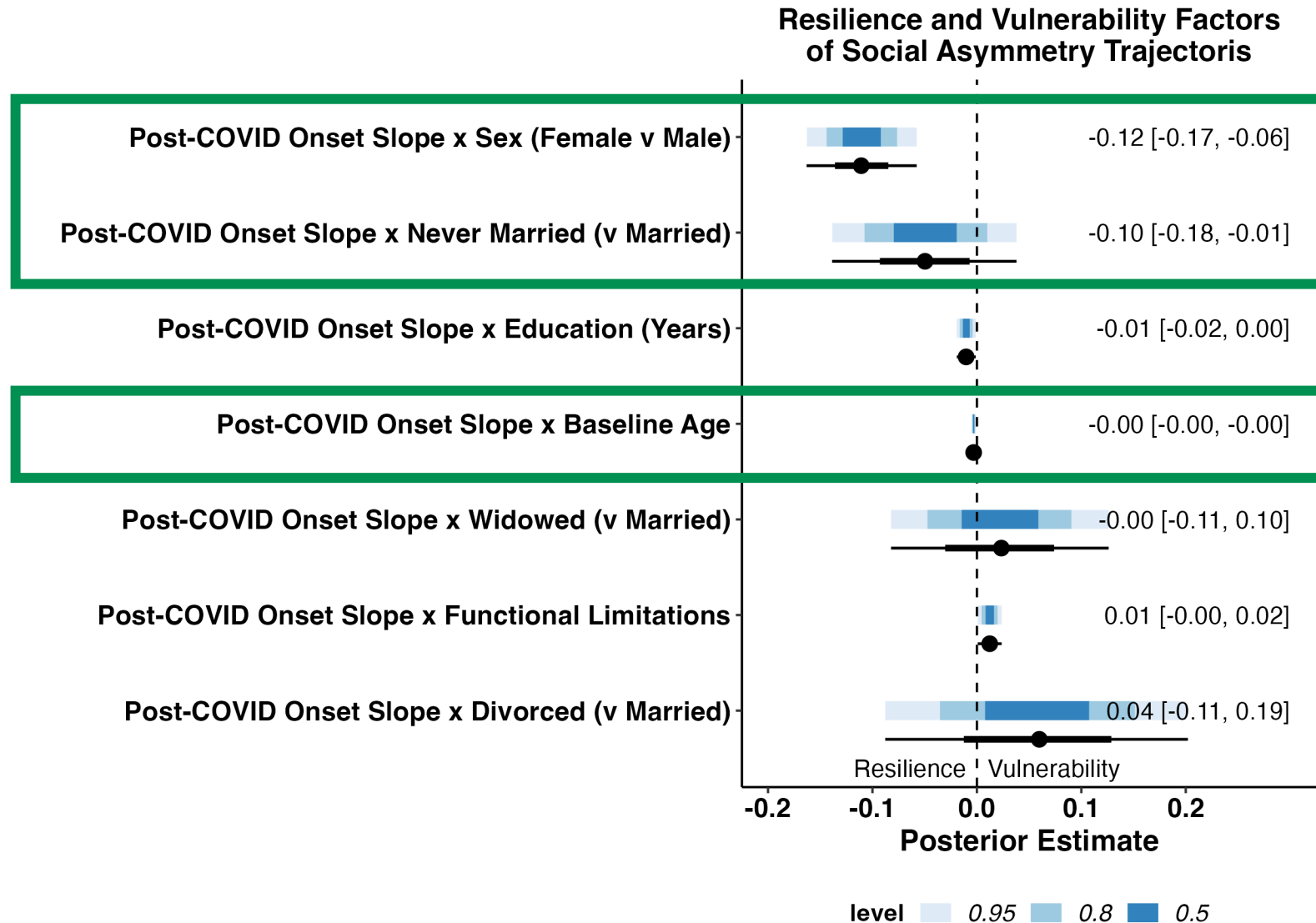
**More educated and older people
decreased more prior to COVID-19
(toward resilience).**

**Widowed and unmarried people and
those with functional limitations
increased more prior to COVID-19
(toward vulnerability).**

Posterior Estimate

level 0.95 0.8 0.5

Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?



Do social asymmetry trajectories vary as a function of socio-demographics and baseline physical health risk and protective factors?

Resilience and Vulnerability Factors
of Social Asymmetry Trajectories

Women and older people decreased more after COVID-19 (toward resilience).

No factors predicted who increased more after to COVID-19 (toward vulnerability).

Posterior Estimate

level 0.95 0.8 0.5

Summary

1

On average, social asymmetry decreased over time (in the Netherlands)

2

Levels and trajectories didn't differ before and after the onset of the pandemic

3

Educated and older people appear to have fared best and those with functional limitations fared worst

4

We're excited to receive the rest of the data, to estimate identical models, and to meta-analyze the results across samples.

Thank you!

Collaborators



**Eileen
Graham**

**Anthony
Ong**



Comments or Questions?



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`@EmorieBeck`



$$Loneliness_{tis} = b_{0ts} + b_{1ts} * Isolation_{tis} + \epsilon_{tis}$$

$$\epsilon_{tis} \sim \mathcal{N}(0, \sigma^2)$$

$$Asymmetry_{tis} = \beta_{0is} + \beta_{1is} * time_{tis} +$$

$$\beta_{2is} * postLockdown_{tis} +$$

$$\beta_{3is} * time_{tis} * postLockdown_{tis} + \epsilon_{tis}$$

$$\beta_{0is} = \gamma_{00s} + u_{0is}$$

$$\beta_{1is} = \gamma_{10s} + u_{1is}$$

$$\beta_{2is} = \gamma_{20s} + u_{2is}$$

$$\beta_{3is} = \gamma_{30s} + u_{3is}$$

$$\epsilon \sim \mathcal{N}(0, \sigma^2)$$

$$\begin{bmatrix} u_{0j} \\ u_{1j} \\ u_{2j} \\ u_{3j} \end{bmatrix} \sim \mathcal{N} \left(\begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}, \begin{matrix} \tau_{00s}^2 & \tau_{01s} & \tau_{02s} & \tau_{03s} \\ \tau_{10s} & \tau_{11s}^2 & \tau_{12s} & \tau_{13s} \\ \tau_{20s} & \tau_{21s} & \tau_{22s}^2 & \tau_{23s} \\ \tau_{30s} & \tau_{31s} & \tau_{32s} & \tau_{33s}^2 \end{matrix} \right)$$