

Examining the representational stabilization of lifetime period narratives in real-time

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Introduction

- Autobiographical memory comprises stories about lifetime periods that represent stable patterns of experience^{1,2}
- However, no studies have tracked and quantified the formation of such stories as the lifetime period is lived

Do lifetime period stories gradually stabilize over time?

Does this happen at the same rate for autobiographical and collective narratives?

- We leveraged the COVID-19 pandemic as an opportunity to measure the formation of narratives as a new lifetime period unfolded
- We examined the rates at which the semantic content of individual's lifetime stories stabilized over time, within and across individuals, by examining the consistency of meaning across narratives

Prospective Longitudinal Design

- Data from 9 timepoints of the Thinking Beyond COVID-19 project

2020						2021					
Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec

- Participants who completed > 4 surveys were included in analyses
- $N = 238$ from 21 Western countries (75 Europe, 102 United Kingdom, 52 North America, 9 Others)
- 134 female, 100 male, 3 gender diverse
- Aged 18 – 78 years old

Pandemic Paragraph Task

Autobiographical Narrative

“Write a paragraph for your **autobiography** that describes the COVID-19 pandemic.”

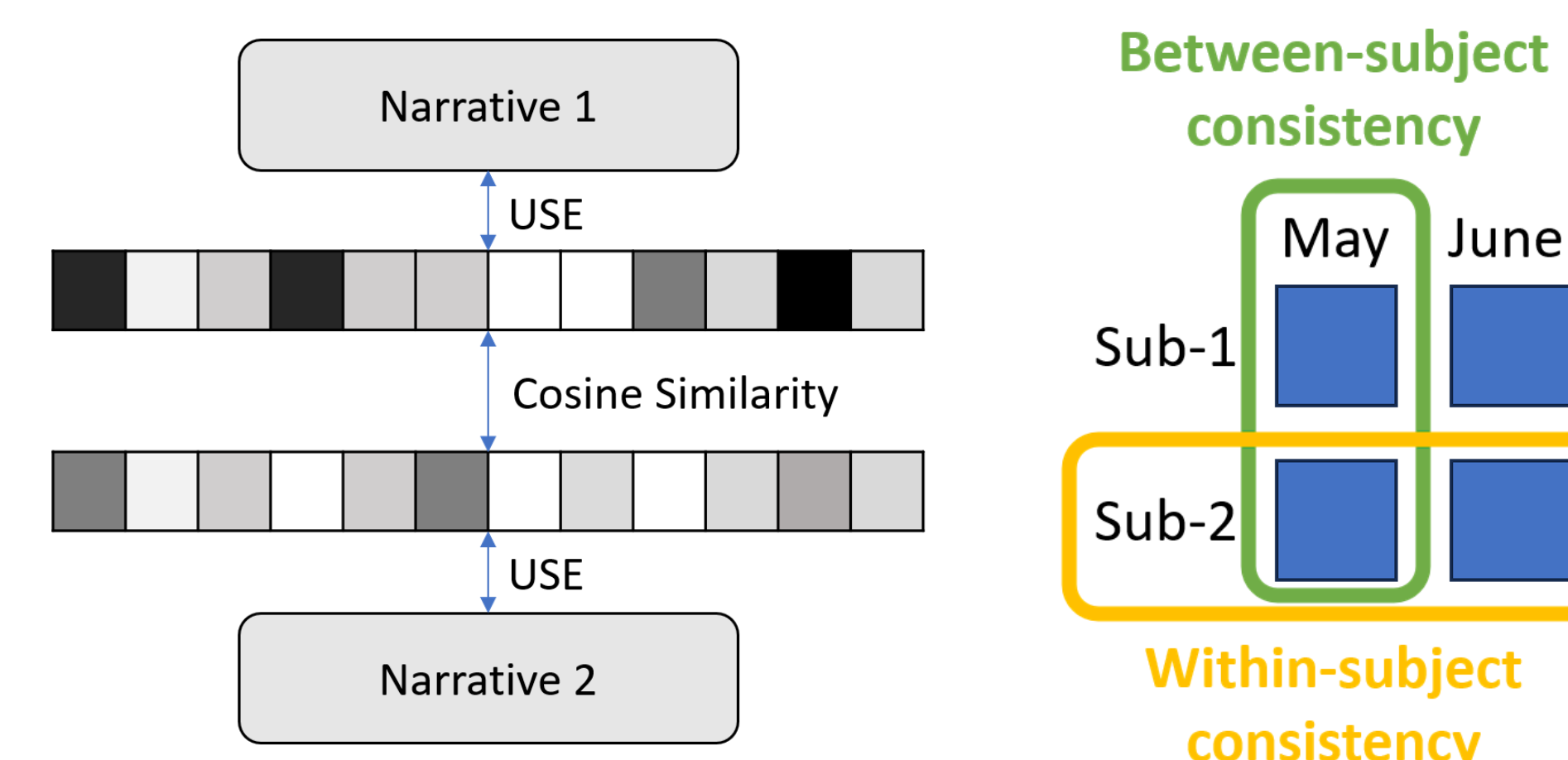
Collective Narrative

“Write a paragraph for a **history book** that describes the COVID-19 pandemic.”

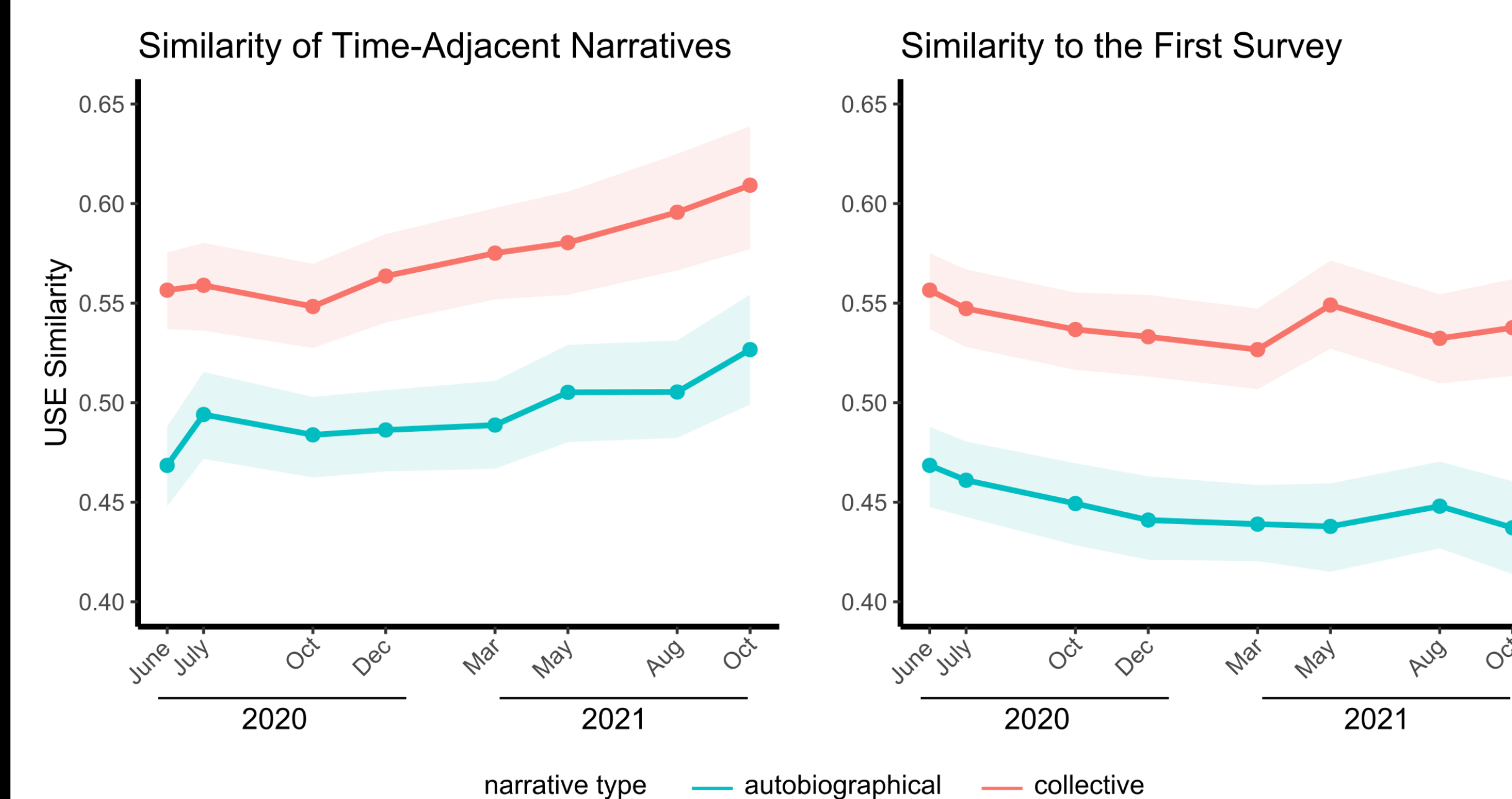
- Participants were instructed to write a “chapter” describing the entire pandemic, from the start until the time of the survey.
- Conditions were presented in a random order in each survey.
- Responses were cleaned for typographical errors and potentially identifying information.

Quantifying Narrative Consistency

- Narrative consistency measured by computing:
 - within-subject similarity** between two adjacent timepoints
 - between-subject similarity** within a survey
- Narrative similarity calculated with the Universal Sentence Encoder (USE)³.



Within-Subject Narrative Consistency



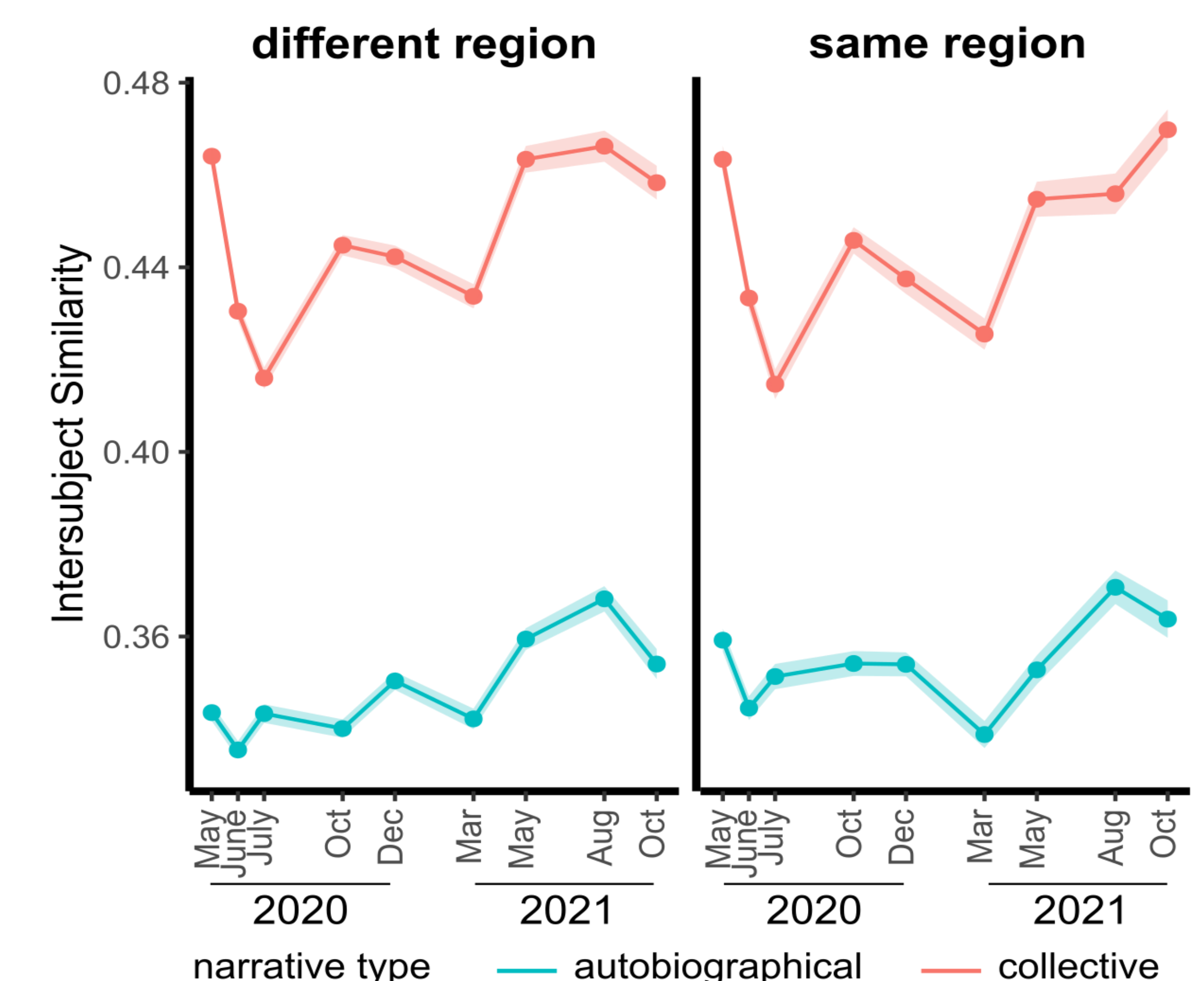
- Temporally adjacent narratives became more similar over time.
- Similarity to the first survey declined during 2020 but did not change significantly in 2021.
- No interaction with narrative type for either analysis

Take-Home Messages

- Pandemic stories became more consistent over time, both within- and between-subject
- Both autobiographical and collective narratives showed similar increases in consistency over time
- Our findings suggest that the semantic content of lifetime period stories gradually stabilizes

Between-Subject Narrative Consistency

- We modeled between-subject consistency using a crossed-random effect model to account for non-independent comparisons⁴.
- We also modeled participants' regions (i.e., Europe, U.K., North America) to test whether physical proximity is associated with higher consistency, possibly via more shared experience.



- Except for early in the pandemic, narratives became more similar across individuals over time – an effect evident for both narrative types
- Autobiographical narratives were less consistent between individuals than collective narratives, but consistency increased more rapidly for participants from different regions.
- The effect of the same versus different regions on consistency was very small, likely due to the global nature of the pandemic.

References

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Acknowledgements



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