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MODELING CANCEL CULTURE

Mental Modeler as a Conceptual Tool
to Generate Hypotheses & Improve
Research Design & Analysis



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Why should we use dynamic systems modeling?

The techniques used to study development are most often (1) linear, (2) infer within-person from between-person change (ergodicity) and (3) not suited for studying processes that are reciprocal, recursive, or self-regulating over time (Kunnen, 2012).

The complexity of development and the interactions of systems and individuals make it difficult to design studies that capture key processes and to interpret the results of statistical analyses that do not fully capture hypotheses.

Self silencing & classroom cancel culture

This project illustrates how Mental Modeler (Gray, Gray, Cox, & Henly-Shepard, 2013) can help researchers gain insight into complex problems and aid in the development of stronger empirical studies. We used an example of a professor trying to facilitate discussion of a socially sensitive topic (racism) within a classroom. When models of individual students are nested within classrooms and interact with one another and with the professor, emergent systems properties generate predictions that can be used to develop more sensitive hypotheses and develop stronger and more sensitive study designs.

What did we do?

The project was done in phases. We began with a review of the popular press & scientific literature on cancel culture & self-silencing in the classroom and interviewed students and faculty. We developed and refined models of individual students, then nested individuals within classrooms, adding professors. Results of simulations with different configurations of student & professor behavior were generated.



COLLABORATIVE RESEARCH PROCESS

1

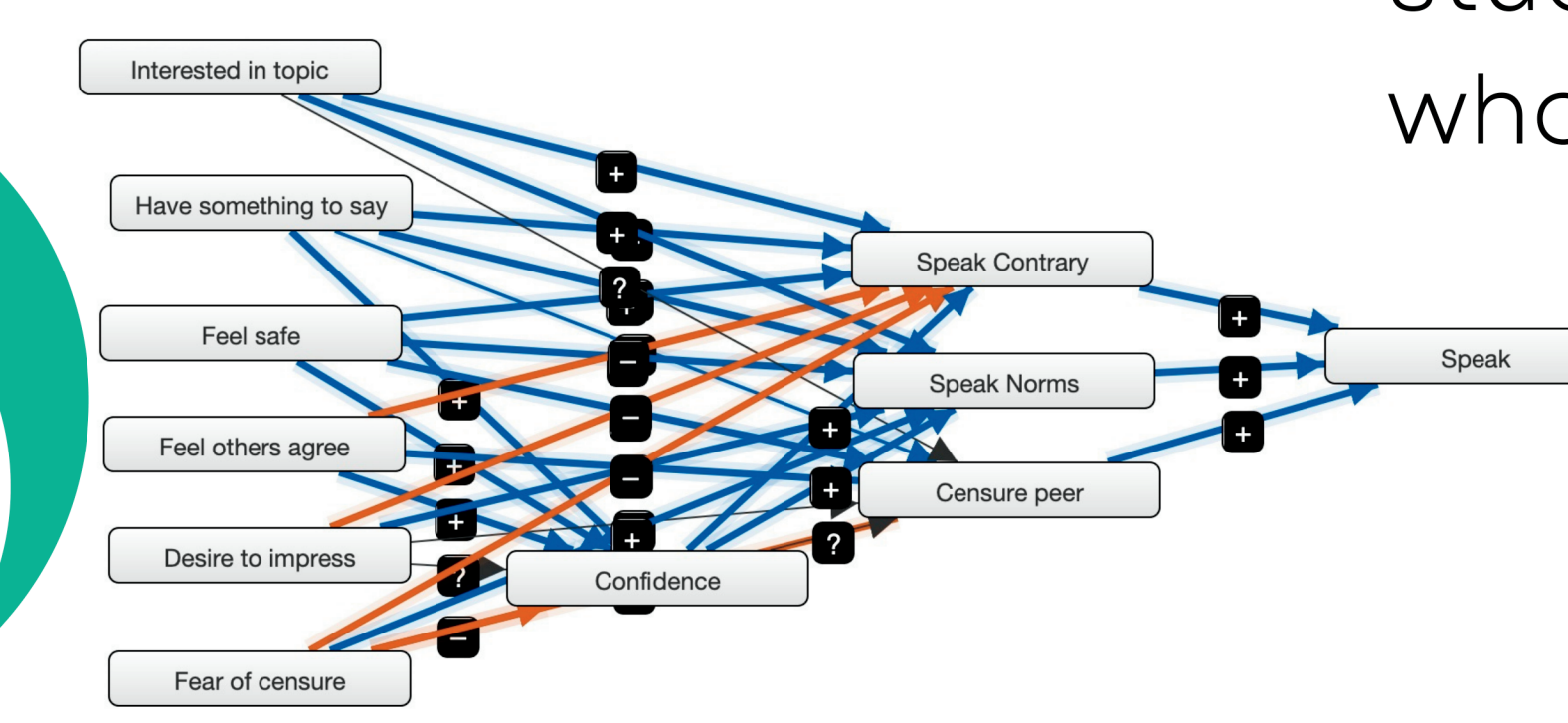
GATHER INFORMATION

- Interviewed students and faculty
- Literature review on self-silencing and classroom dynamics
- Reviewed media representations of cancel culture

2

DEVELOP MODELS REPRESENTING FINDINGS

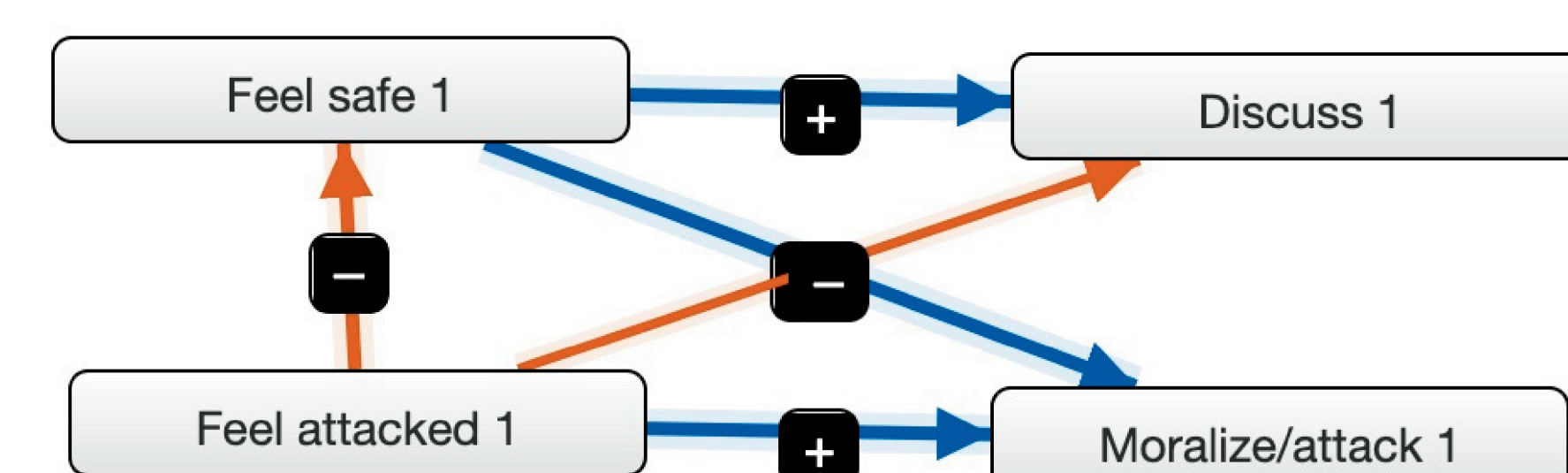
- Students clearly identified other students as proximal influences
- Professors only recognized their own influence



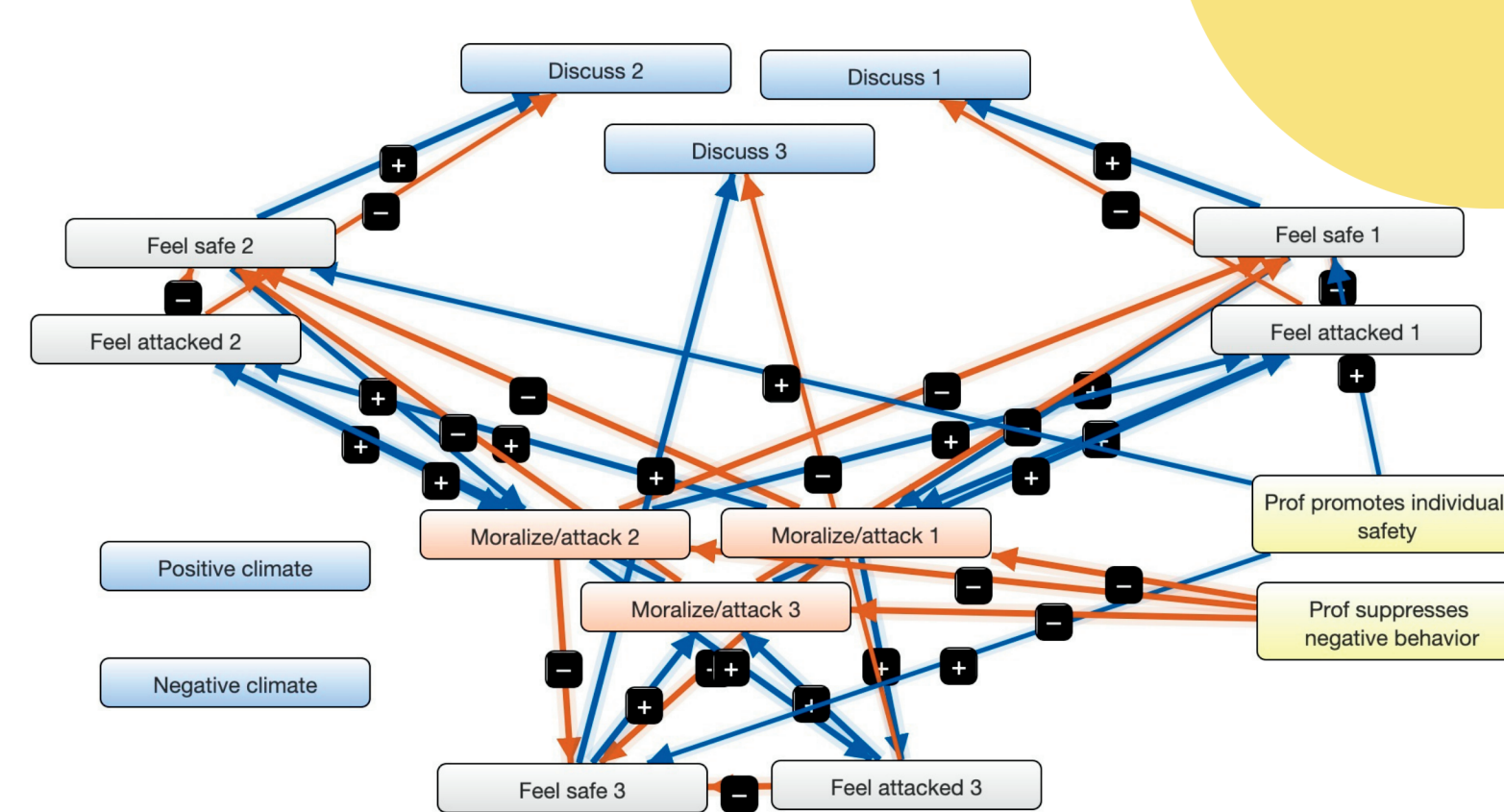
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DEVELOP SIMPLIFIED MODEL OF STUDENT

- Predictors of speech included feeling safe and feeling attacked
- Types of speech included discussion & moralizing/attacking



Parsimonious model
identifying key processes

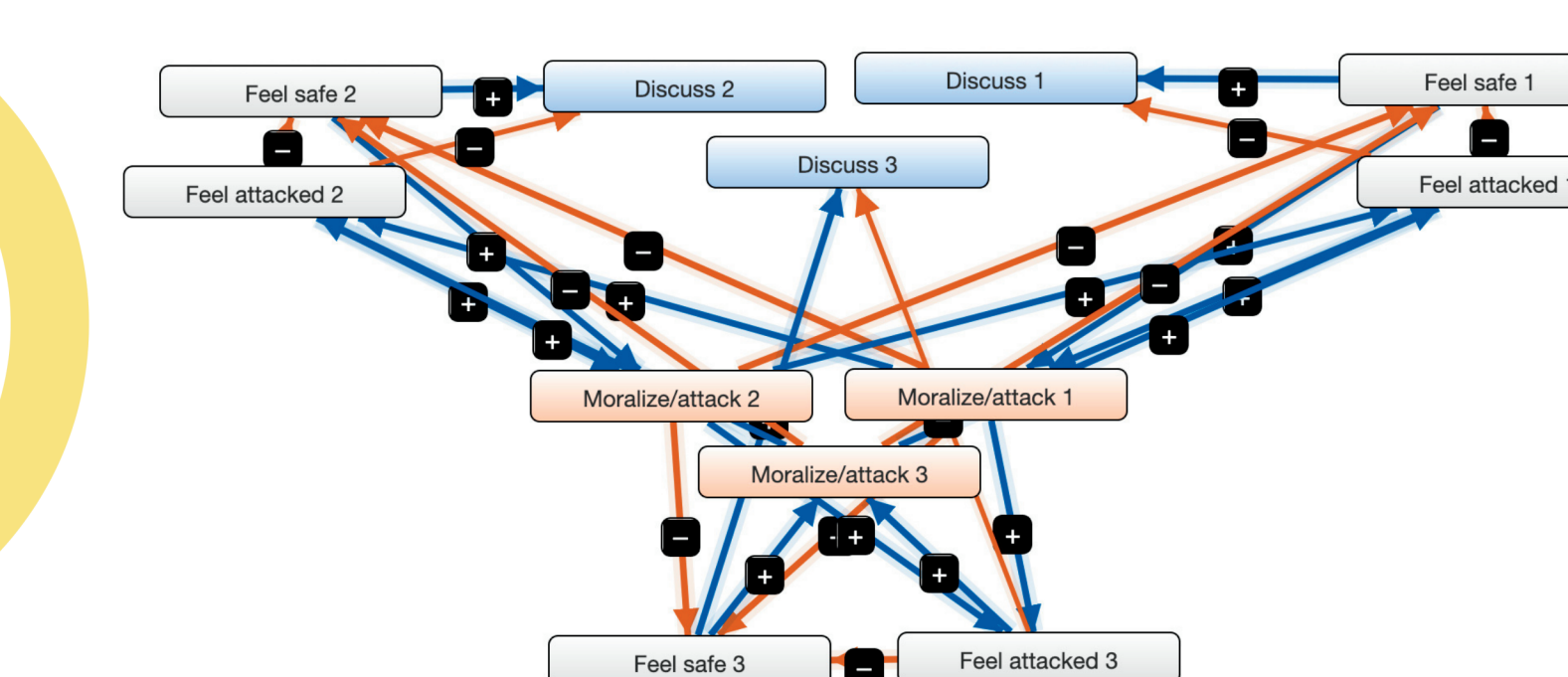


Professor influence is
introduced to change
student processes

4

MODELED STUDENT INTERACTION

- Students were more likely to speak when they felt safe and less likely to speak when they felt attacked



Classroom model nests
individual processes within
classrooms so students
influence each other

5

ADDED PROFESSOR INTERVENTIONS

- Professor actions that fostered feelings of safety and discouraged moralizing/attacking were added to the model

6

TESTING HYPOTHESES

- Scenarios were developed visualizing the quantitative predictions of the conceptual model



7

HYPOTHESIS GENERATION

- A better understanding of the implications of processes at the individual and group level helps to identify sensitive, appropriate research designs and measures

What did we learn about self-silencing from developing & using the simulation?

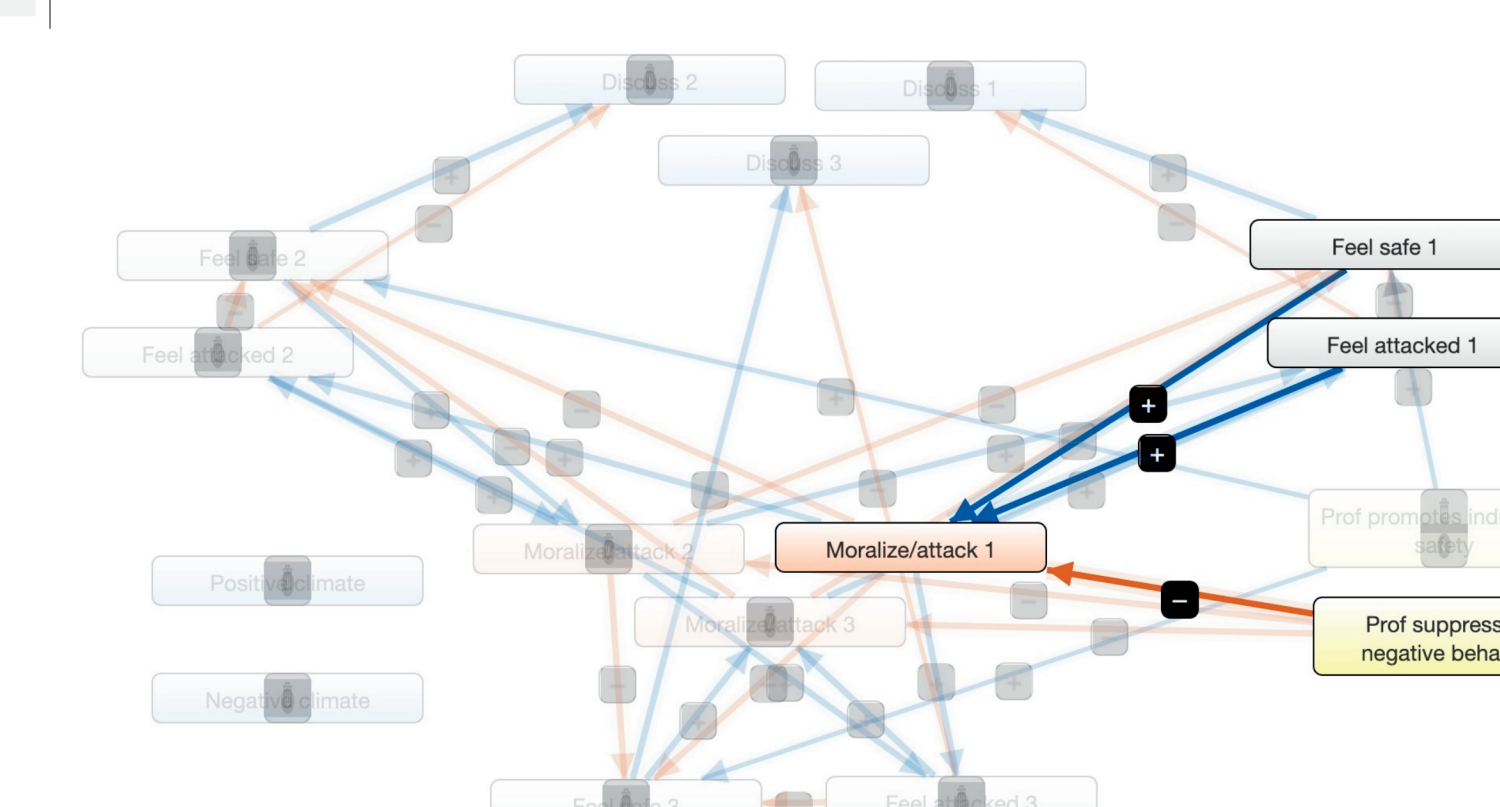
- Interviews revealed that students and professors thought about self-silencing fundamentally differently.
 - Professors conceptualized the problem as their shaping classroom climate, focusing on making students feel safe. They thought about the class as a whole rather than interactions between students.

- Students focused on relationships with other students in & outside the classroom & on social media. Professors were invisible.

- Models were developed, then simplified to reflect core processes
 - "Discuss" are utterances that further understanding of the topic
 - "Moralizing & attacking" are utterances that discourage speech in others

- "Feel safe" increases "discuss" and "attack/moralizing"
- "Feel attacked" decreases "discuss" and increases "attack/moralizing"

- Models of individual students are nested within "classrooms" and influenced by professor behaviors (promoting individual students' feeling of safety and sanctioning attacking/moralizing behavior)
 - Contrary to hypotheses developed based on the behavior of individual students and professor interviews, behaviors promoting student safety suppressed discussion unless paired with sanctioning attacking/moralizing behavior



Key take-away: The Usefulness of Simulations
Developing this simple simulation allowed us to identify core processes that need to be captured when designing an empirical study of self-silencing.

The importance of different variables to influence outcomes can be identified

This project began in the Advanced Methods in Adolescent Development course taught in Spring 2022. Students performed all interviews and literature reviews and were invaluable throughout the process. I want to thank Alex Blosser, Julia Blotner, Alita Boyse-Peacor, Julie Caffrey, Athena Greaves, Shayla Keegan, Aishwarya Krishnaswamy, Sarah Mia Liberatore, Monte Montero, Audrey Morrow, Drew Packs, Batian Pienaar, Allison To, Mia Woo, Chloe Yanovich.