



Welcome!

PSYC 51.09: Human Memory
Spring 2021

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FOUNDATIONS OF HUMAN MEMORY

MICHAEL JACOB KAHANA

$$s_{t+1}(i) = \text{sgn} \left(\sum_j w(i, j) s_t(j) \right)$$

OXFORD



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About

Course material
course: Human Memory Readme MIT License

Releases

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Languages

 TeX 100.0%

 jeremymanning	added image of dali's persistence of memory	7f14a15 2 hours ago	18 commits
 admin	added syllabus, consent to recording form	23 hours ago	
 problem sets	file reorganization	yesterday	
 slides	added introduction and overview slides	2 hours ago	
 .gitignore	added problem sets	yesterday	
 LICENSE	Initial commit	yesterday	
 README.md	added image of dali's persistence of memory	2 hours ago	

README.md



Human Memory

Welcome! This repository contains course materials for the Dartmouth undergraduate course [Human Memory \(PSYC 51.09\)](#). The syllabus may be found [here](#). Feel free to follow along with the course materials (whether you are officially enrolled in the course or just visiting!), submit comments and suggestions, etc. If you are a course instructor, you may feel free to use these materials in your own courses (attribution is appreciated).



Workload

- **Readings:** we'll work our way through the textbook, along with supplemental readings as needed. You'll read roughly a chapter each week.
- **Problem sets:** practice working with the concepts we cover (first one: **today!**). These contribute relatively little to your grade, and it doesn't matter if you get the "right" answers; the idea is to give you room to learn and make mistakes.
- **Exams:** test your conceptual understanding. The midterm and final will comprise the bulk of your final grade. Both are open book and time "unlimited" (you'll have up to 24 hours to finish each).

Format

- Each week (approximately) we'll discuss a theory
- Then we'll systematically tear it down
- At the end of the course we'll hopefully understand memory a bit better
- Goal: leave my course with a deep, cutting edge understanding of (a subset of) what is known about human memory

What is memory?

Why do we have
memory?

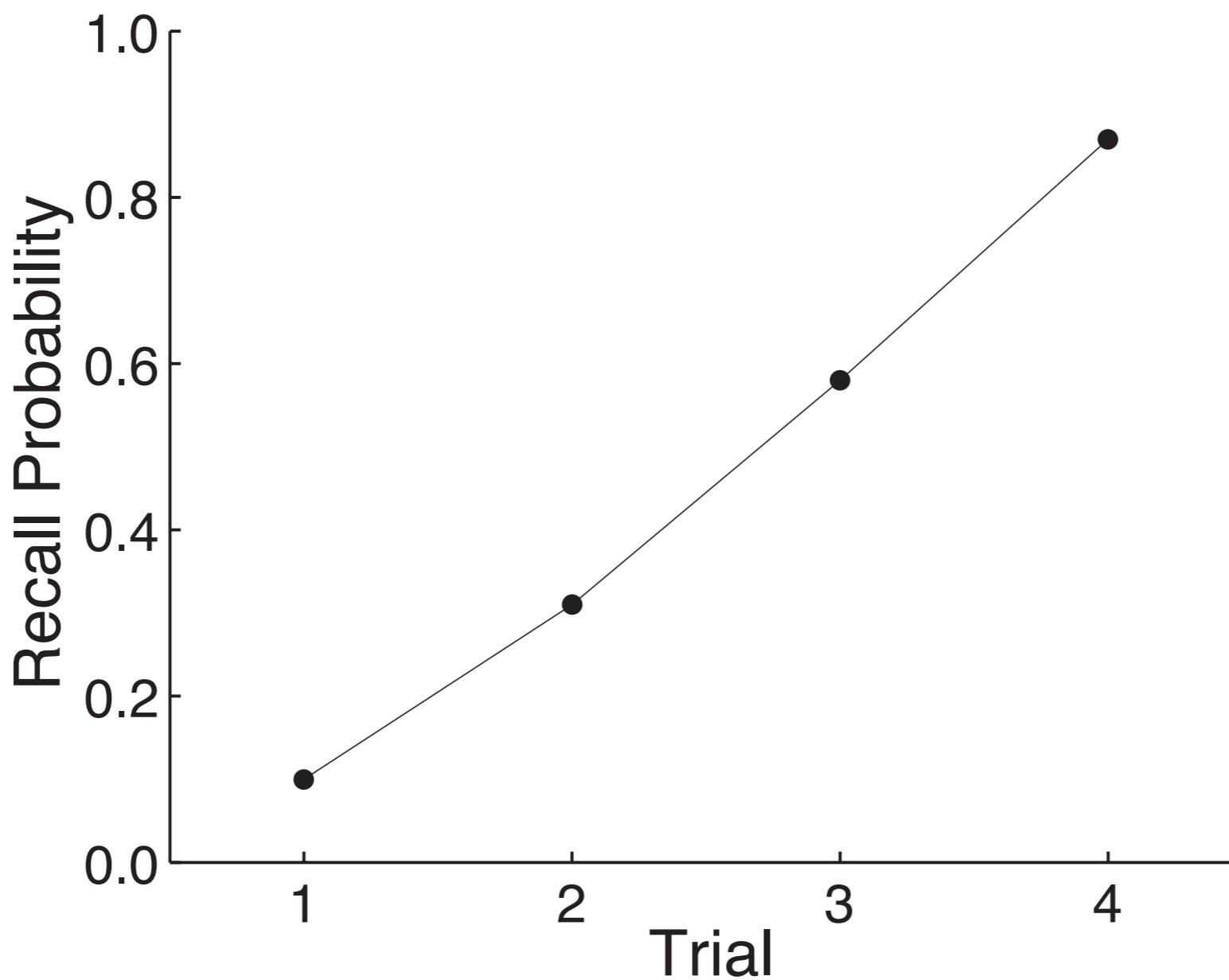
Does memory require
consciousness?

Ethics of memory

- Perfect model of memory
- Memory in the courtroom

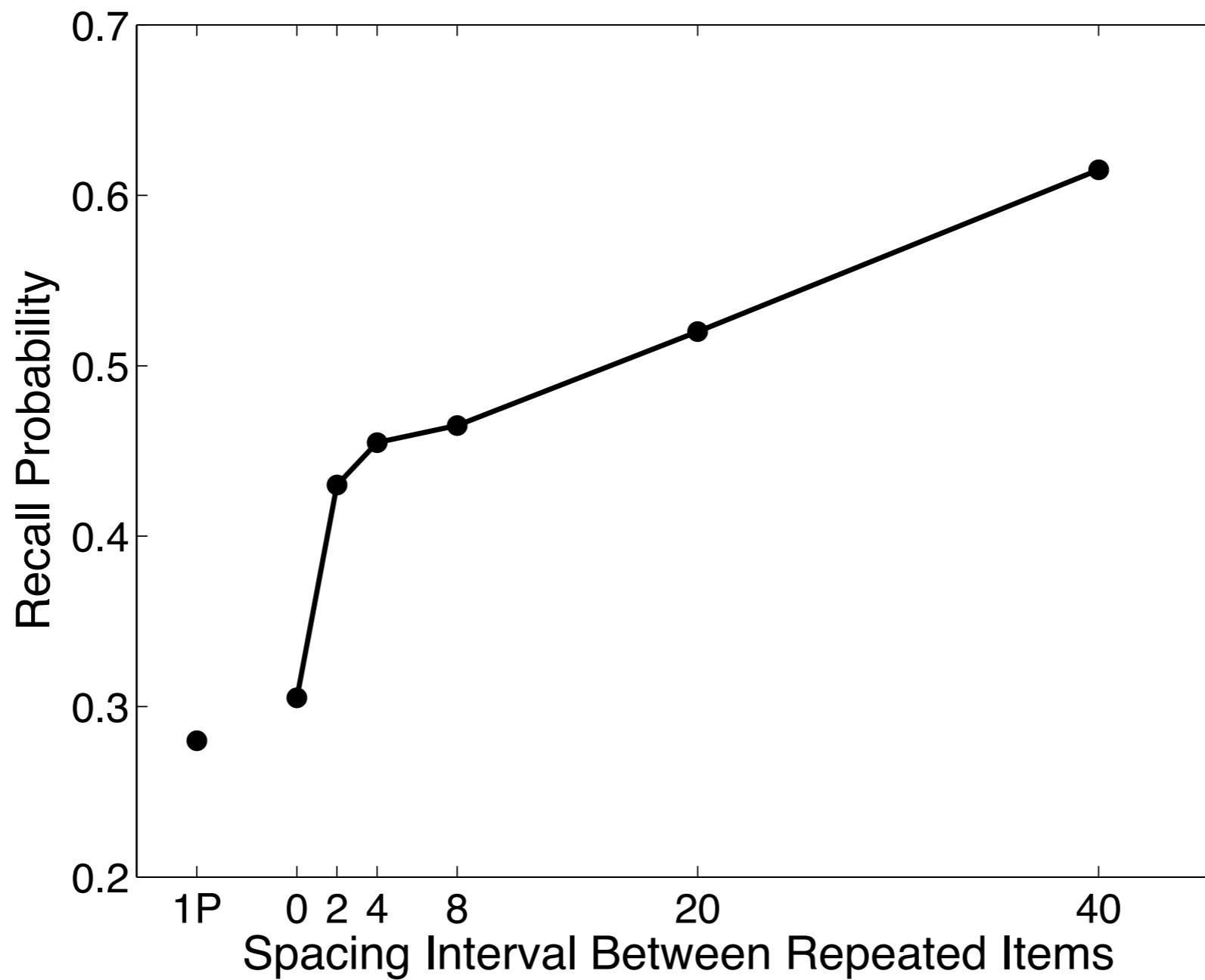
What have you heard
about how memory
works?

Law of repetition



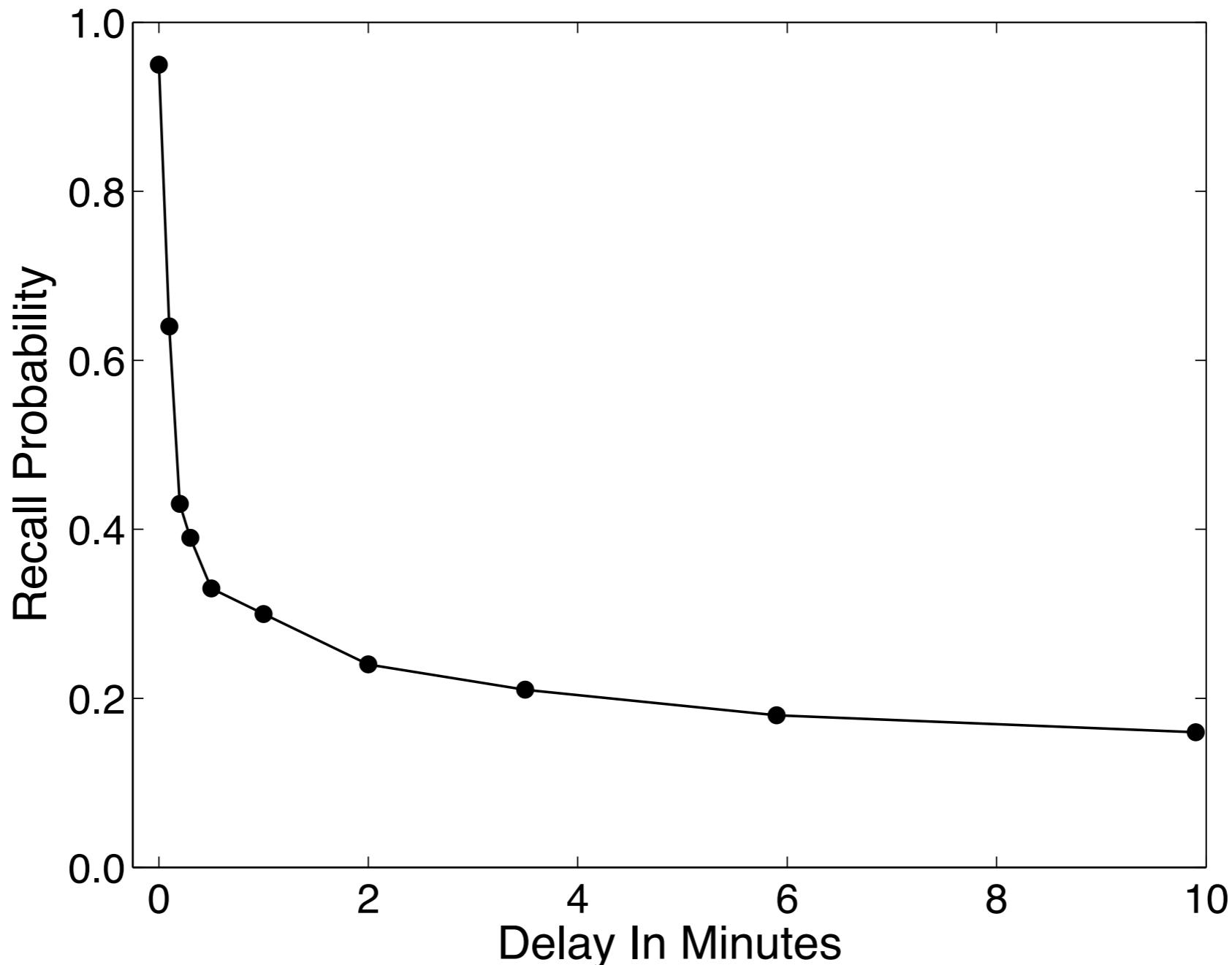
Murdock, 1989

Spaced vs. massed learning



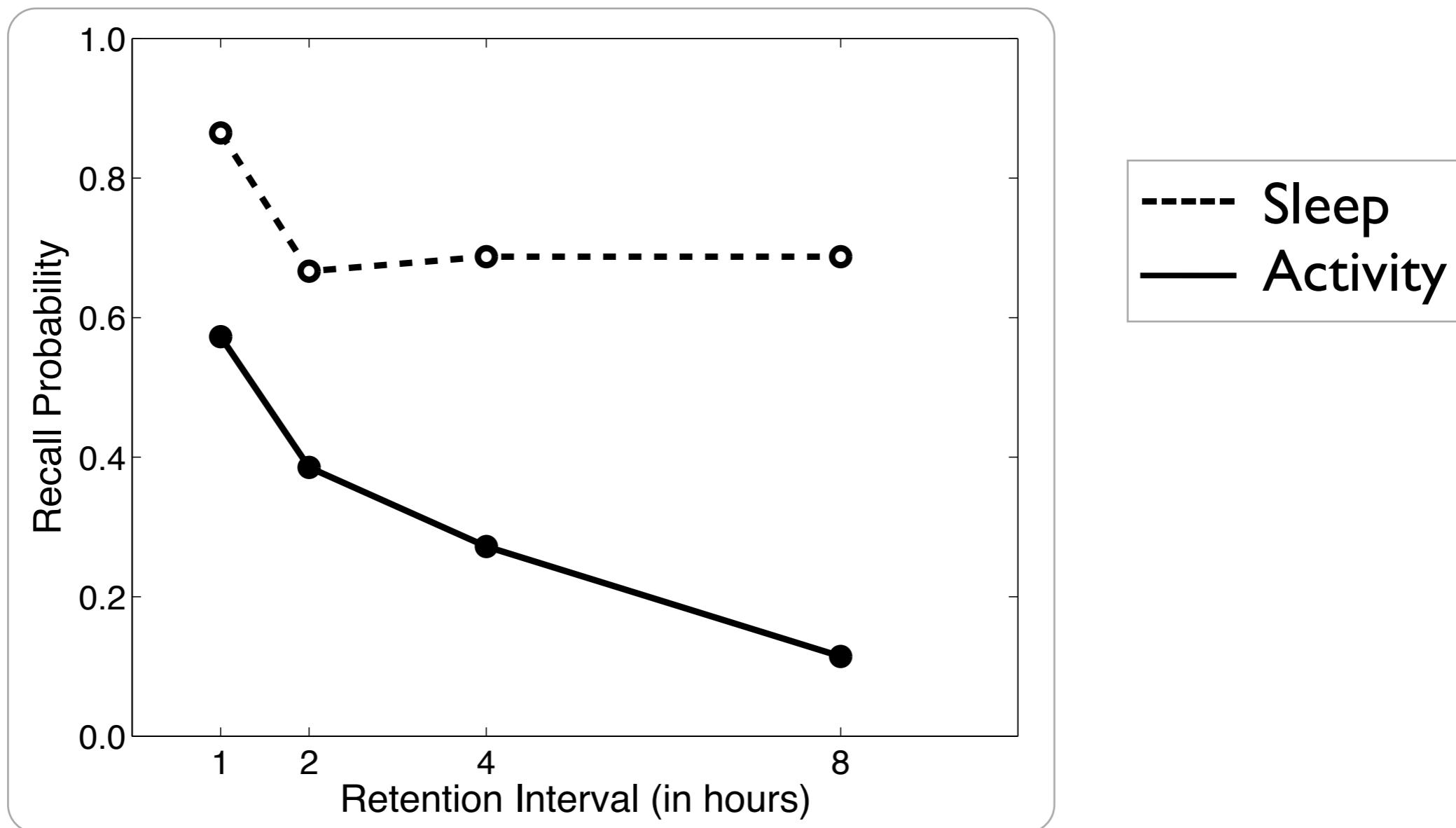
Madigan, 1969

Recency



Rubin et al., 1999

Sleep and forgetting



Jenkins & Dallenbach, 1924

Repetition, spacing, and recency



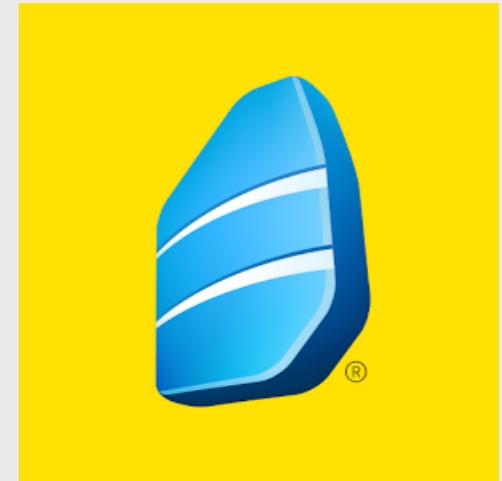
Duolingo



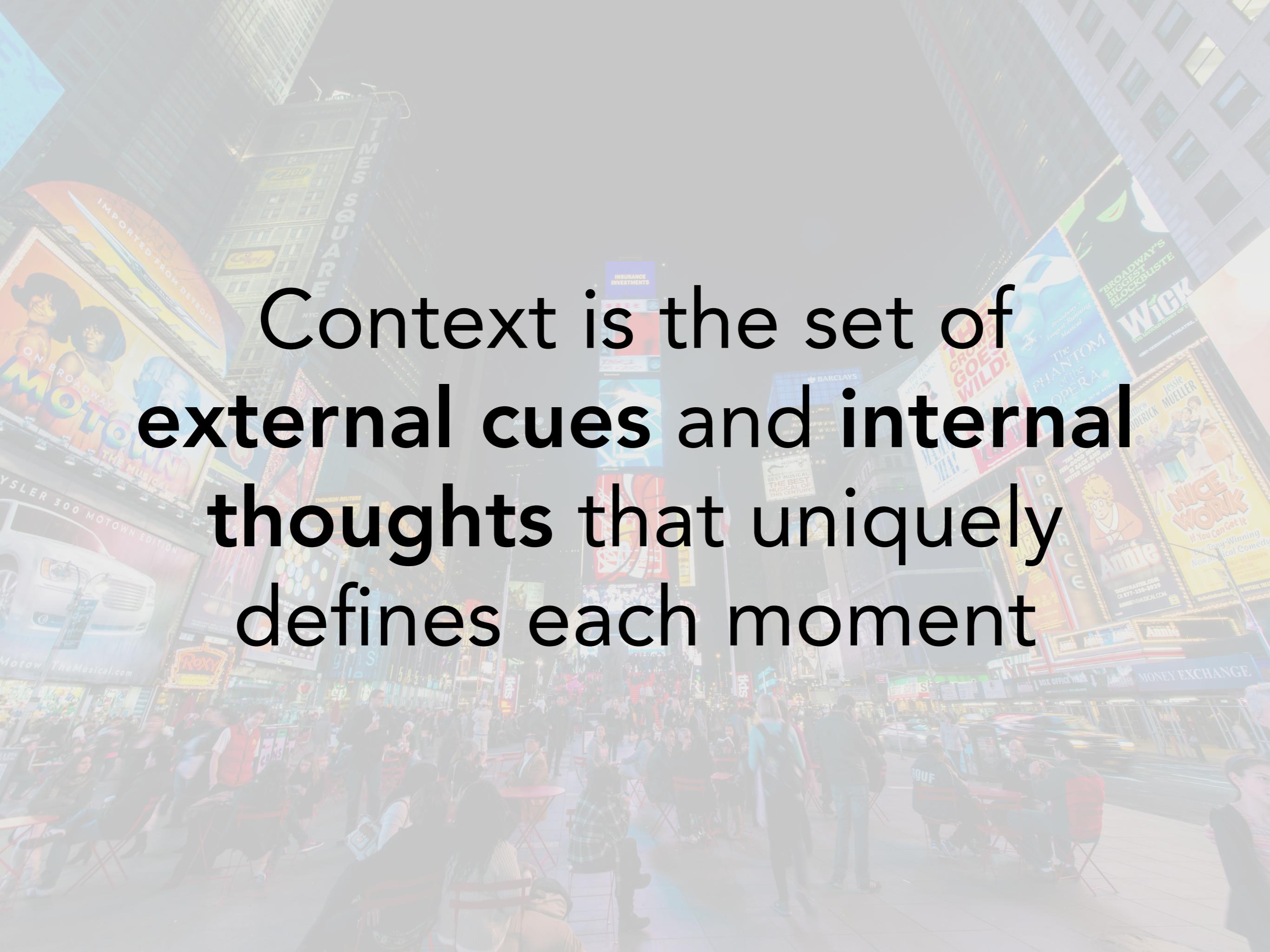
Memrise



Knewton



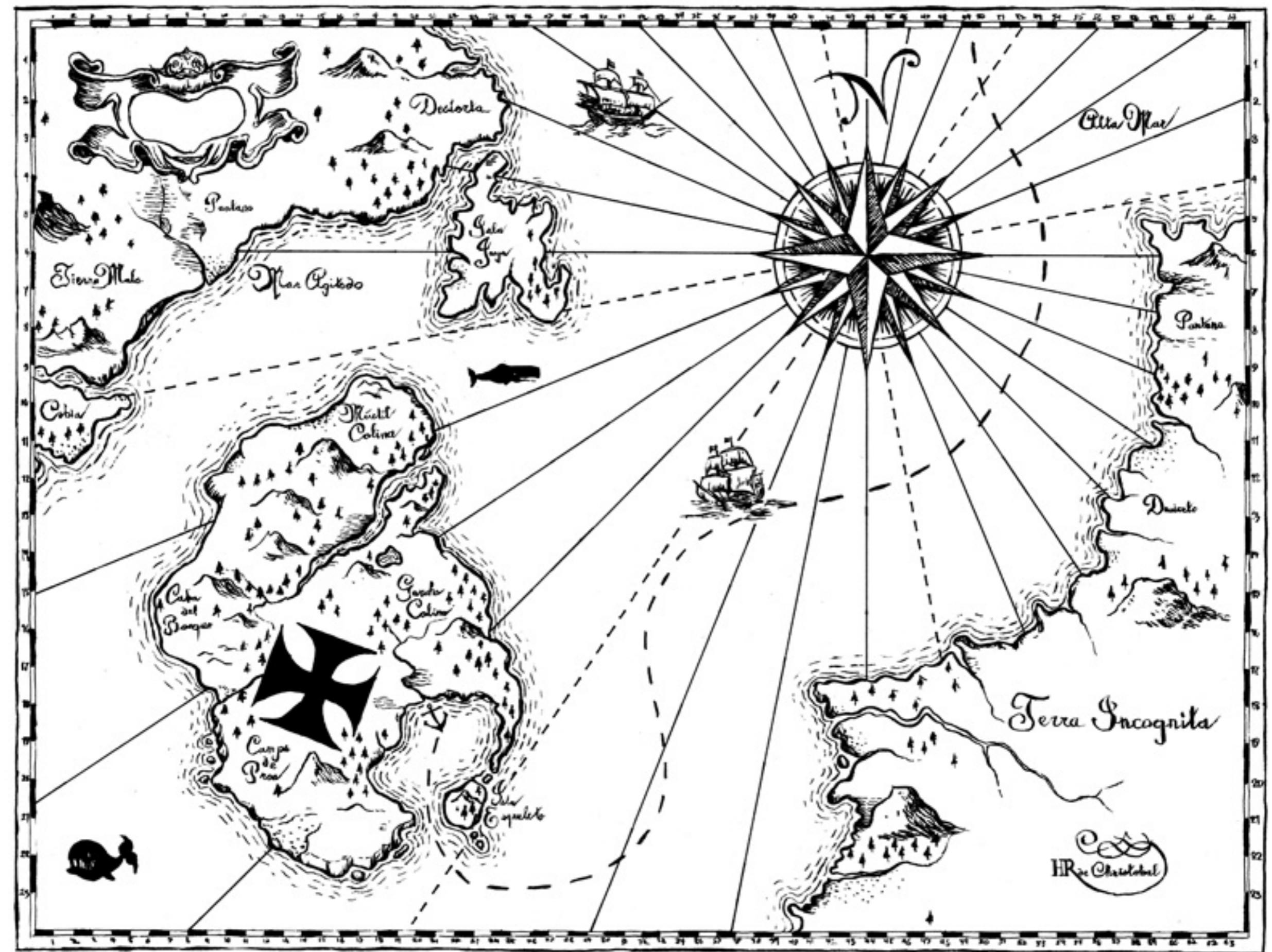
Rosetta Stone



Context is the set of external cues and internal thoughts that uniquely defines each moment











Veniți și luați-le!



Veniți și luați-le!



Veniți și luați-le!

Music as context

- Music can evoke a variety of emotional responses
- These responses are often similar across people and cultures (sometimes they're learned)
- Movie directors exploit this to influence how we interpret what's going on in the movie and how we feel about it

JAGUAR XJ



Context in advertising

- If you buy the car, you'll fit in with the image the advertiser is selling
- Contextual cues in the commercial also help us understand what's going on in limited airtime

Why does context matter?

- Context is reflected in the **statistical structure of our experience**
- Our brains exploit this statistical structure to help us remember what we need, when we need it
- This plays a fundamental role in how we remember

For Wednesday...

- Check out the course [GitHub page](#)
- Read Chapter 1 in FoHM
- Start working on [Problem Set 1](#), due before class on April 5
- [Register to get COVID vaccine](#)