Student Attention in a Technological Age

James M. Lang Kaneb Center for Teaching Excellence University of Notre Dame Teaching as the Art of Directing Attention

"Teaching's essential task consists in heightening the ability to notice what is remarkable and important in what we are looking at."

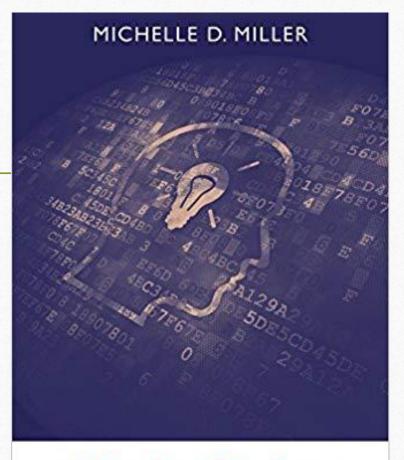
Yves Citton

The Ecology of Attention

Stewards of Attention

"Within the human cognitive system, attention is a precious, limited resource . . . So as designers of learning experiences, we should also think of ourselves as *stewards of students*" *limited stores of attention*."

Michelle Miller

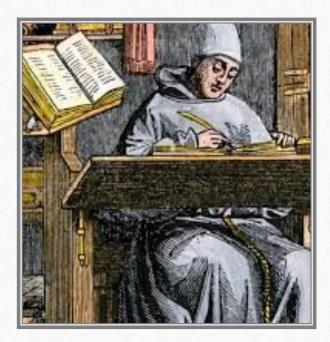


Minds Online Teaching Effectively with Technology

A Brief History of Distraction

Medieval Monks and Their Distractible Minds

"When he reads . . . [he] yawns a lot and readily drifts off to sleep; he rubs his eyes and stretches his arms; turning his eyes away from the book, he stares at the wall and again goes back to read for a while; leafing through the pages, he looks curiously for the end of texts, he counts folios and calculates the number of gatherings . . . Later, he closes the book and puts it under his head and falls asleep."



The Wandering Mind

FORECASTS FOR 1907.



IV.-DEVELOPMENT OF WIRELESS TELEGRAPHY. SCENE IN HYDE PARK. [These two figures are not communicating with one another. The lady is receiving an amatory message, and the gentleman some racing results.]

Modern Distractions

"These two figures are not communicating with one another. The lady is receiving an amatory message, and the gentleman some racing results."

Punch (1906)

Distracted at the Conference

"Literary conference takes place in the morning . . . Am sorry to find attention wandering on several occasions to entirely unrelated topics, such as Companionate Marriage, absence of radiators in Church at home, and difficulty in procuring ice. Make notes on back of visiting-card, in order to try and feel presence at Conference in any way justified. Find these again later, and discover that they refer to purchase of picture-postcards for Robin and Vicky, memorandum that blue evening dress requires a stitch before it can be worn again, and necessity for finding out whereabouts of Messrs. Thos. Cook & Son, in case I run short of money."

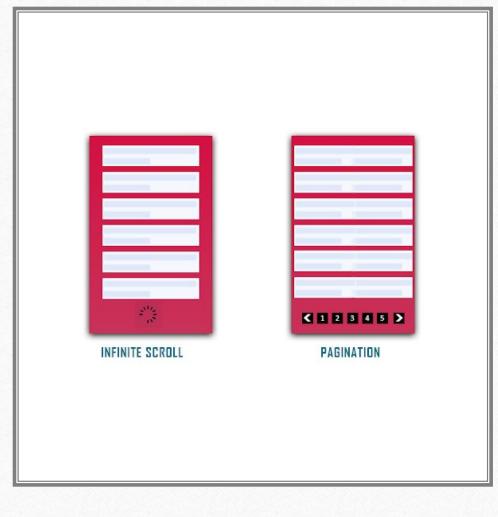
Diary of a Provincial Lady (1930)

The Pull of Novelty

"At our core we are *information-seeking creatures*... This notion is supported by findings that molecular and physiological mechanisms that originally developed in our brain to support food foraging for survival have now evolved in primates to include information foraging."

The Distracted Mind





Infinite Scrolling

In *Stolen Focus*, Johann Hari points out that the creation of technologies like the infinite scroll represents choices made by corporations to keep continual novelty in front of our faces.

The Modern Lament

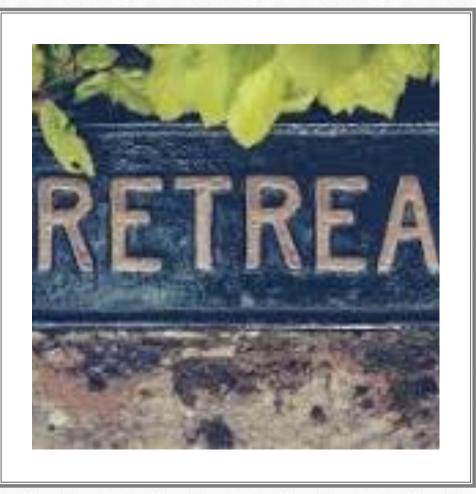
"Our ability to pay attention has been altered by how often we haunt digital spaces. The stories we tell are often sound bits instead of full-on narratives. The videos we watch are reduced to concise clips—snapshots of scenes. Even the traditional news we read has been Axiosed into short chunks— summaries of summaries."

Marc Watkins

Attention is an Achievement

"We need to think of paying attention as an *achievement*, something that you're able to do [i.e., and not that you do effortlessly . .] multiple steps are needed to ensure that you end up aware of the stimuli you're interested in, and not pulled off track by irrelevant inputs."

Daniel Reisberg, Cognition



The Classroom as an Attention Retreat

Most of us work and live in environments in which distractions are omnipresent, so the classroom itself can serve as space where we and our students can practice more varied forms of attention-including, and especially, the forms that support deep engagement.

What Resonates With You Thus Far?

Two-Minute Discussion with a Partner

Strategies

Close Attention

Slow Attention

Communal Attention

Close Attention

Deep Attention

Students viewed the same painting every week at the Worcester Art Museum and wrote a new response to it *every single week*.



What Do You Notice?

What Do You Think?

What Questions Does it Raise?

Close Reading

"Take turns reading the selected text aloud with your partner(s). The Bible is meant to be read out loud. *Go slowly!* I mean REALLY slowly!! Don't worry about getting through the whole text. It's better to ask many questions about one verse than to read fifty with little thought."



Object Analysis

(1) What do you think this object is?

(2) What does it tell us about Shakespeare, his works, and his cultural relevance?

Jay Zysk

Ripe Opportunities

• Set the tone for engagement in the **opening minutes** of the class period with activities that invite attention to the day's subject matter.

•Use the closing minutes of the class to re-gather attention for a final learning activity.



Gathering with Attention

• Image

• Poem

• Song

• Video

• Problem



Connection Notebooks

- Describe one way in which the day's course content connects to something you have observed or experienced in **everyday life**.
- Have you ever seen this depicted in a television show, film, or book?
- Articulate how today's material connects to something you have learned in **another course**.

What Could You Try?

- Deep, repeated viewings of a single item.
- Structured close reading in pairs or small groups.
- Students handling objects that might spark new conversations or ideas.
- A pre-class or opening attention activity.
- An exit strategy that encourages students to connect the day's material to their own lives.

Slow Attention

The Power of Slow

"In music, in poetry, and in life, the rest, the pause, the slow movements are essential to comprehending the whole. Indeed, in our brain there are 'delay neurons' whose sole function is to slow neuronal transmission by other neurons for mere milliseconds. These are the inestimable milliseconds that allow sequence and order in our apprehension of reality, and that enable us to plan and synchronize soccer moves and symphonic movements."

Maryanne Wolfe

Proust and the Squid



Of cloudless climes and starry skies; And all that's best of dark and bright Meet in her aspect and her eyes; Thus mellowed to that tender light Which heaven to gaudy day denies.

One shade the more, one ray the less, Had half impaired the nameless grace Which waves in every raven tress, Or softly lighters o'er her face; Where thoughts serenely sweet express, How pure, how dear their dwelling-place.

And on that check, and o'er that beow, So soft, so calm, yet eloquent, The smilles that win, the tints that glow, But tell of days in goodness spent, A mind at peace with all below,

Attention Protocols

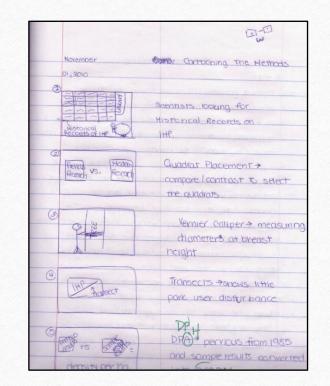
Meaning Hot Spots

- •Opening Lines
- •Closing Lines
- •Literary Figures
- •Strange Language

- What are the meaning hot spots in the "text" of a discipline?
- How could teachers guide students through those hot spots?
- What class activity would give them practice in this work?

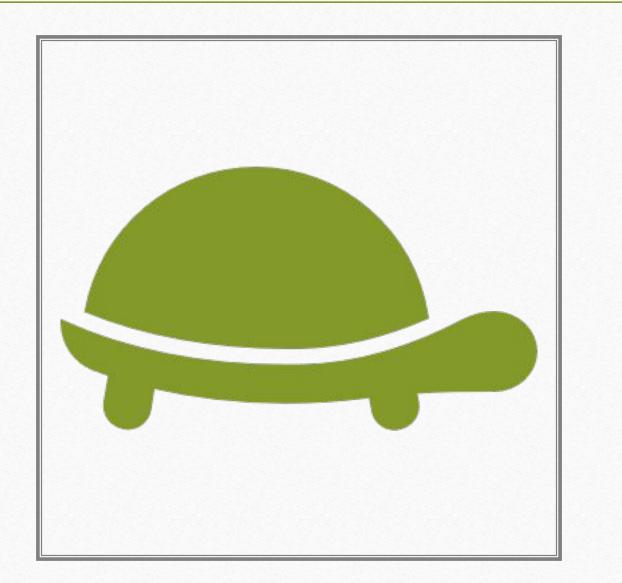
Drawing the Methods

Experiment 2C
· 3 weeks after amphetamine exposure Brains Romaed Brain Sections · · · · · · · · · · · · · · · · · · ·
In situ Hybridization Digitized Images



Slow Prompting?

How could we slow down the process of interacting with AI to bring greater attention to the learning process?



Communal Attention

Attention Contagion

"Relative to participants who watched the lecture with an inattentive confederate, participants with an attentive confederate: (a) **self-reported** higher levels of attentiveness, (b) behaved more attentively (e.g., **took more notes**), and (c) **had better memory for lecture content**."

Forrin, N. D., et al. (2021). Attention spreads between students in a learning environment. *Journal of Experimental Psychology: Applied, 27*(2), 276–291.

Supporting Communal Attention

Policies

Teacher

Students

Technology Policies





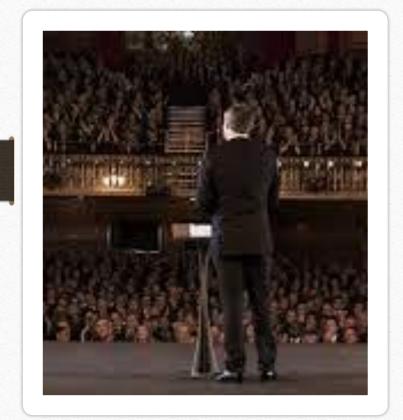
What Policy Supports Learning?

- Total Ban: In support of attention to the material and the other humans in the room, phones are off and put away with no BYOD (bring your own device) or AI use.
- Laissez-Faire: In support of respecting and trusting individuals' liberty, and of recognizing the needs of individual learners, students can make their own choices on in-class tech use.
- **Context-Specific:** It's intentional with explicit and transparent expectations and communications: sometimes required, sometimes banned, sometimes optional.

Framing Attention Policies

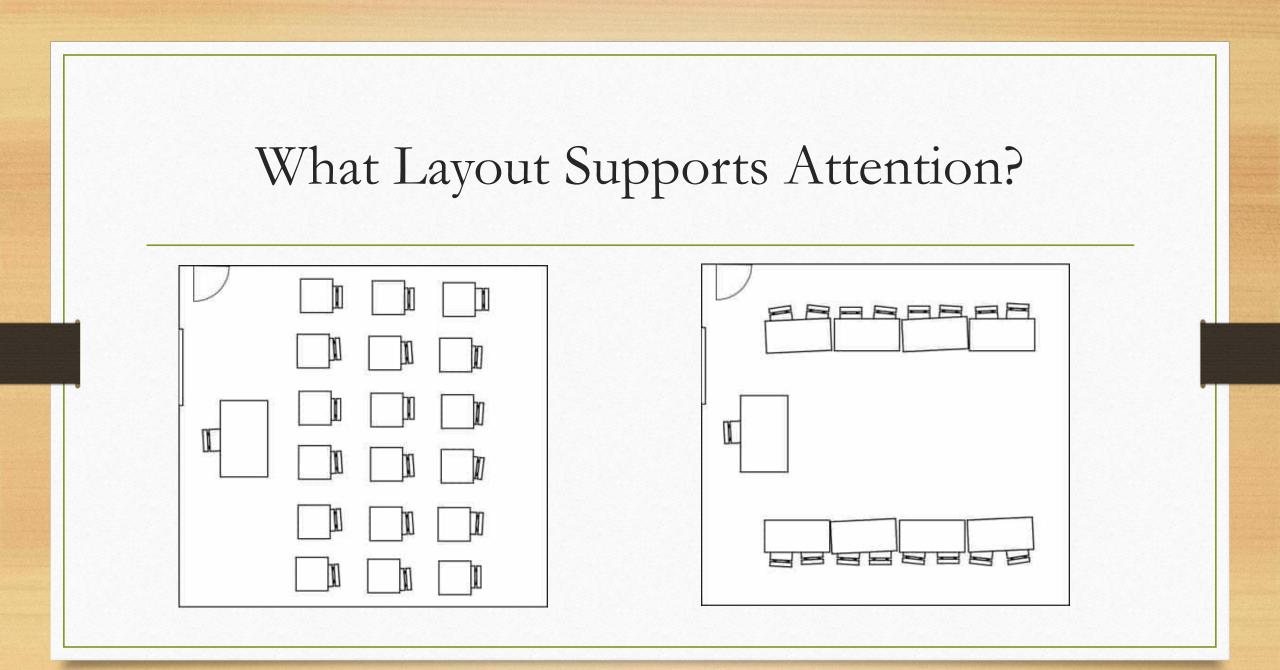
"In this class we will spend the majority of our time engaged in activities that depend upon you being present and attentive to one another, and of course to the works of literature we will study. We are all challenged these days by the ways in which our digital devices—including laptops, tablets, and phones—can steal our attention away from our immediate surroundings. In this class we will have a technology policy that is designed to support your attention to one another and to the course material. I have developed this policy for three reasons . . ."

Physical Presence



• Get off the stage. Break the invisible barrier at the front of the room.

- Use your physical presence to *invite* students into the conversation.
- Movement and change draw attention.



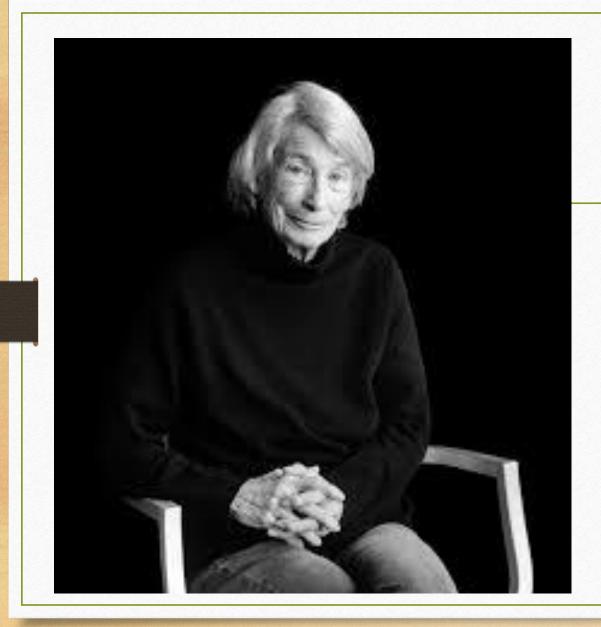
The Annotated Attention Policy

"This syllabus—like our course—is incomplete without you and your commentary. This Annotated Syllabus is the start of a conversation about our course, your learning, and shared accomplishment. We will annotate our syllabus by: Asking clarifying questions; sharing opinions readings and assignments; noting confusions and uncertainties; responding to policies; providing advice; and reflecting on what works and what can change.

https://remikalir.com/blog/annotate-your-syllabus-4-0/

Mid-Term Feedback

- •What features of the class are supporting your attention?
- •What features are interfering with your attention?
- What can we do differently to re-direct your attention for the rest of the semester?



Renewing Our Attention to the World

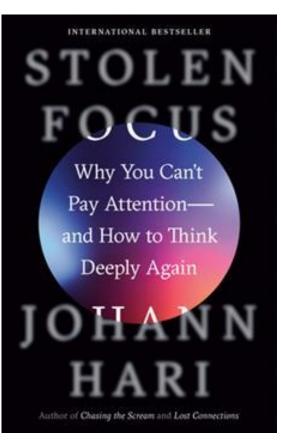
Instructions for living a life:

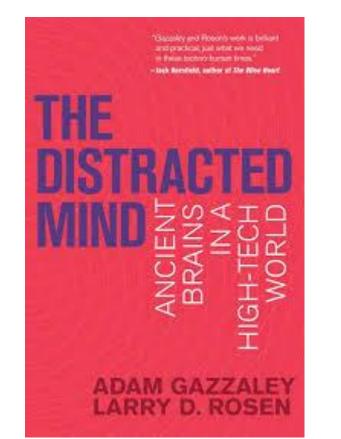
Pay attention. Be astonished.

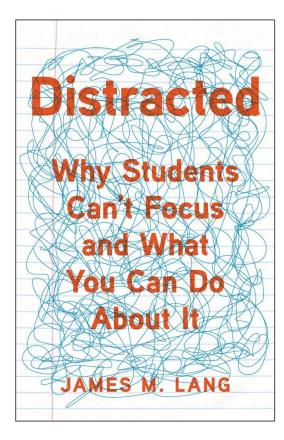
Tell about it.

"Sometimes"

Mary Oliver







http://jamesmlang.com