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Multi-tasking is associated w/ reduced learning

Experimental study:

Students required to send 3 text messages to the professor during class scored lower on a quiz on the lecture material than students who turned off their phones

Effect was observed for both strong and weak students



Ellis, Daniels & Jaurequi (2010). Research in Higher Education

Multi-tasking means longer time to complete tasks

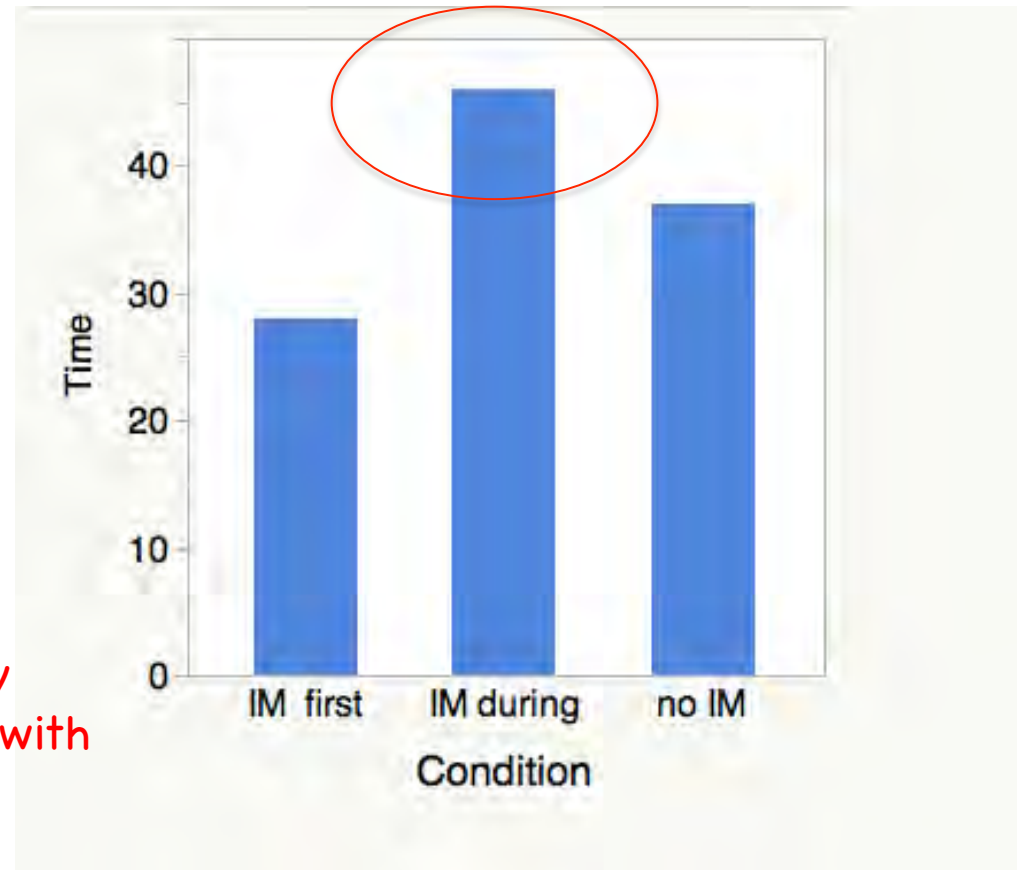
Experimental study:

IM before reading text

IM while reading text*

No IM; read text

* These students took significantly longer to read the passage, even with IM time removed



Bowman et al. (2010). Computers and Education

Laptops in class are associated with reduced learning

Students reported an average of 17 minutes in a 75 minute class allocated to email, games, IM, web surfing, and "other"

More laptop use in class associated with lower class performance

Students reported the greatest barrier to their learning was *other students' laptop use*

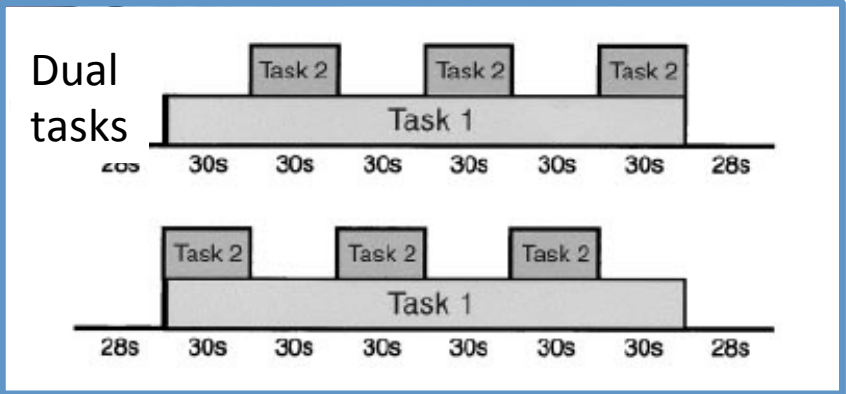
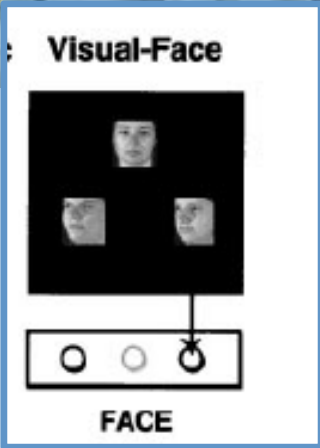
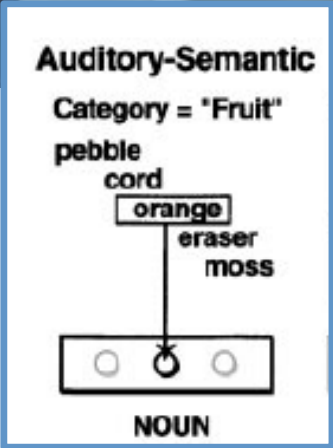


Fried (2007). Computers & Education.

Multi-tasking is associated w/ different patterns of brain activity



Single tasks



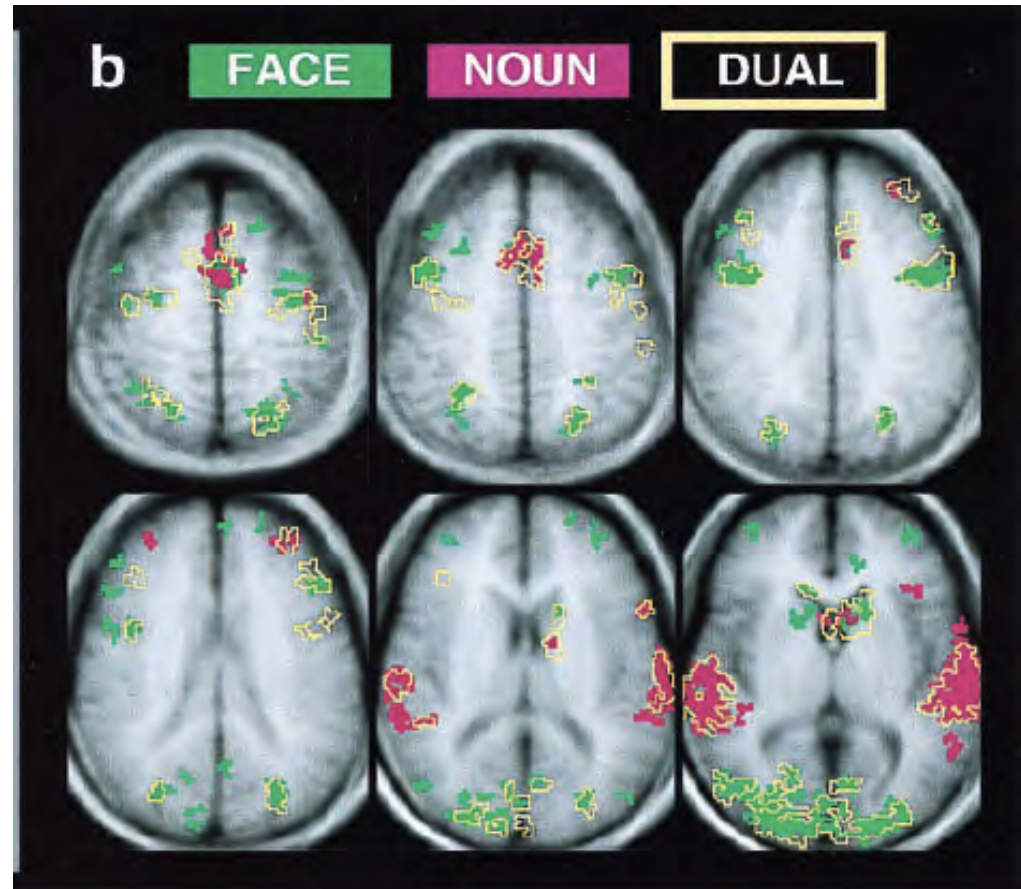
Adcock et al. (2000). PNAS.

Multi-tasking is associated w/ different patterns of brain activity

Participants reported dual task was harder

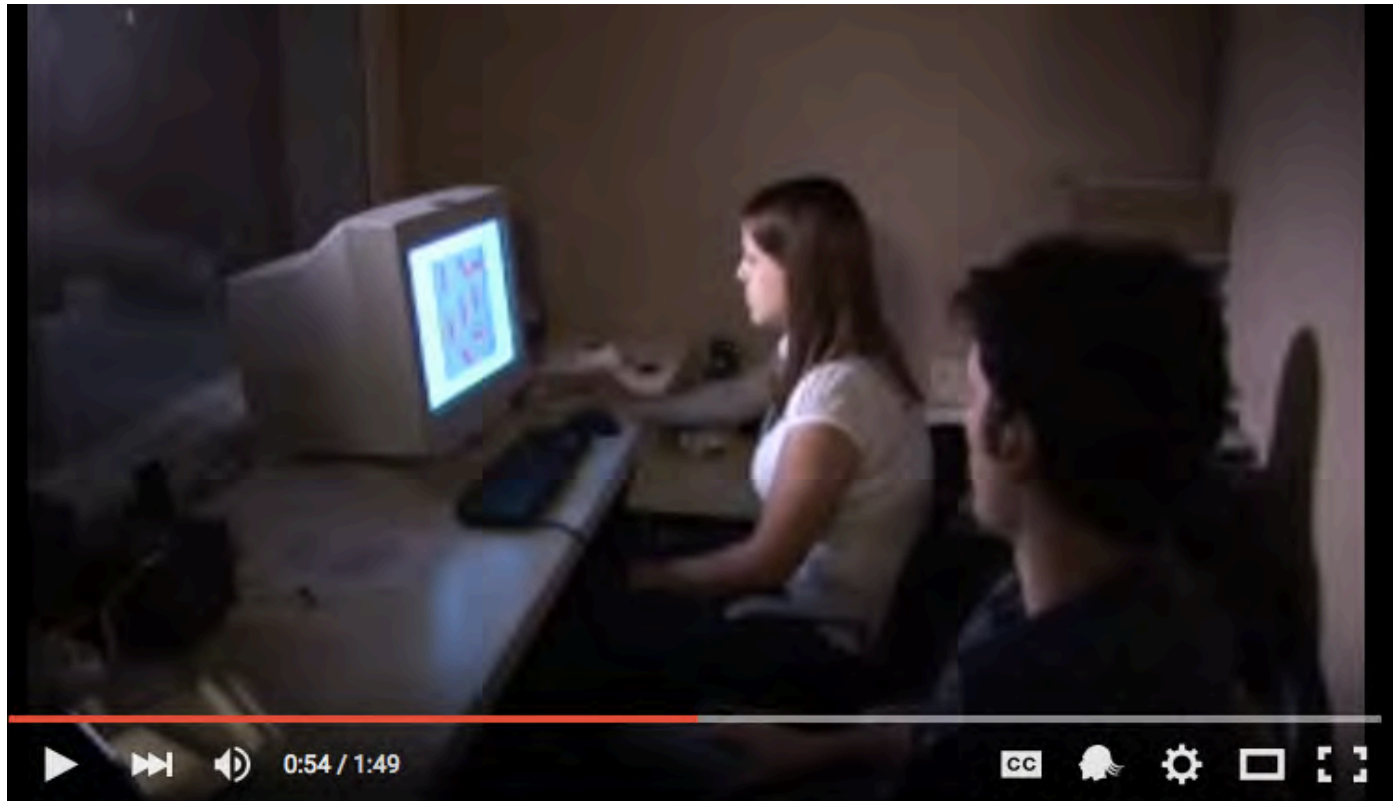
They made more errors

Scans suggested dual tasks led to "an increased demand for maintenance of task-specific information in the presence of distraction"



Adcock et al. (2000). PNAS.

Students who believe they are good at multi-tasking are *not*

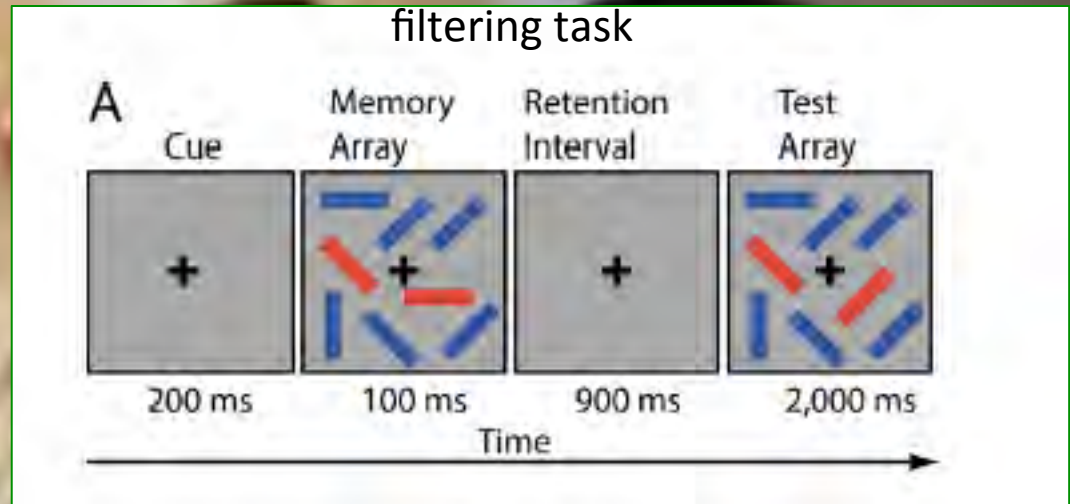


Stanford University on multitasking

<https://www.youtube.com/watch?v=Na1fYwCZAu4>

Ophir, Wagner & Nass. (2009). PNAS.

Comparison of high multi-taskers versus high-focus people



	games	TV	h/w	music	phone	text	social	print	F2F
games									
TV									
h/w									
music									
phone									
text									
social									
print									
face 2 face									

high multi-taskers performed much worse - but were more confident!

Attention Span

- ▶ The average attention span at present is just **5 minutes** *long*.
- ▶ Ten years ago, it was **12 minutes**.



THAT'S A PRETTY DRASTIC CHANGE

- ▶ Younger people have *shorter attention spans* than the elderly.



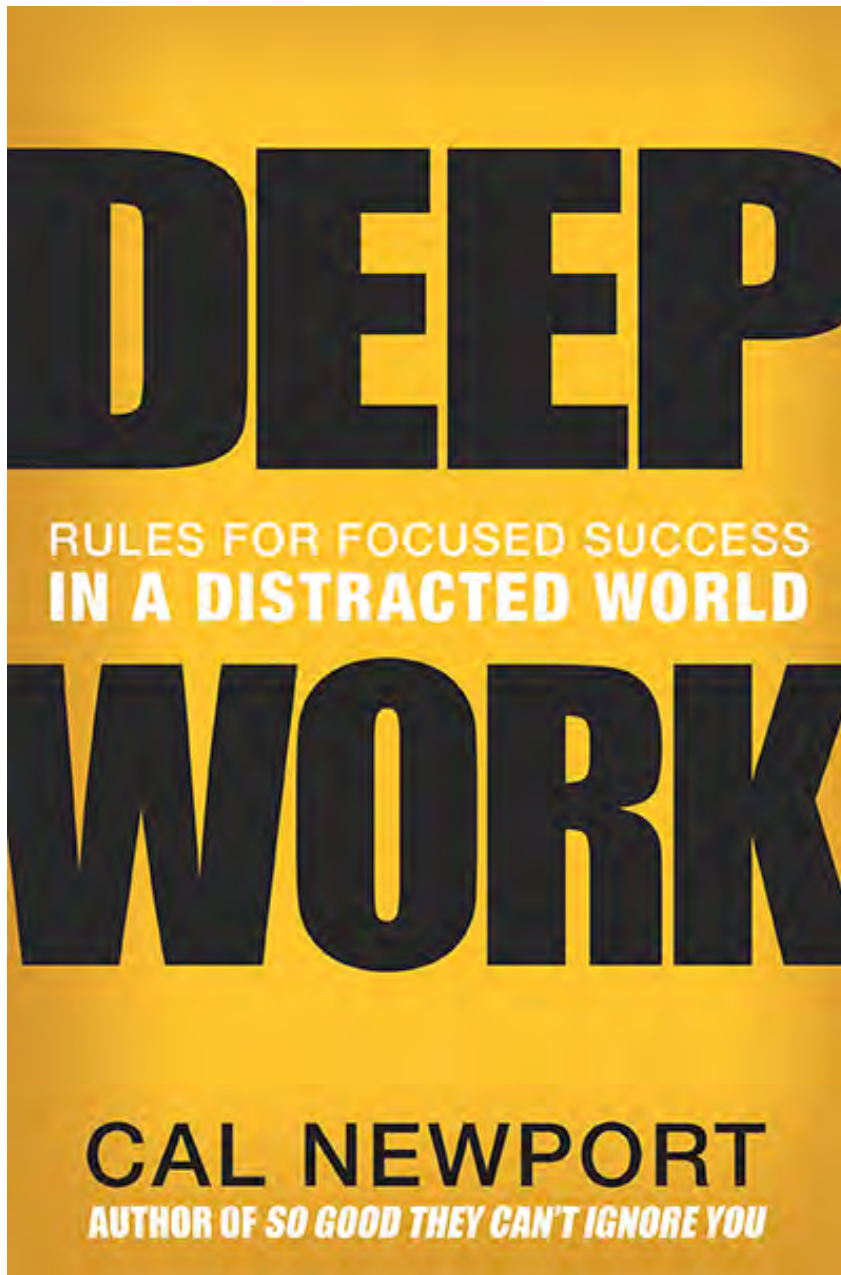
THIS INDICATES THAT SOCIAL MEDIA AND TECHNOLOGY HAVE AN EFFECT, AS OPPOSED TO AGE.

EFFECTS OF A SHORTENED ATTENTION SPAN



- **25%** forget the *names* or details of close friends and even relatives.
- **7%** of people forget their own birthdays from time to time.
- Forgotten *pots and pans* on the stove.
- In the UK last year, **£1.6 billion of damage** was caused by lack of concentration.





<http://calnewport.com/>

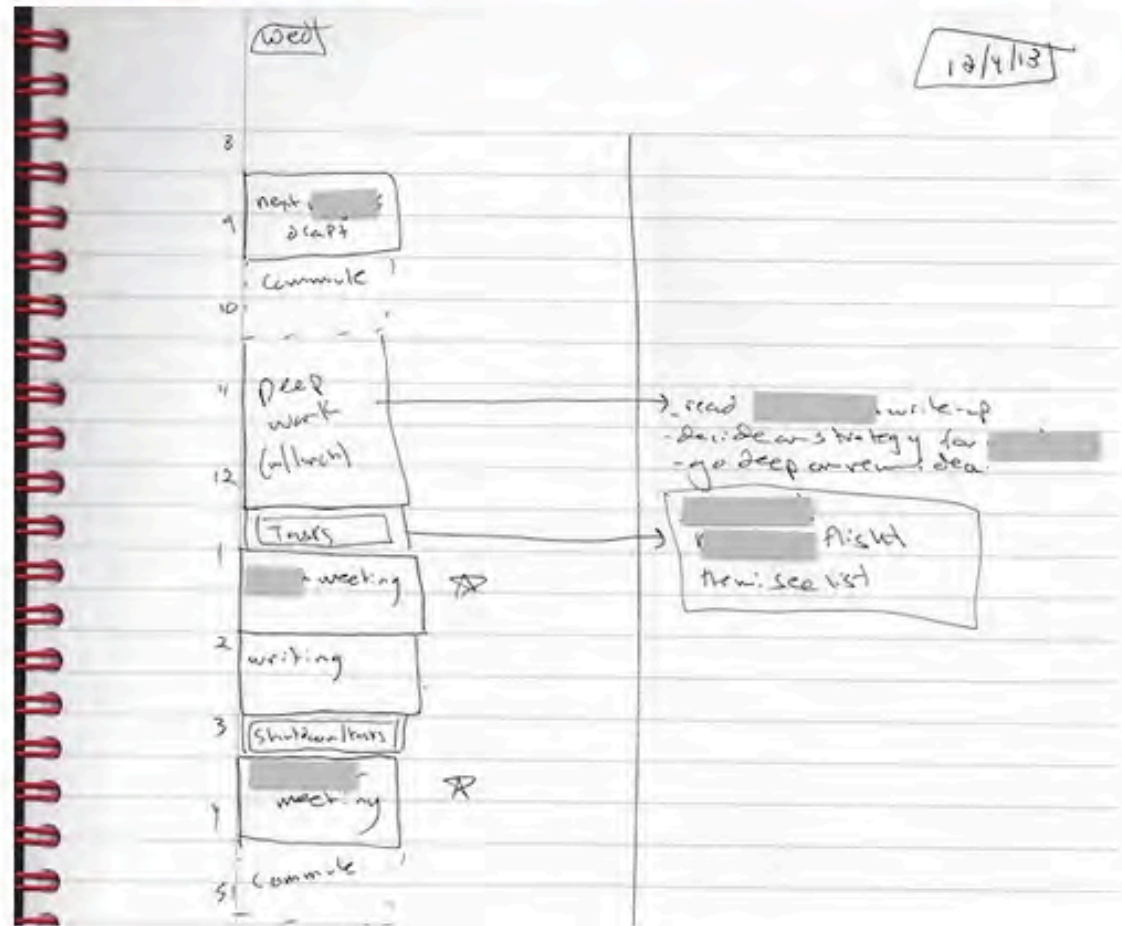
“Deep work” is the act of focusing without distraction on a cognitively demanding task.

To produce at your peak level you need to work for extended periods with full concentration on a single task free from distraction.

Time blocking

Deep Habits: The Importance of Planning Every Minute of Your Work Day

December 21st, 2013 · [112 comments](#)

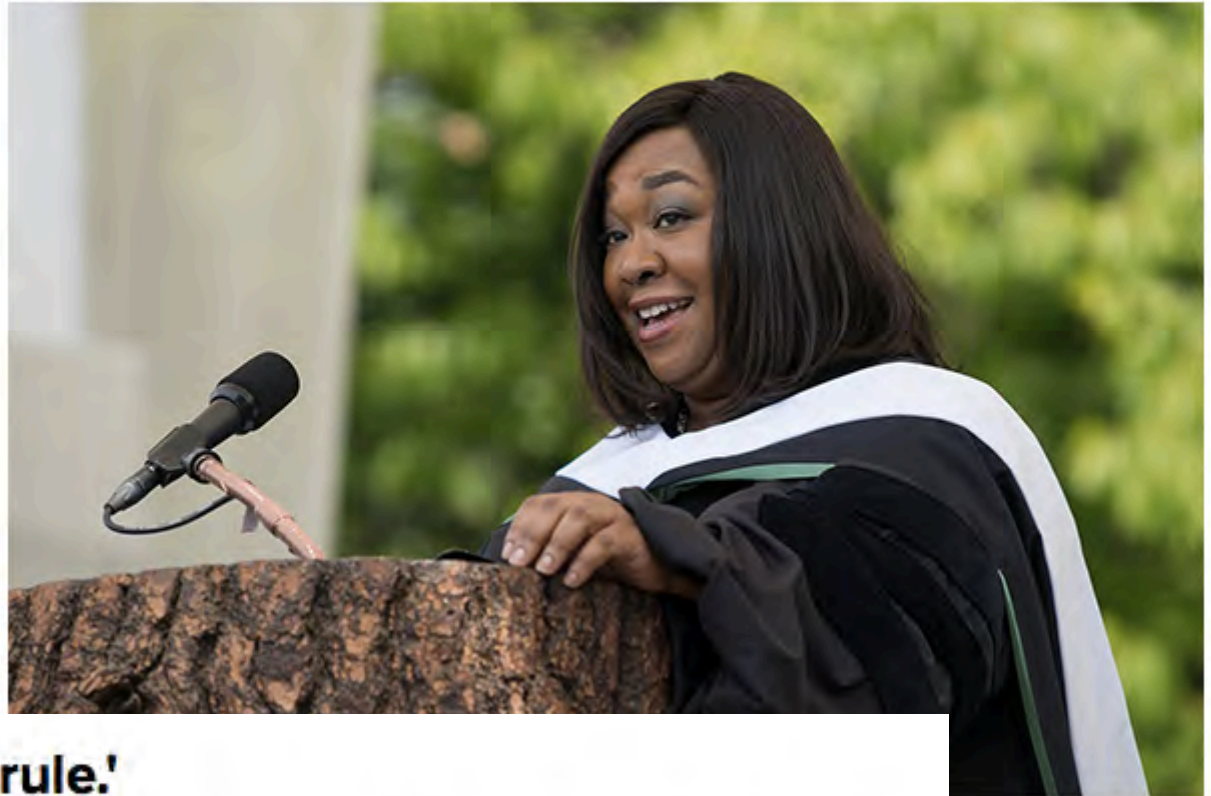


Time Blocking

Fixed schedule

Shonda Rhimes Doesn't Check E-mail After 7 pm

November 17th, 2015 · [11 comments](#)



The '20 percent less rule.'

Whatever deadline you set for yourself, cut it by 20 percent. "Now you have to scramble with as much intensity to get this thing done," says Newport.

Adding a sense of urgency to the task is like doing interval training for your mind. It forces you to work just a little bit harder.

use locations that are not your normal office

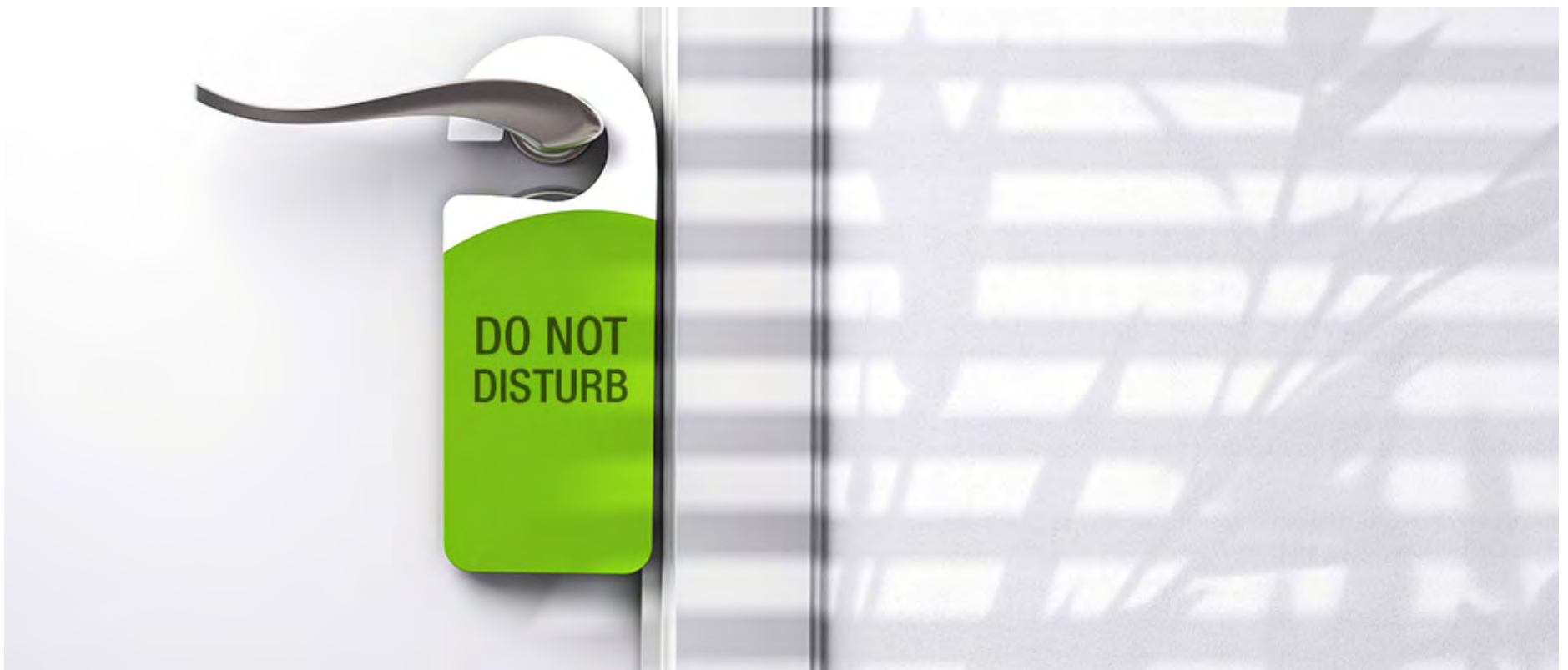


Practice being bored (w/o jumping to social media)

Engaging in deep work isn't as simple as setting aside a chunk of time to work on something. "You have to treat your attention with a lot of respect, like a professional athlete might treat their body," says Newport. This also means training your brain to focus.



Rituals to signal it's Deep Work time



Be good role models for our students

