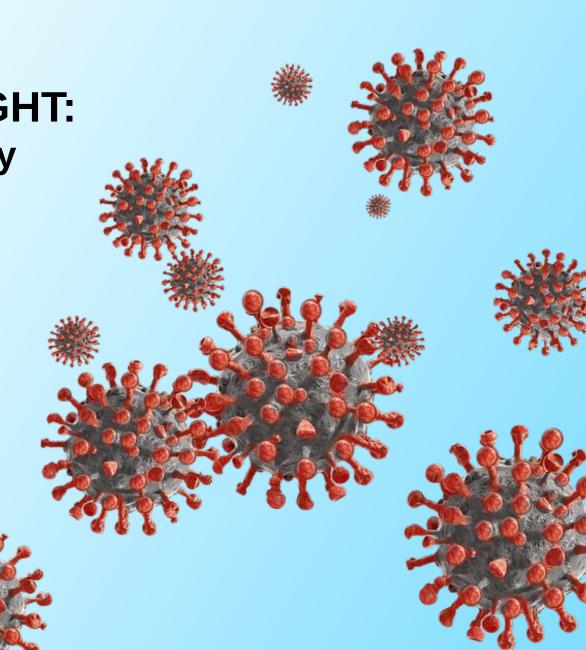


The Complex System Society Conference - 2020

THE RHYTHMS OF THE NIGHT: Increase in Online Night Activity and Emotional Resilience During the Spring 2020 Covid-19 Lockdown

Maria Castaldo, Tommaso Venturini, Paolo Frasca, Floriana Gargiulo

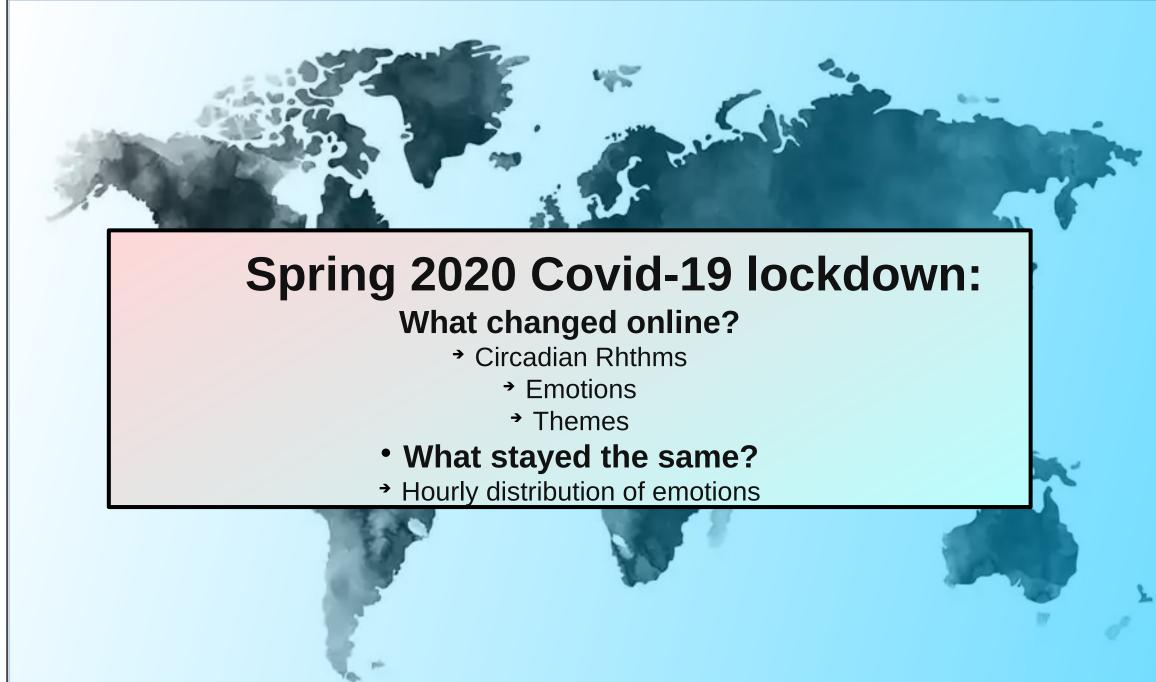
CNRS, France













The French Spring Lockdown

Key dates:

March 15: the lockdown is announced

March 17: start day of lockdown

May 11: end day of lockdown



Two French Datasets



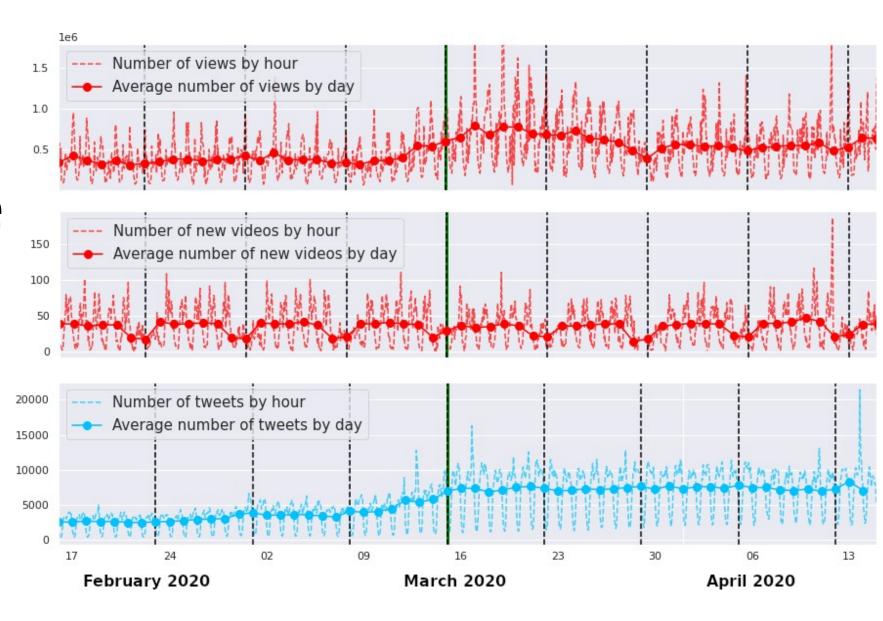
- Evolution of views along time
- 1031 French news and politics channels
- 99.992 **videos**
- from February 17 to April 14

- TWITTER
- 8 millions tweets and retweets
- 5161 unprofessional **users**
- from February 17 to April 14

 Data collected in collaboration with the Quatar Computing Research Institute



An Increase in Online Activity

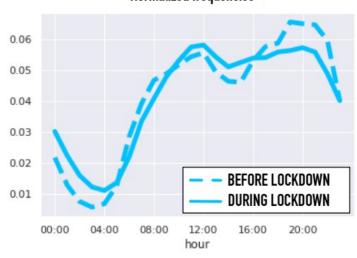


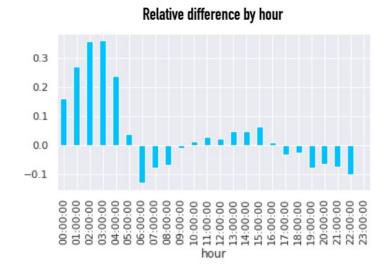


Normalized frequencies

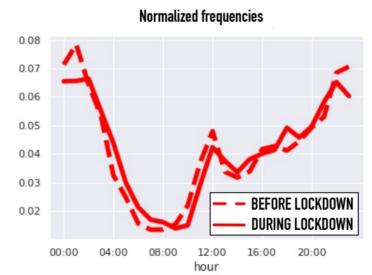
TWITTER

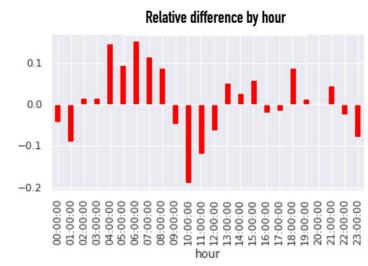






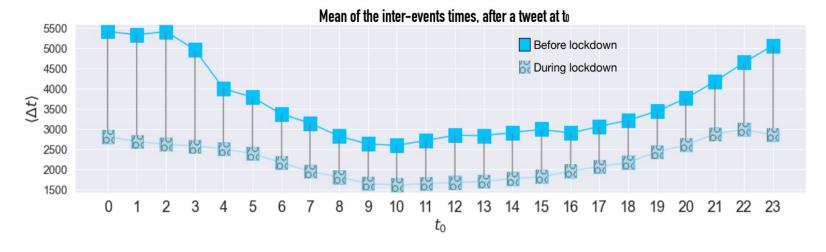
YOUTUBE



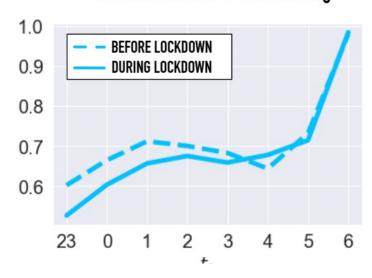




An Increase in Night Activity

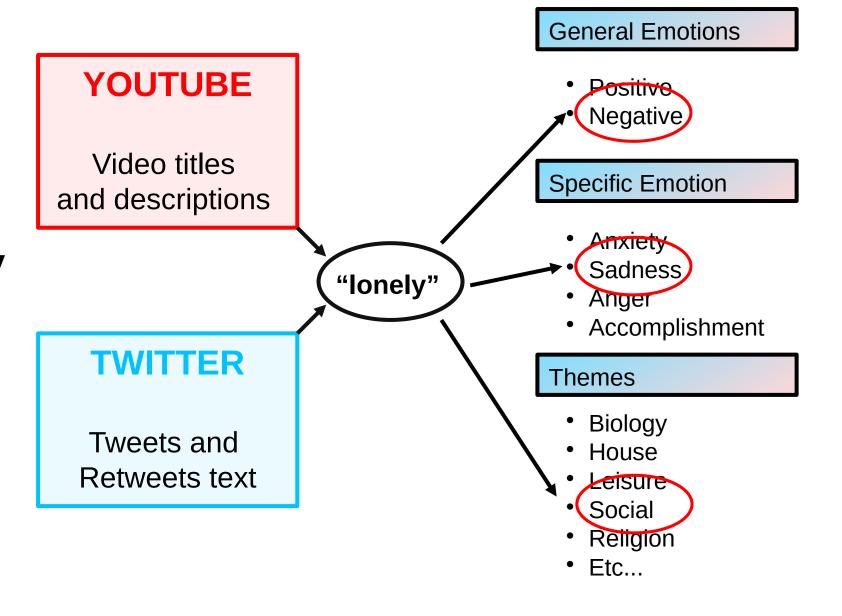


Probability that after a tweet at to, the next one is in the next morning



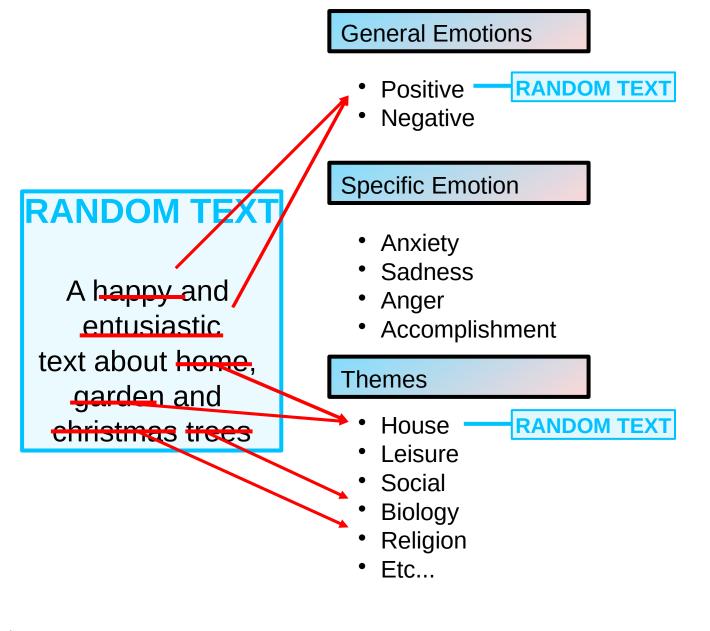


Content Analysis: the LIWC dictionary





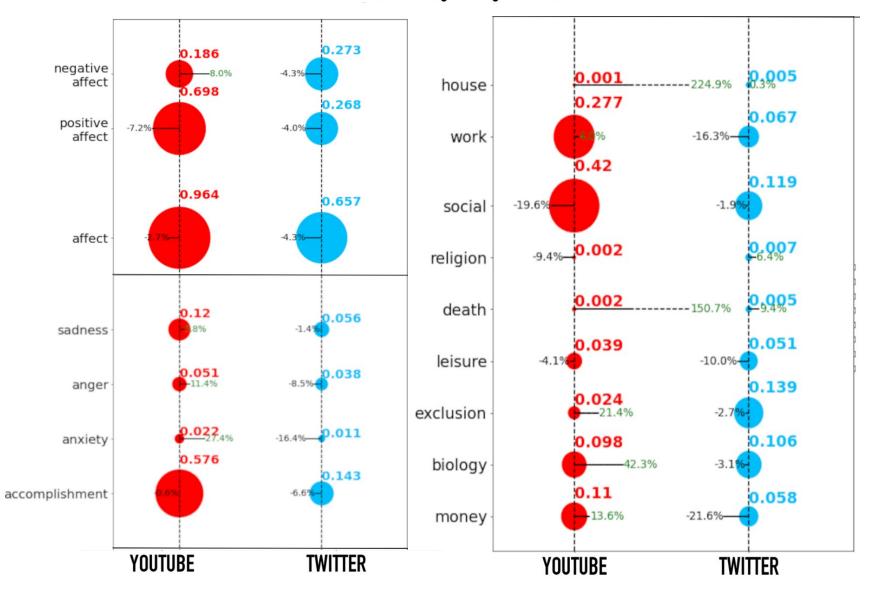
Content Analysis: the LIWC dictionary





Fraction of Videos/Tweets with a content and relative change during lockdown

Content Variation with lockdown



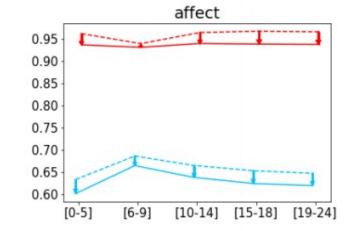


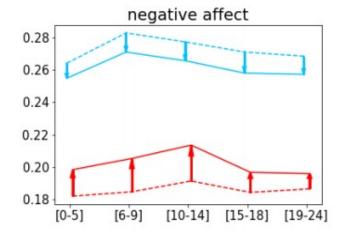
Resilience Of emotion distribution

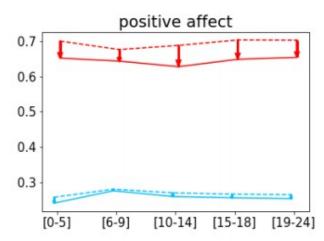
Fraction of Videos/Tweets with a content by hour

Youtube during LDYoutube before LDTwitter during LD

Twitter before LD









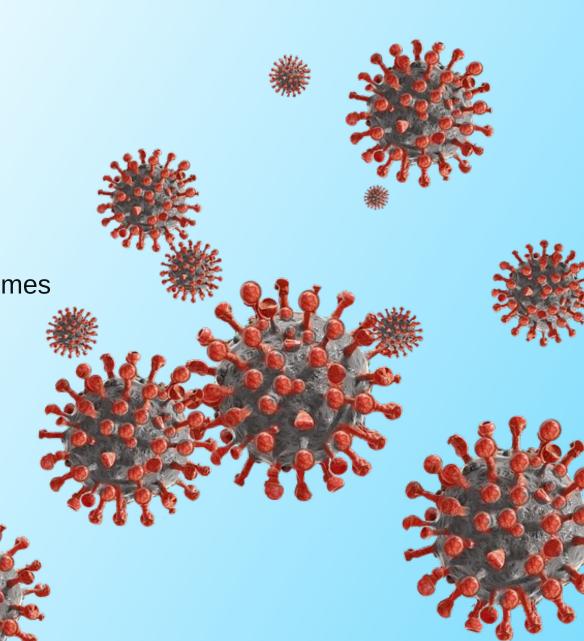
Conclusions:

What changed?

- Circadian Rhythms shifted towards night
- → Emotions decreased
- → Themes changed to lockdown related themes

What stayed the same?

→ Hourly distribution of emotions





Thank you for your attention

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