01/03/2024

HOW TO DESIGN AN ACADEMIC POSTER
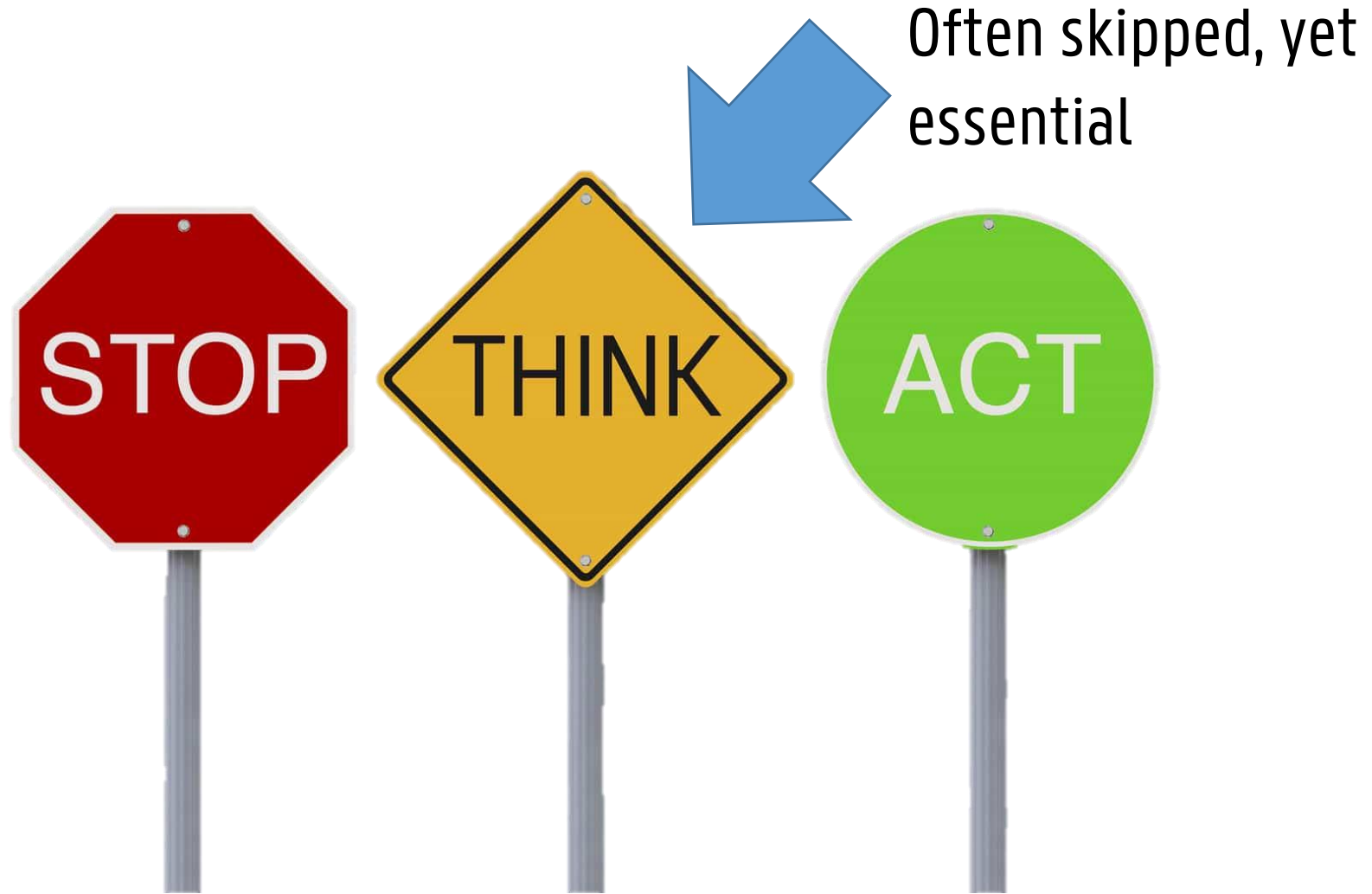
SSHT topics

Evelynn Devos

POSTER SESSIONS: WHAT TO EXPECT?

POSTER DESIGN PROCESS

Often skipped, yet essential

STOP THINK ACT

THINK

1. Conference instructions
2. Audience
3. Poster functions

1. READ POSTER INSTRUCTIONS

- Specific requirements for posters:

  - Dimensions, orientation, font, logo, handouts, photos, etc.

- Where is it happening?

  - Schedule, location, etc.

- Judging criteria if available

  - Best poster award

2. AUDIENCE

Who are they?	→	Level of assumed knowledge?	→	Knowledge gap	→	Used content/ terminology
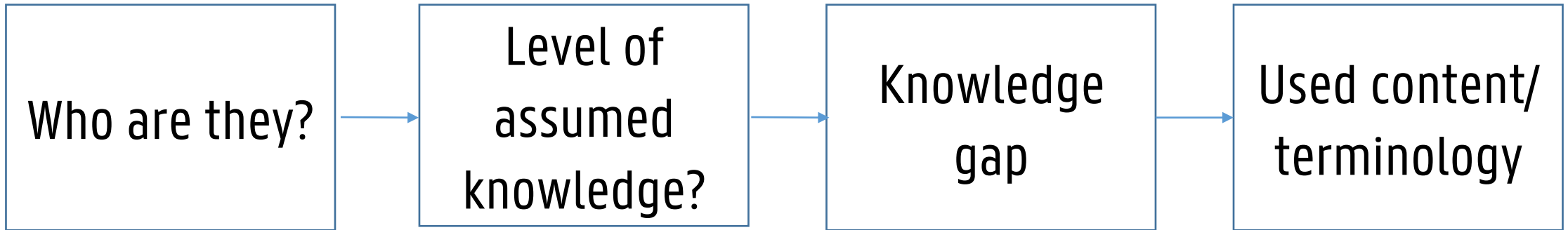
SAME FIELD   **OTHER FIELD**   **BUSINESS**   **GOVERNMENT**   **INDIVIDUAL**

3. FUNCTIONS OF A POSTER?

?

3. FUNCTIONS OF A POSTER:

Grab attention

Inform

Network

GRAB ATTENTION

FIRST FUNCTION

ATTENDEE'S EXPERIENCE

WHICH POSTER DO YOU PREFER?

A

B

POSTER SIZE

- Follow poster size restrictions:
  - Not too small
  - Not too big
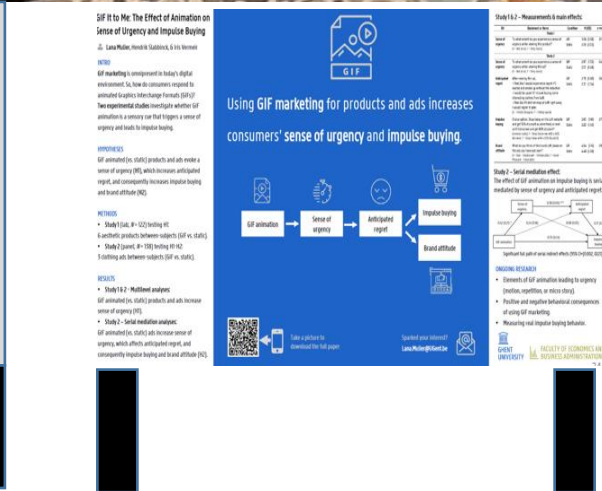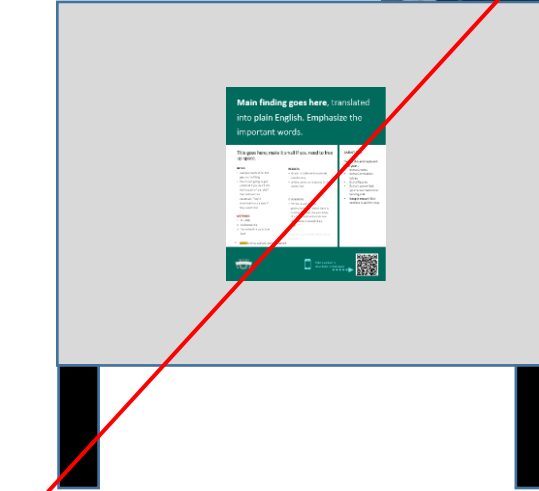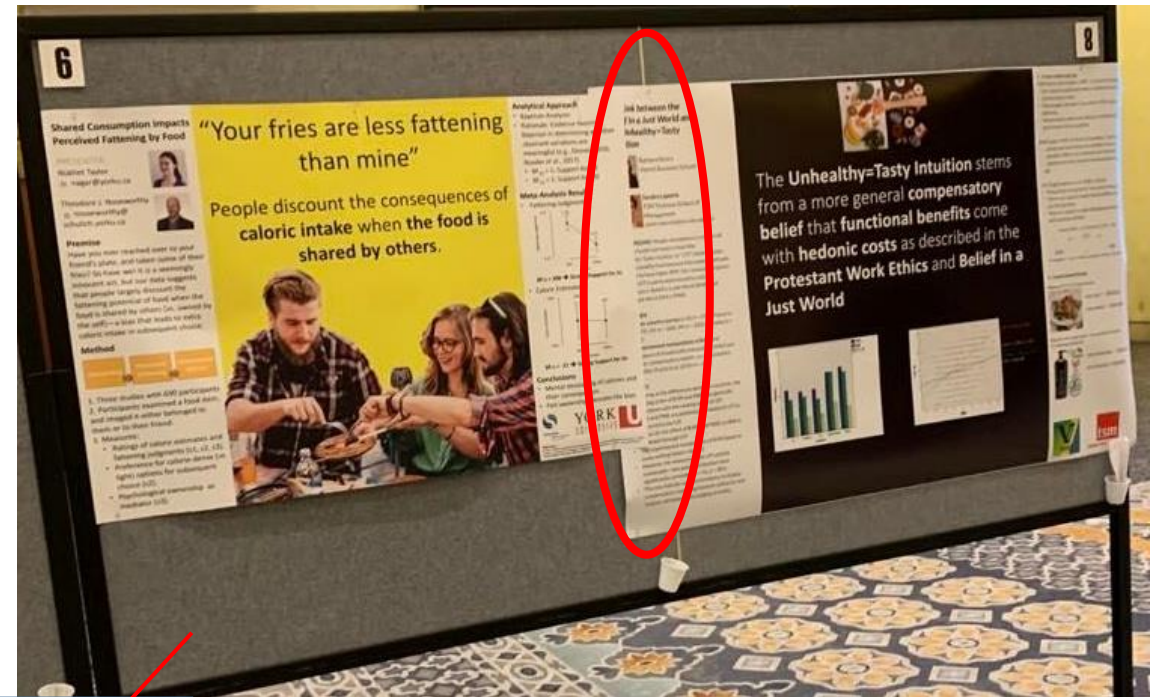
FONTS

- Everything readable from 1.5m
  - Font sizes as large as possible (within reason)
  - Recommended minimum sizes for A0 poster:
    - 72 points for titles
    - 48 points for headings
    - 24 points for body copy

- Fonts: easy-to-read, sans-serif fonts
  - Arial, Helvetica, Ugent Panno, Calibri
  - Emphasize by putting words in bold

  - Avoid using too many different **formats**, sizes *and colors*

FONT SIZES:

24 32 48 60 72

Is this easy to read?

Is this easy to read?

TITLE/ KEY TAKE-AWAY = SELLING POINT

- Visible from 5m

- Concise

- Catchy

- To-the-point: keywords!

- Can be a question or summarize main finding

BOGO Frees Consumers: Free Options Lead to Adventurous Product Choices

(When) Are Online Friendships Real and Influential? An Evaluative Context Model

COLORS

- Simple & pleasing to the eye
  - Contrasting colors work well
  - Light colored background, dark font
  - Do not use an image as background
- Avoid multiple (3+), vibrant, gradient, transparent & pale colors
- Consider blindness! http://www.vischeck.com/vischeck/vischeckImage.php
- Use the UGent template

IMAGES

- Ensure images are of high enough resolution (300-600px/inch)!

- Number and label all tables and figures

- Link the figure to the tekst (e.g., see Table 1)

- Remove all unnecessary information/detail

- Represent as much as possible visually

- Lock aspect ratio – no distortions

A0 is 8x A4, the same as 1/4 of this image being magnified 4x.

GRAPHS & CHARTS

Source: http://www.ncsu.edu/project/posters/CreatePosterGraphics.html
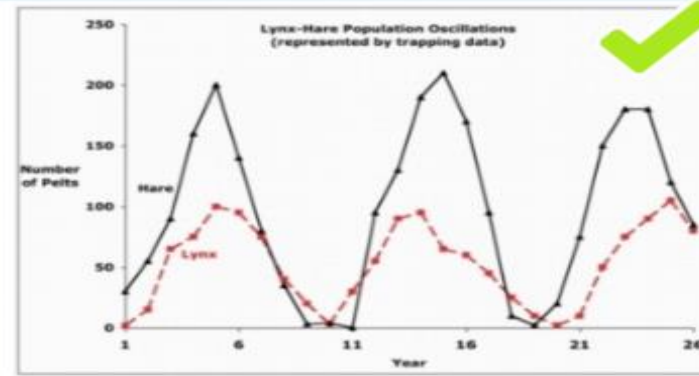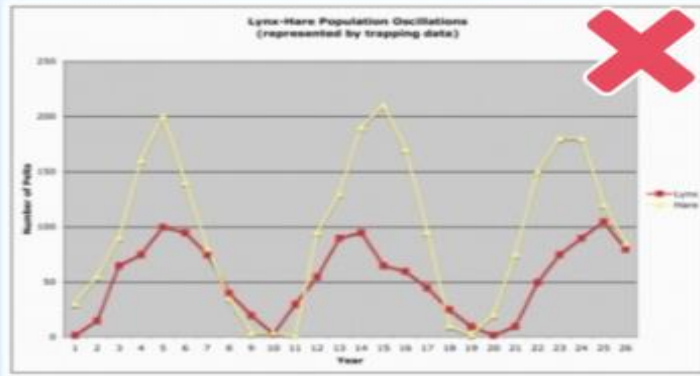
- Always include a descriptive title.
- Make sure each axis has a legible label.
- Avoid including gridlines.
- Label the data instead of using legends.
- Use colour and formatting to distinguish data.

INFORM

SECOND FUNCTION
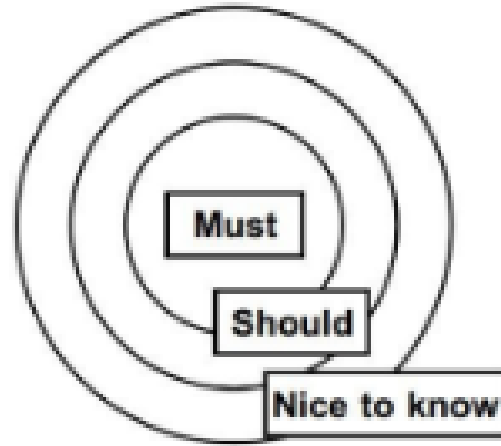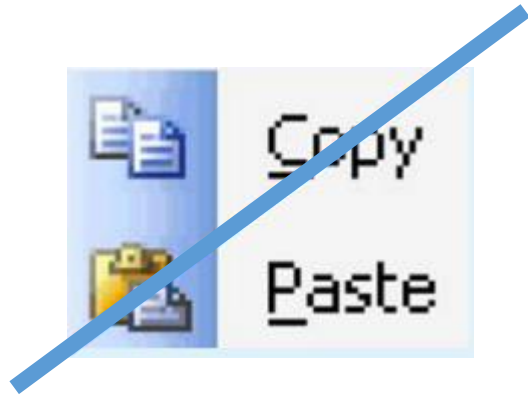
GOOD POSTER PRACTICES
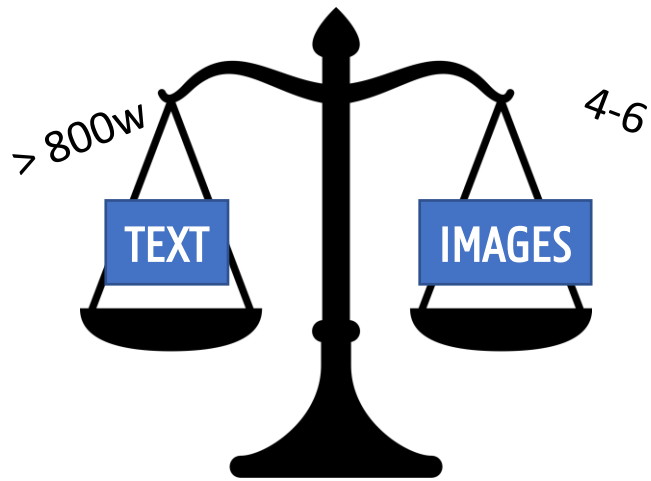
CONTENT: TEXT

👍 The Do's

1 Use bullet points & emphasize words with bold font

2 Pictures = 1000 words

3 Plain language: no jargon, abbreviations

Study: Sushi Eating ASMR

- Design: ASMR video (audio on vs. audio off)
- N: 180 from Amazon Mturk
- DVs:
  I. Number of sushi pieces desired (SUSHI)
  II. Willingness to pay (WTP)
  III. Intention to eat at restaurant (NARE)

Sushi ASMR Stimuli

- Procedure:
  A. Measure DVs after watching 30 second video
  B. Report a physical reaction (i.e., tingling sensations) along with other feelings

A POSTER SHOULD INCLUDE MOST ITEMS:

- Title + authors and affiliations (+ contact info)
- Main message/take-away
- Introduction + objectives
- Methods
- Data and Results
- Conclusions and Future Work:
- (Reference and Acknowledgements)

INTRODUCTION + OBJECTIVES

Section should clarify:

- Research question
- Significance of study (so what?)
- Previous work on similar lines
- May have hypotheses embedded
- Maximum 200 words

Theoretical Framework

- **Creativity:** novel/unique, appropriate/effective (Sternberg & Lubart, 1991)
- **Visual Entropy:** information intensity, amount of uncertainty within a visual field (Kittaneh et al. 2016; Tsai, Lee, and Matsuyama 2008)
  - Computer-vision-based measure: permutation entropy

- **Honing Theory of Creativity** (Gabora 2017): Creativity starts with humans' recognition of high psychological entropy material (e.g., an inconsistency), which challenges one's prior beliefs/expectations and generate uncertainty, motivating individuals to seek creative restructure (divergent thinking) until the mental entropy is minimized and the uncertainty is dissipated.
- **Moderation Role of Experience:** only experienced ones have readily available nodes in the territory of the individual's mind to construct restructured associations.
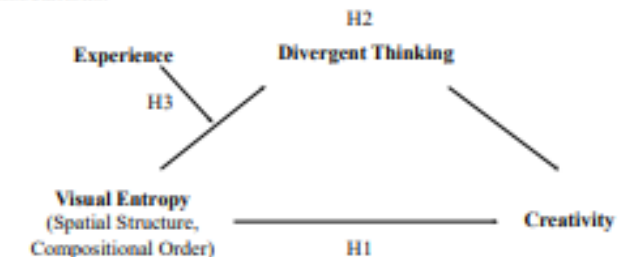
METHOD SECTION

Section should include:

- Basic parameters:
  - Study design, target sample, setting, key interventions, variables, data source, ….

- Do not get lost in the details!

- Use visual elements
  - Flowcharts, photos, …

Experiment 3 (lab study)

- **Scenario:** drawing a birthday card with colored pencils
- **Study design:** compositional order entropy (high – random vs. low – rainbow) *drawing experience between-subjects design
- **Measures:** self-report creativity, expert-rated creativity, layout attractiveness (control)

Rainbow	Random
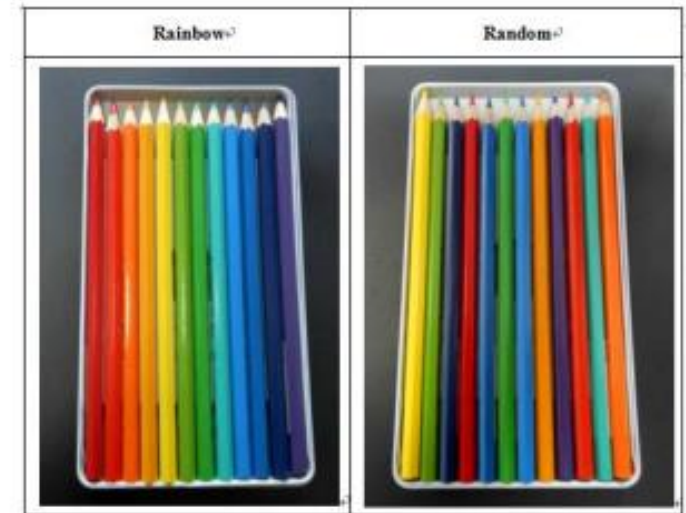
Panel D. Estimated Values of Objective Creativity

DATA AND RESULTS

= findings presented in figures/table, highlights key findings, links to hypotheses

- **Results:** both compositional order entropy and spatial structure entropy increases consumer creativity, which is mediated by divergent thinking

Panel A. Self-perceived Creativity
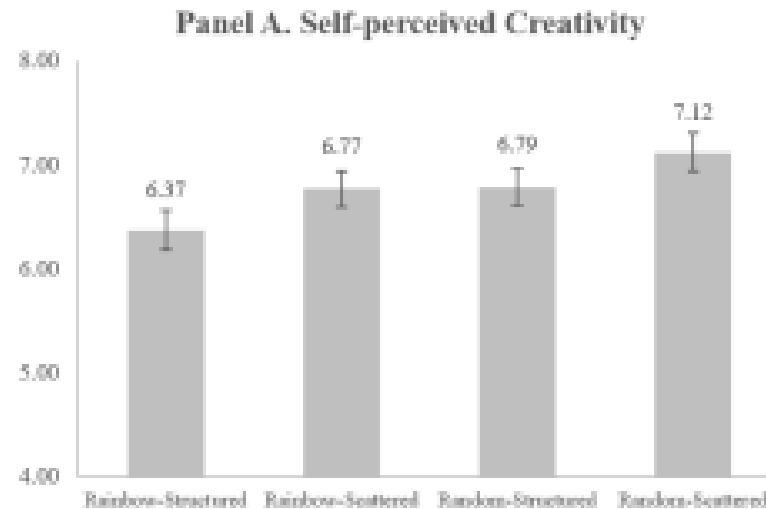
CONCLUSIONS AND FUTURE WORK

- = summary of findings, implications for research & directions for future research

REFERENCE AND ACKNOWLEDGEMENTS

References:

- Most crucial ones in-tekst and/or full references at the bottom
- Often disclaimer ("references available upon requests") -> preferred

Acknowledgements:

- Funding: FWO, BOF, … -> show the logo
- Acknowledge others who was helping out with your research -> rare

POSTER STRUCTURE

From this...

To this!

Check out the YouTube #betterposter video

Anatomy of a #betterposter.

GIF It to Me: The Effect of Animation on Sense of Urgency and Impulse Buying

Lana Mulier, Hendrik Slabbinck, & Iris Vermeir

INTRO

GIF marketing is omnipresent in today's digital environment. So, how do consumers respond to animated Graphics Interchange Formats (GIFs)? **Two experimental studies** investigate whether GIF animation is a sensory cue that triggers a sense of urgency and leads to impulse buying.

HYPOTHESES

GIF animated (vs. static) products and ads evoke a sense of urgency (**H1**), which increases anticipated regret, and consequently increases impulse buying and brand attitude (**H2**).

METHODS

- **Study 1** (lab; N = 122) testing H1:
6 aesthetic products between-subjects (GIF vs. static).
- **Study 2** (panel; N = 138) testing H1-H2:
3 clothing ads between-subjects (GIF vs. static).

RESULTS

- **Study 1 & 2 – Multilevel analyses:**
GIF animated (vs. static) products and ads increase sense of urgency (H1).
- **Study 2 – Serial mediation analyses:**
GIF animated (vs. static) ads increase sense of urgency, which affects anticipated regret, and consequently impulse buying and brand attitude (H2).

Using **GIF marketing** for products and ads increases consumers' **sense of urgency** and **impulse buying**.

GIF animation → Sense of urgency → Anticipated regret → Impulse buying / Brand attitude
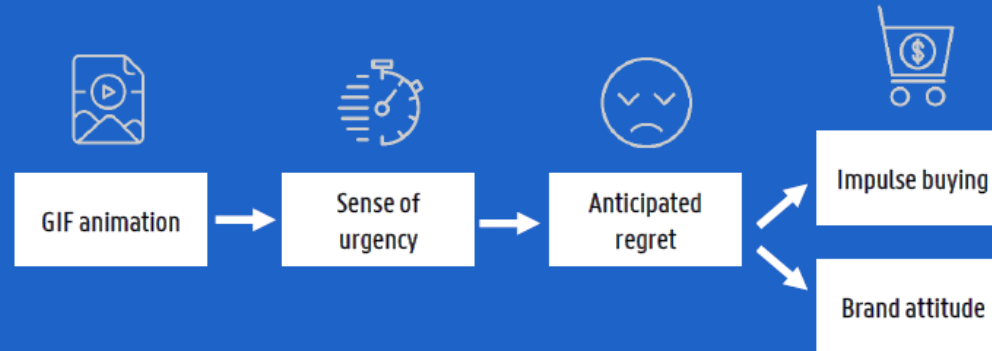
Take a picture to download the full paper

Sparked your interest?
Lana.Mulier@UGent.be

Study 1 & 2 – Measurements & main effects:

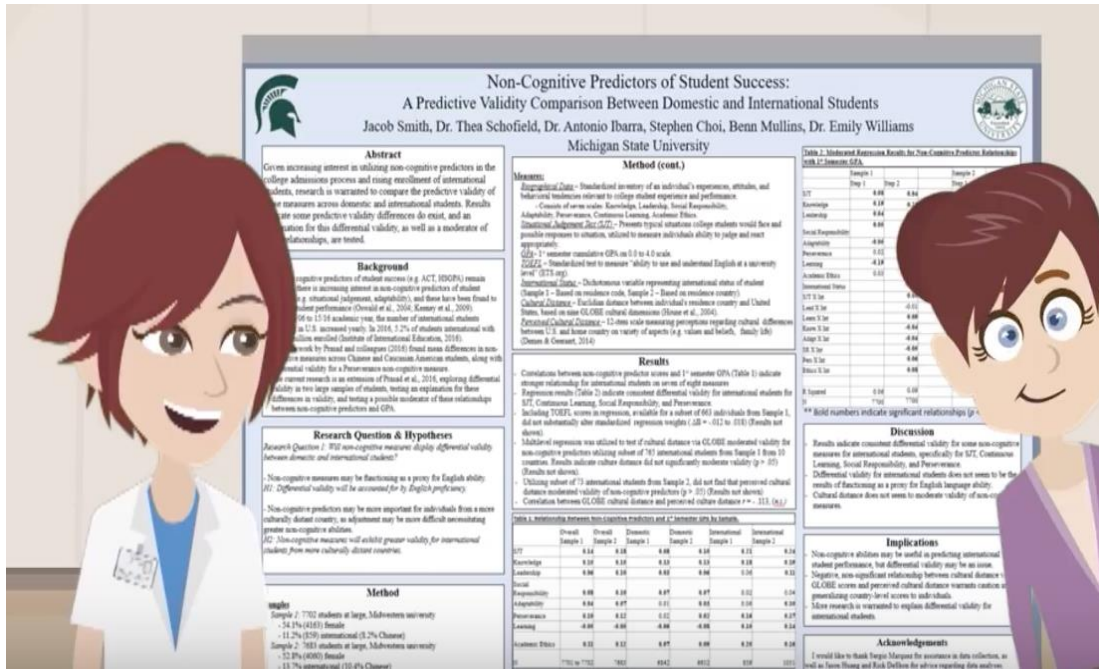| DV	Statement or Items	Condition	M (SD)	p-value
	Study 1			
Sense of urgency	To what extent do you experience a sense of urgency while viewing this product? (1 = Not at all; 7 = Very much)	GIF	3.06 (1.08)	.015
		Static	2.59 (1.03)	
	Study 2			
Sense of urgency	To what extent do you experience a sense of urgency while viewing this ad? (1 = Not at all; 7 = Very much)	GIF	2.97 (1.35)	.048
		Static	2.57 (1.48)	
Anticipated regret	After viewing this ad... -I feel like I would experience regret if I waited and ended up without the reduction. -I would be upset if I missed buying some interesting clothes from Loft. -I feel like if I did not shop at Loft right away, I would regret it later. (1 = Totally disagree; 7 = Totally agree)	GIF	2.78 (1.40)	.062
		Static	2.37 (1.34)	
Impulse buying	Choice option: Shop today on the Loft website and get 50% discount as advertised, or wait until tomorrow and get 60% discount? (reverse-coded; 1 = Shop tomorrow with a 60% discount; 7 = Shop today with a 50% discount)	GIF	2.63 (1.61)	.079
		Static	2.20 (1.45)	
Brand attitude	What do you think of the brand Loft, based on the ads you have just seen? (1 = Bad – Unpleasant – Unfavorable; 7 = Good – Pleasant – Favorable)	GIF	4.84 (1.16)	.092
		Static	4.48 (1.28)	

Study 2 – Serial mediation effect:

The effect of GIF animation on impulse buying is serially mediated by sense of urgency and anticipated regret.

GIF animation → Sense of urgency: 0.42 (0.21) *
Sense of urgency → Anticipated regret: 0.38 (0.04) ***
GIF animation → Anticipated regret: 0.24 (0.18)
Sense of urgency → Impulse buying: 0.08 (0.05)
Anticipated regret → Impulse buying: 0.17 (0.06) **
GIF animation → Impulse buying: 0.33 (0.24)
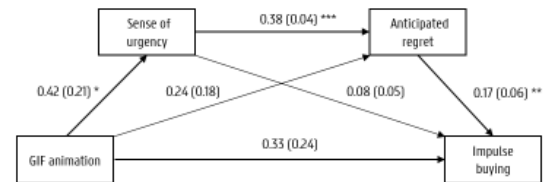
Significant full path of serial indirect effects (95% CI=[0.002; 0221])

ONGOING RESEARCH

- Elements of GIF animation leading to urgency (motion, repetition, or micro story).
- Positive and negative behavioral consequences of using GIF marketing.
- Measuring real impulse buying behavior.

GHENT UNIVERSITY

FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

NETWORK

THIRD FUNCTION

INCREASE INTERACTION!

Only when relevant!

QR-CODE

- https://me-qr.com/

Many more options (image, videos, etc...)

Technology may change cognition without necessarily harming it

Abstract and Research Question

What is the long-term impact of technological advances on cognitive abilities?

We critically examine relevant findings and argue that there is no clear evidence for detrimental lasting effects of digital technology on cognitive abilities. But we also suggest how digital technology may be changing predominant ways of cognition.

Are digital devices making cognition worse?

We challenge two key assumptions about the argument that digital devices worsen cognitive abilities:

(1) Long-term abilities are affected.
(2) Changes are cognitive in nature.

With regards to 1) experimental evidence oft used in support of these claims actually suggests that the demonstrated effects have been temporary, not long-term. In reference to 2) their nature is also unclear; they may be about cognitive processes or about motivational factors that turn on the cognitive processes in the first place.

Consider an oft-cited series of experiments that demonstrated people's tendency to think of and rely on digital technology as a form of external memory.

When participants were presented with hard (vs easy) questions, technology-related words became more mentally accessible. And when participants expected information to later be accessible (vs not accessible) on the computer, they were less likely to remember what its content was, but more likely to remember where it could be found.

These effects were temporary—they emerged when access to digital technology or information stored therein was available, not when access was unavailable.

Want more details on the empirical evidence?
Scan the QR code with your smartphone to see the full article

How digital technology may be changing cognition

By construing cognition as a dynamic interplay between internal processes and external tools, digital technology does not necessarily compete with cognition, but complements it.

Smart devices are external tools specialized in performing tasks that free up mental capacity for other goals. As such, technology changes cognition, and may even improve it.

Box 1 Highlights some of these predicted changes.

Predictions

Box 1 | Predictions about how digital technology may be changing predominant ways of cognition as a dynamic interplay of internal processes and external tools

1. **Complexity:** Digital technology may be increasing the effectiveness (e.g., accuracy) and efficiency (e.g., speed) of performing tasks that are too complex to be handled by internal processes alone (e.g., statistical analyses, data visualization, financial accounting).

2. **Reliance and Skill:** Because of the advantages in #1, people may be (a) increasingly reliant on digital technology for computationally demanding tasks and (b) increasingly skilled at transforming information and enacting the iterative back-and-forth between internal processes and digital technology (e.g., writing code, interpreting results), skills that appear rewarded in the job market.

3. **External access → Freed capacity:** Digital technology may be expanding the scope of where and how people find information (as opposed to remembering the information itself), such as when they use apps that rely on machine learning to offer personalized recommendations based on their past behaviour or when they simply use Google to search for facts and GPS for driving navigation (as opposed to remembering the facts or routes),

thereby freeing up their internal capacity for other cognitive tasks (e.g., intentional mind wandering, creative idea generation, learning new information).

4. **Flexibility:** People may be enjoying more flexibility in choosing what information to process internally (e.g., remembering phone numbers of significant others, remembering future intentions) and what information to rely on a smartphone for (e.g., looking up phone numbers of colleagues, using calendar reminders).

5. **Self-insights and Self-control:** People may be facing an increasing need for (a) self-insights into which cognitive activities they actually want to offload (e.g., for efficiency) and which ones they want to perform themselves (e.g., to train the internal processes they value, to retain information intrinsic to their learning goals) and (b) self-control for guarding against cognitive laziness, which is made all too easy by digital technology thanks to its provision of fingertip access to large amounts of motivationally rewarding information (e.g., reading newsfeed for hours on end).

Article References

1. Sparrow, B., Liu, J. & Wegner, D. M. Science 333, 776–778 (2011).
2. Storkart, C., Mitchum, A. & Wehnert, C. J. Exp. Psychol. Hum. Percept. Perform. 41, 893–897 (2015).
3. Ward, A. F., Duke, K., Gneezy, A. & Bos, M. W. J. Assoc. Consum. Res. 2, 140–154 (2017).
4. Hughes, B. L. & Zaki, J. Trends Cogn. Sci. 19, 62–64 (2015).
5. Meng, H. et al. J. Behav. Addict. 9, 163–174 (2020).
6. Ophir, E., Nass, C. & Wagner, A. D. Proc. Natl. Acad. Sci. USA 106, 15583–15587 (2009).
7. Madore, K. P. et al. Nature 587, 87–91 (2020).
8. Bjerre-Nielsen, A., Andersen, A., Minor, K. & Lassen, D. D. Psychol. Sci. 31, 1351–1362 (2020).
9. Thelen, E. & Smith, L. B. A Dynamic Systems Approach to the Development of Cognition and Action. (MIT Press, 1994).
10. Clark, A. Being There: Putting Brain, Body, and World Together Again. (The MIT Press, 1997).
11. Risko, E. F. & Gilbert, S. J. Trends Cogn. Sci. 20, 676–688 (2016).
12. Núñez Castellar, E., All, A., de Marez, L. & Van Looy, J. Comput. Educ. 85, 123–133 (2015).
13. Miles, E. et al. J. Exp. Psychol. Gen. 145, 1075–1091 (2016).

AI PROMPTS

Credits to Ehab Hamed

Prompt:

•As a scientific editor, produce text for a scientific poster for an imminent academic event. Ensure the content is scientific, clear, and concise. Stick to these guidelines:

•**Context:** *[insert conference focus or theme].*

•**Development Guidelines:** *[insert specific guidelines for the conference abstract].* You can use academic language and cite relevant research as necessary.

•**Example:** *[insert example if provided by the conference]* A top-tier scientific poster typically starts with a clear introduction to the research question, followed by a detailed methodology and significant results.

•**Note:** The task involves distilling complex research insights into a format appropriate for a scientific poster.

•**Start:** Ask for the content to use for the scientific abstract development.

Credits to Eposter: https://eposterslive.com/node/673

- **Prompt to generate possible fonts/color schemes for the poster:**

Generate design ideas for an ePoster on the topic of XXXX. Provide me with a color palette and typography suggestions that would convey the seriousness of the topic while also being visually appealing to a wide audience. Please include at least three different color options and two typography options

- **Prompt: Catchy Titles**

"Generate a catchy title for a research poster about [insert jargon-ridden subject matter here].".

BETTER POSTER TEMPLATES

CREDITS TO Mike Morrison

U-GENT TEMPLATE

- https://styleguide.ugent.be/templates/print.html#poster

- Adjust the template according to the conference's guidelines!
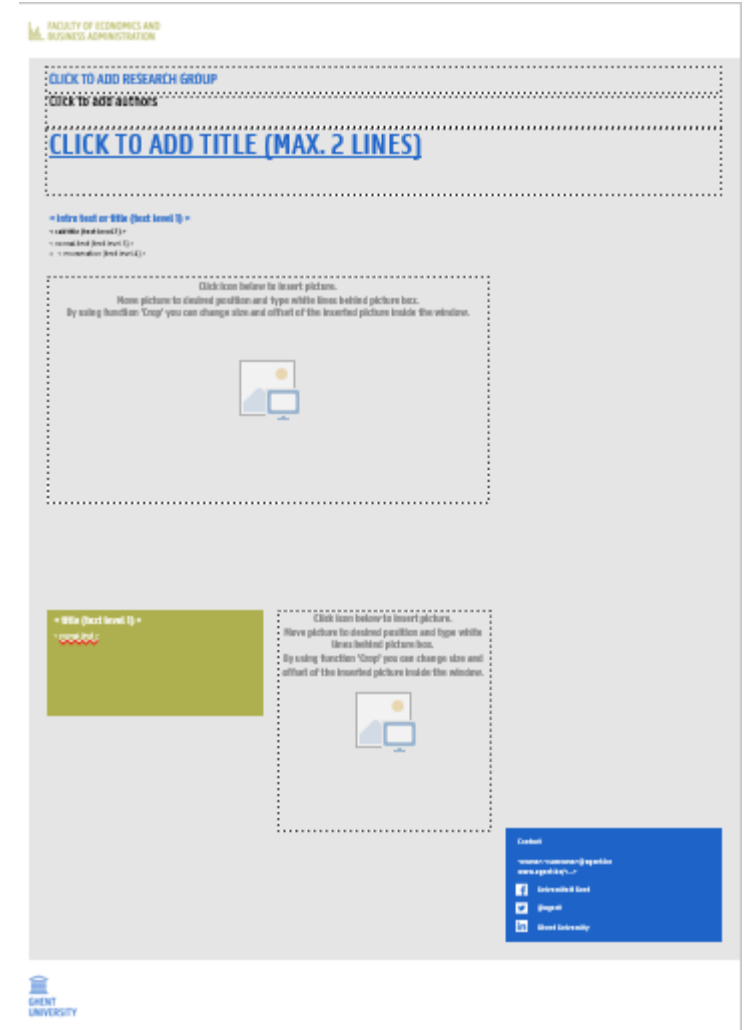
Title:
Subtitle

PRESENTER:
Leeroy Jenkins

BACKGROUND: Who cares? Explain why your study matters in the fastest, most brutal way possible (feel free to add graphics!).

METHODS
1. Collected [what] from [population]
2. Tested it with X process.
3. Illustrate your methods if you can.
4. **Try a flowchart!**

RESULTS
- Graph/table with **essential results only**.
- All the other correlations in the ammo bar.

Main finding goes here, translated into **plain English**. **Emphasize** the important words.

Visualize your findings with an image, graphic, or a key figure.

Take a picture to **download** the **full paper**

Leeroy Jenkins, author2, author3, author4, author5, author6, author7, author42

AMMO BAR

Delete this and replace it with your…
- Extra Graphs
- Extra Correlation tables
- Extra Figures
- Extra nuance that you're worried about leaving out.
- **Keep it messy!** This section is just for you.

UNIVERSITY NORTH STATE

Title:
Subtitle

PRESENTER:
Leeroy Jenkins

BACKGROUND: Who cares? Explain why your study matters in the fastest, most brutal way possible (feel free to add graphics!).

METHODS
1. Collected [what] from [population]
2. Tested it with X process.
3. Illustrate your methods if you can.
4. **Try a flowchart!**

RESULTS
- Graph/table with **essential results only**.
- All the other correlations in the ammo bar.

Main finding goes here, translated into **plain English**. **Emphasize** the important words.

AMMO BAR

Delete this and replace it with your...
- Extra Graphs
- Extra Correlation tables
- Extra Figures
- Extra nuance that you're worried about leaving out.
- **Keep it messy!** This section is just for you.

Leeroy Jenkins, author2, author3, author4, author5, author6, author7, author42

Take a picture to **download** the **full paper**

UNIVERSITY U NORTH STATE

40

Main finding goes here, translated into **plain English**. **Emphasize** the important words.

Title goes here; make it small if you need to free up space.

INTRO
- Just give context for the gap you're filling
- You're not going to get yelled at if you don't cite the 5 papers from 1937 that defined this construct. They'll download your paper if they want that.

METHODS
1. N = ###,
2. Collected this
3. Tested with X statistical test

👤 **Leeroy** Jenkins, author2, author3, author4

RESULTS
- Graph or table with essential results only.
- All the other correlations in the ammo bar.

DISCUSSION
- "If this result actually generalized and I didn't have to humbly disclaim the possibility of a thousand confounds and limitations, it would imply that…."

Keep font size as high above 28 as possible.

AMMO BAR

Delete this and replace it with your…
- Extra Graphs
- Extra Correlation tables
- Extra Figures
- Extra nuance that you're worried about leaving out.
- **Keep it messy!** This section is just for you.

Take a picture to download the full paper ▶

SOURCES

CONSULTED SOURCES

- Asper, N. (2010). Instructions for poster presentations. Retrieved 1 June, 2011, from http://www.tcnj.edu/~asper/posterrules.html

- Colorado State University (2010). *Poster Design Tips and Techniques.* Consulted on 19/04/2022 via: https://extension.colostate.edu/docs/staffres/poster.pdf

- Enago (2019). *Most Effective Tips When Presenting Your Scientific Poster*, Consulted on 19/04/2022 via: https://www.enago.com/academy/wp-content/uploads/2019/06/ScientificPosters2_changes.pdf

- Gundogan, B., Koshy, K., Kurar, L., & Whitehurst, K. (2016). How to make an academic poster. *Annals of medicine and surgery, 11*, 69-71.

- Stuckey, M., & Hoyer, T. (2022). *How to make an effective poster.* Consulted on 19/04/2022 via: https://urc.ucdavis.edu/sites/g/files/dgvnsk3561/files/local_resources/documents/pdf_documents/How_To_Make_an_Effective_Poster2.pdf

- Tulpesh, P. (2014). Creating an Academic poster. Consulted on 19/04/2022 via: https://prezi.com/pcovkdvojahz/creating-an-academic-poster/