


# Research Poster Competition 2022



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**USING NORMATIVE  
INFORMATION TO PROMOTE  
SUSTAINABLE BEHAVIOUR**

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### 1. Background

- Livestock contribute to 14.9% of human-caused greenhouse gas emissions<sup>1</sup>
- Limiting meat eating largely modifies behaviour
- Evidence for efficacy of normative information about meat is missing (related to a “dynamic”) intensity norm?<sup>2</sup>

*Question: Does dynamic norm information lead to more positive attitudes, intentions, it is used, and/or intentions to limit own meat consumption?*



### 2. Study 1: Direct replication<sup>3,4</sup>

**Sample**  
N = 840, M<sub>age</sub> = 37.21, SD<sub>age</sub> = 13.95, M, 50% female

**Conditions**

Dynamic norm (n = 270)	Static norm (n = 304)	No norm (n = 266)
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Example (dynamic norm):  
“Recent research has shown that, in the last 3 years, 50% of people in the UK have now started to make an effort to limit their meat consumption. That means that, in recent years, 3 in 10 people in the UK have begun to eat less meat than they otherwise would. Why do you think this is?”

**Meat consumption outcomes (1 - 7)**

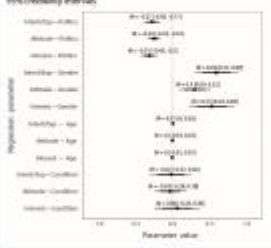
Interest	Attitudes	Intentions/Expectations
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**Demographic information**

Age	Gender (1 = Male, 2 = Female)	Political position (1 = Left to 7 = Right)
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**Confirmatory results**  
Effect of dynamic norm (vs static norm) on interest in reducing meat consumption:  
Beta = -0.09, 95% CI [-0.14, -0.03], KRAB = -0.21, p = 0.021, d = -0.02, R<sub>change</sub> = 0.18, PR [0.05, 0]

**Exploratory results**  
Figure 1. Posterior distributions of regression parameters with means and 95% credibility intervals.



### 3. Study 2: Increasing percentage

**Sample**  
N = 711, M<sub>age</sub> = 24.35, SD<sub>age</sub> = 11.95, 65.50% female

**Conditions**

Dynamic norm (n = 225)	Static norm (n = 241)	No norm (n = 245)
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Example (dynamic norm):  
“Research from early 2020 has found that 40% of British people – an increase from 27% in 2019 – engage in one or more of the following behaviours:  
– Eating small portions of meat  
– Opting out of eating meat several days of the week  
– Adopting a vegan/vegetarian diet”

**Meat consumption outcomes (0 - 100%)**

Interest	Attitudes	Intentions	Expectations
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**Confirmatory results**

Regression path (=Condition)	B	SE	p	R <sub>change</sub> [95%]
Interest	-0.08	0.08	.283	0.15, [0.02, 0.1]
Attitude	-2.38	2.52	.313	0.25, [0.03, 0.15]
Intention	-0.11	0.08	.286	0.15, [0.02, 0.1]
Expectation	0.40	2.68	.003	0.14, [0.03, 0.11]

Notes: B = Bayesian mean; SE = standard error; R<sub>change</sub> = change in R<sup>2</sup> from 1 = dynamic; 2 = static; 3 = comparison on mean/credibility of outcome. Substantive regression model for reduced meat = 0.13 up to 1.1.

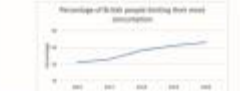
### 4. Study 3: Using visual cues

**Sample**  
N = 808, M<sub>age</sub> = 30.04, SD<sub>age</sub> = 13.85, 53.48% female

**Conditions**

Dynamic norm (n = 435)	Static norm (n = 400)
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Example (dynamic norm):  
“In 2020, 53% of British people – a figure increasing over time over the previous 5 years – successfully engage in one or more of the following behaviours:  
– Eating small portions of meat  
– Opting out of eating meat several days of the week  
– Adopting a vegan/vegetarian diet”

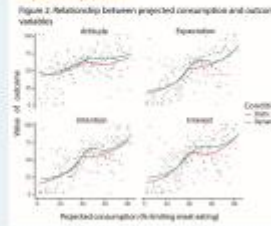


**Confirmatory results**

Regression path (=Condition)	B	SE	p	R <sub>change</sub> [95%]
Interest	4.15	4.28	.069	3.08, [0.005, 1.5]
Attitude	3.62	1.88	.034	4.81, [0.04, 1.5]
Intention/Expectations	0.22	2.16	.076	0.08, [0.03, 0.14]

Notes: B = Bayesian mean; SE = standard error; R<sub>change</sub> = change in R<sup>2</sup> from 1 = dynamic; 2 = static; 3 = comparison on mean/credibility of outcome. Substantive regression model for reduced meat = 0.19 up to 1.1.

**Exploratory results**  
Figure 2. Relationship between projected consumption and outcome variables.



**HIGHLIGHTS**

- Evidence suggests dynamic norm information more effective on meat consumption outcomes, in comparison with static norm cues.
- Evidence of the tendency norm positively associated with all outcomes.
- Exploratory research suggests that gender and political position are associated with the outcomes.

**References**

- 1. Sparks, P., Stead, M., Beal, S., Higgs, S., Sparks, P., Sparks, P., & Sparks, P. (2012). The Meat/Meat/Meat Through Livestock: A global assessment of livestock and aquaculture systems on food and agriculture. *Food and Agriculture Organization of the United Nations*.
- 2. Sparks, P., Aldoh, A., & Harris, P. (2021). Dynamic Norms: Research Sustainable Behaviour Over 10000 Consumers. *Psychological Science*, 32(1), 100-110.
- 3. Sparks, P., Aldoh, A., & Harris, P. (2021). Dynamic Norms: Research Sustainable Behaviour Over 10000 Consumers. *Psychological Science*, 32(1), 100-110.
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Using dynamic norms to influence sustainable behaviour - Alaa Aldoh (School of Psychology)

# INVESTIGATING DOGS' PERCEPTIONS OF DISEMBODED TECHNOLOGY



Alice Torjussen  
Animal-Computer Interaction Lab

## What is ACI?

Animal-Computer Interaction (ACI) follows a user-centred design approach to designing technology for animals. It aims to develop technology that can better support animals' general wellbeing and daily activities.

## Background

Technologies that facilitate human-dog remote interaction offer a variety of functions:

- Voice
- Live audio
- Live video
- Treat dispensing
- Not at eye-level
- No eye-contact
- No body language
- No scent

However, social interactions via these devices are often not representative of traditional human-dog interactions as they are unimodal and lack realism. Importantly, dogs have consistently shown a decrease in performance when communicative cues have been systematically reduced to a singular modality (i.e. verbal cues without eye contact or gestures) or issued via an artificial agent or machine [1, 2, 3].

## Introduction

Have you ever spoken to your dog over Skype or Facetime? Recently, companies have developed novel technologies to facilitate remote human-dog communication (e.g. Furbo or PetCube - below).



These systems allow owners to watch, treat, and interact with their dogs remotely. While this may provide satisfaction and value for the human user, it remains unknown whether the canine users experience these social interactions in a similar way.



- RQ1: How do dogs respond to remote interactions with humans? How much social value do they get from these interactions?
- RQ2: How might this affect the design of future remote interaction technology?

>\$500 Million  
invested into pet tech startups last year

34% of the UK have a pet dog



## Study 1: The importance of eye-contact

This study examines the extent to which attention (eye contact), is important for obedience and communication. Specifically, does being distracted (e.g. texting) influence dogs' obedience when they're told to sit or lie down?



### 1 PILOT STUDY

We ran a pilot version of the study to test our methodology and to test our research. We also looked for other uncontrolled variables to control in the main study.



### 2 MAIN STUDY

10 participants were given 6 conditions (control, holding a phone, texting, holding a book, reading, using guitar). All participants saw their dog perform the commands in a random order. They gave their dog two different commands, "sit" and "down", again in a random order. Each behaviour was repeated 2 times per condition.



### 3 ANALYSIS

Following a method developed by Pulcrone, Mills & Cooper (2009) [1], we analysed the data using a 0-4 scale for each 0 = no response and 4 = immediate response.

We found that dogs performed significantly worse in the conditions without eye contact (texting & using guitar for "sit" and texting, read & using guitar for "down"). This shows that eye contact is crucial when communicating with dogs.

## Study 2: Reactions to interactive pet cameras



This mixed-methods study collected anecdotal evidence of owners' motivations, perceptions, and experiences of remote interactions with their dogs. There were 3 parts to this study:

- 1) Web-scraping and analysis of Tweets and Amazon reviews
- 2) Interviews with 15 owners who use these devices
- 3) Expert consultation to generate alternative paths to design

"I try not to upset them too much as I wouldn't want her to think none is there but actually she's not"

"You do see, you do see my dog, but my dog is a bundle of 4"

"Totally the value is for me - it just seemed up there we got a lot more for our money because really it was a great price for all"

We found a mismatch between owners' interpretation of impact early on after the purchase (i.e. novelty effect) versus long-term impact and sense-making as, in some cases, the perceived value and function of remote interactions for dogs may be divergent from the dogs' actual experience. Our findings illustrate a need to more critically evaluate the design and use of multi-species systems and we suggest alternative paths to design for future iterations of remote human-pet interaction devices.

References:  
[1] Pulcrone, M., Mills, D.S. and Cooper, J.J., 2009. More than just a word: communication and the challenge to the domestic dog. *Current Directions in Psychological Science*, 18(1), pp.129-132.  
[2] Pulcrone, M., Mills, D.S. and Cooper, J.J., 2009. The effect of human communication on the domestic dog. *Current Directions in Psychological Science*, 18(1), pp.129-132.  
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Investigating Dogs' Perceptions of Disembodied Technology - Alice Torjussen (School of Engineering and Informatics)

# ACCESS TO SERVICES FOR PERINATAL OCD



Intrusive thoughts are common in the population, however form the basis for obsessive-compulsive disorder. The perinatal period can make parents vulnerable to experiencing mental health problems [1]. However, perinatal obsessive-compulsive disorder (POCD) is **under-recognised** and **under-diagnosed** [2], despite effective treatments being known [3]. It's important for us to understand the experiences of those who have and haven't used services in order to increase access.

## AIMS

To develop a nuanced understanding of the experiences of those who **self-identify** as having experienced POCD, including identifying any **barriers and facilitators** to accessing psychological support in the South East of England. This includes aiming to understand **how individuals recognised symptoms**, if they accessed support and whether they were **satisfied** with their treatment.



## CO-PRODUCTION

**Five experts by experience (EBEs)** have been involved throughout the study, through group and 1-1 meetings as well as through emails. EBEs have been involved in the following:

- **Co-creation of all participant facing materials** including, the recruitment poster, topic guide, signposting document and PIS.
- One EBE became the **recruitment lead** and ran the social media accounts.
- Three EBEs have been **trained** to conduct interviews.
- EBEs will also be trained and involved in the **thematic analysis** and dissemination of results.



## DESIGN

Semi-structured interviews are being conducted by the PI and **three EBEs**. **10-25** individuals who self-identify as having experienced POCD, or are close to someone who has, will be sampled.

The whole time I was asking for that help, I was like blaming myself thinking, this is just me not coping with the anxieties of pregnancy and every woman feels like this, but they've got better coping mechanisms

## APPROACH

The NIHR INVOLVE co-production guidelines are used including their principles of **sharing power and respecting others' knowledge**. **Flexibility** is a key feature of the approach taken. **Ways of working** were decided among the co-production group. The approach values EBE's knowledge and perspectives, in order to move away from the "us vs them" and "unwell patient" discourse. As a result, **remuneration** for all EBE time is important.

I feel like [my child's] babyhood and early years have been snatched from us

It was almost like if you haven't got perinatal depression, then what do we do?

## OUTCOMES

Currently, we are still recruiting and conducting interviews as informational power has not been reached. As POCD is under-recognised, this is a **hard-to-reach** group so **recruitment has been challenging**.

It has been **exciting** to working with the EBEs, as they have developed the project by providing **invaluable insights** and furthered the PI's understanding of POCD. This study will contribute to the research field as there is **limited research** on POCD, and no study has identified barriers and facilitators to accessing services. The results from this study will be used to **co-produce a toolbox** for future services with healthcare professionals and EBEs.




Created by Alice Tunks. Supervised by Dr Liz Ford, Dr Clío Berry and Dr Clara Strauss

[1] Ferraz, A., Theodorou, M., Thomas, B., McDougall, C. J., & Cipriani, C. N. (2018). Origin and manifestations of obsessive-compulsive disorder in pregnancy and the postpartum period. *The Journal of clinical psychology, 74*(8), 1303.  
[2] Sharma, V., & Macrae, D. (2011). Are we overlooking obstetric compulsive disorder during and after pregnancy? Some arguments for a perinatal onset specifier. *Archives of Women's Mental Health, 2*(1), 145-158.  
[3] Chalcraft, T. J., & Salkovskis, P. M. (2011). Internet cognitive-behavioural treatment for women with perinatal obsessive-compulsive disorder: a randomised controlled trial. *Behaviour research and therapy, 49*(6-7), 422-430.

Access to services for perinatal OCD - Alice Tunks (Brighton & Sussex Medical School)

# DISMANTLING NGO ACCOUNTABILITY: A DIALOGUE WITH THE BENEFICIARIES

Perhaps the most important aspect of social reform is the human rights approach in the enactment of policies in the accountability of development actors and policy makers whose actions focus on respect for the rights of people. Rights, high ability, and values demand accountability. (Sri High Commissioner for Human Rights)



### INTRODUCTION

NGOs are complex organizations with multiple stakeholders groups with different interests and power. NGOs are human made and are prone to corruption. In the context of NGOs, such as charity, transparency and accountability over the board level are necessary. In this paper, NGOs accountability and transparency management and practice of a development organization is discussed. This study is using a dialogic approach.

### OBJECTIVE

From the beneficiaries, an NGO board member group demand for accountability and have raised their practice a rebuilding of the traditional NGO accountability to a new that accounts for participation.

### RELATED LITERATURE

Past studies (e.g., Agambone et al., 2019; F. Dora & Ibrahim, 2018; O'Leary, 2017) perceive NGO accountability to the beneficiaries as a "feature" to be done in accountability. "Without finding ways to re-examine practice" (Koushanfar & Wolkstein, 2011, p. 619)

### RESEARCH QUESTIONS

- How do NGO accountability issues and sustain the support beneficiaries' rights of development?
- How do NGOs can be engaged in maintaining the trust issues of NGO accountability?

### METHODOLOGY

The qualitative research is conducted in a dialogic approach that involves active participation of the beneficiaries.

Using a dialogic approach, the research is conducted through:

- Interviews
- Focus groups
- Document analysis

As a theoretical approach, this research is based on dialogic approach and participatory action research. The data is analyzed through thematic analysis and content analysis.

### PRELIMINARY ANALYSIS

Interview by Stakeholder Theory data were analyzed, coded and organized into 4 stages:

1. Data collection: The data is collected from the beneficiaries through interviews and focus groups.
2. Data analysis: The data is analyzed through thematic analysis and content analysis.
3. Data interpretation: The data is interpreted through dialogic approach and participatory action research.
4. Data presentation: The data is presented through a report and a presentation.

### CONCLUSION

The research finds that NGOs are not always transparent and accountable. The research also finds that NGOs are not always engaged in maintaining the trust issues of NGO accountability. The research also finds that NGOs are not always engaged in maintaining the trust issues of NGO accountability.

**Dismantling NGO Accountability: A Dialogue with the Beneficiaries - Amanda Acintya (Sussex Business School)**

# DISGUISED CULTURAL APPROPRIATION AS APPRECIATION: THE CASE OF PERUVIAN ELITE CHEFS

Created by Belinda Zakrzewska, supervised by Dr. Michael Beverford and Dr. Stephen Manning  
Business School, University of Sussex

### INTRODUCTION

- Authenticity has become an important idea that recently for chefs who claim authenticity for their restaurant based on their own and traditional ways of how to cook and ingredients (Lentini, 2017).
- The new foodies culture is a movement by chefs that value their own authenticity in their restaurants and cultural heritage (Lentini, 2017).
- Recent academic studies have identified authenticity (Lentini, 2017) as a form of social capital (Lentini, 2017).
- Despite the importance of authenticity, the topic of authenticity through the restaurant industry is still under-researched.

### FINDINGS

Process model of cultural appropriation/appreciation:

Cultural Appropriation	Appreciation	Appropriation	Appreciation
Defining	Proving historical cultural elements that were not recognized or valued.	Adopting historical cultural elements to the present.	Using the historical cultural elements to create a new identity.
Who	By the chef, the chef's family, or the chef's restaurant.	By the chef, the chef's family, or the chef's restaurant.	By the chef, the chef's family, or the chef's restaurant.
Means through	Researching about the history of the cultural elements and their significance.	Researching about the history of the cultural elements and their significance.	Researching about the history of the cultural elements and their significance.
Cultural Appropriation	Researching about the history of the cultural elements and their significance.	Researching about the history of the cultural elements and their significance.	Researching about the history of the cultural elements and their significance.
Appreciation	Researching about the history of the cultural elements and their significance.	Researching about the history of the cultural elements and their significance.	Researching about the history of the cultural elements and their significance.

### CONCLUSION

The study of authenticity is a complex and multi-faceted issue. The study of authenticity is a complex and multi-faceted issue. The study of authenticity is a complex and multi-faceted issue.

### METHODOLOGY

1. Semi-structured interviews

2. Secondary data

3. Analysis

### REFERENCES

1. Giddens, J. (2017). The importance of authenticity in the restaurant industry. *Journal of Culinary Education and Research*, 10(1), 1-10.
2. Lentini, B. (2017). Authenticity in the restaurant industry: A conceptual framework. *Journal of Culinary Education and Research*, 10(1), 1-10.
3. Lentini, B. (2017). Authenticity in the restaurant industry: A conceptual framework. *Journal of Culinary Education and Research*, 10(1), 1-10.
4. Lentini, B. (2017). Authenticity in the restaurant industry: A conceptual framework. *Journal of Culinary Education and Research*, 10(1), 1-10.

**Disguising cultural appropriation as appreciation: The case of Peruvian elite chefs - Belinda Zakrzewska (Sussex Business School)**

# DEVELOPMENT OF A PSYCHOLOGICAL INTERVENTION FOR PRIMARY SCHOOL ATTENDANCE PROBLEMS

CO-DESIGN WORKSHOPS WITH PARENT AND EDUCATIONAL PROFESSIONALS

## INTRODUCTION

Covid-19 pandemic has caused widespread disruptions to education and this has been particularly difficult for children with emotional difficulties including emotionally based school avoidance (EBSA).

The onset of EBSA is likely to occur in primary school [1] and, although the importance of early intervention has been evidence in mitigating the negative outcomes, there is yet to be a focus on support for primary school-aged children in the UK [2].

This study aims to develop a new intervention specifically for families affected by EBSA, taking into account the evolving Covid-19 context.

## LITERATURE

- [1] Clark, P., Cohen, J.A., Ghaffar, J., & Manning, G. (2017) A systematic review of psychological interventions for children and young people with emotional and behavioural difficulties. *Journal of Child Psychology and Psychiatry*, 58, 992-1004.
- [2] Galloway, J., Smith, L., & Hetherington, L. (2019) The impact of COVID-19 on children and young people with emotional and behavioural difficulties. *Journal of Child Psychology and Psychiatry*, 60, 1000-1004.
- [3] Hetherington, L., & Galloway, J. (2020) A Review of Evidence-Based Interventions for Children and Young People with Emotional and Behavioural Difficulties. *Journal of Child Psychology and Psychiatry*, 61, 1-15.
- [4] Hetherington, L., Galloway, J., & Hetherington, L. (2020) The impact of COVID-19 on children and young people with emotional and behavioural difficulties. *Journal of Child Psychology and Psychiatry*, 61, 1-15.

## OBJECTIVE



## METHODS

Co-Design workshops



## RESULTS



## CONCLUSION

Feedback from stakeholders was consistent with an applied ecological systems model of EBSA (e.g. Mair et al., 2018), highlighting relevant risk and protective factors across environmental, family and individual child domains. In particular, stakeholders wanted strategies to improve parent-school communication, and better understand statutory requirements around attendance. Strategies were also recommended to help parents effectively respond to a child's anxiety/distress about school through cognitive-behavioural techniques.

In terms of the wider process, stakeholders called for the need for knowledgeable and knowledgeable facilitators with capacity for parents to deliver group-based peer support. Additionally, stakeholders advocated for an online delivery that is accessible and manageable with additional supportive resources such as a website and/or workbook. Also, value was given to providing the intervention at the early stages of EBSA.

Next steps will be to consider to create an intervention blueprint and materials, with continued co-design. This can be followed.

Development of a psychological intervention for primary school attendance problems: codesign workshops with parent and educational professionals - Brontë McDonald (School of Psychology)

# Intrinsic decision biases are under cognitive control

Clémence Compain<sup>1,2</sup>, Anil K. Seth<sup>1,2</sup>, Maxine Sherman<sup>1,2</sup>

<sup>1</sup>Sackler Centre for Consciousness Science, University of Sussex, Brighton, UK  
<sup>2</sup>School of Informatics and Engineering, University of Sussex, Brighton, UK



## Introduction

People generally exhibit intrinsic decision biases when they are asked to make a forced choice<sup>1,2</sup>.

Can people control their biases once they are informed of them?

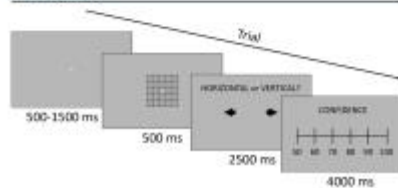
Does the knowledge of such bias and the cognitive effort to control it improve metacognition (the ability to evaluate our own performance)?

We predicted that people successfully controlling their bias will decrease it without decreasing their performance. However, people adopting a trivial response strategy to decrease their bias will have their performance decrease as well.

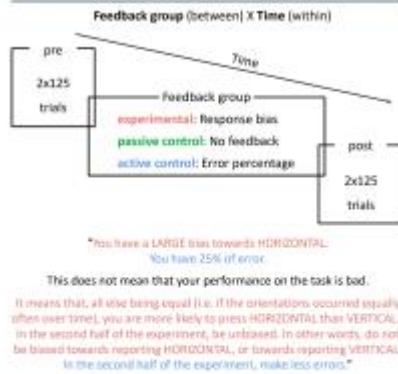
## Methods

Fully pre-registered: 10.17605/OSF.IO/PMBDJ  
 N = 115 participants, 69 used in analyses

## Procedure



## Design



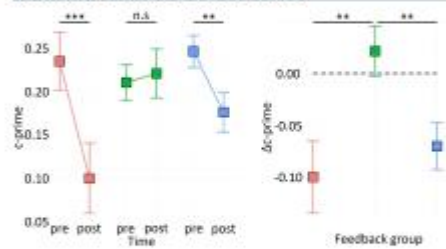
## Analyses

- Type 1 judgment:**
- Discrimination performance:  $d'$  prime
  - Decision bias:  $c$ -prime (criterion/ $d'$ -prime)
- Type 2 judgment:**
- Confidence
  - Metacognitive efficiency:  $m$ -ratio (Meta- $d'$ / $d'$ )<sup>3</sup>

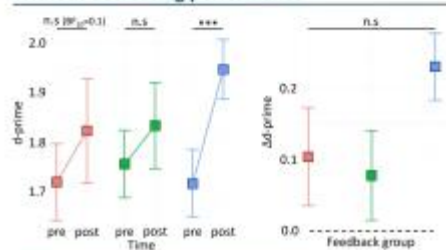
Contact: c.compain@sussex.ac.uk, www.sussex.ac.uk/sackler  
 Acknowledgements: This work was supported by the Leverhulme Trust

## Results

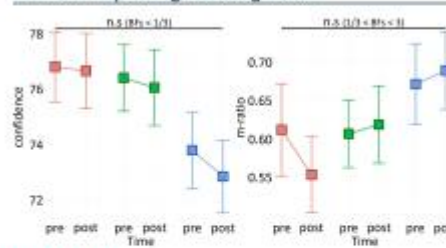
### Feedback reduces decision biases



### Without decreasing performance



### Without improving metacognition



## Conclusion

Participants were able to control their intrinsic decision biases once they were informed of them. No significant decrease of accuracy was found, so participants did not adopt a trivial response strategy. But asking them to try harder (active control) worked just as well. The decrease of biases happened regardless of how well they were able to infer their decision accuracy (confidence). However, we cannot determine whether  $m$ -ratio changed or not.

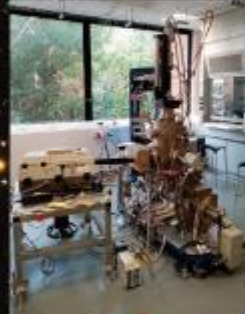
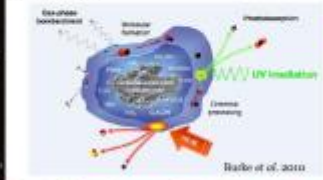
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Intrinsic decision biases are under cognitive control - Clémence Compain (School of Engineering and Informatics)

Introduction

The interstellar medium (ISM) consists of approximately 90% molecular gas and 1% dust grains. At the cold temperatures and low pressures of space, molecules condense onto dust grains to form ice. Interstellar ices experience various forms of processing, such as thermal and UV/energetic particle irradiation, which cause chemical reactions on the grains. These surface reactions contribute to the rich chemistry of space.



Experimental

- Setup**
- Ultra high vacuum (UHV) chamber
  - Base temperature = 20 K
  - Highly oriented pyrolytic graphite (HOPG) surface
- Experiments**
- Temperature programmed desorption (TPD)
  - Used to monitor the rate at which molecules come off the surface (desorption) as the ice is heated

$$r_{\text{des}} = \frac{dN}{dt} = A N^* \exp\left(\frac{-E_{\text{des}}}{RT}\right)$$

Why are molecules interesting?

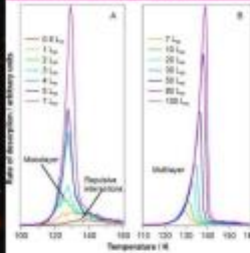
Which molecules are of interest to astrochemists?  
All of them! Currently over 200 have been detected in space.

Why do we study H<sub>2</sub>O and CH<sub>3</sub>CN?

H<sub>2</sub>O is the most abundant component of interstellar ice meaning that if you find an ice in space – it probably has some H<sub>2</sub>O in it!  
H<sub>2</sub>O is crucial for the existence of life as we know it, while molecules such as CH<sub>3</sub>CN play an important role in the formation of amino acids. Studying interstellar molecular ices will not only provide information regarding how life came to be on Earth, but will also give us an idea of what life might exist in space!

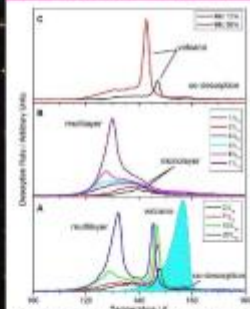


TPD of Pure CH<sub>3</sub>CN Ice



Single component ices are unlikely to be observed in space, however, it's important to first characterize their behaviour to understand more complex systems. A shows the thinnest layers of CH<sub>3</sub>CN have high desorption temperatures, similar to the thick layers in B – this means it takes a relatively large amount of energy to kick the molecules off the surface.

TPD of CH<sub>3</sub>CN – H<sub>2</sub>O Ices



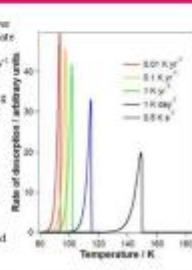
A and C: H<sub>2</sub>O traps CH<sub>3</sub>CN in the pores leading to very different desorption behaviour.  
B: Crystalline H<sub>2</sub>O has no pores and so CH<sub>3</sub>CN desorbs from the surface just like on HOPG.

Astrophysical Simulation

Astrophysical heating rates are much slower than in the laboratory so we need to simulate the processes more accurately.

• Typical heating rate in space: 1 K century<sup>-1</sup>  
Desorption of CH<sub>3</sub>CN was simulated with astrophysically relevant heating rates using the Polanyi-Wigner equation<sup>1</sup> and energy values calculated from the TPD data.

What do the simulations show?  
• Desorption peak temperature decreases with decreasing heating rate.  
• Desorption temperatures determined by the simulation are crucial for modelling star and planet formation.  
• Laboratory experiments are extremely important as this data cannot be obtained without them!



Summary and Future Work

- Summary**
- Characterised the desorption behavior of pure CH<sub>3</sub>CN ice.
  - H<sub>2</sub>O significantly impacts the desorption of CH<sub>3</sub>CN – studying this gives us a better idea of how multi-component interstellar ices behave.
  - Astrophysical simulation of CH<sub>3</sub>CN desorption shows desorption temperature decreases with decreasing heating rate – this data is crucial for modelling star and planet formation!
- Future Work**
- Investigate the desorption behavior of other organic molecules with H<sub>2</sub>O.

Acknowledgements

The author would like to acknowledge the EPSRC and the University of Sussex for funding. Jack E. Fuller is acknowledged for help with the RAIR spectrum for layered CH<sub>3</sub>CN/H<sub>2</sub>O ice.  
1. B. T. Denison, *Ann. Rev. Astron. Astrophys.*, 2003, 41, 241–289.  
2. D. J. Baiko and M. A. Brown, *Phys. Chem. Chem. Phys.*, 2006, 12, 2947.

# The social representation of climate activist identity: a discursive analysis of MailOnline comments



Harry Lewis  
&  
Vivian L Vignoles

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## INTRODUCTION

- Movements such as climate activists have a greater social, political and institutional influence if they are supported by the public
- Evidence suggests that such support is, in part, an expression of group membership and associated intergroup conflict [1]
- Therefore understanding how climate activists are perceived through the lens of group membership is an important area of investigation
- One factor that influences public perceptions of an issue is media coverage. This research focuses on audience interaction with such media coverage through the lenses of social representation theory and the social identity approach [2]



## OBJECTIVE

- This study aimed to shed light on the social representation of climate activist identity in the comments section of a major online newspaper (MailOnline). The following question is addressed:



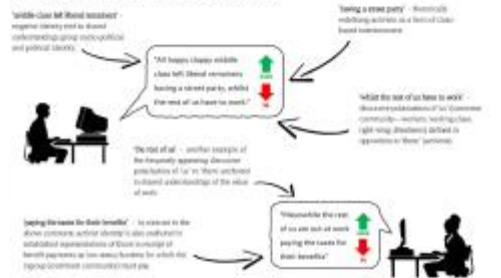
## METHODOLOGY

- Google search function was used to retrieve all MailOnline articles containing search terms relating to climate activists and climate activism published during 2019
- Using data about the number of comments and number of shares as a measure of reader engagement, the corpus was cut from 725 articles down to 38 articles. These had been shared a total of 607,808 times and contained 110,462 comments
- In order to reduce this, only the top 5 most upvoted (community approved) and top 5 most downvoted (community disapproved) comments from the 38 articles were retained, along with the most upvoted and most downvoted reply to these comments. 638 comments were kept for analysis
- Comments were analysed using a discursively oriented thematic analysis [2] informed by insights from social representations theory and the social identity approach

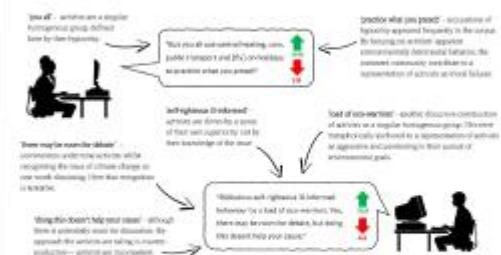
## ANALYSIS



**Activist identity is 'anchored' (tied) to shared understandings of group identity existing outside of the context of activism, such as the socio-political and socio-demographic characteristics of the activist:**



**Negative constructions of activist identity were also 'objectified' (given colour) in ways that represented activists as immoral and incompetent:**



## CONCLUSION

Climate activists are delegitimised by representing them as an outgroup fundamentally different from the MailOnline comment community (ingroup). This is achieved by anchoring activist identity in shared representations of socio-political and socio-demographic categories portraying activists either as middle-class, left-wing, privileged, and anti-Brexit, or as low-income and of little societal value. This characterization is identified in ways that represent activists as both immoral and incompetent. Further analysis revealed that comments depicting these portrayals of activists were extensively downvoted and received abusive or retaliatory responses.

**Relevant literature**

[1] Biles, A. H., McGary, C., Thomas, E. F., Lutz, G., Wenzlow, M., & Maguire, R. (2019). Public opinion about climate change: a test for conflicting socio-cultural identities. *Nature Climate Change*, 9(2), 159-168.

[2] Reicher, G. M. (1984). Social representations and social identity theory. *Social Representations*, 2(1), 199-217.

[3] Shook, V. & Clark, V. (2007). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 4(2), 75-99.

The social representation of climate activist identity: a discursive analysis of MailOnline comments  
- Harry Lewis (School of Psychology)



# The Network A Priori: Mapping New Constellations of Reason Under Conditions of Computational Capitalism

"Network ideology always poses the idea that you can become the master of the network"  
 (F. Schlegel 2001, personal communication, 2 November)

## Introduction

This theme begins by querying an inscription dated postwarly to historian Hal Ferguson who asked whether "to a better today to be a network, which opens up differences, than to a hierarchy, which gives positions?" (2017). By its very construction, this question asks the way in which network thinking has been constructed as an alternative to previously "hierarchical" modes of thinking, but also and perhaps more strongly, as a more capacious and emancipatory means of investigation. Indeed, from society to biology, technology to economy, attempts to grasp the properties and structure of complex phenomena through the sciences of networks has become a defining feature of scientific, discursive and technoscientific practice in the 21st century opening up a new horizon of thought and action predicated on the notion that networks are everywhere.

"Networks, it seems, are everywhere today. In the last week of 2017, the New York Times ran 130 stories in which the word 'network' appeared...not once a friend of the stories were about television networks, Twitter reports about corporate networks and its fan about various kinds of political networks, but these were also stories about transport networks, financial networks, neural networks, health care networks...not to mention social, ethnographic, criminal, intelligence, security and emergency networks. To read all this is to be struck by a word, so the cliché has it, where everything is connected" (Ferguson 2017).

Engaged with its own methods, tools, and metrics, network science is a highly formalized articulation of the type of "relational thinking" that has found its broader use and deployment within working organizations and the technical control systems of a machine-mediated world of data. But it is not just a technical endeavor; network science also involves ideological claims about network ideology, network categories, and network methods as a means to seek truth. However, by its nature a purely scientific concern, today's network science increasingly takes on the affective and digitally mediated social context an internet-dependent laboratory that, in this computerized and digital, represents everything that science has uncovered before" (Barabási 2016).

Inscribed within the framework of a Critical Theory of networks, this thesis begins to interrogate Critical Theory's role in dialoguing with the advances of network science. In particular, it turns over the Frankfurt School's critique of authoritarianism, hierarchy, and the notion that reason manifests in distinct historical formations, which, on the one hand, might be considered to emerge from the very act of the other, they issue into "socially defined" formations. Indeed, the idea that unlike conditions of computational capitalism's network itself is subject to stable systems of statistical, algorithmic, and other calculative forms of thinking has become an increasing concern amongst those of the digital, with figures such as Shoshana Zuboff drawing explicit attention to the re-materialization of network science in its contemporary data practices and political polarization. (2017) Drawing on an archive of internet data, I aim to extend these discussions in light of Herbert Marcuse's notion of a "technological a priori" a concept with which he associated to these to be the working together of science, capitalism, and technology as a reified projection of society as an object of technical control.

"The digital to which this connection becomes applicable and effective is itself, therefore, to be approached as a hypothetical system of formal relations, the metaphysical being of such 'given' goals to be investigated." (Marcuse, 1964) as it effectively, this concept works as an a priori - a conditionless experience, I complete the function of the re-materialization of reason, it represents the whole" (Marcuse 2007).



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 Supervisors: David M. Berry & Denise Schneider

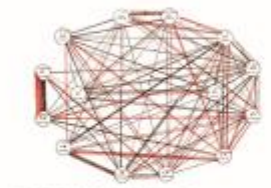
While inevitably present, the first generation of a data-theoretic did not, however, anticipate the rise of a global information society one where re-materialization rather than re-materialization would take center. In light of this structural transformation, I attempt to critically re-materialize certain key moments in the Frankfurt School's critique of reason, with the aim to develop an account of what I call "the network a priori" as a category in today's historical constellation of intelligibility, and one which I aim to show has opened up a new horizon of history, social, economic, biological, and political predicated on the mathematical formalization of the study of "relations." As such, I do not search network science as if it were a product of "dark matter," but instead locate it where it has been, that is, one which contains the only available relations between technical system and the material and cognitive formations associated with them. To this end, I am currently producing two case studies.

## Case Studies

Drawing on a corpus of open education's activities undertaken with its network scientific and technical media, I present a series of 17000 words of internet data collected over 22 hours, the following case studies extend aspects of reflexive critical analysis (Eman & Clarke 2017) with the aim to offer a critique of today's computational social science (CSS) together with a re-materialization of the political economy of the network society.

## Network Positioning

- This case study returns to the Frankfurt School's critique of authoritarianism in light of the re-materialization of reason within the social sciences.
- Discussed by Dorothea J. Watts as "emerging at the intersection of the social and computational sciences, are researchers that include analysis of web-scale observational data, virtual laboratory experiments, and computational modeling" (2016), CSS maintains network science and applied based modeling with the aim to provide a new paradigm of human behavior (Pentland 2014, Lopez et al. 2016).
- Inscribed in terms of an engagement of sociologically informed forms of knowledge production with an epistemic regime of open education, this case study draws upon critical theory to explore (a) the ways in which CSS both devalues and re-materializes knowledge, forms of thinking (e.g., hermeneutic, binary, and social reason) and the socially-regressive implications that arise (Barabási and S), the ways in which CSS conceals a concrete network which is actually a "product" that re-materializes a concrete set of assumptions about technical systems that equate with CSS's biological of natural activity (e.g., reinforcing formal logic, scientificity based on calculated data, social as a network, in effect, this case study begins to engage with the question of how the systems and cognitive deficits inherent to network science function together and back upon the subject in the form of concrete social relations.



Visualization of a network structure showing interconnected nodes and edges.

## The Network Industries

- While still in its embryonic stages, this case study builds upon the latter by locating network science within the broader social context in our today with regard to its role in the political economy of the digital. Indeed, it has been through the continued accumulation of profit through the generation of nodes and edges and through learning (operational algorithms) that today's network industries (e.g. Google, Meta, 7474c, Amazon) have been able to transform, model, and extract value from their extractive industries.

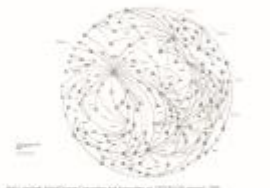


Visualization of a network structure showing interconnected nodes and edges.

- Drawing on internet data, I explore the ways in which network thinking has been re-materialized within and against itself through an order to technology (a relational and epistemic re-materialization) under conditions of computational capitalism, not only as a force of production, but also as a social-structuring technology that opens to question "new forms of the social" (e.g. see above the introduction) with the bodies and tracks of four and then a half-hour (July 2016). I aim to extend in this way the question of how network thinking is at once cognitive and necessarily material, with a particular focus on the implications to critical cognition that arise therein.
- Finally, this generative Critical Theory posited a connection between right-wing politics and the technologization of nature. I thus aim to incorporate a discussion of how network thinking is inscribed within the anti-technoscientific changes that underlie today's network industry, as seen, for instance, in Meta's "concerns notice of a 'network state'"

## Final Remarks

While some theorists have argued that the concept of 'the network a priori' has lost its original critical edge and understanding of political economy, inscribed in part by a new vocabulary of ethics, platforms, apps, and big data, so that an other connects back as algorithms and through engagement (Lopez 2016), this thesis argues for a return to the network question. Re-articulated within the framework of a critique of reason, I aim to bring the aforementioned threads together into an account of what I call the "network a priori" a new contribution of research closely tied to the left that inscribes a new materiality by re-materializing our political economy. However, in its return to Critical Theory, this project is guided by the notion that "in the concrete sphere of the technological reality, there is no pathing in a purely technical manner, but rather the process of technological rationality is a political process" (Marcuse 2007).




Visualization of a network structure showing interconnected nodes and edges.

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# The Network A Priori: Mapping New Constellations of Reason Under Conditions of Computational Capitalism - James Stockman (School of Media, Arts & Humanities)



**The use of acoustic monitoring as a means to detect colonies of the barbastelle bat (*Barbastella barbastellus*) within woodlands**

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### Introduction

Locating woodlands that provide important roosting habitat can be a time-consuming process and has traditionally been reliant on the capture and/or radio-tracking of individual bats.

Acoustic surveys may offer an alternative solution, as woodlands with colonies are likely to exhibit high bat activity within the first hour after sunset.

### Objectives

- To quantify an optimal cut-off threshold for the number of bat passes needed to determine woodland occupation by barbastelle colonies.
- To determine the survey effort required to correctly identify a woodland that is occupied by a barbastelle colony.

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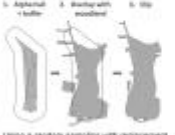
### Methods

#### Optimal cut-off threshold

- 148 points across 12 ancient woodland sites were surveyed using acoustic detectors between May and September 2018.
- Barbastelle calls recorded within the first hour of sunset were isolated for further analysis.
- Receiver operating characteristic (ROC) curves were used to obtain the optimal cut point cut-off threshold to distinguish woodlands with and without barbastelle colonies.

#### Survey effort

Coverage of woodlands by detectors was calculated by creating polygons within fully encompassing detector locations and clipping to woodland.



- Using a detector sampling with replacement approach, the minimum detector density needed to identify a colony was determined based on the optimal cut-off threshold.

### Results

#### Optimal cut-off threshold

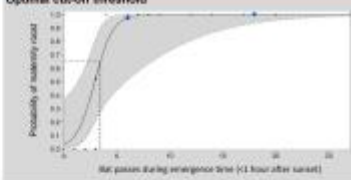


Figure 1: A threshold of 3-15 passes was determined via ROC curve analysis, which aims to find a balance between maximising the number of true positives and minimising the number of false positives. Consequently, two sites classified as 'highly likely' to contain colonies based on the optimal cut-off threshold.

#### Survey effort

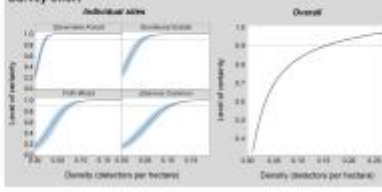


Figure 2 and 3: Increasing the density of detectors within woodlands rapidly increased detection probability. To maintain a minimum of 80% probability of colony detection, at least 1 detector should be deployed for every 0.25 hectares of woodland.

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### Key findings

When designing an effective survey protocol, woodland density should be considered to account for the heterogeneity of bat activity. For barbastelles, we demonstrate that 0.1 detectors/hectare is sufficient to ensure this.

At this density, any detector that picks up 4 or more barbastelle calls indicates a strong likelihood that a colony is present locally.

### Future outlook

The approach provides a standardised and cost-effective means of identifying woodlands with a high probability of barbastelle colony presence. It is such a well-validated, low-cost survey method, it has the potential to survey woodlands on a much larger geographic scale, with the potential of final test groups and comparisons.

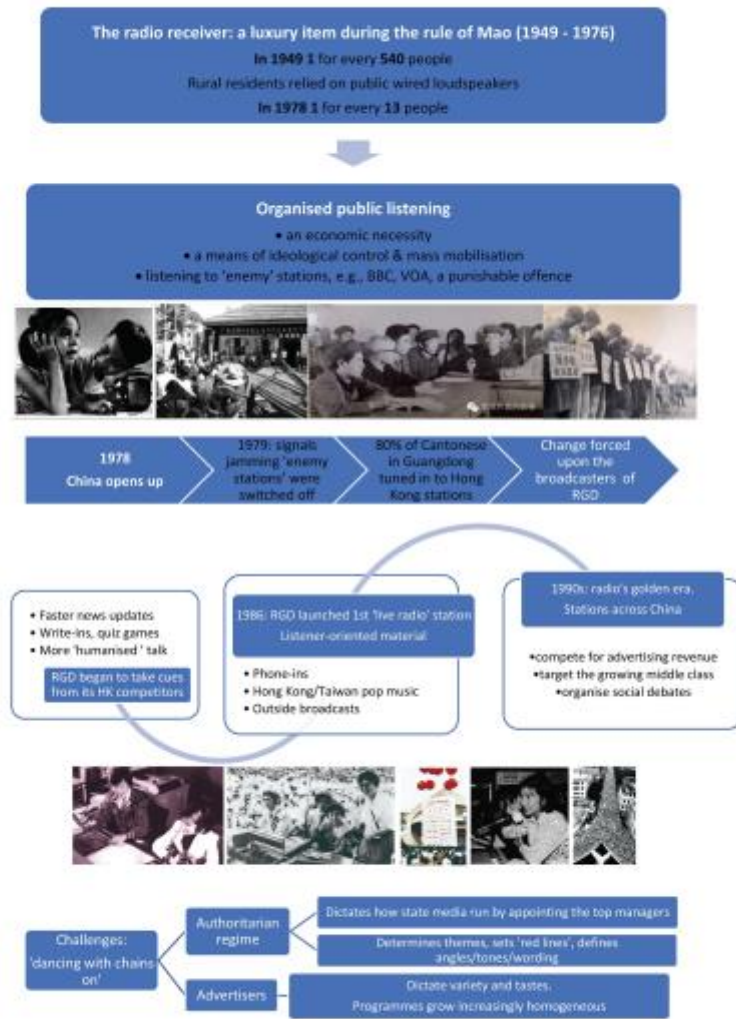
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### Acknowledgements

We thank an anonymous reviewer for comments on the manuscript and the Sussex Wildlife Trust for funding this project. The authors would like to thank the University of Sussex and the Vincent Wildlife Trust.

The use of acoustic monitoring as a means to detect colonies of the barbastelle bat (*Barbastella barbastellus*) within woodlands - Kieran O'Malley (School of Life Sciences)

**Desperately seeking listeners:  
the liberalisation of Chinese sound broadcasting**



Laura Maynard Radio Guangdong (RGD) and the Liberalisation of Chinese media: 1978 - 1997

**Desperately seeking listeners: the liberalisation of Chinese sound broadcasting - Laura Maynard**  
 (School of Media, Arts and Humanities)

## A MAGPIE APPROACH TO COSY METHODOLOGIES

Method chapter of the thesis - *Cosy vibes: a visual culture study of cosiness as an aesthetic category*

by **Manuela Salazar**, doctoral researcher from Media, Arts, and Humanities at the University of Sussex  
e-mail: manuela.salazar@sussex.ac.uk | Instagram: @mundomesaico | Twitter: @manusalazar



### Intro

Described here is the process of selecting methods and strategies for the study of cosiness as an aesthetic category on Instagram. This methodology takes on a variety of approaches originated from aesthetic theory, cultural and media studies, art history and anthropology as well as creative practices. This assemblage was thought to correspond to Instagram's blurred borders and mosaic worlds.



TO OBSERVE A PRISMATIC OBJECT LIKE INSTAGRAM COSINESS IS TO LOOK CLOSELY AT ITS NUMEROUS REFLECTIONS AND REFRACTIONS, TRUSTING THAT MULTIPLE ANGLES WILL PROVIDE A HOLISTIC PERSPECTIVE.



### Textures

With its fragmented nature, Instagram does not suit a search for totality and neither does cosy and its visual sensibilities. They favour methodologies focused on revealing textures and unveiling details.

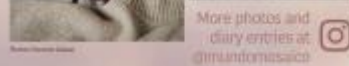
### Magpieism

An approach (Carter, 2014) that blends methods for an individual and original interpretation of topics. Magpieism allowed the development of a tailored approach to attend to research questions that link different theoretical regards such as cultural studies, art history and philosophy.

### Instagram-native methodologies

The search was aimed at finding methods that could consider both the flow of interconnected images using tools such as hashtags and metadata, and the single image, to reveal characteristics which could not be unveiled by only considering images en masse.

"THE MAIN TASK FOR THE ETHNOGRAPHER MOVING ACROSS SOCIAL MEDIA, SHOULD NOT BE EXCLUSIVELY THAT OF IDENTIFYING AN ONLINE COMMUNITY TO DEVEIN (NOT) BUT OF MAPPING THE PRACTICES THROUGH WHICH INTERNET USERS AND DIGITAL DEVICES STRUCTURE SOCIAL FORMATIONS AROUND A FOCAL OBJECT" (EGLANDORF 2016: 9, 10).



More photos and diary entries at [@mundomesaico](https://www.instagram.com/mundomesaico)

## STRATEGIES AND METHODOLOGIES TO RESEARCH COSINESS ON INSTAGRAM

### Through thick and thin

While big data affords answers about clusters and trends, smaller data sets reveal specificity and meaning. Large-scale patterns can be illuminating but often overlook social contexts, moods and feelings.

### Social media fieldwork

A prolonged process of observation provided a greater understanding of the inner workings of the studied communities.

### Cosy informants

Interviews with 12 informants served as keys to unlock information about their sense of style, their level of self-awareness, their understanding of aesthetic and their own practices.

### Process-based writing

Interviews were mixed with close readings of creators' images and compositional analysis. The result is an entanglement of written ideas; the informant's views on the matter are interwoven with their image compositions, captions, hashtags, comments and a theoretical analysis that crisscrosses it all.

### Photographic diary

An autoethnographic experiment affords an embodied tactile, aesthetic and practice-oriented grasp of cosiness of Instagram. The experiment mirrors the object of study by incorporating sensorial, personal, and intimate techniques to the methodological practices. It involved sharing subjective experiences through self-observational and reflexive writing about the process of creating, photographing, and writing about ten photographs.

This study was financed in part by the Contratación de Apoyo Académico de Personal de Nivel Superior (R001/2019) (EGLANDORF, Calabretto, A., 2018, Digital Methods for Ethnographic Analysis: Concepts for Ethnographers Exploring Social Media Environments, J. Contemp. Ethnogr., 46, 551-576; Carter, S., 2014, The methodology of magpies, Int. J. Res. Method Educ., 37, 125-136).

**A magpie approach to cosy methodologies - Manuela Salazar (School of Media, Arts and Humanities)**