Social Science at the Met Office
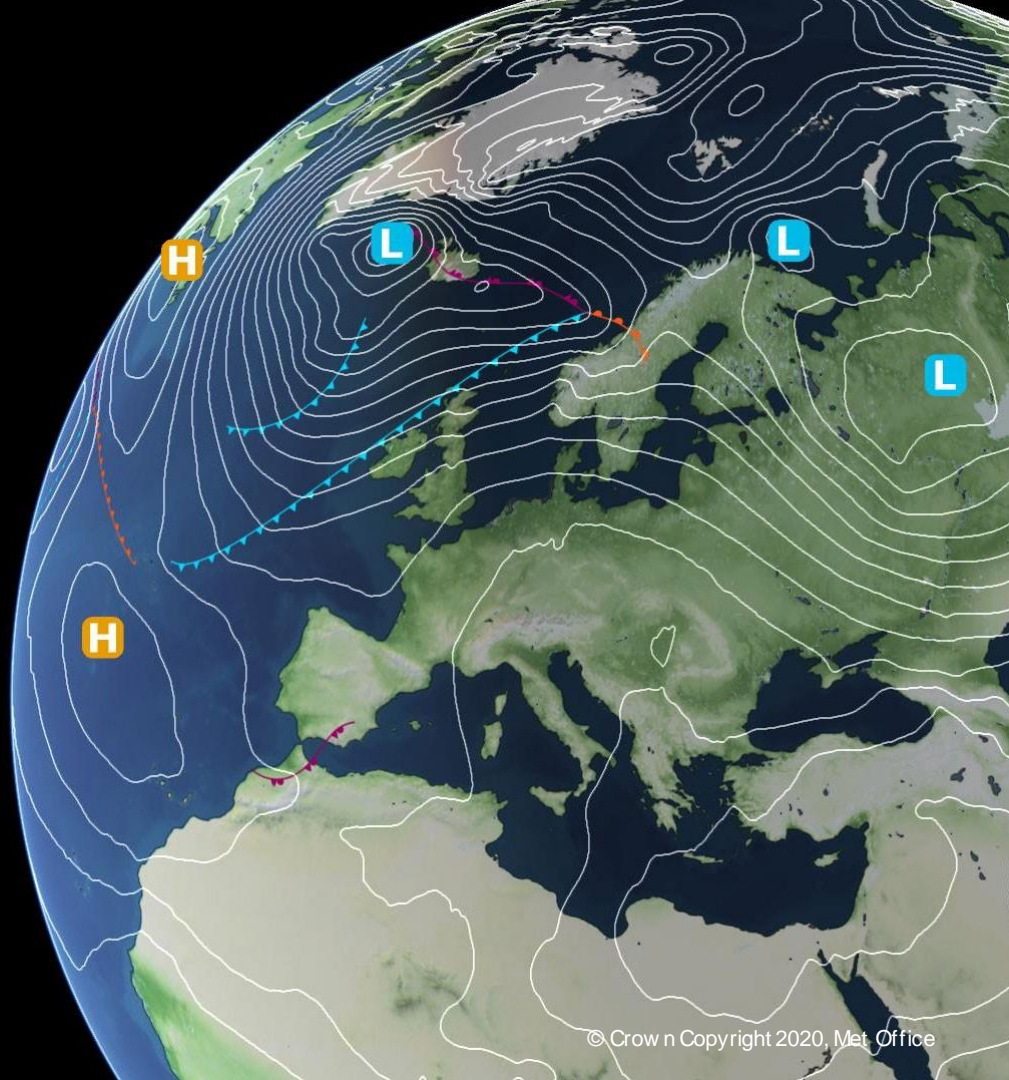
Helen Roberts

Weather and Society Conference

2 March 2022

Coming up

- My background
- Why social science
- Journey so far
- Topics
- Next steps

Background

Helen Roberts

Socio-meteorologist

- 19 years in weather - 17 years as an Operational Meteorologist:

  military – aviation - transport – retail – commercial - media

- Current role: Product Futures, Markets

- Studying for an MSc in Psychology

Why?

Met Office incorporates a wealth of expertise and knowledge, particularly in terms of natural, physical and data sciences.

Growing recognition that social science is equally as important.

When forecasting weather, we are actually predicting 'the social consequences of the atmosphere' (Daipha, 2015) -
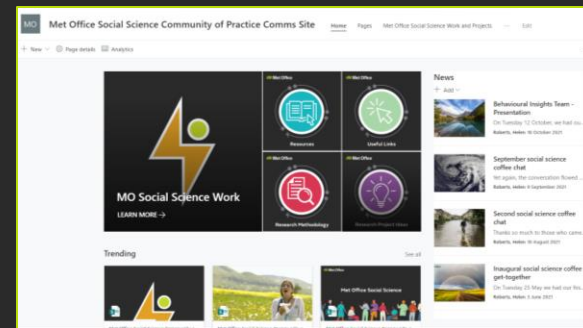the *sensable* weather.

Journey so far…

Met Office Social Science

Kayleigh Hutcheon

- Social Science Yammer group

- Social Science Community Comms Page

- Monthly meetings

Topics

Met Office Social Science

Operational Meteorologist cognition including decision-making processes

- **Contextual (emotional) biases when decision-making - (forensic science research)**

- **Handover process, model changes**

- **Severity and anchoring bias – UCL collaboration**

- **Expertise – how to maximise**

- **Positivism v Interpretivism - scientist v detective – empirical v intuition – system 1 v system 2**

- **Streamline decision-making – multiple focuses – chunk schedule**

- **Added value of the human meteorologist**

- **Visualisation preferences (Informatics Lab – eye tracking)**

Contextual (emotional) biases when decision-making

Example of an unambiguous match (left), an unambiguous non-match (centre) and an ambiguous pair (right)

Source: Osborne and Zajac, 2016, Imperfect Match

*Operational Meteorologist cognition including decision-making processes*

- **Contextual (emotional) biases when decision-making - (forensic science research)**
- **Handover process, model changes**
- **Severity and anchoring bias – UCL collaboration**
- **Expertise – how to maximise**
- **Positivism v Interpretivism - scientist v detective – empirical v intuition – system 1 v system 2**
- **Streamline decision-making – multiple focuses – chunk schedule**
- **Added value of the human meteorologist**
- **Visualisation preferences (Informatics Lab – eye tracking)**

Communication - customer decisions and behaviour

- Probabilistic v deterministic
- Aleatory v epistemological uncertainty
- Text v visuals
- Warnings – colours, matrix, text, lead time
- Weather symbols
- Impact and advice

- Storm names
- Recent experience bias
- 'Storylines'
- Segmenting publics
- Positive messaging
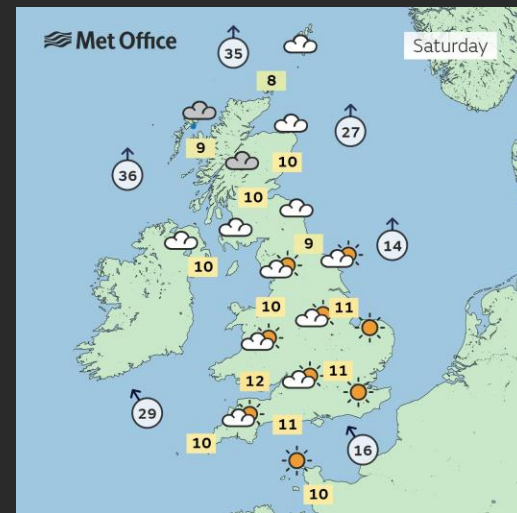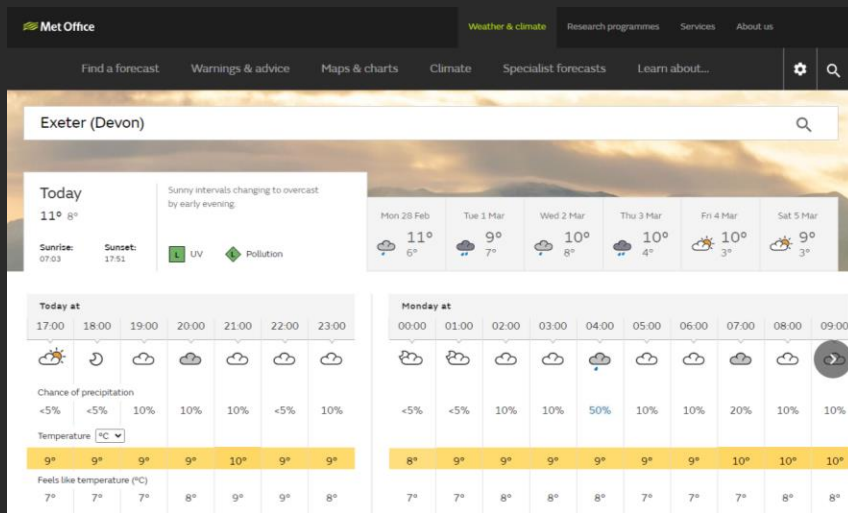
Met Office Social Science
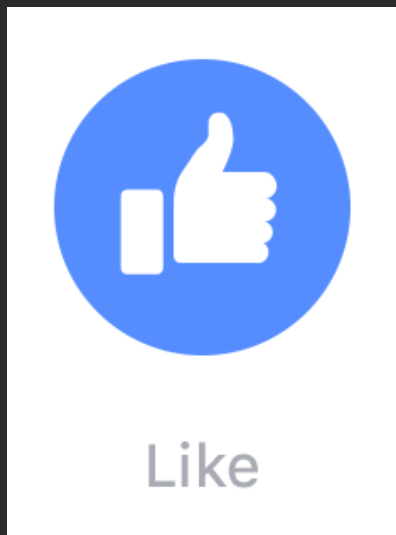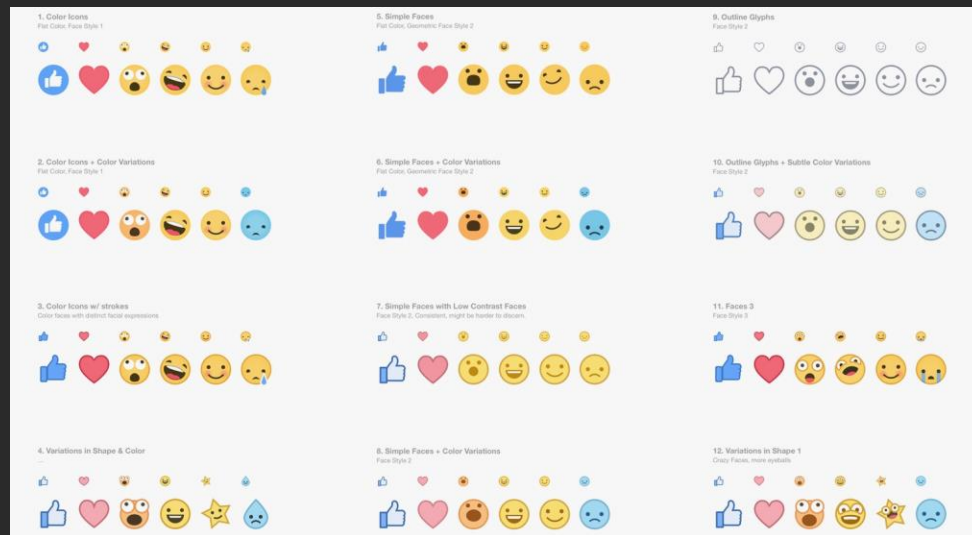
Facebook 'like' emoji
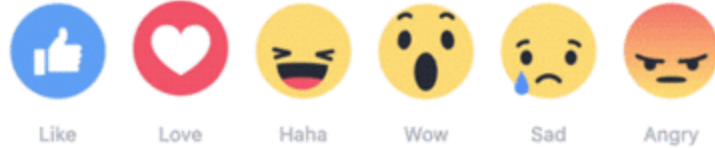
Facebook reaction emojis

Facebook reaction emojis

Staff well-being

- Positive Psychology
- Shift-work – seminar series
- Mental health

- Leadership
- Culture
- Bullying and harassment

Next steps

Met Office Social Science

- **Continue to develop the Met Office Social Science Community of Practice**
- **Source interesting and relevant speakers – internal and external**
- **LinkedIn communications**
- **Finish MSc and write a full report**
- **Integrate and embed social and natural sciences – evidenced by pandemic**

Summary

- Social science as important as physical and data sciences
- Coordinate social science work in Met Office
    - Social Science Community of Practice
- Embed social science into ways of working
    - Expertise, cognition, communication, decision-making, behaviour
- Dedicated social science resource

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Any questions?

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