EGAP materials

… and climate change (sshhhh!!!)

Kathy Aston, University of Sheffield. k.j.aston@sheffield.ac.uk

Outline

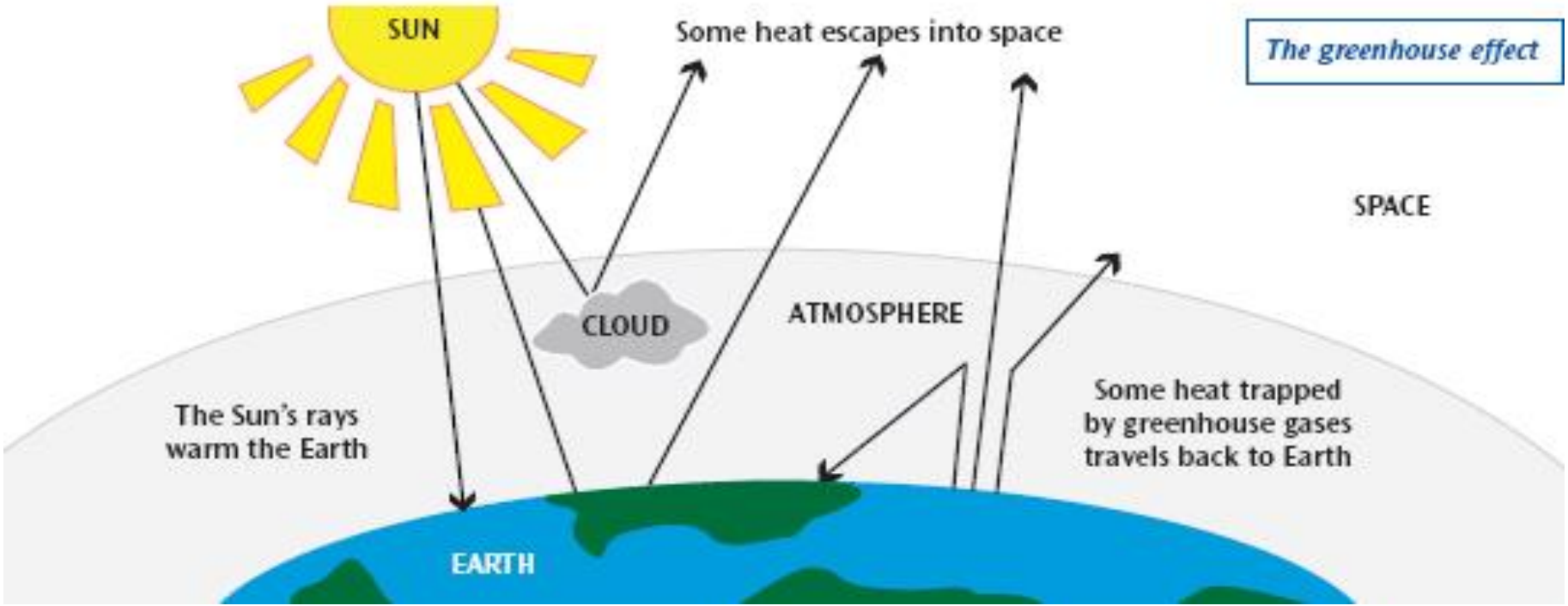
1. Climate change - what's at stake?
2. The case for climate change in EAP
3. Materials and activities
4. Your questions and ideas.

What <u>one</u> topic is relevant to all these disciplines?

engineering of all kinds
architecture
physics
chemistry
biology
politics and sociology
journalism and media
education

economics, finance etc
psychology
public health and medicine
international development
agriculture
town and regional planning
environmental studies
theology, philosophy, ethics
drama and all the other arts

The greenhouse effect



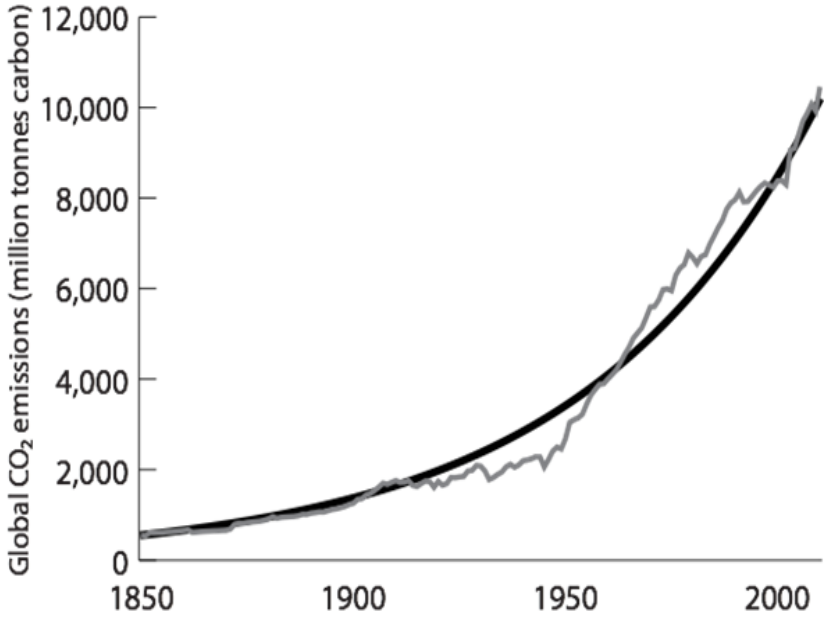
www.bradford.gov.uk/environment/climate-change/what-is-climate-change-and-how-will-it-affect-the-uk/

$C02_e$ rise (Mike Berners-Lee, Lancaster University)

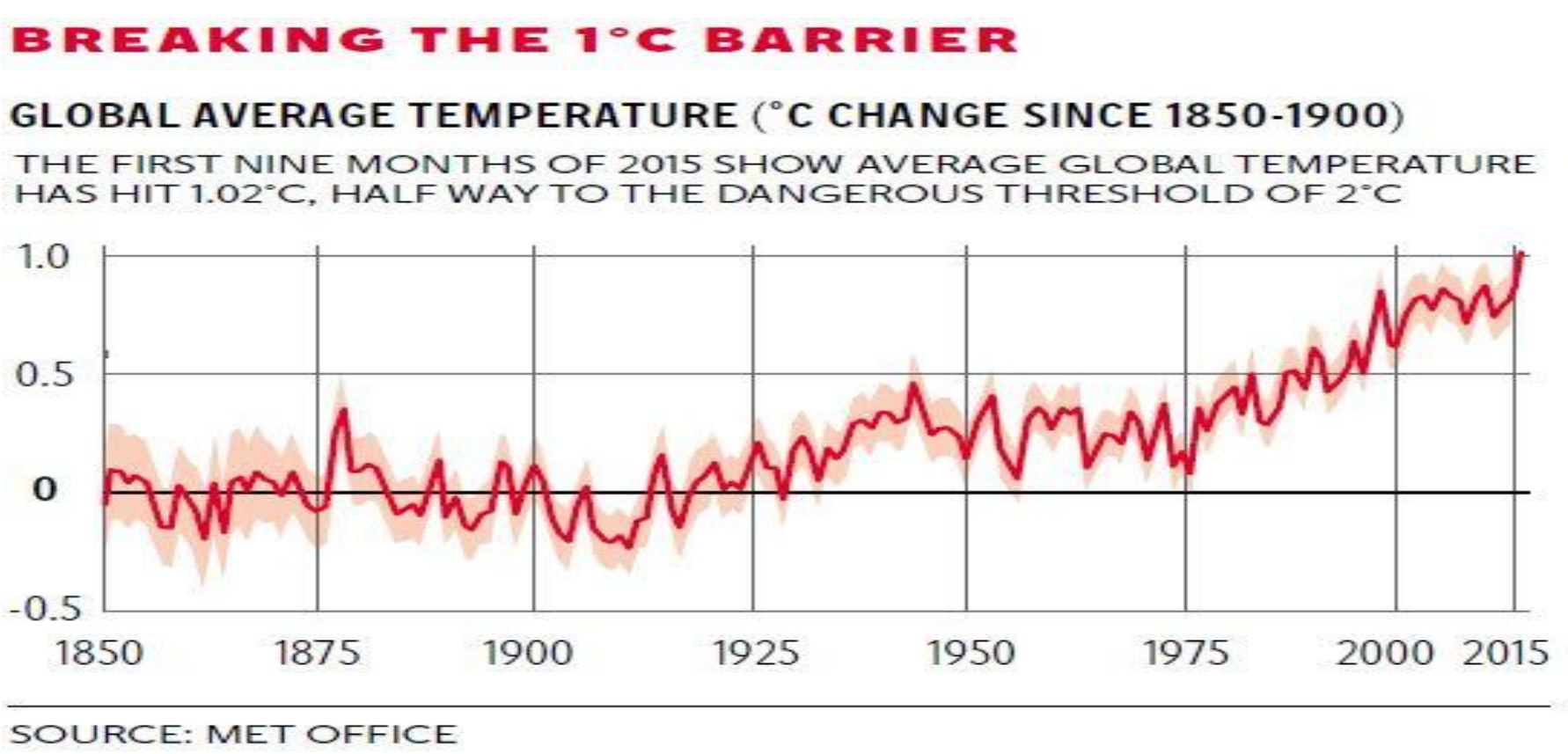
Emissions risen 60% since Kyoto agreement in 1992 (Kevin Anderson, the Tyndall Institute)

No change from business as usual

Efficiency and green energy haven't helped



Temperature rise http://www.metoffice.gov.uk/



What has 1 ^{o}C meant so far?

"Every year climate change kills over 300,000 people, due to severe droughts, floods and hurricanes and spreading diseases such as malaria".

(Kofi Annan, former UN Secretary General, 2009, cited by WWF-UK)

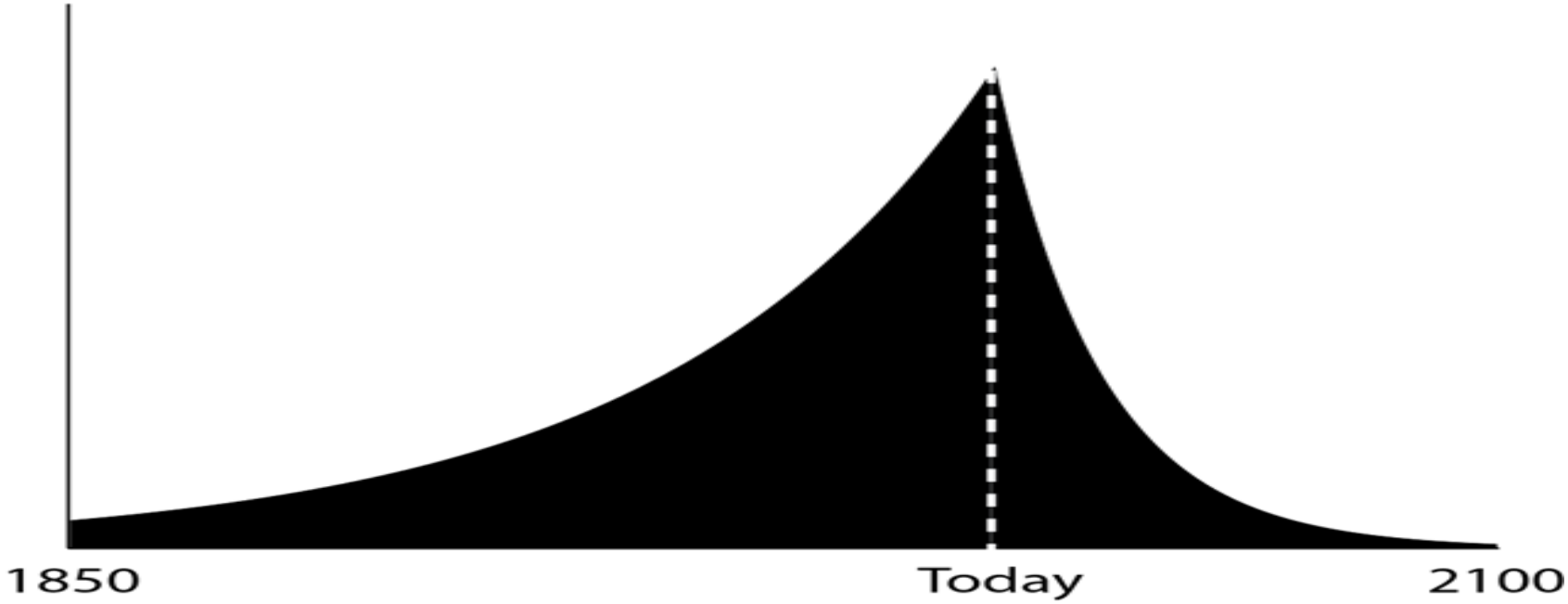
What will 2 °C mean?

Report by United Nations Framework Convention on Climate Change, May 2015

"Limiting global warming to below 2°C would significantly reduce the ... very high risks of climate impacts corresponding to 4°C of warming, which is where we are headed under a 'business as usual' scenario. …However ... the poor or otherwise disadvantaged will still be at very high risk"

http://unfccc.int/resource/docs/2015/sb/eng/inf01.pdf, p 18, accessed 05.01.17

75% chance of <2°C; peaking today(Berners-Lee, 2015)



What would 4ºC mean?

Professor Kevin Anderson, former director of the Tyndall Centre for Climate Change Research: (cited in Marshall, 2014)

"catastrophic."

Professor John Schellnhuber (Potsdam Institute for Climate Imapct Research):(cited in Marshall, 2014)

"The difference between two and four degrees is human civilisation"

Is it our fault?

From NASA's climate website

"Most climate scientists agree the main cause of the current global warming trend is **human expansion** of the 'greenhouse effect'".

http://climate.nasa.gov/causes, accessed 05.01.17

From the Royal Society's website

"Scientists know that recent climate change is largely caused by **human activities**".https://royalsociety.org/topics-policy/projects/climate-evidence-causes/question-2, accessed 05.01.17

But what do ordinary people think?

Do they take the problem seriously?

Common arguments for doing nothing

“The scientists don’t agree.”

“The climate has always changed naturally.”

“The government should do something.”

“The scientists will fix it.”

“It’s not changing” (or, “It’s not man-made”)

“It’s an anti-capitalist conspiracy.”

“It’s a State plot to take away our freedom.”

“It’s China’s fault.”

“I have to fly/drive a 4x4.”

“Why change if no-one else does?”

“I don’t want to live in a cave!”

“I like it warm, myself!”

“Don’t guilt-trip me!”

“Don’t blame me - I recycle!”

“It’s too late.”

Why don't people engage with climate change?

- Emotional brain versus rational brain: fear, denial, hopelessness
- Framing a "wicked problem" (Rittel and Webber, 1973, cited in Marshall, 2014) - environmental, economic, political, moral…?
- Confirmation bias/ biased assimilation
- Conformity: the "socially constructed silence" (Zurubavel, 2006; cited in Marshall, 2014)
- In-groups; "normal" people vs eco-nuts

Some of the critical functions (according to Cottrell, 2011, p 2)

- reflecting on issues in a structured way, bringing insight and logic to bear
- presenting a point of view in a structured, clear, well reasoned way that convinces others
- evaluating the evidence for alternative points of view
- drawing conclusions about whether arguments are valid and justifiable, based on evidence
- being able to read between the lines, seeing behind surfaces, and identifying false or unfair assumptions

Climate change and academic language

Hedging and cautious language

Tenses: present perfect and futures (especially possibility and probability)

Cause and effect, including conditionals

The language of process, including present simple and passives.

Discussion language for disagreeing respectfully, etc.

Climate change in typical academic language

The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen. *IPPC 2014 Synthesis Report*

Continued emission of greenhouse gases will cause further warming and long-lasting changes in … the climate system, increasing the likelihood of severe … impacts for people and ecosystems. (*Mark Carney, head of the Bank of England).* Removing CO2 from the atmosphere results in cooling. *U.N. Framework Convention on Climate Change*

Certain gases in the atmosphere block heat from escaping. Long-lived gases that remain semi-permanently in the atmosphere and do not respond physically or chemically to changes in temperature are described as "forcing" climate change. Gases, such as water vapor, which respond physically or chemically to changes in temperature are seen as "feedbacks." *NASA*

What should be our criteria for EGAP topics?

Relevance to all kinds of students and their background or needs?

Provides a good vehicle for target language?

Intrinsically interesting or stimulating?

Might come up in the IELTS exam?

Doesn’t offend anyone? But what about critical thinking and debate?

Topics in *Language Leader Up-Int* (EAP; pub 2014)

Communication

Environment (2 pages on climate change out of 10 pages)

Sport

Medicine

Transport

Literature and film

Architecture (~~nothing on e.g. energy-efficient buildings~~)

Globalisation (~~nothing on e.g. the global politics of climate change~~)

Art

Psychology

Cultures

Technology (~~nothing on e.g. renewable energy~~)

My mini research: climate change in EAP W/ R&W books

46 EGAP writing books published since 2000 ; 10 publishers: Pearson; Garnet; C.U.P.; O.U.P.; Collins; Routledge; Macmillan; Sage; Heinle; National Geog.

Results: Only 4 books dealt with climate change in any depth, i.e. critical thinking; building arguments; synthesising from sources; cause and effect language/essay organisation; modals of future possibility.

Bailey, S. (2011) *Academic writing* (3rd ed). Routledge
Barton, L. and Sardinas, C.D. (2009). *North Star 3* (3rd ed) Pearson Longman
Folse, K. S. and Pugh, T. (2015) *Great writing* (3rd ed). National Geographic
Westbrook, C. (2014). *Unlock reading and writing skills* 3. C.U.P.

6 books dealt with it superficially, e.g. in an editing ex. 7 more mentioned it

My mini research: EAP reading books

19 EGAP books pub. since 2000: Pearson; Garnet; Wadsworth; O.U.P; Delta

Results: Slaght, J. and Harben, P. (2009). *English for academic study; reading.* (2nd ed). Garnet : A little focus in Unit 5 on reliability of sources, otherwise various reading sub-skills practised but not much critical thinking.

Slaght, J. (2012). *English for academic study; reading*. Garnet Chap 2: "Sustainable energy". Various reading sub-skills practised but no critical thinking.

Zwier, L. J. (2012). Inside Reading 2. O.U.P. pp 74 - 5 Text on climate change that suggests CC may not be happening or isn't caused by human activity. No critical thinking.

Typical knowledge gaps in my EGAP students

Students say;
“It’s because of the hole in the the ozone layer”.

Students are unable to demonstrate the greenhouse effect on a simple diagram drawn on the board.

They can’t explain cause-effect patterns e.g. consumerism→ emissions

In essays about climate change, they throw in all the environmental stuff they learned from IELTS (or course textbooks), regardless of whether they can directly relate it to climate change (e.g. litter, noise pollution, parks)

My argument

Most EAP materials are pitched at the current low level of public understanding and debate about climate change. EAP materials and public discourse frequently ignore the weight of scientific evidence, e.g. “climate change is not happening” or “it’s not man-made”. (Is there a taboo?) There is a lack of EAP material dealing directly with global warming per se and a failure to exploit it to develop critical thinking skills (and academic language).

I argue that university students should not be expected to operate at this low level of critical thinking, but to challenge it. This is important because their generation will have to deal with the fallout from climate change, and it will become increasingly relevant to many of their disciplines as time goes on.

What to do?

- Use online resources, e.g. WWF quiz, or adapt EGAP materials
- Make students do their own research on climate change - linked to a formal debate or role play?
- “Two brains” irrationality: give the students the usual reasons for not doing anything and ask them to consider a) why people think this and b) how you might contradict them. Extend to argument-building exercises, debate, essay writing etc.

What to do? Cont.

- Different frames/perspectives: role plays (e.g. on fracking) , OR non-role play discussion if you have the right mix (eg Saudis, Chinese, Malaysians)
- Establish CC as a taboo (EGAP materials? media?)and discuss why, and the value of breaking taboos. Extend to other taboos that students might have to talk about on their courses , e.g. Taiwan (Chinese politics student), abortion (RC medical student).
- Pre-sessional projects - ask departments to supply research questions related to climate change

What do you think?

References: books

Berners-Lee, M. (2010) *How bad are bananas? The carbon footprint of everything.* Profile Press

Berners-Lee, M. Lecture given at the University of Sheffield on November 3rd 2015

Cotton, D., Falvey, D. and Kent, S. (2014). *Language leader upper intermediate.* England: Pearson Education Ltd.(Cottrell, S (2011) *The Study Skills Handbook* (2nd edition) Palgrave

Marshall, G. (2014) *Don't even think about it; why our brains are wired to ignore climate change* Bloomsbury

Marshall, G (2007) *Carbon detox; your step-by-step guide to getting real about climate change* Gaia Thinking

Online references

- 3.epa.gov/climatechange/ghgemissions/global.html (website of the United States Environmental Protection Agency)bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx

- climate.nasa.gov/causes/

- ipcc.ch/report/ar5/syr/
- metoffice.org.uk

- royalsociety.org

- Turn Down the Heat : Confronting the New Climate Normal a report by the World Bank, 2014; https://openknowledge.worldbank.org/handle/10986/20595

- unfccc.int/2860.php
- unfccc.int/resource/docs/2015/sb/eng/inf01.pdf
- wwf.org.uk