



# Translating climate science for young people

Michael J. Reiss  
Royal Society, 27 June 2016

# Teachers as translators

## Translation as simplification

- **Simplification of language**
- **Simplification of cognitive demand**
- **Simplification of complicated ('wicked') interdisciplinary problems to disciplinary ones**

# Teachers as translators

## Translation as clarification

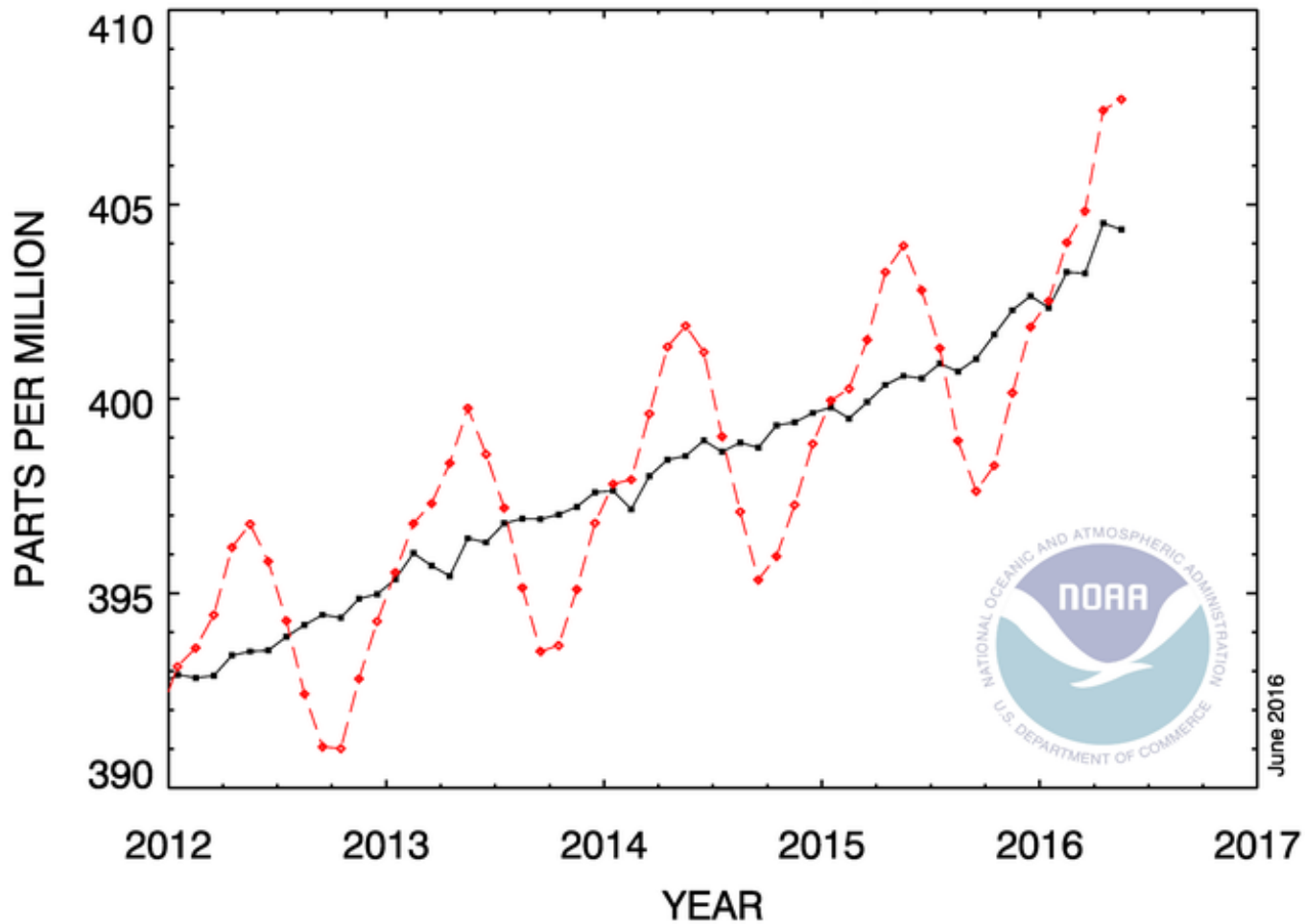
- **For example, when, in a plenary session, a student says something which the teacher then clarifies for the benefit of the whole class**

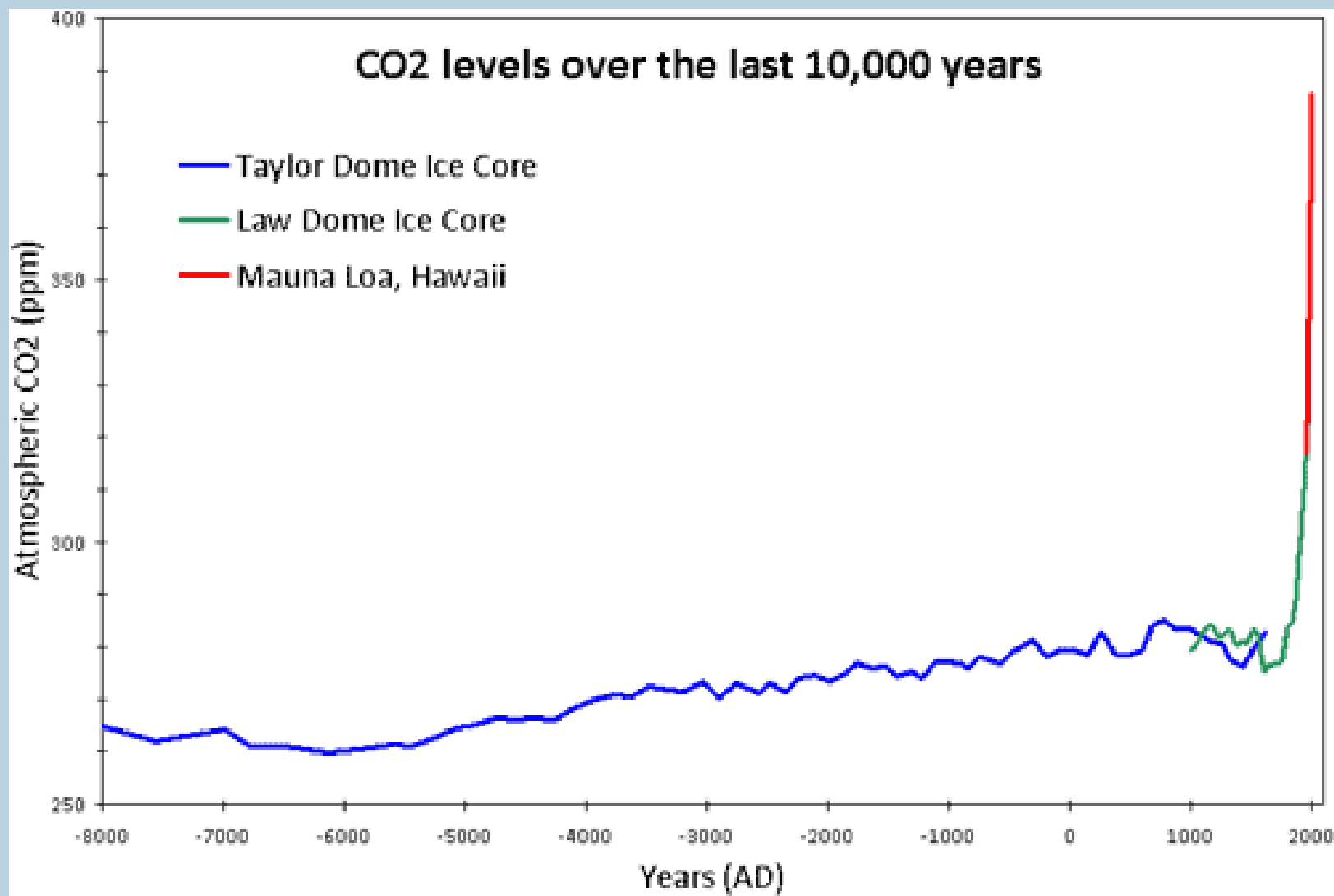
# Teachers as translators

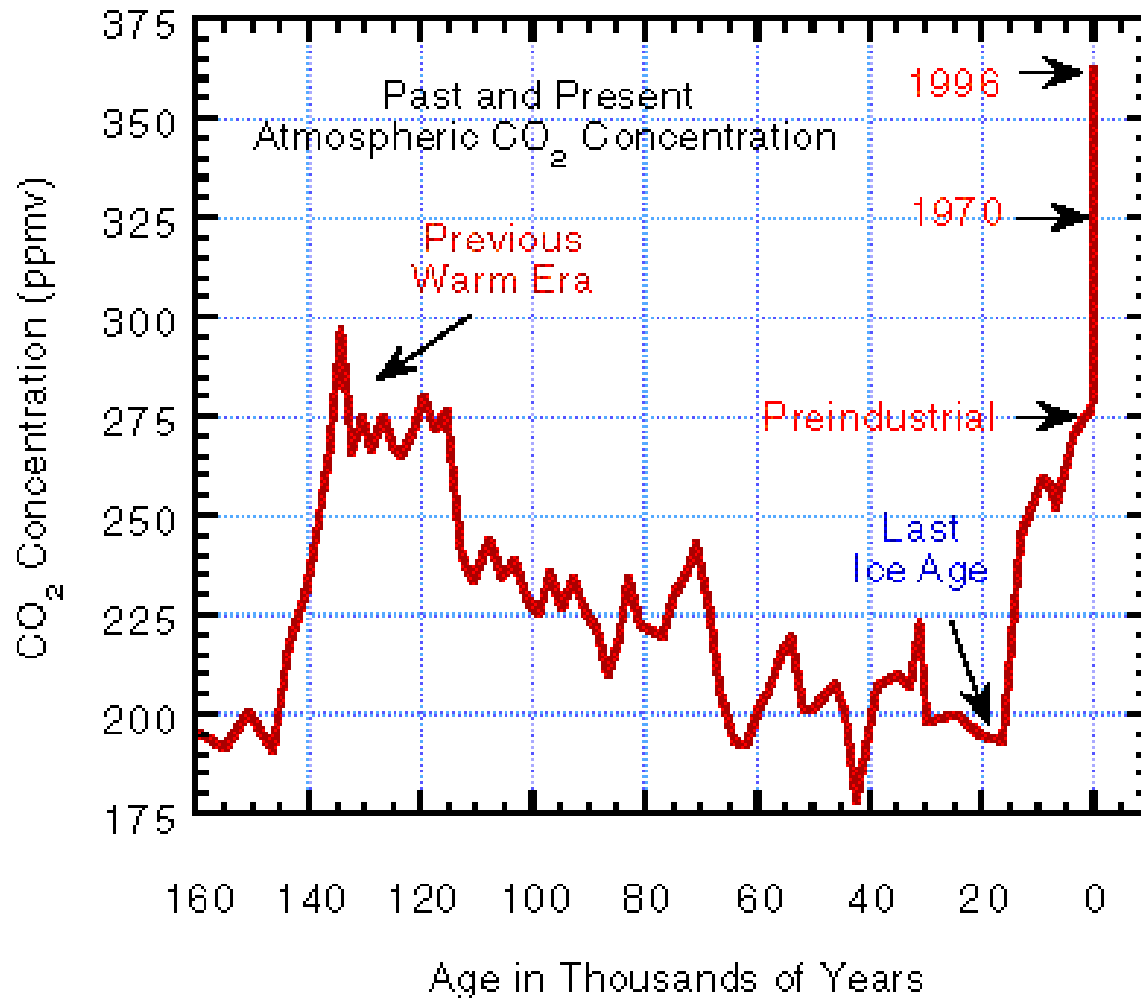
**Translation as a shift in the mode of representation**



### RECENT MONTHLY MEAN CO<sub>2</sub> AT MAUNA LOA







# Translating as learning

- **So, students need to translate**
- **Sources of translation: teacher, textbooks, peers, media**
- **Translation as work in progress – its provisionality**
- **To translate is to ‘carry across’ (*trans* and *latum* – *fero, ferre, tuli, latum*)**



## Other metaphors in addition to translation

- **Border crossings**
- **Worldviews**
- **Pluralism**
- **Radical constructivism (versus the notion of misconceptions)**

# Science education

- **A sub-set of education rather than of science**
- **Two main frameworks: ‘powerful knowledge’ and ‘education for flourishing’**
- **Is getting more people to be scientists an aim of school science education?**
- **Is getting more students to choose to study science once it is no longer compulsory an aim of school science education?**

# The content of school science education

- **A systematic introduction to the ‘Big Ideas’ of science**
- **Balance between the different ‘areas’ of science**
- **The role of practical work**
- **The nature of science**

# Socio-scientific issues

- **Argument from motivation**
- **Argument from reality**

# Climate change as a teaching topic

- **Importance of knowing real science ('powerful knowledge')**
- **Interdisciplinary**
- **An open-ended problem**
- **Contemporaneous**
- **Understanding of probability, risk, the precautionary principle**
- **Intersection with ethics and with politics**



Thank you

**UCL Institute of Education**  
University College London  
20 Bedford Way  
London WC1H 0AL

Tel +44 (0)20 7612 6000  
Fax +44 (0)20 7612 6126  
Email [info@ioe.ac.uk](mailto:info@ioe.ac.uk)  
Web [www.ucl.ac.uk/ioe](http://www.ucl.ac.uk/ioe)

