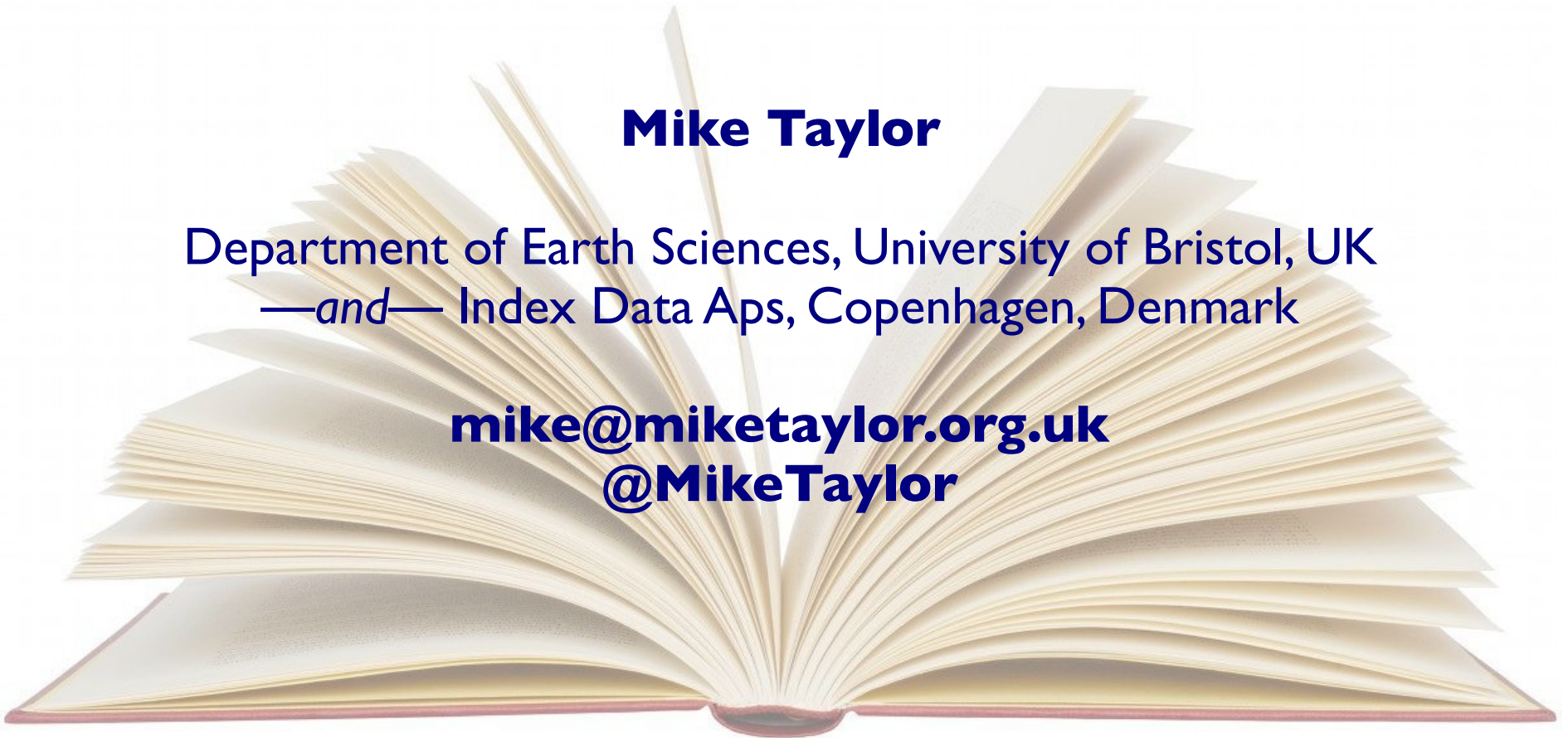# Should science always be open?

Mike Taylor
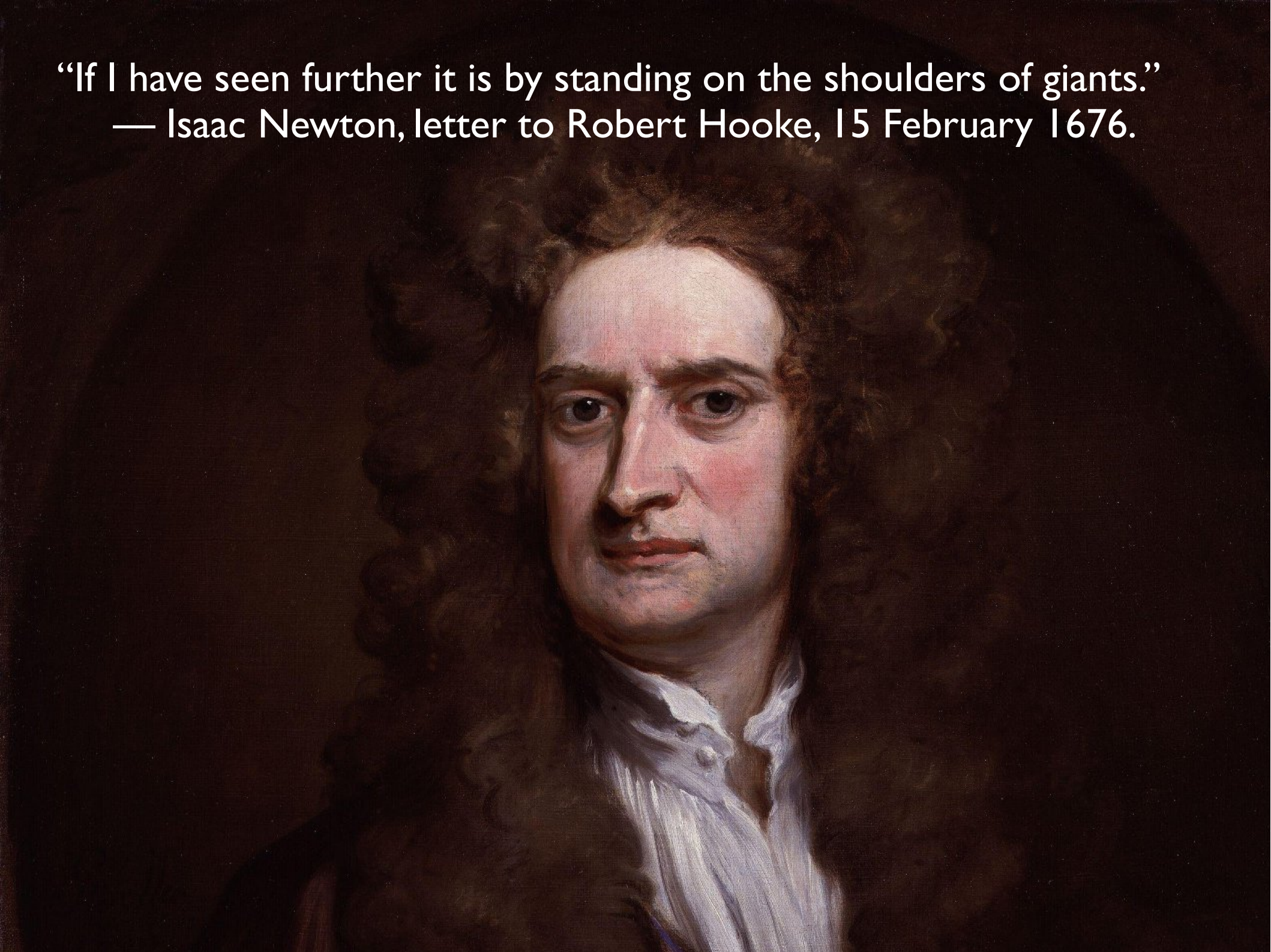
Department of Earth Sciences, University of Bristol, UK
—*and*— Index Data Aps, Copenhagen, Denmark
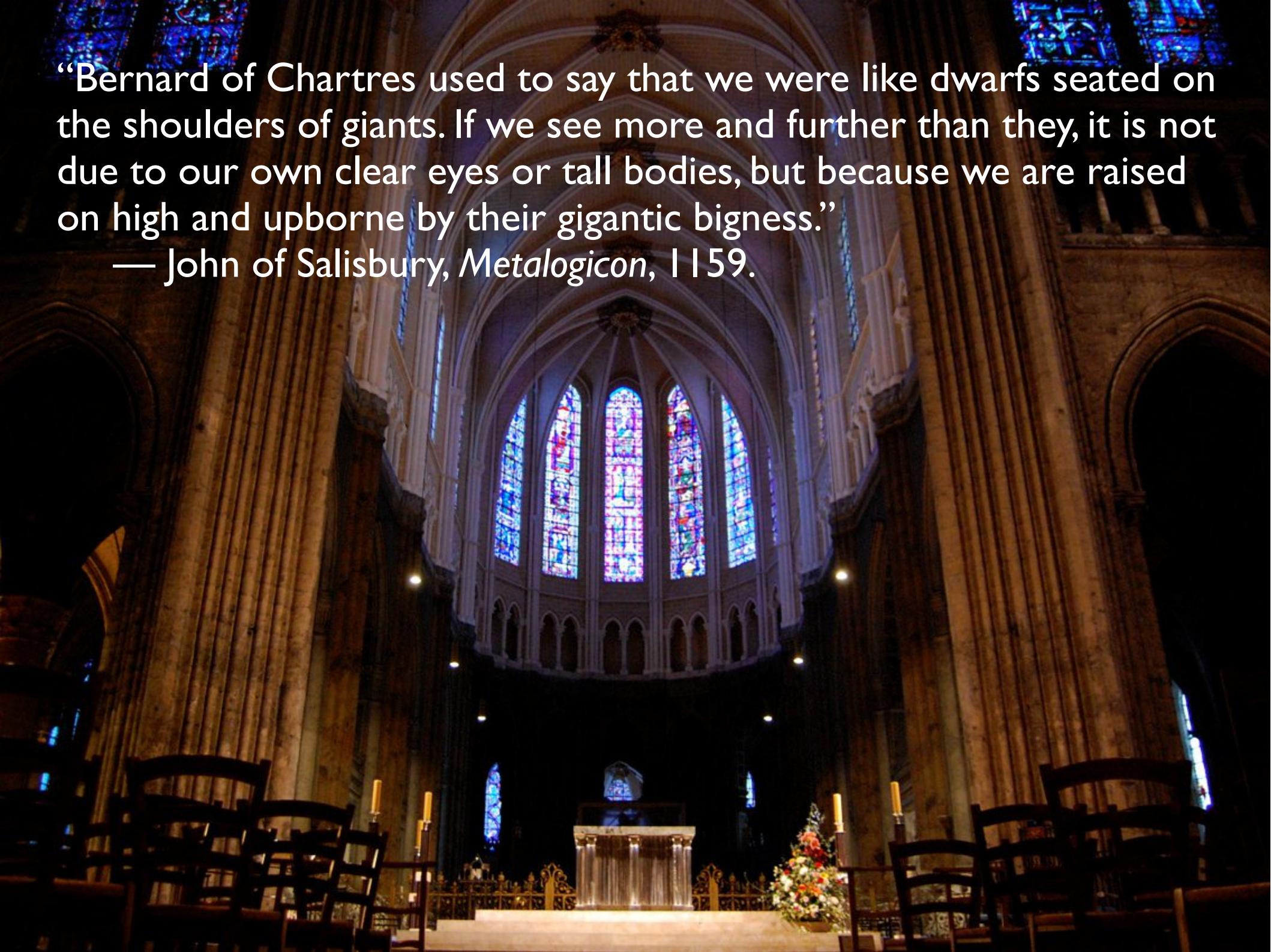
mike@miketaylor.org.uk
@MikeTaylor

"If I have seen further it is by standing on the shoulders of giants."
— Isaac Newton, letter to Robert Hooke, 15 February 1676.

"Bernard of Chartres used to say that we were like dwarfs seated on the shoulders of giants. If we see more and further than they, it is not due to our own clear eyes or tall bodies, but because we are raised on high and upborne by their gigantic bigness."
— John of Salisbury, *Metalogicon*, 1159.

Where progress comes from

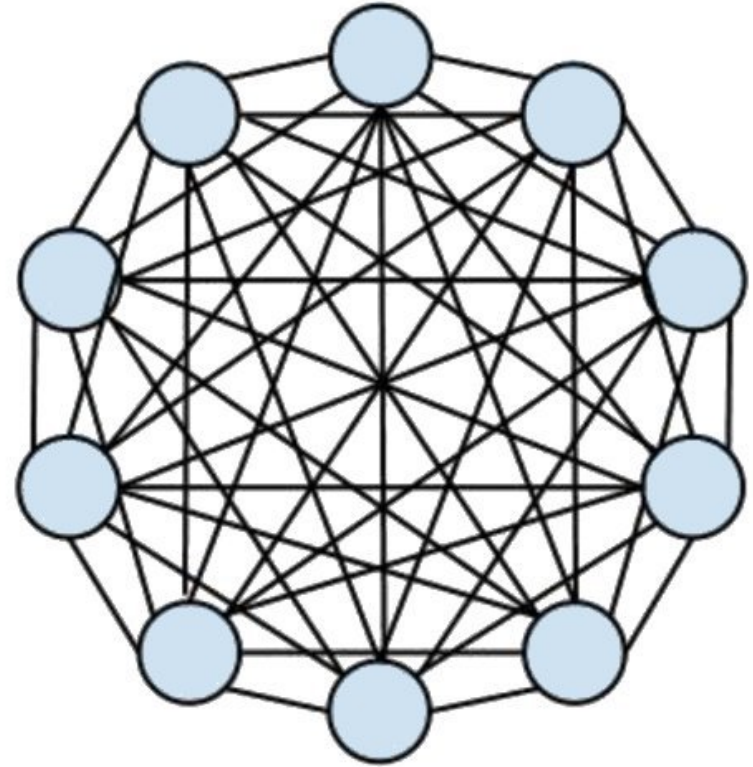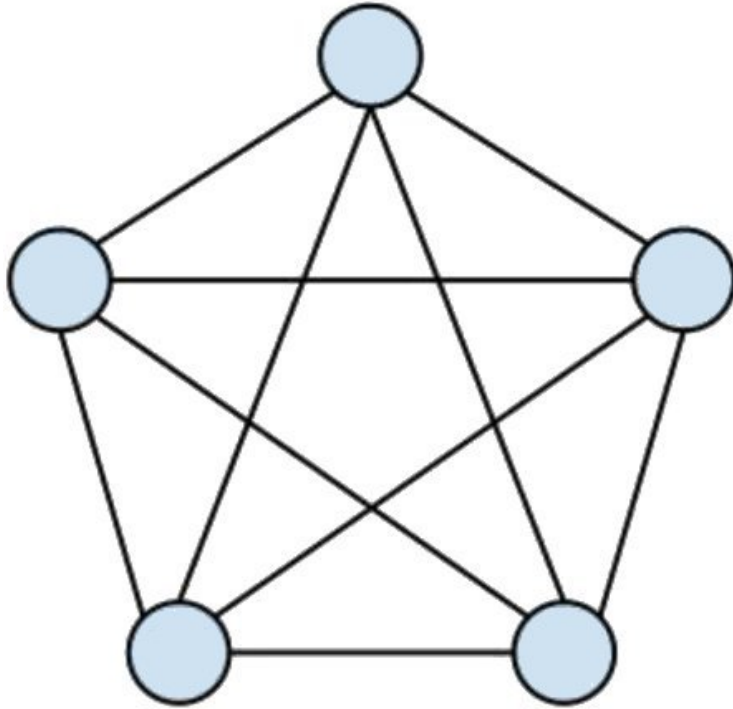Silicon Valley

The Impressionist painters

Renaissance Florence

Network effects hugely increase the value of research.
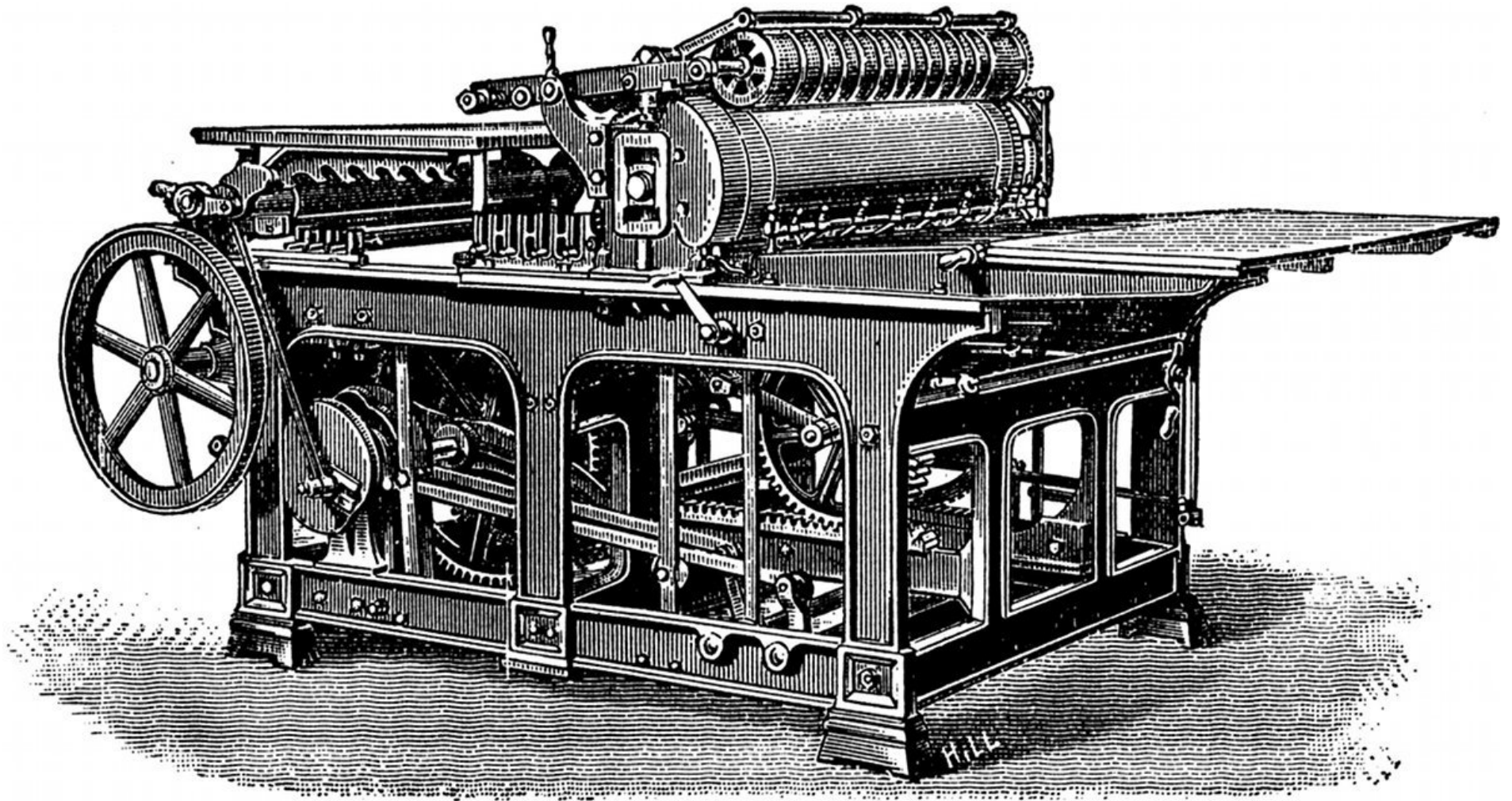

$$y \propto x^2$$

So the natural tendency is to share
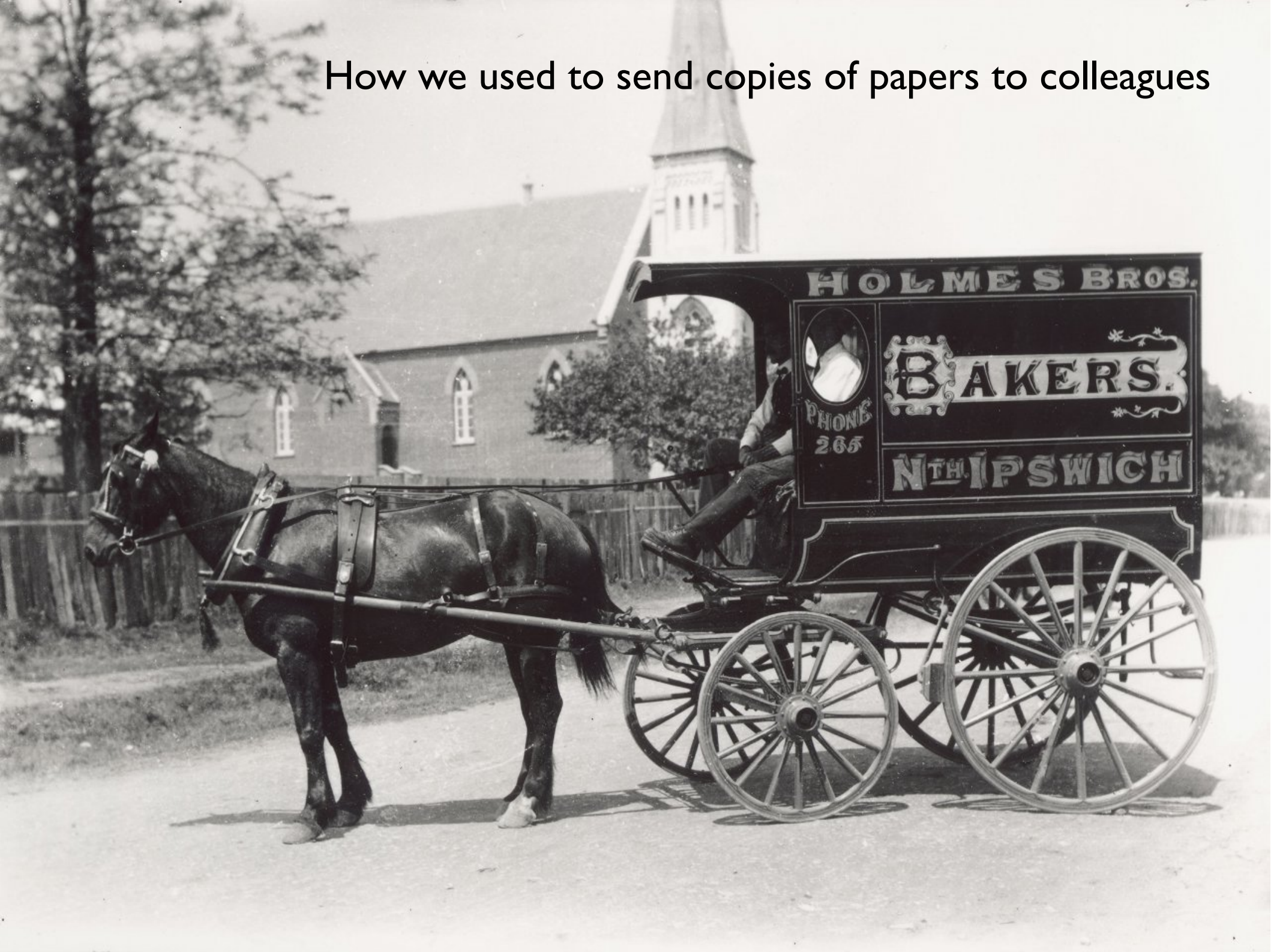
How we used to make copies of papers
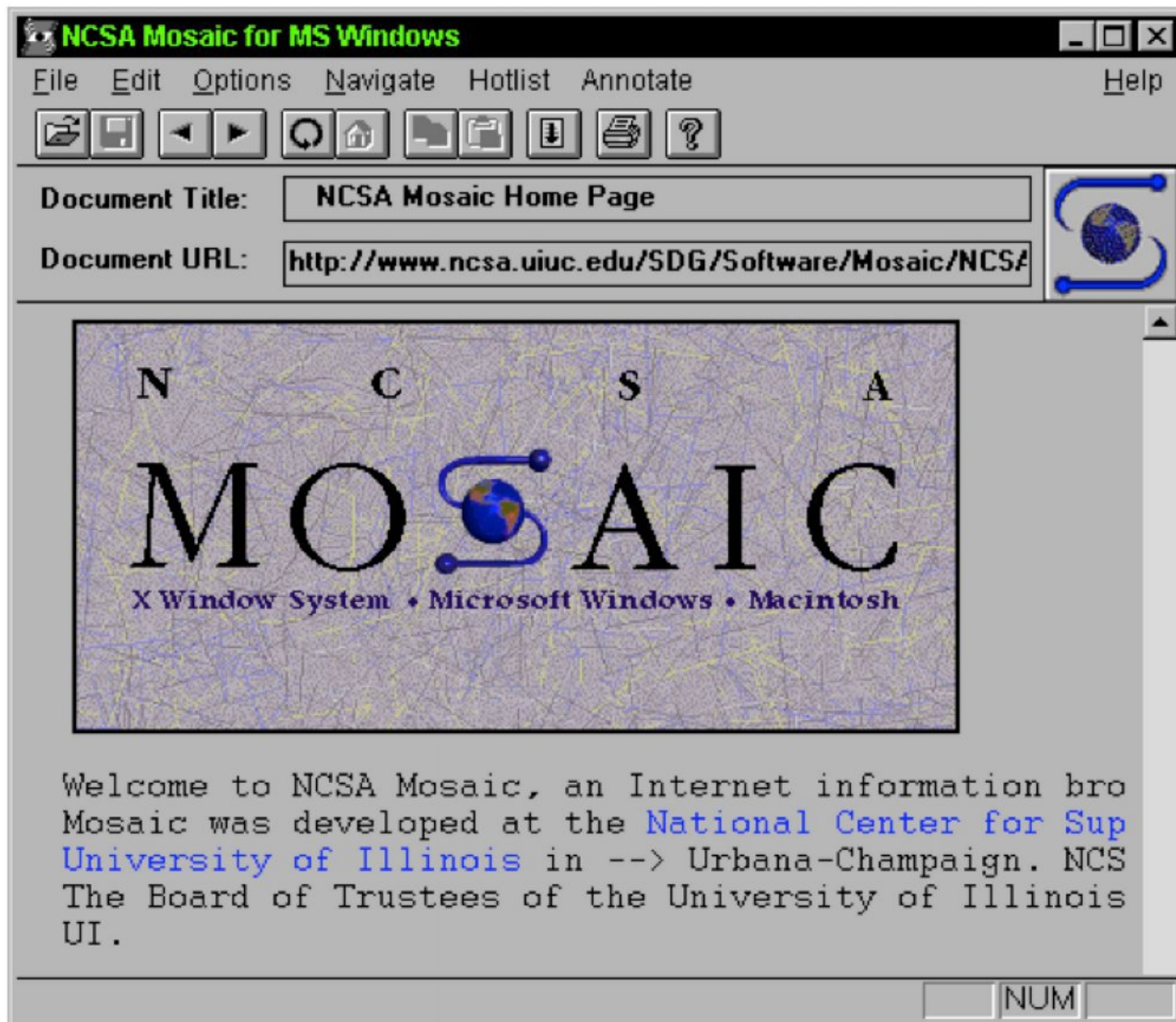
19th Century memory stick

How we used to send copies of papers to colleagues

The World Wide Web was invented to solve exactly this problem

The World Wide Web was invented to solve exactly this problem

```
Message-ID: <6484@cernvax.cern.ch>
Date: 6 Aug 91 14:56:20 GMT
From: timbl@info.cern.ch (Tim Berners-Lee)
Newsgroups: alt.hypertext
Subject: Re: Qualifiers on Hypertext links...

In article <64...@cernvax.cern.ch> I promised to post a short summary
of the WorldWideWeb project. Mail me with any queries.

                WorldWideWeb - Executive Summary

The WWW project merges the techniques of information retrieval and
hypertext to make an easy but powerful global information system.

The project started with the philosophy that much academic information
should be freely available to anyone. It aims to allow information
sharing within internationally dispersed teams, and the dissemination
of information by support groups.
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Here's why this is important

"Like all developments of new communication networks, SMS, fixed telephones, the telegraph, the railways, and writing itself, the internet doesn't just change *how well* we can do things, it qualitatively changes *what* we can do."

"At network scale the system *ensures* that resources get used in unexpected ways. At scale you can have serendipity by design, not by blind luck."
— Cameron Neylon.

Health care

Agriculture

Climate change

"Your job is NOT to get tenure! Your job is to change the world."
— Jon Foley.

"Publish" means "make public"

Publishing is meant to open up the world

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Short communication

Detecting counterfeit antimalarial tablets by near-infrared spectroscopy

Floyd E. Dowell[a], 👤 · ✉, Elizabeth B. Maghirang[a], Facundo M. Fernandez[b], Paul N. Newton[c, d], Michael D. Green[e]

[a] USDA ARS, Grain Marketing and Production Research Center, Engineering Research Unit, 1515 College Avenue, Manhattan, KS 66502, United States

[b] Georgia Institute of Technology, 901 Atlantic Drive NW, Atlanta, GA 30332-0400, United States

[c] Centre for Tropical Medicine, University of Oxford, Churchill Hospital, Oxford OX3 7LJ, UK

[d] Microbiology Laboratory, Mahosot Hospital, Vientiane, Lao PDR, UK

[e] Centers for Disease Control and Prevention, 1600 Clifton Road, Mailstop F12, Atlanta, GA 30333, United States

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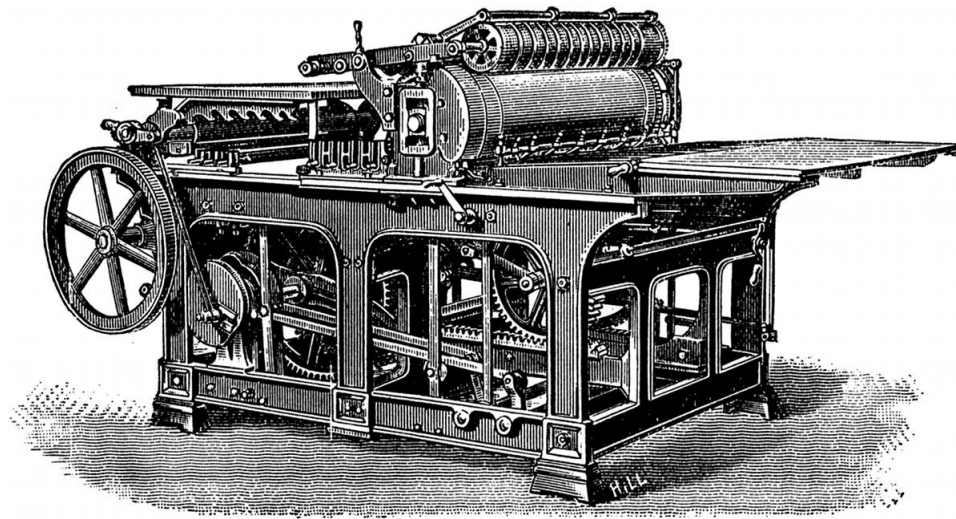Check access

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It's a tragedy when "publishing" actually locks the world up
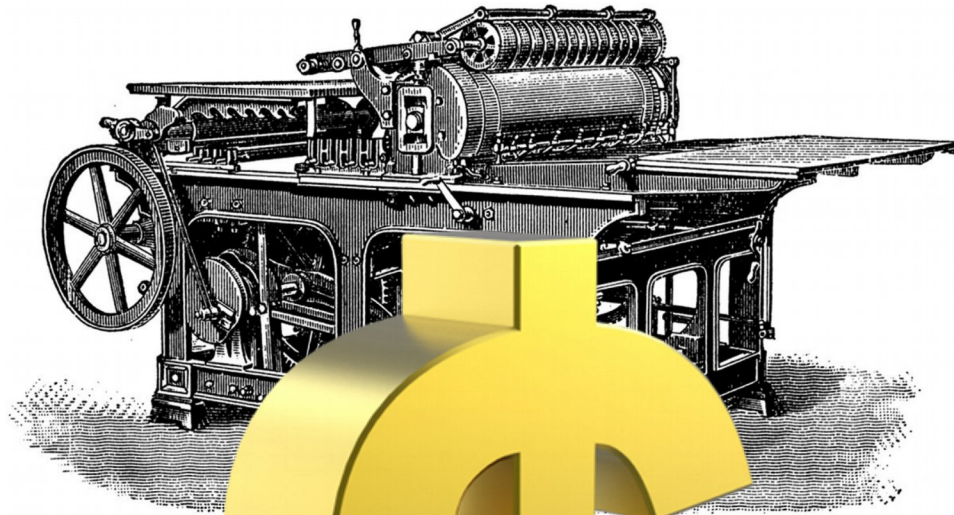
We're still doing publishing this way
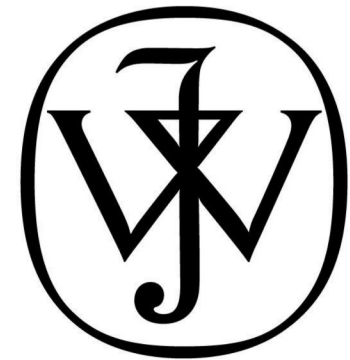
Why?

ELSEVIER

Taylor & Francis
Taylor & Francis Group

Springer

WILEY-
BLACKWELL

ELSEVIER

Taylor & Francis
Taylor & Francis Group

36%   **32%**

Profitability (2010)

34%   **42%**

Springer

WILEY-BLACKWELL

What is the cost to publishers of being open?

What is the cost to the world of *not* being open?

What is the cost to the world of not being open?

Remember the mission

We're not groping towards cost savings.

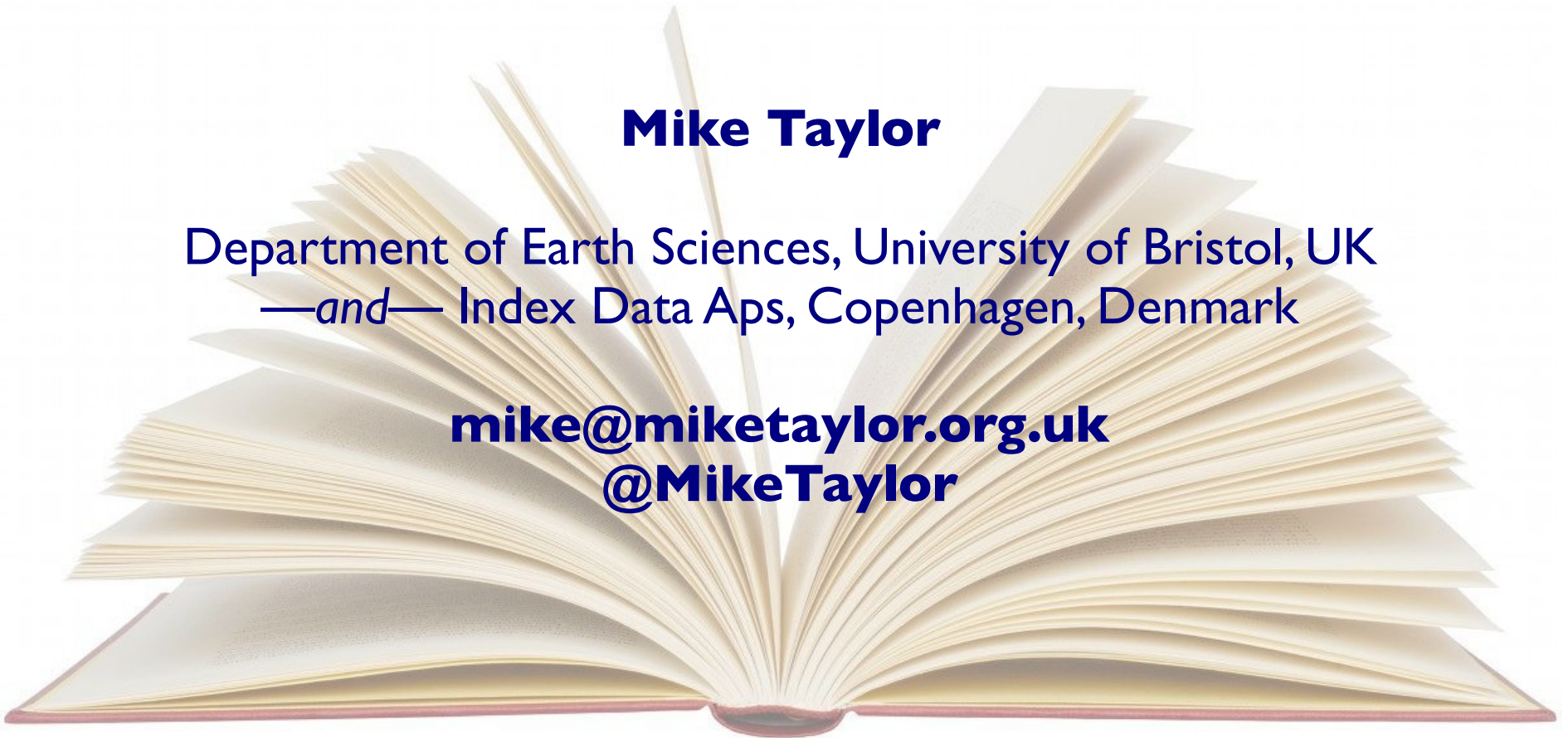We're transforming what research is and how it's used.

Should science always be open?

Mike Taylor

Department of Earth Sciences, University of Bristol, UK
—and— Index Data Aps, Copenhagen, Denmark

mike@miketaylor.org.uk
@MikeTaylor

Should science always be open?

Of *course* science should always be open!

Mike Taylor

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