

The Role of History in the Popularisation of Science

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Life and Physics

Jon Butterworth is a physics professor at University College London. He is a member of the UCL High Energy Physics group and works on the Atlas experiment at Cern's Large Hadron Collider. His book *Smashing Physics: The Inside Story of the Hunt for the Higgs* was published in May 2014

28 December 2017

After 40 years of studying the strong nuclear force, a revelation

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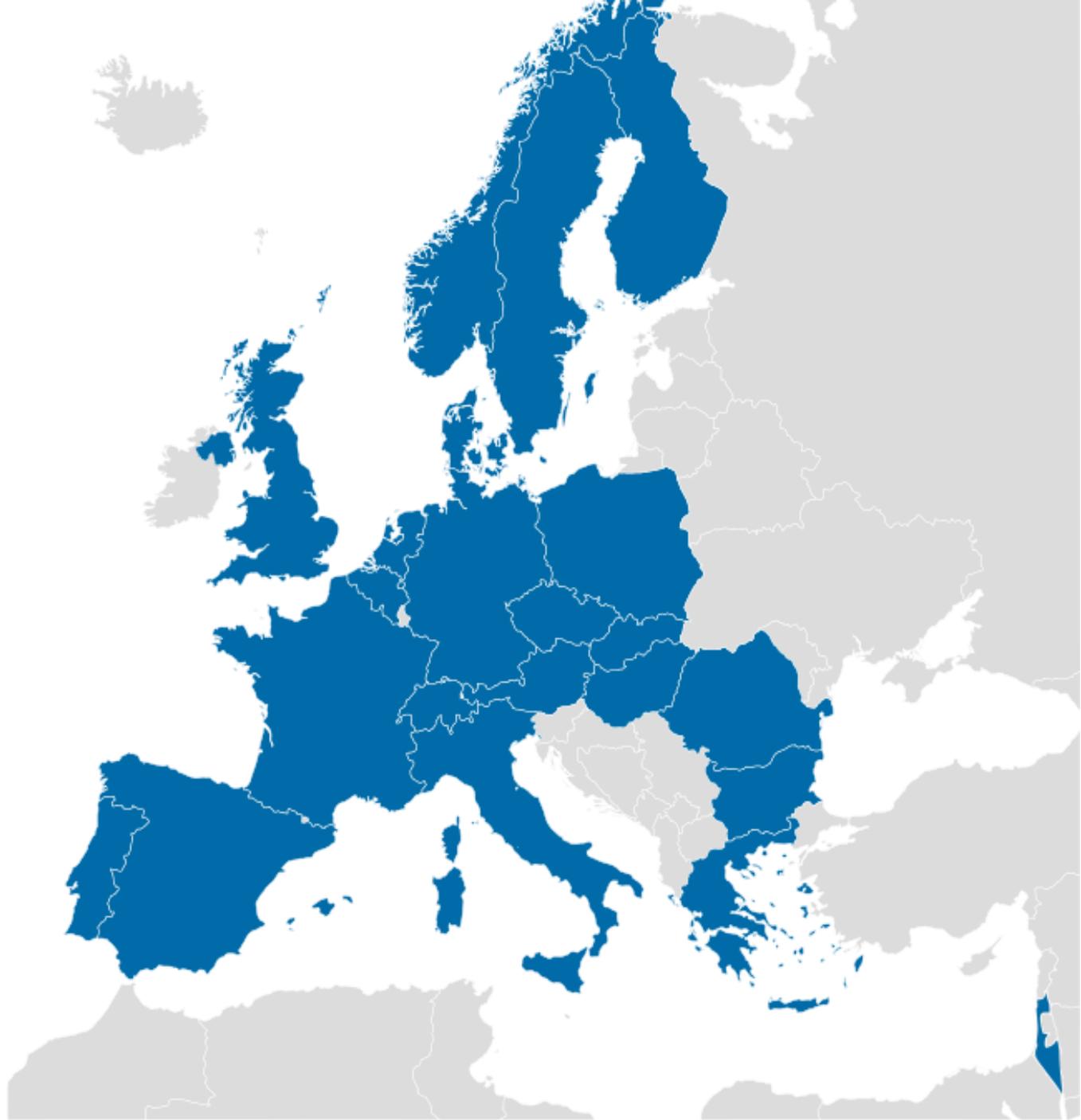
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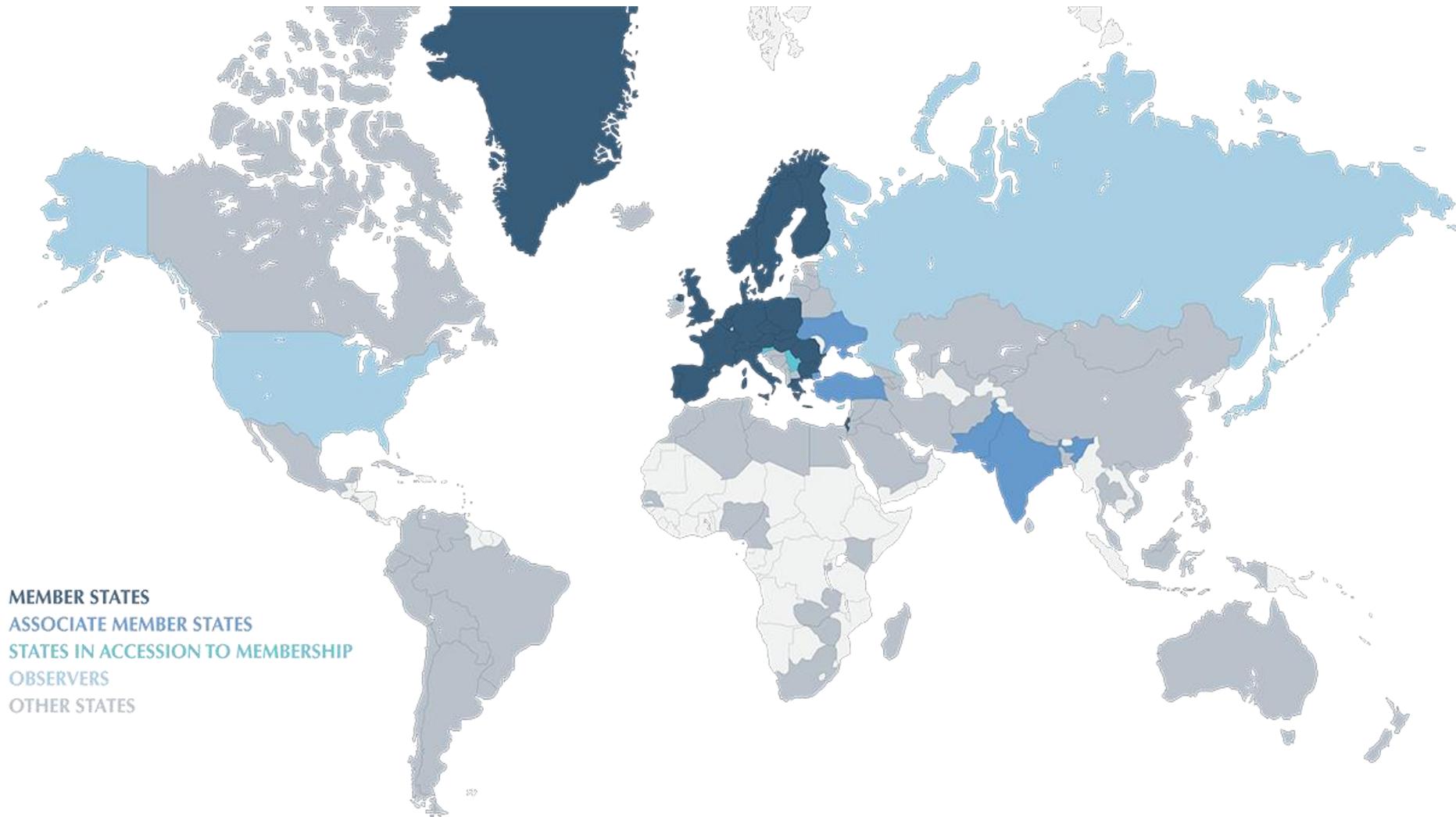
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MEMBER STATES
ASSOCIATE MEMBER STATES
STATES IN ACCESSION TO MEMBERSHIP
OBSERVERS
OTHER STATES



Phone a friend...

“First thought is to remember the distinction between history and heritage:

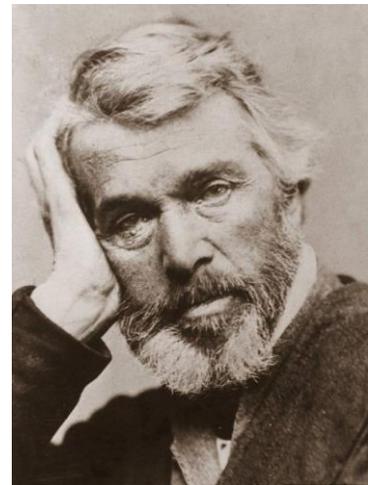
- History - what happened, as verified by evidence
- Heritage - what we mix and edit together as memory, nostalgia, want, emphasis, and gap filling for the purposes of delivering a message relevant to the present.

Both have their purposes and value, the latter more so.”

Joe Cain, Head of Science & Technology Studies, UCL

Negatives/Dangers

- Historical account is not necessarily the best way of explaining current knowledge
e.g. the SM
- Science is full of dead-ends which are often forgotten
 - “History of the winners”
- “The history of the world is but the biography of great men”
 - Thomas Carlyle



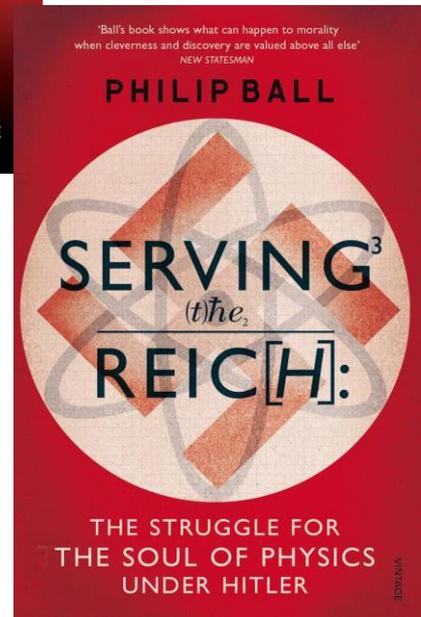
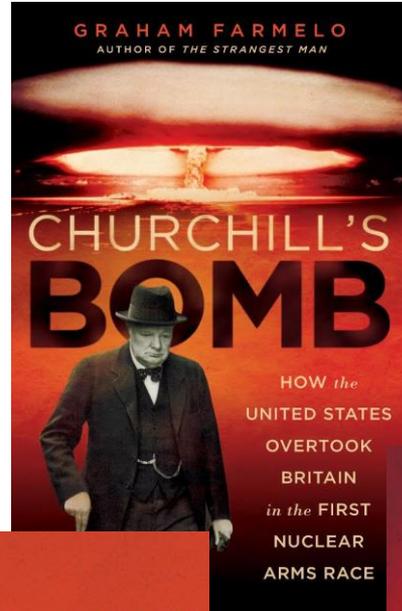
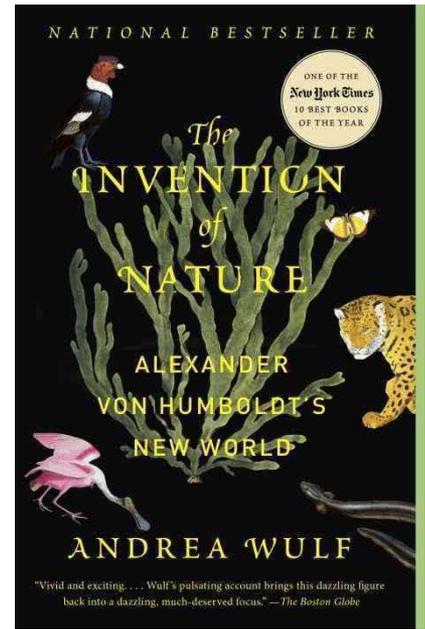
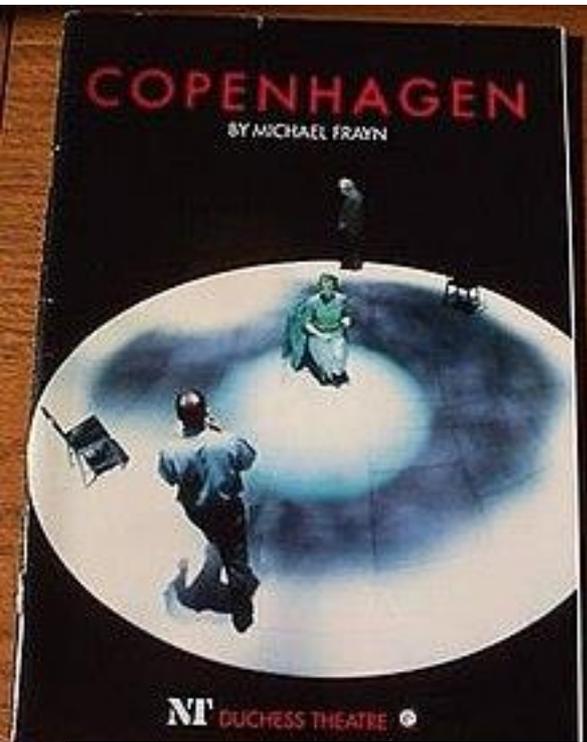
Positives

- History/heritage can place science in cultural context; how is science done, who does science, (why) is scientific knowledge different
- Illustrate the impact of science
- Stories, especially stories about exceptional people, are engaging
- Give a sense of the excitement of discovery, controversy, puzzlement...

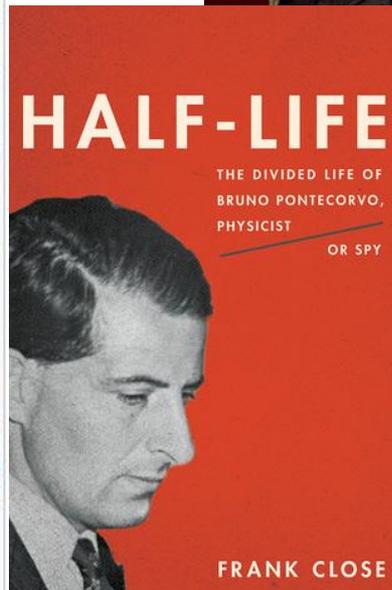
Stories we tell



Stories we tell



Neal Stephenson (center) makes use of historical figures as characters in *The Baroque Cycle*, such as Isaac Newton, Leibniz, Sophia of Hanover and William of Orange (counterclockwise from upper left)



Final

- Many times when history features, the focus is not on popularising science, or about scientific knowledge
- Many *are* about the processes of science. Being clear-sighted about the history (and hence sociology) of science can be a powerful educator
- A primarily “historical” approach can stimulate interest; acting as a gateway to more in-depth science for those who would not otherwise be engaged