

The word 'history' has two senses: what happened in the past, and what we say in the present about what happened in the past. 「歴史」という言葉には2つの意味がある：過去に起こったことという意味と過去に起こったことについての、私たちが現在までに採用するに至った解釈という意味である。In the first sense, history as past events is imagined as a country( stretched out 'behind' us)( which we could visit / if only we had a time-travel machine).前者の意味において、過去の出来事としての歴史は、私たちの「後方」にあって、はるか遠くまで伸びている国、タイムマシンさえあれば飛んでいける国、のようなものと理解されている。History as the surmises, interpretations and narratives (constructed today) is based on what those past events left for us —it survives in the form of documents, letters, diaries, ruins (unearthed by the archaeologist), artefacts(known or judged to be old). (後者の) 現在までに考えられてきた、推測や解釈や物語としての歴史は、そうした過去の出来事が私たちに残してくれたものからできあがっている。それは 文書、書簡、日記、(考古学者が発掘した) 遺跡、(歴史的なものとされ伝えられてきたか、そうした鑑定が出ている) 遺物、のような形で残っている。These are the residue of what has otherwise gone; historians study and arrange them, like pieces of an incomplete jigsaw puzzle, in order to fashion a coherent story. これらは、滅んでしまったものが残した断片なのである。歴史家はこれら(断片)を使って、完成することのないジグソーパズルに挑戦しているのである。筋書きがしっかりとした物語の輪郭だけでもなぞりたいのだ。History, in the sense of past time, is accessible only through history in the sense of today's incomplete jigsaw puzzle; we can get at it in no other way. 歴史は、過ぎ去った過去のことであるから、今日の、完成することのないジグソーパズルとしての歴史を採用しないことには、歴史を語ることはできない。ほかに歴史を語る方法などないのだ。

Among the indispensable resources of the historian are contemporary accounts of past events written by witnesses. 歴史家にとって、なくてはならない資料の中には、当時の目撃者たちによって書かれた、過去の出来事の記録がある。Of course these accounts have to be approached with scepticism; the historian must remember the human inclination to dramatise, enlarge a share or minimise a responsibility, write with bias, distort the facts whether deliberately or unconsciously, 'spin' the events or tell outright lies. もちろん、こうした記録を使うときには疑って見ることを忘れてはならない。大げさに表現する癖、自分の関与を強調する癖、さもなければ、自分の責任を他に転嫁する癖、偏見を持って書く癖、意識的であろうと無かろうと事実を歪曲する癖、出来事を「捏造する」癖、なんなら、真っ赤な嘘付く癖、のような習性を、人間がもっていることを歴史家は忘れてはならない。Even so, first-hand reports are valuable and important. とはいものの、実際に体験した人間による報告は貴重かつ重要である。Without diaries and reports, memoirs, newspapers and other contemporary records, historians would have a very hard if not impossible time. 日記、報告書、回想録、新聞、そして当時を記録したものが他にも全く残されていなければ、歴史家は手も足も出ないということはないだろうが、苦戦することは確かだ。This was what Thomas Carlyle had in mind when he defined history as 'a kind of distilled newspapers', though of course he thereby ignores the task of checking and interpretation that the historian uses to turn those records into an organised whole. これは、トーマス・カーライルが歴史を「一種の蒸留された新聞」と定義したときに彼が考えていたことでもある。ここでの

彼は、もちろん、歴史家がそうした記録をまとめた一つのものに仕上げるのに行った、検証と解釈という作業のことを見落としているわけだが。Moreover a great deal of the raw material used by historians consists of other less interesting factual records, such as lists of names, account books, legal documents, and the like; a far cry from, say, diary entries and personal letters, reportage and memoir. あえて付け加えれば、歴史家の用いる、膨大な量の資料は 上記の資料と異なり、名簿、帳簿、法律文書、あるいは、これらに類似したもの（これらは、たとえば、日記の文章、私信、報道記事、回想録とは全く異なる）のような余り興味を引かない事実の記録からなっている。

It is these latter accounts, though, that give the freshest and most vivid impression of the past, however much spin and bias they contain. しかし、今述べた資料こそが、たとえどんなに多くの歪曲や偏見を含んでいても、最も新鮮で、鮮烈な印象をもたらしてくれるのである。The documentary raw material of history has the immediacy of presence, the directness that characterises communication from someone who was there and felt and saw the things reported 文書形式の歴史資料には、臨場感、つまり、現場にいて、報告されている物事を見たり感じたりした人の語り口に、特有の生々しさがある。Any policeman will tell you that four witnesses at the scene of an accident will give four different stories of what happened; so we must accept that every contemporary account is one person's account 特定の個人による記述, filtered through ~ のフィルターを通した subjectivity and the often unreliable channel of memory. しばしば、脈絡が怪しい記憶 Nevertheless it is impossible not to be gripped, absorbed and often moved by letters, diaries and court records. そうであるにもかかわらず、手紙、日記、裁判記録を読んでいるうちに、それらに興味を持ったり、のめり込んだり、しばしば心を動かされたりすることがあってもおかしくはない。It is a quite different experience from reading novelised versions of the events, and even historical accounts of them. それは、史実を歴史小説で読むこととも、さらには歴史書で読むこととも、全く違った経験だからである The consciousness that the writer was there makes a big difference. 作者が現場にいると自覚していることが大きな違いを産むのだ。If, as you read, you recall the cynical view of Santayana that 'history is a pack of lies about events that never happened told by people who weren't there', you might not be able to resist a smile もし、あなたが、これらの文書を読んでいるときに、「歴史とは、起こってもいない出来事について、その場にいなかった人々によって語られた、嘘の寄せ集めである」というサンタヤーナのシニカルな見解を思い出すことがあれば、微笑まづにはいられないだろう。 He meant today's historians writing about the past; but the same applies to the creators of their resources. 彼は、過去について語る、現代の歴史家のことを言っているのだ。しかし、同じことが、歴史家が使う資料を作った人たちにも当てはまる。Some letters and diaries might indeed be a pack of lies, and their authors might not really have been where they claimed to have been -but it is reasonable to suppose that most are the authors' version of the truth. 実際、手紙や日記の中には、嘘からできあがっているものがあるかもしれないし、作者たちがいたと主張する、その場所に、彼らは本当はいなかったのかもしれない。しかし、そのほとんどは、作者なりの真実であると考えるほうが賢明だ。And the fact that they were written close to the described events makes them compelling. そして、（描写されている）出来事の間近で、それらは書かれたという事実こそが、それらを魅力的にしているのである。

The life of a physicist can be a lonely one. Imagine this: You sit down in an airplane, and the person next to you asks you what you do for a living. You reply that you're a physicist. From here, the conversation can go one of two ways. Nine times out of ten, the first thing out of his or her mouth is something along these lines: "Physics? I hated that class!"

You'll then spend the rest of the trip (or party, or elevator ride, or date) apologizing for the emotional trauma that physics has apparently inflicted on your friend. These random encounters often reveal an almost joyful contempt, reserved specifically for the fields of physical science and mathematics. "Oh, I'm terrible at algebra!" for example, is said in an almost boastful tone, in a way that "I barely even know how to read!" never would. But why?

Physics has a somewhat unfair reputation for being hard, impractical, and boring. Hard? Perhaps. Impractical? Definitely not. Indeed, when people try to "sell" physics to the public, it is almost always in terms of how it can be used to build bridges or launch rockets -that is, how physics is ultimately the foundation for engineering or chemistry.

But boring? That's where we really take issue. The problem, as we see it, (is that the practical side of physics is almost always put forward at the expense of the interesting side. Even folks with technical focuses such as engineering and computer science typically don't get past mechanics and electromagnetism to the really fun stuff. And that's a shame, because quite frankly there has been very little cutting-edge research done on pulleys in the past few years.

This hostility to physics seems to be deep-rooted, and makes it difficult to have discussions without discouraging an audience. In starting a scientific conversation with a "civilian," we promoters of physics often feel like we're trying to force people to eat their vegetables, and rationalize it in the same way. We never begin physics discussions with "It's fun!" but almost always with "It's necessary," which naturally drains all of the fun out of it.

In an era when new technologies are constantly emerging, scientific literacy should be fundamental. On the other hand, it isn't necessary that you have four extra years of college sciences to understand them. You don't need to have a detailed knowledge of exactly how the physics works to appreciate the

revolutions in quantum computing or cosmology. It is important, rather, to understand why these developments are significant, and how they will change technology and our lives.

And it's not simply that people need to understand a particular theory. Physics is the model inductive science, and by understanding how science proceeds, people are better able to make informed decisions about issues such as global warming. The hope is that we are more prepared to refute people who disagree with us by offering facts rather than simply insisting "No."

The United States, in particular, has an immense problem with science and mathematics education, with high school students performing well below average compared to those in other developed countries. But we cannot limit ourselves to only blaming teenagers, or their teachers. The problem is far-reaching, affecting all walks of life.