

Purveyors of truth

Harry Collins

A Social History of Truth: Civility and Science in Seventeenth-Century England. By Steven Shapin. University of Chicago Press: 1994. Pp. 483. \$34.50, £23.95.

STEVEN Shapin is one of the foremost exponents of what has become known as 'social studies of science' or 'science studies'. The field blends history, philosophy and sociology of science into a critical understanding of how scientific knowledge is made. Shapin pioneered the combination of history and sociology; his example is increasingly influential. *A Social History of Truth* is Shapin at his best. It is a detailed and definitive historical study of Robert Boyle's establishment of experimental science, informed by an acute sociological sensibility. It is a scholarly *tour de force* that never loses sight of its theoretical purpose.

Shapin first reminds us that all societies rest on truth-telling and its correlate, trust. If people will as easily tell a lie as a truth, then nothing they say or do has meaning or consistency and there can be no social order. Samuel Johnson said that even the social order of Hell rests on trust. Scientific society is in no way special in this respect except in that it conceals its foundations. Second, Shapin argues that scientists must, perforce, work out ways of managing trust; they must work out whom to trust and whom not to trust. Third, in the bulk of the book, Shapin shows how Boyle manipulated the resources at his disposal — his gentlemanly standing — so he and other gentlemen would be seen as persons of a sort whose observations of natural phenomena should be believed.

Each element of the argument makes compelling reading. Shapin writes fluently, melding old and new sources and authorities seamlessly into the narrative. Like Robert Boyle, his control of detail is as masterful as his analyses are penetrating. Gentlemanly credibility rested on four qualities: gentlemen were taken to be competent sensory agents by virtue of their blood and their upbringing; gentlemen had to tell the truth to safeguard their reputations within a wide social circle; gentlemen were Christians; finally, gentlemen had the means to be free disinterested observers, unbound to any person or mundane end. The Royal Society's motto is *Nullius in verba* (take no one's word for it) but the word of gentlemen came to be accepted without strain. The mores of gentlemanly disagreement are

exposed and the parallels between the etiquette of 'giving the lie', which would lead to a duel, and challenging a claim about a matter of fact are drawn out. Shapin shows how philosophical violence was avoided by the use of what we would now call 'subhypotheses', which could

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Gentlemanly credibility — Robert Boyle (1627–1691).

save everyone's honour. Did a captain witness too buoyant an iceberg? Perhaps it was full of air, or the water was especially cold and dense!

Shapin shows that gentlemen might well pass the responsibility of experimentation and observation to assistants of lowly birth, but these people had no licence to speak the truth or to own knowledge; when their findings were uttered by gentlemen such as Boyle, however, the reports were credited with veracity. Technicians gained the 'invisible' status in the conduct of experiment that they have to this day.

In the epilogue, "The Way We Live Now", Shapin says that while today's sources of credibility may be different, the need for managing trust remains the same. The sheer scale of science suggests we must nowadays give our credibility to certified institutions rather than to individuals, but Shapin argues that science is still done in 'core-sets' where specialists know each other personally and make

their judgements of credibility on the basis of private assessments of competence and on local reputation. "Scientists", he concludes, "know so much about the natural world by knowing so much about whom they can trust."

That Shapin's account of science is correct is hard to doubt. We know that despite science's most prevalent image of itself, experiments can be repeated only by those with the appropriate skill; to see a disputed result tested requires that one *knows* who has the right skill, and this cannot be measured; so witnessing an experiment may tell one much or little, depending on whether the demonstrator is an honest and competent scientist

Royal Society

(and we can never be sure of even our own competence) or a dupe, dissembler or magician. In the light of Shapin's analysis we can see some of the recent fashion for 'vigilante-style' exposure of scientific heretics as a misunderstanding of the way the thread of trust holds science together (pulling too hard threatens to destroy the whole garment). We can see why the sometime-chemist and former British prime minister Margaret Thatcher, accepting the self-image of her old discipline, could think that self-interest and accountability were a substitute for truth, trust and society.

Shapin spends time defending the title of his book and it has to be said that it is a little 'cheeky'. That there cannot be social relations without truth and trust is a matter of 'acting truly'; it is a matter of constancy and reliability irrespective of what we believe. A history of truth would be about the historical tension between narrow self-interest and the development of

human societies. (It is worth noting that ants, bees and computers manage things differently.) There is no social history of truth, for a history of truth is a history of society. Trust may be everywhere necessary, but normal life and 'normal science' do not need trust management; trust management is Shapin's topic. In other words, trust management is to truth as good looks are to sex; good looks are not a condition of reproduction (see p. 193, where the ineradicable role of trust is taken to imply the necessity of an answer to the question 'whom to trust?'). Thanks to Shapin, we now understand how the managed plausibility of gentlemen in seventeenth-century society gave rise to our beliefs about what is in the world. Anyone who wants to understand the origins and meaning of modern science should read this book. □

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