Science Facts v. Folk Facts

LONG ABSTRACT

POPULARISATIONS SEEK TO DISSEMINATE EXPERT KNOWLEDGE AMONG inexpert communities, and in so doing, to enable those communities to understand a little better why experts are useful and what experts are paid to do. Popularisation is necessary because expert knowledge in the "raw" is inaccessible to all but the experts, and popularisation is desirable because expert knowledge is desirable – a desirability predicated upon the reasonable-sounding assumption that (new) expert knowledge is preferable to (existing) folk knowledge. Popularisations, then, aim to close the distance between what scientists believe and what non-scientists believe, and what this usually entails is a replacement of non-scientific beliefs with scientific beliefs. As the domain of what scientists consider their legitimate subject matter gradually expands to include fields previously held to be either unreachable by scientific investigative techniques or already in the possession of some other, non-scientific discipline, conflicts between scientific and non-scientific forms of knowledge are occurring with increasing frequency.

In order to claim to have successfully explained a phenomenon, scientists don't require or anticipate a good fit between their new theory and the beliefs people may already have about that phenomenon. This disregard for traditional belief is one of the sources of science's epistemic prestige, but it also contributes to the unease many people have regarding the power and reach of scientific thinking. People feel uneasy because what to some looks like an heroic intellectual iconoclasm, to others looks like an aggressive attempt to reduce all knowledge to scientific knowledge. Even the language available for talking about this process of "conversion" suggests superannuation: all that hasn't yet attained scientific status is "protoscientific" or "prescientific." The matriculation from folk belief to scientific belief is made to seem both inevitable and desirable. And as "scientific" has become an honorific, so the belief systems being replaced have come to seem increasingly parochial: prescientific theories are usually called "folk" theories. "Folk beliefs" – or "folk theories" – are the beliefs (or theories) people already hold about a subject before they have been

properly educated. Obviously, people don't describe their *own* beliefs as folk beliefs – it's a term that a discipline gives to any areas of overlap between its professional domain and "common knowledge." Especially over the past century, folk-theories and commonsense notions have been proved wrong with such regularity that truth and plausibility have come to seem irreconcilable, opposing notions. This strangeness can be a resource for those trying to popularise physics and cosmology, and so the quantum theory will be marketed on the very incomprehensibility of its conclusions. The radical novelty of much of popular cosmology – the so-called "gee-whiz" factor – is precisely its selling point. This works in the favour of those sciences whose subject matter lies some way beyond personal experience.

But when the subject matter of a scientific enquiry overlaps with an area in which the average citizen has personal experience – as is often the case with theories of mind and sociology – then the encroaching interests of science might face special difficulties. Psychologists and sociologists routinely claim to possess expert knowledge about issues which citizens feel they have a working knowledge. These two "rival" accounts do not simply coexist: rather, expert knowledge trumps inexpert experience. Of course, no one likes to be told that what they believe is wrong, and the colonisation and subsequent "privatisation" of what had previously been the preserve of "common knowledge" represents an intrusion of academic thought into existing (and functionally adequate) belief systems. This is likely to be experienced as unwelcome, and may result in widening the very gap that popularisation had sought to close-up. As these new "facts" travel into the public domain, clashes with existing belief systems seem inevitable. When they occur, how do popularisations deal with these conflicts?

Many popularisers meet them head on, and speak in terms of the "updating" or "replacement" of existing beliefs, whereas others – though no less colonial in intent – are more subtle in the means by which they propose to subsume folk belief. The focus here is on how popular science writers deal with any conflicts that emerge in the process of colonising the modern mind, paying especial attention to the books of evolutionary psychologist and psycholinguist Steven Pinker as an exemplary case of how a readership's existing beliefs can be effectively employed by popular science writers as a persuasive and even evidential resource. Pinker's use of anecdotes, jokes, cartoons, and popular music show that commonsense folk beliefs are not always an obstacle to science popularisation, and that the process of entirely disabling folk belief

is not always either necessary nor effective. In cases where folk beliefs overlap with the scientific view – as with the evolutionary psychologists, the folk beliefs become a valuable resource for the popularisation of scientific claims.

Pinker's intention is to explain that (and how) our commonsense folk beliefs are grounded in what he holds to be a scientific truth. This process converts folk psychology to scientific psychology by slipping a new causal foundation underneath the existing belief. What might have been dismissed as a folk belief is shown to have been a fact all along. So, that we *already* agree that men will tend to seek more sexual partners than women, or that identical twins are similar in more than just physical appearance, is now made to seem evidence not simply for the reliability of our folk theories, but rather, for the *accuracy* of evolutionary psychology's "predictions." In other words, by holding these true-folk-beliefs, we find ourselves to have been of Darwin's party without knowing it. (Where the theories do not overlap, of course, or where they contradict, they can still be dismissed as "faulty" intuitions – the "folk fact" being a subset of folk beliefs.)

For Pinker, and for evolutionary psychologists generally, folk beliefs are too valuable a resource to be done away altogether: Evolutionary psychology cannot afford to abandon folk beliefs because many of those folk beliefs provide the empirical grounds for the arguments they want to make. To put it another way: these true-folk-beliefs (and that we hold these beliefs) are substantive evidence for their conclusions about human nature. So rather than simply pushing aside the folk belief, successful popularisations may be those which are able to selectively employ them. Therefore, science popularisation is by no means universally hostile to folk belief, and the manner in which a popularisation treats commonsense folk belief will depend on the nature of the science being popularised. As we can see with the case of Pinker, sometimes, it can be a valuable resource for the dissemination of scientific facts.