

## The fruitless search for exact knowledge

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Donald Rumsfeld made the distinction between known unknowns – the things we know we do not know – and unknown unknowns – the things we do not know we do not know. Mr Rumsfeld's musings won awards for gobbledygook. Yet this remark was one of the wisest things the former US defence secretary said, although the competition is not intense. The distinction between known and unknown unknowns aptly expresses the distinction between risk and uncertainty: a distinction emphasised almost a century ago by Frank Knight and John Maynard Keynes and largely elided in the years that followed.

The questions "what will interest rates be in the last quarter of next year?" and "who will win the US presidential election in 2008?" describe known unknowns. We do not know the answer, but we know the range of possible answers. In December 2008 we will know the result.

But questions such as "what will be the outcome of the Iraq war?", "what will be the economic consequences of China's rise?", "how will economic and political systems deal with climate change?" are open-ended. We cannot fully describe the range of outcomes.

We can attempt to transform open-ended questions into more narrowly defined ones. "How many US troops will be in Iraq in 2010?" "What will be China's gross domestic product, or the average world temperature, in 2025?" But even if it were possible to make such predictions – and it is not – the outcomes would not tell people what they really want to know.

Our knowledge is more imperfect still. People who are today concerned about the Iraq war, China's rise or climate change would not have been worrying about these issues 20 years ago. They would have been worrying instead about the cold war, Japan's economic pre-eminence, and the effects of Aids. Such uncertainties have been largely resolved, although in ways that few people expected. But the main point is not that we mostly fail to foresee the answers. It is that we mostly fail to foresee the relevant questions. No one predicted the catastrophes of the 20th century – the stalemate of the first world war, the influenza pandemic, the murder of millions by deranged dictators – until shortly before they happened. The same was true of transforming political and economic developments.

Looking at the future with the eyes of the present, we overestimate the permanence of current trends and fail to perceive incipient issues. That failure is inevitable. If you could have predicted the functions and uses of the personal computer, you would already have taken the main steps towards inventing it. To describe a future political movement or economic theory or line of philosophical thought is to bring it into existence.

A new book\* by Roman Frydman and Michael Goldberg coins the phrase "imperfect knowledge economics" to describe this world of fundamental uncertainty. They use the systematic failure of attempts to analyse exchange rate swings to illustrate the hopelessness of a search for economic explanations that transcend time and place. Frequent discontinuities and transitions in the ways market participants view events mean that economic models, like historical narratives, are context specific. The search for "sharp prediction" – the mantra of the modern scientific economist who seeks to replicate the successes of physics for social science – is doomed to failure.

The best that economists and their clients can do is identify qualitative regularities and patterns in events – as historians do – and, like historians, they can say a lot when they accept their inability to make "sharp predictions". We will never know what an exchange rate will be two years from now, or what the weather in England will be on July 15 next year, but we can look to purchasing power and capital flows for guidance, just as we recognise that on that day it will not snow and may rain. In a world of imperfect knowledge and irresolvable uncertainty – of unknown unknowns – the quest for exact knowledge gets in the way of useful knowledge.

*\*Imperfect Knowledge Economics by Roman Frydman and Michael D. Goldberg, Princeton, 2007*

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