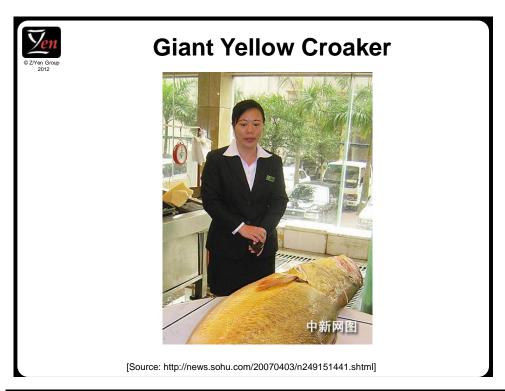
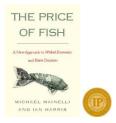


In 2008 three fishermen, well one was a housewife, landed an 85 kilogram, 1.68 meter, Bahaba fish after a 90 minute fight. This Bahaba fish is colloquially called a giant yellow croaker.



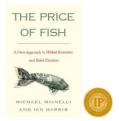


They thought they hit the jackpot when they sold the fish to a local fish buyer for HK\$20,000, about £1,300. But the fish buyer sold the massive fish, which is highly prized for its swim bladder, for HK\$580,000, about £38,000, to a local restaurant. But then the restaurant sold the fish to a mainland Chinese buyer for HK\$1,000,000, about £65,000. The three fishermen clearly undervalued their catch. Despite our modernity, we don't know the price of fish. There's a dark, sad coda to this story, taking the American slang meaning of "croak", i.e. "to die". The giant yellow croaker is critically endangered, nearly extinct, and few survive to maturity given overfishing.

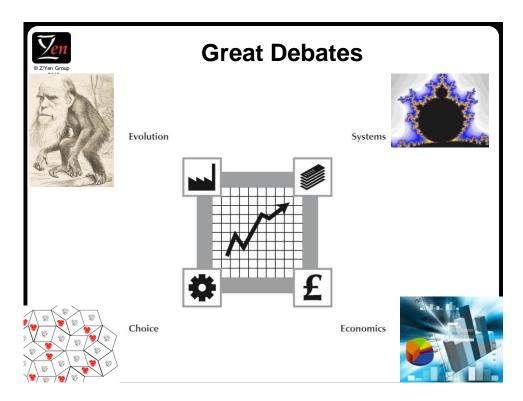


We live in a strange world where, after millennia, we still don't know the price of fish. If we knew the correct price of fish, one-third of the world's fisheries wouldn't have collapsed and we wouldn't be projecting total global fisheries collapse within the next fifty years while the seas grow increasingly acidic.

So what is "The Price of Fish"? Douglas Adams quips, "You can tune a guitar, but you can't tuna fish. Unless of course, you play bass." But can you price a fish? Well, if you believe in our big themes of population growth and resource scarcity, the price has been too low for too long. If you're a pessimist, you terrifyingly believe the demand will shrink to empty. If you're an optimist, then you believe the supply and demand might just be half full. Right now I suggest that you be an optimist; pessimism is for better times.

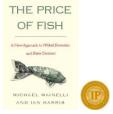


In <u>The Price of Fish</u>, we try to make sense of the way the world really works. The physicist David Deutsch remembers the wonder of being told as a small child "that in ancient times it was still possible for a very learned person to know everything that was known." Deutsch contends that the four key theories for understanding the universe are quantum physics, epistemology, the theory of computation and the theory of evolution. Deutsch prompted an excellent, similar question for us: what should a learned person know in order to know everything that is known about Commerce?



There are some strong parallels in Commerce with Deutsch's answer for the physical world. While there is as yet no grand unified theory of commerce, and may never be, we can still embark on a journey to explore the tools and ideas that can help society make better decisions about how to live successfully over long periods on a shrinking planet. We suggest four basic areas of knowledge, or four streams, that we believe need to be included and integrated in order to understand and explain everything that has to do with the price of fish:

- choice: understanding how people develop knowledge and biases and how these perceptions affect behaviour. Normative aspects of choice such as fairness, trust and ethics feature in this stream;
- economics: pondering models of exchange between people and expanding the debate about the role of government and social institutions;

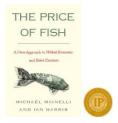


- systems: in the world of commercial and political economics, systems thinking encourages us to break down complex systems into sub-systems with interlinked information loops of feed-forward and feed-back;
- evolution: in particular innovation and competitive selection. This stream highlights wicked problems that can't be solved, just evolved towards incomplete solutions, such as climate change.

There is an old financial markets story about how fish trading works. Back in the early 1900's, on rumours that sardines had disappeared from their traditional waters in Monterey, California, commodity traders started to bid up the price of tinned sardines; a vibrant market ensued and the price of a tin of sardines soared. A classic bubble. This fervent trading went on for some time. One day after some successful trade a buyer chose to treat himself to an expensive snack; he actually opened a tin and ate the sardines. They tasted awful and made him feel ill, so the buyer called the seller and told him the sardines were no good. The seller said, 'You don't understand. Those are not eating sardines, they are trading sardines.' Ultimately, sardines off California were fished out by the 1950s.



This story again illustrates our frequent ignorance about the price of fish. Had people really known the price of fish over space and time, they wouldn't have overfished the North Sea, the Grand Banks of Newfoundland and other fishing stocks including Monterey's.

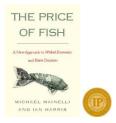


We would describe overfishing with a phrase introduced in the 1970's by Horst Rittel and Melvin Webber, a "wicked problem". Wicked problems are not the comparatively tame problems most decision theorists love, for example chess, game theory or puzzle solving. The real world is messy, circular and aggressive. According to Laurence J Peter of The Peter Principle fame, "Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them." Yet, in combination, the four streams of knowledge can improve both understanding and decision-making.

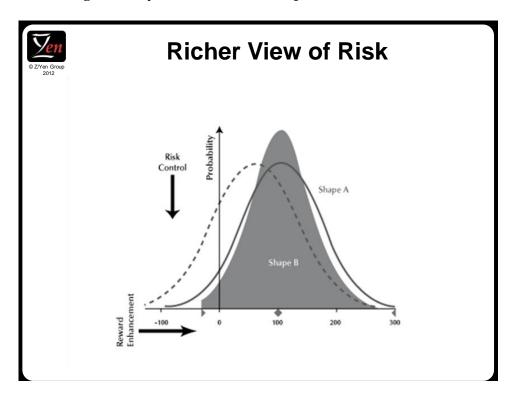


As an example, we worked with The Marine Stewardship Council (MSC) in its formative years. In the early days of the MSC it seemed easier to encourage consumers to choose sustainable fish than it was to encourage fisheries to participate.

In 2000 the MSC asked us to help them grapple with the question, "is it possible to prove the value of certification to the fisheries who ultimately have to pay for the certification process and meet the cost of implementing any changes required in order to become certified". We examined the potential financial impact of the reduced volatility in stocks that might arise from sustainable fisheries practice, in order to prove the financial case for industry participation in the scheme. Apart from learning more about Alaskan salmon than we expect you want to know, our study did prove that there should be substantial economic benefit, through price stability, when fisheries engage in sustainable fishing practices, regardless of any

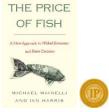


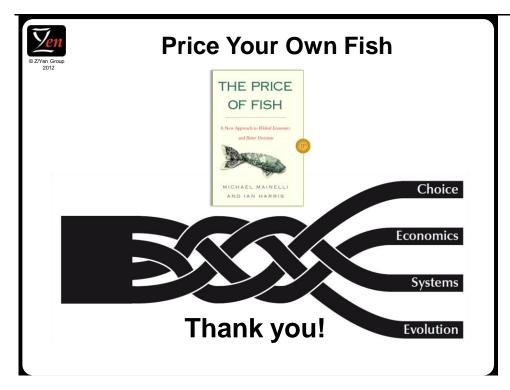
additional benefit that might accrue through consumer choice. That substantial benefit should more than outweigh the costs of certification. Subsequently, MSC standards have increasingly been deployed in major fisheries worldwide. Much of the fishing industry has evolved to adopt the standards.



The MSC example illustrates how the four streams: choice, economics, systems and evolution are intertwined. The MSC harnessed the power of consumer choice for positive change. Economics, both practical and theoretical, helped decisions on costing, pricing and calculating value. The fishing system was improved by distinguishing eating fish from exploited fish. Finally, the entire standards system was designed to evolve, using competition to improve specifications and certification firms, as well as to have fishermen keep each other in check.

The commercial and financial world is replete with wicked problems of sustainability or long-term viability, from natural resource destruction to pollution to poor infrastructure to financial crises. While people like to think that economies, commercial organisations and financial systems are 'built to last', creating stable, enduring value has been elusive.





One meaning of the phrase "what has that got to do with the price of fish" can be expressed as "what's in it for me?" or "how does the matter you have described affect me?". The diverse topics covered in this book affect everyone profoundly, as individuals, as organisations and as society. It is all too easy to fall into the traps of the Monterey sardine traders or Newfoundland fisheries; to lose sight of the real purpose of commerce.

Understanding and integrating the four streams of real commerce can enable better understanding of these vital matters, and therefore better decision-making. If a grand unified theory of commerce ever does emerge, we are confident that these four streams will feature strongly in it. Understanding the <u>price of fish</u> enables people to make sense of the way the world really works and do something to improve it.

Thank you.