

Evaluating Tradeoffs – The Need for Open Debate

a report by

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One of the great advantages of learning to play chess is that it so firmly places decision-making into the context of trade-offs. Any move allows a piece to cover territory that was formerly precluded; but any move likewise relinquishes control of some previous positions. The gains and losses in position are never symmetric nor zero-sum: games do progress from first move to final outcomes, whether win, loss or draw. Victory goes to the player who makes the best trade-offs.

Yet chess has agreed-on outcomes, established rules, and even recognised strategies. Tournaments do not need to start by laboriously re-negotiating these each time. By and large players sit down to play, though the strategies and tactics are certainly not confined to the pieces on the board! Chess is usually, after all, a human game.

Yet ground rules, tactics, outcomes and even rewards are much less clear when we debate in the broader realms of human decisions and consequences. Life possesses a range of ambiguity that is so great that both sides of a debate often claim victory, with each side chalking up imaginary points on their own fictional scoreboards. Political

Darwin's theories were true or unlikely often depended as much on their political convictions (or whether social change and political reform was good or bad), as it did on their assessment of the scientific merits of evolution.

The current issue, though, is not about chess tournaments nor even evolution, at least not in its biological sense. The decision is whether a society or region will adopt, or avoid, nuclear power, or whether it will play a greater, or lesser, part in our human future.

But what is clear is that this is not just a question of saying yes or no to nuclear energy. It is a question of trade-offs. In the real world of finite budgets and limited resources, the investments required for nuclear energy to work well will be to preclude other options. But, similarly, to make major investments in wind or solar energy is to preclude at least some of the other avenues that could have been explored through aggressive conservation or clean coal technologies. Each "move" opens or closes new avenues of choice and development, but what a thermodynamic understanding makes very clear is that we will not get this moment

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debate and popular media coverage are often staged, not for the technical and economic grounds that appear at first glance to be contested, but for quite different goals. These unstated but more honest goals can at times be obvious, as when politicians seek votes or newspapers readership, but at other times the real motives are more illusive. Some historians of science have argued, for example, that even at the start a person's convictions of whether

of choice back – the arrow of time means that the decisions we make, or fail to make, not only matter, but will continue to have implications for those who come after.

What is perhaps clear to all is this: the stakes are high, the rules themselves are debated, the field of play is ambiguous, the key opponents are highly polarised, and even those who cover the debate

and make the decisions often have mixed motives! In the meantime, for each of us, a thousand pressing distractions, or 100 neglected emails, push themselves onto our mind, overwhelming any possibility of quiet reflection or properly considered action. Viewed in such a way, is there any hope at all for progress or consensus?

Perhaps surprisingly, I believe there is more cause to hope than is sometimes credited. Many people are progressively concerned with the state of the planet, and appear more urgently motivated to act to preserve what is beautiful, worthwhile and good, and more concerned than ever about the state of the world we will pass on to our children and grandchildren. Do any but a few madmen want a legacy of destruction and exploitation? Even if we have forgotten the proverb, its good sense is still immediately recognised by most – if you wish to be remembered, you do not build a monument, you dig a well.

Certainly, even while debating the benefits or dangers of nuclear power, both sides are overwhelmingly preoccupied with the current and future state of the world. There is no moral or ethical split on this debate, with the ‘good guys’ and ‘bad guys’ exclusively on one side or the other. People on both sides are concerned with material and economic forces, and know the power of these choices to bring both benefits and harm. What the sides do not agree on is the detailed assessment of opportunity costs, the likelihood of the associated risks, nor what new positions the current moves will permit or preclude.

Perhaps we cannot expect instant consensus on such matters, but what we can work towards is

help to level the playing field between immediate and long-term issues, so we need to use these tools, to debate their general merits and their specific implementation, not just of nuclear energy, but for all forms of energy usage and transformation.

But certainly there is also a sense of urgency. In chess, one of the agreed-on rules is typically that if a player takes too long to decide, the game is forfeit. There is a pressing need not only for long-term plans, but for short-term implementation of those plans, and there are many issues that must be addressed. We urgently need, for example, to assess not only current household energy use, but what that use can be reduced to, and the expeditious steps of getting from where we are to where we need to be. And in this, too, we need balance and debate, for premature obsolescence, which is often simply the price of impatience, can be a true and considerable cost.

What is needed – now and not later – is debate that is open, vigorous and charged, and yet respectful of differences. In chess, it is possible to respect the other contestants, even while trying to win the tournament. Indeed, is it possible to win if one does not deeply respect and understand the competition? Nor can you play at all if you do not risk losing.

There is another proverb that is worth remembering, for it captures well the mental make-up and understanding that must be part of anyone who would play chess, or of anyone who would make a difficult decision. Our first impulse is not always the best, since “the first to present his case seems right, till another comes forward and questions him” (Proverbs 18:17). Various

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more open debate and perhaps to present these arguments to an agreed on jury. One of the incredible things of being human is the ability to change our mind when presented with new data or a new perspective. We are developing critical tools of life cycle assessment and more holistic measures of performance than simple input-output models and mere technical efficiency. These approaches

alternativeness, and their likely benefits and costs, along with the benefits and costs of doing nothing, need to be laid out, and the arguments weighed and assessed. Dialogue is an incredible thing, not because we always agree with each other, but precisely because we sometimes do not. Yet the ultimate goal of all this is not just better debate, but also better decisions. ■