

# Do We Need To Think Differently When Solving Problems?

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*We cannot solve our problems with the same thinking we used when we created them*  
- Einstein

We all think but do we really understand how we think? Consciousness has been and remains a highly debated issue. How do we make decisions? It is an intricate interplay of intuition, experience and intellectual knowledge which leads us to make decisions.

There has been much debate on the analogy of the fox and the hedgehog. The fox is a holist and the hedgehog is a detailer with tunnel vision. Some people can think in breadth and in depth. We need both types of thinkers. I was spurred on to consider this analogy by an article entitled My proposition? Infrastructure planning needs more foxes, fewer hedgehogs by Neil Bennett (in the April issue of the New Civil Engineer 2014) in which it was argued that we may need more foxes to deal with infrastructure planning. Foxes ensure we consider the interconnections between things but the hedgehogs are more tunnel vision thinkers and have tended to be dominant.

Specialised disciplines and analysts have tended to rule the day but sustainability for example calls for synthesists with holistic vision and these need to be an intrinsic part of the story too. Even universities with their specialised subject faculty structures are not immune from the lob sided view that in depth analysis is the main thing but what use is this if the interconnections with other sectors are ignored? In the words of Macaro and Baggini:

*“...glad that some people have a narrow focus and so spot the detail generalists miss. But there should be more space for those who attempt to join the dots. We need both close-ups and landscapes...”*

We need generalists as well as specialists.

Leadership is important to motivate and instil the passion for a project besides the need to complete it. Isaiah Berlin believed that the qualities that leaders or heads of organisations should have are justice, kindness, imagination and intellectual power. This reminded me of the popular book The Fifth Dimension by Peter Senge. Basically he proposed that we have to learn to master our discipline and rid ourselves of rigid closed perceptions of the world. We can do these things individually but then we must share our visions and learn with others. Our knowledge develops individually by reflection on experiences, organised learning and punctuated by short periods of refreshing the brain by activities like meditation or walking outside among Nature for example. Often ideas from other sectors can feed value to a particular sector and inspire lateral thinking.

The Nobel Prize Laureate Daniel Kahneman describes two modes of thinking in his book Thinking Fast and Slow. He discusses systems 1 which is the quick intuitive decision making and systems 2 the

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rational cognitive long process of coming to decisions. The problem is how do we come to judgements when a team of minds come together? Many of our problems in the built environment as exemplified in the construction industry involve multifarious skills distributed among individuals which make up multidisciplinary teams. Decisions have to be taken which take into account practical issues concerning function, reliability, safety, other various performance measures and convenience but not ignoring the human and socio-economic consequences all of which have to stand the test of time. Budgets and timelines often blot out thinking time.

So called wicked problems are those characterised by complexity because they contain uncertainties and conflicting conditions. Often technical quantitative issues are surrounded by what may seem fuzzy social qualitative issues. Solutions are often reached as in the construction industry by collaboration involving all the stakeholders and this has to involve consideration of complementary points of view. Such problems offer challenges for Government, Local Authorities and organisations every day.

Too often one hears on the media a response to any sum of money being mentioned as being expensive before any real value assessment has been made. For example does being sustainable really cost more? The real question is surely --can we afford not to be sustainable? Often quantities of money are stated by politicians and the media without any context so are meaningless to the public in a population with an average salary in the UK of about £26,000 per year. A billion pounds maybe large or small depending on the context but for most of us as these sums are always enormous and beyond our imagination.

In London In 2017 the UK experienced a devastating fire in London which engulfed an apartment block called Grenfell Tower in which 72 people lost their lives. Since then there has been another fire engulfing the Glasgow School of Art in June 2018 only four years after a previous fire there in 2014 and most recently the fire at Notre Dame in Paris in April 2019. Whatever codes and regulations there maybe we need to question whether they alone are enough.

The pain of the Grenfell tragedy lives on. How could this happen in this century? We have to question the way we do things. It is likely that there were fault lines at every stage of decision-making chain. The conclusion made about the cause of the fire in the Bronx area of New York that took place in 2011 in which 3 people died was found to be the silo effect that happens when different departments and agencies do not communicate with each other. This paralyses the connectivity and flow of communication and information. Cost cutting too will no doubt be evident as the causes of the Grenfell fire emerge. Cost cutting is endemic in many cultures and acts like a tumour in our heads that paralyses any hint of long term value assessment. Cost cutting is often a vacuous exercise devoid of human needs and any sense of longterm value which can turn out to be more expensive.

One of the sorrows of the age is in spite of the digital technologies seemingly speeding things up but requiring a rigid pinpoint accuracy in completing on-line forms there is increasing bureaucracy. David Graeber in his book *The Utopia of Rules* (Melville House 2012) questions why we seem to enjoy devising endless rules, regulations which can so often restrict creative thinking. Graeber writes about the dead zones of imagination and his words are true. The mind and brain have so much energy so if we overload them with lots of administrative tasks this will sap any energy left for creative thinking. Digitalisation quickly links with family, friends and colleagues all over the world which is marvellous but the same method is used with the colleague in the next office space. Then the simplest of tasks,

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which used to take a decision between two or three people maximum, now has to pass through several more layers so lengthening the process and leads to what I call the 'digital slowdown'. Virtual digital assistants are emerging and these may save the day.

Can we imagine different structures for organisations that ensures better cleaner decision making and enduring motivation for workers? Laloux in his book *Reinventing Organisations* (Nelson Parker 2014) describes the virtues of self-managing teams quoting the Dutch Buurtzorg (neighbourhood care). This is the opposite of centralisation with control from a centre with rules and administration channelled down to all sectors of the organisation. Encouraging and maintaining human motivation is so important at all levels of an organisation and people work better when they have some degree of ownership of their daily working lives.

Should we look at economic value in a different way? We tend to measure success in terms of increased profitability and criteria like GDP. Profitability can be good if it is shared equitably and feeds new ideas and education for the betterment of humankind. But growth for the sake of it raises many questions about how we make decisions and neglect social value.

But above all we need a change of mindset and an integrated decision-making chain where transdisciplinary working overcomes the current dominant silo thinking together with developing a value approach rather than a capital cost one. Modern society is too short term minded. Sustainability, health and wellbeing are long term not short term aims. Mariana Mazzucato in her book *The Value of Everything* (Penguin 2019) argues strongly for a value based economy and that equally applies to procuring, planning, designing and managing our built assets. Kate Raworth in her recent book on *Doughnut Economics* (Random House Business 2018) makes a strong case making decisions between the boundaries of climate change and social values. She proposes seven ways to think like a twenty-first century economist and they essentially form the contents of 7 chapters. Here are the ideas she proposes that I have adopted and adapted here:

*Change the Goal* – Move from monetary measures like GDP towards aiming to achieve a safe and just space for humanity with a regenerative and distributive economy within desirable ecological and social boundaries. This is the basis of the doughnut model.

*See the Big Picture* – Too often thinking out the fine detail first obscures the mission and vision for the project.

*Nurture Human Nature* – Social value should be the basis of our decision-making. Architecture is for humanity where justice, generosity and societal needs are the foundation.

*Get Savvy with Systems* – I wrote some time ago that we treat the processes of design, construction and management as if they were linear systems, but they are not; they are non-linear dynamic systems which, of course, are more complex, but they are more realistic. Systems thinking is key.

*Design to Distribute* – The COVID pandemic has shown us that we need to share if we are to avoid inequality. We knew this before the pandemic and there are good examples that feature this way of sharing what you have and then gladly receiving what others offer but with politics and power struggles between nations any thoughts of sharing often gets lost.

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*Create to Regenerate* – This simply is the basis of the Circular Economy in which reuse and recycle principles are advocated.

*Be Agnostic about Growth* – There is a growing world population and each human being needs food, uses energy and generates waste. More money, more wealth, more expenditure without restraint is not sustainable as is already evident. Perhaps we need to question our expectations. Are our expectations too high? Can we be more mindful of our relation to the Earth and its natural resources at individual , corporate and governmental levels?

A more humane approach to planning and designing cities with their buildings and infrastructures can emerge which will balance functional, environmental and social needs for a more sustainable world if decision-making is reconsidered in some of the ways suggested here.

*We need to create things that have a good purpose and serve humanity. In that way the aim for being productive takes a more humanised view of the world and becomes something that speaks a language to all. Michio Kaku (Fintech Times April 2018).*

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