

ESSAY

META-SKILLS ARE THE KEY TO HUMAN POTENTIAL

Dr Melis Senova

A new world is trying to be born – a world that seeks greater resilience, creativity, compassion and sustainable planetary progress. To bring this world into being, we need a new set of abilities not yet taught in schools and a fresh perspective on humanity. Neuroscientist, entrepreneur and expert in human-centred design Dr Melis Senova explains the idea behind her proposal for a new *Institute for Human Potential*.

The many challenges faced by humanity today can only be tackled by understanding and unleashing the full power of human potential. Technological innovation and social change are accelerating at a bewildering rate. For individuals and nations to not only cope with change but shape it and thrive, we need to prioritise the skills which define our humanity, rather than pursue old and outdated paradigms of knowledge, or compete with the machines we have created.

We live in the Anthropocene, the era in which human activity is the dominant influence on the environment and climate. The decisions we make today, as individuals and communities, will not only affect our prosperity but might decide the survival of our descendants. It is therefore incumbent on us to consciously reconsider how those decisions are made and realise the importance of the meta-cognitive attributes (or meta-skills) which shape them.

META-SKILLS UNDERPIN SUBJECT KNOWLEDGE

The industrial revolution of the 19th century demanded a more educated workforce, and mass education, in turn, borrowed its model from the factory. Schools and universities today are optimised for efficiency, producing the highest number of graduates at the lowest possible cost by marking progress through standardised examinations. However, this mass production of knowledge is increasingly irrelevant to the individual skills demanded in our post-industrial age of automation and artificial intelligence.

Recent government proposals to increase the cost of arts degrees follow years of other efforts to encourage STEM studies in the hope they will revive the economy to compete with other nations. Unfortunately, a rigorous understanding of science, technology, engineering and maths is necessary but not sufficient at a time when the need for meta-skills such as creativity, emotional maturity, agility and resilience is coming to the fore.

Policymakers still expect students to emerge with a static identity – an engineer, lawyer or doctor – rather than a set of skills which will allow them to solve problems creatively, adapt to changing circumstances and effectively lead teams of other human beings. However, just as machines replaced agricultural workers in the 19th century, and manufacturing workers were supplanted in the 20th, so computers are replacing office workers today and many professions will be disrupted by artificial intelligence tomorrow.

Businesses complain that graduates arrive unprepared for the world of work because students are still being prepared for 19th-century factories, or 20th-century offices, rather than the creative hubs of the 21st century. As Sir Ken Robinson quipped, 'complaining that graduates aren't creative is like saying, "I bought a bus, and it sank"'.¹ The last thing the world needs is human robots. So our schools and universities should begin to recognise, value and promote the meta-skills which society demands and which will never be replaced by a computer.

UNDERSTANDING META-SKILLS

So what is a meta-skill? Gustavo Razzetti defines it as 'a master skill that magnifies and activates other skills... a high order skill that allows you to engage with functional expertise more effectively... a catalyst for learning and building new skills faster'.²

Meta-skills are the foundation on which we build the world, the human attributes and qualities that allow us to use the knowledge we acquire for higher purposes and nobler aims. Meta-skills are transferable from situation to situation and, as they determine the 'how to be' rather than the 'what to do', are best understood as guiding principles than sequential steps.

Marty Neumeier advocates investment in five specific meta-skills – feeling, seeing, dreaming, making, and learning – in his book *Meta-skills: Five Talents for the Robotic Age*.³ Appreciating the power of these concepts will help individuals, communities and organisations self-direct, coordinate and collaborate on their initiatives, allowing society to react to challenges such as COVID-19 or climate change in a more agile and resilient way.

1. K. Robinson, *Out of our Minds: Learning to be Creative*, Wiley UK, 1 edition, 2011

2. G. Razzetti, *The Metaskills You Need to Thrive in the 21st Century*

3. M. Neumeier, *Meta Skills: Five Talents for the Robotic Age*, New Riders, Pearson Education, 2013

Establishing proficiency in meta-cognitive skills will also have an impact in the following areas:

- **Potential**

The future will belong to individuals, companies and countries which understand the untapped power of human potential and implement the evidence-based practices required to express it through technological advance, social reform, entrepreneurial endeavour and scientific discovery.

- **Productivity**

While classical economic production required the rational organisation of land, labour and capital through enterprise, growth in the 21st century cannot ignore the environmental, cultural, political and technological conditions which underpin it. Similarly, understanding the meta-skills which underpin and direct our technical know-how and individual aims will help individuals, organisations and governments not only innovate but share its benefits among all.

- **Progress**

The meta-skills of self-management, interpersonal communication and social awareness will help people adapt to new norms and transition gracefully to new paradigms on a sustainable and ongoing basis. Improving our ability to adapt and evolve will, in turn, make communities less reliant on external assistance, freeing government resources from welfare to invest in the future.

META-SKILLS, MINDSETS AND INNOVATION

We are always urged to innovate to adapt to a fast-changing world. Still, the debate is focused on the 'what' of process, infrastructure and policy, rather than the 'why' of what this innovation is supposed

to achieve. To inspire the population, innovation should be redefined as a force which benefits people rather than profit.

We need to broaden our thinking to encompass innovation in our society and redesign our struggling super systems of education, health and finance to serve all Australians. This will require a set of new mindsets far more radical than those proposed by our political leaders. Rather than assume we know the answer as soon as a question is asked, we should be open to listening and exploring all alternatives. Only by loosening our attachment to the past can we contemplate new concepts. Our children are innately curious, yet this invaluable trait is all too often crushed by the needs of education and the cares of adulthood. To innovate, we must first see our world through new eyes, and cultivate a *beginner's mind*.⁴

To build on that, we must then maintain an *open mind*. We must welcome new perspectives and paradigms, rather than instinctively defend our boundaries and social traditions. Allowing these boundaries to be tested and stretched encourages a more nimble viewpoint more conducive to creativity and innovative thinking. In an increasingly technological and interconnected world, where boundaries between nations and cultures are diminishing, having an open mind is an entry criterion for successful interaction.

These attributes, in turn, nurture the *creative mind*. A creative mind is willing to question the systems that have organised society for hundreds of years. The ability to reconsider problems from first principles may be the only way to tackle the complex systemic challenges facing humanity today, from social strife and political confrontation to economic disruption and environmental catastrophe.

4. M. Senova, Head space for creativity and innovation; Keynote address at A Vision for Australia 2016: Global Access Partners Annual Economic Summit 'Spaces of Australian Innovation', NSW Parliament House, Sep 2016

A PhD does not delineate a creative mindset in design, but by defiance of the worn-out *problem to solution* pathway drilled into us at school. A genuinely creative mindset is more interested in asking great questions about global challenges than huddling around a single answer. It is willing to spend time understanding a problem's core, rather than snatching the first proposal to make the problem disappear.

The *seduction of a solution* is no longer fit for purpose in an ever more complex world of dynamic socio-technical systems. We cannot solve challenges with the same thinking that created them, rely on linear thinking to tackle complex challenges or polarise in tribal groups on issues which affect us all.

Putting all these and other meta-skills together will help us cultivate the *whole mind* we need, to perceive, understand and act upon reality with an inclusive and systemic perspective. It will help us focus on social outcomes, rather than economic outputs, on people, rather than things.

THE META-SKILL OF LEADERSHIP

Leadership is another meta-skill only humans can deliver. While there is no shortage of authoritarian leaders in the world today, yet this type is the antithesis of the purpose and direction we crave to build a robust, safe and secure future for our species.

Modern experience proves that the drive for economic prosperity is not enough to guarantee contented lives. We should strive for meaning, as well as the satisfaction of immediate needs. By developing our meta-skills, we will not only become more resilient in the face of adversity, and agile in a time of change, but also offer a new model for the good of our planet and its people.

The ability to prioritise is another vital meta-skill. If we prioritise the absolute need – as people, organisations and a nation – to have a net positive impact on our planet, we can not only make a difference ourselves but show authentic leadership by inspiring others to follow. With a clear sense of purpose and intention, it becomes much easier to focus the decisions about what and how to achieve it.

TO REACH FOR THE STARS, WE MUST REACH WITHIN OURSELVES

Ray Kurzweil is a leader in the field of artificial intelligence. Still, he defined our unique biological advantage when he said that 'ours is the species that inherently seeks to extend its physical and mental reach beyond current limitations'.⁵

The process of extending our physical and mental reach beyond our current limitations rests on our ability to learn, create and cooperate. Learning unlocks the ability to master the skills any situation may require. So our schools and universities should increasingly teach us how to learn, rather than static skill sets and attitudes. We should also take responsibility ourselves. While our biological evolution is achingly slow, lagging far behind our rampant technical innovation, we can evolve and shape our ways of thinking – our mindsets – through conscious effort.

To learn effectively – and grow as a human race – we need to appreciate and develop a range of enabling meta-skills. These may be summarised as:

- **self-awareness** – the ability to observe own behaviour in rational terms;
- **self-reflection** – the ability to reflect on the implications of our own behaviour for others as well as ourselves; and
- **self-directed growth** – the interest in the evolution of our own capacity.

5. R. Kurzweil, *The Singularity Is Near: When Humans Transcend Biology*, Penguin Publishing Group, 2006, p. 9

These meta-skills are more than the key to remaining employable in a world where drones deliver goods manufactured by robots and designed by computers. They are the qualities which make us human and distinguish us from our machines. They should be nurtured to save ourselves from our baser instincts but also to appreciate the better lives they help create.

Meta-skills are not obscure or irrelevant. They are:

- the ability to *feel* – from intuition, empathy, social intelligence to communing with nature – as well as think;
- the ability to *imagine* as well as implement those dreams in reality; and
- the capacity to *think holistically* about the past, present and future, and the rest of the world as well as ourselves.

Meta-skills allow us to tolerate complexity, navigate ambiguity and see reality as the sum not of things but their interconnections.

The world portrayed in the news every day is a frightening, gloomy and dangerous place, but I remain convinced that a new world is struggling to emerge from the chaos. A world of greater resilience, creativity, compassion and sustainability. To bring this world into being, we will need to value and promote a new set of age-old abilities that are not yet taught in schools. We will need a renewed perspective on what human potential might look like. To quote an Insight Report published by the World Economic Forum in January 2018, we need 'nothing less than a societal mindset shift for people to become creative, curious, agile lifelong learners, comfortable with continuous change'.⁶

An Institute for Human Potential can advocate for these skills and qualities, but we can all play our part today.

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6. *Towards a Reskilling Revolution*, Insight Report, World Economic Forum, Jan 2018

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