

# **HUMAN SUPERINTELLIGENCE:**

## **How you can develop it using recursive self-improvement**

### **Chapter 1. The Purpose of the Book**

Are you able to see your thinking as ‘object’? In other words, can you mentally stand outside your thinking so that you can examine it, evaluate it, and improve it where necessary?

Without this capacity, you cannot know in detail the thinking strategies that you use to solve problems and achieve your goals. Nor can you consciously and intentionally improve your thinking strategies in the light of experience.

Do you continually bootstrap your thinking strategies in this way? When you find that a thinking strategy fails, do you consciously and intentionally use this knowledge about the strategy to identify specifically where it is flawed and how it can be fixed?

If you did this actively and regularly throughout your life, you could continually enhance your cognitive capacities. By paying attention to your thought processes, you could identify where they could be improved and implement the relevant changes.

Do you regularly use such a meta-learning process and enhance it by actively seeking opportunities to test the effectiveness of your revised thinking strategies, amending them where they fail, and so on, repeatedly?

Potentially, you could also observe the meta-strategies that you use to develop and improve your thinking strategies. This would enable you to evaluate and improve them where necessary.

Are you aware in detail of the meta-thinking strategies that you use to generate your thinking strategies? If so, are you able to consciously and intentionally improve your meta-strategies when you find that they have produced a thinking strategy that is flawed? Do you take every opportunity to test your meta-strategies and to improve them continually? Do you then use your enhanced meta-strategies to improve not only other meta-strategies, but also themselves, recursively?

Do you celebrate when you find a flaw in your thinking strategies or in your meta-thinking strategies because it means that you have encountered an opportunity to improve your cognitive capacity?

Practices and associated knowledge exist that enable individuals to self-scaffold the ability to dis-embed from their existing thinking and meta-thinking, to see it as object, and to modify and improve their thinking as necessary.

Are you aware of any practices and knowledge that can be used in this way? If so, have you made serious and sustained efforts to use these practices? If you have yet to do so, but are

persuaded in the future that these practices could work effectively, would you then make serious and persistent efforts to use them?

In recent years, additional tools have been developed that can enhance the process of recursively improving your own cognitive capacities. These tools identify the ‘movements in thought’ that constitute the thinking strategies that individuals with higher cognitive capacities use to build mental models of complex phenomena.

Otto Laske, an adult developmentalist, published a comprehensive description of these ‘movements in thought’ in his *Manual of Dialectical Thought Forms*.<sup>1</sup>

These tools have two invaluable uses for individuals who set out to scaffold their ability to build effective mental models of complex, dynamic phenomena:

First, the tools assist thinkers in identifying where their current thinking fails to represent relevant aspects of complex phenomena. The use of the thought forms helps thinkers see their existing thinking strategies as object and to see their limitations. This assists thinkers in identifying what thought processes are missing from their existing strategies and from the mental models they build.

Second, the tools assist thinkers in seeing what they need to include in their thinking and how they can include it if they are to understand and manipulate complex phenomena. The tools guide thinkers in identifying how they can represent these aspects of complex reality in their models.

The ‘movements in thought’ are particularly effective for identifying and overcoming the limitations of what I refer to as analytical/rational thinking. This is the level of cognition that underpins mainstream science and that powered technological development, industrialization, and the First Enlightenment.

Analytical/rational thinking is very effective for understanding those restricted parts of reality that can be represented effectively by mechanistic, analysable, reductionist models. However, it is very limited in its ability to model and understand phenomena that are too complex and dynamic to be represented by mechanistic, analysable models. These limitations are the primary reason why mainstream science has failed to develop an adequate science of complex, dynamic phenomena. Unfortunately, this is a major restriction—most of the phenomena that constitute the reality we are embedded in are of this kind.

Are you aware of the discoveries made by research into the ‘movements in thought’ and ‘thought forms’ used by advanced thinkers to build effective models of complex phenomena? Are you aware of how individual thinkers can use these discoveries to scaffold their own ability to understand and manipulate complex reality?

If so, have you made efforts to practice the use of these ‘movements in thought’? If not, but if you are persuaded in the future of the effectiveness of these tools, would you then be prepared to make the considerable efforts necessary to use the tools to scaffold the recursive self-improvement of your own cognition?

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<sup>1</sup> Laske (2023) – see References for full citation

The practices that can be used to develop the capacity to dis-embed from thinking can also be adapted to scaffold the capacity to dis-embed from dysfunctional emotional predispositions, habitual behaviours, conditioning, and so on.

Are you aware of practices of this kind? If so, have you used them to free yourself from the dictates of dysfunctional predispositions and negative emotions? Can you see the advantages of doing so? Can you see even greater benefits in freeing yourself from all behavioural predispositions, enabling you to take whatever action is needed to achieve your goals in any given situation? If you knew that these kinds of practices can be effective, would you make serious and persistent efforts to use them?

Do you celebrate when you encounter difficulties and challenges, particularly ones that produce strong, unpleasant negative emotions, because this enables you to practice letting them arise and dissipate, so that they will not control your behaviour?

The adult developmental psychologist Robert Kegan produced a simple but powerful model of what occurs when an individual undergoes vertical development to a higher level in the cognitive or social/emotional domain. His model suggests that vertical development occurs when what was part of the subject at one level becomes object to a new, higher-level subject.<sup>2</sup>

He suggests that when an individual makes such a vertical transition in relation to their thinking, their thinking no longer has them. Instead, they have their thinking. And when they make this transition in relation to emotions, their emotions no longer have them. Instead, they have their emotions

In other words, the individual is no longer embedded in and controlled by their thinking or by their emotions. Instead, they can now choose if and when to engage in thinking and if and when to give attention to emotions that arise in their body. Thinking and emotions become tools that the individual can choose whether or not to use, freeing them to respond appropriately to the needs of whatever circumstances they are in.

During your life, have you ever set out consciously and intentionally to scaffold your own vertical development? Does Kegan's description of the fundamental shift that underpins vertical cognitive development resonate with anything in your own personal experience? What about the shift from emotions having you (e.g., being embedded in anger and being consumed by it) to you having your emotions (e.g., noticing that anger has arisen in your body but choosing to let it go by without acting on it?)

The great Armenian systems thinker and developmentalist George Gurdjieff advocated the need for humans to become what he called 'self-evolving beings'.<sup>3</sup> Such a person would be able to remake themselves psychologically in whatever ways were necessary to meet the needs and demands of future evolution.

Their behaviour and psychology would no longer be controlled by the dictates of their biological and cultural evolutionary past and by their conditioning. Now, they would be able to move at right angles to the predispositions they have inherited and developed. Instead of serving the needs of past evolution, they would have the capacity to consciously and intentionally choose to do whatever is beneficial for the future evolutionary flourishing of

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<sup>2</sup> Kegan (1982) – see References for full citation

<sup>3</sup> e.g., see Ouspensky (1949) – see References for full citation

humanity. As a self-evolving being, they would have the capacity to find motivation and satisfaction in whatever this requires them to do.

Are you aware of the concept of a self-evolving being? If so, are you aware of practices and associated knowledge that can be used to scaffold this capacity? Can you see how the emergence of self-evolving beings on any planet on which life emerges fundamentally changes the nature of the evolutionary process on that planet?

But what are the practical consequences of the emergence of self-evolving organisms on Earth? What will individuals who develop a capacity for self-evolution actually do with their lives? What strategies would they pursue if their goal is to contribute to the future evolutionary flourishing of humanity and life on Earth?

Fortunately, evolution science is beginning to answer this question as it develops a comprehensive understanding of the large-scale evolutionary processes that have made humans what we are and will shape our evolution into the future.

It is becoming increasingly evident that evolution has a trajectory. We can locate current humanity along this trajectory. This enables us to see how we must change our social systems and psychology if we are to remain aligned with this trajectory in the future. If we can use our understanding of the direction of evolution in this way, we can survive and thrive indefinitely into the future, using the trajectory of evolution to guide what we do and how we evolve.

Broadly, evolution's trajectory is towards increasing integration and evolvability (evolvability is the ability to discover and implement effective adaptation. It improves as evolution advances. At the human level, a major component of this capacity is intelligence).

The trajectory towards increasing integration has produced the step-wise increases in the scale of cooperative organisation that characterise the long evolution of life on Earth. The first simple cells were cooperatives of self-producing molecular process. Cooperatives of these simple cells gave rise to the more complex eukaryote cell. Cooperatives of these produced multicellular organisms, and these eventually gave rise to cooperative animal societies.

This pattern has been repeated throughout human evolution, producing cooperative groups of increasing scale and evolvability: kin groups banded together to form tribal societies, cooperatives of these produced city-states, and further repetitions of this process produced kingdoms, empires, and eventually nation-states.

A proper understanding of this trajectory and the evolutionary forces that drive it reveals the next great step in the evolution of life on Earth: the integration of humanity and life on Earth into a unified, cooperative, and highly-evolvable global society.

It is worth emphasising at this point that this next great evolutionary transition in the evolution of life on earth is not something that will happen in the far-flung future. Rather, if this step does not occur this century, it will likely never happen on this planet. The destructive competition between nation-states, corporations, and other entities that is generating global environmental destruction and the threat of nuclear annihilation is highly likely to end human civilization this century unless significant changes are made.

Unless we take this next great evolutionary step soon, life on Earth will likely become a failed evolutionary experiment. Instead of hatching a global entity, life on Earth will be an egg that never hatches and instead goes rotten.

It is of utmost importance to recognise that the next great evolutionary steps towards increasing integration and evolvability will not occur automatically. If these steps are to occur, humans will need to drive them consciously and intentionally.

Natural selection cannot be relied upon to generate the emergence and development of an evolvable global entity. This is despite the fact that evolution has got us to this point automatically, driven by natural selection at the genetic and cultural levels. However, there is no population of global entities that will compete to produce the natural selection that could drive the evolution and development of global entities.

When the evolution of life on a planet reaches the point reached by life on Earth, it will proceed further only if it is driven consciously and intentionally. Humans, therefore, have a critically important role in ensuring that the evolutionary process on Earth continues successfully.

Viewing this unfolding evolutionary process from the broadest perspective, it is as if we are living within a process that is destined to hatch an integrated entity on the scale of the planet.

But this developmental trajectory has a surprising feature. Although evolution has proceeded automatically along the trajectory up until now, it will not continue to do so. Earth will fulfill its destiny of hatching a global-scale entity only if certain conditions are met: humans must wake up to the nature of the developmental process in which they are embedded; see that they have an essential role to play if the process is to be completed successfully; and decide consciously and intentionally to do whatever is necessary to establish and develop a highly-evolvable and cooperative global entity.

As I have noted, if humans do not do this, it is unlikely that human civilization will survive this century. Only by performing their apparent evolutionary function can humanity survive and thrive indefinitely into the future and contribute positively to the future evolution of life in the universe. It is only to the extent that an individual pursues pro-evolutionary goals that their life can make sense in a larger scheme of things which has the potential to continue long after they die.

The same evolutionary forces that drive this developmental process on Earth will arise on every planet where life emerges and evolves.

Are you aware of this emerging evolutionary worldview? If so, do you have the cognitive capacity to understand it in full and to work out in detail its implications for humanity in general, and for yourself in particular? Can you use it to identify how you can live a life that is meaningful in a larger, evolutionary scheme of things?

Does it seem plausible to you that you have a critical role to play in the future evolution of life on this planet and beyond? Have you grasped that if you are to undertake such a role successfully, you will need to develop the capacity to become a self-evolving being? Do you understand that this will be necessary if you are to free yourself from the dictates of past evolution so that you can find motivation and purpose in doing whatever is necessary to meet the demands of future evolution?

Is your current cognitive capacity sufficiently developed to understand that analytical/rational thinking is woefully inadequate for understanding the evolutionary worldview and its detailed implications, including understanding how a global society can be established and organised? Is it therefore clear to you that a priority for the advancement of the evolutionary process on Earth at this time is to spread across humanity the higher cognitive capacities needed to understand the relevant evolutionary processes and their implications? Do you also see that you face an evolutionary imperative to work on yourself to scaffold these higher cognitive capacities in yourself?

The central aim of this book is to facilitate the spread of higher cognition across humanity. Consequently, a key goal is to identify how we can recursively improve our own cognitive capacities and to scaffold higher cognition in others.

By higher cognition, I mean at least the capacity to construct mental models that underpin the ability to understand and influence complex, dynamic phenomena. Foremost amongst these are models of the large-scale evolutionary processes that have shaped us and will determine the future of humanity and life in the universe. This includes constructing models of the evolution of our social systems so that we can see how we will need to reorganise our societies as we evolve into the future.

The book's central focus on cognitive development serves a larger, wider goal. The book is a conscious and intentional attempt to facilitate the spread of the enabling capacities needed to empower humanity to advance the evolutionary process on Earth and contribute positively to the future evolution of life in the universe.