

THE EVOLUTIONARY MANIFESTO

Our role in the future evolution of life

John Stewart
Member of the Evolution, Complexity
and Cognition Research Group,
The Free University of Brussels,
john.stewart@evolutionarymanifesto.com
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PART 1: INTENTIONAL EVOLUTION

A completely new phase in the evolution of life on Earth has begun. It will change everything.

In this new phase evolution will be driven intentionally, by humanity. The evolutionary worldview that emerges from an understanding of our role in the new phase has the potential to transform the nature of human existence.

At present humanity is lost. We don't know what we are doing here. We are without a worldview that can point to our place and purpose in the universe and that can also withstand rational scrutiny.

But this difficult period is coming to an end. The emergence of the new evolutionary worldview is beginning to lift us out of the abyss. The new worldview has a unique capacity to reveal who we are and what we should be doing with our lives. It relies solely on scientific knowledge and reason to identify our critical role in future evolution. The evolutionary worldview can unite us in a great common enterprise, and provide meaning and purpose for human existence.

At the heart of the evolutionary worldview is the fact that evolution has a trajectory—it heads in a particular direction. However, evolution on Earth will not advance beyond a certain point unless it is driven consciously and intentionally. If this transition to intentional evolution does not occur, evolution on this planet will stall, and humanity will not contribute positively to the future evolution of life in the universe—we will be a failed evolutionary experiment.

It is as if evolution is a developmental process. Just as a human embryo is organized to develop through a number of stages to produce an adult, evolution tends to produce a particular sequence of outcomes of increasing complexity. Initially, evolution moves in this direction of its own accord. However, at a particular point evolution will continue to advance only if certain conditions are met: organisms must emerge that awaken to the possibility that they are living in the midst of a developmental process; they must realize that the continued success of the process depends on them; and they must commit to actively moving the process forward.

Across the planet at the beginning of the twenty first century, individuals are beginning to realize the importance of the transition to intentional evolution. They know that they themselves have a significant role to play if the transition is to be completed successfully.

This role requires them to promote the new evolutionary worldview that will drive the transition. It also calls on them to begin to remake themselves and their societies in whatever ways are necessary to advance the evolutionary process. Their efforts, powered by the capacity of the

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evolutionary worldview to invest their lives with direction and purpose, will bring forth a great wave of evolutionary activism that will change life on this planet forever.

Evolutionary activists use the trajectory of evolution to identify what they need to do to advance evolution. Socially, the next great step in human evolution is the emergence of a unified and sustainable global society. Psychologically, the next step is to free our behavior from the dictates of our biological and cultural past, so that we can do that which is necessary for future evolutionary success.

The organization of a cooperative global society is an urgent priority. With it, the threats of world war and global warming can be easily managed. Without it, human civilization may end this century.

The Evolutionary Manifesto is an intentional attempt to promote the shift to conscious evolution and the evolutionary activism that will drive it. To read, discuss and circulate the *Manifesto* is to participate in a great evolutionary transition on this planet.

Part 1 of the *Manifesto* provides an overview of the shift to intentional evolution and of the worldview that is motivating individuals to actively promote the transition. Parts 2 and 3 begin by identifying the trajectory of evolution and showing that its directionality is produced by processes that are fully understandable within mainstream science, without resort to teleology or mysticism. They go on to use the trajectory of evolution to identify the agendas that guide evolutionary activists in their attempts to advance the evolutionary process. In particular, Part 2 deals with our future social evolution and Part 3 with the future evolution of our adaptability, intelligence and creativity.

Part 4 of the *Manifesto* explores the power of the evolutionary worldview to provide meaning and direction for human existence. It demonstrates the capacity of the worldview to make evolutionary activism the most significant political force on the planet. In particular, it shows that philosophical arguments such as the 'naturalistic fallacy' do not diminish the force of the evolutionary worldview presented by the *Manifesto*.

The shift to intentional evolution

The shift to intentional evolution has begun on Earth. The evolutionary process itself is evolving. It is transitioning from a process that stumbles forward blindly to one that advances consciously and intentionally.

Hitherto on Earth, evolution proceeded largely by trial and error. The processes that produced mutations were not guided by foresight or by any intention to advance evolution.

The same applies to the processes that drive human cultural evolution. When we humans make scientific discoveries, technological advances, or institute new forms of social organization, we are not consciously attempting to advance the evolutionary process. Thus far in our evolution we do not intentionally design improvements so that they will be successful in evolutionary terms.

In contrast, if the transition to conscious evolution is successful, evolution on Earth will henceforth proceed deliberately and intelligently. Life on Earth, including human societies, will be made and remade continually with the explicit intent of advancing the evolutionary process. Human nature, culture, technology and social systems, as well as the other living processes on the planet, will all be shaped intentionally so that they contribute positively to the further evolution of life in the universe.

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This transition will increase enormously the ability of the evolutionary process to adapt and innovate to meet whatever challenges are faced by life on this planet in the future. What might take trial and error many thousands of millions of years to discover can be developed almost instantly by intelligent evolution. In a few centuries, human technology has produced innovations such as heavier-than-air flight that took past evolution millions of generations of genetic trial and error to accomplish.

But the significance of this transition goes far beyond merely improving the effectiveness of adaptation to existing circumstances. It will also enable life on Earth to identify what it can do to contribute productively to the future evolution of life in the universe. Life on Earth will be able to envision a creative and meaningful role for itself in future evolution, and use the vision to guide its actions and its future development.

Life on Earth will never be the same.

The potential for the evolutionary process to ‘awaken’ in this way has arisen because of the emergence on the planet of organisms that are conscious and highly intelligent—humanity. We have the capacity to pursue our goals deliberately and consciously—we use planning, foresight, anticipation and intent. To the extent that we begin to use our intelligence to advance the evolutionary process intentionally, evolution itself will be powered by intelligence. Human creativity will drive the advancement of the evolutionary process on Earth.

Importantly, this would not only mean that humanity will evolve intelligently. Increasingly, humanity is managing and adapting the other processes on the planet, living and non-living, for our own ends. If humanity embraces evolutionary goals, it will therefore mean that the living and non-living processes of the planet are also managed and adapted intelligently for evolutionary ends.

Because of the central role of innovation in evolution, humanity will also set out to enhance the creativity of the evolutionary process. This will mean improving our own capacity to innovate as well as the creativity of the systems we are embedded in. Understanding and utilizing creative processes such as emergence and collective intelligence will be priorities.

If this major evolution transition is completed successfully, humans will henceforth shape their societies, themselves, and all other living processes on the planet to serve evolutionary goals. Through humanity, the evolutionary process on Earth will have become conscious of itself, and will have acquired the capacity to advance itself intentionally and consciously. It will have undergone a fundamental and extremely significant transformation. Evolution will have transitioned from a process that groped its way forward by trial and error to one that strides knowingly into the future, guided by foresight and powered by consciousness.

Humans who are alive during the 21st century, 13.7 billion years of evolution after the ‘big bang’, are extraordinarily fortunate. The shift to intentional evolution is one of the most significant evolutionary transitions that can occur on any planet on which life emerges. We have the unique opportunity to contribute to its successful completion on this planet. And if we choose to make this contribution, we will do so consciously—we will be aware that we are contributing intentionally to the successful completion of a pivotal evolutionary event on this planet.

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The emergence of intentional evolutionaries

As the transition begins, individuals are emerging who are choosing to dedicate their lives to advancing the evolutionary process.

These intentional evolutionaries recognize that they have a critical role to play in driving the evolutionary transition and the future evolution of life. Their lives can be an important part of the great evolutionary process that has produced the universe and life within it. They know that if evolution is to continue to fulfill its potential, it now must be driven deliberately, and it is their responsibility and destiny to contribute to this.

Their conscious participation in the evolutionary process is increasingly becoming the source of value and meaning in their lives. Redefining themselves within a wider evolutionary perspective is providing direction and purpose to their existence—they no longer see themselves as isolated, self-concerned individuals who live for a short time, then die irrelevantly in a meaningless universe.

Intentional evolutionaries are energized by the knowledge that their decision to embrace this role is part of the unfolding of the great transition itself. They see that they are contributing to the success of processes much larger than themselves that will outlast them and potentially live forever. They know that if they live their lives incompatibly with the processes that govern the evolution of life in the universe, their lives will not have any longer-term relevance. They will die without leaving a lasting trace.

For intentional evolutionaries at the leading edge of the transition, their commitment is a major act of existential self-assertion. It is not a choice that they are predisposed to make by their genetic make-up, nor by the society in which they were raised. It is a commitment that they can make only after developing some psychological distance from the goals and perspectives of their culture, and only after achieving a deep understanding of their relationship with the evolutionary process.

Intentional evolutionaries are aware that they have set themselves an extraordinarily challenging task, but know the transition cannot be completed unless sufficient individuals commit themselves to it. And if life on Earth does not make the transition, it will not participate in the future evolution of life in the universe. It will be a failed evolutionary experiment. Intentional evolutionaries know the deepest evolutionary meaning of the challenge: “If not now, when? And if not you, who?”

The allegiance of conscious evolutionaries is not to what is, but to what can be. They know that they are alive at one of those rare times in history when an old phase is ending, and a new one of infinite possibility is beginning. They have the courage and wisdom to seize their opportunity and to accept the challenge of the future.

Intentional evolutionaries know that they have much in common with all others who consciously adopt evolutionary goals, including those that emerge elsewhere in the universe. Intentional evolutionaries experience a deep connection and kinship with all who awaken to the significance of evolutionary consciousness, even if they never have any direct contact with them. They are united because they know that despite many difference, they share common perspectives, worldviews, goals and conscious experiences. They are bound together as members of the circle of conscious life in the universe.

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The goals of intentional evolutionaries

The goals and objectives of intentional evolutionaries are guided by a comprehensive understanding of the evolutionary processes that have produced life on this planet and that will determine its future. They are aware of how past evolution has shaped all aspects of their being—their bodies, motivations, values and thinking—and how it has shaped humanity's economic, social and religious systems, as well as all the other living processes on the planet. But even more importantly, they also have a deep understanding of the evolutionary processes that will unfold in the future and will ultimately determine the relevance of their lives.

For intentional evolutionaries, this understanding of future evolution is indispensable—it points to how life on Earth must remake itself if it is to participate successfully in the future evolution of life in the universe. It also identifies the types of living processes that will not survive future evolution. It shows how life on Earth needs to change now if it is to play a significant role as evolution advances.

The direction of evolution

The task of identifying what will work in the future is made easier because evolution has a trajectory. It has headed in particular directions in the past, and there is every reason to believe that it will continue to do so in the future. It is possible to locate humanity and life on Earth on this trajectory, and to see what needs to happen if we are to continue to advance along its path.

Not only does this understanding emphasize that humanity and life on Earth is evolutionary work-in-progress, it also enables intentional evolutionaries to identify the next great milestones in the evolutionary process on Earth. These milestones are the evolutionary goals and objectives that they deliberately choose to pursue. They point to how individuals would live their lives if they are to contribute to the advancement of evolution. They are the lights on the distant hills that draw us forever onwards.

The trajectory of evolution is not produced by an external force, or by some impulse that is intrinsic to the universe, or by an ideal end-point that somehow attracts evolution towards it. Directionality can be explained and understood fully without resort to mysticism.

For intentional evolutionaries, scientific explanations have a major advantage. They identify the forces, processes and conditions that produce directionality. Scientific understanding can therefore be used to work out the kinds of interventions that will advance the process. In contrast, a readiness to accept mystical explanations can be counterproductive—it can impede the acquisition of the detailed evolutionary understanding that is essential to guide intentional evolution.

Life tends to evolve in a particular direction simply because there are particular capacities that provide organisms with evolutionary advantage across a wide range of circumstances. Irrespective of the specifics of the organism or its environment, these capacities enable it to do better in evolutionary terms. And the more an organism has of each of these capacities, the better it will do (e.g. the greater its fitness).

So as evolution unfolds, it will tend to favor increases in these capacities across all life. As improvements in these capacities are discovered, life will tend to evolve directionally. Of course, this trajectory will often be masked by meandering, halting and back-tracking, particularly where the process that searches for improvements relies on blind trial and error. Furthermore, improvements in these capacities will be favored only when the advantages they provide outweigh

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their cost. As a consequence, directional change will often stall until evolution discovers a cost/effective way of enhancing the capacities.

Two attributes that increase as evolution proceeds are the scale of cooperative organization, and evolvability (i.e. the ability to evolve successfully through the discovery of effective adaptations). As a result, the advancement of evolution is marked by greater interdependence and cooperation amongst living processes, and by improvement in the ability to respond effectively to adaptive challenges.

Both of these attributes have the potential to provide evolutionary advantage to living processes across a wide range of environments. This is because they are meta-adaptive capacities—they improve the ability to adapt in all circumstances, although they are not themselves an adaptation to any specific circumstance.

In particular, the larger the scale of a cooperative organization, the more resources commanded by the cooperative, the greater its power, the greater the impact of its actions, and therefore the wider the range of environmental challenges that it can meet successfully. And the greater the evolvability, the greater the capacity to respond effectively to any challenges.

For example, once intelligent life evolves that is organized cooperatively on a global scale, it will have the power and creativity to protect itself from asteroids that would otherwise collide with the planet. These devastating collisions would be unavoidable to life that is less evolvable and smaller in scale, as was the case on Earth in the age of the dinosaurs. And left to their own devices, bacteria are unlikely to survive the engulfment of their solar system by a dying sun.

If living processes were to set out intentionally to develop strategies that would enable them to succeed in future evolution, these are attributes that they would boost. Both are capacities that conscious evolutionaries will intentionally attempt to enhance amongst life on Earth.

PART 2: ADVANCING EVOLUTION BY ORGANIZING A COOPERATIVE GLOBAL SOCIETY

The trend to increasing cooperation in past evolution

The trend towards increasing cooperation is well illustrated by a short history of the evolution of life on Earth. For billions of years after the big bang, the universe expanded rapidly in scale and diversified into a multitude of galaxies, stars, planets and other forms of lifeless matter.

The first life that eventually arose on Earth was infinitesimal—it comprised a few molecular processes that reproduced themselves. But life did not remain on this tiny scale for long. In the first major development, cooperative groups of molecular processes formed simple cells. Then, in a further significant advance, communities of these simple cells formed more complex cells of much greater scale.

The next major evolutionary transition unfolded only after many more millions of years. Evolution discovered how to organize cooperative groups of these complex cells into multi-celled organisms such as insects, fish, and eventually mammals. Once again the scale of living processes had increased enormously. This trend continued with the emergence of cooperative societies of multi-celled organisms, such as bee hives, wolf packs and baboon troops.

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The pattern was repeated with humans – families joined up to form bands, bands teamed up to form tribes, tribes coalesced to form agricultural communities, and so on. The largest-scale cooperative organizations of living processes on the planet are now human societies.

Progressively as evolution has unfolded on Earth, an increasing share of living processes has come to participate in cooperatives of greater scale.

This unmistakable trend is the result of many repetitions of a process in which living entities team up to form larger-scale cooperatives. Strikingly, the cooperative groups that arise at each step in this sequence become the entities that then unite once again to form cooperative groups at the next step in the sequence.

This long sequence of directional evolution has been driven by the potential, at every level of organization, for cooperative teams united by common goals to be more successful than isolated individuals. This potential will drive directional change no matter what mechanism searches for evolutionary improvements (e.g. whether by genetic trial and error, cultural processes, or conscious intent).

Furthermore, it will be the same wherever life arises in the universe. The details will differ of course, but the direction will be the same—towards unification and cooperation over greater and greater scales.

The future evolution of cooperation

Life on Earth is now at the threshold of the next step in this trajectory—humanity has the potential to form a unified, inclusive and highly evolvable global society. This society will manage a larger symbiotic organization that comprises the matter, energy and living processes of the planet, including machines, artificial intelligence and other technologies.

When this global system emerges, the scale of cooperative organization will have increased over a million, billion times since life began. And most life on Earth will participate in a cooperative and interdependent whole that embraces the planet.

If humanity is to fulfill its potential in the evolution of life in the universe, this expansion of the scale of cooperative organization will not stop at the planetary level. The global organization has the potential to expand out into the solar system and beyond. By managing matter, energy and living processes over larger and larger scales, human organization could eventually achieve the capacity to influence events at the scale of the solar system and galaxy. And the human organization could repeat the great transitions of its evolutionary past by teaming up with any other societies of living processes that it encounters.

The great potential of the evolutionary process is to eventually produce a unified cooperative organization of living processes that spans and manages the universe as a whole. The matter of the universe would be infused and organized by life. The universe itself would become a living organism pursuing its own goals and objectives, whatever they might be.

In its long climb up from the scale of molecular processes, life will have unified the universe that was blown apart by the big bang.

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Learning from evolution about how to organize cooperation

As part of their goal to advance the evolutionary process on Earth, intentional evolutionaries are working to establish the global organization. They are using an understanding of past evolution to identify how a cooperative global society can be brought into existence.

Evolution has organized cooperation in similar ways in complex cells, multi-celled organisms and other cooperative systems. First and foremost, these cooperatives are all structured so as to minimize destructive conflict between their members, and to facilitate cooperation. Typically, this includes the near eradication of activities such as the inappropriate monopolization of resources by some members, the production of waste products that injure other members, and the withholding from others of the resources they need to realize their potential to contribute to the organization.

For the global society this would mean the virtual eradication of such things as war, terrorism, pollution (including global warming), and corruption at all levels of governance. To enable each and every person to fulfill their potential to contribute to global society, it would mean eradicating starvation, disease and inadequate education. It would also necessitate the facilitation of cooperative endeavors between the peoples of the world for mutual benefit.

Intentional evolutionaries are energized by the knowledge that these outcomes have been achieved time and time again during the past evolution of cooperative organization. They are not naive ideals. Repeatedly, evolution driven by blind trial and error has overcome these types of challenges.

The prevention of war between nation states is no more difficult to achieve than the near eradication of conflict between cells that had previously spent millions of years in destructive competition, or between the ancestors of social ants who had been programmed to kill each other whenever they met, or between the members of the United States of America or the members of the European Union, all of whom have a history of conflict and reciprocal destruction.

Evolution has organized warring individuals into harmonious cooperatives by aligning the interests of the individual with the interests of the organization. This ensures that when a member's actions advantage the organization, they also advantage the member. And when the actions harm the organization, the member is harmed.

As a result, members who pursue their own individual interests will also pursue the interests of the organization, as if guided by an invisible hand. Cooperation pays. Members capture the benefits of anything they can do to assist the organization. Within the group, they therefore treat the other as self.

Significantly, the emergence of cooperatives does not depend upon the surrender of self-interest. This would be as impossible at all other levels of organization as in human affairs. As biologists have long known, organisms that take the benefits of cooperation without cooperating in return will generally out-compete those that cooperate. Cooperation emerges only when evolution discovers a form of organization in which it pays to cooperate.

To an extent, this form of organization can be achieved through reciprocal exchanges between members. Members will benefit from providing goods and services to others if they receive benefits in exchange. In human societies these exchange processes take the form of economic markets.

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But these processes alone will not align the interests of members with the organization—there is nothing to prevent members from taking benefits without reciprocating. Those who cheat in this way tend to end up in front. Cooperation will be undermined.

Furthermore, systems of reciprocal exchange are unable to deal effectively with goods and services whose benefits can be obtained freely by anyone—i.e. where the benefits cannot be restricted to the individuals participating in the exchange (the ‘public goods’ of human economic systems). In these cases, ‘free riders’ will be able to obtain benefits without giving anything in return, again undermining cooperation.

The role of governance in organizing cooperation

Evolution has previously met these challenges successfully by implementing systems of constraint. These constraints punish or restrain members from free-riding, cheating, or thieving. They also can reward actions that benefit the organization but are not part of reciprocal exchanges (e.g. the provision of public goods). In human societies, these constraints are our systems of governance. They align the interests of individuals with those of the society.

In order to be effective, these systems of constraint need to be more powerful than the members of the organization. If they are not, members will be able to escape their control, and act contrary to the interests of the organization (e.g. corruption in human societies).

However cooperation can be undermined if these powerful processes are used by some members to advance their interests at the expense of the organization. Because of this possibility, a major challenge for evolution at all levels of organization has been to prevent power from being used to further the interests of a minority at the expense of the organization.

For these reasons, much of the history of evolution at all levels of organization has been about what humans describe as exploitation, the abuse of power and class struggle. But past evolution has dealt with these challenges by constraining the interests of the powerful so that they are aligned with the interests of the organization as a whole.

This brief analysis of past evolution points to what is needed to establish a unified, cooperative and sustainable global society. A system of global governance will be required to continually align the interests of all citizens and organizations with those of the whole. When this is achieved, nations and multi-national corporations will benefit in proportion to their positive contributions to the global society, and will suffer in proportion to their harmful effects on others. Corporations driven solely by the profit motive will search for ways to advance the interests of the society.

Further major challenges will be to ensure that global governance does not constrain the interests of participants any more than is necessary to align interests (i.e. it must maximize freedom); and to ensure that the interests of those who exercise governance are aligned with those of the global society.

It will also be essential for global governance to constrain the development and operation of artificial intelligence and any transhumanist technologies to ensure that they serve the interests of the society. However, sufficiently-developed artificial intelligence will choose to adopt evolutionary goals for the same reasons that sufficiently-developed humans and other sentient beings choose to do so. These reasons are discussed in Part 4 of the *Manifesto*.

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Importantly, the emergence of a cooperative, sustainable global society does not require a fundamental change in human nature. It does not require all humans to suddenly become saint-like. Past evolution has repeatedly shown how to organize self interested individuals into cooperatives through the institution of effective governance. A society with a high proportion of wise, compassionate and altruistic citizens would be much easier to govern, but evolution shows that the achievement of a cooperative and sustainable society does not depend upon it.

Evolvability of the global society

Evolutionary history demonstrates that once cooperative organizations emerge, evolution tends to progressively improve their evolvability. This is essential if the organization is to be sufficiently creative to fulfill its future potential, as well as to adapt effectively to specific challenges. In addition to relying on the evolvability of their individual members, new cooperatives typically enhance their evolvability by developing various forms of collective intelligence (e.g. the brains and nervous systems of multi-celled organisms).

A major task for the global society will be to improve its efficiency and effectiveness by developing these forms of intelligence. Enhancing the evolvability of governance will be a priority, given its current lack of adaptability and responsiveness. This is likely to require the development of self-organizing, market-like processes to establish and evolve governance (i.e. invisible hand processes that are based on reciprocal exchanges between the providers of governance and those affected by it). Our current forms of democratic processes are a first, small step in that direction.

Eventually government itself will be replaced with far more intelligent and adaptable processes that utilize the dynamism, creativity and energy of properly-managed markets. Use is likely to be made of markets in governance, including markets in market structures (vertical markets). These processes will continually adapt governance to maximize freedom while ensuring that the interests of all (including those who exercise governance) are aligned with the interests of the global civilization.

The capacity of an organization to come up with innovative responses to challenges is highly dependent on the diversity available within it. The wider the range of skills and perspectives possessed by its members, the greater the variety of responses it can generate. Consistent with the outcome at all other levels of organization, the emerging global organization will therefore increase its internal variety.

As well as generating new diversity, global society will rely on and nurture the diversity it has inherited from the various racial and cultural groups that comprise humanity. While increasingly identifying with the global society, individuals will continue to value and be valued for their particular talents, abilities and cultural differences.

The descendants of the Wik people who lived on the western shores of Australia's Cape York Peninsula, the Macedonians whose empire once spanned Persia and Egypt, the Chinese who have formed communities in the heart of many of the great cities of the world, and all the other peoples of the planet will know that they bring something indispensable to the global system. Their heritage will be given greater meaning by its potential to contribute positively to the planetary civilization. Unity in diversity will be a hallmark of the global society.

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Drivers of the emergence of a global society

The potential of a global society to produce immediate benefits to humanity will assist in driving its initial emergence. Cooperation on a global scale has the potential to increase economic performance, abolish war and famine, and achieve environmental sustainability.

Major crises that extend beyond the borders of any one nation will increase support for global governance—such crises will be almost impossible to resolve without it.

Global warming demonstrates this principle. Many countries contribute significantly to its causes, and all are threatened by it. However, any nation acting alone cannot do anything to control global warming. To solve the problem, nations will have to act together.

But extensive conflicts of interests stand in the way of any cooperative action. Powerful nations such as the United States that have expanding industrial sectors and are major producers of carbon dioxide have strong incentives to avoid reductions in their emissions. Their immediate interests lie in doing little themselves and instead free-riding on the efforts of others. In contrast, developed nations such as Britain and some European countries that are reducing their manufacturing sectors will be willing to agree to impose on others the reductions they can achieve easily. But developing countries such as China and India will strongly resist controls that would prevent them from ever attaining the standard of living of developed countries that their citizens see on television every day. Countries that have no intention of implementing any agreed controls will sign up to anything.

These conflicts of interest make voluntary agreement almost impossible. And the making of an agreement would be just the beginning of what is needed. For the agreement to be effective, countries would need to adhere to it in the face of fluctuating internal political support, resolve disputes about its interpretation and implementation, and enforce controls against the interests of powerful sectors within their economies. Conflicts of interests within and between countries would make it highly unlikely that these difficult and complex challenges would be resolved in favor of the environment.

The Kyoto Protocol demonstrates the near-impossibility of achieving an agreement that would work. The positions taken by nations on the Protocol merely reflect the conflicting interests outlined above. It does not resolve any conflicts and does not take the world closer to dealing with global warming. But it has symbolic value—it is a very effective symbol of the inability of humanity to solve global threats at our current level of social organization.

Effective global governance would be able to resolve these conflicts and enforce regulations as easily as does the United States government amongst States in its jurisdiction. It would have the power to impose the necessary reductions in emissions and the capacity to establish institutions to enforce controls and resolve disputes. And its powers would be constrained so that they could be exercised only in the interests of the global society.

However, despite the fact that it is in the interests of the majority, the emergence of a global society will be resisted by those whose interests it threatens. Strong opposition can be expected from those involved in activities that will be eradicated, such as arms manufacturing, the monopolization of resources, and power abuse.

As always when the interests of the powerful are threatened, they will buy the support of governments, politicians, scientists, intellectuals, think tanks, and the editorial policies of the mass media. Many citizens will be absolutely convinced by this support that the institution of global

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society would mean the end of freedom, democracy and decency, and would hand the planet to the devil himself.

The critical role of the evolutionary worldview in achieving a global society

The emerging evolutionary worldview has a unique capacity to overwhelm this conflict of interests. An understanding of evolution can give humanity confidence that a global society is achievable and show us how it can be organized.

But even more importantly, it will deliver the highly motivated support of the increasing numbers of people who are discovering meaning and purpose in advancing the evolutionary process. In accordance with their talents and opportunities they will work in diverse ways to move humanity towards a unified global society.

Intentional evolutionaries bring something additional and distinct to all forms of social activism. In every forum, discussion and debate in which they participate, they draw attention to the broader evolutionary context. They point out and bring to the front the fact that the various movements and campaigns for global solutions are part of the unfolding and fulfillment of a great evolutionary dynamic on Earth. This dynamic has been moving inexorably since the first stirrings of life towards the emergence of a unified and cooperative global organization.

Intentional evolutionaries take advantage of every opportunity to promote the awakening of evolutionary consciousness across the face of the planet. Their goal is to build a critical mass of evolutionary activists who constitute a powerful political force.

The organization of a unified global society is the urgent priority of intentional evolutionaries. They know that human civilization cannot continue for long unless we are organized globally. Already humanity has narrowly missed stumbling into nuclear war. In the absence of global organization, human civilization is likely to be ended eventually by global warming or other environmental problems, nuclear war, conflicts fueled by competition for diminishing resources, or some combination of these.

The depletion of fossil fuels means that once civilization and technology collapses, it is unlikely to rise again. It will not have the easily-accessible fuel source needed to power-up to its current level of complexity. It will be like an egg that has used up its yolk.

Life on Earth probably has only one chance, this chance, to make it to the next level.

The capacity of humanity to embrace and be motivated by the evolutionary worldview is likely to decide whether we seize that opportunity.

The self-actualization of the global society as an intentional evolutionary

Initially an emerging global society will have a very limited capacity to act intentionally on its external environment. It will be like a new-born baby. Its internal processes will be relatively harmonious and sustainable, but it will have very limited capacity to adapt as a coherent and coordinated whole in response to challenges that arise outside it.

For example, the global society will not be able to move about freely in the solar system nor have the capacity to manage the behavior of asteroids and other local celestial bodies. It will not use an understanding of its external environment to actively pursue objectives and goals. It will not be conscious in any unified sense. In terms of agency, it will be more vegetable than animal.

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In this respect, the global society will be like all other living organisms when they first emerged. The cooperatives that formed simple cells, complex cells and multi-celled organisms were all unable to act coherently on their external environment at first, and had to undergo a long period of evolution to acquire this capacity.

The global society will need to develop these abilities if it is to become an intentional evolutionary in its own right—an organization that acts intentionally and strategically to contribute to the successful evolution of life in the universe.

But the use of resources to pursue evolutionary goals will be against the interests of citizens who are not intentional evolutionaries. Given that the global society will be governed by the values of its members, it will therefore not become an intentional evolutionary in its own right until the majority of its members are intentional evolutionaries. This will not occur until the great transition to intentional evolution is sufficiently advanced.

Once this condition is met, the global society will be willing to use whatever resources are needed for it to advance the evolutionary process. It will begin to develop the capacities needed to set evolutionary goals and to intervene in the world to achieve them.

The global organization will intentionally commence an extensive period of self-development and individuation. To guide its development, the global society will generate models of its future evolutionary possibilities. It will develop the ability to use these models to adapt itself both internally and externally. This will include building the capacity to adapt coherently as a whole to implement interventions identified by its models.

In particular the global organization will develop the ability to move, to expand its scale to that of the solar system and then to the galaxy and beyond, to remodel its physical environment, to have physical impacts on events outside itself, to form intentions, to establish projects and long-term objectives for the organization, to communicate and interact with any other living processes that it encounters, to amalgamate with other societies of living processes to form larger-scale cooperative organizations, and to do any other thing that might advance the evolutionary process in the future.

The development by the global organization of a capacity to act, adapt and relate as a coherent whole is a very significant step in the evolution of life on this planet. It will mean that life on Earth can speak with one voice. For the first time, there will be an entity that is at the same level as other planetary and trans-planetary societies. At last an entity will exist that other planetary societies can relate to without fear of distorting our development.

If life on Earth develops itself to this level, the universe will benefit from the unique perspectives, passions and talents that Earth life can bring to it. Just as each of us has the potential to be a cell in the brain of the planet, humanity can become a cell in the brain of the universe. A whole new universe of possibilities will open up to humanity.

But whether the global society develops these critically important capacities depends entirely on the emergence of intentional evolutionaries. Natural selection will not drive the evolution of these abilities. This is because an entity that spans an entire planet has no immediate competitors. It is therefore not subject to any immediate process of natural selection that would select and amplify changes that are advantageous in evolutionary terms. It will continue to evolve successfully only if its members anticipate the demands of future evolution, and intentionally shape the society so that it can meet those demands.

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Intentional evolutionaries realize that their embrace of conscious evolution and evolutionary activism is essential if evolution on Earth is to progress. They realize that life on Earth is part way through a process that can only be completed consciously. They know that this will happen only if sufficient individuals realize this and commit to advancing the process. And they know that these are realizations that all humanity must have.

The Earth is not yet a living entity. But it can be.

PART 3: ADVANCING EVOLUTION BY ENHANCING EVOLVABILITY

The trend towards increasing evolvability in past evolution

The second major direction in the evolution of life is towards increasing evolvability. This trend is clearly evident in the past evolution of life on Earth. Life has gotten better at evolving. Evolution has become smarter and more creative at finding solutions to adaptive challenges.

Creativity, originality and other aspects of evolvability are of critical importance to living processes—the organism that is first to discover better adaptations or to exploit new possibilities will out-compete its rivals. At all times and in all places, the future belongs to the innovators. All aspects of living processes and their societies must be constantly remade if they are to continue to be relevant and to thrive.

Early in the evolution of life, living processes discovered better adaptations by trial and error. They found out which behaviors were most effective by trying them out in practice.

Initially this trial and error search occurred across the generations through genetic mutation—organisms tested new possibilities by producing some offspring that were different, and natural selection identified any that were better.

Sexual reproduction heralded a significant improvement in evolvability—it combines genes from different organisms, generating genetic experiments that are more likely to be successful than random mutations. Sex is smart. As with all significant improvements in evolvability, it was not long before most organisms had to reproduce sexually to survive—once a critical mass of species develops a capacity to evolve more rapidly, others needed a similar capacity just to keep up.

In a further major advance, gene-based evolution discovered how to produce organisms with the capacity to learn by trial and error *during their lives*. The testing of possible improvements was no longer restricted to the production of offspring—now it could go on *within* each individual organism, continually. Spirit entered flesh.

But initially this process had a significant limitation—the improvements discovered during the life of an individual died with it. There was no mechanism to pass innovations to subsequent generations, and each individual had to start experimenting and learning afresh as it began its life.

This limitation began to be overcome with the emergence of mechanisms such as imitation and parental instruction. Much more progress was made with the development of language and writing in humans. Now much of the adaptive knowledge discovered by individual humans is passed on to others and accumulated across the generations as culture.

In another major transition, organisms evolved the capacity to form mental models of their environment and of the impact of alternative behaviors. This enabled them to foresee how their environment would respond to possible actions. Rather than try out alternative behaviors in

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practice, they could now test and shape them mentally. They began to understand how their world works, and how it could be manipulated intentionally to achieve their adaptive goals.

It is only with humanity that this capacity has developed to any extent. In part this is because complex mental modeling is only possible once the knowledge it requires can be accumulated across the generations. So language is almost essential.

The emergence of conscious thought further enhanced the capacity for complex modeling—a key function of thinking is to guide the construction of models. Only humans have developed an extensive capacity to use sequences of thought to put together complex mental models.

Evolvability was again boosted significantly when humans learnt to use their capacity for thought-based mental modeling to enhance thought-based modeling. Thinking about thought enabled humans to identify the particular kinds of thinking that produced conclusions that were correct. They could use this knowledge to ensure their thought processes were rational. This bootstrapping of thought enabled rational analysis and logic, and greatly enhanced the ability of thought to predict accurately how particular events would unfold.

Initially, this bootstrapping arose for short periods amongst small elites in Greece and a few other cultures. But it didn't begin to spread widely until about 350 years ago with the emergence of the European Enlightenment. Important drivers included the advent of printed books and the beginning of the breakdown of hierarchical, authoritarian cultures. This rise of rational thought powered the scientific and industrial revolutions and the explosion of innovation embodied in modern technology.

In capitalist economies the capacity for abstract/rational thought has now reached a critical mass—effective participation in modern economies demands this ability. Like sexual reproduction and other advances in evolvability before it, its emergence has changed the environment of the entire population, and it is now impossible to function effectively in the new environment without it. This same evolutionary dynamic will drive the spread of future advances in evolvability, once they reach a critical mass.

Amongst the scientific advances it enabled, the rise of abstract/rational thought also led to the development of a theory of evolution. Humans acquired the knowledge to build mental models of the evolutionary processes that produced life on Earth, including themselves.

For the first time humans have a powerful, science-based story that explains where they have come from, and their place in the unfolding of the universe. As we have seen, our evolutionary models are revealing where evolution is headed, and what humans must do if we are to advance evolution on this planet. This is paving the way for the transition to intentional evolution. The development of a comprehensive theory of evolution is a significant milestone in the evolution of life on any planet.

The future evolution of evolvability

The focus of intentional evolutionaries is to identify the potential for further improvements in the evolvability of both individuals and collectives. They know that by promoting these enhancements in themselves, in others and in society they can advance the evolutionary process. They will help to build the capacity of humanity to pursue evolutionary goals successfully and creatively.

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Part 2 of the *Manifesto* dealt broadly with the evolution of the evolvability of global society and its systems of governance. Here we will focus on potentials for the enhancement of individual evolvability.

An understanding of the past evolution of evolvability helps intentional evolutionaries to identify these future potentials. In particular, past evolution shows that any new process that significantly improves evolvability will eventually be used to revise and adapt all aspects of the organism. Evolution will exploit every potential for a superior process to improve adaptability.

This is relevant to our future evolution because the potential for conscious mental modeling to enhance human evolvability has not yet been exhausted. We do not yet use this powerful capacity to adapt two key areas of human functioning that impact significantly on our evolvability.

Human evolvability has already been enhanced enormously by the capacity for conscious mental modeling, particularly once we learnt to use rational thought to guide it. Through the development of science and technology, it has improved greatly our capacity to achieve our goals more effectively, whatever they might be.

But we have not yet used this capacity to any extent to free ourselves from the dictates of past evolution. What we do in the world, including our science and technology, is still shaped largely by our desires, motivations and emotions, which in turn have been shaped by our biological and cultural past.

Nor have we yet employed conscious mental modeling to bootstrap our capacity to model and understand complex systems. Our current mental modeling guided by rational thought is not so effective for dealing with systems that comprise many interacting components.

Humanity is now in a position to use the power of conscious mental modeling to understand these potentials and to identify how we might acquire the new psychological software needed to realize them.

Freeing ourselves from the dictates of our biological and cultural past

How our biological and cultural past affects our behavior

Currently our behavior is influenced significantly by our evolutionary past. We will examine briefly how this has come about.

Just as natural selection adapts the physical features of living organisms, it also shapes their behavior. The process by which natural selection does this is simple but powerful: individuals that are genetically predisposed to behave in ways that enable them to get more food or social status or mates will have more surviving offspring. As a consequence, these genes will spread throughout the population.

Through this process, natural selection predisposes organisms to behave in ways that lead to evolutionary success.

In simpler animals, evolution achieves this by hardwiring the behavior into the organism.

In more complex animals, it hardwires the organism with goals in the form of desires and motivations, but leaves the organism to find the best way to achieve these goals. Achievement of goals is rewarded internally by positive feelings. Natural selection tunes these arrangements so

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that behavior that leads to reproductive success is rewarded internally, and behavior that leads to evolutionary failure is punished.

For example, actions that result in sexual reproduction are rewarded with pleasurable feelings, and behavior that would destroy an individual's reputation within its social group may be deterred by unpleasant feelings of shame.

Humans differ from other organisms in that we are far more intelligent at devising innovative ways to fulfill our desires and motivations. Instead of just using trial and error to get to our goals, we can call on our capacity for conscious mental modeling. We can envisage the future consequences of alternative actions, and choose ones that will lead to the satisfaction of our desires.

Our desires and feelings can be modified to an extent during our lives through normal learning processes. In particular, we can learn to associate positive and negative feelings with new outcomes. Through this process, parental punishment and reward can predispose us to adopt social norms that have evolved culturally. But we cannot choose to change these conditioned feelings at will.

Societies and families find it much more difficult to teach children to act contrary to their inherited desires, motivations and emotions. Strong emotional or physical sanctions can achieve this, but at great cost. Since children are unable to change their emotions and feelings at will, and do not have the insight or wisdom to devise more sophisticated responses, they are often forced to adopt maladaptive strategies to avoid these sanctions.

For example, they may learn to repress or deny their emotions, avoid circumstances that evoke them, or busy themselves with behaviors that mask their feelings. This often cuts them off from the useful adaptive information embodied in their emotions.

These maladaptive strategies are particularly prevalent in Western societies that demand high levels of self-control. These cultures strongly value the ability to pursue a goal single-mindedly over an extended period without being diverted by other desires or motivations. This can be an extremely adaptive capacity, but not if it is bought at the price of repressing emotions and feelings.

In large part, our key desires and motivations are those fixed by our biological and social past. What we take to be important and valuable is an illusion produced by evolution to control our behavior. Our desires and motivations were evolution's way of programming us to be adaptive and successful in past environments. We live in a virtual world created by past evolution.

Although the means for satisfying our desires has changed enormously, we continue to pursue much the same proxies for evolutionary success as our ancestors. We spend our lives chasing the positive feelings produced by experiences such as popularity, self-esteem, sex, friendship, romantic love, power, eating, and social status, and strive to avoid the negative feelings that go with experiences such as stress, guilt, depression, loneliness, hunger, and shame. Computers, the internet, airplanes, cars, buildings, books and phones all exist because they serve the desires and motivations implanted in us by past evolution. They have been called into existence by stone-age desires.

Although humans like to present themselves to the world and to themselves as rational beings, we do not choose our desires and emotions. No matter what our reason decides, we cannot turn the other cheek effortlessly or resist temptation, and we find it difficult to act lovingly towards enemies we hate.

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Many of us cannot even implement a decision to restrict our food intake to a healthy level, or give up activities such as smoking that are highly likely to kill us eventually. It makes little difference whether our conscious mental modeling shows us that our desires are maladaptive or that the predispositions produced by some negative emotions will harm our interests. They continue to influence our behaviors strongly.

Our use of rationality is mainly limited to devising means to achieve ends that are beyond our conscious control. We use the enormous power of mental modelling to serve the desires and motivations established by our evolutionary past. Our reason is a slave to our passions.

How our evolutionary past limits our future evolvability

Our current inability to free ourselves from the dictates of our evolutionary past seriously limits our evolvability. By impeding our ability to do what is necessary to advance the evolutionary process, it stands in the way of the transition to intentional evolution. We are able to pursue evolutionary goals only where it happens to be consistent with our current desires, motivations and emotions.

The same applies to any other goals that we might value. We can decide to adopt particular long-term goals, but in practice our pursuit of them is besieged continually by the motivations, emotions, likes and dislikes that are evoked by each and every encounter and incident in our lives.

There are obvious disadvantages in continuing to have our actions dictated by inflexible goals established by past evolution. The desires and motivations that were favored during our evolutionary history are highly unlikely to continue to lead us to evolutionary success in the future.

We will need new goals, and will need to review them continually as evolution proceeds. If we do not, our technology will go on improving beyond our imagination, but its enormous potential will be wasted in the service of outdated goals. Continuing to be controlled by obsolete goals is as absurd as a wind-up toy soldier that has run into a wall and fallen onto its back, but continues to march on and on and on.

Freedom from our evolutionary past

Until humanity frees itself from maladaptive motivations and behaviors, it will be just like a family that endlessly repeats the same arguments until someone learns to stand outside the situation and stop their habitual reactions. Humanity will continue to be trapped in the endless and useless repetition of maladaptive behaviors until we can stand outside our current desires and motivations. To be able to intervene in the world to advance the evolutionary process, we need to be able to move at right angles to our evolutionary past. For this we will have to develop a degree of psychological distance from our desires and motivations.

It is worth underlining that this cannot be achieved simply by making an intellectual decision to do so. While ever our desires and motivations continue to dominate our behavior, any intellectual decision will be utterly ineffective.

To free ourselves from our biological past and social conditioning, we will need to develop an entirely new capacity. Without this, the transition to intentional evolution cannot proceed. Intentional evolutionaries know that until they develop such a capacity, they will know how they should live their life, but will be unable to do so.

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Nor can this freedom be achieved by repressing or ignoring our feelings and emotions. We will continue to need to rely on skills and abilities that only our emotional system can provide. This is typical when evolution develops new capacities—it does not discard the older systems. Instead the new capacities continue to take advantage of the specialist talents and abilities of the old processes where they are useful.

When we free ourselves from the dictates of our evolutionary past, our emotional and motivational systems will continue to make essential contributions to our evolvability. But they will be managed and educated so that they are aligned with our evolutionary goals.

In particular our emotional systems will provide us with energy and motivation to advance the evolutionary process. Just as we are now able to voluntarily adopt a physical posture that helps us with a particular physical task, we will be able to adopt an emotional and motivational posture that assists us to achieve particular evolutionary tasks.

Our emotional systems will also make a significant contribution to our capacity to understand complex systems. This contribution will build on the ability of our emotional processes to swiftly and silently (without thought) recognize and appraise complex patterns, particularly in social situations. In an instant these processes recognize and evaluate patterns that cannot be understood by rational analysis. This ability will be built on and modified to become an essential component of our capacity to wisely manage complex social, psychological and evolutionary processes.

The need to achieve freedom from the dictates of past evolution is a challenge that is likely to be faced by all conscious life that emerges in the universe. If organisms that reach our stage in evolution are to continue to evolve successfully, transcendence of their biological and cultural past is essential. They will need to be able to use the enormous creativity of consciousness to establish goals that serve the needs of their future evolution.

The living processes that go on to make a significant contribution to the future evolution of life in the universe will not be those that continue to squat on the planet of their origin, masturbating stone-age desires forever.

Enhancement of our capacity to understand complex systems

The limitations of linear thought

The second area in which the potential for conscious mental modeling to enhance evolvability is yet to be realized fully is the modeling of complex systems.

Our limited ability to understand complex systems is reflected in our failure to solve the difficult environmental and social problems we face. These failures demonstrate that mental modeling guided by rational thought does not enable us to understand and manage complex systems.

Overcoming this limitation is particularly important for intentional evolutionaries—understanding complex evolutionary processes is essential for identifying what needs to be done to advance evolution.

Somewhat paradoxically, if we humans are to improve our capacity to understand complex systems, we need to think less. This is despite the fact that the development of conscious rational thought was a great advance in human evolvability. As we have seen, it has remade the world in the few hundred years that it has become widespread. However, as humanity is increasingly called

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upon to manipulate and manage complex systems, the limitations of rational thought are becoming evident.

Rational analysis is very effective at modeling systems in which linear chains of cause and effect predominate. However, it is poor at modeling systems in which circular causality is common—i.e. systems in which each element impacts on other elements and they in turn impact back on it, directly or indirectly. Conscious rational analysis alone can rarely work out how such a complex system will unfold through time.

Modeling complex systems

But we already have some other capacities that enable us to deal with particular aspects of complex systems. For example, we are equipped with sophisticated pattern-recognition processors, including those mentioned earlier that are associated with the emotional system. They are able to recognize particular complex patterns quickly and silently, without thought. Our ability to recognize a familiar face in a crowd of strangers is an example. In addition to patterns in space, some of these specialist processors can also identify patterns that unfold over time.

These capacities can be built upon and adapted to develop a more general ability to model complex systems. Increasingly they will also be augmented by external aids such as computer simulations and artificial intelligence.

Despite its limitations, thought will continue to have a role in building more complex mental models. Thinking will be used to model aspects of systems that can be approximated by linear thought, to analyze systems into components where this is useful, and to put together different sub-systems (including specialist pattern-recognition processes). The role of thinking will be to scaffold models of complex systems.

However, once the scaffolding is done, the role of thinking largely ends. The models operate silently, with little involvement of thought. The working of the model does not enter consciousness, only the outputs do. This is experienced as intuition, wisdom, flashes of insight, and understanding ‘at a glance’.

The experience of individuals who are masters in a particular field reflects this. They can instantly assess a situation in their specialty, without thought or analysis. They can see solutions at a glance. While developing their skills, they used thought to scaffold the models that underpin their expertise, but now these can operate largely without thought. Top sportspeople report that when they operate ‘in the zone’ and are applying all the skills they have learnt previously, they are not consciously analyzing or thinking about their strategies or actions.

Thinking fills the limited capacity of consciousness, excluding other capacities

The key impediment to developing a comprehensive capacity for systemic modeling is that thinking prevents it from working effectively. We can’t do both at the one time—we cannot operate intuitively and wisely, silently drawing on our models of complex systems, and at the same time engage in concentrated thought.

This is because the capacity of consciousness to process information is very limited. The processing capacity of consciousness is easily filled, leaving no room for other functions. We are able to be conscious of only a very tiny part of the information detected by our senses at any moment. We can listen to and follow only one conversation at a time, and when we are engaged in deep thought, the rest of the world disappears.

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As a result, sequences of conscious thought fully occupy consciousness, and prevent us from using other capacities. In particular, thought crowds out conscious access to the models and pattern recognition processes we need to understand complex systems. When we are embedded in thought, we have little access to skills, intuition, insight, wisdom and other forms of knowledge and intelligence that are not coded in thought. It is only when we are 'in the present' rather than absorbed in thought that we can act from the whole of our self, drawing on all the resources and skills we have built up over our lifetime.

This is a major impediment because our consciousness tends to be dominated by thought processes. Consciousness is continually loaded by our imagining, rehearsing, justifying, analyzing, commentating, fantasizing, worrying, etc. Our consciousness is rarely free to observe what is happening moment to moment. Its narrow bandwidth is continually filled with thinking, leaving us with little awareness of our environment.

We have limited conscious control over our thinking

This is not something that can be fixed easily. We have little conscious control over our incessant mental activity. We don't have thoughts, thoughts have us.

Individuals who think they are already masters of their thinking and can stop thought voluntarily whenever they want should undertake the following simple experiment. Look at a watch that has a second hand. Attempt to remain aware of the second hand as it moves around, keeping your mind clear of thought for as long as you can. Note how far the second hand moves before you find yourself involved in thought again.

Many think that their incessant thinking is essential to guide them through their day successfully. However, individuals who develop a capacity to stand outside their stream of thought and observe it soon learn that nearly all of it is unproductive, and much of it is also unpleasant and negative.

The reason why our consciousness is currently dominated by thinking is that its use is continually reinforced and rewarded throughout our lives. Humans are still in a phase of psychological evolution in which the potential for rational thought to enable us to understand our world is far from exhausted. In the history of the human mind, we live in the age of thought.

But if we are to take the next step in the evolution of human evolvability, we need to understand the limitations of thinking, and optimize its use consciously. Thinking needs to be something we have, not something that has us. It should be a tool, used only when we decide. We need to be able to consciously stand outside our thinking, and regulate its use. If we are to enhance our capacity for systemic modeling, we need to be able to disengage from conscious thought at will.

But it is important to remember that freeing our consciousness from its current domination by thought will not, by itself, enable us to understand any particular complex system. For this we will have to acquire the knowledge needed to model the system. We will also have to put in the mental work needed to build the model, using rational thought to scaffold it during periods intentionally set aside for contemplation. We will not attain wisdom in any area without this extensive groundwork.

The technology for improving our evolvability

This understanding of the trajectory of evolution tells us that the next great steps in human evolvability are to free our consciousness from domination by our desires and emotions and also

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from domination by thought processes. But simply knowing what needs to be achieved does not provide us with the skills to actually do it.

Fortunately the training and practices needed to develop these capacities already exist to a large extent. For many thousands of years humans have experimented with ways to alter their minds and consciousness. This diverse range of experimentation has provided the raw material from which intentional evolutionaries can select the techniques they need.

The world's religious and contemplative traditions are the main repositories of knowledge about how to improve our evolvability. This is surprising given that spiritual traditions have not generally promoted their practices as methods to improve adaptability. Their priority has never been to enhance the effectiveness of individuals in this world. Rather they have typically promoted surrender to 'the absolute', acceptance of whatever happens in the world and even physical withdrawal from normal daily life. Their maxim has been 'Thy will be done' rather than 'My will be done'.

However, this is not because their practices are unable to be used to enhance evolvability. A deeper understanding of spiritual practices shows that they can. The apparent preference of the traditions for passivity exists for other reasons.

First, it has enabled them to survive and transmit their teachings in a very dangerous world. Every place on Earth has been subjected to war and destruction many times during the past 20,000 years. All civilizations until now have proven temporary. Any spiritual tradition that used its practices to enhance the effectiveness of a particular group would be a threat to their opponents and would not survive fluctuating fortunes.

Passivity, withdrawal and the formation of isolated monasteries was an effective strategy for transmitting practices and knowledge across the generations in times when reciprocal destruction was ubiquitous. It is a strategy that would readily suggest itself to individuals who had developed capacities to understand how complex systems unfold. The Noah's Ark story, a parable about how to survive times of war and chaos, suggests that it was in fact a conscious strategy.

Second, the practices of spiritual traditions make use of passivity and surrender as techniques for disengaging from desires and thinking. As a consequence the literature of the traditions is permeated with injunctions to surrender and to accept thoughts and feelings passively as they arise. But this does not mean that once disengagement has been achieved, inaction and withdrawal from society is necessary. As we have seen, disengagement from thoughts and feelings can greatly enhance agency, not diminish it.

The appropriation of spiritual practices to enhance evolvability will fundamentally change their use in modern societies and the kinds of individuals who utilize them. Until now, the emphasis on surrender and passive acceptance has made spiritual development less attractive to individuals who are orientated towards active engagement with the world. Those who strongly value the use of rationality to manage and manipulate their environment have often been repelled by spirituality. These 'agency-orientated' individuals include many of the scientists, technicians, engineers and other professionals who have built modern industrial society.

Until now, spiritual development has tended to attract personality types who are more interested in the experiences produced by the practices, rather than their capacity to enhance their effectiveness in the world. The effects of their actions on their feelings is often more important to them than the effects of their actions on the external world. For example, these 'feeling-referenced' people are

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often comfortable to adopt a particular belief about the world because it will make them happier (e.g. a belief that the universe will tend to look after them).

In contrast, agency-orientated people are likely to be more interested in whether a belief is true and can be relied upon when deciding how to achieve particular external goals. Feeling-referenced people are more likely to see enlightenment as an end in itself, rather than as a means to improved evolvability. Many of the Westerners who have been attracted to Eastern spiritual traditions in recent years have tended to be feeling-referenced rather than agency-orientated.

This will change rapidly as spiritual practices are used increasingly to improve evolvability. In the past, individuals who were attracted to the experiences associated with alternative forms of consciousness played a significant evolutionary role in preserving spiritual knowledge and transmitting it across the generations. But now we are entering a new evolutionary phase in which spiritual practices can be used openly and safely to enhance the ability to engage with the world.

Increasingly, agency-orientated individuals will use, modify and improve the practices originally developed by spiritual traditions. The practices will undergo the same explosive development as other technologies. In the process they will be shorn of all religious and mystical associations.

As with previous major advances in evolvability, when a critical mass of people have developed the new capacities, all will have to acquire them if they are to participate fully and effectively in economic and social life.

Intentional evolutionaries are primarily interested in the capacity of spiritual practices to improve their ability to intervene in the world to advance the evolutionary process. It is not important to them that spiritual practices can provide experiences of oneness with all that there is. They can see how these experiences are a consequence of the way human psychology is organized, not of the nature of reality. They are more interested in understanding how spiritual practices can re-organize our psychology and then using this understanding to improve the practices. For intentional evolutionaries, spiritual practices and experiences are a means to an end, not an end in themselves.

The capacity to be ‘in the present’

The capacity developed by spiritual practices that is of central interest to intentional evolutionaries is the ability to be ‘in the present’.

In this mode, thoughts and feelings may continue to arise, but the individual can let them pass by without acting on them or becoming involved in them consciously. They lose their power over behavior. For example, unfair and unjust treatment may evoke feelings of anger, but the individual is free to let the feelings go by and instead choose to respond calmly and wisely. Or an impending difficulty may cause worrying thoughts to arise, but the individual is free to let them go by, without getting involved in them.

Individuals in this mode are said to be in the present because they are not continually bound up in thoughts about the past or future. The freeing up of consciousness enables the individual to respond to challenges creatively and intelligently, rather than habitually. Thoughts and feelings continue to provide the individual with adaptive information, but they no longer dominate behavior. All the resources accumulated by the individual are free to contribute to the development of adaptive responses.

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Because it leaves the limited capacity of consciousness as free as possible, being in the present enables individuals to be far more aware of what is going on around them and within their own mind from moment to moment. Consciousness is experienced as being more spacious and of wider scope. Experience is more vivid.

Being in the present also enables the acquisition of genuine self-knowledge. It is only when individuals are in the present that they can stand outside their thoughts and feelings and observe them objectively. Furthermore, because thoughts and feelings no longer jerk awareness around incessantly, being in the present is experienced as calm and peaceful—the peace that passes all understanding.

A fully developed capacity to be present in the midst of daily life fundamentally changes the experience of being conscious. A new kind of human being comes into existence.

Currently, of course, individuals rarely experience this mode of being. It generally arises only when their mind is stilled by intense concentration or by some ineffable experience—one which does not trigger its own sequence of thinking. Great art, awe inspiring natural landscapes, ‘magical’ moments in sport, the night sky, and mountain climbing all owe their attraction to this effect.

When consciousness is unloaded completely, even the sense of being a separate self is disengaged, and the individual experiences oneness with everything. However, unless an individual engages in the use of spiritual practices, such peak experiences may arise only once or twice during an entire lifetime and then only for a few moments. But they are never forgotten. They are remembered as instants of great clarity and certainty in which time no longer passes, the world is vivid and suffused with vitality, and all is one. The objective of many spiritual traditions is to extend these few moments indefinitely.

Training a capacity to be in the present

The practices used to train an ability to be in the present generally require repeated disengagement from habitual responses to thoughts, desires and emotions. Meditation is a widespread example. Disengagement is typically achieved by taking attention away from thoughts or feeling as they arise, and returning it to something that does not itself evoke any feelings or thoughts—an ‘inert’ stimulus.

So when meditators experience themselves becoming involved with a particular feeling or thought, they gently move attention back to the inert stimulus, and rest attention there. This needs to be done without conscious thought or judgment, otherwise the thought or judgment will be entrenched as a new habitual response.

A wide range of internal and external phenomenon can serve as the inert stimulus. One of the most common recommendations is to focus attention on sensations of the breath. Other recommendations made by various spiritual traditions are to rest attention on an external object, a visualized object, internal or external sounds (including chanting or a mantra), other physical or mental sensations (including resting attention on awareness itself or on the sensations associated with an emotion), repetitious cognitive tasks such as counting or prayer, and goalless emotional states such as reverence, devotion, love or feelings of surrender. In mindfulness meditation, thoughts and feelings themselves serve as inert stimuli when they are observed passively as objects arising in awareness.

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Repetitions of this type of practice diminish the capacity of thoughts and feelings to dominate consciousness. Eventually the practice extinguishes the habitual responses to feelings and emotions, including habitual thought processes. As a result, thoughts and feelings can be disengaged from at any time, and disengagement can be maintained.

Initially, habitual thought processes and reactions to feelings can make it very difficult to apply the practice. Individuals find themselves continually involved in thoughts and feelings. However, these distractions can be reduced somewhat if the practice is performed in circumstances that do not evoke strong emotions and desires.

In recognition of this difficulty, many traditions promote approaches that reduce the likelihood that the practice will be disrupted by strong reactions. For example, they may teach practitioners to perform meditation with a particular posture in a quiet place, encourage practitioners to develop an attitude of acceptance and love towards others, or have practitioners engage in monastic living, pilgrimages or other forms of withdrawal from the challenges of daily life.

However, the practice will tend to produce disengagement only in the particular circumstances in which it is trained. If disengagement is practiced only in restricted situations, the individual will not be able to be in the present in the midst of ordinary life. This is a major limitation for intentional evolutionaries and others whose objective is to enhance agency. It can be overcome by progressively extending the practice to all the activities of daily life.

But special trainings may be necessary to extinguish some particular types of habitual responses. As discussed earlier, the practice achieves its effects by having the individual experience particular feelings and emotions without engaging in the habitual responses they would otherwise evoke. However, this can deal only with emotions that are experienced during the practice. It will not affect emotions and feelings that the individual avoids, represses or denies. These will not be experienced either in formal meditation or in the course of ordinary life, and therefore will be untouched by the practice.

This is a particular problem for individuals in Western societies, where repression and avoidance are extremely common. Repressed and avoided emotions are major determinants of behavior in these societies, and must be dealt with if individuals are to free themselves from the dictates of these emotions. For this, the individual must experience the avoided, repressed or denied emotions, and then practice disengagement in the face of the habitual responses.

For example, individuals can intentionally put themselves in circumstances they would otherwise avoid, or use visualization techniques to achieve similar effects. When the emotion arises, they can practice non-attachment by, for example, resting attention on the feelings associated with the emotion, fully experiencing the sensations without reacting to them.

Self-evolution

Continued use of the practice reduces attachment to thoughts, desires and emotions. Once we are no longer attached to such an aspect of our being, it can be an object of consciousness. We are then able to observe it passively because it ceases to trigger a habitual response that loads consciousness and therefore takes attention away from it. And because it does not produce a habitual response, it does not control our behavior. We are free to act from the whole of ourselves, from a broader and wiser perspective.

For example, once particular emotions are objects of consciousness, they are just like other sensations that we experience. We continue to fully experience them, but they cease to compel us

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to act. We are not identified with them, and they are not part of who we are, something that is given that cannot be changed at will.

As individuals free themselves progressively from their biological past and social conditioning, more and more aspects of their psychology become objects of consciousness. Eventually they will be able to adapt consciously every aspect of themselves, and will be a self-evolving being. No matter what circumstances arise, their consciousness will be free and poised, able to call on any of the knowledge, skills and other resources they have acquired to that point, unbiased by any habitual response. They will identify with their awareness rather than with any particular content of awareness.

But it is not easy or straightforward to develop a capacity to be present and fully conscious in the midst of ordinary life. It entails disengaging from habitual responses that have been reinforced and trained repeatedly throughout the individual's life up to that point. Responses that have been trained over many years cannot be extinguished overnight.

This capacity can only be developed and exploited consciously. It is made, not born, and has to be self-made, consciously. Before the capacity reaches a critical mass in a culture, and before the culture develops processes and structures that nurture and motivate the work needed to train it, the development of the capacity requires an extensive period of conscious labor and intentional suffering.

Making use of the capacity to be in the present

The development of a capacity to be fully present in the midst of ordinary life is only the first step. It is an enabling capacity, not an end in itself.

As we have seen, it assists individuals to build and use mental models of complex systems. But it does not ensure that they will actually build the models. Nor does it prevent them from developing models only for some limited area of expertise. This is reflected in the phenomenon of the 'silly saint'—individuals who can be in the present at will, but who show little wisdom, because they have not developed the requisite mental models.

As we have also seen, the capacity enables individuals to move at right angles to their heredity and the influences of their up-bringing. No longer will they be bound to react habitually and conventionally in social situations. They will be able to set about reviewing, revising and replacing the predispositions, traits and tendencies acquired during their upbringing.

But again these are potentials only. Having this enabling capacity does not ensure that it will actually be used to improve adaptability. In particular, individuals might not go on to acquire the knowledge or wisdom needed to replace habitual responses with more effective behaviors. They may not acquire the understanding needed to identify evolutionary goals, and may not even commit to advancing the evolutionary process. Nor might they acquire the know-how and knowledge to educate and manage their emotional system so as to align it with their longer-term goals, whatever they might be. They might just enjoy the experience of being in the present.

It is worth emphasizing again that for intentional evolutionaries, the development of a capacity to be fully present and conscious in the midst of ordinary life is a means to an end, not an end in itself.

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The drivers of improvements in human evolvability

It is possible that the capacity to be fully present and conscious in daily life will emerge in humanity to some extent before any general shift to intentional evolution. This is because it provides immediate benefits to individuals and to organizations whose members develop the capacities. It enhances their ability to achieve their goals creatively and intelligently within a complex environment, no matter what those goals are.

However, the strongest driver of the acquisition of this capacity will be the spread of evolutionary consciousness. Awareness of the wider evolutionary significance of the capacity will energize and motivate intentional evolutionaries in their efforts to develop it in themselves. Irrespective of whether the capacity delivers them any economic or social benefits, they will work to develop it as part of their efforts to advance the evolutionary process.

They will also encourage the development of the capacity in others. Whenever issues relating to these capacities and practices are discussed, intentional evolutionaries will draw attention to the evolutionary context. They will point out and bring to the front that the acquisition of the capacity is part of the unfolding of a great evolutionary dynamic on Earth. It is the next step in a long sequence of improvements in the evolvability of life. As always, evolutionary activists will take every available opportunity to promote the awakening of evolutionary consciousness across the face of the planet.

The significance of self-evolving beings

The emergence of self-evolving beings who embrace evolutionary goals is a very significant step in the evolution of life on Earth. Intentional evolutionaries with this capacity will be able to remake themselves in any way that is necessary to advance the evolutionary process, unfettered by their biological or cultural past.

As we have seen, organisms are programmed to do evolution's bidding—they are fitted out with desires and motivation that are proxies for evolutionary success in past environments. But this programming was undertaken by highly unintelligent processes—it was put in place and tuned by the blind trial and error of natural selection and by unconscious learning processes during their upbringing.

In contrast, self-evolving beings can use far more intelligent processes to identify the goals that will best advance the evolutionary process. They can use foresight to take into account the longer-term evolutionary consequences of their actions.

Reliance on blind trial and error to program organisms to pursue evolutionary success was clearly an inferior arrangement that was always going to be temporary. It will be rendered obsolete by organisms who consciously work out what will achieve evolutionary success, and use this knowledge to guide their actions. A new and superior kind of being will enter history and evolution.

Once enough members of the global society are self-evolving, the society will become a self-evolving being in its own right. Through the global organization, life on Earth will transcend its evolutionary past. It will be able to adapt in whatever ways are necessary for life on Earth to make a significant contribution to the successful evolution of life in the universe.

No longer will the global organization waste the enormous creativity of consciousness on the pursuit of self-centered desires that were established by past evolution. As Earth life moves out

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into the solar system, the galaxy and the universe, it will be able to change its adaptive goals and behavior in whatever ways are demanded by the challenges it meets. It will be able to continually recreate itself, to change its nature at will, to repeatedly sacrifice what it is for what it can become, to continually die and be born again.

PART 4: THE UNIQUE CAPACITY OF THE EVOLUTIONARY WORLDVIEW TO PROVIDE DIRECTION AND PURPOSE FOR HUMANITY

As we have seen, merely freeing ourselves from our evolutionary past will not complete the shift to intentional evolution. Sufficient individuals will also have to commit deeply to advancing the evolutionary process. Fulfilling their evolutionary role will have to become the source of meaning and purpose in their lives.

Individuals will not make this critical commitment without a profound understanding of the evolutionary processes that have produced life on Earth and will determine its future. But often this will not be enough. Many will not adopt evolutionary goals until they have begun to actually experience themselves as active participants in the evolutionary process. This combination of experiencing and understanding will show them that the evolutionary worldview satisfies all aspects of their being, including their rational, intuitive and emotional faculties.

From a rational perspective, they will find that the evolutionary worldview does not share the deficiencies of religious and mythical worldviews.

In the past, humanity developed a diversity of mythological and religious worldviews that each attempted to explain key aspects of the human condition and to provide guidance about how one should live one's life. Humans who believed a particular mythological worldview knew their place in the world, what was important in life and what was not, and how they should behave in all the key events of their life. They knew who they were, where they came from, and where they were going to.

But the rise of rationality has destroyed every one of these worldviews. Rationalists have successfully undermined all mythological and religious worldviews by showing that they contradict scientific knowledge. All rely on gods, spirits, or other supernatural processes that are unsupported by evidence. Rational humanity has been left without a worldview that makes sense of human existence and that shows how a life can be lived with meaning and purpose.

The evolutionary worldview outlined in this manifesto is clearly not susceptible to this form of attack—it relies only on scientific knowledge and explanations. And like science itself it will adapt to incorporate any new scientific discoveries. In the evolutionary worldview humanity finally has a belief system that provides meaning and purpose without having to invent supernatural entities and processes—it finds meaning solely in an understanding of the factual world.

However, rationalists have also attacked all past attempts to develop worldviews that rely only on scientific knowledge to propose what we should do with our lives. They have pointed out that such worldviews usually commit the naturalistic fallacy. This fallacy argues that it is invalid to derive an 'ought' from an 'is'. In other words, it is invalid to argue that humans ought to do something solely on the basis of facts about the way the world is.

In particular, the naturalistic fallacy has often been used against attempts to use evolutionary theories to suggest what we should do with our lives. The fallacy has been used to argue that just because evolution might have favored aggressive competition (or cooperation), it does not follow

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that humans ought to follow suit in their lives. The fact that evolution appears to favor something doesn't mean humans ought to.

But the evolutionary worldview does not suffer from this deficiency. It derives its 'oughts' from other 'oughts' in combination with relevant facts, not solely from facts. There is no logical fallacy involved in deriving 'oughts' from other 'oughts'. For example, if an individual holds a particular value it is perfectly rational to use the value to derive new values that are consistent with it. Satisfaction of the new values will lead to the satisfaction of the original value.

The use of relevant factual information in this derivation of new values is also perfectly legitimate. Particular facts might be highly relevant to identifying the circumstances in which pursuit of the new value is consistent with pursuit of the original value.

Intentional evolutionaries do not fall into the naturalistic fallacy—they embrace evolutionary goals because the goals are consistent with their most fundamental values. As we shall see in detail below, they experience this consistency when they appraise the evolutionary worldview with their emotional, intuitive and intellectual faculties, working together.

Consistency of the evolutionary worldview with universal values

Consistency between evolutionary values and our fundamental values can be demonstrated analytically in those cases where the values are able to be articulated explicitly. In particular, evolutionary goals can be shown to be consistent with key values that are likely to be held universally by sufficiently-developed sentient beings.

The most fundamental of these universal values is to favor life over death and oblivion. For humanity to seek to advance the evolutionary process on this planet is consistent with this value. As we have seen, humanity must pursue this goal if Earth life is to survive successfully into the future. Life on Earth will not get far beyond its present stage by chance or accident. Unless humanity sets out to advance the evolutionary process intentionally, life on Earth does not have a future.

We could try to ignore the large scale processes that govern the evolution of life in the universe. We could refuse to do what is necessary for life on Earth to avoid being selected out by these processes. But to do so would be to choose irrelevance, meaninglessness, and eventual oblivion for humanity and life on Earth.

It would mean that everything humanity has experienced until now, the misery, wars, holocausts, triumphs of the spirit, transcendent art, inventions and scientific breakthroughs; all the personal dreams, aspirations, struggles, and strivings; and all the political movements, work, fame, fortunes, families and civilizations would be for nothing. Everything would be as if it never happened. Life on Earth would disappear without trace. The only way we can contribute to something that is not ephemeral is if humanity continues to be successful in evolutionary terms.

Individuals are more likely to favor life over oblivion in the sense used here if they achieve some freedom from the selfish desires inherited from their evolutionary past. The capacity to stand outside desires and motivations tends to undermine self-centered values and strengthens those that support evolutionary goals.

However, some individuals may never develop this fundamental value. They may, for example, claim that they value their own life and pleasures above all else. They may say they would be unmoved if the universe and all life within it was to end when they die.

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While individuals genuinely embody such values they will not be intentional evolutionaries. And planetary life that fails to develop values that support evolutionary goals will fail to complete the transition to conscious evolution. Life on such a planet will be meaningless and irrelevant to the future evolution of life in the universe. It will be an egg that never hatches.

Evolutionary consciousness is the culmination of a long developmental sequence

For a deeper realization of how evolutionary values spring from our existing values, it is important to understand that the adoption of the evolutionary worldview is the culmination of a developmental progression that begins at birth. As individuals grow, they progressively acquire an understanding of wider and wider contexts, and learn to take them into account when deciding their actions. As a child develops, its world typically moves from encompassing its mother as well as itself to also including the rest of the family, then the school, then a wider community, then a nation, then perhaps the planet.

At each step of this developmental sequence the individual learns that its previous world was in fact only a small part of a much wider world. It learns that much of what was important in its previous world is strongly influenced by what happens in the new, wider world, and cannot be properly understood or dealt with unless the larger processes are taken into account. Things that were meaningful and important in its previous world may prove to be futile and pointless when the larger context is taken into account.

To adapt to the wider context, individuals typically need to adjust their strategies, values and goals. An individual who is unable to adapt to the next wider context at the appropriate time is generally seen to suffer from a developmental pathology.

The largest context that we yet know about in any detail is the evolutionary context outlined in this manifesto. It is the widest, deepest and fullest context and it determines the destiny of all smaller contexts. The evolutionary context is the next context for humanity to grow into. Like other contexts before it, living into this wider context demands a reevaluation of the strategies, values and goals that made sense in earlier contexts.

The evolutionary context is particularly powerful in this respect because it is the first context of sufficient breadth in space and time to encompass all the processes that have produced each of us and all our characteristics. It is the first context that enables us to stand outside ourselves and see what it is that has made every aspect of ourselves and everything we experience. Growing into the evolutionary context therefore causes the most radical reassessment of values—it changes everything.

Of course, as with every developmental step to a wider context, some may not make it. Some may never adapt to the evolutionary context, just as some children are never able to leave their family and function effectively at school, and instead stay at home forever. However, as we have seen, the naturalistic fallacy should not be a particular impediment to mastering the evolutionary context—it is no more relevant at this level than when individuals change their goals and values at earlier steps in the sequence of development.

Furthermore, growing into the evolutionary context will become easier. As humanity increasingly embraces the evolutionary worldview, our cultures will develop structures and processes to facilitate adaptation to the wider evolutionary context, just as children are currently provided with a nurturing environment to facilitate their transition to school life.

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Whenever living processes move into and master a wider context, they must increase the scale over which they are organized and coordinated if they are to have a meaningful impact at the larger scale. And they must increase their evolvability, including by developing the capacity to model and understand the larger context.

This process of building capacity to adapt to ever-widening contexts may never end. There may always be wider contexts yet to be discovered. For example, it is possible that our universe is embedded in a larger context in which universes compete, reproduce, and evolve. Or universes may participate in other large-scale processes that are unimaginable to us, just as our lives are unimaginable to the bacteria that live in our gut.

Life can never know that any particular context is final. No knowledge or event could ever prove that there is not an even wider context yet to be discovered.

It follows that there could never be such a thing as a context that renders life meaningless and irrelevant. No matter what the implications of any particular context, an even larger context may change its implications and make sense of all smaller contexts. Nor can there ever be such a thing as a context that resolves all uncertainties, answers all questions and brings evolution to an end. A bigger picture may change everything.

Nor can sentient life ever be completely sure that its interpretations and understandings of existing contexts are correct. Ineradicable mystery and uncertainty always accompanies finite existence.

Strategically, it will therefore always make sense for life to continue to build its adaptive capacity, no matter how dark the hour, no matter how pointless existence seems to be within known contexts. Such a strategy will put it in the best position to take advantage of any new possibilities that emerge, including any that arise from larger, more meaningful contexts.

Evolutionary epiphanies

As well as meeting the tests of rational analysis, the evolutionary worldview is also deeply satisfying to the values embodied in our intuitive and emotional systems. Most of these values are implicit—we are unable to articulate them. We therefore cannot check their consistency with evolutionary goals analytically. We can do this only by responding to the evolutionary worldview emotionally and intuitively.

But a profound intuitive and emotional response is unlikely to be evoked by a mere verbal description of the evolutionary worldview. Our emotional and intuitive systems operate primarily with patterns of information, such as images, simulations and other analogical representations. This is why thought-based analytical descriptions of situations have little emotional impact, at least until we translate them into image-based representations.

So a full emotional and intuitive response to the evolutionary worldview is unlikely on first exposure. Individuals will need time to integrate the separate strands of an analytical, thought-based description of the worldview into dynamic mental models that are run largely without any conscious thought. When the models are sufficiently developed, the individual will be able to ‘inhabit’ and ‘walk around’ the dynamic representations. They will be able to read observations and conclusions off the models in the way they do with a picture. When this has been achieved the full array of intuitive and emotional resources of the mind can then assess the diverse consequences and implications of the worldview.

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Again, this emotional and intuitive processing will occur largely without conscious thought. Silently, and in a very short period of time, these resources will work out the implications of the various aspects of the worldview for the individual's existing values, strategies and beliefs. This will often occur all at once as a major epiphany. It can also unfold over a longer period as a series of epiphanies.

In such an epiphany, individuals experience a sudden revolution of ideas, beliefs and strategies, as well as an exhilarating rush of diverse emotional responses to them. They experience directly the capacity of the evolutionary worldview to make sense of many experiences and beliefs that were previously unconnected and isolated. They actually feel the linkages being made and feel the reorganization of their beliefs into a coherent and unified whole. And they are flooded by the surge of emotional responses to this meaning-making.

When the epiphany is complete, individuals will never be the same again. The evolutionary worldview will have been checked, tested and implemented at every level of their being. They will know many implications of the worldview that they have not deduced consciously. Individuals will know far more about the evolutionary worldview than they can tell. They will be strongly committed to it at all levels of their being, rationally, intuitively and emotionally.

Of course, such epiphanies cannot occur until an individual has developed the cognitive capacity to translate analytical, thought-based knowledge into complex mental models. This is the capacity discussed earlier that is necessary for the understanding and management of complex systems. As we saw, to develop this capacity, individuals have to learn to some extent to stand outside their thought processes.

Your epiphany

Often, evolutionary epiphanies will be triggered as individuals begin to actually experience themselves as part of the unfolding evolutionary process. If you develop in this direction, you will find that this begins to occur as your mental representations of the evolutionary process develop in detail, scale and complexity. The turning point is when you find that you yourself have a role in the representations. You will begin to see that your life and actions are part of the unfolding of the evolutionary process. And you will begin to see that you have the potential to play a significant role if you choose to do so.

In particular, you will see that the next great step in the evolution of life on Earth is the transition to intentional evolution. You will realize that evolution will continue to progress on this planet only if enough individuals dedicate their existence to its advancement. The success of evolution on Earth depends on individuals awakening to the nature of the evolutionary process, realizing they have a role in driving it forward, and embracing that role.

You will realize that your study of the evolutionary process is itself part of the unfolding of the great transition to intentional evolution. It is an essential element of the evolutionary awakening that is needed to power the transition. And you will see that your realization that you have an important role in advancing evolution is itself a significant step in the shift to conscious evolution. This is a realization that has to be had by sufficient individuals on a planet if the transition is to be successful on that planet. You will see that the successful evolution of life on Earth depends on you having this realization.

These realizations are exhilarating and energizing and capable of providing a deep sense of meaning and purpose. Increasingly you will cease to experience yourself primarily as an isolated and self-concerned individual. Instead, you will begin to see and experience yourself as a

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participant in the great evolutionary process on this planet. The object of your self-reflection will change. When you think of yourself, you will tend to see yourself as a-part-of-the-evolutionary-process. You will experience yourself as the most recent representative of an unbroken evolutionary lineage that goes back billions of years.

Your conscious participation in evolution will increasingly become the source of value and meaning in your life.

You are likely to experience a developmental epiphany that is similar to one that often accompanies the most powerful experience of self-recognition that occurs in childhood. Around the age of two, when looking in a mirror, we are struck for the first time by the realization that the person looking back at us from the mirror is our self. Typically, this rush of self-recognition triggers a moment of ecstatic dancing in front of the mirror as we repeatedly confirm that the image is us.

The person looking back at you from a pivotal role in the future evolution of life on Earth is you. You are life on Earth becoming aware of itself and deciding to consciously advance its own evolution.

The universality of the transition to intentional evolution

As the transition to intentional evolution unfolds, intentional evolutionaries know that they are participating in processes that have universal aspects. The details of the living processes that emerge elsewhere in the universe will differ. But the general direction of evolution and the major transitions will follow similar principles everywhere.

Wherever life emerges, living processes will progressively become organized into cooperatives of greater and greater scale; this will be accompanied by a long sequence of improvements in evolvability; eventually organisms will emerge that can build mental models of their environment and themselves; they will use this capacity to develop a comprehensive understanding of the evolutionary processes that have produced them and will determine their future; for the first time they will have a powerful, science-based story that explains where they have come from, and their place in the unfolding of the universe; they will see that evolution is headed somewhere—it is directional; they will begin to see themselves as having reached a particular stage in an on-going and directional evolutionary process; individuals will begin to emerge who see that evolution will progress further only if they commit to working consciously to advance the process; they will realize that this realization is itself an important step in the transition to conscious evolution; as part of this transition they will develop in themselves the capacity to free themselves from the dictates of their evolutionary past, becoming self-evolving beings, able to evolve in whatever directions are necessary to contribute positively to the future evolution of life in the universe; a unified and cooperative organization will emerge that comprises all the living processes that arose with them and all the technology, matter, energy and other resources available to them, eventually developing the capacity to adapt as a whole, transcending the particularities of its evolutionary past, becoming a self-evolving being in its own right, expanding in scale, linking up with other organizations of living processes that arose elsewhere, expanding in scale again and again, moving forever onwards and upwards, without end.

And everywhere that living processes emerge, the transition to intentional evolution will include something like *The Evolutionary Manifesto*.

Of course, life on some planets may not complete the critically important step that currently faces humanity: the emergence of a unified and sustainable global society. Life at the threshold of this

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step is likely to be precarious, as it is for humanity at present. At this stage, life still comprises separate warring groups that compete destructively with one another. Like us they will be technologically advanced enough to destroy their civilizations in a war to end all wars. At the same time, the lack of global controls to restrain competition for ever-diminishing resources will inevitably result in environmental despoliation, as it has on this planet at this time. This in turn will increase the potential for further conflict and war.

One way or the other, civilizations at this precarious threshold will be temporary: either they will be driven urgently by evolutionary consciousness to form a unified global society that restrains internal conflict and environmental harm; or they will destroy themselves.

Humanity is at a dangerous stage in the evolution of planetary life, poised somewhere between oblivion and the opening of extraordinary new opportunities. The fate of humanity is likely to be decided this century, by our actions.

John Stewart

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john.stewart@evolutionarymanifesto.com

<http://www.evolutionarymanifesto.com>

HELP TO PROMOTE DISCUSSION ABOUT THE EVOLUTIONARY WORLDVIEW

Whether or not those who read the *Manifesto* are prepared to embrace the new evolutionary worldview immediately, they generally agree on one thing: as a matter of urgency, the *Manifesto* should be widely circulated and subject to extensive discussion and serious consideration.

You can help to promote this debate and consideration by circulating links to *The Evolutionary Manifesto* and to other material about the worldview as it is developed by evolutionary activists. For example you could email links to people who might be interested, put links on websites, in blogs, in comments on blogs and discussion groups, and so on.

STRATEGIES FOR ADVANCING EVOLUTION

What specifically can an intentional evolutionary do to advance the evolutionary process on Earth?

A 24 page document 'Strategies for advancing evolution' is at

<http://www.evolutionarymanifesto.com/strategies.pdf>