

Second General Email - The next major cooperative transition

In my previous email, I circulated access to my new paper ‘Towards a general theory of the major cooperative transitions’ (<https://doi.org/10.1016/j.biosystems.2020.104237>). The paper outlines what I refer to as Management Theory. I also foreshadowed that I would email you in the future about the possible role of evolutionary science in the next major cooperative evolutionary transition. This transition has the potential to produce a cooperative global society that could overcome the existential threats facing human civilization.

The purpose of this email is to promote discussion and debate about the science that is relevant to this next major cooperative transition. Subsequent emails will then discuss how evolutionary scientists might use this knowledge for the benefit of humanity.

An easy-to-print PDF of the body of this email is available on my website [here](#). A PDF of the body of the previous email is [here](#).

The sequence of Major Cooperative Transitions

Evolutionary science is in a unique position to identify how humanity must organise itself if we are to survive and thrive into the future. It understands that human social organization is part of a sequence of major cooperative transitions that have unfolded during the past evolution of life on Earth.

It is clear what the next step in this sequence will entail, and what challenges it will overcome. Each transition in the sequence involved entities at one level becoming organised into complex cooperatives that eventually became large-scale entities at the next level. These larger-scale entities then formed cooperatives, which then became even larger-scale entities, and so on, repeatedly. Each step built on the next. Each step produced cooperative organisations of wider scale than the previous.

The transition to a global cooperative society

The first cooperative organisations of molecular processes were infinitesimal. Currently, the largest-scale cooperative entities on the planet are Nation States. The largest of these span a continent. The final step in this sequence of cooperative transitions on Earth will be the emergence of a cooperative organization that spans the entire planet.

We are currently on the verge of this final cooperative transition.

This sequence is obviously not an accidental artefact. It is causally driven. At each step, the emergence of cooperative organization was favoured by selection. Every transition in the sequence was driven by the competitive superiority of effective cooperation. Cooperative organisations of entities have the potential to outcompete isolated individuals acting alone. Cooperatives can exploit the benefits of effective cooperation, and can suppress the destructive competition that otherwise exists between individuals.

The transition to a global society can remove existential threats to human civilization

The advantages that have driven previous transitions will also apply to the emergence of a global human society. Most significantly, such a global society will be able to suppress the

destructive competition between Nation States, corporations and others that is currently threatening the survival of human civilization itself. This destructive competition is currently driving environmental degradation such as global warming, as well as the threat of nuclear war. Individual Nation States acting alone cannot remove these existential threats because their causes and effects are transnational.

Evolutionary science knows how previous cooperative transitions were organized. This enables us to understand how a global cooperative society needs to be structured so that it can overcome these existential threats. We know that large-scale complex societies of humans have been organised by governance. This governance reaches across the society to support beneficial cooperation as well as to punish and deter destructive competition (including by punishing free-riding and cheating). Supra-national global governance has the potential to fulfil these same functions at the global level. More concretely, the establishment of global governance would repeat at the global level what was done to produce the United States of America. The US was established by federal governance that reached across the states to prevent destructive competition between them and to promote cooperation. This made war between states unthinkable, at least while the federal governance remains effective, and the centre holds.

The need to constrain the governance of a global society

Evolutionary science is increasingly recognising that it would be essential for global governance itself to be constrained and governed. This would be necessary to ensure that the interests of the governors are aligned with the interests of citizens, and continue to be so aligned. The need to govern the governors has been a key factor in the recent evolution of human societies. This has particularly been the case as societies have increased in scale. The consequent reduction in the numbers of competing societies has tended to reduce the intensity of competition. In the absence of intense competition to align interests, measures such as the Magna Carta and then democracy have emerged to do so, often driven by the threat of revolution. At the global level, stronger measures will be necessary since a global society will not be disciplined by any immediate competition.

Three propositions about future human evolution that can be advanced by evolutionary science

In summary, evolutionary science is increasingly recognising the validity of three central propositions: (1) the next step in the sequence of major cooperative transitions that have arisen in the evolution of life on Earth is the emergence of a global cooperative society; (2) the emergence of such a global society is essential to suppress the destructive competition that is endangering human civilization by driving environmental degradation and the threat of nuclear war; and (3) such a global society will need to be organised by global governance that is appropriately constrained so that it always acts in the interests of the citizens of the world.

In short, humanity is facing an evolutionary imperative to organise itself into a global cooperative society.

For detailed justification of these three propositions, see my recent paper on evolutionary transitions, and my paper ‘The direction of evolution: the rise of cooperative organization’ (BioSystems, 123: 27-36. 2014). It is freely available here:

<https://doi.org/10.1016/j.biosystems.2014.05.006>. For more detail about how a global cooperative society can be organized, including how its governance can be appropriately constrained, see my 2018 paper ‘Evolutionary Possibilities: Can a society be constrained so that “the good” self-organizes?’ (World Futures, 74, pp 1-35). An earlier version titled ‘The Self-Organizing Society’ is freely available here:

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

Can evolutionary science endorse the three propositions?

But is it overly optimistic to suggest that mainstream evolutionary science is slowly but surely converging on the validity of these three propositions?

The vigorous disagreements between evolutionary scientists about the mechanisms that have produced complex cooperative organisation might suggest that it is. However, a deeper understanding of the relevant issues demonstrates that this is not the case. This is because the three propositions do not deal with the details of the selection mechanisms that produce cooperative transitions. They are essentially mechanism-independent. Irrespective of where a scientist ends up in the group selection wars, he or she can still accept the validity of the three propositions. You don’t have to sign up to Management Theory in order to agree with the propositions. This is demonstrated very clearly by the position adopted by David Sloan Wilson, the super-spreader of the group selection virus. His recent statements take him extremely close to supporting the propositions. For example, see this video where he acknowledges the role of global regulation in producing global cooperation (it is the first video on the page): <https://evolution-institute.org/evolving-a-major-transition-in-the-internet-age/>

But isn’t it that case that few mainstream evolutionary scientists have yet explicitly supported something like the three propositions? More significantly, don’t most evolutionary scientists believe that science has rejected the existence of large-scale patterns in the evolution of life on Earth? Isn’t this particularly the case for patterns that involve directionality or sequences of emergences? And finally, isn’t the prevalence of these beliefs evidenced by the near-absence of serious debate about these issues in respected scientific journals in the past 70 years or so?

Yes, this is all true, more or less. But the prevalence of these beliefs is not due to any scientific case against large-scale directionality in evolution. In fact, the beliefs have another explanation entirely:

The intentional exclusion of issues such as directionality from evolutionary science

As detailed by evolutionary philosopher Michael Ruse in his book *Monad to Man*, the founders of the Modern Evolutionary Synthesis got together a number of times during the 1940s to plan the establishment of the Synthesis. A central concern of these meetings was to establish evolutionary studies as an accepted academic discipline within science. With profession-building as a key goal, the architects of the Synthesis decided that ideas about direction and progress should be excluded from the discipline of evolutionary science. In particular, the founders were concerned that such ideas could be misused by some ideologies to justify racism and social inequality. This could embroil evolutionary science in controversy and undermine the academic acceptability of the nascent discipline.

Ruse outlines how the founders went about implementing their plan. They decided to use their editorial positions with scientific journals and their powers as ‘respected’ peer reviewers to influence what was publishable. In a world of publish or perish, these were powerful weapons for enforcing their intentions.

As Ruse points out, it is ironic that the architects made these decisions despite most of them supporting the view that directionality in some form or another is evident in evolution. For more detail, see pages 438 to 450 of "Monad to Man". In particular, pages 447 to 450 inclusive focus on the exclusion of directionality and wider "speculation" from the Synthesis.

Against this background, it is understandable that many evolutionary scientists currently believe that the exclusion of the study of directionality and other large-scale patterns from evolutionary science is due to the absence of a scientific case for these ideas.

However, it is clear that the initial exclusion was not due to relevant scientific considerations. There never was and there never has been any convincing science-based justification for their exclusion. The exclusion was decided without any recourse to the widely-accepted criteria for distinguishing speculations that are acceptable within science from speculations that should properly be excluded from serious science i.e. the Popperian criteria of testability and falsifiability.

The decisions and actions of the architects of the Synthesis gave birth to the ‘dark ages’ of evolutionary science. We are only beginning to emerge from this era today. It has tended to produce the kind of science that results whenever reductionist, mechanistic science alone is deployed to understand complex, evolving phenomenon. In the main, it produces rigorously-justified trivia, precise and analytically-rigorous mathematizations that bear little relationship to reality, masses of highly accurate data that decides nothing of importance, an inability to say much of interest about large-scale complex phenomena, and journals full of junk papers that are soon forgotten. To date, evolutionary science has failed miserably to fulfil its enormous potential to contribute significantly to the survival and future evolutionary success of humanity. Evolutionary science put a gun to its head in the 1940s and blew its frontal lobes away.

The need to intentionally reverse the exclusion

The time has come for evolutionary science to intentionally reverse the stunting of its scope that was engineered by the architects of the Modern Evolutionary Synthesis over 70 years ago. Although the actions taken by the architects were somewhat understandable, their manipulations constituted a fundamental attack on the integrity and effectiveness of the scientific process.

However, this reversal will not be simple and straightforward. The concerns that motivated the architects of the Synthesis have not disappeared. Science that can be used to encourage actions that cut across vested interests will always be attacked and undermined. But the price of insulating evolutionary science from political controversy is increasing significantly—as I have indicated, evolutionary science has particular knowledge about what our civilization needs to do if it is to survive and thrive into the future. Much more is now at stake if evolutionary science continues to ignore a significant part of its subject matter.

The lack of competent leadership in evolutionary science

Perhaps the most obvious way to attempt to reverse this stunting would be for the modern-day counterparts of the architects to lead and manage the reversal. This could work if today's leading evolutionary scientists had the capacity for 'big picture' thinking and the leadership abilities that were evident in the architects i.e. the ability to manage and mould a whole scientific discipline. But the problem is that the actions of the architects created a scientific discipline that repelled people with these characteristics. They lobotomised evolutionary science.

But has there been time for evolutionary science to free itself from this dark legacy? Are there leading, respected evolutionary scientists who have the capabilities needed to emulate the architects, but this time for the benefit of humanity? As I will outline in future emails, my approaches to the leaders to date have not yet identified any who have these qualities. But I would be more than happy to be proven wrong about this in the future.

The necessity for genuine systems thinking

A further difficulty is that many current evolutionary scientists are incapable of 'big picture', systems thinking. They are unable to understand and work with the mental models needed to represent the large-scale processes and patterns that have emerged in the evolution of life. Much of current science is powered solely by analytical/linear thinking. This thinking tends to build mechanistic, analysable models. Analytical/linear thinking has been extraordinarily successful for understanding those limited parts of reality that can be approximated by mechanistic models. But this kind of thinking is far less able to construct mental models of complex systems as they transform and interact over larger scales of space and time. This limits its usefulness in evolutionary science which deals primarily with phenomena of this kind. Some capacity and affinity for genuine systems thinking is a prerequisite for understanding and working with the phenomena being discussed in these emails.

For more about the higher levels of cognition that are necessary for 'big picture' systems thinking and how it can be developed and enhanced, see my short review of a book on the subject: <http://integralleadershipreview.com/14809-14809/>

Removal from the mailing list

I am circulating these emails widely amongst evolutionary scientists. I have done my best to target them to those who have worked on 'big picture' issues such as major transitions. However, given the success of the 'theoretic cleansing' undertaken by the architects of the Synthesis, there will likely be evolutionary scientists who feel uncomfortable with a renewed focus on 'big picture' issues including directionality. Any who wish to be deleted from the mailing list for this or any other reason can achieve this by replying to this email with the word 'Remove' in the content of their reply.

Please forward this email to any other evolutionary scientist who you think might be interested, and ask them to email me if they want to be added to the mailing list.

John Stewart

<http://www.evolutionarymanifesto.com/about.html>

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