catalysing exponential progress in a time of exponential challenge

the strategic role of knowledge, evolutionary diversity, and chance; research proposal, maki lam 2020

introduction

central question	Explore the highly-related concepts of *knowledge, evolutionary diversity, and chance* in making strategy effective. From this exploration, is there a method or set of methods that are particularly suitable in creating, implementing, or transmitting strategic responses to grand societal challenges?
example question 1	*Narrative* (and narrative history) faces a challenge, along with the "theory of mind" on which it is most often based (Rosenberg 2018, 00089). Can we make factual, evidence-based narrative and narrative history? If so, how and when is it best used? Can it replace traditional, "theory of mind"-based narrative?
example question 2	What is the influence of *givers* on effective social innovation? Are they more effective than takers and matchers, and if so, when and under which circumstances?
example question 3	The *argumentative theory of reasoning* is beginning to replace the dual-process model of intuition-versus-reason (Mercier and Sperber 2017, 00074). How can we apply this theory to enhance collaboration, negotiation, and conflict resolution?
example question 4	Review the impact of the *illusion of knowledge* on strategy. How does the emerging science of the unknowable, and hypocognition (Wu and Dunning 2018, 00097), inform strategic responses to sustainable development goals in general, and persistent inequalities and climate crisis in particular?

thesis statement/methodology/ethical considerations

academic and practical interest	Our societies are failing to thrive, and in continuing to fail, are catalysing exponential failure. If we can thrive, and grow a nurturing society, this cultural *zeitgeist* will lift us all, enabling and catalysing exponential progress. Are there still major innovations, ideas, that can enable a *step-change*, a drastic improvement, in this process? I believe there are; but if there are, why have they not been exploited already? The reason lies in the *illusion of knowledge*. Almost everyone believes they already understand knowledge, evolution, and chance. We understand very little of them, but since they are common, everyday concepts, we believe we know them well, even though this belief is not justified. Thus these, and other similar areas represent a huge *hidden potential* for research.
potential difficulties	the major difficulty stems again from the *illusion of knowledge*. The very strength that makes these areas so rich in potential is also the major weakness, when communicating the rationale to others. Our current culture cannot conceive of many concepts *beyond its ken*. This may be a general law of hypocognition, as we will also explore. In this case, without considerable luck as well as effort, it may be difficult to convince funding bodies and other gatekeeping entities of the worth of the project, because it is something that is literally *out of the ordinary*. Far from being just obstacles, though, these difficulties are also major part of the reason this project is so worthwhile; like a tall dam blocking a watershed, they are part of the reason that successfully negotiating them will lead to a step-change, a surge in progress.
the unknowable	researchers are at the early stages of understanding that there are certain things that are unknowable. The field is so new that there is not even a consensus on a name, in western science it is variously styled as agnotology (history of science), hypocognition (linguistics), or agnoiology (philosophy). The most basic outline is that we now have an inkling that there exists a conceptual and practical realm beyond knowledge and understanding, due to circumstance or intention. What does this have to do with strategy? Beyond the famous "unknown unknowns" — which were famous, ironically, for being literally incomprehensible — there has been little general conception of this field. This is remarkable because we thus leave unexplored a vast swathe of possibility. We should note that this goes far beyond the similar-sounding, but different, concept of "not valuing what we cannot see" which is a powerful tool in understanding behaviour that leads to environmental destruction and other abuse.
evolutionary diversity	it is also little appreciated that evolutionary diversity propagates not only due to current niches, but due to the inevitability of unknowable chance circumstances (of which extinction-level events are dramatic examples). Diversity is "selected for" because a non-diverse population will likely fail to survive drastic changes in circumstances, or, less dramatically, fail to thrive in a "normal" range of circumstances — in effect, the only way organisms can "prepare" for change is to be diverse. Almost everyone has no idea that diversity is a fundamental consequence of evolution; instead the concept of competition, "red in tooth and claw", still holds sway. Thus, this large mismatch between conception and reality creates a huge opportunity for research.
chance circumstance	many researchers are now familiar with the concept that a person's circumstances have a massive influence in their chances of "success" or "failure". However, most people are still not familiar with this, and even researchers who know this may judge a person's merit based on their station in life or their current perceived circumstances. Once people are truly familiar with this concept, in my experience, a step-change in behaviour occurs — it is no longer logical to blame people for their actions (please note, this is *not* absolving people of responsibility for their actions) and, paradoxically, as people start to understand the limits of our agency and responsibility, they become more able to act responsibly. One example of this is in conflict resolution, where *truth and reconciliation* can only occur when we acknowledge the truth of the abuse we each caused in the past, no matter whether we intended or understood what we were doing at the time, and strongly wish to communicate in dialogue with all parties to try to resolve conflict. Understanding chance circumstances helps us acknowledge that we are all, then and now, perpetrators of abuse, no matter how unwitting or unknown to us, and thus helps us come to terms with our true role in conflict.
scalable	a major part of the project will be investigating theory and designing high-impact interventions, and many practical outcomes are possible. For example, it may be possible to build upon Manning and Bejarano (2017) by revisiting the data for an analysis of language incorporating theory of mind; and to weave our theories into a scalable, *modular architecture* (Manning and Reinecke, 2016)
ethics review	there are no standard ethical concerns arising from the topic or proposed methods of research. However, emerging scientific theories can indirectly cause individual and societal harm, however unintentionally or unknowingly, no matter how beneficial the theories themselves may be. This may require a non-standard ethics review.
accessible	epub file (screenreader, mobile-friendly) apple pages file (accessible) pdf file (not accessible)

theoretical framework/literature review/bibliography

empathy   00013 (preview) e.g. *empathy is hard work: people choose to avoid empathy because of its cognitive costs*
c. daryl cameron et al. 2019 http://dx.doi.org/10.1037/xge0000595

origin and nature of abuse   00017 (preview)* e.g. *social influence and interaction bias can drive emergent behavioural specialization and modular social networks across systems* christopher k. tokita, corina e. tarnita 2020 http://dx.doi.org/10.1098/rsif.2019.0564

dealing with abuse   00020 (preview) e.g. *motivating the adoption of new community-minded behaviors: an empirical test in nigeria*
graeme blair et al. 2019 http://dx.doi.org/10.1126/sciadv.aau5175

retrieve, recall   00045 (preview) e.g. *motivated misremembering of selfish decisions*
ryan w. carlson et al. 2020 http://dx.doi.org/10.1038/s41467-020-15602-4

trust, belief   00074 (preview) e.g. *the enigma of reason: a new theory of human understanding* hugo mercier, dan sperber 2017

decay and renewal   00085 (preview) e.g. *a model-based approach to the tempo of "collapse": the case of rapa nui (easter island)*
robert j. dinapoli et al. 2020 https://doi.org/10.1016/j.jas.2020.105094

narrative   00089 (preview) e.g. *how history gets things wrong: the neuroscience of our addiction to stories* alex rosenberg 2018
convincing the crowd: entrepreneurial storytelling in crowdfunding campaigns
manning and bejarano (2017) https://doi.org/10.1177/1476127016648500

evolution   00092 (preview)* e.g. *high-resolution lineage tracking reveals travelling wave of adaptation in laboratory yeast*
alex n. nguyen ba et al. 2019 http://dx.doi.org/10.1038/s41586-019-1749-3

diverse, adapt   00093 (preview)* e.g. *history is written by the victors: the effect of the push of the past on the fossil record*
graham e. budd, richard p. mann 2018 http://dx.doi.org/10.1111/evo.13593
evolutionary dynamics of incubation periods
bertrand ottino-loffler et al. 2017 http://dx.doi.org/10.7554/elife.30212.001
a modular governance architecture in-the-making: how transnational standard-setters govern sustainability transitions
manning, s., reinecke, j. 2016

unknown, potential   00097 (preview) e.g. *hypocognition: making sense of the world beyond one's conceptual reach*
wu, k., & dunning, d 2018 http://dx.doi.org/10.1037/gpr0000126

chance, luck   00099 (preview)* e.g. *the drunkard's walk: how randomness rules our lives* leonard mlodinow 2008