
COMING FACE TO FACE THROUGH NARRATIVES: EVALUATING FROM OUR EVOLUTIONARY HISTORY THE CONTEMPORARY RISK FACTORS AND THEIR CONCEPTUALISATION WITHIN A TECHNOLOGISED SOCIETY

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Abstract

*Technological developments represent wide-ranging and multifarious economic and cultural forces worldwide – even in South Africa. As forces, they must be faced and addressed contextually and critically since they have shaping impacts on societies, that is, they imply agency. The vantage point and focus of my critical engagement with technological developments as shaping agencies is the conviction that these developments are in no way neutral. In an explorative manner the article will focus on the most recent publication (Feb 2020) by the Institute of Risk Management South Africa (IRMSA), namely *The IRMSA Risk Report 2019 (5th edition)*. In the report, a very sophisticated analysis is given of the contextual challenges as risks that the South African society are facing but at the same time, conceptual skills (as tools!) are proposed for the risk manager as futurist to address these (technological) challenges. I subsequently raise and ask the question against the background of brief remarks on the (technological) challenges from the 4th Industrial Revolution whether it is helpful to judge and critically evaluate the proposed conceptual skills from the narratives on our evolutionary history as *Homo sapiens*. The evaluation of the proposed skills, transversally undertaken as the narratively-shaped face to face encounter of our evolutionary history and the contemporary-contextual conceptualisation of the management of risks within the South African society represents the original contribution of the argument.*

Keywords: IRMSA Risk Report (2019); Risk Management; 4th Industrial Revolution; Evolutionary history; Cardiac Discernment

Introduction

Can an evolutionary starting point on human anthropology perhaps assist us in a constructive way in valuing contemporary decision-making and envisioning the addressing off contextual societal challenges and risks? The challenges I have in mind are specific technological challenges that currently affect the very fibre of our societies in numerous ways. Can we learn something from, on the one hand our evolutionary

history (including toolmaking)¹ and the various challenges that confronted *Homo sapiens*, and on the other hand the conceptualisation of the current (technological) challenges and identified risks that confront us?

In an explorative manner, I take as vantage point, the most recent publication (Feb 2020) of the Institute of Risk Management South Africa (IMRSA), namely *The IRMSA Risk Report 2019* (5th edition).² In the report ³a very sophisticated analysis is given of the contextual challenges as risks⁴ that are facing South African society, captured in a template of risk impact, risk likelihood and risk readiness. At the same time an analysis is given of the risk causal relationship, structured by means of identified drivers, pivots and outcomes. Twenty risks⁵ are identified and ranked so that guidelines can be formulated in order to address the risks in a constructive manner. Or simply captured by Gillian le Cordeur, Chief Executive Officer of The Institute of Risk Management South Africa, in stating that “risk management is optimally used as a tool to bring about positive change in the country” (Le Cordeur 2020:16), and risk managers therefore can be best

¹ The reason for “and toolmaking” in brackets and the formulation of “and” is to emphasise that I will concentrate more strongly on the dynamics of the “social niche” within which the toolmaking takes place rather than the story of toolmaking itself. On social niche, see my section 3. *Homo Sapiens: a brief history*. An important qualification on the study of technology or toolmaking (stone tools, pottery, metalwork, etc.) is made by Coward (2018:42) in stating that it is one of the most significant specialist areas in archaeology. She insightfully adds: “This is not in itself problematic: stone tools are a major class of evidence for early hominin behaviour … and technology—and material culture more generally—do play a hugely significant role in human lifeways both past and present. Indeed, it could be argued that other disciplines do not pay enough attention to the kind of information that can be gleaned from studying technology … The danger comes when the alluringly oversimplified, linear schemes of technological development lurking in broader cultural narratives about human ‘progress’ are allowed to shape the understandings of human evolution we claim are entirely objective and scientific”.

² The IRMSA Risk Report creates awareness of the risks facing the achievement of the South African country and industry objectives. It stimulates debate on how to best manage the risks highlighted in the report through communicating current challenges clearly to create effective risk treatment plans benefiting the country and all South Africans (cf. IMRSA 2020:36).

³ In the report more than 85 experts provided summarised and consolidated opinions for each of the top risks for both country and industry.

⁴ In the report, a risk is defined “as the effect of uncertainty on objectives” (IMRSA 2020:35)

⁵ The following risks for the South African context are identified: 1 Structurally high unemployment; 2 Growing income disparity and inequality; 3 Failure of governance – public; 4 Unmanageable fraud and corruption; 5 Inadequate and/or sub-standard education and skills development; 6 Energy price shock; 7 Labour unrest and strike action; 8 National political uncertainty/instability; 9 Cyber-attacks (ransom, algorithm shutdown of the internet of things); 10 Macro-economic developments; 11 Skills shortage, including the ability to attract and retain top talent; 12 Lack of leadership; 13 Breakdown of critical infrastructure & networks (e.g. transport, information, roads); 14 Government policy, legislative and regulatory changes and uncertainty; 15 Failure of State, a State crisis or a State collapse; 16 Global political uncertainty/disruption; 17 Capital availability/credit risk; 18 Insufficient supply of electricity; 19 Failure of governance – private; 20 Business interruptions (e.g. production, supply (IMRSA 2020:2). Interestingly, there are some global risks – such as climate change, loss of biodiversity etc. – that the compilers do not see as important enough to include in their identified risks.

seen as “futurists”!⁶ For my critical engagement with, and evaluation of, the constructive guidelines for addressing these risks, I will firstly briefly discuss the report and its formulated guidelines, embedded within a few general remarks on the multi-dimensional challenges flowing from the 4th Industrial Revolution. Secondly, I will give a brief paraphrased overview of *Homo sapiens* from evolutionary anthropology, limiting myself in my exposition to focussing only on the manner in which they addressed their challenges (amongst others in toolmaking). Lastly the contemporary-contextual conceptualisation of the risk factors will be critically and transversally⁷ explored and valued.

IMRSA Report and Technology

IMRSA Report

In his “Foreword” to the report, the Minister of Public Enterprises, Pravin Gordhan (2020:11), states that risk managers “... are in a unique position to connect the proverbial dots – finding the linkages and trends in information, vertically and horizontally, from a number of different planes that enable [them] to navigate the level and pace of complexity of what we are going through in the world and certainly in South Africa”. It is therefore of the utmost importance for Gordhan (2020:11) that the dots be connected by the guiding question: “Where to from here and how do we as public officials or private operators in companies influence and chart our own destiny?” From the important conviction that “Silence can be costly”, Gordhan (2020:12) urges the risk professionals to find “bold solutions with new mind sets that can enable us both to overcome the difficulties of the past and present, and also to make determined efforts to create a very different kind of future”.

One such solution is offered by Graeme Codrington in two contributions, namely “The risk practitioner as a Futurist” (Codrington 2020a) and “Dealing with disruption – don’t get caught behind the 8-ball” (Codrington 2020b). In the latter contribution, he states emphatically:

⁶ In the report, a “futurist” is described as “someone who intentionally builds the capacity to see and understand the implications and meaning of change” (IMRSA 2020:31).

⁷ Why the specific emphasis on transversal? The emphasis is to distinguish my approach from interdisciplinary and multi-disciplinary approaches. The former focuses on the spaces between disciplines and strives to create a relational connection. In the latter approaches, we find that actors from distinct disciplines unite for an investigation, sharing insights but seldom incorporating them into their own worldviews. Although both approaches are important sources for data generation, they are thin on the integration of frameworks from different disciplines and therefore on the broadening and deepening of a specific intellectual approach. A transversal approach entails collaboration that incorporates some of the assumptions, worldviews, and potentially the languages of different disciplines. But even more importantly: It has the goal of developing a relationship that creates the possibility for discourse in which the terms of all the participant disciplines are, or can be, expressed, thus facilitating the possibilities for intellectual transformation that is more thorough, intensive, and generative than in inter- or multidisciplinary approaches. Transcending disciplinary boundaries enables the possibility of synthesizing knowledge anew (cf. Fuentes & Deane-Drummond 2018b: 11-12).

We live in the digital age, and so looking at technology is an obvious place to start. Which technologies to focus your attention on is obviously the most important starting point - even having that conversation with your team will be valuable. The technologies you should analyse are those that bring the greatest opportunities and the biggest threats to your business. Technologies are not just external 'shiny things' coming our way - we must also consider the intangible shifts driven by digital trends like personalisation, cloud, data analytics, social proof, gamification and connected platforms (Codrington 2020b:50).

Indeed. A discussion of technology is not "a" place to start but "the" place to start. Codrington therefore unfolds the five major areas of his exposition - what he calls areas of disruption – in close alignment with current technological developments within our society. The five major (disruptive) areas that he identifies as influential forces are Technology, Institutional Change, Demographics, Environment and Natural Resources, and lastly Shifting Societal Values.⁸ Since the risk manager for him is a futurist who "intentionally builds the capacity to see and understand the implications and meaning of change" (Codrington 2020a:48), he proposes six key skills (read: conceptual tools) that in his opinion we can learn and apply in our South African context. How does he "see" our context, and what are the six skills? The former is described as follows:

The last two decades have been preparation for what we're about to experience. At some levels, we merely developed the key building blocks for deep change, including cell phones and digital communication networks, the Internet (and now the Internet of Things), robotics, artificial intelligence, automation, quantum computing, augmented reality, the block chain, regenerative medical options, and many other disruptive technologies and mega forces. All of these are also fuelling deep structural changes in politics, economics and society itself. Every aspect of our world is currently in flux (Codrington 2020a:48).

The latter, namely the skills (see Codrington 2020a:49) that he proposes, are:

- Switch Your Radar On⁹
- Be More Curious¹⁰
- Collect Sense-making Frameworks¹¹

⁸ Codrington (2020b:50) calls his model for addressing the four major areas of disruption appropriately the TIDES model!

⁹ For Codrington (2020a:48) this entails that we look beyond what we can see with our naked eyes, that is, looking beyond the horizon.

¹⁰ For Codrington (2020a:48) this entails that we ask better questions since questions are fundamental to the learning process and the gateway to challenging existing realities and orthodoxies.

¹¹ For Codrington (2020a:48) this entails in a complex world the developing of a shared vocabulary and frameworks. It is the latter that helps us to connect dots, to see the ripples of the cause and effect of disruptive change, and then anticipate the implications of these changes across all of the systems in which we live and work.

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- Embrace Diversity¹²
 - Unlearn and Relearn¹³
 - Experiment More¹⁴

Before I direct my attention to the evolutionary anthropology and history of *Homo sapiens* from which I would like to evaluate the skills that Codrington proposes, a brief interlude in which I sketch an overview of the 4th Industrial Revolution (4th IR) is relevant.

Technology¹⁵

The societal importance and influence of technology on contemporary societies cannot be underestimated or overemphasised! It represents both an economic and cultural force (cf. Franssen and others 2018:1) affecting every fibre of our respective societies in multifarious and penetrative ways. It was the German engineer-economist Klaus Martin Schwab who coined the term 4th IR to signify the current technological revolution for the world we are living in. If our current world is then described as in the grip of the 4th IR, the core of the previous revolutions can be best described with steam as a power source (1st Revolution), electricity (2nd) and information (3rd). Our current world, in the grip of the 4th IR is characterised by the seamless, intelligent (or smart) integration of multiple disciplines and sectors into a single whole. The markers of the 4th IR are insightfully captured and described by the industrial psychologist Theo Veldsman (2019:14; cf. 2019b:97-101) in the acronym DIVAS, namely:

- Digitisation: making everything, anything and anywhere computer readable and processable. Examples are smart phones, voice and facial recognition, augmented reality.
- Interconnectivity: everyone/everything talking to everyone/everything. Examples are the Worldwide Web, Social media, Internet of Things, Cloud, and virtual collaboration platforms (such as Skype).
- Virtualisation: being present and delivering on an ongoing basis in cyberspace, anything, anywhere, anytime, anyhow, for anyone. Examples are smartphones, voice and facial recognition.
- Automation: performing a process or practice, and taking decisions and actions, through technological means with no/minimum human mediation. Examples are robotics and 3D printing.
- Smart: generating data from everything/anyone, affecting machine learning through feedback and/or turning data into intelligence through decision-making

¹² For Codrington (2020a:49) this entails the celebration of different opinions and many different viewpoints on the same issue.

¹³ For Codrington (2020a:49) this entails the conviction that the past offers little help in finding solutions since tomorrow's challenges will not be solved by yesterday's solutions. Merely building on past experiences is not good enough.

¹⁴ For Codrington (2020a:49) this entails that we intentionally build our capacity for change.

¹⁵ See the interesting discussion from our evolutionary history by Coward (2018:42ff) on technology not being a uniquely human trait.

algorithms in order to take focused real time, in time, validated, predictive action. Examples are Artificial Intelligence and machine learning.

These markers clearly indicate not only the wide-ranging influences of technological developments, but also their (implicit) intensity and effective depths. Schwenger (2016:44) confirms its range and rightly cautions that the “importance of technology in our time can hardly be overestimated. Technology is ubiquitous and all areas of life are influenced by it, such as work processes, mobility, relationships (especially the realm of communication), leisure activities and health”. And Jeffrey Shaw (2018:152) adds on a very scary note that the “...whole massive complex of technology, which reaches into every aspect of social life today, implies a huge organization of which no one is really in control, and which dictates its own solutions, irrespective of human needs or even reason”. The Israeli historian Yuval Harari (2016:59) sings in the same out-of-control-technology choir by stating that “nobody really has a clue where we are heading in such a rush nor can anyone stop it” since – according to McGinnes (cf 2018) - it is currently disruptively blurring the boundaries between the physical, digital and biological worlds.

Against the background of these brief and sketchy remarks on contemporary technological developments that highlight their wide ranging disruptive and out-of-control and blurring character, I turn to the narrative of *Homo sapiens* as a framework into which I subsequently would like to transversally embed my exploration and evaluation of the conceptualisation of the management of risks.

***Homo sapiens: a brief history*¹⁶**

The story of human evolution goes back more than six million years. It is a fascinating story that tells us that our species name, namely *Homo sapiens* – that is, “wise man” - gives us an important indication of what characterises “being human” or “what makes us human”. Wisdom¹⁷ is an answer,¹⁸ albeit a debatable answer, but there are very good reasons to present and qualitatively defend it as one of the better answers! In evolutionary anthropology, wisdom is mostly defined as “the pattern (and ability) of successful complex decision-making in navigating social networks and dynamic niches in human communities. It is suggested that much of the core development of human wisdom

¹⁶ I call it a “brief” history since it only focusses on very limited and deliberately chosen dimensions of being human.

¹⁷ The importance of wisdom for characterising “being human” was creatively explored at the conference, - *Human Distinctiveness: Wisdom’s Deep Evolution* at the Notre Dame London Global Gateway in July 2017. The conference was the culmination of the transdisciplinary *Evolution of Wisdom* research project supported by a grant from the John Templeton Foundation and led by Celia Deane-Drummond and Augustin Fuentes at the University of Notre Dame. A collection of articles that originated from the papers presented at the conference was published by the Centre for Theology, Science, and Human Flourishing, University of Notre Dame as e-book *Evolution of Wisdom: Major and Minor Keys*. I gratefully acknowledge that I make use of many of their insightful explorations of the role of wisdom for the characterisation of “being human”.

¹⁸ In contemporary discourses on human distinctiveness, we find many answers to the question, conceptually captured in symbolic behaviour (including religious imagination), morality, and language. However, see my later remark that we can no longer propose exclusively one specific trait for human distinctiveness.

occurred with the evolutionary advent of symbolic thought and its correlated material evidence”¹⁹ (Fuentes & Deane-Drummond 2018a:11). Niches? What does it entail in an evolutionary context? And: To talk about contemporary successful decision-making in this context does not imply that it can be fully grasped alone from either reconstructive understandings of wisdom or from our evolutionary history. Both terms, namely niches and decision-making, must be explicated in a broader evolutionary narrative of becoming human.

To add significantly to the challenges of unfolding the range and depth of “becoming human” and “being human”²⁰ from our evolutionary history (that is, from the archaic form of our genus *Homo sapiens* into the current form of *Homo sapiens sapiens*), the very history itself is an ongoing evolving history. The crux for my evaluation of risk management in light of our evolutionary history lies precisely here, namely that the “focus on this transition in our current socio-cognitive niche will add to our insight into how we, as humans, experience the world in the here and now” (Van Huyssteen 2018:38).

“Becoming” and “niche” are the two keywords in contemporary discourses on our evolutionary history, since Darwin’s original theory of evolution that was formulated more than 160 years ago has insightfully and dramatically evolved. In the contemporary Extended Evolutionary Synthesis (ESS), Darwin’s theory is not only understood through a variety of lenses, but has also been excitingly broadened. Evolution is much more than the inheritance of genes! The variety of lenses and its broadening have unearthed the influential totalising discourses on the insistence of natural selection as a creative force as well as opened up new exciting interpretative anthropological horizons. The former, namely EES has taken on and revised the classical understanding of Darwin’s evolutionary theory in that “becoming human” restrictively entails past fitness, potentials and survival mechanisms in which natural selection and sexual selection were taken as the key factors in change and adaptations for evolutionary success over a period of time (cf. Van Huyssteen 2018:26). In their important revision of evolutionary theory, Eva Jablonka and Marion Lamb (2005) argue convincingly in *Evolution in Four Dimensions* that apart from genes, three other inheritance systems come into evolutionary play.

Alongside the important genetic inheritance system, Jablonka and Lamb (cf. 2005:1-8) argue for three other inheritance systems that may also have causal roles in evolutionary change, namely epigenetic, behavioural, and symbolic inheritance.²¹ What important implications flow from this broadening of traditional evolutionary theory? Evolution is now much more than simply the inheritance of genes. Behaviour and behavioural patterns are vehicles of the transmission of information, and its transmission

¹⁹ Since archaeological data represents the basis on which interpretations of and inferences for human symbolic thought relies, it will always be challenged and remain problematic!

²⁰ See the important critical discussion of the formulation of “becoming human” and being human” by Jennifer French (2018:57ff) in which she argues that this transition is often difficult and problematic to pin down. She refers to and discusses the example of the dating of the recently discovered hominin *Homo naledi*, found in the Rising Star Cave in South Africa. Only c. 300,000–200,000 years old?

²¹ Epigenetic inheritance is found in all organisms, behavioural in most, and symbolic inheritance occurs only in humans.

occurs through socially mediated learning. Language not only ensures symbolic inheritance, but also the ability to engage in complex information transfer containing a high density of information (cf. Jablonka and Lamb 2005:193-231). And here emerges a special and distinct human trait, namely the organisation, transferral and acquisition of information. In short: It is our ability to think and communicate through words and other types of symbols that makes “being human” different. And even more enlightening flowing from the broadening (read: extension) of traditional evolutionary theory, is niche construction, that is, the important implication that variation on which natural selection acts is not always random in origin or blind to function. As response to the conditions of life, a new heritable variation can arise. Niche construction entails the insight that organisms are constructed in development, not simply programmed to develop by genes, and consequently do not evolve to fit into pre-existing environments but co-construct and co-evolve with their environments (see Fuentes 2016:13ff). In this, humans construct ecological, technical, and cultural niches that influence the structure of evolutionary landscapes (cf. Fuentes 2016:14).

In the period from about 2.5 million to 12 000 years ago (the so called Pleistocene period), we find a significant evolution of increasing complexities regarding culture and social traditions, tool and manufacture, trade and the use of fire. But evenmore: enhanced infant survival, predator avoidance, increased habitat exploitation and information transfer via material technologies (cf. Van Huyssteen 2018: 28). Van Huyssteen (2018:28) insightfully summarises in reference to Augustin Fuentes’ article “Human Evolution, Niche Complexity, and the Emergence of a Distinctively Human Imagination” the implications:

All of these increasing complexities are tied directly to a rapidly evolving human cognition and social structure that require greater cooperative capabilities and coordination within human communities. Thinking of these developments as specific outcomes of a niche construction actually provides a mechanism, as well as a context, for the evolution of multifaceted response capabilities and coordination within communities.

And:

(T)he emergence of language and a fully developed theory of mind with high levels of intentionality, empathy, moral awareness, symbolic thought, and social unity would be impossible without an extremely cooperative and mutually integrated social system in combination with enhanced cognitive and communicative capacities as our core adaptive niche (Van Huyssteen 2018:29).

A last important remark and quotation must suffice: the key part of our evolutionary niches, and perhaps the best explanation for why our species succeeded and all other hominins went extinct, is a distinctively human imagination as intrinsic evolutionary force!²² There is not only a naturalness to human imagination, but also to religious

²² One of the most important insights that emerges from our evolutionary history of “becoming human”, is that there is neither a single trait that explains human evolutionary success, nor is there a particular environment that created it!

imagination²³ – and it makes our engagement with the world in some ways truly distinct from any other animals! Van Huyssteen (2018:29-30) concludes:

Now existing in a landscape where the material and social elements have semiotic properties, and where communication and action can potentially be influenced by representations of both past and future behaviour, implies the possession of an imagination, and even something like hope, i.e., the expectation of future outcomes beyond the predictable.

The latter remark, namely “the expectation of future outcomes beyond the predictable” represents the connection from our evolutionary history to the subsequent evaluation of contemporary decision-making and envisioning the addressing off contextual societal challenges and risks.

Coming face to face through narratives: Our evolutionary history and risk management

Facing contemporary (technological) challenges within the given context of risk management should in my opinion, be pre-guided by a crucial and helpful distinction that is prompted by our evolutionary history and specifically niche construction, especially between human technological intelligence and human social wisdom. Following Fiona Coward (2018) in her very readable exposition “Technological Intelligence or Social Wisdom? Promiscuous Sociality, Things, and Networks in Human Evolution”, she argues that it is not only an important distinction to be made, but a significant one. Whereas in the study of the evolution of human cognition the emphasis tends mostly to fall on intelligence, Coward proposes an emphasis on human social wisdom in contrast to human technological intelligence.²⁴ In her understanding of human social wisdom, she explains that whilst wisdom requires and is predicated on intelligence, it actually represents intelligence tempered by experience (cf Coward 2018:41). And the application of that intelligence is based on a deep and rich understanding of the world in which one lives.²⁵

²³ The argumentative emphasis on religious imagination at this point, is not an insight that we can merely bypass in a friendly noteworthy manner and then continue on our “being human” merry way! It is of crucial importance because, as paleoanthropologist Ian Tattersall has insightfully and convincingly argued, every human society, at one stage or another, possessed religion of some sort, complete with origin myths that purportedly explain the relationship of humans to the world around them. The point is: Religion cannot be discounted from any discussion of typically human behaviours (cf. Van Huyssteen 2018: 31). There is indeed a naturalness to religious imagination that challenges any viewpoint that would want to see religion or religious imagination as an arbitrary or esoteric faculty of the human mind.

²⁴ Coward (2018:41) quotes an example to make the difference clear. She refers to a poster on reddit.com that states, “... intelligence is being able to clone a dinosaur, and wisdom is stopping and asking ‘hey, is this really a good idea?’”.

²⁵ Coward (2018) discusses the important shift that has taken place regarding the dividing line between humans and non-humans from technology to sociality. She aligns her argument for the decisive emphasis on wisdom with the viewpoint that the distinctive elements of human nature relate primarily to the complexity of our social worlds, rather than to technology per se. This she does convincingly by employing an alternative to the technological model of human wisdom,

For the world in which we currently live in South Africa, Codrington (2020a:48) proposed in the IMRSA Report six key skills for addressing the risks we are facing. Do his proposed skills make sense against the background and in the light of the preceding evolutionary history of *Homo sapiens*, and especially the importance that our evolutionary history intrinsically places on the role of imagination for our semiotic species? Contemporary risk management surely represents a specific type of complex decision-making for the benefit of our South African societal context. In this qualified and restricted sense, the six skills should constructively contribute in navigating our social networks and dynamic niches in our communities. Our adaptive societal niche can indeed do with “looking beyond what we can see, that is, to look beyond the horizon (skill: Switch Your Radar On). The same goes for the emphasis on “curiosity”, that is to ask better questions, cognitively prompted (skill: Be More Curious). Closely tied to curiosity, is the acknowledgement of complexities, that is, to go looking and working towards sense-making frameworks in which we can be assisted to connect the dots, to see the ripples of the cause and effect of disruptive change, and then anticipate the implications of these changes across all of the systems that we live and work in (skill: Collect Sense-making Frameworks). To collect sense-making frameworks, implies for me discernment, and discernment presupposes pluralism and diversity. I can therefore also support the celebration of different opinions and many different viewpoints on the same issue (skill: Embrace Diversity). The last skill that I can positively acknowledge is that we intentionally have to build our capacity for change and doing things differently (skill: Experiment more).

But from this evaluative point onwards, our paths critically divert in the light of our evolutionary history. I can agree in a qualified sense that merely building on past experiences is not good enough (skill: Unlearn and Relearn), but I cannot light-heartedly accept the dismissive statement that the past offers little help in finding solutions for our so called new challenges. A skill should rather be added for taking deep history more seriously: there is much more to learn from our history than Codrington suggests. The same goes for the strange omission of the utmost importance of one of our most outstanding characteristics for “making it” as *Homo sapiens*, namely co-operation. Those groups in the past that addressed their societal challenges (read: risks) together made it! Those that did not hold cooperation in high esteem did not make it! Cooperation is far more powerful than the suggested skill of merely “seeking meaning with others” and “building diversity” into one’s system. And perhaps the most crucial omission of skills for risk management is what I will call in light of our evolutionary history, Cardiac Discernment. Cardiac Discernment is a very “risky human dimension” that should be acknowledged for its highly complex and problematic influential composition, but precisely for this reason - it must subsequently be moulded into a skill – and perhaps emphasised (prioritised?) as the “first skill” to be crafted and pursued. With Cardiac Discernment, I take seriously, the words from wisdom literature that were formulated in Ancient Israel that warningly states: “Be careful what is going on in your heart. It

namely the “Social Brain Hypothesis” in which the emphasis falls on the fundamentally social selective context for brain evolution.

determines everything you do” (*Proverbs 4:23*).²⁶ Our successful evolutionary history is deeply driven by passions (affective dimensions such as empathy, compassion and attachment). Not only are we biologically woven together affectively (feelings, moods, emotions), but our affectations represent core elements of being a societal human being in community, in relationships. At the very same time I would acknowledge the lurking dangers in the suggested skill of Cardiac Discernment, but that is why it carries the qualification of “discernment”. Closely tied to Cardiac Discernment lies the evolutionary insight of the naturalness of the role of imagination, and then specifically the naturalness of religious imagination. The qualified point that I would like to make is not to emphasise a religious disposition as such, but the unavoidable role of morality or moral awareness within a context of discernment since that is the “place” from which we or I speak and from which we or I manage our societal risks (the “space”) as futurist. Risk management for embodied persons has a very concrete contextual address (Tshwane in the first place and not Tokyo; Durban in the first place and not Dubai), embedded deeply in sociality and therefore (moral) values – both organisational (and institutional) and societal values. It is therefore necessary that the skills for the management of risks should entail a skill as a moral guideline to ensure that it does not itself contribute to the privileging of those in (economic/political) power, or the silent marginalisation of those that are excluded from the mainstream of technological developments.

Conclusion

According to Codrington, we need risk practitioners as futurists in South Africa who will intentionally build the capacity to see and understand the implications and meaning of change, and therefore learn and apply at least six skills that he proposes. His proposed six skills are helpful guidelines, but then only as a starting point for extension and deep revision if viewed and evaluated from our evolutionary history. If these revisionary challenges that come from our evolutionary history are simply ignored, our risk practitioners are themselves at risk in being human beings without social addresses and with a shallow sense of (moral) discernment in our contemporary deeply disrupted South African environment.

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²⁶ My own translation from the Hebrew text. It is also very illuminating to compare with other translations. I shall note a few. The Living Bible reads: “Above all else, guard your affections, for they influence everything else in your life”. The KJV translates: “Keep thy heart with all diligence; for out of it are the issues of life”. The MSG reads: “Keep vigilant watch over your heart; that’s where life starts”, and the NASB: “Watch over your heart with all diligence, for from it flow the springs of life”.

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