

Colloquium explores the role of anticipation as an alternative way to engage with the future and complex problems.

compiled by Rika Preiser, April 9, 2014

Current economic and political crises are characterized by unsolvable, complex problems. In the effort to try and come up with workable solutions to these crises, the notion of anticipation is increasingly at the heart of urgent contemporary debates.

At the recent **Anticipation: Complexity And The Future** colloquium jointly organised by the Centre for Studies in Complexity (CSC) and the Association of Professional Futurists (APF), in Stellenbosch, South Africa, presenters explored how the notion of anticipation is coming to the foreground as an emerging field of study. From the variety of presenters at the colloquium, it became clear that an in-depth understanding of how the future can be anticipated to be part of the present, is influencing a diversity of disciplines as societies become less confident that traditional methods will provide effective models by which to understand and engage with complexity.

In his presentation on the notion of anticipation, the opening speaker, Prof Roberto Poli from Trento University, and UNESCO Chair in Anticipatory Systems (<http://www.projectanticipation.org/>), emphasised that by acknowledging how the future plays an active way in how we think and act in the present, the traditional understanding, that past events are the primary drivers that influence how we understand the present, is undermined. He argued convincingly, that both the past and the future are forces that simultaneously and actively influence the present. By interpreting the present as the time where the forces of the past and future meet, our understanding of the present changes from a “thin” (the present as a boundary without any extension between past and future) to a “thick present” (the present as the collection of contemporaneous events). Moreover, by giving the future scientific legitimacy, a novel vision of science arises where a fully scientific (i.e., not allusive, metaphorical or mystical) treatment of ‘final’ causation (= anticipation) is included and not rejected as is the case in the traditional scientific paradigm.



Following Poli, Prof Jan-Hendrik Hofmeyr, biochemist and Director of the Centre for Studies in Complexity (www.sun.ac.za/complexity) at Stellenbosch University, explained how an in-depth understanding of the



work of theoretical biologist, Robert Rosen (1934–1998), holds important insights for how anticipatory systems can be modelled. Hofmeyr elucidated how Rosen’s insight that “science is the art of establishing modelling relations between the natural world and the world of our formalisms” challenges traditional modelling strategies that mainly form simulations of reality, but do not explain causal relations. According to Rosen, the modelling relation (or the main task of ‘theoretical science’) consisted of establishing congruences between ‘causal relations in the external world, and implicative relations between propositions describing that world’. Essentially the mapping relation points to the process we carry out when we ‘do science’

and exposes this process as one in which there can be no biggest model of the world, but only snap-shots thereof.

In her short presentation on how the study of complexity and anticipation can be linked to the modelling relation, Dr Rika Preiser, researcher at the Centre for Studies in Complexity, argued that the acknowledgement of complexity lays bare the dilemma that there remains a gap between our models and the reality they intend to describe. An irreducible difference exists between the nature of complex reality and our descriptions thereof. By acknowledging that all knowledge of complex, anticipatory systems will always prove to be partial knowledge, one is confronted with the unavailability of the limitations of human understanding. Preiser argued that this recognition opens up a space where the conceptual implications of complexity surpasses epistemological concerns and exposes the normativity that lies in all our modelling strategies. This ethical imperative challenges scholars to engage with the question of re-thinking what it means to be human and calls upon us to proceed differently in this world.



Ms Tanja Hichert, an experienced scenario planning practitioner and futurist and board member of the Association of Professional Futurists (<http://www.profuturists.org>), provided a practitioners perspective to how anticipation can be used to proceed differently in the process of ‘working’ with the future when corporate businesses or governments have to come to terms with complexity, risk and uncertainty. She explained how scenario planning and horizon scanning offer the best futures studies tools for making sense of how one could anticipate the future and make better decisions. Because we cannot have a biggest or best model of the future, it means that futurists cannot predict the future. Instead, their task is to rather help find ways to understand the critical driving forces and uncertainties in the (business) environment and to use this almost ‘bottom-up’ information to make strategic decisions. Her well researched and finely picked examples of ‘weak signals’ that could act as driving forces in the African continent and beyond stimulated a vibrant discussion from the participants.



Prof Mark Swilling from the School of Public Leadership at Stellenbosch University (www.sopmp.sun.ac.za) and Academic Director of the Sustainability Institute (www.sustainabilityinstitute.net), engaged with the argument of whether current scholars who draw on the apparent success of Konratieff long-wave theory to make sense of the economic crisis, can be implemented as useful strategy for anticipating sustainable futures. Swilling pointed out that although there has been some convincing evidence for the usefulness of the long-wave theory, the obvious danger in implementing it blindly over all scales and time frames, is that they are prone to produce a kind of determinism that links technological innovations to socio- political development. By recognizing the radical contingency of open and embedded complex systems (such as the economic system and governance systems) one sees that long-wave theory is limited by the fact that it creates by implication, stories of the future based on perceived patterns from the past. Swilling demonstrated very articulately that it is unlikely that long-wave theory can be useful



when mindful of its limitations, and argued that what we can learn, is that; patterns of the future will break fundamentally from past patterns and as long as patterns of the future are imprisoned by the past, life as we know it will end. Hence, the usefulness of long-wave theory lies in the fact that it can suggest (a) what needs to change, (b) what may already be changing and (c) who may be giving meaning now to emerging futures. He concluded that the accelerated implementation of renewable energy resources by financial institutions has the potential to be a realistic response to the deepening ecological crises that the planet is facing.

Dr Reinette (Oonsie) Biggs, from the Stockholm Resilience Centre (www.stockholmresilience.org) and Research Associate at the Centre for Studies in Complexity (Stellenbosch University), concluded the colloquium with a presentation on how scenario planning can be used as a tool for exploring sustainability transitions. Her presentation was framed by the fact that we are now living in the Anthropocene – a new geological era where human activity is a dominant force in shaping ecosystems at global scales. From this perspective, the challenge to ensure sustainable transitions relies on forging dynamic partnerships between science, business, government and citizens in order to expand their reach and influence by imagining a future world that is radically different from the present. Through anticipatory scenario planning strategies, a more positive vision of what the Anthropocene could look like, can be developed. Biggs argued that possible change should be scoped out so as to be better prepared to respond to change and surprise and to help influence and drive change along more desirable trajectories, as well as avoid undesirable trajectories. She also argued that the new Sustainable Development Goals as supported by the Future Earth research platform (www.futureearth.info) provides appropriate and effective goals to strive toward a world where human actions have transformed to the extent so as to achieve sustainable stewardship of social-ecological systems.



During the last session of the colloquium, the floor was opened to allow a general discussion and interactive participation from the audience with the presenters. The session was very vibrant and members of the audience asked critical and challenging questions. From the level of participation and interaction, it became clear to the organisers, that there is a serious and huge interest in the topics of anticipation and complexity and how these concepts can be translated into practical strategies to engage with the future from a novel perspective.

This piece relates to the *Anticipation: Complexity and the Future Colloquium* on March 18th 2014 at the Stellenbosch Institute for Advanced Studies (STIAS), Stellenbosch, South Africa. Podcasts and photos from the meeting can be found on the following link: http://www.youtube.com/watch?v=RWQH7Tsy12E&feature=em-share_video_user