RESEARCH ARTICLE

Stellar Organisations Making a Quantum Leap to a Sustainable World

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Abstract: This article builds on social quantum theory and complexity theory, proposing key characteristics of stellar organisations that aim to foster a more sustainable world. The concept of stellar organisations draws an analogy with the solar system: individuals gravitate toward the organisation's core, or "sun"–encompassing its vision, mission, purpose, culture, objective key results, and more. Driven by change, stellar organisations incorporate resilience to prepare for future needs and challenges. Empowering proactive individuals to pursue greater sustainability within these organisations can help trigger a global quantum leap toward a more sustainable world. The article discusses various worldviews and concludes that actions within stellar organisations may help predict the timeline required to achieve a more sustainable world.

Keywords: sustainable worldview, sustainability, resilience, stellar organisations, change management

1 Introduction

The future is uncertain with regard to the environment [1]. Countries and societies face issues such as excessive or insufficient precipitation, rising sea levels, extreme temperature changes, storms, droughts, floods, and other climate hazards [2]. It is thus vital to have a clear course of action of how societies should respond to changes in the environment, how to prepare for potential threats in the environment, as well as how to transform various systems so as to be able to meet the coming challenges. The question of how people and organisations anticipate and manage the future has been central in various streams of social theory, while diverse claims have been made about how to know and change the future. Quantum social theory provides a bridge between different realms of knowledge such as economics, finance, psychology, sociology, and physics. The theory of quantum decision-making recognises that judgements and decisions are influenced by context. The conscious and intentional actions by individuals who are collectively interconnected influence systems and structures that appear stable or otherwise entrenched. The quantum nature of society does not make human behaviour more predictable, but it allows for an indeterminate, spontaneous and vital force to influence the future through collective and purposeful action, where world and its possibilities for becoming are remade with each moment [3]. Looking at human behaviour in such a way may not only enable us to establish a concept that would allow us to understand how organisations function and evolve over time but may also help us to investigate how we can predict changes in environmental outcomes based on the intra-acting changes and actions of people within the various levels of organisations. The actions taken at every level may then help to predict the amount of time we need to create a more sustainable world.

2 Stellar Organisations

The world in which we live in, according to quantum mechanics social theory and the theory of complexity, is organised based on discrete units, which work together in independent but related systems [4]. Organisations are defined as a set of interrelated elements which adapt to changes in the environment [5]. Quantum social theory considers how certain concepts, methods and forms of understanding from quantum physics relate to certain societal issues, and it enables us to have a holistic perspective on conscious and intentional transformations in the direction of sustainability [3]. Kok et al. (2020) [6] argues that previous studies have predominantly focused on a single actor as the force contributing to transformative change, and calls for more research that looks at intentional human actors and their aggregates, such

as alliances and other collectives [6, 7]. Complexity theory explains how organisations emerge from different chaotic situations. From this perspective, corporations are not viewed merely as complicated, static organisations, but as complex self-organising components that are made up of employees, business units, resources, and stakeholders [8]. This provides support for the concept of stellar organisations (Figure 1), where individuals organise themselves around a common purpose, vision, mission, culture, and objective, with a focus on certain key results in the context of the organisation's day-to-day operations. Complexity theory recognises that economic and organisational phenomena are organised in similar ways to nature itself. The theory builds on the idea that even birds organise themselves in self-organising systems, and the result is a configuration that has its own life, and can move in harmony without a leader or external control. This kind of organisation is a bottom-up phenomenon that then creates a complex, flowing system [8].
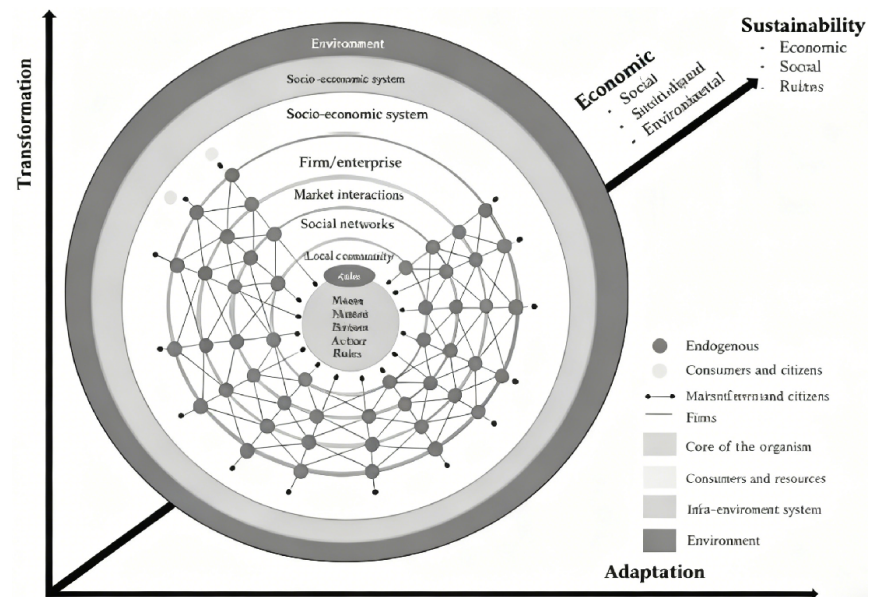

Figure 1   A stellar organisation

The support for this line of organisational operationalisation can be found in quantum mechanics social theory, which proposes that everything is made of discrete units, which then work together in independent but related systems [4]. This line of operationalisation of the organisation is aligned with the systems model, which defines the organisation as a set of interrelated elements that adapt to changes in the environment [5]. Kok et al. (2020) [6] argues that previous studies have predominantly focused on a single actor as the one contributing towards transformative change, and states that transformative systems should also consider the consequences of the deliberate or even strategic actions of more value driven actors. The structures within a system should focus on the human actors and their aggregates, alliances, collectives, and various other forms of organisation [6]. From the perspective of quantum social theory, people can be considered as elements that make many small actions that collectively can change the direction of the organisation [3]. A planetary system is composed of planets orbiting around a central star [9], and this can be used as an analogy to represent the functioning of an organisation, where the core represents the star and is composed of a common purpose, vision, mission, culture, objective key results and other constructs that are shared guidelines for everyone who is a part of the organisation. In this analogy, people are planets who are drawn to the organisation and can achieve seamless execution of its goals by revolving around the core – the organisation itself.

Vision can be viewed as a fundamental attribute of effective leadership, the basis of a person's ability to lead and a force that leaders can use as a form of influence [10]. A vision is always about a desirable future state, and contributes towards aligning all the employees in an organisation towards the company's goals [11]. However, businesses need more than a vision, as they also need a purpose, which means something greater than just making profit [10]. A purpose represents what organisations have been set up to achieve, and it explains why particular people with certain skills, experiences, relationships, and assets work together. A purpose generally looks beyond short-term profit generation to positively impact individuals, society, and the environment. Businesses with a clear purpose generate more long-term value, while

having a positive societal impact strengthens the whole system on which organisations depend, while the employees of such organisations are more engaged, innovative, and productive as a result. Purpose must guide behaviour, influence strategy, transcend leaders and endure within an organisation [12]. Another concept that is close to the vision and purpose of an organisation is its mission, which can be both strategic as well as cultural. A mission statement should answer two important questions regarding an organisation – who the company is and what the company does [13,14]. The mission of an organisation is closely aligned with the cultural dimension, and thus a mission statement encompasses an organisation's philosophy, identity, and values, giving meaning to its goals, norms, decisions, actions, and behaviour.

Culture represents the central element in an organisation, and is the unspoken code of communication among all of its members, being a set of norms and values that are widely shared and strongly held [15]. Nevertheless, while research suggests that a company's stated values are irrelevant to its performance, Guiso et al. (2015) [15] showed when employees perceive their top managers as trustworthy and ethical, then the firm's performance is better. In fact, culture has a significant influence on non-market performance, and is associated with a firm's debt/equity ratio and may provide a sustainable competitive advantage. As such, culture may be an important element with regard to managing an organisation at all levels. Cultural values and assumptions build the mental framework for reasoning and responding to stimuli from the business environment. These values and assumptions thus determine the organisational perception of time, the nature of employee activities and horizontal relationships, as well as vertical relationships across various levels of the organisation. Strong cultures in this respect provide powerful mediums for providing information to employees regarding desirable behaviours and organisational outcomes. A culture is considered strong when a majority of organisational members share common values and beliefs, as promoted by the leaders of the organisation, while an organisational culture's influence on performance can be found in its alignment with strategy [16].

Hypothesis 1: Vision, mission, purpose, culture and strategic OKRs represent the core of the organisation and represent the guideline on which employees enact upon.

Having people across all levels of the organisation acting in line with the common core of the organisation can provide an important pathway to transforming and adapting operations to achieve its vision, mission and purpose, while at the same time it provides the guideline on how employees within the organisation should act and what they should achieve in what time. If leaders can embed the social, economic, and environmental sustainability of the organisation and its wider environment within the strategic domain of the core of the organisation, then they can than create a set of actions at the level of the organisation that will be more effective. Westley et al. (2011, 2013) [17, 18] and McCarthy et al. (2014) [19] both identify the vision as one of the factors needed to establish social change within complex social-ecological systems [7], and both top-down and bottom-up approaches can become sources of innovation if nourished and engaged [7, 18], while the role of middle managers during the change management process should not be neglected [20]. Constant change management within the organisation at the bottom-up, top-down, and middle levels can help organisations to adapt, transform, and implement innovations that can lead to a more sustainable present and future.

Hypothesis 2: Stellar organisations go through constant change management where all levels are engaged in order for the organisation to achieve its mission.

The core of an organisation must be preserved, and it should not reflect a single actor or group of actors inside the organisation, but rather a common vision, mission, culture, and objective key results, among other things, which then create a flowing complex system at all levels of the organisation. When this core is not preserved, then organisations tend to malfunction. Sometimes economic factors or other external and internal forces compromise the core of an organisation, which can then harm organisational outcomes and functioning. A good example of this is healthcare organisations in Slovenia, which are faced with a shortage of healthcare workers [21]. If a healthcare organisation faces an increased need for its services, then this will put pressure on them to implement shift work and encourage employees to work overtime [22], but this can then compromise the core of such organisations. For example, research that we performed during the first month of the COVID-19 epidemic shows that working overtime can significantly decrease the amount of sleep doctors get, which then leads to decreased psychological functioning at work, which reduces safety and increases medical errors [23]. It is thus necessary to seek a solution that preserves the core of an organisation when engaging in change management to improve organisational operations.

Hypothesis 3: Core must be preserved in order for healthy functioning of the organisation.

The form of an organisation is ultimately based on the patterns of interaction that occur within it. The issue is thus not about the various individual parts in isolation, but how these parts fit together with each other. If we think of the atoms in an organism, then without any organising principles they are nothing but atoms and molecules – and the organism ceases to exist. Much the same can be said of an organisation, as if different people are not connected around the core, then we do not have an organisation. The system within an organisation must not only receive, process, and retain information, but must also respond and produce an output as well. Complex adaptive system represents a collection of individual agents with the freedom to act in ways that are not always predictable, and whose actions are interconnected so that one agent's actions change the context of other agents [24, 25]. Quantum leaps are how we can describe the set of jumps from one interaction to another. If we understand quantum leaps, then it is possible to estimate the probability that an individual will act in a certain way [26], and therefore that a certain interaction will contribute to a certain change in the organisation, thus contributing towards the common quantum leap of the organisation as a whole. The question here arises as to what types of behaviour and sets of interactions contribute towards the outcomes of the organisation that contribute towards sustainability.

Hypothesis 4: *The outcome of the organisation is a result of interactions between individuals inside the organisation, which can be referred to as quantum leaps.*

People at different levels and positions may have different amounts of power with regard to how their contributions can cause a change inside and outside of the organisations. Power can be considered as the generalised capacity of a system to get things done. The laws of physics influence the state of the universe, including everything related to human beings as entities [27]. The interactions between actors at the individual level contribute to the ability of the system to ensure the changes necessary to obtain a more sustainable present and future of the organisation. Previous organisational models, such as hierarchical and matrix models, place an emphasis on the upper management, as leaders or managers with power over people, as opposed to having power with people. However, within a stellar organisational system this becomes a natural and co-evolving process that places people at the core of strategic initiatives, with the goal being having power with people and not over them. In hierarchical organisations motivation can be controlled either through contingent rewards or power dynamics, which can narrow the range of employees' efforts, produce short-term gains on targeted outcomes, and have negative effects on performance and work engagement [28]. This is where stellar organisations represent an improvement, as they are based on autonomy and individuals' free will to achieve the goals of the core. While financial incentives and rewards should still be considered, stellar organisations are based on and emphasise internal motivation. Every person has needs that ensure their optimal functioning at work, and that drive them to be motivated to join an organisation and to do their best to see it succeed. Basic psychological needs theory, which has been used to explain work motivation [23, 28, 29], proposes that there are certain culturally universal and innate needs of individuals [30]. Basic psychological needs can be explained as "those nutrients that must be procured by a living entity to maintain its growth, integrity and health" [7, 31]. Support for autonomy from managers and peers can lead to more work engagement, less burnout and less voluntary withdrawal from the organisation [23, 28, 32]. Stellar organisations incorporate and take into account the first the need for *autonomy*, which is the need to experience self-direction and personal endorsement of one's action [33]. Actors or individuals inside the stellar system self-direct and autonomously enact on behaviour that enables them to achieve the proposition of the "sun" or the vision of the system.

Hypothesis 5: *Individuals inside stellar organizations autonomously enact on the propositions of the "sun" of the organization.*

3   Future preparedness of stellar organisations

The future is uncertain with regard to the environment [1], it is therefore importrant to prepare organisations for future needs. Resilience enables adaptivity to an unknown future [34], while sustainability, as defined by the United Nations Brundtland Commission (1987) [35] is concerned about "meeting the needs of the present without compromising the ability of future generations to meet their own needs". Furthermore, while resilience is concerned with maintaining the identity of the system when it is faced with external shocks and stressors, sustainability requires ensuring adequate performance of the system across social, economic, and environmental domains [7, 36, 37]. One can therefore argue that there is a great overlap across resilience and sustainability, since both are required for the optimal functioning of the system. While resilience is concerned with processes, sustainability is concerned with outcomes, and

innovation is crucial in obtaining both [7]. We may therefore propose that the sustainability of a system contributes towards its current and future performance [10]. Sustainability, resilience and innovation are nested within socio-ecological and economic systems [7]. We need to consider that the use of natural resources should not exceed their natural regenerative capacity, while at the same time the economic return should meet certain expectations in order to be considered sustainable [38].

Sustainability can be considered as the outcome of a system that is resilient and innovative [7]. Reidsma et al. (2020) [37] defines resilience as the "ability to ensure the provision of the system functions in the face of increasingly complex and accumulating economic, social, environmental and institutional shocks and stresses". One may therefore argue that resilience can work as a catalyst to maintaining the sustainability of the system when faced with external pressures and shocks. Olsson et al. (2014) [39] argue that resilience is sufficient to achieve sustainability only when both transformation and adaptability properties of resilience are considered, while Reidsma et al. (2020) [37] adds that the robustness of the system is another important factor that describes resillience. Resilience requires robustness, adaptation and transformability [7]. The concept of robustness refers to "the capacity to resist and endure shocks or stresses", while adaptability is "the capacity to actively respond to shocks and stresses without changing the system's structures and feedback mechanisms", and transformability refers to the "system's capacity to reorganise its structure and feedback mechanisms in response to shocks and stresses" [37, 40]. This means that stellar organisations may need constant reconfiguration in new ways if they are to remain resilient. This may mean the reallocation of staff or funds, or new actions taken, while at other times remain robust and not change at all in order to make sure that the organisation remains resilient and in line with sustainability.

The underlying concept that can help organisations and societies to address both sustainability and resilience can be found in innovation [7]. Innovative approaches are needed to deal with large-scale changes [17, 41], avoid crossing potentially catastrophic Earth system thresholds, and build resilient social-ecological systems that are able to see such changes as opportunities [17, 18]. The problem, however, is that innovation has so far often occurred without reference to ecological integrity, which is why it is necessary to consider which innovations have a considerable ecological and societal risk before they are implemented [39]. We therefore propose that managers should be careful when implementing innovations so that a system can achieve greater sustainability and resilience. According to Leach et al. (2012) [1], innovation can be defined as a new way of doing things, most often in science and technology, but also in relation to institutions and social practices. As such, innovation can be social, socio-digital and technological [7]. While strategies for greater sustainability can increase business resilience to external stresses, the reverse is not necessarily the case. Strategies for increasing business resilience do not always enhance environmental sustainability, unless this is the focus of their implementation [42]. A win-win strategy emerges when organisations act as a catalyst for the sustainable development of society and the environment, while at the same time they can develop in such a way as to realise their potential and gain a sustainable competitive advantage [7, 43].

Hypothesis 6: *To prepare organisations for future organisational needs and environmental threats, organisations need to incorporate resilience, sustainability and innovation inside their strategic goals.*

4   A Sustainable World

Worldviews are the systems of meaning and meaning-making that inform how people interpret, enact, and co-create their realities, which also contain values and environmental attitudes [44, 45]. Rigolot (2018) [45] argues that the complementarity of different forms of knowledge can contribute towards a shift in one's worldview. Nevertheless, some authors argue that modern worldviews should be challenged, and new alternatives established [45, 46]. Worldviews represent the fundamental cognitive orientation of a person or group regarding the world and life, and thus how people make sense of human and physical nature. Cultural theory incorporates "systems thinking into the discourse on worldview" [47]. When creating a shift towards sustainability one of the core issues that arises is in the implementation of the related plans [45]. While implementing plans aimed at increasing sustainability, resilience, and innovation it is important to consider the multitude of stakeholders involved in these processes, and how they contribute towards a sustainable worldview. On the other hand, different institutions can play a role in achieving the transformation of society, such as businesses, non-profits, educational and political institutions [7]. The results in Chuang et al. (2020) [48] show that worldviews have a systematic and comprehensive impact on how people assess

sustainability. A worldview based on fatalism features low social involvement but strong prescriptions. Individuals operating in a fatalist context are isolated or alienated from their social units, and excessively regulated. They have very limited choices with regard to decisions about their own lives, while cooperation with others or political participation is of no use to them. In contrast, an egalitarian worldview favours the control of demand, environmental friendliness, and action driven by inner conviction; a hierarchal worldview privileges conformity, order, and security; and an individualistic worldview embraces freedom, speed, and external incentives. Environmental concern is thus rooted in an egalitarian culture, where nature is fragile and even slight interference with it can lead to catastrophic consequences, while a fatalistic culture adopts a myth of nature as changing according to no previously known rules about it or how the world will develop [48]. These differing worldviews could therefore significantly shape how people respond to and believe which responses are needed to combat climate change, and may also influence which sustainability initiatives will be implemented by the organisation.

Pearce (1993) [49] proposes four worldviews that range from weak to strong sustainability. Weak and strong sustainability are differentiated by their approaches to integration, the ambition of the vision of change, the complexity of the innovation and the extent of collaboration among social, political, and economic actors. Weak sustainability is based on the neoclassical economic value principles that require production to remain intact to enable consumption. Very weak sustainability allows for more radical resource exploitation, with unfettered free markets that seek to maximise gross domestic product and a view nature as of instrumental value to humans. Both weak and very weak sustainability represent the economic value principles and attempt to integrate the environment into business. On the other hand, strong sustainability builds on ecological economic and physical principles, and the scientific laws of thermodynamics which recognises that economic activity is bounded by environmental limits. In strong sustainability the intergenerational transfer of capital is a priority and the natural capital stock must remain intact. Strong sustainability views economic and social relationships as connected, where the sharing and caring are highly valued. The last worldview, very strong sustainability, is a more extreme position that regulates resource usage, encourages a reduction in the scale of the economy and population, and views nature as having intrinsic value. Humans must thus live in solidarity and balance with the natural world, and ecological economics considers both the natural and social sciences [49].

Landrum (2017) [50] identifies compliance as the first step towards sustainability, and at this stage firms are defensive and any activities that are tailored towards sustainability are externally enforced. There is business as usual, while the activities aimed at sustainability are those that are regulated. The second stage is business centred, where the sustainability of the firm-centric proactive stance is characterised by the adoption and internal enforcement of sustainability in order to increase strategic competitiveness. This stage is growth and consumption oriented. There is still business as usual with some incremental improvements, and sustainability is understood to mean doing less of certain bad things. In such cases companies will adopt an internal systems perspective, still exploiting nature for economic gain and turning to technological fixes such as biotechnology, geoengineering, and eco-efficiency. The third stage, which focuses on systemic sustainability, integrates environmental, economic, and social sustainability. In this stage systemic change is pursued, and here companies will collaborate with other systems, while continuing to be focused on the increased growth of both production and consumption, with limited integration of environmental or ecological science. The last stage is one of coevolutionary sustainability, which moves beyond the restoration of damage and avoids managing the human-nature relationship, but instead adopts a view where the business works cooperatively in symbiosis with the environment, with the self-management of consumption and use of resources [50].

People are creating the future, whether they acknowledge it or not, and whether they accept responsibility for what they are creating [51, 52]. The possibility of creating a better future lies in creating innovations that aim to establish resilient and sustainable systems, both in terms of technology as well as in terms of the social aspects that contribute towards such the implementation of such system. When implementing sustainability, resilience, and innovation it is important to consider the multitude of stakeholders involved in the process and how they contribute towards achieving a sustainable world. These stakeholders may include environmental protection organisations, farms and agriculture organisations, non-profit organisations, educational institutions, business organisations, infrastructure organisations and governmental organisations [7]. Barriers to or the process of accelerating the speed of implementation can either occur at the individual, organisational, national, or international levels, and different institutions can play a role in achieving the transformation of society. However, while companies

are increasingly adopting sustainability as a goal, the environment continues to rapidly decline, and perhaps this is because reducing unsustainability and increasing sustainability are not the same as each other. (see in Figure 2)
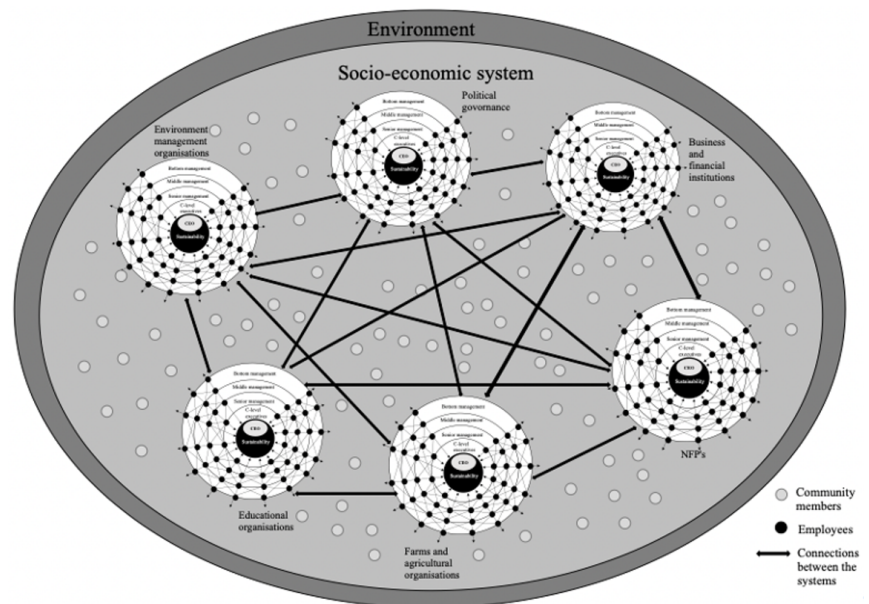

Figure 2   A stellar organisations making a quantum leap to sustainable world

Hypothesis 7: In order to achieve sustainable world different types of organisations in the world should incorporate sustainability inside the core of the organisations and through collaboration they can reshape socio-economic and environmental systems towards achieving sustainable world.

5   Time to Create a Sustainable World

The universe in which we live unfolds itself into the future and exists according to the measure of time [53]. On the other hand, when studying innovation, resilience and sustainability, the temporal and spatial scales can be considered as crucial to understanding the related processes [7]. When establishing sustainable world, we must think about the time it will take to make the transition and the space this will impact. The Paris Climate Agreement proposed that nations should try to limit global warming to 1.5 °C before 2025 (UN, n.d.), and this thus created a guideline as to when such a change should happen. Time itself can be considered as an important measurement of change [54], and time is a crucial factor in terms of strategy, organisational performance, and survival. In fact, researchers suggest that the combination of time and place is key to understanding how organisations operate and balance the different logics that can shape the changes that occur within them [55]. The greater the change, the less time we will need to achieve the Paris Climate Agreement goals, and the greater the space that will be positively influenced with regard to sustainability. Understanding potential futures is a key task of organisations facing complex, uncertain and globalising environments [56]. Looking at time in the context of quantum physics, we can say that the idea that a well-defined "now" exists is an illusion. However, there is still the past, which refers to all the events that happened before now, while the future refers to what will happen after this. Before the future and after the past, there is a time interval when we can call the here and now [53]. This time interval is important to understand in the context of climate change and how our actions are shaping our future. It is within this time window that we can reshape the future we will one day live in. Moreover, the measurement of time may provide an opportunity to build and gain an insight into how successful any interventions to combat climate change have been [57].

Hypothesis 8:To measure the impact of climate change we need to consider over what space the change will be impacted.

Hypothesis 9: To measure the progress of combating climate change we can consider it in time it will take to create the change to reverse the effects of climate change.

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6 Conclusion

The future is uncertain, and climate change poses an existential threat both to organisations and humanity as a whole. Having a clear course of action is therefore necessary. Our review of the literature suggests that stellar organisations are better prepared for the challenges we face in this context, as their employees are drawn towards achieving their vision, mission, purpose, objective key results and culture. These organisations strive towards ensuring that resilience, sustainability and innovation are all implemented in their operations. Resilience is involved in processes such as adaptation, transformation and robustness, which ensure that organisations can be more sustainable. . Organisations can implement technological, social and socio-digital innovations that can help deal with climate change. Stellar organisations are driven by change and are able adapt and transform based on changes in the environment. Stellar organisations can collaborate with others to create a more sustainable world. These stakeholders may include environmental protection organisations, farms and agriculture organisations, non-profit organisations, educational institutions, business organisations, infrastructure organisations and governmental organisations [7]. Finally, the amount of change we can achieve in this context will determine how much time humanity needs to combat climate change.

Conflicts of Interest

The author declares no conflict of interest.

References

[1] Leach M, Rockström J, Raskin P, et al. Transforming Innovation for Sustainability. Ecology and Society. 2012, 17(2).
https://doi.org/10.5751/es-04933-170211

[2] World Meterological Organization. State of the Global Climate 2020 (Report No. 1264), 2021.
https://library.wmo.int

[3] O'Brien KL. Climate change and social transformations: is it time for a quantum leap? WIREs Climate Change. 2016, 7(5): 618-626.
https://doi.org/10.1002/wcc.413

[4] Dyck B, Greidanus NS. Quantum Sustainable Organizing Theory. Journal of Management Inquiry. 2016, 26(1): 32-46.
https://doi.org/10.1177/1056492616656407

[5] Baumann O. Models of complex adaptive systems in strategy and organization research. Mind & Society. 2015, 14(2): 169-183.
https://doi.org/10.1007/s11299-015-0168-x

[6] Kok KPW, Loeber AMC, Grin J. Politics of complexity: Conceptualizing agency, power and powering in the transitional dynamics of complex adaptive systems. Research Policy. 2021, 50(3): 104183.
https://doi.org/10.1016/j.respol.2020.104183

[7] Zupancic N. Systematic Literature Review: Inter-Releteledness of Innovation, Resilience and Sustainability - Major, Emerging Themes and Future Research Directions. Circular Economy and Sustainability. 2022, 3(3): 1157-1185.
https://doi.org/10.1007/s43615-022-00187-5

[8] Sammut-Bonnici T. Complexity Theory. Wiley Encyclopedia of Management. Published online January 22, 2015: 1-2.
https://doi.org/10.1002/9781118785317.weom120210

[9] Heisenberg W. The development of quantum mechanics. Nobel Lecture, 1993.

[10] Kantabutra S. Toward a behavioral theory of vision in organizational settings. Leadership & Organization Development Journal. 2009, 30(4): 319-337.
https://doi.org/10.1108/01437730910961667

[11] Reyes JR, Kleiner BH. How to Establish an Organisational Purpose. Management Decision. 1990, 28(7).
https://doi.org/10.1108/00251749010004665

[12] Emery J. Leading for organisational change. Wiley & Sons Ltd., 2019

[13] Falsey TA. Corporate philosophies and mission statements: A survey and guide for corporate communicators and management. Westport, CT: Greenwood, 1989.

[14] Dermol V. Relationship Between Mission Statement and Company Performance. Annals of the Alexandru Ioan Cuza University - Economics. 2012, 59(1).
https://doi.org/10.2478/v10316-012-0022-9

[15] Guiso L, Sapienza P, Zingales L. The value of corporate culture. Journal of Financial Economics. 2015, 117(1): 60-76.
https://doi.org/10.1016/j.jfineco.2014.05.010

[16] Joseph OO, Kibera F. Organizational Culture and Performance: Evidence From Microfinance Institutions in Kenya. Sage Open. 2019, 9(1).
https://doi.org/10.1177/2158244019835934

[17] Westley FR, Tjornbo O, Schultz L, et al. A Theory of Transformative Agency in Linked Social-Ecological Systems. Ecology and Society. 2013, 18(3).
https://doi.org/10.5751/es-05072-180327

[18] Westley F, Olsson P, Folke C, et al. Tipping Toward Sustainability: Emerging Pathways of Transformation. AMBIO. 2011, 40(7): 762-780.
https://doi.org/10.1007/s13280-011-0186-9

[19] McCarthy DDP, Whitelaw GS, Westley FR, et al. The Oak Ridges Moraine as a Social Innovation: Strategic Vision as a Social-Ecological Interaction. Ecology and Society. 2014, 19(1).
https://doi.org/10.5751/es-06212-190148

[20] Razvani Z. Who is a middle manager? International Journal of Family Business and Management. 2017, 1(2): 1–9.

[21] OECD: European Observatory on Health Systems and Policies (2017). Slovenija: Zdravstveni profil leta 2017, State of Health in the EU. OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels.
https://doi.org/10.1787/9789264285422-sl

[22] Benyus J. Biomimicry: Innovation inspired by nature. New York, NY: HarperCollins, 1997.

[23] Zupančič N, Palanović A, Ružojčić M, et al. Differential influence of basic psychological needs on burnout and academic achievement in three southeast European countries. International Journal of Psychology. 2023, 59(2): 288-302.
https://doi.org/10.1002/ijop.12938

[24] Holden LM. Complex adaptive systems: concept analysis. Journal of Advanced Nursing. 2005, 52(6): 651-657.
https://doi.org/10.1111/j.1365-2648.2005.03638.x

[25] Carmichael T, Hadžikadić M. The Fundamentals of Complex Adaptive Systems. Complex Adaptive Systems. Published online 2019: 1-16.
https://doi.org/10.1007/978-3-030-20309-2_1

[26] Rovelli C. Seven Brief Lessons on Physics. Great Britain: Penguin Books, 2014.

[27] Lavazza A. Why Cognitive Sciences Do Not Prove That Free Will Is an Epiphenomenon. Frontiers in Psychology. 2019, 10.
https://doi.org/10.3389/fpsyg.2019.00326

[28] Deci EL, Olafsen AH, Ryan RM. Self-Determination Theory in Work Organizations: The State of a Science. Annual Review of Organizational Psychology and Organizational Behavior. 2017, 4(1): 19-43.
https://doi.org/10.1146/annurev-orgpsych-032516-113108

[29] Olafsen AH, Deci EL, Halvari H. Basic psychological needs and work motivation: A longitudinal test of directionality. Motivation and Emotion. 2017, 42(2): 178-189.
https://doi.org/10.1007/s11031-017-9646-2

[30] Jang H, Reeve J, Ryan RM, et al. Can self-determination theory explain what underlies the productive, satisfying learning experiences of collectivistically oriented Korean students? Journal of Educational Psychology. 2009, 101(3): 644-661.
https://doi.org/10.1037/a0014241

[31] Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist. 2000, 55(1): 68-78.
https://doi.org/10.1037/0003-066x.55.1.68

[32] Liu D, Zhang S, Wang L, et al. The effects of autonomy and empowerment on employee turnover: Test of a multilevel model in teams. Journal of Applied Psychology. 2011, 96(6): 1305-1316.
https://doi.org/10.1037/a0024518

[33] Reeve J. A Self-determination Theory Perspective on Student Engagement. Handbook of Research on Student Engagement. Published online 2012: 149-172.
https://doi.org/10.1007/978-1-4614-2018-7_7

[34] Redman CL. Should Sustainability and Resilience Be Combined or Remain Distinct Pursuits? Ecology and Society. 2014, 19(2).
https://doi.org/10.5751/es-06390-190237

[35] United Nations Brundtland Commission. Report of the World Commission on Environment and Development: our common future. Oslo, Norway: United Nations General Assembly, Development and International Co-operation: Environment, 1987.
http://www.un-documents.net

[36] Seghieri J, Brouwers J, Bidou JE, et al. Research and development challenges in scaling innovation: a case study of the LEAP-Agri RAMSES II project. Agroforestry Systems. 2020, 95(7): 1371-1382.
https://doi.org/10.1007/s10457-020-00532-3

[37] Reidsma P, Meuwissen M, Accatino F, et al. How do Stakeholders Perceive the Sustainability and Resilience of EU Farming Systems? EuroChoices. 2020, 19(2): 18-27.
https://doi.org/10.1111/1746-692x.12280

[38] Dong L. Toward Resilient Agriculture Value Chains: Challenges and Opportunities. Production and Operations Management. 2021, 30(3): 666-675.
https://doi.org/10.1111/poms.13308

[39] Olsson P, Galaz V, Boonstra WJ. Sustainability transformations: a resilience perspective. Ecology and Society. 2014, 19(4).
https://doi.org/10.5751/es-06799-190401

[40] Meuwissen MPM, Feindt PH, Spiegel A, et al. A framework to assess the resilience of farming systems. Agricultural Systems. 2019, 176: 102656.
https://doi.org/10.1016/j.agsy.2019.102656

[41] Galaz V, Olsson P, Hahn T, et al. The Problem of Fit among Biophysical Systems, Environmental and Resource Regimes, and Broader Governance Systems: Insights and Emerging Challenges. Institutions and Environmental Change. Published online August 22, 2008: 147-186.
https://doi.org/10.7551/mitpress/9780262240574.003.0005

[42] Larsson M, Milestad R, Hahn T, et al. The Resilience of a Sustainability Entrepreneur in the Swedish Food System. Sustainability. 2016, 8(6): 550.
https://doi.org/10.3390/su8060550

[43] Karman A, Savanevičienė A. Enhancing dynamic capabilities to improve sustainable competitiveness: insights from research on organisations of the Baltic region. Baltic Journal of Management. 2020, 16(2): 318-341.
https://doi.org/10.1108/bjm-08-2020-0287

[44] Hedlund-de Witt A. Exploring worldviews and their relationships to sustainable lifestyles: Towards a new conceptual and methodological approach. Ecological Economics. 2012, 84: 74-83.
https://doi.org/10.1016/j.ecolecon.2012.09.009

[45] Rigolot C. Sustainability transformations as shifts in worldviews: a dynamic view of complementarity issues. Ecology and Society. 2018, 23(2).
https://doi.org/10.5751/es-10101-230222

[46] van Egmond ND, de Vries HJM. Sustainability: The search for the integral worldview. Futures. 2011, 43(8): 853-867.
https://doi.org/10.1016/j.futures.2011.05.027

[47] Thompson M, Ellis R, Wildavsky A. Cultural Theory. Routledge, 2018.
https://doi.org/10.4324/9780429501180

[48] Chuang F, Manley E, Petersen A. The role of worldviews in the governance of sustainable mobility. Proceedings of the National Academy of Sciences. 2020, 117(8): 4034-4042.
https://doi.org/10.1073/pnas.1916936117

[49] Pearce D. Blueprint 3: Measuring sustainable development. London, England: Earthscan, 1993.

[50] Landrum NE. Stages of corporate sustainability: Integrating the strong sustainability worldview. Organization & Environment. 2018, 31(4): 287-313.
https://doi.org/10.1177/1086/26617717456

[51] Gare A. Natural Philosophy and the Sciences: Challenging Science's Tunnel Vision. Philosophies. 2018, 3(4): 33.
https://doi.org/10.3390/philosophies3040033

[52] Whitehead AN. Modes of Thought (p.171). The Free Press: New York, NY, USA, 1938.

[53] Rovelli C. The Order of Time. Great Britain: Penguin Books, 2018.

[54] Gentry BA. Time as a measure of change (Doctoral dissertation), 2019.
https://scholarcommons.sc.edu

[55] Ponte D, Pesci C. Institutional logics and organizational change: the role of place and time. Journal of Management and Governance. 2021, 26(3): 891-924.
https://doi.org/10.1007/s10997-021-09578-6

[56] Flyverbom M, Garsten C. Anticipation and Organization: Seeing, knowing and governing futures. Organization Theory. 2021, 2(3).
https://doi.org/10.1177/26317877211020325

[57] Donatti CI, Harvey CA, Hole D, et al. Indicators to measure the climate change adaptation outcomes of ecosystem-based adaptation. Climatic Change. 2019, 158(3-4): 413-433.
https://doi.org/10.1007/s10584-019-02565-9