The Role of Knowledge Leaders to Enhance Organisational Performance Through Society 5.0

Rachel Barker

*Department of Communication Science
University of South Africa
barker@unisa.ac.za*

Abstract

Rationale of Study – To investigate the role of knowledge leaders to enhance organisational performance through Society 5.0 as a combination of continuous enquiry regarding the systems and processes of an organisation.

Methodology – A systematic literature review, adopting an exploratory and descriptive approach was used to obtain insights into and to relate the basic theoretical concepts through a multiple-point-of-view and exploratory interpretivistic approach. The focus is on the shift to metamodernism, an oscillation between modernity and postmodernity, as an interpretative framework.

Findings – One way to do this is to prepare the system (knowledge management) as the basis for creating a fusion between Society 5.0 and a continuous enquiry into the systems and processes of an organisation, including appropriate policies and technologies, to enhance organisational performance. It is posited that positive intervention will enhance knowledge sharing for problem solving and innovation to develop a culture of trust and commitment. In addition, a conceptual theoretical framework for the role of knowledge leaders in knowledge-based organisations was proposed to emphasise the core philosophy of Society 5.0 where the human being is positioned at the center of innovation, digital transformation and organisational computerisation. In this framework, intellectual capital at individual and collective level is arguably important to enhance organisational performance.

Implications – This paper is limited to the presentation of a theoretical framework. Evidence-based research based on knowledge management and Society 5.0 is needed.

Originality – This review shed light on an under-researched and crucial area in the ever-changing organisational environment and presented a conceptual theoretical framework to address the key theoretical constructs of Society 5.0, knowledge management, knowledge leaders, intellectual capital and innovation to improve organisational performance on the micro and macro levels beyond existing corporate frameworks.

Keywords

Society 5.0; cyberspace; digital transformation; knowledge management; knowledge sharing; knowledge leaders; knowledge-based organisations; intellectual capital; organisational performance

1 Background of the study

The Hitachi-UTokyo Laboratory (2020) defines Society 5.0 as "a vision of a future society guided by scientific and technological innovation to create a people-centric approach by merging cyberspace with physical space (real world)" (p. XI). Cyberspace in this case refers to the electronic world that is synonymous with computers and is used for the exchange of massive volumes of data. Whereas the Internet is a set of computer networks that communicate using the Internet protocol, cyberspace is a world of information through the Internet. According to Barker and Hanekom (2022), the use of digital platforms like the Internet in organisations entails interactive digital tools permitting employees to share knowledge and co-create messages or influence information and content to facilitate interactivity. Digital platforms refer to a "collection of online services that support social interaction among users and allows them to co-create, find, share and evaluate the online information repository through Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan & Haenlein, 2010, p. 61).

The theoretical framework for this research draws on the premise that digital technologies reduce the individual costs of participating in a public-centric society and alter the risks of doing so, and that this applies not only to the sharing of information and opinion but also to engaging in communities and collective action. A second dimension is that digital tools may facilitate a shift in individual motives and the perceived benefits of societal participation. An important third dimension comprises efforts to regulate cyberspace, as the actions of individuals and societal groups do not occur in a vacuum: the actions and reactions of organisations will influence collective action to analyse data into meaningful information and use it to offer solutions in the real world.

The observations of this paper are divided into three sections. The first presents metamodernism as the worldview of the study; the second is devoted to Society 5.0; and the third focuses on findings from the literature review on knowledge management and the role of knowledge leaders in the organisation. Finally, the findings of the literature review is presented in a conceptual theoretical framework from a metamodern worldview for the assessment of knowledge leaders' efforts to utilise Society 5.0 in the strategic intent of the organisation to reshape a people-centric society in cyberspace. According to

Bryman and Bell (2016), interpretivism as research methodology stems from an epistemological position and refers to the critical application of analyses of various academic traditions in order to study the social world.

2 Theoretical framework: metamodernism as worldview

The move from a functionalist management perspective in line with modernistic thinking towards a more deliberate, holistic approach to cater to the polyphonic, multi-voiced organisational context in a postmodern environment is characterised by more emergent approaches in managing organisational phenomena and increasingly fragmented audiences. In response to this, the main premises of metamodernism, originally coined by Zavarzadeh as early as 1975 and popularized by the cultural theorists Vermeulen and Van den Akker (2010), brought the concept to the fore as an inter- and multi-disciplinary worldview. This worldview was further refined by Meyer and Barker (2020) as an intervention in the postmodernism debates that conceptualizes the epistemology and ontology of metamodernism in relation to modernism (the faith in human ability and belief that grand theory represents knowledge) and postmodernism (the belief in faith, trust, dialogue and sincerity, questioning the so-called truths of modernism), as a "both–neither" approach which is seen as simultaneously modern and postmodern, as well as neither of these. Meyer and Barker (2020) further argue that a metamodern approach with a constant ontological oscillation between both paradigms would provide the agility and flexibility needed to cope with the current reality, which is characterised by volatility, uncertainty, complexity and ambiguity – the so-called VUCA world. Through metamodernism, the harsh reality of modernism and the seemingly unfocussed perspective of postmodernism are softened into a milder worldview – a view comfortable with the simplicity of modernistic communication theories in a complex postmodern environment. This is substantiated by Hassan (1985), who reasons that humans are all a "little Victorian, Modern and Postmodern at once" and that knowledge leaders do not have the luxury of practicing purely from a postmodern perspective. By following a metamodern framework, they are able to comply with modernistic management's desire for 'one way one truth', while simultaneously dealing with the VUCA world. This also links to the thinking of Rouleau and Balogun (2011) that two sets of discursive activities, 'performing the conversation' and 'setting the scene', are critical to the accomplishment of sense-making in communication. From this worldview, it is posited that a need exists for knowledge leaders to use both emergent and intentional strategies in devising, implementing and evaluating communication strategy, yet to

acknowledge that some modernistic elements remain relevant. This aligns with the knowledge management paradigm popularized by Nonaka and Takeuchi (2008), in which explicit or tacit knowledge is communicated to others to ensure knowledge sharing of implicit knowledge. From this perspective, knowledge management and knowledge leaders become strategic resources to improve organisational performance, facilitate the detection of new market opportunities and to build intellectual capital (individual and collective), thereby reshaping a 'people-centric society' in cyberspace. It is argued that this networked public sphere is made possible through the systems of Society 5.0.

3 Society 5.0

3.1 Emergence of Society 5.0

Sarfraz, Sarfraz, Iftikar and Akhund (2021, p. 591) argue that it is critical to leverage ICT to its fullest to create, gain and share new knowledge, and create new values by making connections between "people and things" and between the "real and cyber" worlds, as an effective and efficient means of resolving diverse and complex issues in organisations. Hence Society 5.0 has become crucial in knowledge-based organisations. Society 5.0 is defined by Pereira, Lima and Charrua-Santos (2020) as follows:

> *Society 5.0 focuses on the use of tools and technologies developed by Industry 4.0 to benefit the humankind. Intelligent systems, developed by Industry 4.0, could be seen by society as a beneficial rather than as adversaries. Future society could benefit from advanced technology in solving problems and economically. Society 5.0 has a special focus to position the human being at the centre of innovation, technological transformation and industrial automation, stimulated by Industry 4.0 (p. 3305).*

It is posited that Society 5.0 will promote interconnections between people and systems in cyberspace through the optimisation of artificial intelligence, Big Data and Information of Technology globally. Consequently, the systems of Society 5.0 are expected to operate throughout society in an integrated manner to create a people-centric society. Narvaez et al. (2021) argue that this can be achieved by leveraging Information and Communication Technologies (ICT) in all aspects of life with a view to creating a knowledge-intensive society. They posit that in order for this to be achieved, appropriate policies and technologies should play an important role in attaining what Society 5.0 envisages in the organisation. According to Bazzano, Martin, Hicks, Faughnan and Murphy (2017), the Society 5.0 initiative seeks to employ emerging technologies to create a "super smart" cyber–physical society that is more "human-centered" than our existing

information society. The Society 5.0 initiative aims to create a cyber–physical society in which (among other things) citizens' daily lives will be enhanced through increasingly close collaboration with artificially intelligent systems. However, an apparent paradox lies at the heart of efforts to create a more "human-centered" society.

3.2 Society 5.0 and its application of the Industry 4.0 paradigm

Japan's Society 5.0 initiative is grounded in the Industry 4.0 paradigm that was developed in Germany in the first half of this decade. The main premises of Society 5.0 are based on the rapidly evolving technologies employed by Industry 4.0 to amalgamate the activities of organisations with humans through a dialectic relationship. The main aim is to apply emerging technologies to enhance the organisation's effectiveness and efficiency to advance human–computer interfaces to qualitatively enhance the lives of individual human beings and to benefit society as a whole. Accordingly, it is argued that if the Industry 4.0 paradigm is seen as the focus, then Society 5.0 focuses on creating the world's first "super smart society" (Nadoleanu, Stăiculescu & Bran, 2022; Pereira et al, 2020; Sarfraz et al, 2021).

3.3 Society 5.0 as the ultimate cyber-physical society

Sarfraz et al. (2021) argue that because both Industry 4.0 and Society 5.0 are premised on the creation of increasingly sophisticated "cyber–physical systems", they are characterised by their reliance on embedded, decentralised, real-time computation occurring within a network of heterogeneous physical objects. They further posit that when human beings (or social robots or AIs) are functionally integrated into a cyber–physical system (CPS) at the social, cognitive, and physical levels, it becomes a "cyber–physical–social system" (CPSS) whose members may engage in "cyber–physical–social behaviors" within cyber–physical spaces. This dialogic interaction with members of a CPSS may give rise to "cyber–physical–social networks" whose topologies follow the members' social connections to facilitate human prosperity. Figure 1 presents the timeline of industrial revolutions and the emergence of Society 5.0.

This evolution presents the passing from the hunter society (Society 1.0), to the agricultural society (Society 2.0), the industrial society (Society 3.0), the information society (Society 4.0) and, currently, the idea of a Society 5.0, which is inherently based on the notion of super-innovative organisations. It emphasis the interdependence of human and computers through the use of ICT and human intelligence, focusing on personalisation for humans.
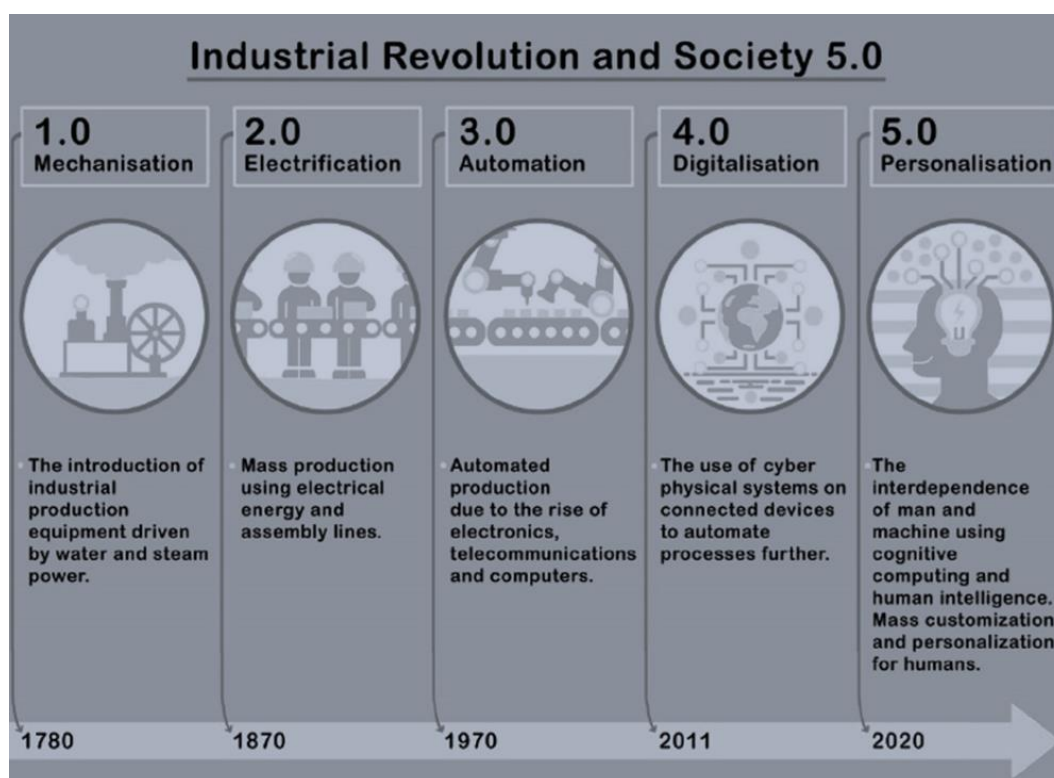
Figure 1: The timeline of industrial revolutions and the emergence of Society 5.0 (Sarfraz et al. 2021, p. 592)

4 Knowledge management and knowledge leaders

KM is a comprehensive approach that includes the capture, receipt, transfer and sharing of information in an organisation that takes the values, procedures, knowledge, and experience of employees into consideration. The role of knowledge leaders is to facilitate this process and has the potential to influence the behaviour of employees and reinforce the use and transfer of this information. In the new leadership movement approaches – such as chaos theory (which touched on the participatory nature of change management), complexity theory (rooted in systems theory) and the contingency approach (role of external environment to develop congruence) – the focus shifted to dynamic environments moving away from planned change and organisational development to the management of change and transformation at a strategic organisational level. This is in line with the underlying purpose of this paper, which sets out to emphasise the emergence of the networked public sphere of Society 5.0 and the need for knowledge leaders to manage it in knowledge-based organisations to enhance true and interactive participation and a holistic perspective between stakeholders (Barker, 2016). Jaatinen (2002) makes convincing arguments as to the importance of interdependence, participation and relationship building in terms of new approaches to change

management. Hence, it is posited that the process of the system becomes important, where all the subsystems should participate in adding to the richness of information, knowledge creation and sharing, codification and data storing, innovation and organisational performance. Today most organisations tend to follow a combination of the intentional/planned and emergent approaches to change management, usually based on their specific strategic goals and objectives. Consequently, the knowledge management paradigm is used in this study.

4.1 Knowledge management

According to Koenig (2012), the domain of knowledge management seems to continue to grow and constantly attract new researchers. For the purposes of this study, the main researchers in the field, namely Nonaka and Takeuchi (2008), Davenport and Prusak (1998), Nonaka (2008) and Argyris and Schon (1978) provide the context and background theories on knowledge management. According to these scholars, the main thrust is that knowledge management is about organisations and problems related to learning, digital transformation, information management and innovation, which are classical themes in most organisational studies. Innovation is understood as the process of creating explicit knowledge from tacit knowledge through socialisation (acquisition of tacit knowledge), externalisation (formalisation of tacit knowledge), combination (a combination of explicit knowledge) and internalisation (from explicit knowledge to tacit knowledge) (Nonaka, Konno & Hirose, 2014). Hence, it is argued that knowledge management is a combination of continuous enquiry relating to the systems and processes of an organisation as well as how organisational performance can be improved through proactively and interactively managing the intellectual capital under its leadership. According to Ra'ed, Gharaibeh, Tarhini and Obeidat (2015), this discovering of new knowledge is defined as "the development of new tacit or explicit knowledge from data and information or from the synthesis of prior knowledge and capturing of knowledge is defined as the process of retrieving either explicit or tacit knowledge that resides within people, artifacts or organisational entities" (p. 2). Tacit knowledge is the skills and expertise ("know-how") within individuals, while explicit knowledge is that which can easily be captured in documents or databases. According to Al-Alawi, Al-Marzooqi and Mohammed (2007), the process of KM involves several activities, with a specific emphasis on knowledge sharing Hence, studies that are more recent acknowledge the need for further research to identify the precursors that could enhance the occurrence of knowledge sharing (Mishra & Bhaskar, 2011) and to study the impact

of knowledge sharing on organisational performance (Mills & Smith, 2012). For the purposes of this study, the following definition of KM is proposed (adapted from Nonaka, 1994; Bounfour, 2003; Scarbrough, Preston & Swan, 1999; Zack 1999; Sunassee & Sewry, 2002; Singh & Kant, 2008; Oluikpe, 2012; Barker, 2019): KM refers to any process or system of creating, acquiring, capturing, sharing and using knowledge to enhance innovation and organisational performance where the KM strategy is aligned with the organisation's knowledge resources, capabilities and intellectual capital through infrastructures, knowledge leaders and innovative ideas.

In terms of this definition, the management of organisational knowledge is seen as a strategic means for organisations to improve their performance, become innovative and sustain a competitive advantage (Davenport & Prusak, 1998; Bollinger & Smith, 2001; Wang & Noe, 2010; Lotfi, Muktar, Ologbo & Chiemeke, 2016). The role of knowledge leaders in implementing these processes has therefore become vital in creating a knowledge-based organisational culture to achieve competitive advantages (Nonaka, 1991; 1994; Nonaka & Takeuchi, 2008), where organisational culture consists of collective thinking and teamwork to enhance credibility and organisational performance (Barker, 2019). Tannenbaum, Weschler and Massarik (2013) refer to a knowledge leader as someone who influences the behavior of a follower (influencee) through communication to achieve a relational or functional goal. This emphasises the need for knowledge leaders to strategically manage the creation, utilisation and application of knowledge it to enhance credibility and trust. This emphasises that knowledge sharing is key to enhance dialectic relationships and interchange between humans and computers made possible by Society 5.0. This is in line with the KM paradigm in that source credibility should focus on the extent to which an organisation as the source of messages is perceived as being trustworthy and reliable. In addition, the increased use of digital platforms in organisational communication creates discrepancies between words and deeds that result in credibility or legitimacy gaps. This accounts for the emphasis on the importance of the role of knowledge leaders to ensure that they do not "cherry pick" regarding the reported items and weak comparability by rendering them non-credible communication tools in the eyes of their stakeholders (Murphy & Aguinis, 2019).

In this study, the focus is on knowledge sharing as the process through which explicit or tacit knowledge is communicated to other individuals to enhance organisational innovativeness and performance (Becerra-Fernandez & Sabherwal, 2020). It is therefore

argued that knowledge sharing involves effective transfer of knowledge through digital platforms to ensure that recipients acquire and understand the shared knowledge in such a manner that action can be taken through the utilisation of knowledge without the recipients necessarily internalising the shared knowledge. According to Wu and Zhu (2012), there is no all-round definition of knowledge sharing. Hence, for the purposes of this paper the following definition has been adopted (Barker, 2019):

> *Knowledge sharing is a process in which one unit is affected by the knowledge and expertise of another unit through formal collaboration or in informal interaction. This process depends on the value of the source's knowledge, the willingness of the source to share knowledge, willingness of recipient(s) to receive and acquire knowledge and the absorptive capacity of the recipient(s) to create new knowledge in support of organisational strategies (p. 547).*

Based on the argument of Narvaez et al. (2021) that the systems of Society 5.0 are expected to operate throughout society in an integrated manner to create a people-centric society, it is posited that this can be achieved by leveraging ICT in all aspects of life with a view to creating a knowledge-intensive society through knowledge sharing. In order to achieve this, appropriate policies and technologies should play an important role in attaining what Society 5.0 envisages in the organisation, which emphasises the role of knowledge leaders as a critical element in enhancing the knowledge sharing initiatives.

4.2 Knowledge leaders

The emphasis on a human-centered society brings to the fore the role of knowledge leaders in using knowledge management (KM) practices to create a human-centered organisational culture in knowledge-based organisations. The concept "knowledge leaders" certainly makes business sense, in that it is able to contribute to explaining how the management of Society 5.0 and knowledge are linked or related to the leadership of the organisation and how it aligns with the systems and processes of the organisation. Indriati, Tjakraatmadja, Rudito and Thoha (2016, p 25) argue that knowledge-based organisations are critical for the capacity and future sustainability of many organisations by dispersing new knowledge and connecting ideas (Goffee & Jones, 2013). This emphasises the important role of leadership, which Tannenbaum et al (2013) define as "interpersonal influence, exercised in situations and directed through the communication process, toward the attainment of specified goals" (p. 24). Knowledge-oriented leadership is defined as an attitude or action, observed or imputed, that provokes the

creation, sharing and utilization of new knowledge which tends to create realignment in thinking and collective outcomes (Naqshbandi & Jasimuddin, 2018). To date, no general leadership theory or model has been presented that provides a comprehensive and all-inclusive explanation of leadership. Many studies reflect only a single philosophical viewpoint or are based on limited, even biased research, explaining limited aspects of leadership and operating as self-fulfilling prophecies, and also seeming to lack the cumulative theory building that occurs in other social sciences (Gill, 2011). According to Donate and de Pablo (2015), "a considerable gap remains in the study of the general leadership conditions that allow knowledge-intensive companies to explore and exploit organisational knowledge simultaneously to achieve competitive advantages from innovation" (p. 2). Sadeghi and Rad (2019) posit that the availability of information and knowledge can be seen as one of the best ways to increase the innovation ability of organisations, while KM is seen as an enabler in enhancing organisational innovation.

Therefore it is argued that knowledge-oriented leadership comprises envisioning the future, coordinating the development of a coherent mission and overseeing the development, control, processes and strategic intent of the organisation to provide integrated strategies, relationship building, organisational performance, a positive organisational culture and climate (Sanghani, 2009), and the use of intellectual capital, especially during change, to ensure organisational performance and competitiveness. Singh and Kant (2008) emphasise the need for knowledge leadership that is evident throughout the organisation and operates on all hierarchical levels from top to bottom, and that the role of knowledge leaders is to "provide strategic visions, motivate others, effectively communicate, act as a change agentmodel good practices and carry out the knowledge agenda and that knowledge leaders should religiously explain the goals of knowledge management to all concerned" (p. 6). Based on the results of the study that they conducted, Donate and de Pablo (2015) found that KM practices mediate the relationship between knowledge-oriented leadership and an organisation's innovation performance, which means that the greater the organisation's tendency toward a knowledge-oriented leadership, the greater the positive effect on its innovation performance. This means that knowledge-based organisations should integrate systems that focus on knowledge exploration (creation) and knowledge exploitation (storage, transfer, and application) to ensure innovation capacity.

Because knowledge management was presented as the theoretical foundation for this study, specifically the importance and role of change agents or experts (enablers) with the

capacity to manage all information at all levels (individual, team and organisational), knowledge leaders should: empower individuals (such as employees) to respond creatively; adopt personal and active attitudes towards individual and organisational goals to contribute to resonant leadership practices; be self- and socially aware (and therefore able to recognise, understand and react empathetically to their own and others' emotions and goals); be equipped with skills such as self and relationship management (characterised by transparency, adaptability, collaboration and inspiration); be associated with a supportive organisational climate arising from a constructive organisational culture; and, in the change process, take on the role of inspiring people (Denrell, 2005; Barker, 2019).

5. The role of knowledge leaders in shaping a people-centric society in cyberspace through Society 5.0

The need for knowledge management and the role of knowledge leaders in Society 5.0 are driven by features such as the dynamic and changing organisational environment, organisational survival, competitive differentiation, and globalisation. The role of knowledge leaders links to this in that this role is a multidimensional construct that is in a perceptual state, where the perceived credibility of these knowledge leaders relies on communication to reach an understanding of the claimed validity of utterances. The latter construct relates back to Habermas's recognition of four "communicative presuppositions", namely truth, sincerity, appropriateness and understandability of communication. In addition, the findings of a study by Crawford (2005) provided evidence of a "growing interest in the relationship between the 'high touch' nature of leadership and the 'high tech' aspect of the workplace and demonstrated the link between people-centric leadership and digital transformation" (p. 14), which in this study refers to the systems of Society 5.0. Oluikpe (2012) posits that the importance of knowledge leaders in the organisation should include both the capabilities to capture and leverage intellectual capital and the deployment of this capital to the advantage of the organisation. According to Martensson (2000), the term "intellectual capital" is the preferred umbrella term because it refers to the possession of knowledge, applied experience, stakeholder relationships and professional skills which link to strategy. Based on the conceptual roots of intellectual capital identified by Edvinsson, Roos, Roos and Dragonetti (1997), the strategic contributions of knowledge are based on the way in which knowledge is created, developed and managed on Society 5.0 systems as well as the way it is leveraged into value. This emphasises the role of knowledge leaders

in responding to emerging technology and the dialectic relationships between humans and technology. It also points to the effect of these relationships on the macro scale of organisational digital structures and systems, as well as on the micro level of human identity and interaction. Hence it is posited that a need exists to investigate digital transformation shaped by Society 5.0. Three levels of digital integration exist, namely digitization, digitalization, and digital transformation, each building on what preceded it. Digitization is the basic level, and entails converting analogue data into a product of digital format. Digitalization is at the mid-level; it is sustained by innovation of computer-aided information processing; and exploits digital opportunities. Digital transformation is at the top level and emerges as a restructuring at the system level through digital diffusion, which leverages knowledge. Nadoleanu et al. (2022) explain it this way: "We see this evolution in the digital integration, as first replicating the real world inside the digital environment through digitization, then further operating through extended digital capabilities across the two now existent environments within digitalization and letting the emerging forces of the digital fusion transform the outside world as technologies disappear into the fabric of smart society and the intelligent natural environment." (p. 300). In terms of the shift in focus in Society 4.0 from digitalization to that of personalization in Society 5.0, emphasises the role of knowledge leaders in this process. In order to personalise knowledge, the main role of knowledge leaders is to ensure this is done through enhanced knowledge sharing.

In the words of Sadeghi and Rad (2019), "knowledge-based leadership plays an important role in enhancing organisational knowledge, attracting and transferring it, organizing knowledge, creating insight and managing knowledge and information, and is considered to be the stimulus of the relationship between the components of intellectual capital management of the organisation" (p. 153). Hence it can be argued that in the digital field, innovation can be seen as a direct consequence of the effectiveness of KM and knowledge leaders in pursuit of improving organisational performance and a competitive advantage. Knowledge leaders should therefore utilise Society 5.0 systems and processes to ensure creativity, innovation, participation and organisational culture, the heart of creating successful knowledge-based organisations. The Society 5.0 systems and processes focus on the interdependence of human and computers by using cognitive computing and human intelligence. It also allows for mass customisation and personalisation for humans. Through this, their role is to build a super smart society

based on knowledge, which is in fact already in its embryonic configuration (Sarfraz et al. 2021, p. 592).

6. Theoretical framework

Figure 2 depicts a theoretical framework developed to present a conceptual model of the thoughts presented above.
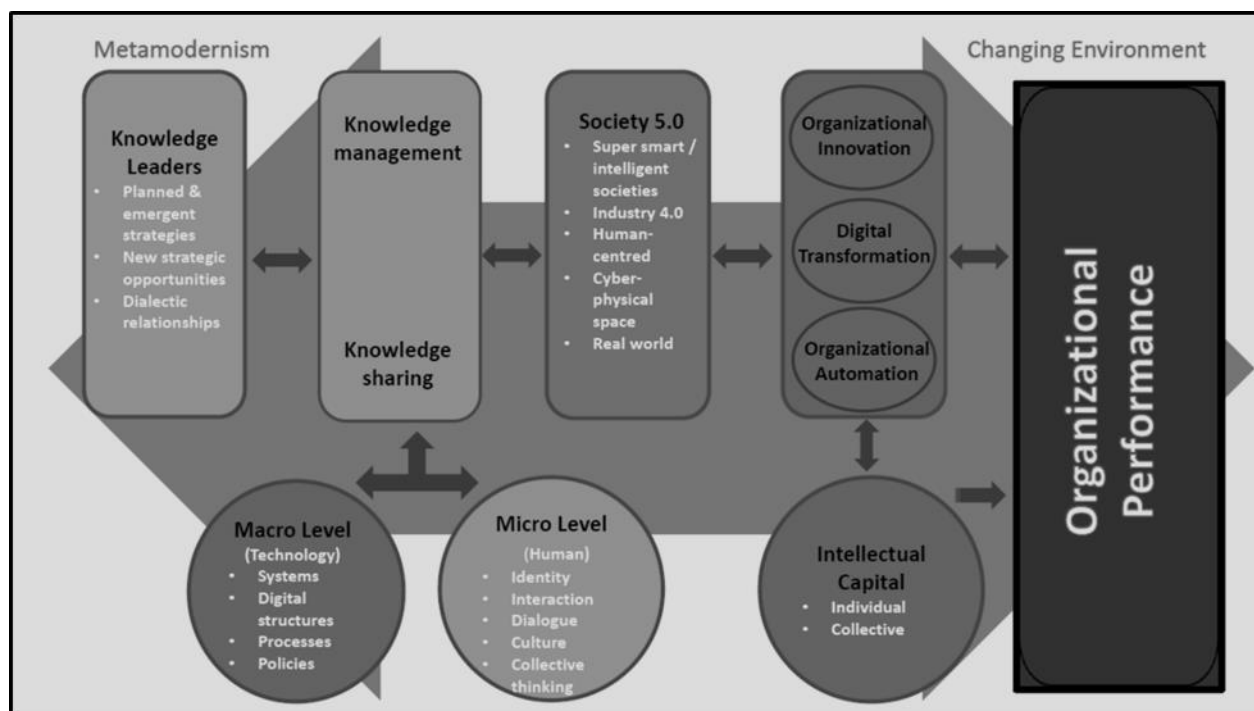

Figure 2: The role of knowledge leaders in shaping a people-centric society in knowledge-based organisations through digital transformation in Society 5.0

From the conceptual model presented in Figure 2, it is argued that the roles of knowledge leaders include the use of both emergent and planned strategies to identify new opportunities in the marketplace for dialectic relationship building. Within the knowledge management paradigm, knowledge sharing at both the macro (technological) and micro (human) levels is crucial to enhance the process. It is hence posited that Society 5.0 presents knowledge leaders with the opportunity to implement its core philosophy, a super smart or intelligent society using intelligent systems developed by Industry 4.0, to create a human-centered or people-centric society in a cyber–physical space (real–cyber worlds). This can arguably lead to organisational innovation, digital/technical transformation and organisational computerisation (automation). In this cyclical process, intellectual capital at individual and collective levels enhances organisational performance and the achievement of the strategic intent of the organisation.

Hence it is argued that through the metamodernistic approach, a constant ontological oscillation between these constructs is crucial to meet the demands of the ever-changing dynamic environment. Where KM processes facilitate the creation, integration and sharing of new knowledge through formal and informal communication channels, knowledge leaders manage the knowledge infrastructure capability, such as its human and technology structures and culture in the organisation. Knowledge leaders empower followers to encourage the development of and experimentation with new ideas; clarify the strategic intent of the organisation in terms of vision and mission to inspire creative ideas; identify their skills and expertise to optimize creative ideas; motivate followers to use the effective exploration of knowledge and the systems of Society 5.0; promote the application of ideas by motivating and acknowledging followers through intrinsic and extrinsic rewards to enhance innovative outcomes; and influence the knowledge infrastructure capability by focusing on developing an organisational culture and a structure which promotes effective communication that facilitates the application and implementation of new knowledge. In terms of the systems of Society 5.0, the role of knowledge leaders have become crucial for enhancing organisational performance by positioning the human being at the center of organisational innovation, technological transformation and industrial automation, stimulated by Industry 4.0. Hence, knowledge leaders can utilise this new paradigm to create a comfortable, satisfied, fulfilled and consequently more productive workforce. Society 5.0 allows knowledge leaders to use the advanced technology of Industry 4.0 to promote an interconnection between people and systems in the cyberspace of the organisation with optimisation of results by artificial intelligence, Big Data, etcetera. The effect of emerging technological advances and the dialectic relationships of humans and technology emphasises the role of knowledge leaders in the knowledge management of organisations. Specifically, the effect on the macro scale of organisational digital structures and systems and on the micro level of human identity and interaction, emphasise the need for organisations to focus on digital transformation as shaped by Society 5.0. Hence it is posited that organisational performance can be improved through proactively and interactively managing intellectual capital (individual and collective knowledge) to ensure innovation under its leadership.

It is further posited that Society 5.0 will promote interactions between people and systems in cyberspace to create, gain and share new knowledge, and create new values by making connections between "people and things" and between the "real and cyber" worlds. These dialogic interactions will give rise to "cyber–physical–social networks", where members' social connections can facilitate human prosperity interfaces to qualitatively enhance the lives of individual human beings to the benefit of society as a whole, but specifically organisational performance. Knowledge leaders should therefore utilise Society 5.0 systems and processes to establish a link between people-centric leadership and digital transformation. This should be done to ensure creativity, innovation, participation and a human-centered organisational culture, as well as intellectual capital which is at the core of creating successful knowledge-based organisations. In order to achieve this, organisational innovation, digital transformation and organisational computerisation become important constructs in the process of strengthening organisational performance.

7 Conclusion

In bringing together the ideas underlying and interrelationships between the key concepts that have been discussed, the study attempted to contribute to the existing knowledge on the role of knowledge leaders on the use of the systems and processes of Society 5.0 to shape organisations in a people-centric society through personalisation. It is posited that Society 5.0, which is facilitated through the use of Industry 4.0, makes possible the strategic creation of new values, mission and vision through innovation to enhance organisational performance. Knowledge leaders play a significant role in managing the systems and processes to address human values and the level of knowledge sharing, intellectual capital, innovation and organisational performance in the advanced cyberspace environment. In the proposed conceptual theoretical framework, Society 5.0 recognises innovation (inbound and outbound) as a necessary precondition for the development of a knowledge-based society into a human-centric society in organisations. The proposition by Roblek, Meško, Peji□c, Thorpe & Šprajc (2020) that the goal of Society 5.0 is to ensure that humans are content with the systems and processes of next-generation technologies to address organisational strategies and enhance organisational performance and innovation is indeed highlighted by this study.

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