Title: The Evolution of Organizations and Stakeholders for Metaverse Ecosystems: Adaptation, challenges and policy interventions

Short title: Adaptation, Challenges and Policies for the Metaverse
Journal Name: Decision Support Systems

Background

With leading technology companies eyeing the next 'big breakthrough', the metaverse is becoming a major topic of major academic and industry discourse, especially after the digital transformation waves that have been introduced across industries due to the pandemic. During the pandemic, individuals and groups were forced to interact virtually through digital platforms and mechanisms were made in products to make these interactions immersive and engaging. Coined by Neal Stephenson in 1992, the metaverse is characterized by a network of three-dimensional virtual worlds that makes it possible for the individuals to behave in their virtual avatars while interacting with each other. While virtual worlds are not new and presented new models of social computing, primarily through games (Messinger et al., 2009; Wang et al., forthcoming), the evolution of virtual worlds towards metaverse takes this ecosystem towards different levels and types of possible collaboration, commerce and smart business models among entities interacting on these platforms, in terms of purpose, place, platforms, population and profit models.

The metaverse, as a malleable platform, comprises socially constructed and technologically enabled artifacts (Shin, 2022) and exemplifies wide activity of information recreation, collaborations, and business opportunities (Davis, 2009). For example, metaverses like Fortnite and Roblox heavily rely on virtual environments and provide a sense of immersion by engaging users in socio-cultural activities (Mandolfo, Baisi & Lamberti, 2022). Further, based on the argument of Matook & Brown (2017) on IT artifacts and their transformational view, the metaverse needs to be explored within the information system (IS) disciplines and IS researchers need to undermine models and frameworks to explore metaversal human, technical and organizational capabilities (Dincelli & Yayla, 2022). In addition, how the metaverse is likely to change the entire socio-technical fabric in the near future is increasingly becoming a topic for debate and speculation. Burgeoning research and incremental success in this area suggests that most organizations will have to soon adapt this change to remain relevant and connected with their stakeholders (Purdy, 2021).

There is no clear definition of the boundaries and challenges foreseen in this new virtual socio-technical ecosystem and so it may evolve to become the nexus of the physical and virtual worlds (Kim, 2021). However, in adopting this new socio-technical ecosystem, stakeholders need to change and evolve in how they can connect with the new paradigm of organizational structures (Dwivedi et al., 2022). For example, internal stakeholders like employees need to be ready which essentially means striving to face challenge, being resilient to failures, and persistent in their efforts. Similarly, customers need to evolve and be more technologically savvy, mature and open to connect with the firm across different media and communication channels. Further decisions surrounding transportation, warehouse management and purchasing may have multiple opportunities and challenges in the metaverse ecosystem. Since the face of the stakeholder is now evolved in this virtual interaction, there is a need to understand the dynamics of the evolving relationships and challenges of managing these relationships. While there has been considerable development at the engineering side of the metaverse, there is little research that investigates the integration possibilities of the current workforce (practices) with the metaverse.

Objectives of the Special Issue

The theoretical output in the said area is limited. Recent research emphasizes utilizing various affordances (Dincelli & Yayla, 2022) by considering the IT artifacts associated with the applicability of the metaverse for organizational benefits and actualizing embodied users' experiences using affordance actualization theory (Shin, 2022). From a socio-technical perspective, Davis et. al. (2009) argues the effect of the metaverse's technological capabilities using adaptive structuration theory on technology's and organization's rules and resources. Indeed, these models need to be modified as and when needed. However, the theoretical scope in this context is immense as different stakeholders connect with each other across a socio-technical platforms using a virtual face to connect and interact with each other.

Another perspective is change readiness in this virtual space which could explain both planned and unplanned change initiatives at both individual and organizational levels (Dwivedi et al., 2022). At the individual level, the theory helps in answering the question 'what do change recipients consider when making their decision to embrace and support a change effort?' and at the organizational level it explains the issues of resistance to change, establishing and maintaining different characteristics of an organization including its policies, culture and core competence. Further beyond individual and organizational levels, there is a need to study the interactions and engagement across the stakeholders who connect over the metaverse. This readiness may be explored in functional contexts like digital marketing, user interactions, service encounters, employee engagement and many more contexts.

The aforementioned review of literature and relevance to practitioners directs us to the following *research questions*:

- What socio-technical challenges do existing internal stakeholders and workforces have in adapting to the metaverse?
- How can emerging technologies like immersive virtual environments, blockchain, haptics and digital twins impact the stakeholders and their experiences in the metaverse?
- How should organizations connect with stakeholders in the metaverse?
- How may external stakeholders like customer and suppliers feel challenged in onboarding metaverse ecosystems?
- What formal and informal mechanisms can help different stakeholders thrive in the space of the metaverse and to what extent?
- What could be potential mental and physical well-being related problems that the different user groups might face while using metaverse frequently?
- How do individuals and organizations engage and disengage over the metaverse so that unintended consequences and deviant behaviors may be avoided?
- How could excess disclosure of private information have unintended consequences and ethical challenges on the multiple stakeholders engaging in the metaverse.
- How can structural, functional and information processing approaches be used to model this confluence of virtual interaction among firms and individuals?

To answer the research questions raised above, submissions aiming at the main theme of this special issue, "Adaptation, Challenges and Policies for the Metaverse," with particular focus on the below sub-themes are welcome. Topics in scope, beyond the below elaborated list are also welcome.

- Theoretical frameworks for managerial and ethical issues in maintaining the complex relationships in virtual spaces
- Theoretical frameworks for assessing impact of emerging technologies (e.g., augmented reality, virtual reality, internet of things, artificial intelligence) among the stakeholders engaged in the metaverse.
- Impact of de-centralised frameworks and technologies for digital transactions (for example, blockchain based platforms) on organisational and stakeholder engagement in the metaverse.
- Role of technology enabled theoretical models and other factors from related disciplines in facilitating teamwork, collaboration and multi-stakeholder experiences
- Theoretical frameworks to explain the possible relationship challenges and adverse unintended outcomes among interacting parties
- Dark and bright side of stakeholder well-being in the metaverse, including physical health and mental welfare related policies while interacting with technologies.
- Managerial and stakeholder learning activities and opportunities in a metaverse environment
- Frameworks for assessing and managing change readiness among employees, customers, suppliers, and other stakeholders onboarded on these digital platforms
- Theoretical frameworks for modelling the interoperability within and also between the metaverse and the real world.
- Frameworks for assessing cross cultural aspects and differences among different stakeholders connecting across the metaverse.

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Submission Timeline
Open call for proposals: 15th March, 2023
Submission deadline: 15th August, 2023
Target publication dates: Mid 2024

Submission Guidelines

Kindly submit your paper to the Special Issue category (SI: Metaverse Ecosystems) through the online submission system (https://www.editorialmanager.com/decsup/default2.aspx) of *Decision Support Systems*.

All the submissions should follow the general author guidelines of *Decision Support Systems* available at https://www.elsevier.com/journals/decision-support-systems/0167-9236/guide-for-authors

Each paper submitted in the SI would undergo a minimum of 2-3 rounds of double-blind peer review.

Each manuscript would have 2-3 reviewers who would attempt to provide constructive feedback.

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