

RE-DISCOVERING SPACE FOR THE ORGANISATION – CONCEPTUAL CONSIDERATIONS

*Piotr Pachura**

Abstract

Background. The peculiar “shrinking” of the world and the already proverbial statement of “the end of the distance” as a result of global processes and technological development have set the thought of the distance aside. However, it seems that there would be a renaissance of scientific interest in space, because it still is one of the basic cognitive and interpretative categories, continually experienced by humans and organisations. The organisations are more and more “struggling” with different spaces, especially in the face of the “locality – globality” dichotomy, or virtual and network spaces phenomena.

Research aims. The aim of the research is an attempt of interdisciplinary and innovative conceptualisation of space issues in the context of organisation and management sciences. Through the course of the research different dimensions of space were identified.

Methodology. Deductive way of reasoning was implemented afterwards. At the macro analysis level – a conceptual model has been built. In the further part of the study a theoretical experiment was made to indicate the applicative capabilities of the model on the meso level, in relation to the business models concept.

Key findings. As a result of conceptual experiments, an original model of four dimensions of space was proposed. This model can be a universal tool for the organization. This article presents its application within the concept of business models.

Keywords: space, organisation, management, business model, conceptualisation.

INTRODUCTION

It seems that it can be assumed that the beginning of the reflections on space in general was the absolutist understanding of space, existing independently of objects and entities. It should be noted that

* Częstochowa University of Technology, E-mail: piotr.pachura@wz.pcz.pl

such understanding of space has for a long time lead to a significant limitation of the category of space as an interpretative ground in social and economic sciences. If space is to be treated as a container in which different material objects are placed, then studying that container turns out to be not very interesting, also from the perspective of management sciences. The aim of the paper on epistemological level is an attempt to conceptualise the space in its different dimensions in relation to the evolution and achievements of management sciences. The author's main aim is to organise the epistemological assumptions regarding space in management sciences to extend a kind of "language" that the discipline uses to describe the reality. In practical perspective the paper may be interesting for modern managers, because for example organisations have to balance between locality and globality, that is, they must constantly struggle with different dimensions of space in a sense. It was assumed that the organisation by definition may be described without references to space, however the way the organisation is functioning has always a reference to space. At the same time, the research presented in the paper is based upon the conceptualisation on the basis of epistemological experiments and a deductive approach has been primarily applied in the procedure.

It seems that one can express a view that there is a lack of complex, thorough conceptualisation of the subject of space in perspective of the organisation and management sciences. At the same time, the last period associated with an increasing importance of globalisation and network economy and knowledge in organisation has resulted in a growing interest in space issues.

The research presented in this paper was focused on the search for answers to two key research questions. Research question (1) concerns the possibility to separate (discover) the space category as a significant "variable" in reference to the organisation's management processes and (2) concerns the possibility to develop a conceptual model associated with the functioning of the organisation based on multidimensional interpretation of space. The methodology used in the research refers to the thesis of theorising the observation. According to this statement observation is not possible without earlier expectations built upon the basis of known theories (Popper, 2002). The study procedure was mainly based on the deductive approach. It is assumed to reach a specific conclusion on the basis of the set and to analyse as many possible premises as possible.

On the other hand, in order to propose theoretical conclusions in the form of the concept of significance of the dimensions of space, elements of the induction approach were also used, mainly related to the formulation of observation sentences. It was also possible to use inference by analogy and predictive elements.

HISTORY OF SPACE

The concept of space is one of the basic categories of existence that the human being has been interested in since the dawn of civilisation. The issue of space and experiencing was an area of interest in science of the ancient times, through modern times and up to the present day. The reflection of the ancient philosophers on space was associated with the analysis of the world of nature. The statement of Parmenides regarding space assumed a connection between space and ontological category of being, as well as the existence of a vacuum. It is the beginning of a discussion associated with an interpretation of the relationship between space and matter. An important consequence of evolution in understanding the space concept in ancient times was adopting Euclid's (365–300 BC) system, i.e. identifying space with geometry through creating images of space as a mathematical and geometrical category. At the same time, Aristotle believed that *natura horret vacuum*, i.e. nature abhors a vacuum. So, the natural order of the world is a lack of vacuum. The distinction between space and matter (or vacuum and matter) in ancient philosophy has led Aristotle to the recognition that space is a kind of finite set of places, in which material beings are located (Hussey, 1983). This approach led to the assumption that matter is inseparably connected with space, and space can be quantified. Descartes (1569–1650) assumed no possibility of the existence of an empty space due to extension of matter (*res extensa*) (Descartes, 2008). It is worth noting that for Newton (absolute) space was a part of the classical mechanics concept system, and it was not just an abstract speculation (Newton, 1999). In the same time, Kant believed that space is not a discursive category, i.e. it exists in an absolute and may not be defined through the system of relations (Kant, 1992).

Euclid's concepts were based on deductive reasoning, i.e. he derived axioms and basic theorems on the basis of pure reasoning recognising

them as certainty (Greenberg, 1994, p. 11). Then, the remaining statements forming a coherent whole or kind of statement system were deductively formulated on the basis of previously adopted basic theorems and axioms.

For over two thousand years, when people thought of space, they understood it in terms of Euclid's "language" of geometry. Thinking and interpreting the space throughout centuries was associated with the assumptions of the axiomatic system of Euclidean geometry.

H. Poincaré also assumed that the geometrical structure of the physical world does not have to be considered in categories of the Euclidean system (Torretti, 1984, p. 329).

Achievements in the field of non-Euclidean geometric systems analysis by H. Poincaré and many other great scholars of that period such as: B. Riemann, C. F. Gauss, G. Cantor, D. Hilbert were the direct groundwork for modern theoretical physics in terms of the ontological interpretation of space.

In addition, non-Euclidean spaces, as a new reference point to the nature science research, have influenced new discoveries in physics related to the construction of the Universe.

According to Einstein space is curved, thus making it non-Euclidean. Space properties depend on matter and energy, thus not making geometry a science, primitive knowledge in relation to physics (Whittaker, 1949). It is acknowledged that A. Einstein (1879–1955) recognised non-Euclidean geometry as an inspiration for the exploration and research on the subject of space and time (Cannon et al., 1997, p. 60). At the same time, A. Einstein, in his groundbreaking achievements, established a link between space and matter. He assumed that they constantly interact. Space affects matter and matter affects space.

Moreover, the human being experiences space only to a very limited extent as if not seeing with his/her senses the phenomenon of space-time continuum, strong gravitational fields or the phenomena on a quantum level. Perhaps in the light of development in discoveries in the field of physics, the concept of space is not a "fundamental" concept.

THE CLASSICAL MANAGEMENT THEORY

The development of management theory and practice proceeded evolutionarily, beginning with practical concepts of very specific solutions in terms of organisation of work in factories. Then, this converted into an increasingly binding model based on a set of fairly rigidly treated “mechanistic” principles (Wagner-Tsukamoto, 2006). Time, which, was understood as an essential dimension of efficiency had fundamental importance in such approach.

The management process is largely manifested through social harmony. Thus, we can notice a little broader idea of space, because next to the physical space as an area of management, we have the process of managing interpreted through the social space. In addition, Fayol points out the importance in the context of the social impact of the organisation beyond its physical boundaries through the locations of workers’ settlements in the vicinity of industrial plants of that period. Thus, the organisational space affects the individual and collective space of the members of the organisation. When it comes to H. Fayol, he concentrates on the whole organisation in the context of an administrative function (Fayol, 1979), which manifests itself through the social system of the organisation.

Space is a system of social interactions, conditioned through physical and contextual meaning of the environment. In that case, physical space of the company becomes a space of relations (relational space), a key space from the point of view of the management process.

However, as noted by H. Yeung (2005) organisational space is potentially regarded as new conceptual optics that is essential for management theory. The starting point of such approach is to analyse the functioning of transnational corporations and the belief that the management concepts are not adapted to the expansion strategy of such companies, because they do not contain the components of “space”. It can be ascertained that the issues of space are mostly not the main aim of research in management sciences, they are somewhat hidden and analysed at the opportunity of research aimed at different issues.

In conclusion, one can concur with the approach of S. Clegg and M. Kornberger (2013), who point out that the issue of space was ignored in management sciences to a large extent with the exception of the

recent references to space in the context of the conditions of globalisation (Tissen & Lekanne Deprez, 2008). The issue of “organisation environment” has been taken up in the first attempts of constructing the management theory. It is merely a metaphor depicting a kind of system of relations between the organisation as such with its boundaries and what lies outside its boundaries. It should be pointed out that the category of environment and organisation boundaries derives from a classic modernistic, rationalistic interpretation perspectives inspired to a large extent by the theory of systems.

GLOBAL AND LOCAL SPACE

In terms of a conceptualisation of company location issues several cognitive optics and analysis methods can be distinguished. It seems that the classic approach to analysing the company location in a global context remains in the interpretation of the relationship between the organisation and space in a geographical sense.

This trend of analysis can show an interesting, according to the author, concept of “proximity” as a category associated with functioning of the company in conditions of globalisation but mostly as a key importance of knowledge and innovation. The concept of proximity as an important category associated with innovation processes has been analysed since the late 1990s. It was introduced to the scientific debate by the French researchers and formed a specific scientific school called “l'école française de la proximité”. The basic approach in “proximity” research is associated with a focus on the conditions of the importance of place space. The space of place is of key importance as the context space in historical and cultural aspects. Recent studies on the proximity phenomenon provide more and more direction to interpreting proximity beyond its understanding as a physical proximity or distance. In such interpretation, proximity is a set of various types of space. For example, it is assumed that the efficiency of producing innovation is conditioned by the combination of various types of proximity, i.e. relative position (orientation) of the organisations to each other, not only in a physical aspect. Such social or relational nature of space can, at the same time, be referred to the classic concept of “production of space” by H. Lefebvre, who points out that “(social) space is a (social) product” (Lefebvre, 1991, p. 26).

In recent times, theoreticians and practitioners of management have welcomed with great interest the concept associated with creating new market spaces, the so-called “blue ocean strategy”. That strategy involves the reconstruction of traditionally understood boundaries of markets and creating new areas of demand.

NETWORKED AND POSTMODERN SPACE

In relation to the economic developments, when describing the network dominance phenomena the most frequently used term is “network economy”. The term of “network economy” includes at least several significant perspectives of interpretation. The first perspective can be associated with the concept of network in the ontological sense, in that case, one can refer to the assumptions of the theory of systems. Networks may also be considered as a spatial arrangement of its individual elements (Batten, 1994, p. 91). At the same time, networks are being analysed from the perspective of a global economic environment and organisations that are functioning in it. It seems that current network research is mostly focused on the context of globalisation combined with a technological approach based on the importance of communicational skills and development of social networks.

The most prominent theories are approaches associated with the development of the Global Commodity Chains (GCC) concept (Gereffi & Korzeniewicz, 1994). Most of the research inspired by the GCC concept regarded the analysis of interconnections between companies operating in countries with a higher level of technological development and companies located in countries that are less economically developed (Bair & Peters, 2006; Daviron & Gibbon, 2002). The development of the GCC approach was initially focused on the research on the dynamics of the processes of inter-organisational relations architecture and secondly on the analysis of management processes and hierarchy of the organisational power. This resulted in adopting the following approaches: Global Value Chains (GVC), and Global Production Networks (GPN). The scientific debate that is concerned with the approaches to the inter-organisational global networks research directs the proposals of further development of those concepts to a development of more dynamic approaches, towards

the analysis of the dynamics and transformation of networks (Coe & Yeung, 2015).

One of the dimensions of contemporary reality is “post” era. Post-modernism is rather a kind of context of interpretation and analysis of phenomena that challenges existing positivist and rationalist canons. In the era of “post...” the paradigm of stability and predictability is challenged (Kostera, 2014). In management studies, the sources of discussion on the postmodernist interpretation of organisational reality are most commonly sought in connection with the concepts of G. Morgan contained in his book entitled *Images of organisation*. He describes metaphoric interpretations of organisations inspired by the holistic approach inspired by humanities, biology, or physics (Morgan, 2007). The concepts of G. Morgan, in some way, were breaking the existing interpretation of the organisation and the management processes. This was strongly associated with the classic achievements of the first decades. In addition, the phenomena of networking and globalisation are accompanied by the development of postmodernist approaches.

Postmodernism questions the traditional cannons of the objectivity of interpreting the reality and classic methods of investigating the truth, and thus research approaches derived from rationalistic premises. At the same time, it undermines the belief in broadly defined development and “grand narratives”. Generally speaking, the postmodernist interpretation advocates the separation of time and space claiming that the unity and continuity of space and time is characteristic of “modernity”. Postmodernism rather abstracts from space.

SPACE OF CONTEXT

Creative processes and innovation are inextricably linked with space in which they take place. From the point of view of the importance of topical contextual space in management sciences one of the most interesting theories explaining the knowledge management processes is the Japanese concept of “space Ba”. Ba means a place, a kind of contextual space, where knowledge is formed and created (Nonaka et al., 2000). Such understanding of space is formed on the basis of relations between the subject and individual experiencing physical space of place. Participants who are found in that space relate to it

with their own experience of interpretation, but at the same time there is a shared perception of space and the resultant meanings created by individual participants of the space (Nonaka & Konno, 1998). Thus “Ba” may be a physical space of place, but also a virtual space or mental space or may also be a combination of these spaces. What is interesting, that this approach derives from a different than Western cultural area. The classic European approach of the Enlightenment era involving Cartesian dualism “mind – matter” was based on the assumption that knowledge refers to the Absolute and requires isolation of mind from the context.

VIRTUAL SPACE

We become the consumers in the new boundaries of space or place in cyberspace. And the companies become their “producers”. A certain perspective that explains space manufacturing in cyberspace is the concept of “experience economy” (Pine II & Gilmore, 1998). It produces the phenomenon of the emergence of “behaviour space”. Space is associated with the development of an ecosystem of IT and communication tools, where technological innovations produce some kind of new space. That space is based on the coupling between consumer and producer behaviour. Such space is a specific place of manifesting human behaviour while creating space of values. Value is individually associated with and transformed by the users, the consumers of innovation. Whereas “place” is a specific portion of the (virtual) space treated by consumers as their own (for example: a profile on a social networking site, list of contacts in a mobile device, the user’s profile in on-line games, etc.). Therefore, similarly to Platonic concepts, J. Baudrillard proclaims that we are living in a world that is not real, but some kind of simulation (Baudrillard, 1981). In such understanding, experience in the environment of cyberspace may be equally important to experiencing it in the real space. Experience economics specify that the main objectives of consumption (values for costumers) are: experiencing new sensations, experiencing pleasure, or experiencing existence.

THE CONCEPTUAL MODEL OF SPACE

Based on the research foundations, objective, and research questions endorsed in this paper and based on the interdisciplinary analysis, four main dimensions of the “spatiality” have been proposed:

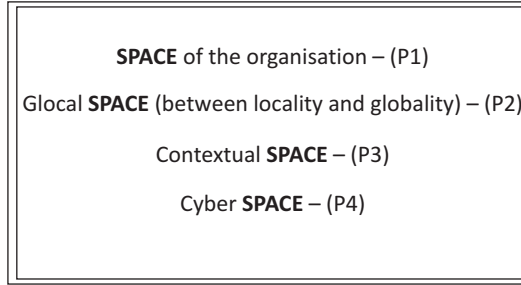


Figure 1. Four-dimensional model of space for the organisation

Source: the author’s own work.

The model (Figure 1) was involved with representing the four categories of space above (P1, P2, P3, P4).

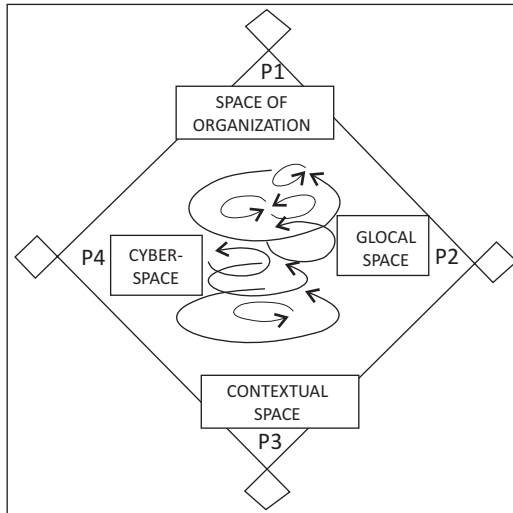


Figure 2. Additional “spatial” dimensions

Source: the author’s own work.

- | | | |
|------|---|--|
| (P1) | Space of the organisation | (P1.1) internal space
(P1.2) external space
(organisation environment)
(P1.3) organisational structures |
| (P2) | Glocal space (between locality and globality) | (P2.1) network space
(P2.2) global space
(P2.3) local (location) space |
| (P3) | Contextual space | (P3.1) cultural space
(P3.2) space of place
(P3.3) space of context |
| (P4) | Cyberspace (virtual space) | (P4.1) network space
(network architecture)
(P4.2) space of experience
(P4.3) production of space |

The approach outlined in this paper can lead to the formulation of epistemological proposals that can contribute to the development of research on space in management science. At the same time, it was decided to make an assumption of presenting a universal concept that can be used in various approaches or management schools. That assumption was made towards the dynamics of discipline development and variability of views, approaches or domination of different research schools in different periods of evolution of management sciences.

CONCEPTUAL EXPERIMENTS

In relation to the practical implementation of the multidimensional concept of category of space, based on earlier reflections, a tool may also be suggested associated with designing or mapping of the organisation's business model. Among the many definitions of the business model, the definition of B. Nogalski is worth noting, which states that a "business model is a general concept that defines the framework for business logic and its features, such as innovation and competitiveness" (Nogalski, 2009, p. 5). T. Falencikowski states that a "business

model is a multi-dimensional conceptual object describing business, describing the logic of creating value for a customer and capturing a part of that value by the enterprises” (Falencikowski, 2013, p. 37). That tool was constructed based on areas of organisational spatiality identified in this paper, while the formal inspiration was the concept of the “Business Model Canvas” (Osterwalder & Pigneur, 2010).

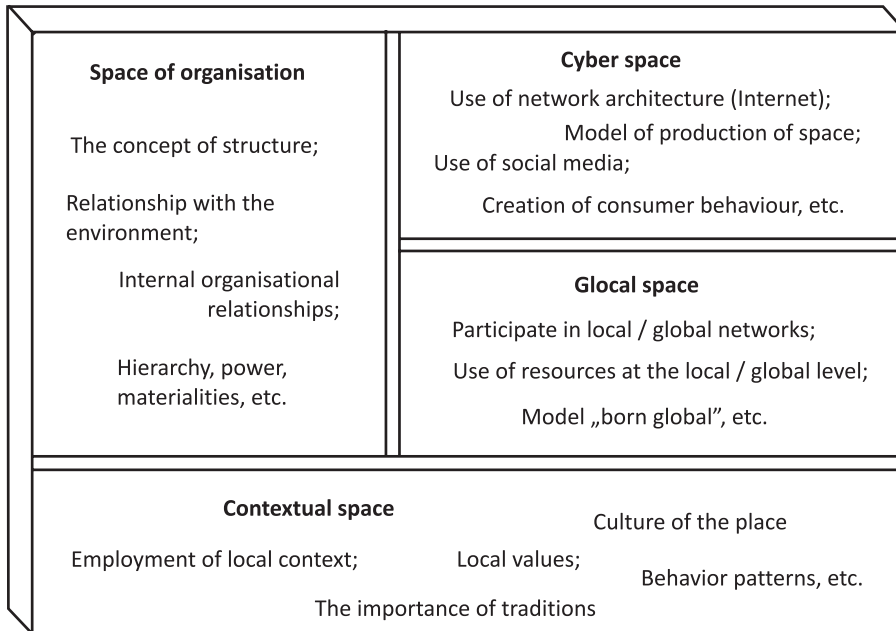


Figure 3. Designing or mapping of the business model based on four model spatial dimensions

Source: the author’s work.

The figure above (Figure 3) presents a suggestion for a tool aimed at designing or mapping of the business model based on four categories of spatiality included in the model. That tool may supplement the classic and popular concept developed by A. Osterwalder and Y. Pigneur that is the groundwork for creating, recognizing, and development of the business model. Of course, the presented tool does not replace the “matrix” of, it only constitutes a complementary (does not include, for example, financial components) expansion by the spatial aspects of the tool referring to the business models. However, the author believes that it may be a valuable supplementation or deepening the

approach to mapping and development of business models. It seems that it may be applied both in the process of designing new business and mapping the already existing one. It seems that in terms of the conceptualisation of business models there is a kind of difficulty that results from the fact that the business models as a specific approach arose mainly as a kind of practical concept intended to describe the general principles of the business logic. It is noteworthy that companies are not competing products, but rather business models, which may determine the dynamic development of this research approach in management science theory in recent years. However, according to the author, the above reference of spatial aspects to the business model concept can be a valuable complementary approach to mapping and developing the business model issue. It seems that it can be applied both in the process of designing a new business as well as in the mapping already existing, because, as Nogalski and Falencikowski note, “treating the business model as a conceptual tool contributing to looking at the phenomenon of economic activity entails the necessary improvement of this tool” (Nogalski & Falencikowski, 2010, p. 189).

DISCUSSION

One can probably express a view that there is a lack, (not only among Polish scholars) of a comprehensive conceptualisation of the space subject in the perspective of management sciences (Pachura P., 2016). Among the Polish scientific community representing management science an increasing interest in space issues can be seen. An important area of research related to the category of space is the problem of knowledge management, in this context, for example, research on the importance of space in the processes of diffusion of knowledge (Perechuda, 2005). A separate emerging field of research in management science becomes, for example, the issue of the importance of virtual space in the management process.

Scientific work on the issue of space in general or the significance of space for the functioning of the organisation is conducted by the representatives of the Polish scientific environment. Although, they are relatively rare, they are important in the process of conceptualising. Despite the limited research on the category of space in management sciences, according to the author, several areas of research can be

distinguished. One of the examples may be sociology of the organisation, where research is conducted on the meaning of social space in the functioning of the enterprise and it analyses the issues of organisational culture, the specific landscape of the social enterprise, researched for example by M. Bratnicki (1988), A. Koźmiński (2004). One can also identify a stream of empirical research on the knowledge processes in organisations where it is worth emphasising the works of M. Bratnicki (2000), B. Mięka (2006), and others scholars.

Also worth noting is the well-developed trend of research on innovation management processes. Creating innovation as a fundamental issue from the company's point of view has been regarded as a paradigm for some time. The issue of innovation has a highly spatial dimension, expressed by the issue of proximity to, for example, technological clusters or the Triple Helix concept (Bojar, 2007). An interesting field of empirical research conducted within the management sciences is the problem of international management, where the interpretation field is most often the environment of a transnational corporation (Penc, 2003).

It can be stated that the problem of space most often does not constitute the target object of research in the management sciences, it is, in a way, hidden and analysed as if research was directed at other issues (Pachura A., 2016). It seems that in the management sciences the approach of classifying space has been grounded by the notion of the so-called "organisational environment" and "organisational boundaries". S. Cyfert states that "Genetic boundary typology allows us to distinguish two categories of external borders, describing relations between the organisation and the environment, and internal boundaries, defining the ways of internal configurations" (Cyfert, 2014, p. 244). Another approach proposed by W. Czakon (2012, p. 28) presenting the basic assumptions of the network paradigm, points to differences in the interpretation of the organisational environment in the classic and networked approach. K. Perechuda (2014), on the other hand, extends the interpretative perspective by asking questions: can we find out about the environment through an organisation analysis? And vice versa, can we say something about the organisation through an analysis of the environment? In the context of S. Cyfert and K. Krzakiewicz's (2015, p. 12) considerations, for example, it can be pointed out that new organisations or new interpretations of an organisation need a "new space", a new perspective on embedding in both physical space and

location, as well as new internal organisational space management related to even network structures. On the other hand, W. Cieśliński (2015) proposes considering the concepts of the organisational space consisting of real, virtual, and media relations. He also suggests the phenomenon of “widening” organisational space mainly through technology. It seems that the issue of space research from the point of view of the organisation and management sciences will develop in the future, and this paper may contribute to some aspects of this discussion.

CONCLUSION

It is a suggestion resulting from the research presented in this paper that in further stages of the research on the conceptual model of space require empirical verification. Such verification could involve identification of tasks and activities associated with four dimensions of spatiality specified in the model, i.e. organisational, topical, and glocal space as well as cyberspace. One could also make a quantifying analysis in relation, for example, to different managerial levels in the organisation. The aim of the conducted research was an analysis and interdisciplinary conceptualisation of the concept of space and its multidimensionality from the point of view of management sciences. Through referring to the paper’s aim and research questions, firstly, the one regarding the possibility of extracting the category of space as an essential “variable” in relation to the management processes – four main categories have been identified that are a kind of “spatiality” dimensions in functioning of modern organisations: (P1) Space of organisation; (P2) Glocal space (between locality and globality); (P3) Contextual space; (P4) Cyberspace (virtual space). Furthermore, the individual dimensions were divided into the particularising categories (Figure 2). However, in relation to the second research question regarding the macro level (business model), the development of a conceptual model was conducted that relates with the functioning of the organisation based on multidimensional interpretation of space. Since space is most commonly used as metaphor, the author’s intention was to avoid this trap by analysing the embedded scientific theories of space.

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ODKRYWAJĄC PRZESTRZEŃ DLA ORGANIZACJI – ROZWAŻANIA KONCEPTUALNE

Abstrakt

Tło badań. Proces swoistego „kurczenia się” świata i przeświadczenie o zaniku znaczenia dystansu w wyniku procesów globalnych i rozwoju technologicznego spowodowały brak zainteresowania przestrzenią. Wydaje się jednak, że następuje renesans zainteresowania naukowym przestrzenią, ponieważ nadal jest ona jedną z podstawowych kategorii poznawczych, stale doświadczaną zarówno przez ludzi, jak i organizacje. Organizacje coraz intensywniej „zmagają się” z różnymi przestrzeniami, szczególnie w obliczu dychotomii lokalność–globalność oraz zjawisk związanych z przestrzenią wirtualną czy przestrzenią sieci.

Cel badań. Celem badań jest próba interdyscyplinarnej i innowacyjnej konceptualizacji zagadnienia przestrzeni w kontekście nauk o organizacji i zarządzaniu. W trakcie badań prowadzono identyfikację różnych wymiarów przestrzeni.

Metodologia. Główną metodą dociekań był dedukcyjny sposób rozumowania. Na poziomie analizy makro zbudowano model konceptualny, który w dalszej części badań wykorzystano do eksperymentu teoretycznego, aby wskazać możliwości aplikacyjne modelu na poziomie mezo w odniesieniu do koncepcji modeli biznesowych.

Kluczowe wnioski. W wyniku eksperymentów konceptualnych zaproponowano oryginalny model czterech wymiarów przestrzeni. Model ten może być uniwersalnym narzędziem wykorzystywanym przez organizacje. Artykuł przedstawia eksperymentalne zastosowanie modelu przestrzeni w koncepcji modeli biznesu.

Słowa kluczowe: przestrzeń, organizacja, zarządzanie, modele biznesu, konceptualizacja.