

MANAGEMENT AND SPACE – INTRODUCTION TO CONCEPTUALIZATION

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Introduction

In perceiving the increasing interest among the representatives of management science of the issue of space, the herein paper constitutes an attempt to carry out a preliminary conceptualization. The main goal of the paper is to present an epistemological dimension of “space” with relation to “management science”. In the first part, the article raises the issue of general interpretation of space. The second part is focused on the role of space in classical theories of management. The two following parts are focused on the issues of challenges for management in global context and refer to current state of the art of empirical research in this field.

Amongst the Polish and international scientific community representing management science, it is possible to perceive the growing interest in the issues of space. An important trend of research associated with the category of management science is that of the problematic issues of knowledge management. In this context, this is exemplified by research on the significance of space in the processes of the diffusion of knowledge or also the concepts of organizational structures. To a certain extent, the separate research area of management science that is closely connected with the category of space is that of the issues of logistics to a certain extent, the separate research area of management science that is closely related to the category

of space, is the domain of logistics issues. The importance of virtual space is also the interest of the process of management.

Nevertheless, it is possible to express the view that there is a lack of an intricate and profound conceptualization of the theme of space in the perspective of management science. Alongside the theoretical dimension, the paper may constitute the subject of interest for the practitioners of management as the managers in enterprises must increasingly find a balance between locality and globalization, namely to a certain degree enterprises are constantly faced with various categories of space as follows: physical, social or cultural.

Interpretation of space – epistemological perspective

The notion of space is one of the fundamental categories of existence which has interested man since the beginning of the development of civilization. The issues of space, including its experience constituted the area of interest in ancient science, followed by modern times right up to contemporary times. The foundations of the ways of interpreting the significance of space set out various philosophical trends that perceive space as an *ontic* and *epistemic* category. By carrying out simplification, it is possible to distinguish three

main interpretations of space presented by the most influential thinkers and scientists: absolute space, relative space and relational space.

Absolute space exists independently of subjects and entities, by means of which it is possible to imagine an empty space (Bathel, Glückler, 2005). It is necessary to note that the absolutist perception of space for a long period led to the substantial limitation of the categories of space as an interpretative level in social and economic sciences. Relative space may be understood as a certain structure consisting of a set of objects (placement) and the physical relations between them (Bathel, Glückler, 2003). In this concept, space is not an objective notion and only emerges as a result of the configuration of the structures of the location of the objects. From the viewpoint of management science, it is possible to discuss the issues of location or the spatial placement of organization with reference to the example of the benefits of agglomeration that result from the concentration of economic activities in a given area.

The relational concept of space would seem to be interpretatively important from the viewpoint of management. In this case, space is not only observed as in the case of the notion of relative space, but the observer is simultaneously an active participant of space and may have an impact on it. This signifies the possibilities of adopting the new potential conceptualization of space as space is becoming somewhat “assimilated” in the various relational contexts, social, economic or cultural relations (Garretsen, Martin, 2010). Simultaneously, the relations between the participants of space, e.g. in the environs of the enterprise, are shaped on the basis of trust, power, or even setting, which in turn leads to the perception of space as the space of network relations or organizational interior (Gieryn, 2000).

In recent times, the notion of space has also spread to biological sciences, where there is such a notion as “genetical space” or “phenotypic space” (Kamiński et al., 2003). However, the most important notions of space in social sciences do not merely constitute an explanatory notion serving to interpret, but rather constitute the subject matter of the research in a *strict sense*. In truth, not so long ago in tandem with the advancing globalization of the world the *end of space* was proclaimed, namely the category of space was acknowledged to be of little interest to the contemporary man who is conscious of spatial compression thanks to the modern and available means of transport, telecommunications equipment or virtualization.

The „shrinking” of the world pushed reflection on the issue of space into the background. Nevertheless, it would seem that a renaissance of interest is occurring in terms of scientific space as it still constitutes one of the fundamental cognitive and interpretative categories in natural, social and economic

sciences (Roskal, 2008). An outline of the interpretation of space with reference to the perspectives of management science is presented in Figure 1.

Space in classical theories of management

By evoking the notion of the classical theories of management in the first period of development, it is possible to refer to the work of K. Adamiecki as a representative of the aforesaid period. In the first works of Adamiecki, the main focal point of interest lies with the issue of time and the harmony of operations. The functioning of the particular systems/sub-systems of enterprises is compared by Adamiecki to the channel of flow by postulating that the particular flows are appropriately regulated (Adamiecki, 1938). Space was secondary and related to the spatial harmonization of the work of machines and people in an enterprise. This approach was typical for this period of the development of science on management, the so-called space existed in the context of internal-organizational space, as well as external space (most frequently termed the environment of an organization). In the works of F. Taylor (1922; 1947), space is interpreted in the categories of the physical location of enterprises. Simultaneously, the significance of space is the significance in the categories of the physical productivity or space associated with the division of labour and organization of production.

The application of the “Ford” production lines and the creation of space in a great automotive factory, its micro-world prevailed in the subsequent decades in a mostly physical and locational context of organizational space to a certain extent. Such an approach towards space has resulted in the relatively clear borders between space within an organization and the borders between an enterprise and its environment. Simultaneously, the phenomenon of the relatively small personalization of space occurred, namely the employees of the organization did not have a great impact on the individualization of their working space (work station). Likewise, it is also worth drawing attention to the fact that the organization of space was first and foremost geared towards the realization of the principal aim of enterprises and subordinated under productivity.

However, in the case of H. Fayol (1917), we observe the concentration on the whole organization (corporation) in the context of the administrative function that appears by means of the social world of the organization (*le corps social*). The process of management to a large extent appears by means of social harmony. Likewise, we may note the rather broader vision of space as alongside the physical space as an area of management there is the process of management interpreted

SPACE:	ABSOLUTE	RELATIVE	RELATIONAL
METAPHOR	CONTAINER	STRUCTURE	NETWORK
HUMAN as	OBSERVER	INTERPRETER	PARTICIPANT
INTERPRETATION FOR MANAGEMENT	ORGANIZATION, EXTERNAL ENVIRONMENT	LOCATION OF ENTERPRISES, CLUSTERS	INTER-ORGANIZATIONAL NETWORKS

Figure 1. Interpretations of space in perspective of science on management
Source: author

by way of social space. Furthermore, Fayol notes the significance in the social context of the impact of enterprises beyond its physical boundaries via the location of working districts within the proximity of the industrial plants of the period in question.

It may also be noted that the administrative trend represented by M. Weber (1947) to a certain degree creates a new universalist representation of the space of an organization associated with the spatial location of the “bureaucracy” (administration). This is a space that is divergent from the space of a factory as a production system. *Bureaucratic space* represents the depersonalized authorities that by assumption operate together for the common good while not creating interpersonal relations, but relations between a person and the spatial representation of power (office, term of office).

A very important turning point in the interpretation of space in science on management was the development of behavioural schools. The classical work of E. Mayo based on experiments of Hawthorne related to research on the execution of work (effectiveness) and the dynamics of the group. They proved the relation between productivity and the dynamics of the group based on the informal network of social ties (Mayo, 1933). It is possible to say that in this manner the space of an enterprise was identified, which consists of relational space, the sphere of values (symbolic) and the space of the location. Space is the system of social interactions that are conditioned by the physical and contextual significance of the environment. Hence, in this case the physical space of an enterprise is becoming the space of relations (relational space), which is key from the viewpoint of the process of management.

The further development of the concept in science on management, particularly within the framework of strategic management, or for instance research on the synoptic or incremental orientation of an enterprise (Lichtarski, 2014) may constitute a very interesting area of research in the context of the significance of space. What is particularly interesting from the viewpoint of the current challenges facing the concepts associated with the space of context, or even topical space and its role in the process of management.

Challenges for management in context of global space

Scientific research on the spatial problematic issues of the organization of processes in the era of globalization, especially the production processes, constitute the subject of debate within the framework of a multitude of scientific approaches, among others: economics, management science and globalistics. Together with the growing globalization, a multitude of new research questions emerge, while simultaneously equally numerous ones remain unsolved.

Technological development has caused the compression on space that is felt in many areas and consequently the specified location of an enterprise is to be found in constant ties with the global space (Pachura, 2015). It would seem that the greatest challenge to the development of the theories of management is posed by the problematic issues of management in a global environment, as well as management in inter-organizational networks.

In this context, it is possible to draw attention to several concepts of a systemic nature that may be of great significance for the development of the theories of management in the perspective of the significance of the space, as in for example: *global commodity chains*, *global value chains* and *global production networks*. The concept of *global commodity chains* was proposed by the Manchester school (Gereffi, 1994; 2005). This approach concentrated on the connection of the interpretation of the aspects of the space associated with the local concentration of the economic activity with a global configuration of the network of production and distribution. The remaining two concepts of a more systemic nature focus on the dynamics of the processes of global configurations of the inter-organizational relations, as well as the process of management and organizational powers. The concept of *global value chains* takes on the issues of the inter-organizational relations, as well as the power of the dependencies influencing and shaping them into a global perspective. Most frequently, empirical research is carried out on the basis of analysis on the level of the transnational corporation, which constitutes significant areas of research in the context of the science on management. The approach from the perspective of *global production networks* focuses on the inter-organizational dependencies between the enterprises creating the space of the global production networks. The subject matter of analysis is first and foremost the structures of networks of manufacturing enterprises, as well as the configuration of space (geographical), associated with the “physical” placement of its particular elements.

The phenomena occurring with development and evolution of inter-organizational elements may afford to include the issues of space as a significant category in contemporary theories of management, while faced with the challenges connected with balancing between the locality, globality and networking of enterprises. The problematic issues of management in the environment of the inter-organizational networks are well acknowledged on the basis of theoretical and empirical research, in which particular attention is worth paying to the works of the representatives of the Polish scientific environment of management science (Lichtarski 1993; Nogalski et al., 2014; Niemczyk et al., 2012; Stachowicz, 2008; Czakon 2014). Simultaneously, one of the dimensions, or also interpretative perspectives in terms of new challenges in science on management may be the application of the categories of space as a cognitive optics for analysing the networking dimension of enterprises.

Outline of state of empirical research

Despite the limited analysis in the sphere of research on the category of space in management science, as well as related disciplines, it is possible to distinguish several areas for running empirical research. One of these examples may be that of the sociology of the organization, whereby the research is carried out on the significance of the social space in the functioning of enterprises, while also analysing the issues of organizational culture, or even the organizational entrepreneurship (Bratnicki, 1988; Stachowicz, Machulik, 2001; Koźmiński, 2004). In this case, it is worth paying attention to for example, the empirical research on the dimensions of organizational creativity in enterprises where



it is possible to perceive clear potential for the analysis of the context of space (Bratnicka, 2014). This research approach may be linked to earlier achievements within the concept of the social production of space by Lefebvre (1991) which recognizes space as a social product.

Likewise, the trend of empirical research on the processes of knowledge in an organization is also deserving of mention (Bratnicki, 2000; Mikuła, 2006; Perechuda, 2005; Romanowska, 2001; Strojny, 2000; Strużyna, 2000). In this case, it is possible to interpret the aspects of the formation and transfer of knowledge in an enterprise as the processes associated with the space of a place or the space of context. Such an interpretative perspective was implemented by the research of Nonaka and Takeuchi (2000), as well as the Scandinavian empirical research on the significance of social and intellectual capital of enterprises. This approach is characterized by an attempt to combine the theory of knowledge and processes of learning within management practice by developing models and specific tools for knowledge management (Edvinsson, Malone, 2001).

It is also worth drawing attention to the developed trend of research on the processes of the management of innovations. Creating innovations as a fundamental issue from the viewpoint of enterprises has been for some time treated as a paradigm (Pomykalski, 2001; Poznańska, 1998). The problematic issues of creating innovations has a strongly depicted spatial dimension that is expressed by means of issues of geographical proximity in the context of for instance technological clusters or the concept of *Triple Helix*. It also involves issues of intellectual capital and social capital management in the context of an organizational potential for innovation production (e.g. Andriessen, 2001; Bontis, 1999).

An interesting area of empirical research that is run within the framework of management science is that of the problematic issues of international management. This is a dynamically developing approach with important contributions by H.W. Yeung and others scholars, which attempts to bridge theories in management and economic geography and developing a new frontier in management and organizational research – known as organizational geography (Yeung, 2005). The interpretative area in the problematic issues of international management is most frequently the environment of transnational corporations, in this case with regard to the dispersal of enterprises operating on various markets the issue of space is becoming very important in the practice of management (Penc, 2003; Koźmiński, 1999; Obkój, Wąsowska, 2014). It is possible to note that the problematic issues of space most frequently do not constitute a deliberate target area for empirical research in terms of management science which is somewhat *implicit* and analysed during the course of research aimed at other issues. Nevertheless, it would seem that gearing epistemological and empirical research towards the issues of space constitutes an interesting direction from a scientific point of view.

Conclusions

The issues of space in management science are most often undertaken fragmentarily, hence the need to conceptualize these problematic issues in a systematic and complex manner. Simultaneously, it would seem that

this category of space may constitute a supporting epistemological perspective in the sphere of the development of management science. As noted by for instance W. Czakon (2010, p. 16), „Few notions are as frequently used in management science ... to explain the analysed phenomena as proximity”. There is of course a certain element of fear in the excessive “trans-disciplinarity” of this approach, however by preserving its own scientific rigour the undertaking may lead to the development of the theoretical bases. The notion of space alongside time has always been naturally associated with human experience and constituted a cognitive aim, which may additionally motivate the undertaking of scientific work in this area. As in the case of all disciplines of science, the theory of management is also subject to the process of evolution that currently faces such challenges as global space, glocalization, networking space or virtual space. The paper herein constitutes an attempt at contribution to the scientific deliberations on the conceptualization of the category of space in management science.

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Zarządzanie i przestrzeń – wstęp do konceptualizacji

Streszczenie

W środowisku naukowym reprezentującym nauki o zarządzaniu można zauważyć wzrastające zainteresowanie problematyką przestrzeni. Niniejszy artykuł stanowi próbę wstępnej konceptualizacji zagadnienia interpretacji przestrzeni w naukach o zarządzaniu. W pierwszej części opracowanie podejmuje kwestie dotyczące interpretacji przestrzeni w perspektywie epistemologicznej, wskazując na istnienie przestrzeni: absolutnej, relatywnej i relacyjnej. Druga część tekstu koncentruje się na roli i pojmowaniu przestrzeni w klasycznej teorii zarządzania, przywołując koncepcje: K. Adamieckiego, F. Taylora, H. Fayola, M. Webera i E. Mayo. Kolejną część tekstu skupia się na zagadnieniach związanych z wyzwaniami dla zarządzania w kontekście przestrzeni globalnej ze szczególnym uwzględnieniem sieci międzyorganizacyjnych. Artykuł kończy się prezentacją stanu badań empirycznych w zakresie problematyki przestrzeni w naukach o zarządzaniu. Intencją autora jest zainicjowanie naukowej dyskusji nad znaczeniem „przestrzeni” w naukach o zarządzaniu.

Słowa kluczowe

przestrzeń, teoria nauk o zarządzaniu, sieci międzyorganizacyjne, konceptualizacja