



## **Assemblage Thinking and Tacit Knowledge in Knowledge Era Urbanism**

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### **Abstract**

The purpose of the study is to reconsider ontological and epistemological approaches of cities in the 21<sup>st</sup> century. This reconsideration, chronologically, is about the shift between the industrial era and the knowledge era. This study also aims to underline two epistemological concepts, tacit and explicit knowledge in the context of this chronological shift. The study starts with Lefebvre's philosophical inquiry in 1960's which was basically a comparison of the Greek City and the modern-day city of that time. Afterwards, until today, there has been many critical changes with advent of information technologies. The concept of "Assemblage" invented by Gilles Deleuze. The idea of assemblage urbanism which was derived from "assemblage", have been used as an alternative conceptual frame for comprehending cities of nowadays. At a contextual glance of this study, critical urbanism aspect is correlated with the industrial era and the assemblage urbanism is correlated with the knowledge era. Thus, by comparing these two approaches, the study reveals the differences, and develops a new understanding of today's cities.

**Keywords:** Assemblage urbanism; Critical urbanism; Tacit knowledge; Explicit knowledge

### **INTRODUCTION**

The discussions of the knowledge era show that our society is in a transitional phase on several counts. Cities, thereby urbanism doctrines, are also undergoing various changes. To develop a new understanding of cities in the knowledge era, it is necessary to comprehend the previous dynamics of industrial era. According to this context the industrial era cities can be understood as determinations of the industrialization and modernisation processes. During the industrial years, settlement concept was understood as the result of new socio-economic changes like centralisation of production, one-way migration and the labour class etc. In many countries on earth, the national state, as a single dominant actor, had a very important role as regulator of the socio-economic situation. Thus, the urbanism discipline grew out of modernisation, which was based on the socio-economic actions of industrialization. The study will be trying to demonstrate a change of the industrial era perspective and a need for a new type of epistemology and ontology in the knowledge era urbanism. Day by day It is becoming apparent that the rigid and codified type of epistemology of critical urbanism, needs to transform into a more tacit and fluid type of epistemology.

Firstly, it's important to anticipate, what kind of epistemological transformations are ongoing in the knowledge era. In recent times, raising the value of tacit knowledge, against explicit knowledge is a widely accepted tendency. About the discussion of the epistemological changes in the knowledge era, mainstream critical urbanism and more recent assemblage urbanism theories, will guide the study with their different epistemological focuses. Assemblage urbanism is an approach, which is trying to develop a new, descriptive and deductive epistemology as opposed to the explanatory and reductive epistemology of critical urbanism. This inquiry is not against the socio-economic background of the urbanism process, which is trying to answer questions of "what and why" about urban issues. Alternatively, the purpose of the study is to reconsider ontological and epistemological approaches cities of 21<sup>st</sup> Century and thus to create an epistemological



and ontological perspectives, focusing on the questions of "how and who" about urban happenings.

### **SEEKING NEW URBAN EPISTEMOLOGIES WITH THE ADVENT OF THE INFORMATION ERA**

Through the advent of the knowledge era in recent years, people have witnessed many changes in our lives. Similarly, there are many seminal papers in the field of social sciences, about society under the title of the 'knowledge era'. If knowledge era is defined as a breakthrough, something has suppose to be revolutionized, out of the previous urban approaches which were valid during the industrial era. Today "the field of urban studies is confronted with significant theoretical, conceptual, epistemological and methodological challenges" (Brenner, Madden, Wachsmuth, 2011).

Before starting with an epistemological inquiry, it will be usefull to reveal the new ontological conditions of urbanism to create conceptual foundations. So, the study offers to extend the notional inquiry of Lefebvre's philosophy and city. Because study aims to reveal, ontological transformations are the main reasons to seek a new epistemology. As Lefebvre (1996) discussed in "Right of the City" industrialisation caused a different kind of notion of city for people, different from the antique Greek way of city understanding. Nature was far more immanent within the Greek concept of city. City was something implicit with the cosmic organisation. The citizens were part of nature both philosophically and economically. The city was defined as a small component, as a part of the whole, part of a cosmos. The city was more like a satellite belong to cosmos, which was immense and far stronger than itself.

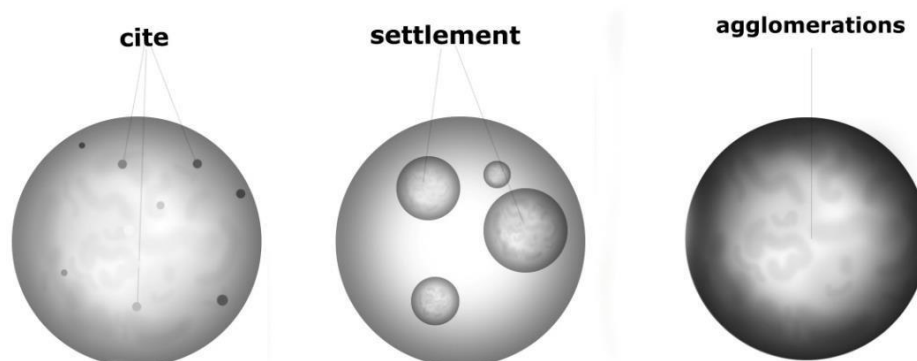
Later, in the Middle Ages, different understanding of the city concept has emerged. In the study, this new city concept of Middle Ages is named as settlements. The main tendency of settlements was isolation, and this isolation has increased over the years. Throughout the process of modernization, the concept of settlements gained a more hierarchical position against nature. The settlements became something opposed to nature rather than being part of it. The settlements had a tendency to isolate themselves from nature and the rest of the cosmic happenings around it. And the more settlements became isolated from the outside, the more they became defined and developed. Then, three centuries later, industrial era started. Rigid separation was the main idea and power of dynamism of the industrial era urbanism. A modern person defined as someone, who hadn't been living with familiar connections to nature; modern people were the ones only who could adapt to this isolation and the exploitation of nature from outside of it.

Under the title of the knowledge era, contemporary urban discussions show that new type of tendency begins. The city concept starts to break down the agreement of division between city and nature. This progress can be understood as one of the main reasons for study inquiry. With the advent of the information era, it is seminal to take further this questioning of Lefebvre (1967). In this process, our cities undergo both ontological and epistemological transformations. "The 'urban question' famously posed four decades ago by Lefebvre, Harvey and Castells remains as essential as ever, but it arguably needs to be reposed, in the most fundamental way, in light of early 21st-century conditions. In other words: do we really know, today, where the 'urban' begins and ends, or what its most essential features are, socially, spatially or otherwise?" (Brenner, Madden, Wachsmuth, 2011). "Despite pervasive sociospatial unevenness and persistent territorial inequality, the entire fabric of planetary settlement space is now being both extensively and intensively urbanized" (Schmid, 2005; Soja and Kanai, 2005; Madden, 2011; Brenner, 2011). "Because of technological convergence between computers, telecommunications, and mass media in all its modalities, global/regional consortia were formed, and dissolved, on a gigantic scale" (The Economist, 1994).

### **Cite, Settlement and Agglomeration**

In the transition of the knowledge era, some concepts, regarding settlements became inadequate, this is because the concepts of the industrial era ontology became inappropriate for the new era in many cases. The settlements of the industrial era were places where mostly non- agricultural activities took place. In many of these settlements the main driver of development was industry. The type people who lived in these settlements had their own modernist lifestyles, were creating a different of society shaped by industrial activities, which was apart from the rural area and rural people around it. Industry was the determining factor for both the epistemology and ontology of settlements. City itself was a passive result, under the effective influence of industry. On the other hand, rural areas were all areas that were outside of these defined centres, also the culture of rural societies was distinctly different to that of cities. The culture of these places was unique, local and strongly related with the climate, geography and history. Rural areas were still immanent to the cosmos in many cases rather than a fragmented modernist way of understanding. Related to this, it can be said that industrial age urbanism relied on the opposition of rural and urban areas and the osmotic interactions between these two opposite poles.

With the advent of the knowledge era this contrast becomes more obscure and vague day by day. As Tekeli (2016) mentioned for both rural and city populations there are some incontrovertible tendencies we are aware of now. From the city to the rural we can observe, the decentralisation of industry, spread of tourism activities, summer houses or country houses, migrations to rural areas because of unemployment or retirement, protected areas or archaeological sites, which have increased in later years. Opposingly, from the rural to the city we can mention the commodification of village labour, resulting in the disappearance of village populations, varying activities in rural areas other than agriculture, the eclipsing of borders between city and rural, cultural dedifferentiation of rural and city, the same consumption habits for both sides etc. "Territorial hierarchies can be blurred, and even reversed, as the industry expands throughout the world, and as competition enhances or depresses entire agglomerations, including milieu off innovation themselves" (Castells, 1996). Consequently, from many perspectives, the separation of society and geography based on rural and city contrast is not as explanatory as it was before,. To create a basis for this inquiry, the Graphic 1 below illustrates the schematic staging of the 3 different notions of: cite, settlement and agglomeration.



**Graphic 1:** 3 different notions of: cite, settlement and agglomeration.

Chronologically focus of the study falls between the settlement and agglomeration stages. The period which has emphasized by prevailing metanarratives like neoliberalism and postmodernism. Both grew apace from the benefits of a knowledge era based on information technology. Scheme is aiming to reveal, with the advent of new technologies 20<sup>th</sup> century urbanism concept (settlements), transforming to 21st century urbanism concept (agglomerations). "Discussions regarding negative situations which don't



correspond with the definition of city have been exceeded by the new discussion of the definition of city itself" (Tekeli, 2016). We are in an environment now where entities are more fluid, discontinuous, erratic, indirect interactive rather than rigid, discrete, direct, stable, unilateral. With the dissolving of 20<sup>th</sup> century urban fragmentation, knowledge era urbanism requires new considerations and definitions of settlements. "The most important consequence perhaps is that the notion of assemblage which involves no outside, no exteriority" (Farias 2011).

By virtue of these changing dynamics, urban thinkers increasingly need a new ontological perspective. Tekeli (2016), starts his inquiry with the offering the concept of agglomeration instead of the concept of settlement. Because it's more descriptive and useful concept to comprehend the formation of cities in the knowledge era. Primarily, According to this aspect it is important to put forth that, agglomerations are global and settlements are national. To support this concept Tekeli (2016) counts four conditions below.

Firstly, in the knowledge era, it is very important to focus on the capacity of synergy, the potential of people's communications in the dense and multiscalar nature of agglomerations. The relationships between pieces are more critical than the pieces themselves. "Spatial economies of synergy mean that being in a place of potential interaction with valuable partners creates the possibility of adding value as a result of the innovation generated by this interaction" (Castells, 2010).

Secondly the economies of agglomerations are based on different but connected activities, rather than collateral, activities as in the settlement economies of the industrial era. "In this new global context, localized agglomeration, far from constituting an alternative to spatial dispersion, becomes the principal basis for participation in a global network of regional economies. At the same time the viability of regional economies is a product of their ability to articulate a coherent organisational presence within a global milieu. Regions and networks in fact constitute interdependent poles within the new spatial mosaic of global innovation" (Gordon 1994).

Thirdly, there are identity-based approaches. People wish to assign meaning to their lives, and this meaning is produced by social interactions. In the knowledge era, the limited interactions of settlement societies are becoming less satisfying day by day for new generations. (Tekeli, 2016).

Lastly, a concept that is the most crucial for inquiry of the study is the relationship between tacit knowledge and innovation in cities. The agglomeration approach is not a limited and homogeneous perspective such as the settlement approach. In the network of agglomerations new dynamics are appearing and disappearing frequently. People mostly perceive these variances with their tacit ways of knowing. Therefore, the agglomeration concept encourages innovation of the city, based on tacit knowledge. Innovation is understood one of the main drivers of global competition and cooperation. So, it is crucial to underline the role of tacit knowledge in urbanism of the knowledge era (Tekeli, 2016).

### **PROMINENCE OF TACIT KNOWLEDGE IN CONTEMPORARY URBANISM**

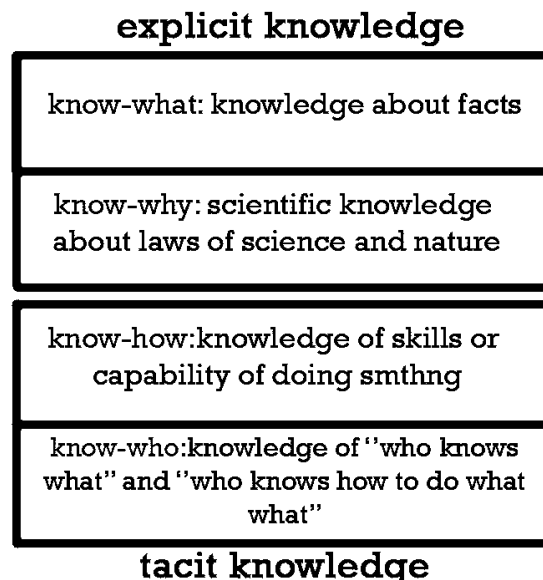
"Historically, capital, raw materials and labour have been considered more valuable than creating and applying knowledge" (Smith, 2001). "In the industrial mode of development, the main source of productivity lies in the introduction of new energy sources, and in the ability to decentralize the use of energy throughout the production and circulation processes. In the new informational mode of development, the source of productivity lies in the technology of knowledge generation, information processing, and symbol communication" (Castells, 1996). As Castells (1996) argued, energy replaced his pioneering position with knowledge. At this point study offers a question. If we need to compare producing energy and creating knowledge which one will correlate more with

tacit/explicit knowledge based information? But before what are the tacit and the explicit knowledge? Tacit and explicit knowledge discussions are associated with knowledge management terminology but also have epistemological origins. Many scholars underline the role of tacit knowledge as one key lever for achieving this creation and application success.

### ***Focusing on the Questions of "What? and Why?" or "How? and Who?"***

In this part of the study firstly, 'explicit' and 'tacit' knowledge are explained which are much debated by Nonaka (1994), Cook and Brown (1999), Polanyi (1983). Explicit knowledge can be described as what can be embodied in a code or a language and as a consequence it can be systematised, processed, shared and archived easily. In the urbanism discipline there are many terms generated by explicit knowledge like size of population, labour class, common scales, national or geographic borders, etc. It can be shared in the form of data, scientific formula, manuals and such like. In contrast, tacit knowledge is personal and hard to formalise – it is rooted in action, procedures, commitment, culture and emotions etc. Additively these two different epistemological approaches can be understood with their main interrogation marks as it seen above in the scheme. Explicit knowledge is based on the "what? and why?". On the other hand, tacit knowledge is focusing the "how? and who?".

"Explicit knowledge can be articulated in formal language including, grammatical statements, mathematical expressions, specifications, manuals and so forth. This kind of knowledge thus can be transmitted across individuals formally and easily" (Nonaka and Takuichi, 1995). On the other hand, tacit knowledge is based on "how?". "It is hard to articulate with a formal kind of language. It is personal knowledge embedded in individual experience and involves intangible such as personal belief, perspective, and the value system" (Nonaka and Takuichi, 1995). The tacit knowledge of urbanists can be understood in examples like, understanding the appearance of the street, the sounds of street life, how people enjoy in the street, how poverty reveals itself, how people act toward street animals etc. The Graphic 2 below sums up tacit and explicit knowledge discussions.



**Graphic 2:** Tacit and explicit knowledge discussions.

The study underlines that in our era, from industry to knowledge, from settlement to agglomeration, tacit knowledge is a more significant and efficient process of understanding for urbanists, politicians, administrators and mayors etc. "The ultimate challenge is to move beyond knowledge to wisdom, or intuition based on experience. Wisdom closely





resembles tacit knowledge" (Tobin, 1997). Tacit knowledge is knowledge that is not explicated. That is to say "Tacit knowledge, make speakers fluent, lets scientists understand each other, is the crucial part what teachers, makes bureaucratic life seem ordered, comprises the skill in most sports, and other physical activities, puts the smile on the face of Monalisa, and, we users bring this tacit knowledge to the interaction, turns computers from idiot savants into useful assistants" (Collins 2010).

At this juncture it is important to emphasize that these two different types of knowledge are not functioning separately from each other. "Each individual needs explicit knowledge to produce tacit knowledge, and each tacit knowledge can turn to explicit knowledge in time. Explicit knowledge without tacit insight quickly loses its meaning. Knowledge is created through interactions between tacit and explicit knowledge and not from either tacit or explicit knowledge alone" (Nonaka et al. 2000).

As stated above, tacit and explicit knowledge are focusing on different components of urban thinking. Explicit knowledge-based concepts, for someone who studies or works in the field of urbanism can be understood as, poverty statistics, labour class, political maps, municipality regulations, defined zones, drawing technics at specific scales etc. This kind of epistemology as we can expect, creates an analogy with industrial understanding of urbanism. For example, zoning approaches in modernist years are clear example of projects based on explicit knowledge. Or it can be thought of a city enclaved with borders that are defined by the constitution of country.

Apperance of tacit knowledge are not as easy to observe, as they are for explicit knowledge. For example, explicit knowledge can tell us about a main boulevard with an art university on it and a coffee shop next to the university. With explicit knowledge, we can know the distance between them, width of street, average income of the neighbourhood, how many students are there, what is size of the coffeeshop etc. But with tacit knowledge we can talk about the synergy of these gatherings, and what they are becoming together rather than what they are individually. We can understand the atmosphere of this coffee shop with its specific decoration, purple walls, velvet chairs, surreal paintings on the walls, two dreadlock people drinking coffee together etc. How the street appears for someone who walk along it, while students draw something on the garden wall of the university? "We need to keep in mind is how through each of these objects, processes and phenomena of the city and urban life are literally being reconstructed and remade, how urban materials technologies and different urban life forms are composed and hold together in practise" (Farias, 2011). "As urban theory, assemblage thought asks how urban 'things'—including, quite appropriately, the urban itself—are assembled, and how they might be disassembled or reassembled" (Brenner, 2011).

## **CONCLUSION**

"This is not an epistemological claim, in the sense that different actors have different views and understandings of the city as a singular object, but an ontological claim, which suggests that any city exists in multiple, overlapping ways" (Farias & Blok, 2016). Scholars focusing more on ontological, empirical, or methodological perspectives in the discussion between critical and assemblage urbanism, the study offers the epistemological focus on assemblage urbanism and its accordance with tacit ways of knowing. Assemblage thinking criticising, critical theory, and its explicit epistemologies, abstract but well-shaped, easily definable structures such as class, labour and capital accumulation. "The urban process is now conceived as a huge collection of human and nonhuman actions within a flat ontology devoid of scalar or territorial differentiations" (Brenner, Madden, Wachsmuth, 2011).

Assemblage urbanism is one of the mainstream critic to critical urban theory of recent times. The inquiry aims to ask, has assemblage urbanism become more practical than critical urbanism in many cases, due to the transformations of the knowledge era?



Assemblage thinking offers a concept, which is more useful to comprehend the tacit knowledge of urban happenings. At the conclusion part, study aims to compare, critical and assemblage approaches with five contrast keywords. For critical urbanism, they are fragmented, being (resultant), deductive, explanatory, and hierarchical. For assemblage urbanism, they are network, becoming (processual), inductive, descriptive, and heterarchical. Each of these keywords and their analogies with implied and explicit knowledge formats can continue to be discussed.

An important approach which was criticized by assemblage thinking is that critical thinking focuses on the fragmented pieces of whole. On the other hand, assemblage thinking focuses on networks of whole, and trying to comprehend interrelated happenings of components. Critical urbanism fragmentation for settlements, needs explicit knowing formats to define borders. Definable, quantifiable, formal, borders for each fragment. Pieces of population, pieces of geography, pieces of economy or any other dissectible wholes. Different than this assemblage thinking agglomerations offers us approaches inter-neighbourliness relationships. If the amount of these endless relationships is taken into account, meaningful combinations can be created between them only with tacit knowledge. "Assemblages work across multiple scales, and they can be considered as "abstract machines" expressing a broader set of functions" (Wise, 2005). "So the changing dynamics of networks, and of each specific network, explains the connection to certain places rather than the places explaining the evolution of the networks" (Castells, 1996).

Critical theory understands settlements as a result of determined happenings, of being. With assemblage thinking, agglomerations understood as a process and the ongoing process is something indefinite, as becoming. All premises that are accepted as fact can disappear or dwindle. Uncertain nature of becoming can understood with tacit knowledge. Contrast to nature of being which had already explicated. "Assemblages are constantly in the fluid status of becoming rather than being" (Dovey, 2010). "Rather than focusing on cities as resultant formations, assemblage thinking is interested in emergence and process, and in multiple temporalities and possibilities" (McFarlane, 2011).

Deductive reasoning is a logical process in which a conclusion is based on the concordance of multiple premises that are generally assumed to be true. That is why deductivism is another questionable approach of critical urbanism. First of all, these premises must be in explicit formats to get accepted as fact or truth. On the other hand, inductive reasoning aims to find patterns or trends, rather than premises. That is why inductive approaches need multi-scalar connections, which are relevant to each other and to give importance to connections and patterns rather than the pieces themselves. This approach is also fitting with the knowledge era movements of urbanism. There are endless different forms of connections between urban existences and these connections are always vague and variable, People interpret them with their tacit knowledge, and give meaning to each happening without the need for explanation.

The explanatory approach of critical urban theory is another target board for assemblage urbanists. The methodological offering of Farias (2011), "three methodological principles summarize its commitment to the empirical: 'follow the actors, forget the contexts', 'describe, don't explain' and 'do not switch conceptual repertoires when you describe'. Farias (2011) emphasizes the contrast between the interrogatives of tacit and explicit knowledge. In Farias (2011) statement, by "following actors and describing", he is seeking answers of the tacit knowledge interrogation marks "who? and how?". In contrast to this, "context and explanation" is focusing on "what? and why?". Thus, according to assemblage thinking in the knowledge era, contemporary urbanists should focus more on approaches centred around "who? and how?" rather than "why? and what?".



The final contrast discussed in the study is between the hierarchic/tree formations of critical urbanism and the hierarchic/rhizome formations of assemblage urbanism. "The hierarchical city (central place structure) is distinguishable from the meshwork-like one (network system) since the former gives rise to the rigidified pyramid-like and homogenised cultural structures while the latter advocates for interlocking heterogeneous elements" (De Landa 1997). Critical urbanism and settlements are based on a hierarchical structure. settlements are explained through their foregone positions, within this top-down structure. Also, in critical thinking each existence needs to be explained as "determinant or passive". Contrast to this, agglomerations of assemblage thinking which rejects these pre-determined levels or determinant/passive separations. Agglomerations offers a flat network ontology that is global and disconnected from geography or history.

"It is no longer a question of imposing a form upon a matter but of elaborating an increasingly rich and consistent material, the better to tap increasingly intense forces. What makes a material increasingly rich is the same as what holds heterogeneities together without their ceasing to be heterogeneous" (Deleuze and Guattari, 1980)

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### REFERENCES

- Brenner, N., Madden, D. J., Wachsmuth, D. (2011), Assemblage Urbanism and the Challenges of Critical Urban Theory, *City*, 15, 225-240.
- Castells, M. (2010), *The Rise of the Network Society*, second edition with a new preface (preface part 17-18), Blackwell Publishing.
- Cook, S.D.N. & Brown, J.S. (1999), Bridging epistemologies: Between organizational knowledge and organizational knowing, *Organization Science*, 10(4), 381-400.
- De Landa, M. (1997), *A Thousand Years of Nonlinear History*, New York: Zone Books.
- Dewsbury, J. D. (2011), The Deleuze-Guattarian Assemblage: Plastic Habits, *Area*, 43, 148-153.
- Dovey, K. (2010), *Becoming Places: Urbanism/Architecture/Identity/Power*, London/New York: Routledge.
- Gordon, R. (1994), *Internationalization, Multinationalization, Globalization: Contradictory World Economies and New Spatial Divisions of Labor*, Santa Cruz-CA: University of California Center for the Study of Global Transformations.
- Farias, I. (2011), *The politics of Urban Assemblages*, London: Routledge Publishers.
- Farias, I., Blok, A. (2016), *Introducing Urban Cosmopolitics*, Multiplicity And The Search For A Common World, in Farias, I., Blok, A., *Urban Cosmopolitics: Agencements, Assemblies, Atmospheres* (p.22) Routledge.
- Lefebvre, H. (1996), *Writings On Cities*, in Koffman, E., Lebas E., Oxford: Blackwell Publishers.
- Kemalipour, H., Peimani N. (2015), Assemblage Thinking and the City: Implications for Urban Studies, *Current Urban Studies*, 3, 402-408.
- McFarlane, C. (2011), Assemblage and Critical Urbanism, *City*, 15, 204-224.
- Polanyi, M. (1966), *The Tacit Dimension*, New York: Doubleday
- Nonaka, I., Takeuchi, H. (1995), *The Knowledge-Creating Company-How Japanese Companies Create the Dynamics of Innovation*, Newyork: Oxford University Press.
- Nonaka, I. (1994), A Dynamic Theory of Organizational Knowledge Creation, *Organization Science*, 5(1), 14-37.
- Smith, A.E. (2001), The Role of Tacit And Explicit Knowledge in the Workplace, *Journal of Knowledge Management*, 5/4, 311-321.





- The Economist. (1994), "Feeling for the Future: Survey of Television", February 12: special report.
- Tekeli, İ. (2016), *Yerleşmeler için Temsil Sorunları ve Strateji Önerileri*, Ankara: İdeal Kent Yayınları.
- Tobin, D.R. (1997), *The Knowledge-Enabled Organization*, New York: AMACOM.
- Wise, J. M. (2005), *Assemblage*, in C. J. Stivale (Ed.), *Gilles Deleuze: Key Concepts*, 77-87, Montreal/Ithaca: McGill- Queen's University Press.