Introduction to theory of culture-related spatial development

Tomasz Eugeniusz Malec

Cogent Arts & Humanities (2018), 5: 1557583
Introduction to theory of culture-related spatial development

Tomasz Eugeniusz Malec*

Abstract: The article presents a theory of cultural and noncultural factors’ influence on spatial development at its current state. The culture of every nation includes both tangible and intangible elements, developed to various stages. Just as there are nations that have created rich culture, there are also those that, in spite of rich intangible culture, did not create a distinct architectural style, mostly adapting to their needs patterns from other cultures. Adaptation of non-native models in the tangible field of spatial development is not due to a nation’s cultural poverty, but rather to its cultural characteristics and the impact of other, noncultural factors. Therefore, identification of factors influencing spatial development is a complex task of an interdisciplinary nature. These noncultural factors are of various characters and strengths; nevertheless, in many cases they remain the most important ones. As proposed in this article, the theory explains relationships between culture, noncultural factors and human needs, and allows us to understand the basic process of spatial development.

Subjects: Architecture; Culture; Cultural Theory

Keywords: architecture; intangible culture; tangible culture; cultural factors; noncultural factors

ABOUT THE AUTHOR

Tomasz Eugeniusz Malec, PhD is an architect, lecturer, and researcher in the field of spatial development, including tangible and intangible culture, human needs in architecture, interdisciplinary relationships between spatial units, and Jewish architecture and urbanism. Between 2000 and 2013, he was the author and coauthor of multiple architectural designs, mostly connected with renovating historical buildings. He authored the textbook Simple Introduction to Architecture (Gliwice, 2011 and 2018; Istanbul, 2017) for new architecture students, and the monograph Jewish Architecture and Urbanism in the Years 1495–1815: The Jewish City in Casimir, Cracow (Rome, 2015), along with over 25 articles in scientific journals. Results of his research on the role of cultural and noncultural conditions in spatial development provide insight into the basis behind the process of human-centered design. His work may be also used for future sustainable architectural and urban design, environmental design, and multidisciplinary projects involving space stations and human settlements on other planets.

PUBLIC INTEREST STATEMENT

Architecture and urbanism remain among the most fascinating outcomes of a long and complex human evolution. Therefore, spatial development is affected by a relationship between intangible and tangible elements of human-made culture. Intangible culture, including knowledge, skills, traditions, and customs—as well as religion—forms the basis for the creation of tangible culture. Outside of cultural factors, spatial development is also influenced by noncultural factors like climate, geology, natural catastrophes, epidemics, and threats from animals and humans. This article presents a theory that in a simple way explains relationships between culture, architecture, and urbanism. The introduction to the theory of cultural-based spatial development stems from cause-and-effect relationships, the theory of human needs, and an assumption that culture is the result of noncultural influence factors. The theory can be used for future research on culture, architecture, and urbanism, and can also be applied to designing a sustainable and human-friendly environment.
1. Defining tangible and intangible culture

In order to investigate intercultural conditions for the development of architecture, the key issue should be recognized as the relationship between components of culture, of which architecture is a part. Therefore, in defining concepts of tangible culture and intangible culture (UNESCO, 2003, p. 2), specification of their correlation also must be made (Crossick & Kaszynska, 2016).

Culture is a concept quite interesting to define in an objective sense. Culture undoubtedly possesses the dimension of time and repetition of elements and characteristics throughout the course of time; culture also must be defined by appropriate evaluation criteria. Due to the social nature of culture which is shared by at least two or more people (Spencer-Oatey, 2012), its definition and parameters have primarily been addressed by representatives of disciplines within the humanities and social sciences, such as philosophy, sociology, history, social and cultural anthropology, ethnology, or ethnography. For studies on complex problems of culture, scientific disciplines have also been involved, including, above all, cultural anthropology and culturology. Representatives of all the mentioned disciplines have created—and continue to make—definitions of culture that explain human perceptions and one’s place in the world depending on a point of view typical for a specific discipline (Edel, 1954).

Therefore, there is no single definition of culture (Baldwin, Faulkner, Hecht, & Lindsay, 2006) and each discipline—and, likely, each researcher within each discipline—can give the culture a meaning most appropriate for the purpose and the scope of the discipline’s work. Thus, considering culture on the basis of conditions for the development of architecture, the most important issue is to analyze distinctions and correlations between tangible and intangible elements.

Tangible culture includes all objects of a material nature—artifacts, buildings, and other structures. These objects, being the effects of human work, are made in a conscious way. Then there are products of a technical or more complex nature. Technical products recognized as a tangible group of objects include, among other things, tools, means of transport, structures, etc. Technical products may be purely utilitarian, thus totally deprived of aesthetic characteristics, or, on the contrary, aesthetics may play a significant role, though not the most important one, in comparison with other features. For example, aesthetics in the case of technical products such as cars or aircraft remains important, at least for these products’ admirers, users, observers, etc. Therefore, the difference between products of technology and art is not defined by aesthetic aspects, which may be appropriate for both of them, and even for their level of usability. The difference is determined, more accurately, by the existence of encoded information and its transmission, which is a way of communication between the creator of a work and its recipient. In this perspective, the work of art is the medium of that message(s). To be more precise, the work of art can be characterized by any level of both aesthetics and usability, but a necessary criterion, is the existence and transmission of encoded information, as mentioned above.

The readability of encoded information, in other words its proper and efficient transfer, is dependent on various factors. First of all, readability is based on knowledge of the information code that is employed. This knowledge directly concerns both its creator, as the encoder, and its recipient, as the decoder, for instance both the author of the work and its audience. The greater the author’s and the audience’s knowledge of the code, the more information can be transferred, in terms of both timeliness and efficiency (Eco, 2003). Therefore, and of outmost importance, the better the author’s and receivers’ knowledge about the culture of the work within which it is created, the easier and more comprehensive the information transfer is. It follows that encoding and decoding are associated with a particular culture. A person brought up within the European culture can more easily understand and appreciate European art than one coming from the Middle East, Eastern Asia or Africa, excluding professionals in the field. Intercultural communication entails a major risk connected with distortion, such as misunderstanding or even misrepresenting any of the conveyed information, which could become a source of conflict.
Intangible culture is a complex issue, including knowledge, skills, tradition and customs, and religion. Due to their importance and purpose for examining the relationship with tangible culture, mentioned elements of intangible culture should be at least partially reconsidered.

Knowledge may be defined as beliefs that are true and justified (Hunt, 2003) or in fact, structured reflection of the state of reality acquired by a human being, remaining a dynamic and deeply humanistic process of personal perception of the world which allows one to create new solutions and consciously lead processes. Knowledge in the context of cultural research is, above all, a collection of structured and verified information. This applies to the theoretical aspect. Because the knowledge of a single individual is limited to that of one comprehended reality, the collective knowledge of humanity requires the transmission of information between people, a process that characterizes all of human history. Such an extension of knowledge, in the field of technology and elsewhere, is performed by learning and gaining experience, and by analysis of gained or observed skills. Knowledge is associated with the possibility of making use of the mind to attain a specific purpose, such as designing or constructing a building. Essential elements of this kind of knowledge include an awareness of the aim, the possibility of its achievement, and potential costs that must be incurred during the application of plans. As knowledge increases, the prospects for successful accomplishment of the planned task become greater. It follows, in the case of designing a building, that the larger the architectural knowledge, the better the building may be designed and constructed.

For rational application of knowledge, skills in a certain field are essential. Skill is an ability to do something well, such as a talent to create something. According to the skill theory, a skill is the capacity to act in an organized way in a specific context. Knowledge, including technological knowledge, requires the possession of certain skills thanks to which individuals are able to produce, at least, artifacts at a certain level of advancement. This requirement can relate both to an individual and to a group of people with specific skills, working together in the same field. Acquisition of the skills requires adequate capacity, for example manual or intellectual potential, as well as the experience necessary to obtain the relevant level of professionalism. Due to its empirical character, significant experience in any given field can be achieved in some cases only after many years of practice. Nowadays, knowledge and experience can be shared by the Internet. People including architects, engineers, and other specialists are connecting and being exposed to diverse viewpoints.

Knowledge and skills are the intangible elements of culture, which since Stone Age allow humans to design and produce technical products, belonging to tangible culture. The level of knowledge, as well as the level of technology and skills, determine the feasibility to produce a more or less advanced artifact or a simple building. Both knowledge and skills are necessary to produce not only technical products, but also works of art. However, for works of art these elements are necessary but not sufficient; much larger competencies are required. In this case, besides technological knowledge and skills, necessary elements include familiarity with the larger context within which the works of art, including architecture, are produced, such as the culture’s traditions, customs, and religious heritage. Accordingly, only the acquisition of appropriate competence within all the elements of intangible culture will allow for the deliberate creation of works of art understood as encoded cultural information.

It should be underlined that indigenous people, including Native Americans, Aboriginal Australians or Uralic, Altaic and Yeniseian natives of Siberia as well as representatives of contemporary environmental movements, still using natural materials and traditional architectural solutions can also be considered high skilled. Lack of knowledge about modern technologies or interest in their application does not make people less skilled in the field of vernacular solutions which are more developed in terms of a nature-friendly attitude to the earth.

Tradition signifies the process of the transmission of culture across the generations (Rigsby, 2012, p. 118). Tradition passes from generation to generation through historically shaped customs.
and beliefs. In some cases, we understand tradition as beliefs interpreted as a set of behaviors and convictions uncomplicated by other social factors. Tradition does not have clearly defined time limits, and its development may be subject to external influences, as well as changes occurring within the system itself. It can be connected with the use of traditional materials, certain architectural designs, and construction techniques.

On the other hand, custom is a proceeding, a set of behaviors, a way of doing something that is typical for a particular society. Custom may have various origins, for example, folk origins or more complex urban ones such as cosmopolitanism. Again, an important role played by the historical aspect often does not allow for clear identification of the source of a custom’s origin. In character, custom is less formal than tradition, and it also may be subject to more frequent changes that occur, for instance, as a result of even short and relatively weak influences from external factors. On the opposite side we have anomie, a culture that lacks unifying customs and identity. It should be emphasized that familiarity with traditions and customs, appropriate for a certain intangible culture, is essential for understanding and applying symbols to the tangible culture.

As well as culture, the concept of religion is difficult to define precisely (Dow, 2007). However, we may use this definition which is reasonable for the research. Religion, understood as a personal set or institutionalized system of attitudes, beliefs, and practices having to do with an acknowledged ultimate reality or deity, is an important, very old, and complex element of intangible culture. As a part of religion, preserved traces of ancient beliefs and customs are often found. At the same time, in ostensibly secularized societies, such as those of most of European countries, as well as in Catholic Ireland and Poland (Casanova, 2009), many religious behaviors are more or less consciously transformed into tradition, or discrete customs. Some of these are also merged together in a syncretic way, creating a new spiritual reality emphasizing well-being of others instead of remaining focused on self-interests.

2. Relationship between tangible and intangible culture
The relationship between intangible and tangible elements of culture changes over time, moreover, remaining in an evolving system for which it is necessary to determine correlations. The study of the relationship consists of two main stages, assuming uneven feedback. On the one hand, intangible culture affects the formation of tangible culture, and on the other hand, tangible culture at a certain point of development creates, to a large extent, the conditions for development of intangible culture. In regard to uncomplicated spatial forms, intangible elements like knowledge, technology, and skills, remaining at a relatively low stage of development, influence the construction of objects at the same, adequately low aesthetic, functional, and structural level. Even great skills, if unsupported by appropriate knowledge and understanding of the technology, are inadequate for the carrying out of a satisfactory process of any building construction; at the least, they make the process inefficient, negatively affecting the final result of the work. Therefore, complex design and construction work, such as in the case of large and multifunctional buildings typical for modern cities, requires the cooperation of people with proper skills and those in possession of sufficient knowledge in the field. In the case where one of these elements remains at a lower level of development, the other cannot compensate for the deficiency, regardless of whether knowledge, technology, or skills are considered. Thus, a properly selected construction team should possess adequate capabilities in their fields, in addition to open lines of communication between the team members, enabling the efficient conduct of the construction process.

A more complicated situation arises from the case of creating architecture, which is already a part of art—in other words, tangible culture at a high level of development. Here, in addition to knowledge, technology, and skills, it is necessary to know the cultural context, such as tradition, customs, and religion, in order to allow for the transfer of these cultural values. It must be stressed, however, that without proper knowledge, technology, and skills, it is not possible to construct a building, which is a sort of “book,” in which encoded cultural information may be included.
The traditions and customs of daily life, including such things as holidays and celebrations, both condition and determine, to a large extent, the organization of space. This concerns both urban space (public squares; urban and rural recreational areas; space devoted to commercial, service, administrative, judicial, and representative functions; spaces around religious and artistic venues, etc.) and individual buildings themselves. Depending on the type of intangible culture, public space is usually organized in a manner that ensures the cultivation of tradition and customs specific for a certain community. Spatial location of the relevant open areas and buildings is based on the specific function that they perform. This function can be varied according to the needs of users. For example, on certain days a town square can be used for public entertainment, and on others for commercial and service functions.

The spatial characteristics of buildings and their close surroundings also greatly depend on cultural aspects. In some cultures, developing in very warm African climate conditions for example, space around houses plays a marginal role in terms of privacy, and life is mostly focused on the public space. In other cultures, like traditional Arabic culture on the contrary, there is a clear boundary between the spaces of private and public life. Here, private space is clearly separated from public space, and family life takes place in partial hiding from other people, recognized as strangers (Gauvain & Altman, 1982).

Religion, including Judaism, Christianity, Islam, Buddhism, and others, has both influenced and continues to influence architecture—not only that of buildings and structures of a religious nature, but also that of many secular buildings. It should be emphasized that a significant part of the art within societies where the largest monotheistic religions are predominant is characterized by the religion’s exclusive or prominent features; that applies also within the society’s architecture. It follows that without an understanding of the religion professed by a community, it is hard to understand the art created by its representatives. This is due to the fact that various religions do not always expect, even from religious buildings, the same aesthetic or functional values as from other artifacts. For example, in the medieval culture of Judaism, religion used to play a crucial role. It followed the need for national identity. On the other hand, many of the preserved ancient artifacts made within Jewish culture bear explicitly secular characteristics, just as in other ancient cultures (Jenkins, 2017). What makes consideration on Jewish tangible culture more complex, is that ancient Jewish architecture, including sacral buildings, seems to be of other origins (e.g. Persian, Greek or Roman). This architecture not only remains under the influence of other cultures, but at least partially belongs to the art of those cultures.

Not only does intangible culture influence the formation of tangible culture. At the same time, the impact of tangible culture is very important to the creation of intangible culture. Without the existence of tangible culture at the appropriate level of development, it is not possible to continue the development of intangible culture; for example, an adequate level of financial well-being is necessary for education and living at a level that not only enables the acquisition of cultural understanding and competence, but also allows for its constant consumption and active participation in cultural development. Low-level standards for architectural solutions—whether aesthetic, functional, or structural—cannot provide a basis for the development of intangible culture. Similarly, poor aesthetic and technical conditions within public spaces may inhibit the growth of any intangible culture in the area.

It should be noted, however, that this suppressed development of intangible culture does not affect all of its components equally. For example, it is possible to sustain, for some time, tradition or customs in conditions of a reduced level of tangible culture. In the long term, the impact of low-level tangible culture on the development of intangible culture is negative. It leads to excessive growth of these elements of intangible culture, which do not require a corresponding spatial context; this determines, indirectly, a further backwardness in cultural development as a whole (Figure 1).
3. Human beings as a medium of culture

Human beings, as individuals and as members of any society, are the mediums through which intangible culture operates. At the same time, humans are responsible for the creation of tangible culture. Individual knowledge of culture(s) as well as the skills necessary for its active use, establish the personal level of cultural development of human beings. The higher the level of cultural development, the greater the value of individuals to the culture of community, or social group, to which he or she belongs. It should be noted that for the sake of the cultural development of any kind of society, culturally developed individuals can be mobilized for action aimed at general social cultural development. The time at which individuals can begin to influence their tangible environment depends on two types of factors: the will of the individuals themselves, which leads to action consistent with their nature, and external factors of a tangible or intangible character. Mobilization is based primarily on the creation of conditions such that individuals can continuously develop but also contribute to the largest extent possible to the cultural development of the rest of society.

Neglecting this action leads, inevitably, to regressed cultural development, or even the collapse, of the society. This is one of the main reasons for which soon all the countries with a very low level of personal freedom will meet serious cultural, social, and economic troubles. People in Egypt, Afghanistan, and Sudan have already suffered from the lowest levels of personal freedom globally.\(^9\)

Human beings cannot exist individually throughout their lives (Anayet Hossain & Ali, 2014); they always exist within a social background, and they belong, more or less willingly, to some social group. Even if an individual does not feel this affiliation, he or she is still determined by the social group of origin—the one that formed his/her original values. It follows that the elements of intangible culture are appropriate for both individuals and social groups to specific degrees, though not necessarily the same ones. This property depends on the level of their assimilation, knowledge, and acceptance, and thus the hierarchy of values of a certain society. The ideal situation, in which the best conditions for creation of tangible culture corresponding to the level of a certain social-group intangible culture development may appear, is a balance between all the elements within intangible culture. Development of tangible culture, in this case, can be carried out in a manner that is equal and adequate to the possibilities, designated by the level of intangible culture. Likewise, critical approaches to cultural development in their social aspects are inevitably tainted; any comparisons made between various societies involve subconscious assessments based on the value system of the criticizing human.

Development of intangible culture, directly dependent on humans, takes place neither in a linear manner nor to the same degree in the fields of knowledge and technology, skills, traditions and customs, and religion. For example, it is possible to observe Western European societies in which technology
remains recognized as a crucial element of development of civilization contrary to Middle Eastern cultures where religion, tradition and customs remain of the utmost importance. Most often, in the case of research on the culture of a society, there is a situation in which some elements of intangible culture are more developed, and others less so. Intangible culture directly influences the creation of tangible culture. The degree of this impact depends on an individual’s ability and willingness to transfer intangible culture values. Depending on the individual’s will, knowledge, and mental and physical capacity, humans can create tangible culture, never being able to produce it at a higher level than the actual level of his or her intangible culture. However, in order to achieve satisfactory results in the area of tangible culture, human beings ultimately reveal the will of such a procedure, through which an individual expresses one’s characteristic stage of intangible culture. This is due to the fact that individuals usually seek to provide themselves, within their immediate environment, such a standard of life that corresponds to their expectations, in this case resulting from the general level of their cultural development.

Nowadays, in the times of development of media and social networks called the Information Age, the standard of life becomes more and more unified all over the world. Communication channels and global mobility allow to transfer and spread intangible culture in a fast way, what hugely affects human mindset. At the same time, thanks to the unification of living preferences, it becomes easy to satisfy the needs of people from, theoretically, very different cultures. Humans are still the main subjects which can create information and send it. Most probably, this will remain so; artificial intelligence (AI) will be never alive in spite of being “intelligent.”

Eventually, as a medium of intangible culture, humans can create tangible culture at a commensurate level of spatial quality with their capabilities (Figure 2). It should be noted that in the ideal situation the design and construction processes are not disturbed by any other influences, including strong emotions and other external factors, guaranteeing that the transfer channel is clear. In other cases, individuals may not be able to create tangible culture at a proper level of spatial quality.

4. Noncultural factors conditioning tangible culture development
A number of noncultural factors of different types, which can be defined as external in terms of culture, can affect the development of architecture, recognized, together with art, as elements of tangible culture. It should be noted that there is a direct cause-and-effect relationship between cultural and noncultural conditions. Creation within human culture is developed on the basis of noncultural conditions and influenced as well by human needs. Thus, the culture of each society or nation has its remote sources in noncultural conditions.

External factors influence spatial development to various degrees, primarily depending on the level of progress for both its tangible and intangible culture. Identification of noncultural factors that influence the development of architecture can be made on the basis of Abraham Maslow’s pyramid of needs (Maslow, 1943). Because spatial development is performed by humans for humans, in the research it is assumed that human needs directly follow noncultural factors.
Therefore, development of architecture is influenced by basic (fundamental) and high-level needs in a direct way, and self-transcendence in an indirect way, moreover, remaining in a relationship with fundamental and high-level needs (Figure 3). According to Maslow’s theory, meeting high-level needs is possible only after satisfaction of the basic ones. However, nonadherence to the principle may exist because it may happen that high-level needs are satisfied in the absence of needs at the fundamental level. In the spatial field, the essential basic needs include the need for housing and other aspects related to daily life (Namazian & Mehdipor, 2013), and the need for security.

High-level needs, directly affecting the development of architecture, are the needs to feel respected, comfortable, and within an aesthetically developed environment. On the other hand, self-transcendence is connected with all other needs of spiritual character, which affects spatial development in an indirect way.

It should be noted that the degree of satisfaction with living needs is directly correlated to the period of stay of individuals or groups of people in a certain area. When the period is longer, people living in the area have more knowledge about it, and therefore they are able to better develop their surroundings. In the case of frequent changes of place of residence, the relationship of people with a given area is weaker, and thus the degree of recognition and interference in the environment remains at a lower level. This then is reflected in the level of architecture. Especially, this happens in the times of massive migrations from, above all, Syria, Afghanistan, and South Sudan when groups of immigrants arriving in a new country meet adaptation problems in a new social and spatial reality.

Living needs, probably the most easily identifiable of needs that influence spatial development, clearly follow geographical conditions, including landforms, access to fresh water and climate. Probably, climate had the greatest influence on the development of human-shaped space in
a period when security problems were also preeminent; thus, climate conditions relate also to the need for safety. In the period when tangible culture did not allow for adequate protection of humans against threats from the climate, people initially chose for shelter such creations of nature that could provide as much security as possible, such as caves. Following this, in places of refuge, humans began to adapt these caves to their needs. In the Paleolithic, they created the first artifacts of artistic and cultural value that have survived until today: cave paintings. In a similar way, humans also lived in wide-open areas that included no natural shelters; such conditions forced the organization of artificial shelters—buildings—that allowed them to survive safely. One of the first known examples is the Neolithic settlement in Anatolian Çatalhöyük, established in the eighth millennium BC, with entrances situated on rooftops, accessible by ladders for defense purposes. Significant differences in tangible cultures can also be seen in relation to buildings and structures that are characteristic of different climatic zones, for example, traditional houses on stilts in Ganvie village in Benin, when located in flood plains, or the floating basket houses of Madan tribes on Iraq’s Tigris–Euphrates marshlands. Moreover, recent architectural solutions also remain closely connected with efficient energy use which influences architecture and urbanism. It follows that the need to protect against climate had, and still has, great importance for the development of tangible culture. At the same time, this is the reason for a large diversity of traditions and customs emerging within individual climate zones, thus indirectly further affecting tangible culture. Thus, climate throughout the whole development of humanity has affected not only the development of architecture, but also has substantially accelerated it in various ways.

An important factor influencing tangible culture has been the need for safety from the threat of animals or people belonging to other groups, nations, societies, social classes, or alliances. The threat of animals, especially visible among prehistoric cultures, conditioned the development of simple forms of defense, for example walls, fences, etc., depending on the specific animal behaviors. In the case of danger from people, the level of difficulty in satisfying the need for safety was much higher. It required continuous development, adequate to the capabilities of the enemy. This led to the creation of advanced forms of structures, from earthen barriers and ramparts through complex Renaissance fortification systems to the elaborate defensive trench systems of World War I in Western Europe. Due to subsequent changes in warfare and the development of military technology, further advances in defensive systems virtually stopped.

Taking care of our climate is also connected with the need for safety. The more unnecessary buildings we make the more possible is that our civilization will end soon because of fires, air and water pollution, and lack of prolife (humans, animals) attitude to spatial conditions. This applies to oversized office building erected for corporations and administration, many of so-called “intelligent” buildings, new huge structures, and many others. It seems that in these cases the needs for respect and comfort outbalanced the need for safety. Thus, it is realizable to solve the mentioned problem by satisfaction the needs for respect and comfort with other means.

Development of architecture as element of tangible culture has also been influenced by factors associated with high-level needs, such as the need for respect. This applies to both individuals and social groups. People located within the upper levels of the social hierarchy usually wish to emphasize their status. Therefore, they often want to live in conditions that clearly stand out from their social surroundings. It is very visible in buildings which belong to nouveau riche. Highlighting their material status may take the form of emphasizing the size and extravagance of their residence, exceeding adjacent buildings in size as well as in specific architectural forms or details.

This applies, too, to the behavior of social groups, for example, residence within gated communities, inhabited by a social group with high material status. The architecture of administrative buildings and churches is shaped in a similar way. Administrative buildings show seriousness and the importance of the officers or authorities; thus they exhibit defined aesthetics that reinforce their legitimacy. Religious buildings, in turn, show the importance of religion, and, at the same time, the
institutions responsible for the buildings’ creation. It may be done through a focus of designers on their formidable height (i.e. medieval cathedrals), glamour, extraordinary simplicity, etc.

A specific case of the need for respect is connected with spatial development in the context of overbearing political power. It happens when a dictator makes the most important decisions concerning urban space without taking into consideration the opinions and needs of the society, which is visible in the recent rapid development of Istanbul in Turkey. It should be noted that the role of “dictators” may also be played by town planners and architects such as Le Corbusier and his model of Ville radieuse from 1930 as an ideal city or Brasilia as an ideal capital city, designed by Oscar Niemeyer and Lucio Costa and built on an empty plateau in Brazil.

The need for comfort is a vital one, remaining an important factor affecting especially modern architecture in many spatial aspects. Ensuring an adequate level of comfort, associated with functionality and degree of spatial privacy, influences the level of inhabitants' satisfaction to a large extent. The need for comfort is connected both with urban space and residential space for houses or apartments. What is important, the need for comfort is culturally and personally diversified.

The high-level need for aesthetics, in other words an aesthetically developed environment, is linked to the need for comfort and the need for self-actualization. This need may be satisfied, first of all, by architecture itself, as well as by art. The better the organization and arrangement of space, and the higher the aesthetic level, the better this need can be satisfied. In this case, important personal preferences are involved, as well as the ability to perceive aesthetic characteristics by potential viewers who are emotionally engaged with the built environment. Therefore, factors affecting architecture are also factors that affect the satisfaction of aesthetic experiences. What should be mentioned is that the need for self-transcendence, which follows human will to find a reasonable explanation of events that remain out of control, is correlated with all other needs in various but indirect ways. Most important, it shapes the human attitude to the world with its all intangible and tangible expressions.

The factors described above are not the only ones that affect or may affect the development of tangible culture. There are many more factors, typical for different civilizations, geographic zones, countries, societies, etc. (Malec, 2015)\(^1\); moreover, these factors change over time, which has various impacts on spatial development. They are, however, those which over centuries of human history have influenced, to a large degree, the development of culture, in particular its spatial part, that is, architecture.

5. Conclusions
In summary, spatial development is affected by a recognizable relationship between intangible and tangible elements of culture. Elements of intangible culture—knowledge regarding technology, skills, tradition and customs, as well as religion—are the basis for the creation of tangible culture, including architecture. Knowledge of proper technology and appropriate skills are

---

\(^1\) Malec, Cogent Arts & Humanities (2018), 5: 1557583

https://doi.org/10.1080/23311983.2018.1557583
necessary to design and create technical products, whereas all the elements of intangible culture together affect the ability to create art.

Architecture, being an element of art in its physical expression, therefore, tangible culture, is a result of knowledge of all elements of intangible culture by human beings. Humans, in this sense, being a medium of intangible culture that remains under the influence of noncultural factors, are able to create architecture at a level that corresponds to their understanding of intangible culture.

Outside of cultural factors, the development of architecture and urbanism is also influenced by external, noncultural factors (Figure 4). According to Maslow’s pyramid of needs, these factors follow the necessity of satisfying basic and high-level human needs.

Factors that address basic needs, such as the need for shelter, daily living, and safety, are primarily connected with geography and threats from other humans. High-level needs that affect spatial development are, in turn, the needs for respect, comfort, aesthetic impressions, and the complex need for self-transcendence.

The introduction to the theory of cultural-based spatial development presented above is based on cause-and-effect relationships which are, in fact, among the most significant issues concerning studies of architecture as a part of tangible culture in a scientific context. The theory can be used for future research on culture, architecture, and urbanism, as well as applied to designing a sustainable and human-friendly environment.

Funding
The author received no direct funding for this research.

Author details
Tomasz Eugeniusz Malec
E-mail: tomasz.malec1@gmail.com
ORCID ID: http://orcid.org/0000-0002-8682-2720
Faculty of Engineering and Natural Sciences, International University of Sarajevo, Sarajevo, Bosnia and Herzegovina.

Cover Image
Source: Author.

Citation information
Cite this article as: Introduction to theory of culture-related spatial development, Tomasz Eugeniusz Malec, Cogent Arts & Humanities (2018), 5: 1557583.

Notes
1. See also Tatarkiewicz (1986, p. 148) who suggests that “everyone who writes about culture and civilization is free: they can be interpreted and differentiated as one wants, just providing differences between them.”
2. In order to differentiate between buildings and other structures, I have used the following distinction: Buildings possess at least walls and a roof; other structures do not necessarily possess these features (e.g., bridges, masts, amphitheaters, etc.).
3. English Oxford Living Dictionaries, s.v. “skill,” https://en.oxforddictionaries.com/definition/tradition (accessed 7 January 2017).
4. “Skill theory”, in The APA Dictionary of Psychology, edited by Gary R. Vandenbos, (Washington, DC: American Psychological Association, 2003), 857.
5. However, architecture is not a part of art in case of copying. See for example, Elie Szarinen, E. The Search for Form in Art and Architecture (New York: Courier Corporation, 1948), p. 54.

References
Anayet Hossain, F. M., & Ali, K. (2014). Relation between individual and society. Open Journal of Social Sciences, 02(08), 130–137. doi:10.4236/jss.2014.28219
Baldwin, J. R., Faulkner, S. L., Hecht, M. L., & Lindsay, S. L. (eds). (2006). Redefining culture: Perspectives across the disciplines. Mahwah, NJ: Lawrence Erlbaum Associates.
Casanova, J. (1999). The religious situation in Europe. In H. Joas & K. Wiegandt (Eds), Secularization and the world religions (pp. 206–227). Liverpool: Liverpool University Press.
Crossick, G., & Kaszynska, P. (2016). Understanding the value of arts&culture. The AHRC cultural value project. Swindon: Arts & Humanities Research Council. Retrieved from http://www.ahrc.ac.uk/documents/publications/cultural-value-project-final-report/
Dow, J. W. (2007, February). A scientific definition of religion. Anthropological Perspectives on Religion. 1–15. Retrieved from http://www.anpere.net/2007/2.pdf

Eco, U. (2003). Towards a semiotic inquiry into the television message. In T. Miller (Ed.), Television: Critical concepts in media and cultural studies (Vol. II, pp. 3–19). London: Taylor&Francis.

Edel, A. (1954). Review of culture; A critical review of concepts and definitions, by Alfred L. Kroeber, and Clyde Kluckhohn. The Journal of Philosophy, 51(19), 559–563. Retrieved from http://www.jstor.org/stable/2021459

Gauvain, M., & Altman, I. (1982). A cross-cultural analysis of homes. Architecture and Behaviour, 2(1), 27–46. Retrieved from https://lasur.epfl.ch/files/content/sites/lasur2/files/Images/stories/editions_du_lasur_pdf/AC/AC%20Vol%202%No.1/GAUVAINandALTMAN.pdf

Hunt, D. P. (2003). The concept of knowledge and how to measure it. Journal for Intellectual Capital, 4(1), 100–113. Retrieved from http://www.emeraldinsight.com/toc/jic/4/1

Jenkins, F. (2017, October 29). Some biblically related artefacts in the British Museum. Retrieved from http://biblicalstudies.info/bibartbm.pdf

Legatum Institute. (2018, November 28). The legatum prosperity index 2018. Retrieved from https://www.prosperity.com/rankings

Malec, T. E. (2015). Jewish architecture and Urbanism in the years 1495–1815. The Jewish City in Casimir, Cracow. Rome: Aracne editrice.

Maslow, A. H. (1943, July). A theory of human motivation. Psychological Review, 50(4). Retrieved from http://psycnet.apa.org/journals/rev/50/4/370

Maslow, A. H. (1970). Motivation and personality. New York, NY: Harper & Row.

Namazian, A., & Mehdipour, A. (2013). Psychological demands of the built environment, privacy, personal space and territory in architecture. International Journal of Psychology and Behavioral Sciences, 3(4), 109–113. doi:10.5923/j.ijpbs.20130304.04

Rigsby, B. (2006). Custom and tradition: Innovation and invention. Macquarie Law Journal, 6, 113–138. Retrieved from file:///C:/Users/tmalec/Downloads/2006_vol6_8pdf.pdf

Saarinen, E. (1948). The search for form in art and architecture. New York, NY: Courier Corporation.

Spencer-Oatey, H. (2012). What is culture? A compilation of quotations. GlobalPAD Open House. 1–22. Retrieved from http://www.warwick.ac.uk/globalpadintercultural

Tatarkiewicz, W. (1986). Cywilizacja i kultura [Civilization and culture]. In Wladyslaw Tatarkiewicz (Ed.), O filozofii i sztuce [About philosophy and art]. Warsaw: PWN.

UNESCO. (2003). Text of the convention for the safeguarding of the intangible cultural heritage. Retrieved from http://unesdoc.unesco.org/images//0013/001325/132540e.pdf