

Nelson Goodman's philosophy: an analytical account of architecture

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ABSTRACT:

Architects resort to philosophy to get inspiration for their projects and to interpret their work. While mainly philosophical currents belonging to the continental tradition have made important contributions to architectural theory, the Anglo-American or analytical tradition is generally not considered. This paper presents the thought of American philosopher Nelson Goodman (1906-1998) as a fruitful alternative to continental accounts of architecture. Goodman's approach to architecture provides new insights to understanding and interpreting the built environment, and his philosophy serves as an example of analytical thinking on architecture that complements the variety of reasoning already at hand for architects.

Following Goodman, architecture plays a key role in the creation of meaning and reality. First, architecture creates meaning and contributes to the advancement of our understanding in a unique manner: buildings are symbols, they mean in various ways, and these meanings are irreducible to other kinds of knowledge. Second, architecture contributes to the making of the world in a radical sense: not only in that buildings are physical objects and, as such, constitutive elements of our world, but in that their various meanings have an ontological counterpart. That is to say, it is not the case that there is one world and many interpretations of it, but rather that these various interpretations and meanings actually constitute different worlds. Given this interrelation with meaning and reality and architecture's central role in both, the task of the architect acquires a wider significance, for designing entails the very creation of meaning as well as of our world.

This paper aims to show how both Goodman's thought and the concepts and methods characteristic of analytical philosophy are helpful conceptual tools to examine buildings. Simultaneously, it shows how analytical philosophy can enhance the architect's critical skills when designing and thinking about architecture.

CONFERENCE THEME: On Approaches. The role and use of philosophy in architectural research.

KEYWORDS: analytical philosophy, Nelson Goodman, symbol, worldmaking, understanding.

INTRODUCTION

It is not uncommon that architects and architecture students resort to philosophical theories, notions, and ideas to both get inspiration for their projects as well as to look for explanations to their work. So, phenomenology, structuralism, post-structuralism, and critical theory have made important contributions to architectural thought and have served as basis for contemporary architectural theory and practice. These philosophical currents, however, belong mainly to the continental tradition, while the Anglo-American or analytical tradition is generally not considered. This paper presents the thought of American philosopher Nelson Goodman as a fruitful alternative to continental accounts of architecture. On the one hand, Goodman's approach to architecture provides new insights to understanding and interpreting the built environment. On the other, Goodman's philosophy serves as an example of analytical thinking on architecture that complements the variety of reasoning already at hand for architects.

Nelson Goodman (1906-1998) was one of the foremost analytical thinkers of the twentieth century, with groundbreaking contributions in the fields of logic, philosophy of science, epistemology, and aesthetics. Goodman specifically discussed architecture in his main work on aesthetics, *The Languages of Art. An Approach to a Theory of Symbols* (1968), and in two essays entitled "How Buildings Mean" (1985), and "On Capturing Cities" (1991). Moreover, his main philosophical notions and theses apply as well to architecture and, as this paper argues, may provide novel insights to both the making of and the thinking about architecture.

Following Goodman, architecture plays a key role both in the creation of meaning and reality. On the one hand, architecture creates meaning and contributes to the advancement of our understanding in a unique manner: buildings are symbols, they mean in various ways, and these meanings are irreducible to other kinds of knowledge. What we learn of space, the building's features, and ourselves when experiencing architecture, for example, cannot be completely translated into words. Buildings, thus, enhance our understanding in an irreplaceable way. On the other hand, architecture contributes to the making of the world in a radical sense: not only in that buildings are physical objects and, as such, constitutive elements of our world, but in that their various meanings have an ontological counterpart. That is to say, it is not the case that there is one world and many interpretations of it, but rather that these various interpretations and meanings actually constitute different worlds. Given this interrelation with meaning and reality and architecture's central role in both, the task of the architect acquires a wider significance, for designing entails the very creation of meaning as well as of our world.

The purpose of this paper is thus to show how both Goodman's thought and, in general, the methods, the concepts, and the ways of arguing characteristic of analytical philosophy are helpful conceptual tools to examine buildings in a novel and fruitful way. At the same time, I hope to show how analytical philosophy can enhance the architect's critical skills when designing and thinking about architecture. The first part of this paper provides the philosophical context to understand what it means that buildings are symbols and what the consequences of such statement are. The second part examines the several ways by which buildings symbolize and convey meaning. The third part examines the ontological counterpart of considering that buildings function symbolically, i.e., it shows how buildings are, as Goodman says, ways of worldmaking.

I. A CHANGE OF QUESTION: WHEN IS ARCHITECTURE?

Buildings have a practical function of sheltering human activities. In addition to this, they convey meaning: palaces, parliaments, and city halls refer to certain political systems; temples, churches, synagogues, and mosques stand for different religions; museums, hospitals, jails, schools, and universities refer to cultural and social structures; factories, warehouses, markets, banks, and malls point to certain economic systems; apartments, housing tracts, townhouses, mansions, huts, and tents reflect various ways of life. Apart from these social, cultural, and historical meanings, we appreciate the artistic features of buildings - such as the qualities of the materials, their forms, or their creation of spaces, we judge and evaluate them, and we also learn about ourselves when interacting with them. How is it possible that one and the same building can be considered simply as a building that we use in everyday life, as a construction with social or historical meaning, and also as a work of architecture or art that we experience aesthetically? How can a building carry out all these functions without changing?

The answer is that buildings can have various meanings and can function in different ways because they are objects that can also be symbols. In this way it can be explained how one and the same building can sometimes be considered simply according to its functional use (and then it is not a symbol at all), sometimes as conveying any kind of meaning or sometimes as suitable of being aesthetically appreciated. Saltbox houses, the earliest New England homes, have a primary function of providing shelter, and now they are also considered artistic examples of American colonial architecture. So, when a construction is considered as art, it is architecture; otherwise, it is simply a building. This means that the status of art or architecture does not need to be permanent and, therefore, it makes no sense to search for an essence that would distinguish simple buildings from architecture, for one and the same building can function as both. When a church is used as a place of prayer and worship, it is just a building; when its construction features are appreciated, it is architecture. Thus, it is inappropriate to ask "*What* is architecture?" Rather, according to Goodman, one should ask "*When* is architecture?" In his words:

Part of the trouble lies in asking the wrong question – in failing to recognize that a thing may function as a work of art at some time and not at others. In crucial cases, the real question is not "What objects are (permanently) works of art?" but "When is an object a work of art?" – or more briefly, as in my title, "When is art?" (Goodman 1978, 66-67)

This change in focus entails an understanding not of what architecture is, but rather of when a work of architecture functions as such. Goodman's answer is a pragmatic one: architecture is when a building functions as a symbol of a certain type. This approach that derives from the shifting from "what" to "when" is not simply a word game: it enables a completely different approach to architecture that abandons an essentialist take of architecture in favor of a much broader and elastic characterization, which for Goodman is a constructivist and functional one. By changing the approach, the essentialist, intentionalist, and institutionalist accounts on architecture are rejected and the difficulties they pose are solved.¹

According to essentialism, there are some necessary properties that characterize what architecture is. To be considered architecture, an object has to comply with these essential features. However, it is very difficult to determine what these properties are, as can be seen when trying to establish a definition that would include all actual and future architectural works. Consider the definition of architecture in the *Oxford English Dictionary* (OED) as "[t]he art or science of building or constructing edifices of any kind for human use" (Anon. 2007). Contrasting this specific definition with our current use of the term "architecture," one realizes that this definition is either too limiting or too broad: it excludes, for instance, landscape architecture, and also all buildings not intended "for human use," such as poultry yards, pigsties, silos, and warehouses. The OED definition is too broad because it overlooks the distinction usually made between some constructions that are architecture and others that are simply buildings: we consider that the Taj Mahal is a work of architecture but the apartment building where I live is not. We could try to amend the initial definition by extending and refining it, as is actually done in the OED: "But architecture is sometimes regarded solely as a fine art" (Anon. 2007). In that way, the difference between simple buildings and works of architecture is acknowledged, but the problem of finding an exact definition is not solved. Rather, it is deferred towards finding an exact definition of the other terms of the definition, such as "fine art." One could continue rewriting this definition until it could seem that it covers all the cases. However hard we would try, though, there could always be a case that obliges us to modify the definition and the undertaking of giving a definition becomes a Sisyphean task. Moreover, essentialism cannot explain how it is possible that buildings sometimes function as architecture and sometimes not: New England salt-box houses are simply shelters and also examples of Colonial architecture and it is not the case that saltbox houses become works of architecture and thus gain an essential feature they did not have before, which causes a change in their meaning, or that we recognize that they had always been architectural works and we had been misconceiving them. Essentialism cannot account, either, for cases that are temporarily, and not permanently, works of architecture.

According to intentionalism, something is architecture if its creator intended to create an architectural work. There are various reasons to reject intentionalism. First, it is not always possible to know the artist's intentions, as happens with anonymous works, such as the Romanesque Churches at the Vall de Boi in the Pyrenees. Second, an architectural work may be the result of unintended actions, which have nothing to do with the creator's intentions, such as the Crystal Palace, where Paxton used iron trusses in order to sustain the glass roof but without the intention of producing and artistic outcome. And third, not all the works are successful, i.e., what the artist intended is not always accomplished by the work and thus the architect's intentions are irrelevant when determining whether a building is architecture because the intentions do not come through.

Finally, the institutional account states that the work's institutional context (the "artworld") establishes what counts as an architectural work. Institutionalization, however, is neither necessary – a work can be architecture independently from its context, nor sufficient – an object can be conferred the status of architectural work and still not be one. The aesthetic functioning of the house on top of the street is unnoticed by the artworld, and yet the house still functions as an artistic symbol and thus is architecture – institutional theories are not necessary. The umpteenth bridge by Calatrava, identical to several of his previous bridges, even though conferred the status of a work of art or architecture by the artworld, does not function as such – institutional theories are not sufficient.

Goodman's account overcomes all these difficulties by stating that a building is architecture when it functions as a symbol with certain characteristics: when it functions as an aesthetic symbol. Thus, the answer to "when is architecture?" is:

[...] just as an object may be a symbol [...] at certain times and under certain circumstances and not at others, so an object may be a work of art at some times and not at others. Indeed, just by virtue of functioning as a symbol in a certain way does an object become, while so functioning, a work of art. (Goodman 1978, 67)

This is clearly a pluralist and functionalist approach, for the same object can function in many ways depending on the symbolic context; it entails also that everything can be aesthetically perceived, that any building can potentially be architecture. Through interpretation we distinguish what functions as architecture, and we also determine what and how a building means. It is not the case that there is only one right interpretation, but rather a symbol is open to several equally right interpretations (Goodman, Elgin 1988). Utzon's Sydney Opera House, for example, can be interpreted as symbolizing a group of sails, a cluster of shells, old men's messy hair or even the hair of the manga series *Dragon Ball*, Son Goku, when adopting the "super sayan form." But it would be very difficult to argue that the Sydney Opera House refers to a tomato. There are criteria to distinguish between right and wrong interpretations, such as coherency and consistency with the symbol's features and also with its context. These criteria are crucial inasmuch as the several construals are also constructions of the world (as is discussed in the last section) (Goodman 1978). Within this context, the task of the architect is more one of creating meanings and enabling interpretations rather than simply one of constructing functional spaces. The architect is then a symbol maker.

So, if the role of the architect is to create meanings, then it is clear why the main role of architectural works is cognitive and why aesthetics is a branch of epistemology (Goodman 1978). Architecture contributes to the advancement of understanding in a unique way, which is as valid as the one conveyed by any other discipline, such as sciences or the humanities. Architecture, for example, can spatially convey the notion of proportion, whereas music does it in an acoustic way and mathematics in an arithmetical one. These three ways of conveying meaning are irreducible to one another; something would be lost in translation. Understanding, then, is not limited to propositional knowledge, but is a much broader notion that includes all sorts of beliefs, opinions, emotions, and experiences. Within this context, buildings convey meaning by symbolizing.

2. BUILDINGS AS SYMBOLS

Buildings are symbols when they refer to or stand for something else (Goodman 1984).² As the previous examples show, buildings do not limit themselves to refer to a single meaning but can stand for many things. As symbols, they require interpretation to determine what they refer to at a certain time and context. This is so because buildings and, in general, all symbols, do not function in an isolated way, but within symbol systems with specific features.³ To understand what they mean or symbolize, one needs to interpret them in relation to the system to which they belong. Take, for example, a traffic light, which is a symbol within a basic symbol system: Green symbolizes "go" and red "stop," as established by the system's features. But green can also refer to "envy" and red to "embarrassment" within a system that associates colors with moods. We need to know the system to interpret these colors properly. The same happens with buildings: They may belong to one or more symbol systems, which are generally more complex than the color systems just discussed. So, Frank Gehry's Stata Center at the Massachusetts Institute of Technology symbolizes an academic building within a system that classifies buildings according to the activities they shelter; it symbolizes a green building within a system that categorizes environmentally friendly buildings; and within artistic symbol systems it refers to certain forms, materials, an architectural style, and many more abstract features, such as creativity and exploding ideas.

Within a symbol system, buildings (and symbols in general) refer in various ways or modes. With relatively few modes, all possible meanings can be conveyed. Denotation and exemplification are the main ones. The other modes - expression and indirect modes of reference - are combinations of these two. Denotation is the relation between a label and what it labels, and these labels do not need to be verbal: the word "house," its utterance and a picture of a house denote a house (Goodman 1968, Goodman 1984). There are relatively few cases of buildings that denote, the most common being buildings representing other buildings, i.e., copies and reproductions (such as the Parthenon in Nashville and the various Eiffel Towers spread around the world), and buildings representing certain

objects (for example, the Sydney Opera House depicting a group of sails, and buildings depicting the food sold within them, such as donuts or apples).

On the other hand, exemplification runs in the opposite direction of denotation, from what is denoted to that which denotes. An exemplifying symbol requires possession plus reference (Goodman 1968) and referring to only some of the properties that it actually possesses, but not to all of them - exemplification is selective (Goodman 1978). A model house usually exemplifies the number of bedrooms and bathrooms, the house's distribution, the size, and the construction materials, but not its placement, accessories, or wall color. Buildings may exemplify any of the properties they possess, depending on the symbol system to which belong. They may exemplify form (roofs exemplify triangles, pyramids and obelisks their respective forms, and high-rise buildings verticality), structure (like the John Hancock Tower in Chicago or the Eiffel Tower), construction elements (like the Centre Pompidou in Paris, which exemplifies the mechanical systems), materials (wood, iron, glass, steel, brick, stone, and their corresponding properties are exemplified by many buildings) and function (buildings representing ice cream, hot dogs, burgers, donuts, clam boxes, or milk bottles usually exemplify their function of selling these foods; here, exemplification is achieved through a prior denotation of these objects).

One architectural way of making these features stand out and facilitate exemplification is articulation, which can be defined as some sort of joint that structures design elements in a construction (Ching 1995). The purpose of articulation is to bring together the several parts of a building into a whole and, at the same time, make each of these parts stand out. In the Hancock Tower, for example, the structure is articulated by being placed in the building's exterior and covered with a cladding so that it stands out in contrast with the glass walls. This articulation further enables exemplification of the structure. However, although articulation may contribute to exemplification, it is neither necessary nor sufficient for symbolizing. Many exemplified features (such as being an academic building or being an original or groundbreaking one) do not require articulation, and, on the other hand, the mere presence of articulation does not assure exemplification (the emergency exits of a building are clearly articulated, but not commonly referred to by the building). It is important to note, though, that through articulation the architect can prompt a certain kind of symbolization and thus create meaning.

Denotation and exemplification can be both literal and metaphorical. In a metaphorical manner, Goodman describes metaphor as "a matter of teaching an old word new tricks" (Goodman 1968, 69) and includes many varieties, such as hyperbole, understatement, overstatement, or irony. Crucial to Goodman's account is that metaphors are not just figures of speech, but they are actual properties. Like literal properties, they are really possessed by the symbol and thus can be exemplified (Goodman 1968). So, the Stata Center metaphorically exemplifies being a green building, for it is environmentally friendly, but it does not literally exemplify being green, because it is not that color. This distinction is central to understand how the sentence "The Stata Center is a green building" is simultaneously true and false: it is true if green is a metaphorical property, and false if it is a literal one. When metaphorical exemplification occurs within aesthetic systems, it is termed expression (Goodman 1968). As architectural works, the Stata Center may express exploding ideas, the Hancock Tower an imposing presence, and a bank security and stability.

Apart from these modes of reference, there are multiple and indirect ways of symbolizing, such as allusion, variation, and style, which can be explained through a combination of the simple modes of reference with more or less complex chains of reference. A building alludes to another when it refers to it at a distance: the Pantheon in Paris alludes to the one in Rome (Goodman 1984, Goodman Elgin 1988, Elgin 1983). Variation upon a theme is a typical mode of reference in music and consists of referring to another piece (a theme) by symbolizing certain features of the piece while altering others (Goodman, Elgin 1988). Again, the Pantheon in Paris may be considered a variation of the one in Rome. Style is a mode of reference composed a series of symbolized properties which all together refer to a certain author, school, period, region, etc. (Goodman 1978). A church, for example, may symbolize Romanesque style. Determining what mode of reference is in play when symbolizing is a matter of interpretation. Just as there where many possible correct interpretations of a building's meaning, there are also many possible correct ways of explaining how these meanings are symbolized.

These are the ways in which buildings convey meaning. The architect can utilize architectural means to achieve certain symbolization and create meanings. The architect, however, is not only a symbol maker, but also a world maker in a radical sense.

3. BUILDINGS AS WAYS OF WORLDMAKING

As said, buildings contribute in the creation of meaning. They also contribute to the making of the world, not only in a physical sense, but in an ontological one. Buildings symbolize different things in various ways within a plurality of symbol systems, which are irreducible to one another and lack a last referent that would serve as a common ground. That is to say, there is not “a” world or “the” world prior to all meaning, but only a plurality of symbol systems, which are the ones that actually constitute our reality (Goodman 1978). This conclusion is extracted from the analysis that Goodman makes on contradictory propositions impossible to eliminate, such as the incompatible propositions regarding the sun according to the geocentric and the heliocentric systems: the sun is a star moving around the earth according to the geocentric system, and a star around which the earth moves according to the heliocentric system. Both systems have different notion of sun, and thus there is not a last referent that would accommodate both. One could say that it is known that the geocentric system is wrong and hence there is still a single referent to contrast our propositions. But the geocentric system is not as easy to dismiss as it may seem: we usually say that “the sun rises in the East” or that “the sun sets in the West,” which entails to acknowledge a geocentric system. That is to say, since there is a plurality of systems or world versions that may create incompatible worlds, there is not only one way in which things really are. Take another example: light can either be understood as a wave or as a particle, and these two interpretations actually create two different worlds with different criteria of rightness and adequacy. These world versions are irreducible to each other; it is impossible to have a world in which light is considered as a wave and as a particle simultaneously. This means that there is not a ready-made world from which we extract immutable facts: worlds and their components are made (Goodman 1978). And any discipline that contributes to the advancement of understanding by creating symbol systems, such as architecture, is also contributing to the creation of a world, i.e., the ways of creating meaning are also ways of worldmaking.

Note, however, that it is not possible to create from nothing; to make a world is always and only to remake it. Worldmaking is similar to language; we cannot create a new language from nothing, but from an already existing one. We can introduce new words to designate new insights, but this creation takes place within a language. Or, more generally, worldmaking does not start from nothing or from a given immutable world in the same way in which we do not start understanding things from scratch, but from a series of previous beliefs and conceptions. Also, worldmaking is a never-ending and open-ended process, for a version or an interpretation of the world is always susceptible of being modified. Since construing a world is always and also constructing a world, the criteria to consider that a world is right are the same as the ones that serve to consider that an interpretation is right. It is not the case that anything goes, but there are criteria, such as rightness, adequacy, coherency and consistency that determine what interpretations and versions are acceptable (Goodman, Elgin 1988).

Rightness is a very general notion that includes not only truth, which is limited to declarative propositions, but also “standards of acceptability that sometimes supplement or even compete with truth where it applies, or replace truth for nondeclarative renderings” (Goodman 1978, 109-110). Works of art and architecture are not true or false, as are propositions or mathematical formulas, but rather their symbolization is fair or unfair, right or wrong depending on how they symbolize within a given context. Affirming that the criterion of rightness of an interpretation is the symbol itself and that there can be multiple correct interpretations of the same work implies that there are no external reasons to privilege certain interpreters above others. In other words, the social, historical, or cultural causes that prompted certain interpretations are in themselves irrelevant for establishing the rightness of each interpretation: feminist or postcolonial interpretations of a work are not right or wrong because they are feminist or postcolonial, nor superior or inferior to others because they have a certain origin; being interpretations of a certain kind does not invalidate or validate them. Rather, some interpretations are adequate to a work – and thus privileged – and others are not based on the work’s symbolic functioning. Note also, that to affirm that a work of requires interpretation implies

also that it can always be misinterpreted. However, misinterpretations can be disregarded as soon as they are contrasted with the work's functioning as symbol. Hence, Goodman opens the possibility of a plurality of different but equally right interpretations of a work, which are independent of the context or concerns that prompted these interpretations and, thus, also independent of arguments based on the interpreter's authority and the institutional context. This means that the creation of interpretations and unveiling of meanings (and also further creations of world-versions) can be historical, social or cultural, but the reasons to maintain that an interpretation is right are not. This is what Goodman calls a "constructive relativism," which is an intermediate position between radical absolutism – where only one interpretation is correct – and absolute relativism – where anything goes (Goodman, Elgin 1988).

Interpretation is then a matter of fit, "of some sort of good fit – fit of the parts together and of the whole to context and background" [Goodman, Elgin 1988, 46].

Thus, architectural works and the several interpretations they bear as symbols actually contribute to the advancement of understanding and also to the creation of world-versions. Architecture can provide new insights in a way that no other discipline can provide and, in so doing, create unique versions of the world that, in their turn, can influence other versions. By modeling space, light, and construction materials, buildings can create environments that can make us aware of previously unnoticed features. The central nave of some Renaissance churches create a perspectival space that, once experienced, may enable us to see the space outside the church in a perspectival centered way; Baroque churches create dynamic spaces that, once experienced, can bring us to perceive space in a different way than the Renaissance churches. By symbolizing features such as proportion, rhythm, symmetry, or massiveness in a unique way the meaning of these notions is enhanced, nuanced, or shifted. By symbolizing in several different ways, architecture can reshape our perception and reorganize our understanding of the several worlds (if any) that constitute reality. In this context, architects are worldmakers in a fundamental sense.

CONCLUSION

Goodman's philosophy offers a new insight into architecture and its significance or, in other words, it provides a philosophical framework to understand how we create and interpret both architectural knowledge and architectural works. By changing the question of "what is architecture?" to "when is architecture?" and by answering that buildings are symbols, a whole new way of inquiry and thinking about architecture is opened. We enter a functionalist and pragmatist realm that has criteria of consistency and coherency that simultaneously preclude a total absolutism and a total relativism of meanings and worlds. With relatively few modes of symbolization, all the array of a building's meanings is accounted for. Most importantly, by considering that architects are not simply object makers but also symbol makers as well as worldmakers, architecture acquires both an epistemological and an ontological dimension that had not been considered before. Furthermore, not only architects but also the general audience or the building's users become interpreters that play a key role in creating and unveiling the multiple meanings of architecture. At the same time, examining architecture under the light of Goodman's thought shows how analytical philosophy can help in the continuous process of construing and constructing buildings, as well as of understanding how architecture contributes to the making of meaning and reality.

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ENDNOTES

- ¹ For more information on essentialism, intentionalism, and institutionalism in the arts see, for instance, Danto 1964; Detlefsen, McCarty, Bacon 1998; Dickie 1977, Dickie 1984, Kieran 2006, Yanal, 1998.
- ² Goodman explains, "Reference' as I use it is a very general and primitive term, covering all sorts of symbolization, all cases of standing for." Goodman 1984, 55.
- ³ Goodman's theory of symbols is much more complex than what is discussed here. For a thorough discussion see Goodman 1968, and Elgin 1983.