ESSENTIALISM AND SPATIAL (RE) PRODUCTION

BENJAMIN BROSS

INTRODUCTION

The phenomenon of Globalization continues to strengthen and spread across socio-cultural community boundaries, resulting in homogenized cultural landscapes. As Henri Lefebvre pointed out, spatial production[1] exhibits a society's value systems through the spaces (and places) it produces. One of the principal effects of a technology-driven flow of information on spatial production is that it has increasingly become a binary proposition: either design practice contributes to a *sense of place* by being rooted in place-based iterative socio-historical spatial production processes or, it follows Modernism's rejection of history and tradition in order to disrupt consciously the socio-historic context. The former asserts the continuation of localized spatial traditions and the latter producing design that participates in a larger globalized contemporary aesthetic. Yet, if spatial production is to (re)produce spatial traditions, how do we recognize what is *essential* to the identity of space?

The purpose of this essay is to produce an analytical approach that examines site-specific spatial design that results in *placemaking*: a unique physical spatial experience defined by the relationship between various spatial objects and

their properties. Together, these objects, usually typological spaces, and their qualities produce a sense of environmental and geographic spatial identity that distinguish a place from other spaces. The spatial production of objects that acknowledge and utilize their contexts help counteract the increasing homogeneity of globalized space. The question is then, how do we determine if a spatial product (a door, a house or a city plaza) belongs to, and hence continues, a specific spatial production tradition or context? How do we answer the question: *What is it?* What follows describes spatial products as knowable by the *nature* of their properties.

This article uses the philosophical concept of essentialism to develop a framework to analyze and generate designs that are rooted in context and history. The paper explores "Aristotelian" essentialism, focusing on the efficient and final causes, to define the *nature* of a spatial object. The essay continues by explaining the role of *time* in identifying spatial products. Finally, anchored in the previous analyses, the essay proposes three modes of spatial production: *discontinuity, continuity,* and *innovation*, that describe contemporary spatial production based on the deployment of essential properties of an object. These three modes allow designers to reflectively engage in the practice of spatial placemaking.

ESSENTIALISM

Introduction to Essentialism

Modern *essentialism*, as part of part of the "scientific realism" tradition, can be applied to explain the *nature* (see below) of objects. First, it is important to remember that as Lefebvre notes, "nature creates and does not produce."[2] This is important to note because my essentialist argument focuses on the essential qualities of produced objects and not that of created things of Nature. Hence, the essay is not about *natural kinds,* but rather, about the essential qualities of produced spatial objects. This philosophical approach seeks to document qualities including those that go beyond the "appearances in order to discover the hidden causes of things."[3] Thus, objects are defined by characteristics/properties that are bound in the *essence* of the object. Essentialism requires first an affirmation of the object's characteristics/properties and thus distinguishes those properties that are intrinsic and necessary for *being* the object from those which are *accidental*; the latter defined as a "p*roperty of an object* …. it happens to have but that it could lack."[4] Necessary properties, in turn, are "primary or secondary qualities" where "primary qualities are properties of the objects themselves. The secondary qualities are manners in which we are affected by things in the process of perceiving them."[5]

Hence, all essential properties are intrinsic, but not all intrinsic properties are essential. Moreover, as Leibniz[6] argued, and more recently Baruch Brody,[7] intrinsic properties can only be essential if they are possessed at *all* times by the object. Therefore, attitudes towards spatial objects are in themselves accidental, that is, susceptible to the passage of time and the concurrent evolution of value-systems.

An attempt to describe an object by what it is not would ultimately be fruitless, because all objects lack an infinite number of properties. Rather, it is imperative to search for properties, characteristics, or qualities that the object must possess to be categorized as a part of a specific spatial production tradition. The question then becomes, *how* do we identify the *essential* qualities of a spatial product?

ARISTOTLE'S CAUSES

Aristotle's "causes"[8] provide an important approach to applying essentialism to spatial production. Aristotle proposed "four categories of cause" that explain physical reality and the nature of things: material, formal, efficient and final.[9] The material cause, as the name suggests, explains the material content of the object; the formal cause explains the shape of the object. With efficient cause, Aristotle attempted to describe qualities that are not necessarily revealed at the surface of the object itself but are imbued into the object during its production. These qualities include socially constructed value systems acting through the individual or groups producing the object: rituals of production, skillsets, aesthetics (value judgements of beauty), logistics (including location, tools and facilities) and temporality (duration and time frame). The final cause, or the purpose of the object, is the designed purpose or function of the object. Because material and formal causes are somewhat self-evident, the essay focuses on the role of efficient and final cause in determining spatial essence.

"ALL ESSENTIAL PROPERTIES ARE INTRINSIC, BUT NOT ALL INTRINSIC PROPERTIES ARE ESSENTIAL"

EFFICIENT CAUSE

In an Aristotelian context, one of the ways we can explain essential properties of the object is by understanding the object's efficient cause or its process of production. First, efficient cause explores *who* produces the object, and more importantly, *how*. Under this interpretation, efficient cause is the combination of the producer and the process (steps) of production itself.[10] At its most expansive scope, a culture is defined by its traditions and rituals (what it does), and at its most granular, fabricators are defined by their knowledge; hence the carpenter is *identified* as the carpenter because she knows how to do carpentry.

Efficient cause analysis requires the development of identifiable proprietary sets -a group based on identified shared properties. *Who* may start with a general category, for example, an ethnic, national, or other productive group, i.e. "the French", and can finish with definitive specificity, such as a particular or individual producer -i.e., Jean Nouvel. As in Set Theory, related groups of specific examples are part of the greater general set, with each set containing kinds.[11] Specificity in the set is only as relevant as required by the analyst to demonstrate the validity of the general set's essential and related properties.[12] *Who* produces the object is then an *essential* property of the object itself -even anonymity of production is an *identifiable* property of the object (i.e., when we do not know or cannot know who made the object, when anonymity is a requirement of production, or when anyone can produce an object). As Walter Benjamin[13] noted, who or what produces an object is a fundamental property when determining authenticity (see replication below), hence it is an essential component of identity. The appearance of "Black Swan"[14] exceptions to any specific set, do not invalidate the original set, but rather, create a new independent subset within the larger general set or alternately, widen the sorting criteria. Identifying who produces the object is limited only by the Venn diagram-like qualifiers that are used to form a kind set: i.e., profession, religious or hierarchical status, socio-cultural and political membership, etc. When analyzing a spatial product, such as a church, we might investigate who designed, built, blessed, and funded the product, noting that each of these *producers* had a specific *role* because of their knowledge in the process of production. We might further investigate requirements to participate in these roles, for example, to bless a religious shrine, it is a requirement to be an ordained priest of that religion.

Another aspect of efficient cause is the '*how*' or the *process* of production. In essentialism, the object's *essential* identity may embody the processes of production if deemed relevant by the individual maker

or society as a whole. These processes include but are not limited to rituals or traditions and their associated codes (rules) of execution. For example, it may be *essential* that the object be produced following specific manufacturing steps or associated rituals that may or may not be visible in the object itself; at specific periods of time, such as the first full moon of the year, or when a comet appears in the evening sky. As we shall see below, these codes of production, may significantly overlap with the *final cause,* i.e. the designed purpose, as often *how* something is produced is part of *why* an object is produced. Hannah Arendt[15] has argued that the *how* also includes socio-political value systems, including capital production contexts, codes, and working conditions. Like production rituals, these characteristics may or may not be visible in the product itself, and overlap at times with other Essentialist Causes. For example, a church façade may be made of the stone of a specific quarry, such that its Material Cause is stone, but its efficient cause is that the stone must be from a particular quarry associated with a sacred mountain. Finally, efficient cause might incorporate "constructal"[16] logic, where the object is the *natural* (that is obeying *Natural Laws*) result of a production process. Once again, it is necessary for the analyst to propose and bound the relevant parameters in developing *identity* sets.

"LIKE PRODUCTION RITUALS, THESE CHARACTERISTICS MAY OR MAY NOT BE VISIBLE IN THE PRODUCT ITSELF, AND OVERLAP AT TIMES WITH OTHER ESSENTIALIST CAUSES."

FINAL CAUSE

Aristotle describes final cause as the object's purpose or telos. Purpose can be divided into two parts: what it *should* do, for example "a house *should* provide shelter"; and what it *can* do (beyond its primary purpose) because of its intrinsic properties, such as materiality, shape, dimension, volume, color etc., for example, "a house *can* be a museum." The *should* makes explicit intent, while *can* acknowledges an object's possibilities, but is

void of designer intent. As we shall see below, this is a critical idea as it lays the foundation for a constructed system of values. Furthermore, fundamental to the idea of what an object does, is an incorporated history of all previous actions, which taken as a sum, enable present and future actions of the object (hereafter, called *functions*). These historic, present and future *functions* become the "signs" by which semiotic analyses ascribe various degrees of *meaning* and ultimately the collective memory inherent in the *social contexts* of spatially produced objects.

Another important aspect of final cause exists in an object's potential purpose, such that as the object fulfills its purpose, what was initially an extrinsic object quality, thereafter transforms the object's essence, and now forms part of its intrinsic properties. It is important to note that regardless of the transformation, the object retains its initial properties even while gaining new qualities.[17] In that sense, the object acquires new purposes, that are fundamental for describing the object's nature. This is especially important when the object must then be able to perform the new intrinsic purpose as its reason for *being*. While considering an object's purpose—and hence describing it—space-time contexts must be identified clearly: What the object *has* been, what it *is*, and what it *could* be are properties of the object. These contexts are necessary to establish categorical boundaries of *being*.

To illustrate this point, let us examine the "Western Wall"[18] in Jerusalem. (figure 1) As a material cause, the wall is made of limestone "Jerusalem Stone" blocks quarried near the site.[19] Turning to the wall's efficient cause, the wall's stone blocks were placed side by side to form long courses, with each successive course rising away from its bedrock foundation. Though parts of the wall have been built and rebuilt by different rulers and their corresponding subjects over the last 2000 years, historic records show that King Herod ordered the initial construction[20] of the wall; hence, members of Judean society ranging from priests to slaves initially built the wall. At each instance, the tools and technology that were used to construct the wall correspond to the time and cultural corpus of the people working on the wall. In terms of its final cause, the wall was designed and erected as a structure capable of holding back soil in order to support a large temple surrounded by ceremonial grounds.

Once the wall was finished sometime between 19 BCE and the end of construction of the Temple Mount in 64 CE, it fulfilled its telos. Yet in 70 CE, 6 years after the Temple Mount was finally completed, the Second Temple was destroyed.[21] After the destruction of the Temple by the Romans, only portions of the retaining wall and Temple Mount were left

FIGURE 1:
WESTERN WALL, JERUSALEM

–though eventually the latter were also removed. However, as F.M. Loewenberg notes,[22] the portion of the retaining wall that did survive, did not acquire an "aura"[23] of symbolic and theological importance until nearly 1500 years later; that would happen four years after the 1546 earthquake, when houses and other lean-to structures collapsed and revealed the original retaining wall. Sultan Suleiman I, the Magnificent, instructed his engineers to clear away debris and prepare a prayer site for Jews. Thereafter, the once extrinsic property –its spatial relationship to the Holy of Holies- became an intrinsic quality, i.e. no longer was it simply a retaining wall, but rather, as a physical remnant of the Temple and its grounds, over the centuries increasingly becoming Judaism's holiest site.

CRITIQUES OF ESSENTIALISM

In his essay, "No Route to Material Origin Essentialism?"[24] Nic Damnjanovic critiques Saul Kripke's *Naming and Necessity,* pointing out arguments made against essentialism's apparent inability to determine the "sufficiency" or minimum

properties that an object must possess to be considered essentially *that* object. First, it is important to note his criticism is primarily directed at material cause, and concludes "any argument for (EMO) [material origin essentialism] that relies on a sufficiency principle is bound to fail."[25] Damnjanovic notes that any essentialist argument that depends on exclusive material properties of objects alone is not enough to identify an object as unique, or belonging to its own set. Instead, an object's identity essence is derived from material, the other three causes, and its resulting intrinsic *compossibility*.[26] Simply stated, an object´s essence does not rest alone on its materiality, but in the sum of the properties that are present in its production, and its ability to sustain relationships (interactions) with other objects.

Other critics note that essences do not seem to be observable and hence verifiable. David Oderberg, citing Locke as the source of the confusion, counters that the fundamental question that must be answered is "what is meant by observability."[27] He continues by discussing an object´s *quiddity*, pragmatically noting that objects do possess *intrinsic* properties that do manifest themselves *extrinsically*. As such, these intrinsic properties cannot be separated from the object, and hence flow forth from it, revealing its *essence*. He writes "…*what* a thing is does determine *how* it is –in the traditional terminology, function follows essence. Essence just is the principle from which flows the characteristic behavior of the thing. And a thing´s numerical identity as particular member of a kind determines its particular behavior…"[28] Objects must be evaluated by what they *are* and *do*, and on that basis, analyses reveal how and why an object behaves as it does. Therefore, designers can utilize modern essentialism to identify spatial production traditions not only by their form, but also equally as important, by *what* they do, and *how* they achieve designed functions. As we shall see below, this is of paramount importance when attempting to avoid "pastiche" aesthetics.

THE ROLE OF TIME

In the reductionist tradition, Time is a descriptive property of a spatial product (object) indicating the specific status of *being* (existing) in an object's production, use and relationship with other objects. In this sense, an object possesses five distinct (but related) qualities of time: embodied, existence, contextual, production, and use.

Embodied time describes the passage of time incorporated since the object's creation.[29] For example, in the case of the Itsukushima Torii[30] (figure 2) the columns are made from Camphor tree trunks. These

FIGURE 2:
ITSUKUSHIMA SHRINE TORII

Camphor tree trunks are at least two hundred years old *before* they were cut down. The embodied time property is neither accidental nor incidental, as width, height and loadbearing requirements for the Itsukushima Torii necessitate trees that must be at least 200 years old to fulfill its final cause in the same way as past Torii iterations.

Existence time is the descriptive characteristic of the object's age from production inception going forward. This is because objects can be said to be in existence once they have been produced and function (see final cause). *Existence* time criteria is fundamental to understand the value systems which are imbedded in the production of spatial product. For example, use may be the primary production criteria when choosing materials prioritizing their point of obsolescence, thus enabling future market-oriented consumption. The Itsukushima Torii's *existence* time begins once the tree trunks are transformed into columns, and all other components are integrated to form the new whole object of the Torii. In this way, we describe the age (measured flow of time) of the components either

as independent of human interaction (created), or dependent on the production process.[31]

Contextual time is determined by the occurrence of other events that demarcate the beginning, continuation and end of specific periods. In contextual time, we note referential time points, as in the *past, present,* and *future*, but more importantly, by a proposed generally accepted historic identifier such as *Neolithic* or *Roman*. Contextual time is indispensable to understand spatial identity as belonging to an identifiable set of criteria to which the spatial product belongs, and as such, denotes and connotes particular spatial identity; it allows us to examine the characteristics of the social, cultural and political contexts in which an object has been, is, and will be produced. Contextual time is often considered the prevalent criteria for membership in an identity group, as we often refer to qualities of context when describing an object's identity. As such, we state the object *belongs* to, *emulates* (simulates, but is not authentic), and disrupts the time qualities of objects belonging to the same identity groups. If matched with efficient and final causes, we derive a cross-reference of who, how, and why, as related to the contextual time frame in which they are produced. *Who* in contextual time, may reference the larger set of people whose cultural spatial making is identified with the production of an object, such as the "Edo" or "Meiji" periods. Equally importantly, is the iterative nature of contextual time, since the production of an object reinforces the notion of a specific period of production: for example, when archeologists suggest that a ruin dates from a specific time frame because its physical characteristics match those of other objects known to have been produced in that time context.

Production time refers directly to the time that is necessary to produce an object. For example, one salient characteristic of Fordism[32] is the mass production of consumable products in a specific calibrated amount of time. In this manner, we can describe the time it takes to produce a spatial object as a specific, descriptive quality. In the case of a Torii, we could distinguish within the context of efficient cause, between those that are handmade (longer periods of time and labor intensive) and those that are machine-made (rapid production and serially made).

As the name suggests, *use time* describes the measured amount of time an object performs its *functions*. Whereas *existence* time is a measure of the passage time of the object, *use time* measures the duration of each *function*. Recalling that *function* applies equally to what an object *should* and *can* do, we can similarly note that *use time* applies to the carrying out of activities that are intended and unintended. At first sight, the latter might suggest an

extraneous consideration, yet if we recall the example of the Western Wall, construction of spatial myth is often the result of built environments performing time-based unintended activities. Such activities become fundamental in understanding the shaping of human perception derived from the essence of the spatial product. For example, a farmer's field that temporarily becomes a brutal battlefield; though comparatively insignificant to the *existence* time of the field, the *use* time of the Rummel Farm[33] as a battleground during the U.S. Civil War transformed the farm into a spatial component of the Gettysburg National Military Park. Such a spatial transformation includes the corresponding changes to site's spatial essence legibility.

DEVELOPMEN OF SETS

Sets are collections of objects that share criteria-based common properties. To apply essentialism as sorting criteria requires considering objects' intrinsic properties. Sets are made through the analyses of spatial production for *identification* purposes based on the *cause* properties (discussed previously) of the objects. For example, "Set Doors" is composed of the physical object "doors," such that all doors are contained in "Set Doors." As a first step, the designer defines a door through its final cause essence: *What* does a door *do* that makes it a door? *What* must a door perform to be considered a door? A second step is to sort doors by *efficient cause,* answering *who* must produce the door, and *how* must they produce it to be perceived as a door, and more specifically a particular type of door? A third, but certainly not final step, would be to generate *time* criteria that further restricts set membership: in what *context* time is the door produced, and what is the use time for a particular door? One possible next step is to identify what is a door by formal properties: dimensions, materials, configurations, ornamentations, colors, components, etc. Each answer generates additional

> "USE TIME DESCRIBES THE MEASURED AMOUNT OF TIME AN OBJECT PERFORMS ITS FUNCTIONS."

sets defined by commonalities between member objects, and differences with objects of other sets, while all objects are generally still considered doors. Taken to its logical end, we can visualize how on one hand increasing complexity leads to increasing differentiation and ultimately uniqueness in an object, while on the other hand, we can determine as many sets as necessary to establish what is *essential* in a spatial *identity set.* At the larger scale, the quantified and qualified identification of sets allow observers to assert that an object belongs to a specific tradition of spatial practice because of its essential properties.

Once a set has been determined by specific criteria, essentialism becomes normative when applied to generate design. First essentialism describes what is, and then, what it should be based on established rules of belonging to the set. The more limited the set of explanations available for each property, the easier it is to *identify* the uniqueness of the type to a society, and in some cases, the singularity of the object itself. These properties are often expressed as normative regulations: to be considered a part of an object's set, a shared minimum of characteristics must be evident. The more specific the *set*, the clearer the revelation of the *essential* nature of the object to a society, and within a society's total production.

Set development reveals constructed value systems not only for the set, but for the set developer as well. A central aspect of set development is the privileging of some properties over others to generate a set identity. In other words, *why* properties are chosen is as important as *what* properties are chosen. The deconstruction of property privileging reveals meaning through semiotics. For example, Amos Rapoport (following Hall) categorized human spatial production based on their physical permanence into fixed, semifixed, and non-fixed components.[34] In his methodic approach, he proposes a system that identifies the object's essential final cause properties in terms of its *existence* time to derive meaning. Designers can utilize his system to generate spatial production that follows the essential property rules to generate similar objects.

As we shall see next, such an approach presents an opportunity for designers to continue a spatial tradition by *(re)producing* that which has been classified as belonging to a pre-existing contextual set; or, innovate designed components rooted in context or history yet exemplifying contemporary expressions of functions, materiality and/or form.

DISCONTINUITY, CONTINUITY AND INNOVATION

Having described essentialism as analytical tools to examine the identity

of spatial products, we can now propose how these analyses are applied through design. Generally, we understand spatial production through three general modalities: Discontinuity, continuity, and innovation. Each of these modes of production display varying degrees of commonality, from none to total, with the latter a high reliance or emulation on the proprietary qualities of contextual spatial production. Specifically, we are able to categorize spatial objects because sets (see above) contain objects that relate to each other through causal qualities at the exclusion of objects that do not share properties. Jouni-Matti Kuukkanen, citing Thomas Kuhn, explains that:

> According to Kuhn's theory, references of kind terms are determined through a network of similarity and dissimilarity relations, which specify what properties an entity can and cannot have in order to qualify as that kind. Similarity-dissimilarity sets do not entail any principled distinction between essential and superficial properties. Although the original formation of sets does not require any description, the descriptive content stored in the sets is subsequently needed to keep the boundaries between kind categories sharp.[35]

"HAVING DESCRIBED ESSENTIALISM AS ANALYTICAL TOOLS TO EXAMINE THE IDENTITY OF SPATIAL PRODUCTS, WE CAN NOW PROPOSE HOW THESE ANALYSES ARE APPLIED THROUGH DESIGN"

Because sets are determined by selecting specific parameters, designers must engage in the selection of properties that may be produced or re-produced during object production. Obviously, certain parameters are impossible to replicate, such as *contextual* time. Yet, as we will see below, the inability to possess the same *contextual* time disqualifies continuity only as far as it limits an object´s authenticity for a specifically bounded time context, but not in its tradition of making or embedded value systems (i.e. building codes).

With the rise of Modernism in the 19th century and onward, as exemplified by Adolph Loos' treatise *Ornament and Crime,* designers and artists willfully turned away from the past and its traditions. Moreover, contemporary spatial production practices, even in the Postmodernist period, continue to question the value of establishing a continuity or innovative relationship with historic and contextual environments. Lebbeus Woods had gone so far as to declare "I am at war with my time, with history, with all authority that resides in fixed and frightened forms."[36] It is this rejection of spatial history and context that creates spatial *discontinuity*, as it privileges objects that are dissimilar to their environment. Discontinuity is a modality of spatial production where contextual *essential* qualities are obviated in favor of the production of a consciously differentiated spatial product.

Discontinuous spatial production exhibits the absence of the various properties of the spatial products such as time, materiality, history, purpose, and value systems. Differentiated objects exhibit contextual relationships that are limited to either their physical presence, enforced embedded value systems, or functionality. Perhaps one of the best examples of discontinuous spatial production is Adolf Loos' Steiner House. Built in 1910 in a Viennese suburb, it radically differentiates itself in its façade design and plan development, a precursor to his *raumplan*,[37] from the neighborhood's preexisting houses.

For the purposes of our discussion, spatial production requires that objects occupy physical space over time.[38] Because of the physical relationship between objects, there is an ontological reality of perceived existence, regardless of the design intention of the produced objects. Simply stated, a new office building whose design embraces a differentiated essence and hence façade from its context, has a relationship with all the other buildings in its proximity by virtue of its physical existence, during the time that buildings in proximity exist. It is this condition of physical-time existence that allows our built environment to be understood as a palimpsest: layer upon layer of spatial production that in summation exhibits Aldo Rossi's "genius loci."[39]

Another baseline shared relationship is the enforced embedded value systems during the production of spatial objects. Discontinuous objects share imposed values systems, such as fire codes, ADA, setbacks, design review directives, or other legislation that all objects must obey. In that sense, all spatial products of a specific time and place exhibit the constructed

FIGURE 3: ISE JINGU SHRINE

value systems of the participative groups who enact, promote and enforce codified production rules. Yet, other constructed value systems are often suppressed or removed from the production process itself, diminishing or eliminating bonds between objects. Finally, discontinuous objects tend to relate to other objects by their functions. Hence, we can see how houses built in the 18th century through the 21st century *should* provide shelter but, often do so at such differentiated processes that the function provides any meaningful relationship across time and space. Altogether, discontinuous spatial production generates environments of disconnected spatial objects, standing silently apart from each other, in the same space, but without a *sense of place.*

CONTINUITY

Continuity is the act of producing objects that directly exhibit object-property kinds revealed by the essentialist qualities of an existing environmental context. This production can occur by either *replacement, replication* or *resemblance*. The intent is

to go beyond surface-first qualities and define design composition through essentialist frameworks in the way of making that embed value systems associated with spatial production.

To *replace*, is "to take the place of,"[40] and –ment, indicates the action itself. Replacement is literally an action where an object´s spatial component are exchanged *in situ* by components whose qualities are materially *identical* to those that are being displaced. Component qualities obey causes with the possible exception of contextual time. Because components are bound to the historic period in which they were produced, all objects not produced at the same time as the original components can be determined to be different, unless the period is expansive enough to be considered part of one space-time continuum.*41*

Replacement components themselves are subject to further analysis: they may have been produced at the same time as the original components, but stored for later use, maintenance and upkeep. For example, roofing tiles might be produced and stored specifically for later use, at the same time as a first set of tiles are installed; these stored tiles are then used to replace older tiles as these reach the end of their useful life. The replacement tiles, though installed years or decades later, would still belong to the same *contextual* and *production* time as the first installed tiles. Alternatively, identical components may be produced millennia later, to replace failing components. The question in this case is a larger one, when we consider *who* installs them, and *how* they install them. This analysis becomes relevant to those who seek to establish parameters of authenticity. *Who?* is not an innocent question, as it identifies groups that seek to appropriate or consolidate socio-political power through the affirmative control of historic spatial products. *How* must be understood too, as we analyze forces of capital and labor involved in production and replacement: we must consider the final cause of replacement itself, especially when accounting for social, cultural and political agendas.

Replication is a spatial production process by which an object´s physical components are produced in an identical manner to the original but, in a separate physical space and time. Unlike replacement, replication production does not occur *in situ*. Similar to replacement components and objects, replication products are bound by the specificity of their time qualities. For example, the Jingu Shrine in Ise is replicated during the Shikinen Sengu ceremony occurring every 20 years (figure 3). Junko Edahiro notes,

Its underlying concept—that repeated rebuilding renders

> sanctuaries eternal—is unique in the world. In the occidental way of thinking, creating something durable would normally involve building a structure with robust stones, bricks, and concrete. At this shrine, however, the structures are made exclusively from wood and, by being rebuilt over and over again, can last forever. Also, in the process of rebuilding, the skills of shrine builders and craftsmen in various fields (carpentry, sacred treasures, apparel, etc.) are also passed on from generation to generation.[42]

“PRODUCTION BY REPLICATION CONNOTES MEMBERSHIP IN THE LARGER GROUP”

Viewed as part of the final cause, the Jingu Shrine object's *use* time prescribes that its Torii pillars be used in the sanctuary for twenty years; once dismounted from within the main shrine, they are used another twenty years as gates at the Uji Bridge. While any variation of this use time may not eliminate the Torii *essence* of the object, it would however, prevent it from being considered specifically an Ise Grand Shrine Torii, because the deviating iteration would no longer be bound by the required use time characteristics.

Mass replication (in series or concurrently) by non-mechanical and non-automated means of production, precisely because of implied labor concentration in *production* time, evokes the sense of a process-centered spatial production unity. In mass replication, spatial production is accretive to the individual maker at the personal level, but also accretive to the larger scale society. Specifically, production by replication connotes membership in the larger group. Presently what we mostly see, however, is mass replication by mechanical and automated processes that obey the logic of capital as its main identity. This continuous spatial production approach is prevalent in projects that produce large amounts of units in a standardized and rapid manner (thus providing the largest

number of costs efficiencies). For example: mass housing projects whose constituent components, entire buildings, and even neighborhoods, are produced identically and serially (except for their physical location within the overall urban project).

On one hand, as Walter Benjamin[43] noted,mass replication has provided unprecedented access to all types of works and spatial products for the largest number of people. Yet, Benjamin points to the failures of mass replication, where spatial production is driven by the logic of capital, leading to vanishing authenticity. Similarly, Aldo Van Eyck has pointed to mass replication in urbanism as its main challenge in placemaking. He notes "[w]e must continue the search for the basic principles of a new aesthetic and discover the human meaning of number. We must impart rhythm to repetitive similar and dissimilar form, thereby disclosing the conditions that may lead to the equilibration of the plural, and thus overcome the menace of monotony."[44,45]

There is a final mode of continuity, that neither replaces, replicates, but relates to the context: *resemblance*. Michel Foucault recalls that until the "end of the sixteenth century, resemblance played a constructive role in knowledge of Western Culture. It was resemblance that largely guided exegesis and the interpretations of texts; it was resemblance that organized the play of symbols, made possible knowledge of things visible and invisible, and controlled the art of representing them."[46] At first glance, reaching back to the sixteenth century and its Aristotelian tradition[47] might seem an anachronistic approach, but attempts to contemporize once archaic forms of understanding yields fruits in present postmodern discourse. Spatial production is perceived as continuous because it resembles preexisting contextual components. Though varying from object precedent/context, they do so in such a way as to present the observer a sense of unity or belonging to a greater group of objects. Resemblance in objects requires the development of parameter-defined *kinds* criteria; individual essential properties that permit identification of the object, or what Foucault calls the "signature." Moreover, resemblance joins spatial objects to each other, over distance and time, creating what Foucault names *sympathetic* links -rendering *contextual* time a non-essential quality of the product. In resemblance, spatial products with similar fundamental properties form sets whose objects exhibit specimen variations to generate object individuality, while retaining membership through what Wittgenstein called "familiar relationships."[48] For example, we can readily recognize a brownstone neighborhood in New York, but we can also distinguish individual dwellings frome each other. Wittgenstein notes that we as observers

recognize similarities between objects, writing that "we see a complicated network of similarities overlapping and crisscrossing; sometimes overall similarities, sometimes similarities of detail."[49]

INNOVATION

The third major modality is that of *innovation*. Unlike *resemblance*, where properties may vary superficially or minimally from object to object, but retain *essential* familiar similarities and hence belong to the same "set," *innovation* represents a wider variation in material cause and an outright departure from an object's historic efficient cause *essence*. Often, changes in material realities are catalysts for changes in production processes. *How* and *who* exhibit contemporary labor, production technology, and social value systems while maintaining *essential* formal and final causes. By modifying the efficient cause properties, designers propose spatial relationships that simultaneously relate to the contextual precedent, while modifying an object enough to imbue it with a sense of contemporaneous production –i.e., the *zeitgeist*. Thus, objects are produced with *essential* modifications that address new or contemporary social, cultural and political contexts.

"INNOVATION REPRESENTS A WIDER VARIATION IN MATERIAL CAUSE AND AN OUTRIGHT DEPARTURE FROM AN OBJECT'S HISTORIC EFFICIENT CAUSE ESSENCE."

This looking back to history but being part of the present is the hallmark of *innovation*. In Koestler´s *Ghost in the Machine,* he relates a story describing the process of production attributed to *Bios*.[50] However, where Nature *evolves*, spatial producers *innovate*. Following his narrative, spatial production processes innovate by incorporating simpler processes into the production of increasingly complex objects. We can directly relate the original production process and its resultant spatial product with each new iteration because of contextual time and the changing efficient cause of an object to achieve intended *functions*. Innovation allows for, even promotes, the notion that design can reveal the

contextual essence of things, and still be produced in its own time context.

Critical Regionalism, for example, as defined by Kenneth Frampton, approaches place making through *innovation* that seizes on the *essential* aspects of spatial production and steers away from what he calls "nostalgic historicism" and "sentimental" attachments to place. Instead, Frampton's focus is on "elements derived indirectly from the peculiarities of a particular place."[51] Confronted with the inability to match contextual time, selected properties are extracted, decanted from contextual objects, to reveal causes that create sympathetic commonalities from spatial object to object. Essential components are not formed from the impulse of replication, but rather, from the material cause of location, the efficient cause of the producer, and the final cause of its functions. Where focus is placed solely on the form as perceived, with disregard for other causes, spatial production becomes "pastiche," and ultimately void of any content other than the act of aesthetic continuity resemblance.

An example of spatial innovation is Urbanu's Tulou Housing (2005-2008) (figure 4) in Guangzhou, China. Hakka migration between the 12th and 20th century produced the "*tulou* …. a dwelling type unique to the Hakka people."[52] The oldest examples are "O" shape building typology, built with compacted earthen walls that look inward in fortress-like relationship with their exterior context. This meant that living units faced inward. That orientation, along communal programming in the central courtyard, provides a rich social environment. After studying traditional Hakka dwellings in the Chinese provinces of Jiangxi, Fujian and Guangdong, Urbanus developed a housing project that *innovated* on the traditional typology. While preserving the final and formal causes (cantilevered roofs over a circular housing block with centralized programming) they also embraced contemporary construction processes and materials such as poured reinforced concrete walls and slabs and steel guardrails.

CONCLUSION

The above text is an attempt to explain an essentialist design approach to *spatial production* in order to achieve context-based placemaking. The sum of essential qualities is the *spatial identity* of the *essential components* of a society's secretions. As Globalization continues to strengthen and spread across socio-cultural community boundaries, places are reduced to geographic accidents: increasingly, locations fail to reveal the *essence* of cultural spatial production, and therefore, they fail to reveal their uniqueness.

FIGURE 4: TULOU HOUSING

Ultimately, all spatial production reveals embedded value systems: *what* is important in the production of space. For those who prioritize not only preserving but also enhancing the qualities of place, especially in the context of contemporary market-driven considerations, the practice of spatial production requires the capacity to go beyond the surface image of objects. It requires the ability to peel away each layer to reveal Aristotelian causes that define design criteria sets of proprietary qualities and functions –and then apply them. These sets, each with their own object-derived properties, form the basis of the sum of the parts to create a greater *sympathetic* whole. Each object, be it a teakettle, a house, or city park, is then the sum of its essential parts and can contribute to the *continuation* and *innovation* of spatial production.

If Modernism's, and Postmodernism's rejection of the past, including its traditions, and context continues, and what is valued and therefore prioritized is the differentiated spatial object, we will eventually be confronted with a world where little or no cultural production differences exist. The long shadow of homogeneity will have spread

over our communities, and we will only find the mythical trace of what was once place through the nostalgic science of archeology.

ENDNOTES

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