Mimesis-Semiotics Method as an Alternative to Dynamic Vernacular Heritage Conservation: An Application on The Karo Traditional House in Dokan Cultural Village, Indonesia

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Abstract

The values of local wisdom that communicate the cultural identity of a community have recently received the attention of researchers in heritage conservation. However, the values of local wisdom, especially those expressed through vernacular architectural heritage are being increasingly challenged by contemporary life. In its broad definition, heritage is understood as a dynamic concept closely related to the "community" and the "continuity" of traditions and practices, including the various changes that occur.

This study aims to develop and apply the mimesis-semiotic method to support the conservation of Karo's vernacular heritage by embracing the dynamic concept of heritage.

The mimesis-semiotics method is elaborated from Tchertov's spatial code, in which there are three types of spatial codes used to analyze, namely architectonic codes, object-functional codes, and social-symbolic codes.

Research shows its effectiveness in terms of finding repeated spatial codes when applied to a vernacular setting. These findings can be used as recommendations on a practical level to support the conservation of vernacular setting as demonstrated through the application to the Karo vernacular house. The paper concludes that the mimesis-semiotics method in relation to dynamic conservation can be employed based on its orientation to the role and relationship of the Subject-Model-Object, in the conservation of traditional settings.

Keywords: mimesis-semiotics method, conservation, vernacular heritage, spatial code, Karo traditional house

Introduction and Background

Vernacular heritage around the world today are increasingly being challenged by contemporary life. It is widely recognized that vernacular settings offer local wisdom values that communicate the cultural identity of the community that formed it. The *Charter on the Built Vernacular Heritage* (ICOMOS, 1999) states the importance of vernacular heritage because it is a fundamental expression of the culture of a community. It has a relationship with the place and at the same time, expresses the diversity of the world cultures. However, the power of economic, and cultural and architectural homogenization of the contemporary world poses a threat to their survival. The emergence of awareness of the importance of vernacular heritage is accompanied by various conservation efforts to maintain its survival.

According to Wijesuriya (2010), the term heritage in the context of conservation contains a broad definition, which does not need to be distinguished from tangible and intangible, or movable and immovable heritage. Heritage must be understood not only to belong to the past and the future, but especially to the present and relates to contemporary life. Heritage is a dynamic concept and is closely related to "community" and "continuity" of traditions and practices (Wijesuriya, 2015). What is meant by community is the "core community" as an integral part of heritage, and thus distinguished from the wider community. While the concept of continuity is related to: 1) especially the continuity of the original function of heritage, namely the intended purpose of heritage from the beginning; 2) continuity of public relations; 3) continuity of cultural expression (both tangible and intangible), and 4) continuity of care (both traditional and established). In this continuity concept, the aspect of "change" is accepted as part of continuity (Poulios, 2014; Wijesuriya, 2015), and process that creates heritage (Khalaf, 2016).

An understanding of heritage is useful for detecting the discrepancy in conservation efforts that have been carried out in the study location of the Dokan Cultural Village located in Karo Regency, North Sumatra, Indonesia. The establishment of a Cultural Village is one of the many vernacular heritage conservation efforts carried out in Indonesia. In the case of the Dokan village, the main reason for its designation as a Cultural Village is because of the existence of the Karo traditional house as a vernacular heritage of the Karo ethnic community. However, in the process, the strategy of determining the Cultural Village as a vehicle for local cultural conservation has not run optimally (Triwardani & Rochayanti, 2014), even in some cases, it does not guarantee that vernacular heritage is maintained, including what happened in the Dokan Cultural Village.

Based on observations and publications of previous research, the Karo traditional house is currently facing the challenges of the times. Hence, this study examines this setting to ascertain the ways in which conservation of heritage can be implemented. At the beginning of its formation about two centuries ago, Dokan had 15 units of traditional houses. In the 1980s, Dokan was designated as a Cultural Village and in 2004, there were still 8 traditional houses. However, currently, there are only 5 units of traditional houses and one of them is in a pretty bad condition due to weathering. Efforts to preserve traditional houses in Dokan are still limited to a material-based heritage approach by replacing weathered parts. The discrepancy that can be detected from this conservation effort is in terms of the involvement of "community" and the "continuity" of traditions and practices.

Previous researchers (Singarimbun, 1989; Sibeth, 1991; Domenig, 2008; Rieger-Jandl, 2016) have pointed out the serious challenges to the continued existence of Karo traditional houses. The need for privacy, internal conflicts between residents, the need to send children to schools (Singarimbun, 1989) and the desire to live like people in the city because traditional houses are considered old-fashioned (Sibeth, 1991) are some of the reasons why Karo traditional houses are being increasingly abandoned. This challenge is getting tougher due to several important factors, namely: 1) difficulties in providing traditional building materials; 2) loss of knowledge of traditional construction techniques; and 3) changes in village architecture due to changing social life and lifestyle (Rieger-Jandl, 2016). Another cause that is no less important is the process of globalization, especially in the colonial period, which "has significantly changed the context and conditions of life of the Karo people" (Kipp, 1996) in

terms of politics, economy, ethnic identity, traditions, environmental improvements, shifts towards individualism, and especially the religious system.

In the midst of these challenges, several imitation phenomena were found, both imitation of traditional houses as a whole, as well as imitation of certain elements of traditional houses in contemporary dwellings. Although carried out based on individual initiatives, it is clear that this imitation can be read as the repetition of a certain "code" that communicates the collective meaning of the Karo ethnic group in terms of symbols of ethnic identity. This phenomenon can be seen as a symptom of the re-creation of the vernacular heritage through imitation, or from the original term, mimesis. In the context of the Dokan Cultural Village, this imitation phenomenon has the potential to be expressed collectively to support the function of the cultural village.

The ontological problem encountered is the negative meaning of the term mimesis without an adequate study of the term itself. There are those who think that mimesis only focuses on the visual aspect without considering the value and meaning contained in the traditional architectural elements adopted (Purbadi, Lake & Arinto, 2020). Some even consider it a "type of cancer" (Erarslan, 2019), and only result in a "copying culture" (Awad & Boudiaf, 2020). However, in a positive sense, mimetic concepts and theories do not only imply mere imitating or copying, but are creative representations and interpretations of certain ideas or themes (Jokilehto, 2006). Girard (1987) states more explicitly, that if people suddenly cease imitating, then all forms of cultures will disappear. Even imitation is actually an act of respect and warning against what is imitated (Denslagen, 2009; Lowenthal, 2015). Through imitation, attention is drawn to the past to be brought into the present with codes and interpretive markers (Lowenthal, 2015: 413).

Holding on to a positive meaning, this paper aims to offer the idea of a mimesis-semiotics method to fill the gap in terms of the involvement of "community" and "continuity" of traditions and practices. This goal was obtained by elaborating Girard's theory of triangular desire (Girard, 1965), the basic dimensions of mimesis by Maran (2003), and Tchertov's theory of spatial codes (Tchertov, 2019). The elaboration has resulted in a conceptual diagram of the mimesis-semiotics method, from which repeated spatial codes have been obtained as elements of vernacular heritage that can be preserved in both contemporary and future contexts. The effectiveness of this mimesis-semiotic method can be proven through its application on research conducted in the Dokan Cultural Village.

Literature Review

The literature review in this study uses a contemporary approach in which the concepts of conservation, vernacular architecture and cultural heritage are understood as dynamic, constantly changing and closely related to contemporary life. This dynamic nature is part of a cultural process in which values and meanings are continuously constructed socio-culturally which leads to the formation of a distinctive identity. Conservation is no longer seen as just preserving what is left of the past, but is focused on creating heritage (Poulios, 2010; 2014) for the present and the future.

Mimesis in heritage preservation has a long history of 'pros vs cons' conceptual debates (Denslagen, 2009; Glendinning, 2013; Jokilehto, 2002; Lowenthal, 2015). Several international conservation regulations state a prohibition against imitation, e.g. ICOMOS 1972 and Burra Charter 2013 (Lardinois et al., 2015). However, it makes sense when mimesis is understood as an integral aspect of the process of learning and human development (Djabarouti, 2021; Jokilehto, 2006; Lowenthal, 2015; Westfall, 2015) and especially when linked to transmission, innovation and cultural continuity (Girard, 1987; Taussig, 1993; Garrels, 2011 ; Wulf, 2016).

The Nara Document on Authenticity (ICOMOS 1994) is one of the most important documents of contemporary conservation theory (Petzet, 2004; Brumann, 2017) and perhaps the first international declaration to incorporate non-Western concepts for heritage conservation at the international level (Ndoro & Wijesuriya, 2015). The Nara Document significantly expands the scope of the authenticity criteria (Brumann, 2017) which is relative and can be seen

as a dynamic process reflecting the various changes that have affected the site throughout its history (Labadi, 2009).

This extension of the meaning of authenticity is used by several researchers (eg Steiner, 2010; Barassi, 2012; Lilja & Baaz, 2019; Alawsey & Al-Dulaimi, 2020; Djabarouti, 2021) as a basis for arguments to elaborate and legitimize mimesis in heritage conservation. A review of this publication demonstrates the breadth of the concept of mimesis and the variety of terms that can be used creatively based on the context of the study. However, the elaboration of the concepts of mimesis and semiotics has not been found as an effective method for heritage conservation. The equation that can be observed is the legitimacy that mimesis has an important role in the conservation of cultural heritage where heritage is positioned as a model or mimetic reference.

In the Indonesian context, the concept of mimesis has not been widely used in the issue of heritage conservation, although there are many facts where traditional houses are imitated, either in whole, in part, or only in ornamentation. Some researchers only briefly mention how vernacular heritage is imitated in contemporary dwellings, for example the imitation of the *rumah gadang* (long house) in Minangkabau, West Sumatra (Vellinga, 2003; Rieger-Jandl 2016; Widisatuti & Kurniati 2019) and the Toba Batak house in North Sumatra (Hanan, 2011). These forms of imitation present a new face of vernacular which is called "contemporary vernacular" (Lim and Beng, 1998), "vernacularization" (Vellinga 2006), or "vernacularity" (Widiastuti & Kurniati, 2019) and can be seen as a cultural process that creates heritage (Khalaf, 2016).

The lack of recognition about mimesis potential stems from the conventional view of authenticity in which imitation is considered as a superficial approach (Awad & Boudiaf, 2020), or only focuses on the visual aspect without considering the values and meanings embodied in the traditional architectural elements adopted (Purbadi, Lake & Arinto, 2020). This conventional view has ignored the role of the core community, namely the people who are directly involved with heritage. But in the contemporary view, the role of the core community and the various changes that produce vernacular diversity through imitation are an integral part of heritage conservation efforts that ensure cultural continuity.

Several studies in the context of cultural villages show the role of communities in heritage conservation. Vitasurya, Pudianti & Rudwiarti (2016) in the context of Brayut Tourism Village, Yogyakarta, places the community as the main informant to understand the internal and external factors that influence the decision to preserve the heritage of the Joglo house. Prajnawrdhi (2020) in the context of vernacular architecture in Bali shows the efforts of local communities in maintaining traditional values through the creative process of transforming their traditional houses. Solikhah & Fatimah (2020) in the context of Praigoli Village, West Sumba, uses the community's view to reveal the lessons learned from vernacular architecture and aspects that affect its cultural continuity.

These studies do not focus on mimetic phenomena, but are in the context of traditional communities that have a strong commitment to conserving their vernacular heritage. In this context, it is implied that mimesis works naturally through the transfer of traditional knowledge and skills from generation to generation. The context of the Dokan Cultural Village in this study faces greater conservation challenges because the local government's attention is still focused on the heritage of traditional Karo houses. In other words, there has been no attention to the role of community and the continuity of vernacular traditions and practices in contemporary situations. Therefore, the mimesis-semiotics method in this study is a positive response to the challenge posed by Khalaf (2016), "What else should be done now that we have expanded the definition?"

Research Methodology

The research was conducted using the pragmatism paradigm as a philosophical foundation. In general, pragmatism assumes that people live in a world that is not objective. It is concerned with social transactions involving subjective reality on the one hand and seeking agreements through action on the other. In other words, pragmatic researchers are concerned

with the value and efficacy of research results for the larger community (Groat and Wang, 2013). The pragmatism approach in research has several special characteristics, including: 1) placing the researcher as an agent (Putnam & Putnam, 2017) who are involved and interact together in the environment under study; 2) research is conducted based on the desired consequences (Creswell, 2014) and is directed to the creation of shared meaning (Shannon-Baker, 2016).

The research methodology uses a qualitative approach. Data were obtained through observations (including living together in traditional houses), unstructured interviews with homeowners in the phenomenon of imitation and local residents, and Focus Group Discussions (FGD) with the specificity of young (unmarried) and adolescent participants in the research location. The involvement of the younger generation is one of the things recommended in the Action Agenda for the *Piagam Pelestarian Pusaka Indonesia* (PPP1, 2003). The current young generation has a role to act as a cultural guardian which in turn is expected to pass it on to future generations (Wijesuriya, 2010). Thus, it becomes relevant to get their views on the conservation of the vernacular heritage they have today.

The discussion begins with a brief overview of the Dokan Cultural Village and the Karo traditional house, then is followed by a theoretical elaboration of mimesis-semiotics and ends with an example of its application in research. The theoretical elaboration of mimesis-semiotics uses three main theories, namely the theory of triangular desire (Girard, 1965), the basic dimensions of mimesis (Maran, 2003), and the theory of spatial codes (Tchertov, 2019). This elaboration produces a conceptual diagram of the mimesis-semiotics method which involves the interrelated relationship between Subject-Model-Object. The Subject-Model-Object relationship will be shown schematically in its application to research.

Findings and the Discussion:
Dokan Cultural Village and Karo Traditional House

The Dokan Cultural Village is located in the Merek District, Karo Regency, North Sumatra Province, Indonesia (Fig. 1). This village is one of the residential areas of the Karo ethnic group. The Karo ethnic group is one of the eight ethnic groups in North Sumatra. In the past, Karo ethnic villages were dominated by traditional houses and buildings. Dokan village itself initially had 15 traditional houses (Fig. 2), but currently only 5 traditional houses remain (Fig. 3). It is called a traditional house because from the beginning, its preparation, construction, until its occupancy is based on customs and rituals which are a combination of the *perbegu* belief system and the kinship system called *sangkep nggeluh*.
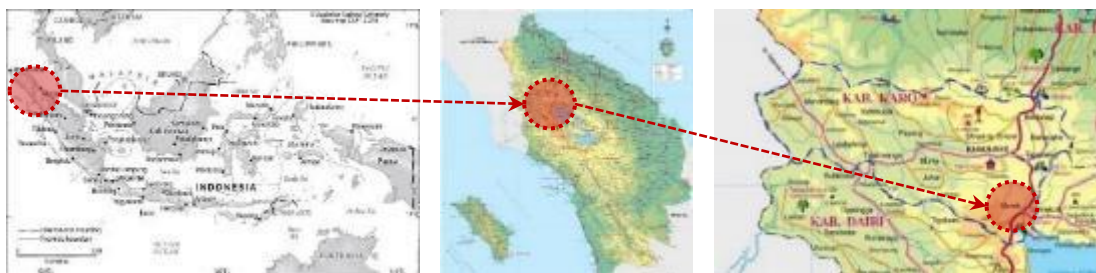

Fig. 1: Location of Dokan Cultural Village
Source: http://www.big.go.id/peta-provinsi

Perbegu is a belief system that accepts in the existence of spirits, both spirits that are in Nature, and the spirits of people who have died. While *sangkep nggeluh* is a kinship system of the Karo people which was formed due to marriage and birth. The elements in *sangkep nggeluh* consist of *anak beru* (the clan group who took the wife), *kalimbubu* (the clan group who gave the wife), and *senina* (the family or those who are related by blood). The center of *sangkep nggeluh* is *sukut*, which is a certain individual/family/clan, which is surrounded by *anak beru* (Prinst, 2014).
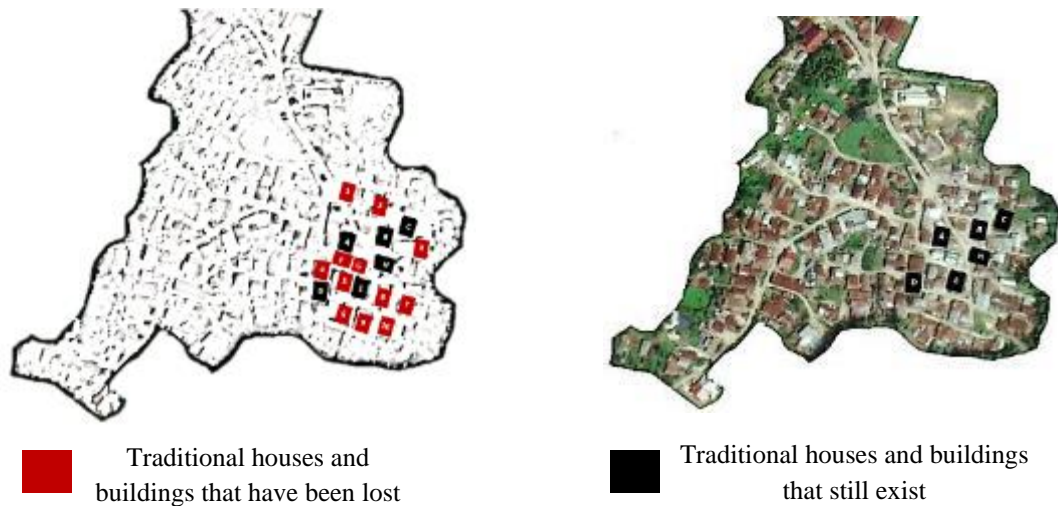
Traditional houses and buildings that have been lost	Traditional houses and buildings that still exist

Fig. 2: Illustration of the existence of the Karo traditional house in Dokan
until 1950 (left) and the current situation (right)
Source: Map taken from Google Earth

The Karo traditional house is a type of collective dwelling that can be inhabited by four, eight, or twelve, up to a maximum of twenty-four families. But the type that is generally built is for eight families, and it is called the *si waluh jabu* house. *Waluh* means eight, while *jabu* can be interpreted as home or family. The composition of the traditional house forms is dominated by the monumental roof shape and is interpreted as the world above, which is the abode of the gods and the ancestral spirits of the owners of *jabu*. While the space for living is interpreted as the middle world, and the lower part which is about 2 meters from the middle world is called the underworld, a place for pets.

Rumah Mbaru   *Rumah Tengah*   *Rumah Mbelin*   *Rumah Sendi*   *Rumah Ketek*

Fig. 3: View of the Dokan Cultural Village and the position of the Karo traditional house (*Rumah Mbaru* is at the left of the *Rumah Tengah*, not shown in the big picture).
Source: Author

Sangkep nggeluh plays a role in the spatial organization of *jabu*, which regulates the position of families who will occupy *jabu* based on their social status in *sangkep nggeluh*. Fig. 4 shows the relationship between the composition of the house form of the *waluh jabu*, the diagram of the *sangkep nggeluh* kinship system and the spatial organization of the traditional

house based on the *sangkep nggeluh*. The Karo traditional house also has a wealth of ornamentation that can be observed on the outside of the walls and roof of the house. In addition to functioning as a decoration (object-functional code), this ornamentation has a symbolic meaning (social-symbolic code) as a guardian of the house from negative forces that come from outside. Nowadays, this ornamentation has additional symbolic meaning as a marker of Karo ethnic identity.
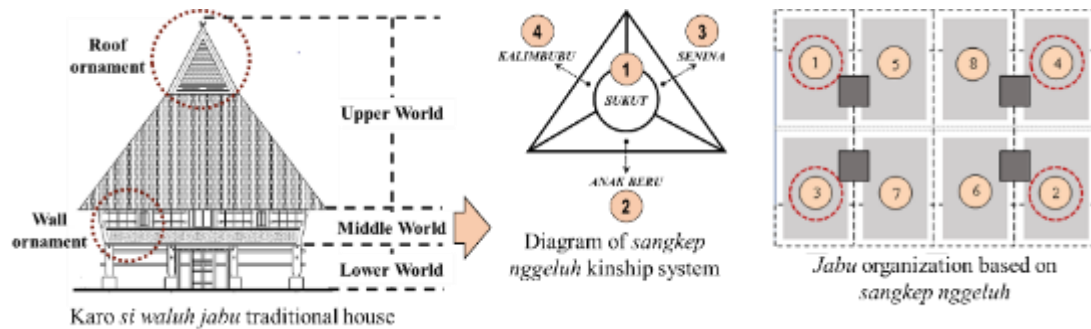

Fig. 4: Karo *si waluh jabu* traditional house and its relationship with *sangkep nggeluh* in the spatial organization of *jabu* at dwelling space (middle world).
Source: Author

The intervention of the Dutch colonial government in the Karo region in 1904 brought many fundamental changes in the life of the Karo people. In addition to promoting Christianity which was brought by missionaries since 1890 (Steedly, 1993), it also had an influence on vernacular architecture in Indonesia, especially in terms of cleanliness, comfort, security, use of money in building houses, specialization of tasks in the construction process, and the inclusion of new dwelling materials and types (Nas, 1998). This whole process has had a significant impact on the transition from the collective to the individual form of dwelling, and from traditional houses to contemporary dwellings. Fig. 5 shows the changes in the form of dwellings that have developed since the 1950s, replacing damaged traditional houses.

A. 1950-an   B. 1970-an   C. 1990-an   D. 2021

Fig. 5: Contemporary dwelling that is evolving to replace traditional house
Source: Author

The interesting thing found in the change of the form of the dwelling is that the expression of *sangkep nggeluh* in traditional houses takes different forms in individual dwellings, namely in the form of a spacious living room and kitchen. The spatial expression of *sangkep nggeluh* in individual dwellings can be read during small-scale traditional events, where the elements of *sukut*, *anak beru*, *kalimbubu*, and *senina* are present together in their respective positions. Fig. 6 shows a schematic of the position of *sangkep nggeluh* on a house plan and an ongoing traditional event.

This change in dwelling form implies the creation of a contemporary vernacular heritage based on the parameters of community involvement and the continuity of dwelling functions, traditions, and practices. The weakness that can be observed is in terms of the continuity of cultural expression when it is associated with the function of the Dokan as a Cultural Village. The phenomenon of imitation of traditional house ornaments (can be observed

in Fig. 5. D) was then captured positively which led to the idea of a mimesis-semiotic method to fill this discrepancy.
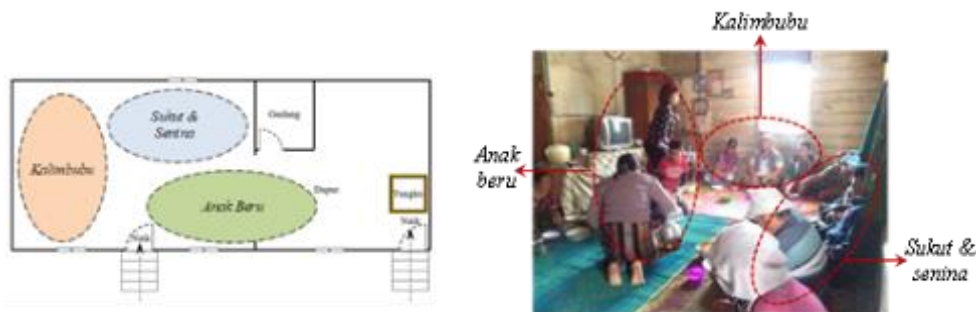

Fig. 6: Schematic of the *sangkep nggeluh* position on the floor plan (left)
and small-scale traditional events (right).
Source: Author

The Mimesis-Semiotics Elaboration

The mimesis-semiotics elaboration begins by constructing a mimesis trilogy diagram, which is drawn from the theory of triangular desires (Girard, 1965). The triangular desire is the substance of Girard's theory of mimesis resulting from his research on the novels of the great authors: Miguel de Cervantes, Gustave Flaubert, Stendhal, Marcel Proust and Fyodor Dostojevsky. Through this triangular desire theory, Girard opens up a reality in a society whose life is based on an imitation system.

According to Girard (in Garrels, 2011), desire in people is almost always a phenomenon involving Subject, Model and Object. Girard (in Potolsky, 2006) builds a theory of desire as something mimetic and conflictual. In an imitation system, the Subject and the Object are not in a direct linear line, but rather in a triangular relationship, i.e., through the point of the mediator. The mediator, which is the Model, is above the line, radiating toward the Subject and Object (Girard, 1965). Because it is the mediator who always determines and selects the objects for the Subject's desires, Girard calls the triangular relationship a triangular desire (Shindunata, 2007).

The triangular desire according to Girard is a structural geometry, a systematic metaphor, which is followed systematically (Girard, 1965). This structural geometry is translated as a mimesis trilogy diagram to show the Subject-Model-Object mimetic triangle relationship (Fig 7). The Model in the mimesis trilogy can be broadly interpreted as a "mimetic reference" (Gebauer & Wulf, 1995: 317), namely as a source of ideas that produce images, correspondences, similarities as well as differences, as well as reflections and replication connections, which are expressed in Objects. Objects can also be interpreted broadly as "mimetic products". According to Aristotle (in Gebauer & Wulf, 1995), mimesis is not merely a re-creation of what already exists (Model), but also introduces changes to the resulting mimetic product (Object). The mimetic product is the result of the Subject's mimetic process, which Maran (2003) calls a "creative subject" because basically humans have the potential for creativity within themselves.

The close relationship between the concept of mimesis and the field of semiotics has been stated by several researchers, which is characterized by the use of the same or similar core concepts in terms and meanings in the two fields of study. Semiosis, namely the process of making meaning (Chandler, 2017), or the process by which something functions as a sign (Morris, 1971) can be assumed to be a concept comparable to mimesis (Bogue, 1991; Maran, 2003; Deacon, 2004; Tchertov 2019). Both semiotic and mimetic processes involve cognitive functions (Donald 1993; Maran 2003; Babuts 2011; Chandler 2017; Tchertov 2019) to interpret meaning (semiotic processes) and create meaningful "signs" (mimetic processes). Thus, it can be stated that meaning is one of the core concepts in mimesis-semiotics elaboration.
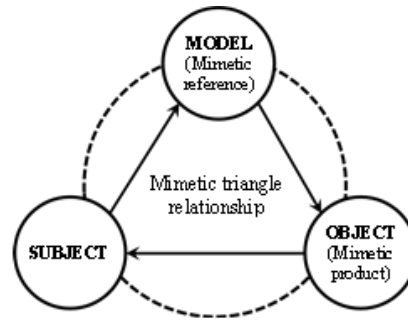
Fig. 7: Mimesis trilogy diagram
Source: Interpreted from Girard (1965) and Gebauer & Wulf (1995)

The descriptive framework that shows the concept of the process in mimesis-semiotic elaboration is implied in the "mimesis semiotic dimension" according to Maran (2003). Maran argues that mimesis is essentially a communicative phenomenon. This descriptive framework is described as the basic dimensions of mimesis (Fig. 8) through the intersection of the vertical axis (semiotic process) and the horizontal axis (mimetic process).
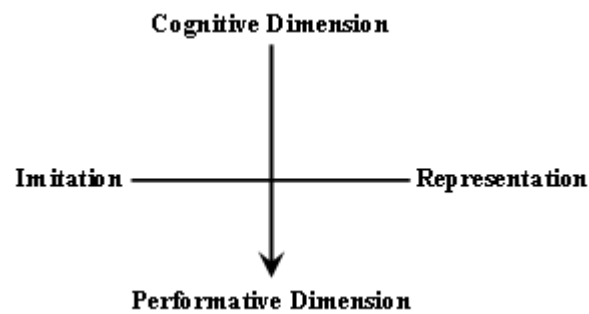

Fig. 8: Basic dimension of mimesis
Source: Maran (2003)

Maran distinguishes the creation of mimesis as the first phase and the acceptance of the results of the creation of mimesis as the second phase. The first phase involves two dimensions, i.e.: 1) the cognitive dimension in which the creative subject recognizes and acknowledges the mimetic potential of an object (or Model in the mimesis trilogy), a particular situation, event, phenomenon, or person; and 2) the practical dimension in which the creative subject expresses, reveals or performs this potential mimetically, through imitation and/or representation. The second phase involves a performative dimension that includes the perception and understanding of the creation that assumes the participation of the second partaker, i.e., the receiver. In this performative dimension, mimesis enters into the act of communication enriched by the artistic and communicative aspirations of the creative subject.

The descriptive framework proposed by Maran has a conformable and complements each other to the idea of the mimesis trilogy. The elaboration is done by combining the mimesis trilogy with the basic dimensions of mimesis (dotted line) to produce a mimesis-semiotics elaboration diagram (Fig. 9). In this diagram, the Subject is the meaning giver and/or the creator of the mimetic product, while the Model and Object are the meaning bearers.

The Subject-Model relationship involves a cognitive dimension in which the Subject recognizes and acknowledges the Model's potential. The relationship between Model and Object is in the practical-performative dimension where the Subject expresses, reveals or performs that potential mimetic, either through imitation and/or representation, into the Object. While the relationship between Object and Subject is in the communicative dimension, which

not only communicates the Object as a representation of the Subject, but also communicates meaning to other subjects who experience the Object. Therefore, in turn, Objects can also function as Models or mimetic references for other Subjects who experience them.
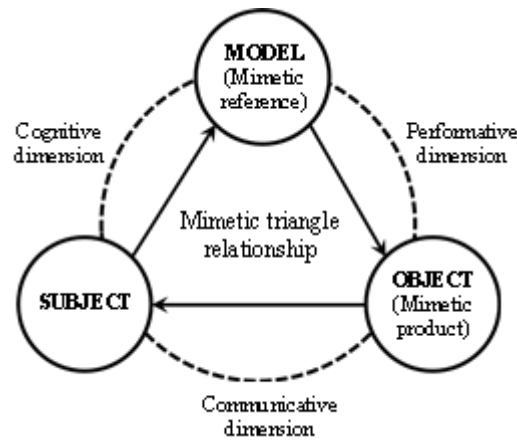

Fig. 9: Mimesis-semiotics elaboration diagram
Source: Author

The next step is to elaborate the mimesis-semiotic diagram with the idea of spatial codes according to Tchertov (2019). The concept of code in architecture has been discussed, among others, by Preziosi (1979) in terms of architectural code. Eco (1997) also discusses architectural code which is broken down into three types of codes, namely technical codes, syntactic codes and semantic codes. Meanwhile, Tchertov (2019) continues Eco's ideas in the context of spatial semiotics.

Tchertov places the semiotics of architecture, urban planning, design, painting, and other fine arts into the application fields of spatial semiotics, where spatial codes interact specifically and form a type of spatial text for each of these fields. To understand codes in architecture, it begins by viewing buildings as spatial objects or spatial texts, or a combination of different spatial texts constructed and interpreted by the norms of the visual-spatial code (Tchertov 2019). Tchertov distinguishes spatial codes into three types of codes, namely architectonic codes, object-functional codes, and social-symbolic codes (illustrated in Fig. 10).
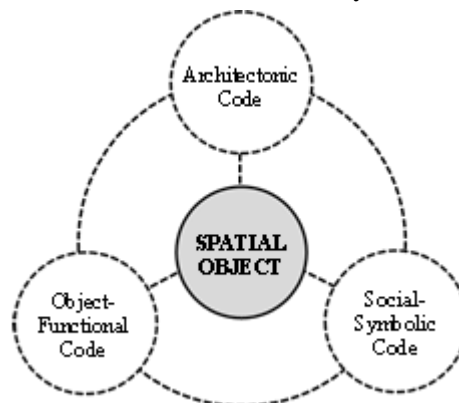

Fig. 10: Illustration of the interweaving of spatial codes in spatial objects
Source: Interpreted from Tchertov (2019)

Architectonic Code (AC): relates to the visually perceived force index, which influences formation, conservation and transformation. AC expressions consist of spatial object attributes, such as size, shape, and orientation to the vertical and horizontal axes, and their arrangement in space.

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Object-Functional Code (FC): deals with the way in which the relationship between a spatial object's form and its instrumental function is expressed. FC is defined completely by cultural norms that define the appearance of significant forms and their dynamic meanings. FC expressions. For example, they can be seen in the form of "language" of clothes, tools, equipment, etc. The visual form that can be reproduced and recognized is the signifier, while the instrumental action scheme with the object being its signified.

Symbolic-Social Code (SC): relates to the order of spatial forms of objects, architectural structures and their locations in space, which indicate the social status of the owners or users, their memberships in a particular social group, to gender, age, profession, certain class, nation, religion and so on. SC includes a semiotic system that assigns a "secondary" or "connotative" meaning to spatial artifacts that have a "primary" or "denotative" meaning, in the FC system. Carriers of meaning in the SC system can be objects of all kinds. For example, clothes, jewelry, furniture, and so on. In architecture, stable forms of architectural structures become means of social symbolism. In addition to their functional purposes, these forms can also express the social role of their users.

The existence of spatial codes can be described conceptually, which is proposed in this paper as a conceptual diagram of the mimesis-semiotics method (Fig. 11). This conceptual diagram can explain what Weizman said, "Architecture is a mimetic practice" (Weizman, 2017: 54), and the opinion of Demetri Porphyrios (in Westfall, 2015: 158), that "architecture is the imitation of the art of building". Architect is a subject who produces architectural designs. But an architect does not depart from tabula rasa because "…. it is simply impossible to create an architectural design…. which does not contain the slightest reference to other works of architecture" (Denslagen, 2009: 169).

In its cognitive dimension, the architect recognizes the potential of the Model (or Models) as a mimetic reference. Then with their creative potential, they express the values and meanings encoded by mimetic references into the object of their design as a new mimetic product. In turn, in the communicative dimension, every architectural Object has the possibility to become a mimetic reference for other Subjects, or subsequent generations. This is a picture of a mimetic process in architecture that keeps repeating itself. Therefore, the mimesis-semiotics method can be referred to as a Model-based or mimetic reference method.
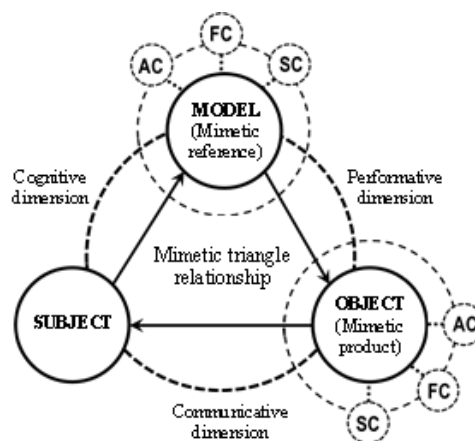

Fig. 11: Conceptual diagram of the mimesis-semiotics method
Source: Author

Application of the Mimesis-Semiotics Method

The application of the mimesis-semiotics method has been carried out through FGDs in a series of research in the Dokan Cultural Village. The development of FGD theory and

practice has inspired creatively designing FGD formats, by combining the use of scenario-based discussions, the use of visual methods, attitude scaling, and questionnaires according to the research objectives (Langford & McDonagh, 2003; Ratcliffe, 2008). The number of FGD participants was thirteen, consisting of teenagers and unmarried young people, which were divided into 6 small groups. Of these thirteen participants, six are residents of traditional houses, while the other seven only visit or stay overnight because of their family relationships.

The FGD format consisted of four core questions, namely: 1) attitude scaling towards the Karo traditional houses using the Semantic Differential Scale; 2) feelings they have (likes and dislikes) towards the Karo traditional houses; 3) aspirations for the desired future house; and 4) participants' views on the conservation of the Karo ethnic culture. From these four core questions, the mimesis-semiotics method is applied to question number 3 to get an idea of the possibility of preserving vernacular living heritage based on repeated spatial codes. Fig. 12 shows the conceptual diagram of the mimesis-semiotics method and the schematic of its application.

Fig. 12: Schematic of applying the mimesis-semiotics method
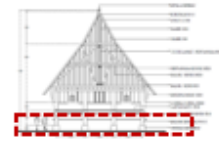**Source:** Author

In this scheme, the Subjects are FGD participants and function as carriers of Karo ethnic culture. They are positioned as subjects who have cultural experience (both inside and outside their culture) and the cognitive ability to give an appreciation of, and a picture of, the future dwelling they desire. To facilitate the description, the subject is given several possible residential models that are representative (not decisive) and can be chosen as desired. The first model represents the Karo traditional house as an early model of Karo's vernacular heritage. The second to sixth models represent contemporary dwellings with variations, i.e.: applying many Karo ornaments (Model 2); only applying roof ornaments (Model 3); only applying wall ornaments (Model 4); applying traditional styles from other ethnic groups in Indonesia (Model 5), and contemporary dwelling in general (Model 6).

The results obtained in this section indicate that the residential model no. 4 represents the most likely to be chosen (8 participants). Three participants chose number 3; one participant chooses number 2; one participant chose number 6. This result implies individual freedom to make cultural choices which at the same time reflects the collective meaning based on repeated spatial codes, in the form of wall and roof ornament elements. Repeated spatial code means a certain spatial code from the mimetic reference selected repeatedly by the FGD participants.

To identify the repeated spatial code, it is necessary to parse the spatial code from the given mimetic reference. The decoding of the spatial code uses the tabulation method based on the segmentation of the Karo traditional house as an early vernacular heritage. Referring to Fig. 9, this segmentation consists of the upper segment, middle segment, lower segment, and ornamentation segment. Table 1 briefly shows the tabulation of decoding the spatial code of the Karo traditional house. The same pattern is applied to contemporary vernacular residential models to get an idea of the changes or transformations that occur.

Table 1: Tabulation of decoding the spatial code of the Karo traditional house
Source: Author

Segmentation	Architectonic Code (AC)	Object-Functional Code (FC)	Social-Symbolic Code (SC)
Upper segment		• As a cover and protector of the house • As a place to store tools and firewood	• The symbol of the upper world, is sacred and is considered the abode of the spirits of the ancestors and the gods.
Middle segment		*JABU:* • As a residential space without partitions consisting of 8 *jabu* for 8 families • *BILIK:* • As a bedroom for husband and wife, a place to store valuable objects and a place (*para negeng*) to give offerings to their ancestors • *DAPUR:* a cooking place where one kitchen is used by two jabu side by side • *TURE,* Function as: terrace of the house; a place where women and children mingle; a place where girls meet their male friends; at night it is used as a toilet	• *JABU:* A symbol of the middle world and as a representation of the sangkep nggeluh kinship system • *BILIK:* Symbol of privacy in domestic/marriage life; and the *para negeng* symbolize respect and offerings to their ancestors • *DAPUR:* The five furnace stones symbolize the *merga si lima* in the bond of *sangkep nggeluh* • *TURE:* As a barrier and intermediary between the outer-inner world and the lower-middle world
Lower segment		As a place to raise livestock and dispose of manure from *ture*	Lower world symbol
Ornamentation segment		TANDUK KERBAU As a roof ornament	As a symbol of fertility and worship, and offerings to gods
		AYO As *jilé-jilé* (decoration)	Describe the nature of its inhabitants
		PENGERET-RET As a fastener for boards and wall ornaments	As the personification of the figure of a shaman who is able to protect the occupants of the house from disease and evil forces; as a symbol of prosperity
		BENDI-BENDI 1) As a door handle to enter the house; 2) in the past it was also used for women who live in the house as a handle when giving birth; 3) as an ornament.	As a repellent to evil
		TAPAK RAJA SULAIMAN As *jilé-jilé* (decoration)	Symbol of magic, majesty and repellent to evil
		EMBUN SIKAWITEN As *jilé-jilé* (decoration)	Symbol of prosperity and beauty

Based on the tabulation of spatial codes, FGD results, and interviews, it appears that the most likely vernacular house to take place in the future is the type of contemporary vernacular dwelling with an individual dwelling architectural code. To create continuity with the heritage of the Karo traditional house as a conservation effort, it can be done by applying a functional-object code in the form of roof ornamentation (*tanduk kerbau* and *ayo*) and wall

ornamentation (*pengeret-ret, tapak Raja Sulaiman*, and *embun sikawiten*) on the dwelling facade. The changes in meaning that occurs in the social-symbolic code show the expansion of meanings towards self-symbol expression in a cultural context; expression of ethnic identity; and support for cultural values, both transcendental (occult powers) and immanent, such as openness, kinship, acceptance, and reflecting on *sangkep nggeluh*. The results obtained are indeed only an illustration of the possibilities seen from the perspective of heritage conservation. Nevertheless, from the point of view of pragmatism, the idea of what ought to be done can be seen as a substitute for direct action (Dewey 1933).

Conclusions

This paper concludes that the repeated spatial codes are the core of research findings that can be recommended to support the conservation of Karo's vernacular heritage. In this context, the effectiveness of the application of the mimesis-semiotics method are as follows:

1) Oriented to the role of the subject as a carrier of culture and part of the "core community", which has a similar function to the "architect" as the creator of contemporary vernacular heritage. The emphasis on the role of the subject becomes important because the continuity of heritage depends on the active efforts of the subject to preserve it.

2) Oriented to the model or mimetic reference. The mimetic reference was not chosen randomly or haphazardly, but was chosen because in its cognitive dimensions, the subject gave meaning to the mimetic reference he chose. Furthermore, through the performative dimension, the subject's creativity gets channelled to create mimetic products. Therefore, architectural forms can always be traced to their meaning based on the mimetic reference chosen by the subject who designed them. This can be traced through the communicative dimension that connects the object to the subject of its creator.

3) Oriented to the creating of object or mimetic products. The conservation of vernacular heritage does not only care for and repairing the remnants of the past that still remain, but also pay attention and support to the changes that occur. Therefore, the idea of applying ornamentation is a support for the continuity of Karo vernacular traditions and practices, as well as support for the function of Dokan as a Cultural Village.

Based on this conclusion, it can be stated that the mimesis-semiotics method is a method that protects cultural meaning, respects the role of the core community, and ensures the continuity of traditions and practices of vernacular heritage, while respecting the changes that occur. Thus, the denial of mimesis is the same sense as the denial of the conservation of cultural meaning and human cognitive dimensions.

Author's Contribution

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References
Alawsey, W.S. & Al-Dulaimi, H.A. (2020) 'Architectural mimetism between heritage and technological advancement', *IOP Conf. Series: Materials Science and Engineering, 671*. DOI:10.1088/1757-899X/671/1/012128

Awad, J. & Boudiaf, B. (2020) 'Re-using heritage elements in new buildings: cases from the United Arab Emirates' *WIT Transactions on The Built Environment, vol. 197*. DOI:10.2495/IHA200031

Babuts, N. (2011) *Mimesis in a Cognitive Perspective,* New Brunswick and London: Transaction Publishers.

Barassi, S. (2012) 'The modern cult of replicas: A Rieglian analysis of values in replication', *Tate Papers*, available at: http://www.tate.org.uk/research/tateresearch/ tatepapers/07autumn/baras… accessed on 9th March 2022.

Bogue, R. (1991) 'Introduction', in Bogue, R. (ed.) *Mimesis in Contemporary Theory an Interdisciplinary Approach, Vol. 2: Mimesis, Semiosis and power,* Philadelphia/Amsterdam: John Benjamin Publishing Company, pp. 1-12.

Brumann, C. (2007) 'The legitimacy of imitation in Kyoto's townscape debates', in R. Cox (ed.), *The culture of copying in Japan: Critical and historical perspectives,* Cox, R. (ed.), London & New York: Routledge.

Brumann, C. (2017) 'How to be authentic in the UNESCO World Heritage System: Copies, replicas, reconstructions, and renovations in a global conservation arena', in C. Forberg & P.W. Stockhammer (eds.), *The transformative power of the copy*, Heidelberg University Publishing.

Chandler, D. (2017) *Semiotics the basics*, 3rd edition, London & New York: Routledge.

Creswell, J.W. (2014) *Research Design – Qualitative, Quantitative, and Mixed Methods Approaches*, 4th edition, Los Angeles-London-New Dehli-Singapore-Washington DC: SAGE.

Deacon, T.W. (2004) 'Memes as signs in the dynamic logic of semiosis: beyond molecular science and computation theory', in Wolff, K.E. et al. (eds.): *ICCS* 2004, LNAI 3127, Springer, pp. 17-30.

Denslagen, W. (2009) *Romantic modernism: Nostalgia in the world of preservation,* Amsterdam University Press.

Dewey, J. (1933) *Human nature and conduct: an introduction to social psychology*, New York: The Modern Library.

Djabarouti, J. (2021) 'Imitation and intangibility: postmodern perspectives on restoration and authenticity at the Hill House Box, Scotland', *International Journal of Heritage Studies*, available at: https://doi.org/10.1080/13527258.2021.1883716, accessed on 6th March 2022.

Domenig, G. (2008) 'Variation in Karo Architecture', in Schefold, R., Nas, P.J.M., Domenig, G. & Wessing, R. (eds.) *Indonesian Houses Vol. 2: Survey of Vernacular Architecture in Western Indonesia*, Leiden: KITLV Press.

Donald, M. (1993) *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition,* Cambridge, Massachusetts, London, England: Harvard University Press.

Eco, U. (1997) 'Function and Sign: The Semiotics of Architecture', in Leach, N. (ed.) *Rethinking Architecture: A reader in cultural theory,* London and New York: Routledge.

Erarslan, A. (2019) 'A contemporary interpretation of vernacular architecture. The architecture of Nail Çakirhan, Turkey', *Journal of Built Environment, vol.7*, no.1, DOI: 10.2478/jbe-2019-0001

Garrels, S.R. (2011) 'Mimesis and Science: An Interviews with René Girard', in Garrels, S.R. (Ed.) *Mimesis and Science: Empirical Research on Imitation and the Mimetic Theory of Culture and Religion.* East Lansing, Michigan: Michigan State University Press.

Gebauer, G. and Wulf, C. (1995) *Mimesis: culture, art, society* (D. Reneau, Trans.). Berkeley/Los Angeles/London: University of California Press.

Girard, R. (1965) *Deceit, Desire, and the Novel: Self and Other in Literary Structure.* (Y. Freccero, Trans.). Baltimore, Maryland: The Johns Hopkins Press.

Girard, R. (1987) *Things Hidden since the Foundation of the World,* (S. Bann, Book II & III and M. Metteer, Book I, Trans.). California: Stanford University Press.

Glendinning, M. (2013) *The conservation movement: a history of architectural preservation antiquity to modernity,* London & New York: Routledge.

Groat, L. dan Wang, D. (2013) *Architectural Research Methods,* 2nd edition, Hoboken, New Jersey: John Wiley & Sons.

Hanan, H. (2011) 'Sustainability of the traditional form of Batak house in Samosir Island' available at: http://www.irbnet.de/daten/iconda/CIB_DC22865.pdf, accessed on 12th October 2018.

ICOMOS (1994) *The Nara Document on Authenticity*. Available at: <https://www.icomos.org/charters/nara-e.pdf> accessed on 14th April 2022.

ICOMOS (1999) *Charter on the Built Vernacular Heritage*, available at: https://www.icomos.org/   charters/vernacular_e.pdf, accessed on 14th April 2022.

Jokilehto, J. (2003) *A history of architectural conservation*, Oxford: Butterworth Heinemann.

Jokilehto, J. (2006) 'Considerations on authenticity and integrity in world heritage context', *City & Time,* vol.2, no. 1, available at: http://www.ct.ceci-br.org.

Khalaf, M. (2016) 'Urban heritage and vernacular studies: Parallel evolutions and shared challenges', *ISVS e-journal*, vol. 4, no. 3, pp. 39-51.

Kipp, R.S. (1996) *Dissociated Identities: Ethnicity, Religion, and Class in an Indonesian Society*. The University of Michigan Press, available at: https://books.google.co.id/books?id=b8OFC6RDKk0C&pg

Labadi, S. (2010), 'World heritage, authenticity and post-authenticity', in *Heritage and globalisation.* <https://www.academia.edu/516844/ World_ Heritage_authenticity_and_post-authenticity> accessed on 11th March 2022.

Langford, J. dan McDonagh, D. (eds.) (2003) *Focus Groups: Supporting Effective Product Development,* Taylor & Francis, London and New York.

Lardinois, S., Gonçalves, A.P.A., Matarese, L., & Macdonald, S. (Eds.) (2015) *Contemporary architecture in the historic environment: An annotated bibliography,* Los Angeles: The Getty Conservation Institute.

Lilja, M. & Baaz, M. (2019) Heritage temples, replicas, and repetitions: theorizing the significance of repeats as resistance, *International Journal of Politics, Culture, and Society*, vol.32, pp. 323–336. https://doi.org/10.1007/s10767-018-9296-8

Lim, W.S.W. & Beng, T.H. (1988) *Contemporary vernacular, evoking traditions in asian architecture,* Singapore: Select Books.

Lowenthal, D. (2015) *The past is a foreign country* (Revisited), New York: Cambridge University Press.

Maran, T. (2003) Mimesis as a phenomenon of semiotic communication, *Sign Systems Studies 31*(1), 191-215. Tartu Ülikooli Kirjastus.

Morris, C. (1971) *Writings on the General Theory of Signs,* Paris: Mouton, The Hague.

Nas, P. J. M. (1998) The house in Indonesia; Between globalization and localization, in *Bijdragen tot de Taal-, Land- en Volkenkunde, Globalization, localization and Indonesia* (154, No. 2, pp. 335-360). Leiden

Ndoro, W. & Wijesuriya, G. (2015), 'Heritage management and conservation: From colonization to globalization', in L. Meskell (ed.), *Global Heritage: A Reader*, 1st Edition, John Wiley & Sons, Inc.

Potolsky, M. (2006) *Mimesis*, New York: Routledge.

Poulios, I. (2010) 'Moving beyond a values-based approach to heritage conservation', *Conservation and Management of Archaeological Sites*, vol. 12, no. 2, pp. 170-185. DOI 10.1179/175355210X12792909186539

Poulios, I. (2014) 'Discussing strategy in heritage preservation: Living heritage approach as an example of strategic innovation', *Journal of Cultural Heritage Management and Sustainable Development,* vol. 4, no. 1, pp. 16-34. DOI 10.1108/JCHMSD-10-2012-0048

PPPI (2003) Piagam Pelestarian Pusaka Indonesia, available at: https://www.icomos.org/images/DOCUMENTS/Charters/indonesia-charter.pdf accessed on 21st April 2021.

Prajnawrdhi, T.A. (2020) 'Transformation versus preservation of vernacular architecture in Bali: A lesson from Bali Aga Villages' in G.A.M. Suartika & J. Nichols (eds.) pp. 157-171, *Reframing the vernacular: politics, semiotics, and representation*, Springer.

Preziosi, D. (1979) *Architecture, Language, and Meaning: The Origins of the Built World and its Semiotic Organization,* Paris and New York: Mouton Publishers, The Hague.

Prinst, D. (2014) *Adat Karo*, Medan: Bina Media Perintis.

Purbadi, Y. D., Lake, R. C., & Arinto, F. X. E. (2020) 'The symbolic regionalism on the architectural expression design of Kupang Town-Hall, *Journal of Design and Built Environment,* vol. 20, no. 3, pp. 71-84, avalilable at: https://doi.org/10.22452/jdbe.vol20no3.5

Putnam, H. & Putnam, R. A. (2017) *Pragmatism as a way of life: the lasting legacy of William James and John Dewey*, MacArthur, D. (ed.). Cambridge, Massachusetts & London, England: The Belknap Press of Harvard University Press.

Ratcliffe, J. (2008) 'Built environment futures research: the need for foresight and scenario learning', in Knight, A. & Ruddock, L. (eds.) *Advanced research methods in the built environment,* Wiley-Blackwell.

Rieger-Jandl, A. (2016) 'Recent Changes in Architectural Identity', in Doubrawa, I., Lehner, E. & Rieger-Jandl, A. (eds.) *Village Architecture in Sumatra, A comparative study: Toba Batak, Karo Batak, Minangkabau*. Vienna, Austria: IVA-ICRA.

Shannon-Baker, P. (2016) 'Making Paradigms Meaningful in Mixed Methods Research', *Journal of Mixed Methods Research,* vol. 10, no. 4, pp. 319-334. SAGE.

Shindunata (2007) *Kambing Hitam – Teori René Girard,* Jakarta: PT Gramedia Pustaka Utama.

Sibeth, A. (1991) *The Batak: Peoples of the Island of Sumatra,* London: Thames and Hudson Ltd.

Singarimbun, M. (1989) 'Rumah adat Karo dan perubahan sosial', *Humaniora,* vol. 1, pp. 99-112, available at: https://doi.org/10.22146/jh.2261, accessed on 3rd November 2017.

Solikhah, N. & Fatimah, T. (2020) 'Lesson learned from vernacular architecture toward sustainable human settlements: Insights from Praigoli Village, West Sumba, Indonesia', *ISVS e-journal*, vol. 7, no. 4, pp. 37-52

Steiner, C. (2010) 'From heritage to hyper-reality? Tourism destination development in the Middle East between Petra and the Palm', *Journal of Tourism and Cultural Change*, vol. 8, no. 4, pp. 240-253. DOI: 10.1080/14766825.2010.521245

Taussig, M. (1993) *Mimesis and alterity: A particular history of the senses*, New York & London: Routledge.

Tchertov, L. (2019) *Signs, Codes, Spaces, and Arts: Papers on General and Spatial Semiotics,* United Kingdom: Cambrige Scholars Publishing.

Triwardani, R. & Rochayanti, C. (2014) 'Implementasi kebijakan desa budaya dalam upaya pelestarian budaya lokal', *Reformasi*, vol. 4, no. 2, pp. 102-110 available at: https://www.researchgate.net/publication/282295229, accessed on 8th February 2022.

Vellinga, M. (2003) 'The use of houses in competition for status. The case of Abai Sangir (Minangkabau)', in R. Schefold, P.J.M. Nas, & G. Domenig (eds.) *Indonesian Houses Vol. 1: Tradition and transformation in vernacular architecture,* KITLV Press, Leiden.

Vellinga, M. (2006) 'Engaging the future', in L. Asquith & M. Vellinga (eds.), *Vernacular Architecture in the Twenty-First Century,* Taylor & Francis, London and New York.

Vitasurya, V.R., Pudianti, A. & Rudwiarti, L.A. (2016), 'Faktor-faktor yang mempengaruhi keputusan pelestarian bangunan tradisional di desa wisata Brayut Yogyakarta', *Seminar Nasional SCAN#7* "The Lost World" available at: http://e-journal.uajy.ac.id/12593/

Weizman, I. (2017) 'Mimesis and copyright, or the rights of copies', in E. von Engelberg-Dočkal, M. Krajewski, & F. Lausch (eds.) *Mimetische Praktiken in der neueren Architektur,* pp. 54-63.

Westfall, C. W. (2015) *Architecture, liberty and civic order*, England: Ashgate.

Widiastuti, I & Kurniati, F. (2019), 'Modernization and vernacularity in the tradition of Minangkabau architecture of the West Sumatra in Indonesia", *ISVS e-journal*, Vol. 6, No. 2.

Wijesuriya, G. (2010) 'Conservation in context', in Falser, M.S., Lipp, W. & Tomaszewski, A. (eds.) *Conservation and preservation: Interactions between Theory and Practice In memoriam Alois Riegl (1858-1905),* , Edizioni Polistampa, pp. 233-247

Wijesuriya, G. (2015) *Living heritage: A summary*, ICCROM, available at: https://www.iccrom.org/ wp-content/uploads/PCA_Annexe-1.pdf, accessed on 4th April 2022.

Wulf, C. (2016) 'The creation of body knowledge in mimetic processes', in G. Etzelmüller & C. Tewes (eds.), *Embodiment in Evolution and Culture*, Mohr Siebeck GmbH and Co. KG. <https://www.jstor.org/stable/j.ctt2250vc6.18> accessed on 8th December 2020.