

Transformation of *Catuspatha* in Bali Indonesia: Alteration Ideas from Empty Space to Aesthetic Element of City

Ngakan Ketut Acwin Dwijendra^{1*}, Frysa Wiriantari², Desak Made Sukma Widiyani³, Anak Agung Ayu Sri Ratih Yulianasari⁴

¹Faculty of Engineering, Udayana University, Bali, Indonesia. ORCID id: 0000-0003-0070-4254. E-mail: acwin@unud.ac.id

^{2 3 4}Faculty of Engineering, Dwijendra University, Bali, Indonesia

Abstract

Catuspatha in Bali is interpreted not merely as a junction or crossroad but a crossroads that have their own sacred values and meanings and are equated with the great crossroads. At the time of the kingdom in Bali *catuspatha* was the center of the royal capital and meant the center of the country. Meanwhile, since the Dutch occupation in Bali, there has been a tendency to place aesthetic elements as the focal points or landmarks of a city at the center of a *catuspatha* and this trend was continued by the republican government during independence. The purpose of this study is to uncover the concept of *catuspatha*, the transformation of concepts, changes in the expression of *catuspatha* from the kingdom to independence and the impact of the changes. To achieve this goal, an observation was carried out on nine *catuspathas* of royal heritage in the Bali region with document research and reconstruction through interviews with priests of Shiva, Buddhism, Bachelors, and other elements as well as textual observations in the form of literature, research results, and ancient chronicles. The results obtained from this study indicate a change in the idea where the view of the center of the *catuspatha* as an empty space turned into an aesthetic element of the city that acts as a traffic sign and also as a city orientation. In the political context, there is an impact on the integrity of traditional values in the *catuspatha* where the symbols of royal power were expressed in the castle's structure. The central facilities of the kingdom, are transformed into a mayor's office with subordinate units. In the context of transportation technology, traffic lights are also expressed to regulate the flow of traffic on the *catuspatha*.

Keywords: *catuspatha*, transform, space, city, element

Introduction

The term *catuspatha* comes from Sanskrit *catus* which means four and *patha* which means road, so that when combined it means a four-pronged or four-way intersection. In Bali, *catuspatha* means not just a junction or intersection but a junction (crossroads) which has its own sacred value and meaning and is equated with a great crossing. Thus every intersection in Bali is an opportunity, but not all positions are great opportunities. In the days of the kingdom in Bali *catuspatha* was not just a sacred intersection but was also related to its status as the center of the royal capital. As the center of the capital, and the meaning of the capital is the center of the country's territory, the *catuspatha* is the center of the state. The country in Balinese culture imbued with Hinduism is a small cosmos (microcosm) which was thought to be a replica or miniature of the universe (macrocosm). In its position as the center of the state, the *catuspatha* contains elements: castle as a palace or center of government and concurrently as a house of office; the market as a trading center or place of

transaction; wantilan building as a center for culture or entertainment especially chicken cockfighting (*tajen*); and public open space used for recreational parks, which sometimes are equipped with a long open building (*bale lantang*).

The results of a study on Architectural Power and Transformation (Putra, 1988) show that not all central capital cities in Bali have the four city center facilities as mentioned above. This relates to the status of power of the ruler who lives in a castle in the area of a *catuspatha* as the center of the city. There is *catuspatha* as the center of the king's city of a country and there is *catuspatha* which is the administrative center of the subordinate territory of the country, and there is *catuspatha* in the village. The study shows that there is a correlation between the type of *catuspatha* and the status of the powers of regional leaders who occupy the castle as one of the elements in the *catuspatha*.

After Bali was conquered by the Majapahit Royal army in 1343, the leaders of the Majapahit army and their soldiers almost all settled in Bali to maintain security and subsequently support the *Dalem Sri Kresna* government of *Kepakisan* as the Duke of *Majapahit* Government for the Bali Region (Mirsha et al., 1986, Agung 1989). Since then many palace buildings have been built, generally located in one corner of a *catuspatha* in the duchy areas of Bali. The construction of royal facilities in the *catuspatha* was steadily increasing as an attribute of power after the subordinate districts of Bali broke away from Gelgel's power and stood as small sovereign states.

The castle as a central facility of government power was found to take a position in the northeast, in the southwest, and in the northwest of the center of the *catuspatha*. Since the Dutch occupation of countries in Bali, there has been a tendency to place aesthetic elements as the focal points or landmarks of a city at the center of a *catuspatha* and this trend was continued by the government at the time of independence, as can be seen from the present four-face sculpture (*Catur Muka*) in the middle of Denpasar City *catuspatha*, *Kanda Pat Sari* statue in the middle of Semarapura City *catuspatha*, statue of four dragons with bells in Singaraja *catuspatha*, and puppet statue in *Negara catuspatha*. In the construction of new district civic centers in Bali, it still implies efforts to maintain the placement of the regent's office within the framework of the *catuspatha* pattern both in the *catuspatha* inheritance or in the newly built central government area, but the facilities at the king's city center are already not applied as a whole.

Research and special writings that reveal about *catuspatha* in Bali are still very limited. Some information about the concept of *catuspatha* are found in the ancient manuscripts namely *Lontar Eka Pratamaning Brahmana Sakti Bujangga* and *Lontar Batur Kelawasan* while the existence of *catuspatha* in the past in Bali are found, among others, in Gegevens Betreffende De Zelfstandige Rijkjes op Bali (1906), Tan (1966), Geertz (1980), Dumarcay (1991), Putra Agung (1996), Putra (1998), Nordholt (1996). *Catuspatha* patterns as spatial centers of the kingdom were used during the Majapahit Kingdom in Java in the 14th century (Dumarcay 1991). Therefore this study aims to uncover how the concept of *catuspatha* was transformed, what changes occurred both from the period of work to independence and the impact of these changes.

Research Method

The research method was conducted by observing *catuspatha* in nine cities/regencies in Bali (Denpasar, Badung, Tabanan, Gianyar, Klungkung, Bangli, Karangasem, Buleleng, Jembrana) which are the royal heritage in the Bali region. The method used to see past conditions is the method of document research and reconstruction through interviews. To complete the materials in the form

of concepts, interviews were conducted with relevant sources, consisting of priests (*sulinggih*) from the elements of priests of *Shiva*, *Buddha*, Bachelors, and other elements. In addition to these sources also carried out textual review in the form of literature, research results, and ancient manuscripts.

Literature Review

Heine-Geldern (1982) in the Conception of the State and the Position of the King in Southeast Asia describes how a king placed himself at par with the gods of the celestial ruler or the ruler of heaven residing in the mountains (*meru*) as the center of the universe. The king built the city including the palace in it is a replica of the universe with mountain symbols (*meru*) appearing in the palace or the place of worship of the country at the center of the kingdom. The king in it plays the role of the deity of the small universe, the kingdom (Heine-Geldern 1982, Lombard 1996, Kaler 1982). These cultural values and conceptions continued during the *Majapahit* kingdom in Java and then penetrated Bali. The king as the top of the power hierarchy is reflected in the palace complex as the center of the kingdom. In the Majapahit Kingdom and the extension of its power in Bali, both at the central and regional levels, the great crossroad (sacred) island was the center of the royal capital. In the central government complex, in addition to the palace as the center of power and residence of the king, there are also houses of central terrace officials such as the governors, royal priests, judicial facilities, and worship (Hall 1996, Adhika 2020, Yogantari 2020).

During the *Majapahit* period, Priestess of *Vaishnava* held a *tawur* offering, preceding religious ceremonies (rituals); ceremonies related to the agricultural cycle are highlighted for the intervention of Lord Vishnu (*Sedana*, *Sadhana*, and especially his partner *Sri*) to safeguard and avoid the negative forces of the noetic world. For the Javanese, to carry out *caru* rice offerings, which were held on the ground before a ceremony, was a custom in order to satisfy (*nyomya*) creatures of the underworld so as not to interfere with the course of the ceremony (Belo 1970, Agung 1989, Hall 1996). The same thing also applies in Bali.

The concept of the state and the layout of a castle in the *catuspatha* in Bali is contained in the *Lontar Eka Pretamaning Brahmana Sakti Bujangga*. In this inscription it is mentioned that in developing state administration, there needs to be a combination of taste, because it is a combination of two worlds/nature, namely microcosm and macrocosm (*bhuana alit* and *bhuana agung*), which is realized through the mind as inspiration in an effort to realize prosperity, justice, and harmony of nature. The duty of the *Brahmin Bujangga*, the teacher of all teachers in the real world, is to manifest energy, unite nature, and realize holiness. To organize the kingdom as a place for people to live, it is first necessary to understand the origin of the formation of nature. Nature is formed from thoughts which are manifestations of taste. In nature the four cardinal directions are determined (*catur loka pala*) which are then translated into state chess. Life and death are the manifestations of day and night which also means east and west. The combination of flavors which is the embodiment of the main (highest) and blasphemous (lowest) values is manifested in the north and south directions. All four are found to be round earth symbols and they are manifested by the *catuspatha* (great crossroad) pattern. The center of the *catuspatha* is the center of the world and also the center of the country. The location of the castle as the center of power is determined according to the direction of the wind from the center of this *catuspatha*, not based on the *qibla* of the mountain-sea (*kaja-kelod*) as the main orientation- direction (Putra 1998, Dwijendra 2020).

Related to the laying of the castle, in the *Lontar Batur Kelawasan* mentioned that the position of the castle in the northeast is the main, in the southeast is bad because the country will be destroyed (*gni rurub*), in the southwest is good because the king will be respected (*kweh bakti*),

and in the northwest is good because the king will be social (*dana*). From the two sources above, it can be concluded that the location of the castle is determined from the center of the *catuspatha*, in the northeast and in the southwest is absolutely good, in the southeast is absolutely bad, and in the northwest there is good and bad (See Figure 1).

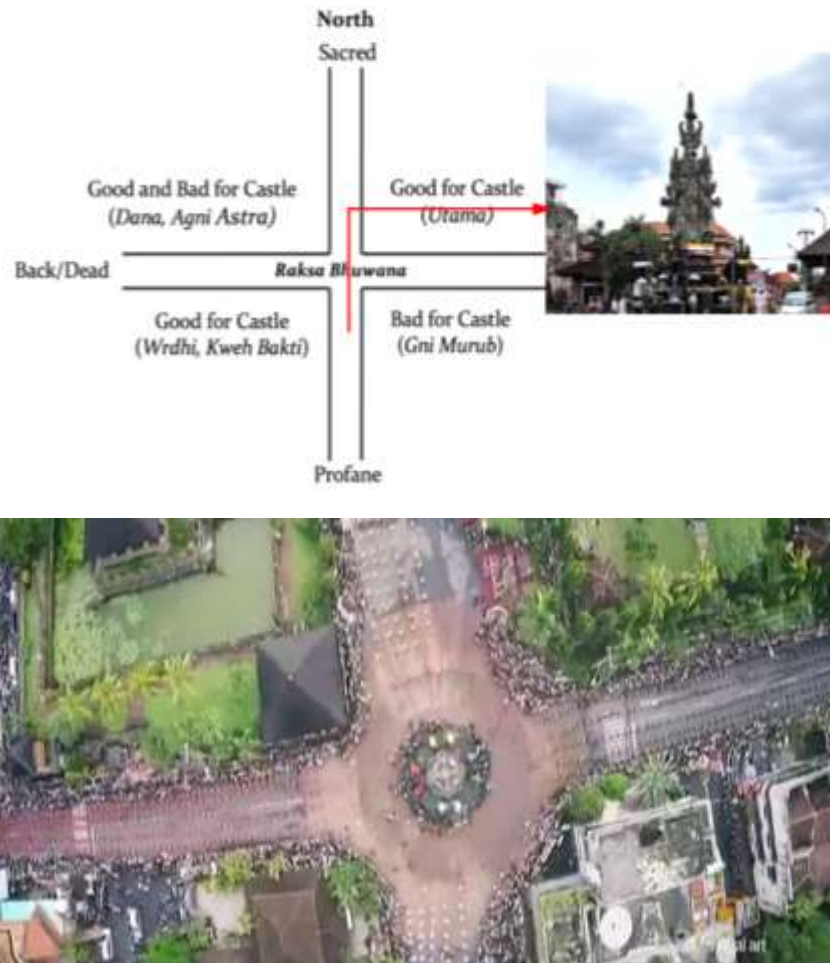


Figure 1: Meaning of Axis and Alternative Layout of Castle in *Catuspatha*

The space formed by the meeting of the four road-forming *catuspatha* (*raksa bhuana*) functions for *tawur* ceremony activities, turning stretchers at the *Ngaben* ceremony, picking up *batara* (*mendak siwi*), *nebusin*, and sometimes to train and improve black magic skills. This space is also played as *natar* (courtyard). The development of *catuspatha* through a sacred process, that is by *bhumi suda* and *pemlaspasan*, is accompanied by burial of means of *pedagingan* (*pemendeman pedagin*), so that a magical energy of the region (state) is realized. In the *raksa bhuana*, it is believed that there are spirits of nature with various names such as *Sang Bhuta Prajapati* (*Kanda Pat*), *Sanghyang Catur Bhuana* (*Tutur Gong Besi*), and *Sanghyang Adi Kala* (*Tattwa Japakala*), all of which are manifestations of the power of creation of *Shiva Mahakala*.

Catuspatha has the basic form of a cross (+). In the Balinese term it is also called the sight of a virgin whose mythology is contained in the *Lontar Catur Bumi*. The ancient Greeks called this virgin look, the term *gammadion*. This virgin appearance inspired cartesian coordinates in mathematics and became the basis of the *swastika*. If the *swastika* is a symbol of the rotation of the

universe, then it appears that the axis of the cross is the symbol of the universe. This wench is also used as an antidote to avoid disaster.

Results and Discussion

The application of the concept of *catuspatha* in the kingdom can be seen as the most obedient and disciplined application compared to those of the later periods. During the colonial period there was no new castle building as the seat of authority of the regional government, as well as during the independence era. If the *catuspatha* pattern is a noble cultural heritage that needs to be preserved as a spatial framework of the central government in the independence period, then the government office can be analogous to a "castle" for the implementation of government.

Based on the *catuspatha* in nine cities/regencies in Bali, four great castles (for the king) are located in the northeast (City of Denpasar, Gianyar, Negara, Karangasem), four great castles are placed in the southwest (City of Tabanan, Semarapura, Singaraja, and Mengwi), and one grand castle is placed northwest of the *catuspatha* (Puri Agung Bangli). At this time, in the independence period, there were nine *catuspathas* inherited from the royal era, four of which (City of Tabanan, Mengwi, Gianyar, and Karangasem) were left blank, without aesthetic elements or elements as landmarks or focal points, and the other five were built with statues, monuments or the like (City of Denpasar, Negara, Singaraja, Bangli, Semarapura) (Moertono 1985, Anderson 1992, Murya 1992).

In addition to the castle in one corner of the *catuspatha*, there are also other facilities such as the market, *wantilan*, and green open space which is equipped with a relatively long open building, the *bale bengong*. The part of the castle which is near the center of the *catuspatha* is the *pelataran* (*palebahan*) *ancak saji* which has a *bale bengong* (*bale tajuk*) in the outer corner. The food court on two sides bordering the road uses a filigree wall with two to three pairs of temple briefly.

During the Dutch rule in Bali, since July 1, 1938, a district-level government pattern was formed, called the *zelfbestuurende landschappen* headed by a *zelfbestuurder* or regional head. The heads of these regions were small "kings" who ruled under the supervision of a Dutch controller (Covarrubias 1956, Wertheim 1960, Wiener 1995, Agung 1989). When Indonesia became independent, the eighth *zelfbestuurende landschappen* became a second level autonomous region and later turned into a district.

During the independence period, the offices of the regent were also established in a District Civic Center. This center shows a tendency still to use the *catuspatha* pattern as the spatial center of the district capital both in the new *catuspatha* (Jembrana, Tabanan, Badung, Lumintang, Gianyar, and Bangli), as well as those which are royal relics (Denpasar, Semarapura, and Bangli before moving to new civic center). However, the Karangasem Regent's Office, the Office of the Regent of Buleleng, the Office of the Governor of Bali, and the Office of the Regent of Badung do not use the *catuspatha* frame. The Karangasem Regent's Office and the Bali Governor's Office are placed in the square pattern as the center of orientation, the Buleleng Regent's Office is placed at the end of the axis/main road, and the Badung Regent's Office is placed in the intermediate zone of the *mandala* in the *trimandala* pattern (Salya 1975, Soebadio 1978, Dwijendra 2020, Nurjani 2020).

The new *Catuspatha* at the administrative center of Jembrana Regency, Tabanan, continues to leave the center as empty space. The placement of the Jembrana Regent's Office as the center of the district government takes a position in the northeast in accordance with traditional norms. However, other city facilities that are traditionally found in the *Catuspatha* area are not fully implemented. *Catuspatha* Jembrana Regent Office has a park but does not have entertainment and

market facilities. The *Catuspatha* of the Tabanan Regent's Office, placed the position of the regent's office in the southeast region which was traditionally of bad value to the Tabanan universe, even three central government facilities were not found in the *catuspatha* area. Existing facilities consist of a hospital in the northeast corner, Pura Dalem in the southwest, and shops in the northwest corner. In Gianyar, the district head's office cannot be said to be inside the *catuspatha* frame because there are other functions (schools and banks) which are at the corner of the *catuspatha* (Frick 1988, Putra 1988, Budiharjo 1995, Dwijenda 2020).

After the Dutch intervention in Bali, changes were made in the *catuspatha* area, especially in the central part of the *catuspatha*, with the construction of bells or aesthetic elements that play a dual role as an orientation. Examples of this case are the construction of bells at the *Puri Denpasar catuspatha* center, and bells at the *Puri Gede Singaraja catuspatha*. Around the center of the *catuspatha* also changes functions and buildings in accordance with the interests of the Dutch government (Soemardjan 1978, Sidemen 1986, Sidemen 1992).

At the time of independence, changes in expression became more widespread, extending to almost every city with the construction of statues or monuments that breathed in Balinese culture imbued with Hinduism, except the *catuspatha* of Puri Gianyar, Tabanan, and Puri Gde Karangasem which remained empty at the center. In Denpasar there was a change in elements from the bells of the Dutch era to the Four Faces Statue (*Catur Muka*). In Bangli there was a change from empty to a four-face statue (*Catur Muka*), which was later changed to *Trimurti*. In Klungkung from empty to shrine then to Statue of *Kandapat Sari*. In Tabanan, since the Dutch colonial period the *catuspatha* had shifted to a place as far as 150 meters towards the south and at the time of independence a kind of monument was built. While in Mengwi, a pillar was built from an empty space, then emptied again before the cremation ceremony of the oldest Castle of Mengwi.

With the change in the power system, the number and density of the population, the means of transformation, and the pattern of population activity, the pattern of shape and dimensions of the *catuspatha* changes. Traditional facilities have also undergone changes such as *wantilan* (traditional community building) turned into other facilities such as offices, recreational parks, and monuments. Public open space turns into the square. The market turned into a cultural park, offices and others (Wiener 1960, Soebadio 1978, Yuda 2000).

In the course of time and the rotation of the universe, the material elements of God's creation both recorded by the human senses (*sekala*) and those not recorded (*niskala*) are likely to experience "defilement" so that they need to be purified and sacrificed to eliminate or suppress the rise of negative evil forces so back harmony occurs between humans, nature, and God. For this purpose, a *yadnya* ceremony is carried out periodically every year on the month of dead love, namely on the day of dredging in the form of a brawl ceremony called a *tawur kesanga* (See Figure 2) (Wikarman, 1998, Putra 1988, Dwijendra 2020).

The development of city elements in any form in the middle of the *catuspatha* has both positive and negative impacts. The positive impact of building bells gives the community time and can also be seen at the same time as the center of attention and also the center of orientation. The Netherlands very cleverly managed to build its image and justification by manifesting *Sanghyang Adi Kala* into the form of a big bell behind the possibility of its hidden agenda to cripple the country's magical energy center (Putra 1988, Putra Agung 1996). The construction of sculptures with nuances of Balinese culture such as statues of gods, rsi, puppet figures, and giants can enhance the aesthetics of the city and support cities with cultural insights.



Figure 2: Catuspatha as a City Landmark and Spiritual Ceremony Activity, Etc. in City Center of Bali

Development of city elements in the center of the *catuspatha* can help safeguard traffic. The construction of hero statues such as in Denpasar City can be used as an element to commemorate heroism and to maintain the spirit of anti-colonialism. The negative impact of the construction of these elements in the middle of the *catuspatha* is the distortion of the placement of facilities and the implementation of religious ceremonial processions that use the media of *catuspatha* and can even shift the implementation of the *kesanga tawur* ceremony to other places such as the square or the new *catuspatha*. Opportunities to rotate the *bade* in rotation (rotating on its axis) cannot be done and must travel around the structure that is in the middle of the *catuspatha*.

Conclusion

In the idea system, there is a change in the idea where the view of the empty center of the *catuspatha* changes into the aesthetic element of the city, besides acting as a sign of traffic as well as orientation. The idea of placing the elements as symbolic expressions of the guardian gods of the city at the boundaries of the city and settlements in all directions of the wind changed to a western pattern by placing aesthetic elements at the center of the *catuspatha*. The placement of aesthetic elements at the center of the *catuspatha* has an impact on the implementation of religious ceremonies that traditionally take place in the *catuspatha*, and must be shifted to another place. New symbols formed such as the four-face statue (*Catur Muka*), the monument, the statue of the statue of Kanda Sari are still not fully understood by certain groups of people.

In the political context there was a change from an aristocratic royal state to a democratic republic where the countries in the group of nations (eight countries) in Bali turned into cities and districts. The symbols of royal power expressed in the castle's arrangement with its royal city center facilities were transformed into the office of the regent/mayor with his subordinate units. This change has an impact on the integrity of traditional values in the *catuspatha*. In the context of transportation technology, the use of motorized vehicles requires road requirements and other traffic requirements compared to the time when the majority of the population only walked and a small portion used animal help. The variety and density of vehicle and human traffic in the *Catuspatha* region have an impact on the safety of road users. Traffic light as an element of technology and the presence of zebra crossing that are used to help regulate traffic safety are basically understood by the public, but often not obeyed so that it can cause accidents. In the context of this technology, traffic lights are also expressed to regulate the flow of traffic at the intersection of four.

References

- Agung, I. A. A. G. (1989). *Bali Pada Abad XIX (Bali in the XIX Century)*. Yogyakarta: Gadjah Mada University Press.
- Anderson, B. R. O'G. (1992). *Language and Power: Exploring Political Cultures in Indonesia*. Ithaca and London: Cornell University Press.
- Anonymous. (1906). *Gegevens Betreffende de Zelfstandige Rijkjes op Bali*. Batavia: Lands-drukkerij.
- Belo, J. (1970). *Traditional Balinese Culture*. New York: Columbia University Press.
- Budihardjo, E. (1995). *Architectural Conservation in Bali*. Yogyakarta: Gadjah Mada University Press.
- Covarrubias, M. (1956). *Bali: With an Album of Photographs by Rose Covarrubias*. New York: Alfred A. Knopf.
- Dumarcay, J. 1991. *The Palaces of South-east Asia: Architecture and Customs*. Terjemahan Michael Smithies. New York: Oxford University Press.
- Frick, H. (1988). *Arsitektur dan Lingkungan (Architecture and Environment)*. Yogyakarta: Kanisius.
- Geertz, H. (1994). *Images of Power*. Honolulu: University of Hawaii Press.
- Hall, K R. (1996). "Ritual Networks and Royal Power in Majapahit Java". In *Archipel* 52. Paris: Centre National de la Recherche Scientifique et de l'Institut National des Langues et Civilisations Orientales. Hal. 95-119.
- Heine-Geldern, R. (1982). *Konsepsi Tentang Negara dan Kedudukan Raja di Asia Tenggara (Conception of the State and Position of the King in Southeast Asia)*. Jakarta: CV Rajawali.
- Kaler, I G. K.. (1982). *Butir-butir Tercecer tentang Adat Bali (Points scattered about the customs of Bali)*. Jilid 2. Denpasar: Bali Agung.
- Lombard, D.. (1996). *Nusa Jawa : Silang Budaya. Kajian Sejarah Terpadu, Bagian III: Warisan Kerajaan-kerajaan Konsentris (Nusa Java: Cross Culture. Integrated Historical Study, Part III: Inheritance of Concentric Empires)*. Jakarta: PT Gramedia Pustaka Utama.
- M. Adhika, N. K. A. Dwijendra. (2020). Selfie Photos Area and Its Implication to Water Availability and Social Culture in Wanagiri Village, Bali Indonesia, *International Journal of Psychosocial Rehabilitation*, Vol. 24, No. 4, 2020, DOI: 10.37200/IJPR/V24I4/PR201652.
- M. V. Yogantari, N. K. A. Dwijendra. (2020). Visual Exploration Using Acrylic Paint on Used Fashion Items for Sustainable Use. In: *International Journal of Psychosocial Rehabilitation*, Vol. 24, No. 03, DOI: 10.37200/IJPR/V24I3/PR201902, 2020.
- Mirsha, I G. N. R. dkk. (1986). *Sejarah Bali (Bali History)*. Denpasar: Proyek Penyusunan Sejarah Bali Pemda Tk I Bali.
- Moertono, S. (1985). *Negara dan Usaha Bina-Negara di Jawa Masa Lampau: Studi tentang Mataram II, Abad XVI sampai XIX (State and Business Development in Old Java: Study of Mataram II, XVI Century to XIX)*. Jakarta: Yayasan Obor Indonesia. Hal. 148-170.
- Murya, A A P. dkk. (1992). *Babad Keluarga Besar Puri Agung Pemecutan*. Denpasar
- N. K. A. Dwijendra. (2020). Identity Struggle Perspective in Car-Shaped Shrine in Paluang Temple, Nusa Penida Bali, Indonesia, *International Journal of Psychosocial Rehabilitation*, Vol. 24, No. 4, DOI: 10.37200/IJPR/V24I4/PR201653, 2020.
- N. P. S. Nurjani, N. K. A. Dwijendra (2020). How Traditional Balinese Houses Can Adjust and Cater for International Tourist in the Canggu Area, Bali Indonesia? In: *International Journal of Psychosocial Rehabilitation*, Vol. 24, No. 03, DOI: 10.37200/IJPR/V24I3/PR201901, 2020.

- Ngakan Ketut Acwin Dwijendra (2020). Meru as a Hindu Sacred Building Architecture with a High Roof and Resistant to Earthquakes in Bali, Indonesia. *Civil Engineering and Architecture*, Vol. 8 (3), pp. 350 - 358. DOI: 10.13189/cea.2020.080319.
- Ngakan Ketut Acwin Dwijendra. (2020). From Tradition to Modernization in Morphological Process of Indigenous Settlement Patterns in Bali, Indonesia. *International Journal of Advanced Science and Technology*, 29(8s), 172 - 184.
- Ngakan Ketut Acwin Dwijendra. I Putu Gede Suyoga (2020). Analyze of Symbolic Violence Practices in Balinese Vernacular Architecture, Bali Indonesia. *International Journal of Innovation, Creativity and Change*, Vol. 13, Issue 5, 18 June 2020.
- Nordholt. (1996). *The Spell of Power: A History of Balinese Politics 1650-1940*. Leiden: KITLV Press.
- Putra Agung, A.A.G. (1996). *Peralihan Sistem Birokrasi Kerajaan Karangasem 1890-1938 (Transition of Karangasem Kingdom's Bureaucracy System 1890-1938)*. Disertasi Universitas Gadjah Mada, Yogyakarta. Tidak dipublikasi.
- Putra, I G.M. (1988). *Kekuasaan dan Transformasi Arsitektur: Suatu Tinjauan Budaya Terhadap Kasus Puri Agung Tabanan (Architectural Power and Transformation: A Cultural Overview of the Case of Puri Agung Tabanan)*. Tesis Magister Universitas Udayana.
- Salya, Y. (1975). *Spatial Concept in Balinese Traditional Architecture; Its Possibilities for Futher Development*. University of Hawaii Thesis, Honolulu.
- Sidemen, I. B. dkk. (1992). *Sejarah Badung. Denpasar (Badung History. Denpasar)*. Pemda Tingkat II Badung.
- Sidemen, I. B.. (1986). Struktur Birokrasi dan Mobilitas Sosial di Kerajaan Gianyar 1856 – 1899 (Bureaucratic Structure and Social Mobility in the Kingdom of Gianyar 1856 – 1899). Tesis S2. Universitas Gadjah Mada, Yogyakarta.
- Soebadio, H. and Carine A. du Marchie Sarvaas (ed.). (1978). *Dynamics of Indonesian History*. Amsterdam; New York: Oxford, North Holland Publishing Company.
- Soemardjan, S.. (1978). "The Keraton in The Javanese Social Structure". In Haryati Soebadio and Carine A. du Marchie Sarvaas (ed.), *Dynamics of Indonesian History*. Amsterdam; New York; Oxford: North Holland Publishing Company. pp. 222-223.
- Tan, R. Y. D.. (1967). Description of the Domestic Architecture of South Bali. M.A. Thesis Yale University, Yale. Dalam B.K.I. 123-4:pp. 442-475.
- Wertheim, W.F. cs. (editors). (1960). *Bali: Stdies in Life, Thought, and Ritual*. Slected Studies on Indonesia, Vol. V. Hague and Bandung: W. van Hoeve Ltd.
- Wiener, M. J. (1995). *Visible and Invisible Realms: Power, Magic, and Conquest in Bali*. Chicago & London: The University of Chicago Press.
- Wikarman Singgin, I N. (1998). *Caru : Pelemahan dan Sasih*. Surabaya: Paramita.
- Yuda Triguna, I B. G. (2000). *Teori Tentang Simbol (Theory of Symbols)*. Denpasar: Widya Dharma.

Ngakan Ketut Acwin Dwijendra, is a Senior Lecturer in Udayana University, Bali Indoneisa. He has expertise as an architect, designer, urban land management, urban planner, researcher, author and also as a yoga teacher. He completed his Bachelor of Architecture in 1996 at Udayana University, obtained a Master of Art (Urban Management) in 1999 at Erasmus University, Rotterdam in the Netherlands and a Philosophy of Doctor (Dr.) degree in 2014 at Curtin University, Perth Australia. He also won a Main Professional Engineer in Indonesia and ASEAN Engineer (ASEAN Eng.) in 2019.

As a lecturer, researcher and author since 1997, he published 19 books in the fields of architecture, urban land, housing, art, design, history and culture and to date has 56 Intellectual Property Rights and is active as a reviewer and article writer in print media, proceeding seminars and international indexed journals. As the Founder of Goldmonk Architects Company, in the field of design work, since 1996, it has completed more than 60 design projects, with the last 4 designs being the Great Temple of *Giri Natha* 2017, Kids Timor Waterpark 2017 and East Timor Rise Building 2018, thus delivering the best architect at Asia Best Architects in 2018 by the Asia Global Council.
