A Study on Bipolarity in the Architecture of Leandro V. Locsin

Caryn Paredes-Santillan
Post-doctoral Researcher, The University of Tokyo, Japan

Abstract
To date, Philippine architectural research has been limited to the study of history, social factors, constructional data, and decorative characteristics. Although these are unquestionably useful, they are ineffectual in communicating the holistic value of architecture. Architecture is an integration of numerous factors through forms; thus, it becomes necessary for the initial visual analysis to be done on the basis of forms. This paper involves a formal analysis of the work of Philippine architect Leandro V. Locsin and how he utilized the concept of bipolarity in the dynamic formation of his architectural forms and spaces. The first three sections explain the significance of bipolarity as an element of Philippine culture and architecture by illustrating the phases of development of Philippine architecture and of Locsin. The fourth section deals with the data and analysis. 70 projects were subjected to a visual analysis of spatial form and object form, from which bipolarity emerged as a recurring concept; these manifestations were noted, classified, and further analyzed. From these, 4 major manifestations of bipolarity emerged: (1) Floating effect, (2) Grounded flight, (3) Enclosed Openness, and (4) Alternation of opposite spatial characters.

Keywords: Leandro V. Locsin; bipolarity; modern architecture; Filipino architecture

1. Introduction: Bipolarity
There are two opposite, conflicting forces found in every action; one force is needed in order to induce the other. They symbolize the two polar energies that, upon the balance of their fluctuation and interaction, are responsible for a dynamic universe.

In architecture, this dynamism is present in the way that we continually seek new spatial experiences. In many cases, the difficulty in distinguishing the symmetry of visual objects is due to the complexity of their form and structure, Jablan (2002) states that "polarity considerably affects the degree of visual dynamism. A dynamic visual effect produced by polar generators can be stressed or lessened by the right choice of the relevant visual parameters" (Jablan 2002:248).

Wofflin (1950) affirms that the art of passionate tension, which we roughly interpret here as dynamism, cannot be composed solely of elements that induce excitement, but must also incorporate areas of repose that highlight the areas of excitement.

Polarity is a useful tool for the analysis of art and architecture. Aside from Wofflin (1950), Frankl (1977) developed a system based on polarity in his studies of architectural history, and Zevi (1978) used polarity to distinguish between classic and modern architecture.

1.1 Bipolarity in the Philippines
Philippine culture has always been a unique blend of East and West. Ancient Indo-Malayan origins provide the basis for the Philippines' rich culture. Chinese and Arabian influences, along with 300 years under the Spanish and 50 years under the Americans contribute to the mixture. The culture of the Philippines is naturally at polar opposites, and this bipolarity is physically manifested in architecture.

Zialcita and Tinio (1980) have spoken of polarity in Filipino culture by contending that the Philippine Spanish colonial house is a successful blend of Eastern and Western building traditions. Klassen's (1986) studies on Philippine architecture partially focused on the concept of polarity as a basis of analysis of modern architecture.

This study further defined Klassen's previous assertion of polarity in Philippine architecture by focusing on the manifestation of concepts of bipolarity in the works of Leandro V. Locsin, one of the foremost modern Filipino architects.

The decision to shift the analysis from the general concept of polarity to bipolarity was due to the fact that during that time, Asian culture was thought of as a single entity, and the conception that it consisted of multiple identities had only begun. In fact it was only
in 1984 at a conference of ARCASIA, in which Locsin was a keynote speaker, wherein the multi-polar concept of Asian identity arose. Although Asian culture has had numerous influences on Philippine culture, what I wanted to highlight in this study was the bipolar distinction between the Asian and Western influences in the Philippines.

Although Locsin did not specifically pinpoint bipolarity as an element of his architecture, he was certainly aware of the dualities in Philippine culture as symbolized by Asian and Western conceptions of culture and their manifestations in space. In his work he spoke of being obsessed with "[forms] that were massive and yet light." Bipolarity is also evident in the monumentality of the exterior as opposed to the interiors that are built to the scale of man, as well as the other bipolar elements further discussed in this study.

1.2 Bipolarity in the Philippines and Japan

Bipolarity is not unique to the Philippines, and there are parallels between Japan and the Philippines.

Even before Commodore Perry forced diplomatic relations on a reluctant Japan, the Japanese were aware of the West. In the 19th century through the Dutch mission at Nagasaki, the Japanese began to study the West's science, technology, and languages. After the Meiji Restoration, the West was taken as the supreme model for nearly every significant aspect of life. From this we may be able to infer that the East-West bipolarity in Japan occurred mainly in the latter part of its history, whereas in the Philippines, the West was largely involved in its formation as a country.

The early population of the Philippines consisted of independent Indo-Malay settlements in different parts of the country. It was the Spanish who helped unify the islands into one nation, so from early on, Filipinos had felt more European than Asian. The whole concept shifted only slightly with the arrival of the Americans and the transplantation of their culture, language, and system of government. After initial resistance, Filipinos embraced the freedom that was offered, probably because it was very different from what they had experienced under Spanish rule. However, it was only after independence was granted in 1946, that the country underwent an introspection of its identity, upon which there was a gradual acceptance of the East-West bipolarity as an inherent cultural concept. Thus, bipolarity in the Philippines is not simply the result of having a new culture transplanted, but came from severing the connection with foreign cultures and forcing the country to delve back to its roots.

1.3 Significance of the Study

Currently, studies and research on Philippine architecture have been limited to the study of history, social factors, constructional data, and decorative characteristics. Although these contributions were unquestionably useful, they were ineffectual in communicating the holistic value of architecture.

The main objective of this study was to determine the character of Locsin's architecture through a formal analysis of the forms and spaces of his buildings. Architecture is an integration of numerous factors through forms; thus, it became necessary for the initial visual analysis to have been done on the basis of forms. Upon the visual analysis of the object forms and spatial forms, I was then able to establish the characteristics of form.

The first part of the study sought to define the formal characteristics of Locsin's architecture and further examined the most apparent characteristics in detail. The second part of the study explained why bipolarity is a concept that relates closely to the development of Philippine architecture, describing how it developed into a natural mix of eastern and western principles and how this subsequently affected the development of Leandro V. Locsin. Lastly, this study discussed the different manifestations of bipolarity in architecture and how this can be defined as Filipino characteristics.

1.4 Methodology

Largely based on the visual perception of architecture, the formal analysis involved an investigation of the visual effects rendered by Locsin's forms and spaces. Both object form and spatial form were analyzed.

A total of 70 projects were analyzed, 53 of which, the author had been able to personally visit and document. Plans, sections, photographs, and drawings were also analyzed. Supplementary data-gathering, such as interviews with Locsin's son, Leandro Jr., as well as with several of the partners at his firm, Leandro V. Locsin and Partners (LVLP) was also carried out.

After the concept of bipolarity was identified as a recurring characteristic in the architecture of Locsin, a secondary survey was performed to determine the bipolar characteristics that best exemplified his work and how their manifestations in his designs have evolved over time. Each manifestation of bipolarity was noted, classified, and analyzed. From this analysis, the evolution of the concept of bipolarity in Locsin's design, as well as the development of his architectural style was ascertained.

The formal analysis was supplemented by a wide sweep of the literature on architecture in the Philippines and on Locsin. This allowed us to correlate the characteristics of form to various socio-political factors, which in turn helped us grasp the holistic meaning of architecture.

2. Review of Related Literature

The study review was done on three levels:

(A) In determining the research structure, three major works relevant to Locsin were consulted. Although two monographs (Polites 1977, Villalon and Perez 1995) documented most of Locsin's work, they did not contain any formal analysis. Klassen (1986) in his description of the Chapel of the Holy Sacrifice...
provided us with a more holistic view of the project; however, it was the only one that he discussed in detail and instead left it as a starting point for further research.

(B) In the second part, we reviewed the history of the development of Philippine modern architecture. Although Locsin was mentioned in several books on Philippine architecture, those articles were based largely on the primary sources mentioned above.

(C) Lastly, we took into consideration several relevant articles in magazines, journals, and newspapers some of which contained lengthy interviews with the architect. These helped put into perspective the general public perception of his architecture, and provided insights into his design conceptions.

2.1 Architectural Development in the Philippines

2.1.1 Pre-Spanish and Spanish Periods (1565-1898)

Pre-Spanish dwellings in the Philippines, like those prevalent in Southeast Asia, were mainly made of wood and built on stilts above the ground. The Spanish introduced building in stone. However, constant earthquakes prevented the European practice of building wholly in stone. A hybrid dwelling called Bahay na Bato was produced: stone was only used as a covering on the ground floor, and roof trusses and floors were held up by wooden posts. And together they formed a giant frame that shuddered freely during tremors. The Spanish mainly built fortifications and churches, which were usually overseen by friars who heavily copied from European models. It was only in the later period (from the 1900s) that the residential Bahay na Bato came into existence.

2.1.2 American Period (1898-1946)

The Americans set up basic infrastructure, providing public facilities such as hospitals, schoolhouses, and town halls. William Parsons designed public buildings in Manila as specified by the plan laid out by Daniel Burnham. During this period, buildings done in the California-mission, Neo-Classical, and Revivalist styles in the earlier period, in the later period, Art Nouveau and Art Deco styles were used. The Americans also set up training schools and introduced modern building techniques in the Philippines.

2.1.3 Post-War Period (1946-1986)

In the years following World War II, architects simply focused on rebuilding ravaged cities. On 4 July 1946, the Philippines was declared an independent republic. It was this newfound independence that prompted questions of nationalism and of national identity, which became apparent in various fields, including art and architecture. It was this period of cultural soul-searching that Locsin's formative development as an architect and artist started.

2.2 The Emergence of a modern Filipino architecture

In the development of modern architecture in the Philippines, there was almost no conscious need to incorporate local traditions with modern practices. Modern architecture was simply copied from the West. Architectural theory was not a prime factor in the development of early modern architecture, and most architects possessed an education that was more Western than Asian.

2.2.1 Background

Leandro V. Locsin was born on 15 August 1928, in Silay City, Negros Occidental, Philippines. Locsin's early education was in Silay and Manila. In 1947, he enrolled at the Conservatory of Music at the UST. After two years of liberal arts and music, and with only a year left to earn a bachelor's degree in music, Locsin decided to shift to architecture.

The author believes that growing up in a culturally-rich environment such as Silay allowed Locsin to become aware of the forms and spaces of Spanish-period Filipino architecture, the bipolar qualities of which are apparent in his work.

In fact, Locsin was one of the first architects who seemed well-informed on traditional building concepts and practices. In Polites' book (1977), the artist Fernando Zobel even commented that at an architectural student exhibition at the University of Santo Tomas (UST), "only one of the projects (that of Locsin) had a distinct Philippine look to it, which
in those days came as a total surprise." From this statement we may deduce that in the Philippines, the image of modern architecture was geared towards Western standards rather than as an amalgam of East and West.

Before Locsin, historical tendencies in Philippine architecture tended to have a provincial feel, as illustrated by the remark of the supervising architect of the Bureau of Public Works, Juan Arellano "We are prone to follow the Occident in matters of art as in other respects, and this, in architecture at least, is perhaps unavoidable in so cosmopolitan a city such as Manila; but in our regional architecture we should carry out our own historical tendencies wherever possible" (Hartendorp 1952). This is perhaps because Western-educated Filipino architects regarded Western architecture as the symbol of modernity, order, and power, and regarded locally-produced buildings as old-fashioned. In their minds, by having very Western-type structures in their cities, they were proclaiming their sophistication to the world.

2.2.2 Early architectural practice

Locsin graduated from the UST in 1953. After graduation, he was engaged by Frederic Ossorio to design a chapel for the Salesian school of the Victorias Milling Corporation. Although Locsin had already started the design, Ossorio was called back to the US and the chapel was never built.

Locsin received his first big break in 1954 when he met Fr. John Delaney, who was looking for an architect to design a chapel for the University of the Philippines in Diliman. Locsin got permission from Ossorio; and used the design intended for the Salesian chapel for the UP chapel.

In 1955, upon completion of the Chapel of the Holy Sacrifice, Locsin was asked to design the first building in the newly-proposed business center in Makati. Bipolarity was evident in the stark modernity (West) that worked with the apparent lightness of the buildings, which called traditional models (East) to mind. This lightness was very apparent in Locsin's Monterrey Apartments, which were completed in 1957, followed by the Ayala Building I in 1958, and the Ayala Building II in 1959. It is important to note that most of the commercial buildings he designed during that period echo the forms of Spanish-period and American-period commercial architecture with their arcaded fronts and overhangs.

In 1966, at a gathering of artists, Locsin was asked by First Lady Imelda Marcos to design a cultural center, as she was impressed by his proposed plans for the defunct Philippine-American Cultural Center. The Cultural Center of the Philippines (CCP) Theater of Performing Arts was inaugurated in September 1969 and since then has become internationally known for its stunning design and remarkable acoustics. It was the first in the series of Locsin-designed buildings at the CCP Complex which include the Folk Arts Theater (FAT), Philippine International Convention Center (PICC), Philippine Center for Industrial and Trade Exhibits (Philcite), and Philippine Plaza Hotel.

Since 1955, Locsin has produced 71 residences, 81 buildings and 1 state palace. His major buildings include 9 churches and chapels, 17 public buildings, 4 apartment buildings, 6 hotels and 41 commercial buildings. His largest single work is the palace of the Sultan of Brunei, which has a floor area of 205,200 square meters.

2.2.3 Filipino character in Locsin's architecture

Leandro V. Locsin was one of the most significant people in the development of contemporary architecture in the Philippines. Locsin's architecture has been attributed to having a distinct Filipino character (Zobel 1977, Zialcita 1989, Rouda 1995). His studies in Philippine archaeology, history, folk architecture, music and Philippine modern art all combine to produce a continuous striving, both unconsciously and consciously, for "an architecture which is truly Filipino."

3. Bipolarity in the Architecture of Leandro V. Locsin

3.1 Floating Effect

The floating form is not only a derivation of vernacular forms but also a reflection of the process of human integration into the traditional house on stilts. Reminiscent of the process of entering into traditional
houses wherein importance is given to the upper floors (Fig.6.-A), the ground floor or silong is used as a storage area and the main living areas are on the second floor. The entry to most of Locsin's buildings gave emphasis to the process of ascending and entering through the upper floor. This is particularly evident in his work at the CCP Theater of Performing Arts (Fig.5.). The upper floor in turn serves as a distributor to the lower floors (Fig.6.-B).

The floating quality pertains to the idea of buoyancy and gravity, which were analyzed according to "buoyant mass" and "buoyant force." The analysis of "buoyant mass" (apparent mass of the suspended object) shows that we may divide the samples into two basic groups: singular floating masses (Fig.7. D-F) and multiple floating planes (Fig.7. A-C). Although both are rectangular in nature, those of the former are more massive than the latter. The analysis of the samples by "buoyant force" (strength and quality of the supports of the buoyant mass) yielded three classifications of the forces applied to the buoyant masses. The first is upright vertical support (Fig.7. B, C, and D), which mostly caters to multiple floating planes, and is used to impart even, distributed support. Next are the slanted forces (Fig.7.-E), which seem to be a precursor of the final classification, curved forces (Fig.7.-F). Slanted and curved forces are usually employed in singular floating masses, whereas upright vertical support is used for stacked multiple planes.

3.2 Grounded Flight

Still connected to the concept of lightness in traditional Philippine architecture, the quality of grounded flight in Locsin's architecture seems to have developed from the floating quality into much lighter forms. Unlike the buoyant masses of the floating quality, anchored masses are generally not rectangular blocks. They are characterized by their connection to the ground (Fig.8.-A), unlike the buoyant masses that are completely separated by the area of displacement composed of their supports (Fig.8.-B).

Grounding relates to the anchoring pull of gravity, and flight denotes movement and detachment from the ground plane. In order to analyze the quality of grounded flight, we took into consideration the qualities of the "Anchored Mass" and the "Anchor Supports." In the matter of anchor supports, we saw an evolution from slanted supports to footed bases. These footed bases articulate the separation of the anchored mass from the ground and prevent the vertical movement from seeming to continue beyond the ground plane.

Movement is more apparent in the forms of grounded flight compared to the forms of the floating effect (Fig.9.). They also replicate the shape of traditional architecture wherein the roof was the main feature (Fig.1.). The practice of securing these large roofs to the ground was common during typhoon season. These forms are interpreted by the tensions observed in grounded flight. Some of these forms also echo the shape of a billowing sail, a common sight in an island nation such as the Philippines.
3.3 Enclosed Openness

Locsin was one of the few Filipino architects who paid attention to the relationship of interior and exterior spaces. He was aware of the bipolar differences between enclosed Western spaces and the more open, multi-purpose Eastern space. Such qualities of enclosed openness and alternating spaces of opposite spatial character both stemmed from the need to segregate space while maintaining a continuous flow throughout the rooms. One apparent underlying theme in the bipolar qualities of both Locsin's object form and spatial form is the continuous process of detachment and reintegration from space to space.

Enclosed openness pertains to the quality of Locsin's work that involves "multiple enclosures around a central core." Traditional Filipino architecture, like much of its Asian neighbors, uses an open, multi-purpose plan. Using a space-time continuum, spaces are divided vertically rather than horizontally. Furthermore, horizontal divisions, when they occur, are semi-solid in the form of movable partitions, screens, and lattices that allow space to be divided according to the user's preference.

These permeable residual spaces surround the core space with different levels of tangible or implied barriers. For example, in the Church of the Holy Sacrifice (Fig.6.), there are three concentric layers that surround the altar and provide different levels of interaction (Fig.11. A-C). Though visibly open, the core space is enclosed by several levels of porous residual space that impedes direct access to the core space. Though from within, the space may seem open, light, and airy, when entering from the exterior into the chapel, one feels the different levels of enclosure that surrounds the core space. This is also apparent in the National Arts Center and the Monastery of the Transfiguration.

3.4 Alternation of opposite spatial characters

Related to the Asian spatial concept, Locsin divides his spaces by an alternation of opposite spatial characters (narrow-wide, light-dark). Emphasis is given to the non-physical barriers of space. We enter through low, dimly-lit passages and emerge into large,
light, and airy spaces that allow us different degrees of integration within a space. Much like the contrast of stepping into the dark coolness of a traditional Filipino house after the harsh glare of the tropical sun, these passages and barriers serve as a rite of passage that separates exterior and interior spaces.

The alternation of opposite spatial character is evident in how "larger dominant spaces" and "narrow residual spaces" interchange. There is a visible pattern of separation and re-integration in the passage from residual space to the dominant spaces. In the Ayala Museum for example, one enters a building through a low, cantilevered canopy that seems to propel movement into the inner space, upon entering one is greeted by the wide, open expanse of the lobby. However, to get to the other dominant spaces, one has to pass through narrow residual spaces (Fig. 12. A-B). Often, there are no tangible barriers that segregate one dominant space from another, but because residual spaces are scaled to human height, they seem to induce a separation from the dominant spaces. The dominant spaces in turn, usually allow for easy integration because of their high ceiling height (Fig. 12.-C). This is also apparent in the hallways connecting the buildings in Locsin's PICC, CCP Theater, Nutrition Center, and the main clubhouse of the Canlubang Golf and Country Club.

4. Conclusion

We have used the concept of bipolarity as a starting point for our inquiry, as it abstractly represents the dilemma of the Filipino, caught as he or she is between two very different worlds. In our analysis of Locsin's architecture, we have found an incorporation of bipolar elements in both exterior form and interior space.

4.1 Bipolarity: Modern Architecture deriving from the Vernacular

The abstract formal interpretations of Locsin are very different from how some Filipino architects have used local materials appliqué-style as a concession to vernacular architecture. Locsin's forms are based on an innate understanding not only of traditional forms, but also of the processes involved therein. This process of integration as facilitated by the bipolarity in his works is one of the aspects that set Locsin's architecture apart.

It was not only Locsin who made use of bipolarity to express a Filipino character in his architecture, however, the use of such was most consistent in his work compared to others. Still, his influence is undeniable. The floating effect for example is visible in Jose Zaragosa's Meralco Building (1968) and Alfredo Luz's Magsaysay Center (1967). Both buildings were built almost a decade after the first appearance of the floating effect in Locsin's architecture (UP Chapel, 1957). Other architects of note are Carlos Arguelles for his tropical adaptation of the international style in his Philamlife Building and Gabriel Formoso's Bauhaus-inspired Central Bank Buildings. Some, such as Francisco Manosa have chosen to develop the use of indigenous materials in building, such as in the Coconut Palace and the Mary Immaculate Church (1986).

4.2 Bipolarity and Locsin as Symbols of Power

The author agrees with Lico's argument (2003) that the Marcos regime's obsession with modern architecture of monumental proportions signified the drive of the government at that time. They were at the threshold of industrialization; this necessitated a show of power, both locally and internationally. Thus the Marcoses supported architecture that propagated their Filipino visions for the new society.

The change of Locsin's architecture into monumental forms during this period signifies maturity as he gained the confidence to carry off his bold architectural statements, and thus established an architectural identity for himself. However, although most of his projects for the Marcoses were designed to be a symbol of the people, they were often alienating in their monumentality. Thus, although these buildings were to serve as a symbol of the Philippines to the world, the Filipino public mostly felt ambivalent towards them because they were not able to experience the spaces within, and tended to judge the buildings solely from the monumental massiveness they perceived from outside.

4.3 Art and Architecture

One of the most significant effects of Locsin's architecture on the Philippines is that he brought art back into architecture; during that time, architects in the Philippines prided themselves on being so well-versed in structural engineering that architects were simply viewed as decorators. Locsin, with his forms
and spaces, re-introduced the architectural experience of building.

Locsin said, "[The Philippines is] a hybrid culture. This is both our weakness and our strength." It is by an understanding and acceptance of bipolarities in culture as it pertains to the production of new forms that we are able to harness bipolarity as a tool to develop and further communicate architecture and culture.

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Note
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Endnotes
1) Unlike most architects of the time who were part of the United States' Pensionado program, which sent Filipinos to the US for education then placed them in appropriate government posts upon their return to the Philippines, Locsin was educated entirely in the Philippines. Although he had planned to go to Harvard for graduate studies, the early start of his architectural career made him decide to stay in the Philippines.