Architecture for sharing

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Abstract. Architecture bureaus tend to sterilize their office from public activities. They tried to stay untouched from common people, keeping their ‘corporate secrets’ away. This situation creates a closed-environment office from the surroundings and less contribution that might bring better change. Andyrahman’s Co-Sharing Office tries to break the boundaries, standing as an oasis between its surrounding, community, and other architectural bureaus. It provides an opened communal space for experts to students, hamlets, communities, and even craftsmen to share their knowledge and experiences. Bricks as the main material used in this building also revive the spirit of Nusantara Architecture, a contextual architecture in accordance with the culture and values of Indonesia as a Nusantara. While its own name stands for ‘Consciousness of Sharing’, it really does provide a place for everyone to share their interests, and giving a significant impact in many possible forms.

Keywords: Bricks, communal space, Bricks, nusantara architecture.

1. Introduction

Figure 1. Co-Sharing Office by Andyrahman Architect.
Co-Sharing Office (figure 1) is an office building of Andyrahman Architect belongs to Mr. Andy Rahman. The existing site is in a residential plot area, which had his childhood value. Formerly, this land was a rice field with rivers that separates his playing fields from his parent’s house. This 210 m² site used to be his playground, and now, he transformed it into a place to share. This sharing space exists because of his dream to provide architectural discussion space in Sidoarjo and space for people to learn together. This office indirectly becomes a communal housing estate, communal space as a substitute for the hamlet hall which is actually needed by the residents but not provided by the developer. The design process starts on August 2015 and finished in October 2015, followed by the construction process which takes one year, starts on November 2015 and completed in November 2016.

2. Literature review

2.1. Nusantara architecture

Indonesia is the world’s largest archipelagic state, and the status has important consequences both for its identity as a nation and for its character as a state [1]. According to Rudofsky [2], ‘in the case of architecture, the exotic forms of traditional societies were translated across art worlds by way of the metaphor of ‘vernacular’ architecture, or more explicitly, ‘architecture without architects’.

According to Macrae [3], ‘to contain and repackage the extraordinary ethnic and cultural diversity of a sprawling archipelago into a model of unified national culture has continued by other means. The systematic devolution of administrative responsibility to districts rather than provinces has to some extent undermined consolidations of local ethnic sentiments by subdividing ethnic populations’. Nevertheless, persistent separatist movements at both ends in Papua and Aceh, reminds people that sentiments of local ethnic/cultural remained strong and, as the religious sentiments, cut deeply across any sense of national identity.

The word Nusantara itself has a deeper meaning, more than just an archipelago, it covers the traditions, people, nature, and values. According to Prijotomo [4], Nusantara architecture known by its maximum use of woods and local materials from its region. It was carefully made to escalate people’s life based on Nusantara climate. But because most of Nusantara architecture located far from the city, it was not well-preserved as the European styled buildings in the city. Sad to see that conservation is mostly done on colonial architecture, and not includes Nusantara architecture. It has been a problem for the country to seek an identity through architecture. Passchier [5] said, in the twenties of the former century, the issue became a serious subject of a debate between architects; they wrote articles in magazines, discussed it and expressed it in their architectural production. Nowadays, the quest challenges regarding an Indonesian identity in modern architecture is still an actual issue.

2.2. Communal space

According to Merriam-Webster Dictionary, communal means participated in, shared, or used in common by members of a group or community [6]. Public space offer lots of benefits, including the ‘feel good’ buzz from being part of a busy scene; therapeutic benefits of quiet time, spent on a park bench; places where people can show their true identity and learn the awareness of diversity and differences; opportunities for kids and young people to meet, play or simply hang out. All have important roles and contributes in creating local attachments which are at the core of a sense of community [7].

3. Results and discussion

3.1. Main concept

The main concept of this Co-Sharing Office is interconnectivity and interdependence. It reminds humans who need each other, depending on one another. This concept leads to the design strategy that stands for three main points: (i) Environment that reflects as space, (ii) History that represented from
the material, and (iii) Activity that creates a bridge between work and communal functions. It was applied in the design implementation:

i. Environment-Space: Cross ventilation and the placement of an inner courtyard with a fish pond.

ii. History-Material: The usage of local material and installation system.

iii. Activity-Function: Knowledge sharing and community development.

Figure 2. Javanese traditional house plan.

This concept is also related to the social context where the site was located. In the housing area, locals usually held some social activities such as communal meeting, community training, and many else. This office provides space for locals to conduct those kinds of activities. The main reference of this Co-Sharing Office’s communal space was the particular spot from Nusantara architecture Java (traditional Javanese house) called pendopo, where people usually come together to chat, eat snacks, gather with their kids, and many more. Pendopo is a part of Nusantara architecture, as it called by communal space in the modern era (figure 2). It is more than just space; it creates the habit of Nusantara people. This is what Andy Rahman was trying to bring inside the office, as the office itself preserves Nusantara architecture and habits.

3.2. Space: Updating Nusantara architecture

Figure 3. Massing diagram of Co-Sharing Office.

Co-Sharing Office was designed with the awareness that all human beings in this world live on the same earth, as one big community. The spatial concept precedent came from the dividing space in traditional Indonesia archipelago architecture that does not separate the inside and outside space. It
does not have a massive wall borders, but a perforated bricks wall that allows air to flow inside naturally, as well as the natural light (figure 3). As said by Idham [8], vernacular dwellings freely evolve according to the people and nature. Such dwellings should be considered and proposed as suitable patterns for modern architecture even if they fail to maintain a distinctive identity. This is the effort to bring *Nusantara* architecture back and well-preserved in this modern era, so all people who worked, visited, or even just passing by this office can see the real example of how *Nusantara* architecture can also be applied in modern buildings. The idea to collaborate *Nusantara* architecture and modern buildings also came from the public’s general mindset about *Nusantara* architecture as an out-dated style building. Co-Sharing Office tries to change that mindset, and introduce modern peoples to the modern form, updated *Nusantara* architecture. Pangarsa explains that understanding *Nusantara* Architecture requires spiritual-intellectual potentials, and cannot be understood only by a glance [9].

3.3. **Main material: Brick**

Bricks are one of the building materials Indonesia itself has a strong history of brick architecture. In the 7th century, the Sriwijaya Kingdom in Sumatra had Muara Takus Temple. Then, in the 14th century, the Majapahit Kingdom was the glory of brick architecture. Various temples from the Majapahit Kingdom in East Java has their own uniqueness with strong and durable brick construction without any coating (figure 4). This situation can be influenced by the type of soil used. The stiffness and strength of the brick generally increases as the method moves from pressed to repressed bricks [10].

![Figure 4. Sumur temple, Sidoarjo.](image)

Brick development in East Java has become very advanced. Conventional red bricks production traditionally developed by the home industries until now. This is what motivates the development of this office to use local materials and to help preserve the brick architecture in East Java (figure 5).

![Figure 5. Brick wall and ceiling installation process in Co-Sharing Office.](image)
According to Merrienboer, brick and stone have been used in architecture for a long time and are favored by architects due to their unique properties and characteristics [11]. Red Brick has become the character of this Co-Sharing Office with manual installation techniques, bringing back the architectural craftsmanship. Red brick is installed as the wall, floor, and ceiling ornaments. This is also a way to elevate local material to the next level, and at the same time preserving traditional techniques in Javanese architecture. Some of the craft designs and techniques even appear suddenly in the field by experimenting, creating unique and new patterns of brick installation. By unique applications of bricks in this office, modern people can see that bricks can also be the main star of modern building.

Although it has been a long journey for bricks to be one of the main building materials in the country, it still has a negative side that needed to work on with. The conventional method of bricks production has brought undeniable shortcomings. The consumption of earth-based materials as clay, shale and sand in brick production resulted in resource depletion, environmental degradation, and energy consumption [12].

3.4. Function
The main function of Co-Sharing Office is an architect consultant office, and also as a sharing space for various activities. This office is a renovation of developer building products. Architects who were involved in the design process tried to maintain some spatial structure and add new building elements to cover all functions needed. The existing building is a house with an area of 71 m$^2$, consists of three main rooms which are maintained into three principal rooms.

![Floor Plans](image)

**Figure 6.** Co-Sharing Office 1st floor plan and 2nd floor plan.

This building was developed into two floors (figure 6) with a total area 250 m$^2$, including the reception room, staff workspace (figure 7), communal room (figure 8), Islamic prayer room, service area, and a bedroom for male staffs. The communal room forms space with different axes from the workspace because it adjusts the existing position of the tread to form a residential plot. The physical communal room is in the form of a mini library, pantry, dining area which can also be used as a public
space for hamlet or neighborhood meetings, workshops, seminars, religious studies, syukuran (thanksgiving in Javanese culture), or even as a lounge to chat, play guitar and playing with the koi fishes.

Counted starting from December 2016 until March 2019 (figure 9 and figure 10), there is a total of 68 events that were held in the Co-Sharing Office’s communal room. Total 41 of them are architectural events, which mostly are campus visits (16 events), book reviews (nine events), and architectural sharing and presentations (nine events), while the rest of it are 27 non-architectural events with a very wide variety, which mostly are mosque-related activities (meetings, etc). Out of 68 events, four of them are joined by international visitors from the architectural field.

Figure 7. Staff’s workspace.

Figure 8. Communal room as public space for kids and hamlet.
The non-architectural event starts to take place in Co-Sharing Office’s communal room in December 2016. That first event was watching a soccer match together with locals. On 2017, there are 22 events that are successfully held, 14 of them are architectural events dominated by campus visits five times, and eight was non-architectural events. Continued in 2018 with a total of 34 events where 22 of them are architectural events and 12 are a non-architectural event. On 2019 counted from January to March, there is an equal number for each architectural and non-architectural event, both of them are held five times.

**2016-2019 Events**

![Comparison chart between architectural and non-architectural events.](image)

**Figure 9.** Comparison chart between architectural and non-architectural events.

![Comparison chart from each year’s events.](image)

**Figure 10.** Comparison chart from each year’s events.
Figure 11. Communal room as internship students’ workspace.

Figure 12. Communal Room for Architectural Workshop and Seminar Events.

This communal room is used as a working space for internship students from various regions and universities, national and international, with a capacity of 8 to 10 students each period (figure 11). Recorded internship students (starting 2017) from Indonesian universities came from Sumatra, Kalimantan, Java, Madura, Bali, Sulawesi, and Papua, as well as international internship students from Malaysia and Mali, Africa. This becomes a valuable cultural experience between users and creates an optimal sharing space.

Andyrahman’s Co-Sharing Office is open to anyone who wants to learn and share (figure 12). International discussion events are also being held here, with international participants from Malaysia, Singapore, Thailand, China, Taiwan, and India. Within one year since the office building was opened, there have been 12 campus groups from the various region in Indonesia who has come and experience the space at Andyrahman Architect office.

4. Project significance and impact
Co-Sharing Office presents the concept of sharing socially, technically, economically, and strives to be a precedent for climate response building among mass-product buildings. The open culture of the office actually presents a different approach to the social space in the buildings. More “outsider” can enjoy the social activities in the buildings and on the outer spaces. This shows the successful co-sharing concept. This is aligned with the Nusantara common space concept in Javanese culture.

Socially, this office provides public space, adding intimacy and becomes a space for introducing various fields. It provides learning space for the general public, academics, and practitioners from various regions. Until now, the communal space of Andyrahman Architect office has been active in
accommodating activities every month. Not only the communal space, but there was also a rooftop area that was commonly used as a gathering space (figure 13).

Technically, this office tries to restore the spirit of *Nusantara* architecture in carpentry field (figure 14). Craftsmen are given opportunities and space to interact intensely, experimenting with their feeling and artistry in craftsmen work, even raising the price of the craftsmen himself. Economically, many clients, communities and other architects who were interested in brick makers at Mojosari, Mojokerto after seeing the results directly applied at this office by themselves. Using local materials in East Java can activate and develops the local home industries economic activities.

![Figure 13. Rooftop area.](image)

![Figure 14. Carpentry.](image)

As a building that stands between residential mass-product buildings, this office seeks to introduce climate responsive buildings to the community. Utilizing natural energy in the form of wind and solar as optimal as possible to reduce the use of artificial energy, and open the land as optimal as possible to capture and absorb rainwater directly. Office’s garden is often visited by unexpected guests like a rabbit who stays for 4 d, cats who visited every day, and even birds who also had time to make a nest between bamboo trees in this office.
How does Nusantara architecture lasts for decades? It could be preserved when people consciously make it as part of their daily life, in any kinds of form. Architectural wise, applying local materials aren’t that difficult. People can learn from the masters: the craftsmen itself. The craftsmen really understand their own materials, the Nusantara materials. It is freely to decide, let them help to preserve what people already had or left them obsolete.

Meanwhile, adapting traditional space divisions and its meaning might sound a bit complicated but it also revives the spirit of our culture. The gathering is an act that cannot be separated from Indonesians, the Nusantara people. From metropolis to villages, people love to gather around and talk about anything, creating a sense of togetherness. This positive habit can be preserve by providing places, creating spaces where they are able to share ideas or just to hang around with other people.

5. Conclusions
When modern offices tend to close their place to public, changing it from functional to creative offices is what people need in this era. It will be an interesting space to support architects as one of creative profession, and also other people in the surroundings or even overseas guests. Andy Rahman’s Co-Sharing Office develops this sharing culture, which was integrated with the communality of Nusantara traditions. This creates a different approach to an open-office and collaborative office, and the need of more communal spaces. The way this building inspires all visitors and neighbors gave hope for Nusantara Architecture to settle in its own land and adapt with the modern era.

Acknowledgments
More research can be conducted to measure the social response to space with an in-depth interview and behavioral observations. These methods can be explored and developed with more assistance in the future.

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