Caring Design: A Multimodal Analysis of Woman Embodiment in Kampung Halaman Foundation Design by Novi Kristinawati

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ABSTRACT

The concept of care in design and architecture is inherent in the work of women designers as a form of embodiment that relates to the social context. The role of women in social structures, often associated with care and nurturing similar to nature, has echoed gender dualism, which also influences the different characteristics of designs created by both genders. Previous research exploring the notion of care in design, particularly in architecture, includes exploring natural materials that convey cultural identity, multi-sensory experiences, and affective architecture. However, studies of the work of women designers, particularly in architecture, that embrace the concept of ‘care design’ and focus on embodiment remain underexplored. This study aims to understand the concept of care as a form of embodiment reflected in
the work of women designers, with a case study of the architectural design of the Kampung Halaman Foundation in Yogyakarta by Novi Kristinawati. Using semiotic methods, particularly multimodal text analysis by Gunther Kress and Theo van Leeuwen, the meaning of care is revealed by examining three metafunctions: representational meaning, interactive meaning, and compositional meaning, which emerge from modes as semiotic resources. The results of this study show that Novi Kristinawati reflects her embodiment in the design of the Kampung Halaman Foundation. The notion of care as a form of women embodiment is manifested in several ways: appearing in the symbol of the mother archetype; creating a multi-sensory experience by blurring the boundaries between natural exteriors and interiors; designing flexible and flowing spaces that fulfil functional values and facilitate social distances among users; prioritising gender equality and recognition in barrier-free design; and designing with the ability to listen to the needs of design commissioners. This research attempts to understand design in terms of the embodiment of women and their contribution to the discourse of design knowledge.

Keywords: caring design, woman designer, woman embodiment, multimodal analysis, architecture, Novi Kristinawati

INTRODUCTION

Embodiment is a way of experiencing the body both physically and socially. Synnott (2007) states that the body, with all its organs, attributes, functions, states and senses, is not just a social creation but one of enormous complexity, richness and power. Furthermore, Arivia (2018) states that the experience of embodiment in humans is inseparable from their sex and gender construction, which are integral to their self-definition as an individual. Similarly, for designers, the process of creation and design work cannot be separated from their embodiment. Modernist principles, which prioritize function, result in differing designs created by men and women. Following Attfield’s perspective (Walker, 1989), women designers are often associated with decorative and soft designs. Conversely, male designers are linked with functional and logical designs. Nevertheless, in Suharson’s study (2024) on women’s domestic activities in Pundong Village, Yogyakarta, proto-historical artefacts indicate women’s significant role in crafting household items such as cooking utensils, tableware, jewellery, and religious ritual objects.

However, women’s pivotal role as creators has shifted since the era of modernism, when women took on domestic and caring responsibilities, making it difficult for them to access workplaces and public facilities located far from home and designed primarily for male use, thus reinforcing gender dichotomies (Boys, 1984). Women’s confinement to domestic spaces is also reflected in their dominance in interior design. Whereas historically men have dominated the profession of architecture, due to the prevailing belief that men are more concerned with the external aspects of houses rather than the interior (Gordon, 1996).

The previous exhibition highlighted the role of women in society, which is characterised by gender inequalities. In the field of design, especially architecture, some women face challenges in a complex environment. As designers, women are perceived as being closer to nature and having unique creative abilities, compared to their male counterparts. Their designs embody the concept of ‘caring’,
reflecting their nurturing attributes and the societal expectations imposed on them through their unique experiences. This perspective aligns with that of ecofeminist scholar Susan Griffin, who asserts that women’s knowledge is deeply influenced by their intimate connection with nature. Griffin argues that women alone have the capacity to preserve the environment because their affection for sustainable living stems from their ability to give birth, which positions them as individuals most attuned to the essence of existence (Arivia, 2018).

The aim of this research is to understand how the concept of care, as a fundamental aspect of the embodiment of women designers, is reflected in their design within social and cultural contexts. In understanding the concept of care as an aspect of a designer’s embodiment, semiotics can be used to interpret a work of design, particularly architecture. Previous studies have looked at care-oriented design, particularly in architecture. These studies were characterised by the use of natural materials that uphold the values of local identity and universality, such as stone, bamboo, wood, clay ceramics, and unfinished concrete. These materials draw on the knowledge of local communities to showcase the identity of Indonesian vernacular architecture, as seen in the works of Mangunwijaya and Eko Prawoto (Hidayatun, Prijotomo, & Rachmawati, 2013).

Other research has explored multisensory bodily experiences in architecture and their impact on design, both at an individual and collective level. These experiences are expected to enhance the development of buildings and urban spaces by promoting social, cognitive and emotional human interactions (Spence, 2020). Affective architecture research offers new perspectives for designing sustainable social interactions using natural materials and sensory connections, blurring the boundaries between private and public spaces to reflect the interdependencies between individuals, communities, buildings and cities (Kopitz, 2022). Another line of research focuses on the application of multimodal analysis to understand socio-cultural constructions in three-dimensional architectural works using Kress and Leuween’s framework, as demonstrated by Ravelli (2015).

The study of women designers in Indonesian architecture who engage in care-oriented design influenced by embodiment discourse remains limited. Their design practices are often associated with experiences in domestic and public spaces, raising intriguing questions about the representation of care in their work. These nuanced meanings of care as women’s embodiment can be uncovered through interpretive analysis using semiotic methods, particularly in the study of three-dimensional architectural texts. Novi Kristinawati’s architectural works, such as the Kampung Halaman Foundation in Yogyakarta, provide an exemplary demonstration of care-oriented design, characterised by the innovative use of bamboo as a material and structural element. Established in 2006, the Kampung Halaman Foundation is a non-profit organisation dedicated to facilitating the engagement and empowerment of youth from diverse communities through collaborative arts and media approaches.

The selection of this design is primarily driven by the functional aspect of the building,
which serves as a communal space for young people to engage in creative endeavours and interactions. Consequently, the main objective outlined in the design brief, which emerged from the collaboration between the facilitators and Novi Kristinawati, was to create a space that would encourage interactions between the young people who would be using the space. The architecture of the Kampung Halaman Foundation is characterised by an open spatial flow with no partitions, made possible by the bamboo construction that eliminates the need for numerous support columns. This bamboo construction blurs the boundaries between private and public spaces, seamlessly connecting the outdoor environment with the indoor areas and enhancing the proximity to nature.

MATERIALS & METHODS

Materials

Facing south, the building is surrounded by a natural landscape of bamboo groves, fruit gardens and a flowing river on its western side. Elevated one metre above the ground, Kampung Halaman Foundation’s design includes a main building and a smaller building. The larger building, known as “We Love You(th)”, serves as the main unit of Kampung Halaman Foundation’s activities and is often abbreviated as WLY in the following references. The main building, characterised by its bamboo-framed curved roof, has two floors. The ground floor is a café space, while the second floor is a multi-purpose space for youth activities. Interestingly, the main building, originally a simple house, has been renovated while preserving its essence. Elements such as walls, ventilation, windows and doors were left in their original positions. The renovation also transformed the former office building into a café on the ground floor and strengthened the structure with additional columns to support the bamboo-domed hall above.

In the café area, four doors are aligned with those of the previous house, facing the points of the compass. The main entrance, facing south, retains the original features, while the east door leads to the café’s kitchen. The west door, with its terrace, was a retreat for the Kampung Halaman Foundation team before the renovation, and the north door opens onto a terrace and courtyard with café seating overlooking a bamboo forest and pond. Originally planned as office space, the second floor was repurposed as a central hub.
for youth activities due to the spaciousness and influence of the COVID-19 pandemic, emphasising open airflow and a refreshing environment.

**Methods**

This study aims to understand the concept of care as a fundamental aspect of a woman designer’s embodiment reflected in three-dimensional architectural texts influenced by socio-cultural aspects. This study employs an interpretive approach as its primary method for understanding the meanings of three-dimensional texts. The method employed involves semiotic analysis utilizing the multimodal theory of Kress and van Leeuwen (2021). Three-dimensional objects necessitate direct experience through observation to engage with specific events or situations. Similarly, interviews with woman designer Novi Kristinawati and the founder of Kampung Halaman Foundation, Dian Herdiany, were conducted to understand the design background. In supporting the data, various documents including architectural drawings and photographic documentation of Kampung Halaman Foundation’s buildings were also utilized for analysis. The three-dimensional text analysed in this study is the architectural design of Kampung Halaman Foundation created by Novi Kristinawati, which is assumed to embody a ‘caring’ meaning influenced by embodiment, through the application of three metafunctions. These metafunctions include representational meaning, which explains literal and symbolic functions; interactive meaning, which shows the relationship between users and the design text; and compositional meaning, which highlights the arrangement of design elements to facilitate effective communication. The analysis will focus particularly on the prominent section of the larger building, known as “We Love You(th) or WLY which consists of a bamboo dome hall on the second floor and a cafe on the ground floor.
The three metafunctions are analysed sequentially, starting with representation meanings, followed by interactional meanings, and concluding with compositional meanings. According to Kress and van Leeuwen (2021), representational meaning refers to the content and intent of a text conveyed through modes as semiotic resources. These include participants, processes and circumstances. Similar to visual images, buildings can also be ‘seen’ by navigating through them, taking into account specific behaviours within the space. The narrative process concretises dynamic actions with the presence of a narrative vector. Meanwhile, the conceptual process emerges through the categorisation of attributes, such as prominent attributes due to size, and the classification of attributes that establish relationships between participants (design elements).

The second analysis is interactional meanings, which comprises three dimensions: contact, social distance and attitude. The final analysis is the metafunction of compositional meanings, which bridge representational meanings and interactional meanings through three interrelated systems. The first system, information value, involves the arrangement of architectural elements to convey specific information. The second, framing, refers to the contextual framing resulting from physical constraints such as window designs, doors, fences or pathways, including the boundary between the building and its surroundings. Finally, salience refers to the ways a building attracts the attention of its users, which can arise from size, colour, lighting or the use of particular materials. Through the examination of these three metafunctions, the reflection of ‘care design’ as a form of embodiment of the woman designer will be revealed in the architectural design of Kampung Halaman Foundation.

RESULTS & DISCUSSIONS
The Three Metafunctions of Kampung Halaman Foundation’s Design
Representational Meanings
Representational meanings refer to the overall intention of the building that can be conveyed through the use of materials and the primary function of the structure, both literally and symbolically. In the representational meanings stage, Kress and van Leeuwen (2021) illustrate an active relationship between the participants (design elements) represented in the design, including narrative and conceptual processes that prompt specific actions in particular circumstances. In the main building, We Love You(th) or WLY, there is a café area on the ground floor and a bamboo dome hall on the second floor, dominated by a massive bamboo framework, which users of the design will experience.

A narrative vector is initiated by observing the main building, particularly the bamboo dome roof, from a distance and entering the courtyard. Participants are guided by the main building and cues such as parking signs, ‘We Love You(th)’ signs, and the main entrance consisting of a one-metre high staircase leading to the café area. Together, these cues direct users of the space according to their intentions, whether to order food and drink from the café or to participate
in activities in the bamboo-domed hall above, which is reached by turning right to locate the staircase, which is also a prominent feature. Upon entering the spacious, unpartitioned bamboo dome hall, which contrasts with the plain cement floor, users are prompted by action vectors to move in different directions. Here is another prominent attribute of utility: the bamboo woven screen and fibre cover on the second part of the dome arch, which serves to shield from direct sunlight and repel rain.

In the design of the WLY main building, there are two masses, with a concrete base structure and a reinforced steel structure to support a huge curved bamboo frame structure spanning up to 13 metres for the second-floor bamboo hall. According to Frick (2008), bamboo frames respond effectively to ground settlement, vibration (earthquakes) and dynamic pressure (wind as a horizontal force). The lightweight construction minimises weight in floors, walls and roofs, using nodes as hinges that allow slight movement without compromising stability. The materials and structure can change shape significantly to dissipate energy. The mixed construction of the WLY design has the connotation of a seismically safe building, especially in the earthquake-prone city of Yogyakarta.

Another symbolic meaning is the harmonious juxtaposition of contrasting material sources such as bamboo, uPVC roofing sheets, wood, old tiles, glass, polished cement floors, exposed brick, concrete and fibre screens. The bamboo and wood structures give a warm impression, while the concrete gives a cold one. This is consistent with Hardy’s (2018) statement that wood is inherently warmer than any piece of concrete. Nevertheless, the dominance of the bamboo dome plays a pivotal role as a primary material and structural component of the building, beautifully integrated into the structure as screens and roofs. Lugt (2017) argues that bamboo, a giant grass found in tropical and subtropical regions, grows rapidly, growing one metre per day and reaching 25-30 metres in just two to three months, and can be harvested at four years of age. Bamboo is a reliable and durable building material known for its renewability. When integrated into the design of the Kampung Halaman Foundation, it can also be interpreted as a commitment to environmental sustainability, especially when combined with the surrounding bamboo forest.

Furthermore, the use of natural bamboo materials is consistent with studies that explain that the use of natural materials from the surrounding environment signifies a building that is dependent on and integrated with nature, as seen in Bali Aga dwellings.
which use materials from the surrounding environment such as wood, bamboo and popolan soil (compacted clay), marking the absence of manufactured materials (Maharani, Santosa and Wardono, 2016). The overarching representational meaning, encapsulating both literal and symbolic functions, resonates with Mangunwijaya’s perspective on two contextual factors that warrant consideration in construction: utility and image. Here, image alludes to cultural dimensions, while utility refers to skill and ability (Mangunwijaya, 1988).

**Interactive Meanings**

The meaning of interaction encompasses the relationship between the representational meanings within the design and the users of the design (main team and facilitators, the youth, café guests, regular yoga class participants, and office tenants). Fundamental and interconnected aspects of interaction include contact, social distance, and attitude (Kress & van Leeuwen, 2021). Within the dimension of contact, design-related interactions with users can take the form of demand and offer. Meanwhile, the dimension of social distance arises from the representational meanings that emerge from the building’s dimensions, whether inside or outside. The attitude dimension comes into play when design users are engaged in specific events while responding to various spaces, such as private spaces and common spaces.

In the design of Kampung Halaman Foundation, the analysis of social distance follows Edward T. Hall’s taxonomy of human distance (in Lawson, 2001), which categorises space as ‘intimate’, ‘personal’, ‘social’ and ‘public’. In the café area, an intimate distance of around 0.5 metres between visitors at two-seater tables encourages interactions such as romance and friendship. The personal distance is between 0.5 and 1.2 metres at tables with 3-5 people. A social distance of 1.2 to 4 metres separates unfamiliar visitors at different tables, minimising interaction. In the unfurnished bamboo hall, the social distance is flexible, depending on the needs of the young participants during the Foundation’s activities, and includes intimate and personal distances. Close and distant social distances, ranging from 1.2 to over 4 metres, occur during seminars where participants listen to speakers and facilitators. Finally, public distances of more than 4 metres are accommodated on the back terrace of the café overlooking the pond and bamboo forest during musical
performances or other artistic presentations.

In terms of the attitude dimension, this design influences users’ attitudes (Kress & Leuwen, 2021), which are triggered by visual adaptations from cinematic and video perspective-taking and influence their behaviour while navigating the building. The visual effects experienced by users are as follows: when approaching Yayasan Kampung Halaman on foot or by vehicle, users initially encounter an oblique perspective, which creates a sense of distance when approaching the building from the roadside. As users approach the building, they perceive it from a low-angle perspective, emphasising the grandeur of the two-storey structure with its prominent domed roof, making it appear taller than the street level. As users enter the building and view it at eye level, the structure becomes more familiar. This perspective is also evident when users look out over the bamboo forest from the second floor, fostering a sense of unity with nature, especially given the absence of permanent walls, except for waist-high fences.

**Compositional Meanings**

Compositional meanings in three-dimensional architecture connect representational and interactive meanings through three systems: information value, framing, and salience (Kress & van Leeuwen, 2021). Information value depends on where text users engage with the design. When approaching the building, the large dynamic bamboo archway conveys significant information, while details like the staircase, main entrance, signage, and café layout guide the vector of movement. The design rhythm created by the recurring use of bamboo materials and structures prominently accentuates a natural ambience, with the bamboo dome representing the building’s most salient dimension. The ground floor of the café area is noticeably heavier than the bamboo dome, both in terms of mass and colour, with the café having a cooler ambience compared to the warm bamboo dome. According to Lawson (2001), the most symmetrical form is the sphere and its subdivisions such as the dome is a traditional architectural form to create focal points that attract attention in
space.

The framing dimension deals with continuity and separation. The WLY building and smaller structure appear distinct from the exterior despite being connected by a bridge. In addition, weak framing is also seen in the open courtyard and a short fence separating the bamboo grove and pond area. The WLY building blurs indoor and outdoor distinctions with its open design, large doors, seamless interiors, and a bamboo dome that incorporates sunshade mesh as a transparent partition. This subtle separation suggests a thoughtful balance between private and public spaces, as well as between culture and nature. This phenomenon aligns with Armand’s (2017) perspective on architecture, which creates distinct external and internal worlds with vastly different characteristics. The interior space provides a sense of “place” that envelops and protects the individual, while the external space opens up opportunities for unexpected interactions, freedom, and adventure. One can be inside as well as outside. Elements such as doors, windows, and thresholds serve as unavoidable transition points between these two worlds.

Caring Design as a Form of Woman Designer’s Embodiment

By examining the three metafunctions of the Kampung Halaman Foundation design, we reveal various expressions of care as a woman designer’s embodiment. Novi Kristinawati, the woman designer, has chosen bamboo as the primary material due to its natural abundance and her expertise in preservation techniques and bamboo construction. This choice reflects a harmonious alignment with nature. Acts of care are also evident in her collaboration with skilled craftsmen, who contributed to the bamboo roof cover and other intricate elements such as bamboo screens, stairs, fences, and strip ceilings in the café area. The meticulous installation of exposed brick, rough-textured plaster walls, column structures, concrete, and tile flooring further demonstrates a meticulous approach.

Figure 6. The weaving patterns in bamboo structures: gedeg weaving pattern for high-density braiding (on dome roofs) and oblique cross bamboo weaving pattern for wide braiding that functions as a sunscreen. (Source: Author, 24 August 2023)

Figure 7. (a) WLY’s backyard café terrace adjacent to the pond and bamboo forest; and (b) The arrangement of the café interior as the main information value dimension of the pond and bamboo garden; (Source: Author, 24 August 2023)
The close collaboration between craftsmen and the designer, characterized by ongoing knowledge exchange, is a prominent feature of the design process. A similar collaboration between craftsmen and designers is observed in McLaine Pont’s designs in Java, Indonesia, showcasing expertise in brickwork, stone carving, wood carving, and innovative tile arrangements using wire instead of timber frames (Mahantmanto, 2012).

In addition, another facet of care is manifested in the shape of the dome itself, a structure consisting of an expansive bamboo frame that curves gracefully, revealing the meaning of ‘visually flexible but with hidden strength’. This suggests that woman designer who chooses flexible bamboo associate it with their own flexibility in society. She explained that a woman’s strength lies in her flexibility and ability to negotiate; and that being a woman teaches you to be more understanding and accepting, so that empathy grows. Women learn to have the ability to listen better than men in order to understand other characters (Kristinawati, 2022). This ability to negotiate flexibly and listen to ‘others’, in this case, the needs of the Kampung Halaman Foundation design team, who are also predominantly women.

Furthermore, the form of the large dome symbolises ‘caring and nurturing’, embracing diverse communities of young people and evoking a maternal figure. This symbolic significance is a recurring motif in dome architecture, where the structure serves as an architectural expression connoting woman breasts and the symbol of maternal care (Feldman, 1992). In addition, circular forms and their subdivisions, such as domes (semicircles), are archetypal representations of motherhood and symbolise protection. This is particularly so because domes are hollow objects associated with the mother archetype, specifically the uterus/womb (Jung, 2020). Although the dome is not universally generalised as a feminine form, historical evidence shows that this visual perception has influenced the mother archetype.

Meanwhile, the compositional meaning of the main building design unveils the connotations of care as embodiments of the woman designer. Novi Kristinawati aims to dissolve the boundaries in interactions and social dynamics among adolescents and the facilitator team during activities within the bamboo dome hall. Similarly, the blurring of distinctions between private and public spaces is evidenced by the absence of barriers separating the building from its social and natural surroundings. This design concept is in line with Luce Irigaray’s perspective, which emphasises gender equality through flexible and humane architecture, as opposed to the conventional confined, rigid and individual spaces (Nurhijrah, Kasman, & Akbar, 2018).

This design, with open and flexible spaces, aligns with the needs of adolescents who value independence and is supported by the Kampung Halaman Foundation, known for providing alternative creative spaces for teenagers. The designer is pleased to witness the bamboo dome hall coming to life as it abounds with human activities (Kristinawati, 2023). In addition, when revisiting the statements of the founder of Kampung Halaman Foundation regarding
the organization’s background, which was established to provide a haven for teenagers often perceived as having societal and social challenges (Herdiany, 2023), it becomes evident that Novi Kristinawati effectively listened to the interests and needs of the design commissioner throughout the design process. This led to the creation of the bamboo dome hall solution - an unpartitioned, free-flowing space that could support the interactions of young people engaged in activities, in line with their characteristics and needs.

Furthermore, the connection between the educated women commissioner of Kampung Halaman Foundation and the woman designer reflects equality and full involvement. The engagement of these women in collaboration to develop theoretical and practical potentials and to address on-ground realities can be seen as a social action or struggle in the sociological sense of ‘sisterhood—or—brotherhood’ (Shiva & Mies, 2005). Moreover, the design of the Kampung Halaman Foundation aligns with Bellacasa’s perspective (2017) which articulates an ethics of care cultivated by the women’s movement. This ethics of care derives from the idea and actions of care undertaken by individuals, in this case, woman designer collaborating with women commissioners in caring for adolescents from diverse families, representing a collective care effort within the community.

CONCLUSIONS

Through semiotic methods, specifically multimodal text analysis of Yayasan Kampung Foundation, the interpretation of three meta-functions - representational meanings, interactive meanings and compositional meanings - can be applied to understand the concept of care as a form of embodiment by the designer. The notion of care is exemplified in the lightweight yet robust construction of bamboo, which can withstand earthquakes. The symbolic value of Yayasan Kampung Halaman’s design, beyond its functional utility, signifies environmental sustainability. Despite its visually flexible appearance, the bamboo structure has a hidden strength. The woman designer, Novi Kristinawati, indirectly reflects its embodiment by associating the character of bamboo with women, who are often perceived in society as delicate and flexible, yet, strong. Furthermore, the dome shape is often associated with the mother archetype, specifically the womb. Similarly, the close relationship between the craftsmen and the designer in constructing robust yet beautiful designs represents ‘care’ for knowledge and craftsmanship within the community.

Novi Kristinawati’s designs provide a multi-sensory experience that blends with nature by bringing the exterior into the interior. The partitionless design as a design solution is able to facilitate human distance interactions such as intimate, personal and social distance far-close. In addition to facilitating social distance, it also promotes equality and recognition of both genders. Similarly, Kampung Halaman Foundation’s space is designed as a flexible, flowing space without partitions that can be rearranged according to the user’s needs, reflecting Novi Kristinawati’s design characteristics of prioritising function over fixity.
Furthermore, the ability of the woman designer to listen to the voices of the commissioners, who are also educated women, and to collaborate in creating a creative space for adolescents reflects the embodiment of care in design practice, which is distinct from her male counterparts. Involving commissioners in the design process and advocating for their interests in an equitable relationship can be viewed as an act of social engagement or struggle akin to sisterhood on a sociological level. Finally, through this research, knowledge of women’s embodiment is reflected in the work of a woman designer by mirroring social semiotic sources. However, the findings of this study are not a generalisation model of the characteristics of designs made by women. Instead, this interpretation offers a new understanding and worldview to understand design in terms of women’s embodiment in reflecting their ideology and needs. Further research can consider the reading of meaning by design users to enrich the findings of women designers’ contributions.

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