INWARD-ORIENTED URBAN HOUSING: TYPOLOGIES OF PRIVACY AND CLIMATE ADAPTATION IN CONTEMPORARY INDONESIAN CITIES

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ABSTRACT

Urban residential architecture in Indonesia has increasingly shifted toward inward-oriented spatial configurations, characterized by enclosed façades, controlled openings, and internalized domestic environments. This study investigates how inwardness is articulated in contemporary architect-designed urban houses and how it responds to the combined pressures of urban density, cultural expectations of privacy, and tropical climatic conditions. Adopting a qualitative multiple-case study approach, six houses were selected from an initial survey of 88 projects and analyzed through spatial mapping, comparative analysis, and semi-structured interviews with architects. The study identifies three typological strategies of inwardness: courtyard-centered inwardness, layered-threshold inwardness, and façade-filtered inwardness. These typologies show how spatial organization, façade articulation, and threshold sequencing regulate visibility, environmental performance, and domestic autonomy. The findings reconceptualize inward-oriented housing not as a residual traditional form, but as a contemporary architectural response to dense urban conditions in tropical contexts. By linking spatial configuration with socio-cultural and environmental factors, the study contributes a typological framework for understanding inwardness as an adaptive strategy in Indonesian urban housing.

Keywords: *Housing Typology, Indonesian Housing, Inward-Oriented Housing, Privacy Regulation, Tropical Architecture, Urban Density*

INTRODUCTION

Rapid urbanization in Indonesian cities has significantly transformed the spatial logic of contemporary residential architecture. Increasing density, shrinking plot sizes, proximity between buildings, and heightened exposure to noise and public visibility have prompted a growing tendency toward inward-oriented housing forms. Many

urban houses today exhibit solid street-facing façades, limited external openings, and a deliberate reorientation of domestic life toward internal courtyards, gardens, or semi-outdoor voids, not only in Indonesia but also in other tropical or Asian country. Rather than engaging directly with the street, these dwellings prioritize internal spatial autonomy and controlled exposure (Civelli *et al.*, 2022; Wijaya Mulya and Schäfer, 2023; McFarlane, Saguin and Cunanan, 2025). Inward-oriented residential architecture is not a new phenomenon in tropical or Asian contexts. Inwardness refers to an architectural expression in which activity and views are predominantly oriented toward internal spaces rather than directly toward the street. Historically, inward configurations have been associated with strategies for regulating space through graded spatial hierarchies (Gibert *et al.*, 2016; Thao and Dewancker, 2017; Zharani and Selim, 2026). In contemporary Indonesian cities, however, inwardness is increasingly reinterpreted through modern architectural expressions and compact urban plots. Socio-cultural values related to modesty, family intimacy, and selective hospitality intersect with environmental demands such as heat, humidity, and solar control, encouraging architects to deploy inward-oriented articulation as integrated design responses. Despite the growing prevalence of inward-oriented houses in Indonesian urban environments, scholarly attention has largely focused on vernacular precedents or generalized discussions of courtyard housing. Empirical analysis of how established principles of inwardness are spatially reinterpreted in contemporary architect-designed urban dwellings remains limited. In particular, it remains unclear how spatial organisation, façade permeability, and the mediation between private domestic life and the surrounding neighbourhood collectively contribute to the articulation of inwardness. In this study, domesticity refers to the social and spatial organization of everyday life and interaction within the dwelling, including family life, workers, and guests, especially in Indonesian culture.

This study addresses this gap by analyzing contemporary architect-designed houses in the Indonesian urban context. It will contribute to architectural and urban discourse by proposing a typological framework of inward-oriented housing that links spatial configuration, privacy regulation, and climatic design response in dense tropical cities. These dimensions are considered because inwardness involves the organization of domestic life, the regulation of exposure between the house and its surroundings, and the environmental moderation of tropical conditions. Through a comparative analysis of selected case studies, the research identifies recurring typological patterns of inwardness. It explores how these patterns respond to urban density, cultural expectations of privacy, and tropical climatic conditions (De Macedo, Ornstein and Elali, 2022).

THEORY / RESEARCH METHODS

Theoretical Framework

Inward-oriented residential architecture has long been embedded in housing traditions across diverse cultural and climatic regions. In Indonesia, in particular, the organization of domestic space frequently reflects negotiations of privacy, climate,

and social and cultural life (Irwin Altman, 1975; Rahim and Hashim, 2012; Othman, Aird and Buys, 2015; Manaf *et al.*, 2018). This section outlines the theoretical concepts that underlie the analysis of inwardness in contemporary Indonesian urban dwellings, focusing on three main strands: privacy as spatial regulation, cultural domesticity and social norms, and tropical urban housing morphology. These strands collectively establish a framework for understanding inwardness as a multifaceted architectural response situated between environmental, cultural, and urban pressures (Kusuma, 2010; Alkhresheh, 2012; Archifynow, 2018; Hasbi and Dawanti, 2021).

Privacy as Spatial Regulation

Privacy is a central determinant of domestic spatial configuration, shaping how residents regulate visibility, interaction, and access (De Macedo, Ornstein and Elali, 2022). Altman's theory of privacy conceptualizes it as a dynamic boundary-regulation process, whereby individuals and groups continuously manage the degree of social interaction in accordance with context and preference. In residential settings, this process is spatialized through access control, proxemics, visibility, and material mediation that separate public, semi-public, and private domains (Irwin Altman, 1975; Hanson and Hillier, 1982; Abu-Gazzeh, 1996). Studies in the Middle East, South Asia, and Southeast Asia have demonstrated how privacy values influence façade transparency, room placement, circulation patterns, and gender-specific spatial arrangements (Georgiou, 2006; Othman, Aird and Buys, 2015; Alitajer and Molavi Nojoumi, 2016; Lee and Gu, 2018; Setiadi and Depari, 2021; Mandaka *et al.*, 2023; Vedhajanani and Amirtham, 2023; AL-Mohannadi and Furlan, 2025; Çetin and Beyhan, 2025).

In urban Asian and Islamic contexts, privacy is shaped by density, proximity to neighbors, modesty, and controlled exposure. These concerns are spatialized through building orientation, differentiated entrances, zoning, transitional spaces, courtyards, and filtered façades (Othman, Aird and Buys, 2015; Hasan, Noor Prabowo and Bava Mohidin, 2021). Inward-oriented buildings are more capable of guaranteeing visual privacy than those that are open to the street (Al-Birawi and 'Adawi, 2019). Research in Qatar, Jordan, Tamil Nadu, and the Arabian Gulf shows that the organization of entrances, courtyards, transitional zones, and façade filters operates as spatial mechanisms that balance household intimacy with the social demands of the neighborhood. Privacy encourages design elements such as separators, height adjustments, transition spaces, zoning, material use, differentiated entrance positions, and gender-separation strategies and spatial agreements. These studies suggest that privacy is not an individual concern but a collective cultural practice, embedded in domestic routines, hospitality traditions, and social norms (Sundstrom *et al.*, 1996; De Macedo, Ornstein and Elali, 2022).

Cultural Domesticity Spatial Norms

Domestic architecture in some Asian regions is strongly influenced by cultural values surrounding kinship, shifting lifestyles, modesty, and consumption patterns(Salama, Wiedmann and Ibrahim, 2017). Rapoport's cultural-meaning framework emphasizes that house form is not solely a functional response, but a material expression of shared values, social order, and ritualized everyday life (Rapoport, 1969). In Indonesian

households, spatial organization traditionally reflects distinctions between front–middle–rear zones, female and male domains, service and guest areas, and family gathering spaces. On the other hand, Indonesia as an Islamic majority country, Islamic principles of modesty and gendered visibility often applied these distinctions through layered spatial transition and barrier, indirect view corridors, and controlled openings (Daniels, 2008; Othman, Aird and Buys, 2015; Saraiva, Serra and Furtado, 2019; Mandaka *et al.*, 2023). With urbanization, these cultural expectations do not disappear; instead, they are reinterpreted within smaller plots, denser neighborhoods, and contemporary aesthetic preferences (Alitajer and Molavi Nojoumi, 2016). Emerging studies in Yogyakarta, Kauman villages, Lasem, and other Indonesian contexts highlight how cultural domesticity continues to shape the organization of courtyards, service areas, and family realms. It is articulated even when expressed through modern materials, minimalist forms, or compact urban footprints (Lee and Gu, 2018; Setiadi and Depari, 2021; Mandaka *et al.*, 2023). Even in the context of building alteration, there is an urgency to separate owners and guests (Saraiva, Serra and Furtado, 2019; Putra, 2021).

Tropical Climate, Environmental Adaptation, and Housing Morphology

In dense urban areas, limited setbacks, overshadowing, and reduced airflow intensify these challenges can encourage inward configurations. They create microclimates through internal voids, skylights, and vegetated pockets. Courtyards, shading devices, double skins, and filtered openings can simultaneously moderate heat, glare, ventilation, and privacy (Rajapaksha, Nagai and Okumiya, 2003; Saelens, Roels and Hens, 2008; Sharmin, 2019; Nugroho *et al.*, 2020; Tomajian and Gyergyák, 2024; Aloshan and Aldali, 2025; Patil, 2026). Thus, climate adaptation provides an environmental basis for examining how inward-oriented configurations mediate tropical conditions.

Methods

This study adopts a qualitative multiple-case study approach to investigate how inwardness is articulated in contemporary Indonesian urban housing. The method combines spatial and morphological analysis with semi-structured interviews to capture both the physical configuration of the houses and the architectural intentions behind their design. The interviews were conducted with five of the houses' architects. From an initial survey of 88 inward-oriented houses documented on curated architectural platforms, six projects were purposively selected for in-depth analysis. The selected houses represent contemporary architect-designed urban dwellings in Indonesia that explicitly employ inward-oriented spatial strategies. The selection criteria included: (1) location within dense urban neighborhoods, (2) constrained plot conditions typical of Indonesian cities, and (3) a clear emphasis on internal spatial organization.

Data was collected from three main sources. First, architectural drawings and project documentation—including plans, sections, elevations, photographs, and, where available, three-dimensional visualizations—were gathered from architects and online publications to support spatial and façade analysis. Second, contextual

information such as street hierarchy, plot configuration, neighboring building heights, and degrees of exposure to public view were examined using publicly available maps, surveys, satellite imagery, and project descriptions. Third, semi-structured interviews were conducted with the architects responsible for each project to explore design motivations, client requirements, interpretations of privacy and domestic life, and responses to climatic and neighborhood conditions. The interviews were recorded, summarized, and thematically coded to align with the analytical categories used in the spatial analysis.

The analytical process employed a qualitative comparative approach to identify recurring spatial strategies of inwardness across the cases. Each house was analyzed through three stages. First, spatial mapping identified key organizational elements, including courtyard placement, façade permeability, and the sequencing of transitional spaces. Second, a cross-case comparative analysis examined similarities and variations across the houses based on three analytical variables: (1) spatial organization and inward-oriented elements such as courtyards or internal voids, (2) façade permeability and the degree of visual openness toward the street, and (3) the hierarchy of thresholds regulating transitions between public, semi-private, and private domains. These observations were synthesized in a comparative matrix to reveal recurring architectural patterns related to privacy, environmental adaptation, and urban density. These three dimensions were selected based on the theoretical framework and reinforced through recurring keywords in interviews. Third, the identified patterns were interpreted typologically, resulting in three strategies of inwardness that represent distinct architectural responses to dense urban conditions.

Triangulating spatial analysis, visual documentation, and architect interviews enhances the credibility of the findings by linking observable spatial configurations with the architects' design intentions. Nevertheless, the study has several limitations. The number of cases is relatively small and limited to architect-designed urban houses, which may not represent broader housing trends. In addition, the analysis relies primarily on architectural interpretation and designers' perspectives rather than systematic post-occupancy evaluation of residents' experiences. Future research may therefore expand the typology to include larger housing samples, incorporate user-centered studies, and explore how inwardness operates at the neighborhood or housing-cluster scale.

RESULTS AND DISCUSSION

Results

The six case studies are located in diverse urban residential contexts, each presenting different environmental and social conditions. FM House (FMH) is situated in South Jakarta–Bintaro, while Twisted Detached House (TDH) is located in Bintaro, where proximity to surrounding pedestrians emphasizes privacy. Banjar House (BJH) responds to a busy street and adjacent properties through controlled openings and internal greenery. Guntur House (GH) addresses an active surrounding environment through a protected open space, while CL House (CLH) responds to a three-storey

commercial building opposite the site, western exposure, and street activity. Doctor House (DH), located near Alun-Alun Bandung, on a street with a small right-of-way (ROW) of around 5 m.

In this part, Table 1 and drawings (Figure 1 and 2) provide a comparative reading of the six cases based on their spatial organization, façade permeability, and threshold sequences. The analysis considers how the houses organize internal voids, control visual connections with the street, and structure transitions between public, semi-private, and private domains. The comparative drawings and matrix are used to identify recurring spatial characteristics as well as variations in the ways each house establishes an inward-oriented configuration. These observations provide the basis for interpreting the common strategies through which inwardness is produced across the cases.

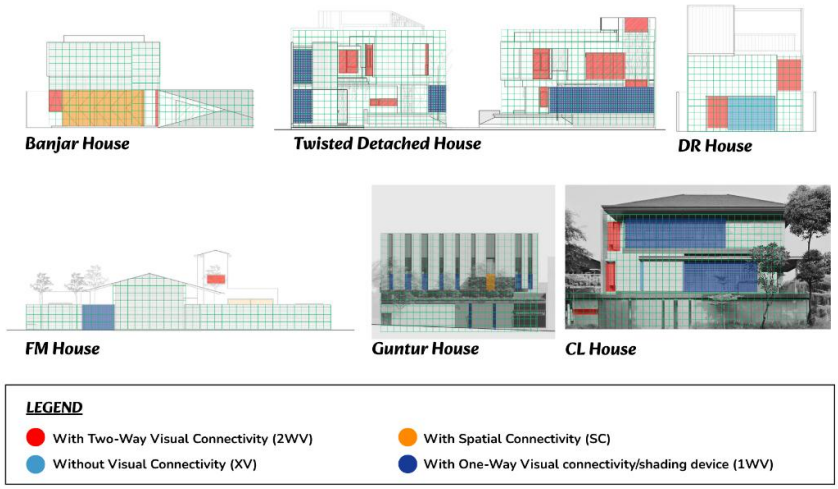


Figure 1. Opening Type in the Street-Facing Façade Comparison Diagram.
Source: Reproduced from Archdaily

All six cases operate design expressions through consistent strategies. Masses orient towards internal voids, such as courtyards, side gardens, or pools. Street-facing façades maintain low permeability through filtered openings and low VSR, and avoid large façade openings, thus reinforcing privacy and enclosure as seen in Figure 1. Access sequences create multi-stage transitions from public street to private core, reinforced by solid exteriors and experiential interiors. The main family spaces, including living, dining, and family rooms, are consistently oriented toward internal courtyards, gardens, or semi-outdoor voids, which not only foster visual connectivity but also serve as climatic moderators. Environmental features such as courtyards, skylights, and ponds regulate temperature and daylight, compensating for limited lateral airflow in dense settings. Interviews with architects highlight that cultural and lifestyle factors, including privacy, modesty, family intimacy, security, and selective hospitality, strongly influence spatial choices. Additionally, curated semi-outdoor spaces such as terraces, decks, and service courts are intentionally designed for

exclusive resident use. These spaces further reinforce the concept of inward outdoor living and distance these areas from public interaction. Together, these patterns illustrate how inwardness is articulated through both architectural and social drivers, shaping domestic environments that respond to urban density, cultural expectations, and climatic demands.



Figure 2. Floor plan of (a) TDH Project; (b) GH Project; (c) BH Project; (d) CLH Project; (e) DH Project; (f) FMH Project

Table 1. Comparative Matrix of Spatial and Façade Strategies

Project	Spatial organization	Façade permeability (VSR & opening types)	Threshold & access sequence
Banjar House	L-shaped mass; main volume extends East–West, secondary/service wing North–South; detached from three plot edges; primary orientation towards side garden and inner court that anchor family activities.	VSR 27.4%; combination of 2WV openings towards the side garden and large XV openings in the main area, creating a highly permeable interior–courtyard relationship; West façade is almost completely solid.	Main entrance hidden along the side of the building, producing a secluded arrival; access sequence directs visitors along the side path before reaching the main space; vertical circulation via a dramatic ramp enhances the sense of internalized movement.
Twisted Detached House	Two main volumes; the second floor rotated 45° to respond to the corner lot and create a strong urban icon; living spaces are oriented towards an inner court and internal garden.	VSR 22.5%; terracotta breezeblock "breathing wall" admits air and light while blocking direct views; significant 2WV openings are oriented only towards the inner court and garden.	Main access concealed behind the breezeblock screen; layered sequence from street, semi-transparent screen, terrace, garden/pond, and interior producing a pronounced entrance experience from public to private.
CL House	Linear main mass positioned to block Western sun and the commercial strip in front; central courtyard organizes daily life and mediates between interior and exterior.	VSR 23.1%; West-facing openings use a timber second skin (1WV); pinhole glass provides limited outward views while maintaining privacy; larger openness is directed towards the courtyard and pool.	Circulation wraps around the courtyard; the spatial procession flows gradually from the public to the private through corridors and galleries that frame the inner garden.
Guntur House	T-shaped mass generating a semi-shaded open space at the center of the plot; inner courts flank the main living area and support	VSR 8%; openings are relatively small and positioned in visual blind spots; *louvre* glass and shading devices used to soften light; solid fence and	Entrance path is explicitly layered: from outdoor, semi-outdoor, to indoor transition spaces; circulation is drawn inward,

Project	Spatial organization	Façade permeability (VSR & opening types)	Threshold & access sequence
	cross-ventilation as well as family gatherings.	envelope act as visual protection, with main openings oriented to inner courts.	building a strong hierarchy of thresholds from street to family room.
Doctor House	U-shaped/C-shaped mass embracing an inner court detached from site boundaries; all primary rooms face the inner garden, turning the house into an inward-looking "sanctuary".	VSR 35.2%; front façade is almost entirely solid; glass blocks are used as light filters; virtually all significant 2WV openings face the inner court, while the street side receives only filtered light.	Linear circulation from the front door to the service zone, but entry into the main living spaces always occurs via the inner court and semi-outdoor zones; vertical circulation is hidden and wrapped around vegetation.
FM House	Three compact masses pulled back from the front boundary; a swimming pool is placed at the center of the composition as the main void and orientation focus for living and bedrooms.	VSR 9%; street-facing façades are largely solid; the right side is fully closed with brick, the left side uses perforated brick (roster) for filtered ventilation; large 2WV openings are directed exclusively towards the pool.	Access from the carport passes through an outdoor-to-semi-outdoor transitional space into the main building; a linear semi-outdoor corridor connects the three masses and separates service, semi-private, and private functions, with the pool as the central node.

As seen in Table 2, the matrix makes clear that inwardness arises from the interplay of concrete site and climatic constraints, intangible cultural and lifestyle values, and highly specific user demands. Density or exposed urban plots and tropical conditions consistently push designs towards solid edges and internal voids. Norms of modesty, security, and family intimacy shape how openness is permitted. Articulated client needs such as large family gatherings, irregular working hours, or religiously inflected privacy, further shape these outcomes. All factors directly translate into inward-oriented spatial organizations, controlled façades, and choreographed thresholds layers.

Table 2. Tangible–Intangible Factors and User Needs

Project	Tangible factors (site, climate, morphology)	Intangible factors (culture, lifestyle, values)	User needs (privacy, use patterns)
Banjar House	Partially open plot with building detached on three sides; East–West longitudinal mass to minimize solar heat; side garden and inner court as main light and ventilation sources.	Preference for a calm, shady, nature-related domestic atmosphere that feels warm but is not exposed to the street.	Flexible family space that can open to the garden for gatherings; visual privacy from the street, with daily life oriented inward to the side garden.
Twisted Detached House	Corner lot with low setbacks and no front fence; proximity to a public street; an inner court and a roster wall moderating light, air, and views.	Desire to appear iconic in the urban corner while maintaining an intimate interior; sensitivity to close neighbor proximity and social exposure.	High privacy at a corner site; layered entry sequence where outside–inside transition is strongly felt; good daylight without direct interaction with neighbors (especially post-pandemic).
CL House	West-facing plot directly facing a busy commercial strip and strong afternoon sun; linear mass blocking front exposure; central courtyard providing light and ventilation.	Aspiration for a quiet, protected, and contemporary home that reduces noise and visual intrusion from commercial activities.	Acoustic and visual privacy from the street; everyday family life centered on a serene inner garden and pool rather than the front street.
Guntur House	Dense urban context with solid perimeter fence; T-shaped mass generating shaded inner courts; small, strategically placed openings and shading devices.	Importance of modesty and controlled interaction with neighbors; valuing a sense of safety and enclosure while still enjoying outdoor family space.	Bright but shielded gathering areas; limited direct visual contact with the street and neighbors; protection of family activities from outside gaze.
Doctor House	Compact urban plot near a busy area; U/C-shaped mass around a green inner court; nearly opaque street façade with glass	Need for retreat and decompression for a doctor with irregular, often late working hours; preference for a calm, predictable,	Strong privacy and security from the street; continuous visual connection to greenery within the house; low exposure to

Project	Tangible factors (site, climate, morphology)	Intangible factors (culture, lifestyle, values)	User needs (privacy, use patterns)
	blocks admitting only filtered light.	inward-focused home environment.	passers-by and neighborhood activity.
FM House	Village-like urban fabric; façade: right side fully closed with solid brick, left side with small roster openings; central pool and garden as the main climatic and spatial organizer; wide eaves protecting openings.	Muslim client (hijab-wearing) emphasizing modesty and low exposure; appreciation of rustic, "honest" materiality and an experiential interior distinct from the modest street context.	Very high privacy for large family gatherings and pool activities; all bedrooms facing the pool; minimized visual interaction with the surrounding kampung while maintaining an open interior towards the central courtyard.

The analysis reveals consistent inwardness strategies that negotiate driving factors such as user needs (privacy and use patterns), intangible factors (socio-cultural values and domestic norms), and tangible factors (climate: tropical heat, glare, and humidity, site: density, setbacks, adjacency, and noise) by orienting domestic life inward as illustrated in Figure 3. Although the houses vary in size, location, and client background, they share similar core patterns: the use of courtyards or internal voids as domestic centers, the layering of thresholds to regulate visibility, and the deployment of façade filters to minimize the internal-external interface. Each typology represents a distinct architectural mechanism by which inwardness is produced in response to the urban environment. These findings highlight how inwardness has evolved into a flexible urban-housing design language that adapts architectural form, spatial sequencing, and façade articulation to the complex demands of Indonesian urban living.

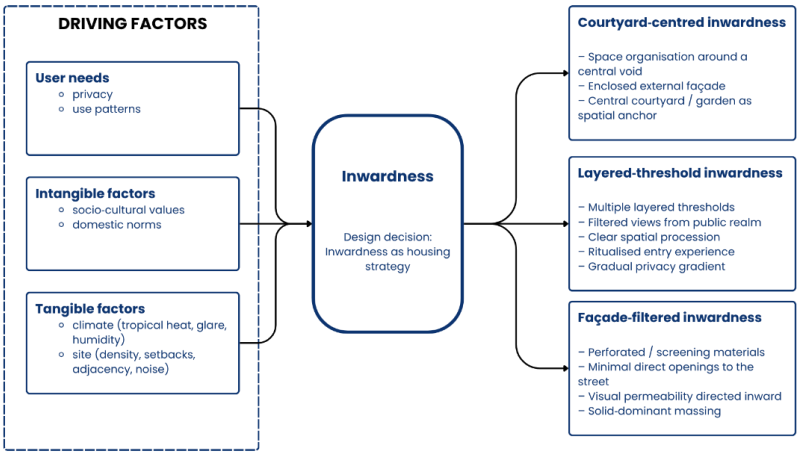


Figure 3. Inwardness as a Design Strategy in Contemporary Urban Houses

The comparative analysis indicates that inwardness is not produced through a single spatial configuration. Across the six cases, different architectural mechanisms are used to orient domestic life inward, regulate exposure, and establish a relationship between the house and its surroundings. Based on these recurring patterns, three typological expressions of inwardness are identified: Courtyard-Centered Inwardness, Layered-Threshold Inwardness, and Façade-Filtered Inwardness. These terms are used in this study to describe the dominant spatial mechanism observed in each case.

Courtyard-Centered Inwardness

The Courtyard-Centered Inwardness typology organizes the house around a central inner space that functions simultaneously as a climatic moderator, visual anchor, and social core. The courtyard or internal garden becomes the primary orientation point for circulation, spatial hierarchy, and daily activities. Several characteristics indicated this typology. A largely enclosed external façade with minimal street-facing voids. A central courtyard, side courtyard or internal pool that brings daylight and ventilation into deep interior spaces. Living, dining, and family areas are strategically positioned around this inner void, creating a continuous visual connection across domestic spaces. The use of soft landscaping, water elements, or double-height voids to enhance interior microclimates.

CLH and FMH exemplify this typology. In CLH, the courtyard becomes the emotional and environmental center of the house, mediating temperature and providing filtered daylight. FMH uses a pool-centered void that not only cools the microclimate but also reinforces family intimacy by visually connecting adjacent spaces. This typology demonstrates how inwardness enables residents to maintain thermal comfort and privacy while establishing a serene domestic atmosphere disconnected from the pressures of urban density.

Layered-Threshold Inwardness

The Layered-threshold inwardness creates inwardness through a sequence of spatial transitions that gradually move the user from public to private zones. This typology constructs inwardness through controlled procession and spatial organization. This typology is indicated by multiple layers of thresholds: perimeter fences, entry courts, front terraces, foyers, or semi-outdoor porches; Indirect or filtered views from public; Emphasis on spatial procession, creating a ritualized entry experience; and a privacy gradient reinforced by changes in materiality, level shifts, or filtered openings. BJH and GH illustrate this typology. BJH layers fences, a narrow front setback, and a semi-outdoor transitional area before reaching the main domestic realm. GH uses a sequence of semi-open outdoor spaces to buffer the house from the immediate neighborhood, creating a sense of retreat even within limited plot constraints. This typology aligns closely with Indonesia and Islamic domestic norms of controlling visibility and hospitality. It highlights how inwardness is not only a spatial configuration but also a cultural articulation of access, modesty, and interaction.

Façade-Filtered Inwardness

The Façade-filtered inwardness constructs inwardness at the building envelope. This strategy relies on façade devices that simultaneously provide lighting, ventilation, and

privacy without direct exposure to the public realm. This typology is indicated by the use of perforated materials such as rosters, brise-soleil, screens, double skins, or vertical shading fins; minimal direct openings to the street, which, where present, they are often small, high, or filtered; solid dominant exterior massing with controlled porosity; and visual permeability directed inward toward secondary courts or gardens. TDH and DH prominently adopt this strategy. TDH uses a breezeblock façade to modulate daylight and provide privacy from the street, while still maintaining micro-ventilation. DH incorporates perforated panels and green buffer zones that filter views and mitigate climatic exposure. Façade-filtered inwardness demonstrates how contemporary urban houses negotiate between the need for openness (light and ventilation) and the desire for enclosure (privacy and comfort). This typology shows inwardness as an environmental interface condition shaped by climate and social exposure.

Discussion

Inwardness as an Urban Response to Exposure

The dominance of enclosed façades and internal orientation reflects a broader shift in Indonesian urban housing away from outward-facing domesticity. Increasing density, limited plot sizes, and close adjacency between houses heighten visual and auditory exposure, echoing conditions reported in other Middle Eastern and Asian urban contexts, where residents respond by closing the home to the street and re-orienting interior life inward (De Macedo, Ornstein and Elali, 2022). Space syntax and visibility studies of residential layouts in modern and traditional settings consistently show that visual privacy strongly influences the configuration of entrances, circulation paths, and façade openings. Similar dynamics are evident in gated communities, where residents modify balconies, fences, and windows to negotiate the tension between communal open space and visual privacy. The inwardness strategies identified in this study can be understood as plot-scale responses to the same tension within Indonesian cities. In this sense, inwardness functions as an urban adaptation that allows residents to curate their exposure to the neighborhood while preserving daylight and ventilation. For households facing noisy streets or highly visible public frontages, the house becomes a defensive yet introverted refuge, aligning with broader patterns of residential withdrawal in dense urban environments. The Indonesian cases thereby extend existing housing research by showing how such withdrawal is spatialized through specific typologies of inwardness, rather than through ad-hoc modifications.

Inwardness as a Pragmatic Design Language, not a Stylistic Trend

Architects articulate pragmatic negotiation rather than personal idealism. Inwardness emerges not from architects' stylistic agendas or authorial signatures, but through their role as mediators interpreting client needs, socio-cultural norms, and site constraints. Interviews consistently show designers elaborating on external pressures such as privacy demands, family gathering patterns, and climate protection, rather than imposing ideological visions. None of the referenced personal aesthetic preferences was primary drivers addressed by the architects. This positions

inwardness as rational, context-bound logic that reconciles competing urban housing demands.

Inwardness responds to structural urban pressures rather than aesthetic fashion. The three typologies materialize through consistent spatial tactics: monolithic street-facing façades, filtered apertures with secondary skins, tactile natural materials (exposed brick and timber), and curated internal voids creating atmospheres of controlled retreat. Rather than stylistic uniformity, this study reveals convergent evolution. Multiple practitioners have independently solved identical pressures of shrinking plots, intensified densities, and shifting modesty norms through inward-oriented configurations.

Indonesian inwardness contributes to socio-culturally nuanced regional variants. These examples connect to global conversations on climate-adaptive, privacy-conscious housing while demonstrating how Islamic domestic norms and Indonesian family practices shape courtyard-centered, layered-threshold, and façade-filtered strategies. The result is not an architectural monoculture, but flexible paradigms tailored to specific cultural narratives, client aspirations, and environmental realities, thereby expanding the international typology of introverted urban dwellings.

Cultural Privacy and the Reinterpretation of Domestic Ethics

The findings also indicate that inwardness reflects enduring cultural attitudes toward modesty, hospitality, and family intimacy in Indonesian domestic life. Altman's privacy regulation theory describes privacy as a dynamic boundary-regulation process through which individuals and groups continually adjust their desired level of interaction using behavioral and environmental mechanisms. In Muslim and Indonesian societies, these mechanisms often materialize as layered spatial transitions, segregated zones, and controlled visual fields within the home (De Macedo, Ornstein and Elali, 2022).

As in studies of Indonesian and Muslim dwellings, these cases show that privacy is particularly salient in women's domains, guest reception, and family spaces (Abu-Gazzeh, 1996; Rahim & Hashim, 2012; Manaf et al., 2018). Interior planning, room placement, and internal circulation patterns are organized to uphold modesty while accommodating hospitality for guests. Similar principles have been documented in Islamic courtyard houses and traditional neighborhoods, where gendered spaces and visual control shape the domestic layout. The cases reinterpret these domestic ethics through contemporary architectural language. Layered-Threshold Inwardness mirrors the long-standing practice of arranging graded zones from public to private. However, the principles express it with minimalist walls, fences, and semi-open terraces rather than overtly traditional forms. The typology thus shows that urbanization does not erase cultural domesticity; instead, privacy norms and hospitality rituals are rearticulated in compact urban plots using new material and spatial vocabularies. In this sense, inwardness can be read as a culturally inflected spatial ethic, not only as an aesthetic preference.

Implications for Urban Housing in Indonesia

This study reconceptualizes inwardness as a contemporary spatial strategy in tropical urban housing, extending Altman's (1975) privacy regulation framework to dense Indonesian contexts while demonstrating continuity of cultural domestic ethics (modesty, hospitality, gendered space) within modern Indonesian dwellings. The tripartite typology offers a conceptual tool for analyzing privacy, climatic adaptation, and urban morphology, showing how internal voids, screened façades, and choreographed thresholds mediate between public streets and private interiors. Regionally, these patterns may prefigure broader Indonesian tendencies where introverted compounds balance privacy with urban proximity. Proliferation, however, risks reducing street transparency and social interaction, echoing gated-community critiques. This study contributes socio-culturally nuanced variants to global courtyard housing discourse, positioning inwardness as adaptive domesticity that addresses density, cultural norms, and tropical climates through deliberate design rather than retrofitting alone. Future policies should integrate such houses with shared semi-public spaces to foster urban conviviality.

CONCLUSIONS

The study identified three dominant typologies: Courtyard-Centered Inwardness, Layered-Threshold Inwardness, and Façade-Filtered Inwardness. Each typology represents a distinct architectural approach negotiating privacy, climate, and urban exposure. These findings highlight that inwardness has become an increasingly significant architectural strategy shaped by the convergence of urban density, cultural domestic norms, and tropical climatic constraints. Inwardness in contemporary dwellings emerges as a hybrid and adaptable design language that accommodates both modern aspirations and deeply rooted social values. The houses analyzed show how modesty, hospitality, family intimacy, and selective social exposure continue to influence residential design, even as aesthetic preferences shift toward inward expressions. At the same time, internal courtyards, screened façades, and semi-open transitional areas serve as passive climatic devices that enhance daylighting, ventilation, and thermal comfort in compact urban plots. Viewed collectively, these patterns suggest that inward-oriented housing is not a stylistic tendency, but a tropical urban morphology shaped by the need to create comfort, security, and domestic identity in complex urban environments. As cities continue to densify, inwardness offers residents a means to reclaim personal autonomy and microclimatic stability amid increasingly constrained spatial conditions. However, widespread adoption of inward-oriented housing also raises important implications for urban streetscapes, neighborly interaction, and community cohesion. Streets dominated by solid walls and filtered façades may diminish passive surveillance, reduce permeability, and subtly reinforce residential withdrawal, indicating a need for future urban policies and design frameworks that balance private inwardness with collective urban life. Future research could expand on these insights by examining a broader range of housing projects across Indonesian cities, allowing for comparative analysis of how inward spatial strategies evolve under different cultural and urban conditions.

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