

JUXTAPOSING THE ARCHITECTURE OF TRADITIONAL HOUSES IN SOUTH SULAWESI: A COMPARATIVE ANALYSIS

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ABSTRACT

Sulawesi Island has a vital role as an ancient shipping transit route that has an impact on cultural acculturation, one of which is represented in the manifestation of traditional house architecture. This study will juxtapose five traditional houses in South Sulawesi to understand how each house reflects the response of nature, community values, and culture. The traditional houses studied are the Langkanae Traditional House (representing Luwuk culture that reflects social hierarchy and power), Tongkonan Traditional House (traditional house of the Toraja people with a curved roof and rich in symbolism), Boyang Traditional House (reflecting the life of the Mandar coastal community), Balla Lompoa Traditional House (traditional house of Gowa, showing luxury and courage), and Bugis Traditional House (depicting the traditions and local wisdom of the Bugis people). This study aims to compare the five traditional houses to understand how each traditional house reflects cultural values, functions, and architectural uniqueness. The analysis method used is narrative-interpretive. Discussion indicators are Proportion, Aesthetic and Symbolic Values, Rules, Tectonics, and the meaning of Space and Architecture. Based on the results of the analysis, it is known that the common thread that forms the traditional architecture of South Sulawesi includes tiered structures (head, body, and feet), the form of stilt houses; building materials, social and spiritual symbolism; rituals and traditions in building houses; direction and position of the house; ornaments; division of space in the house. The benefit of this research is that it can contribute to maintaining the sustainability of the nation's cultural heritage.

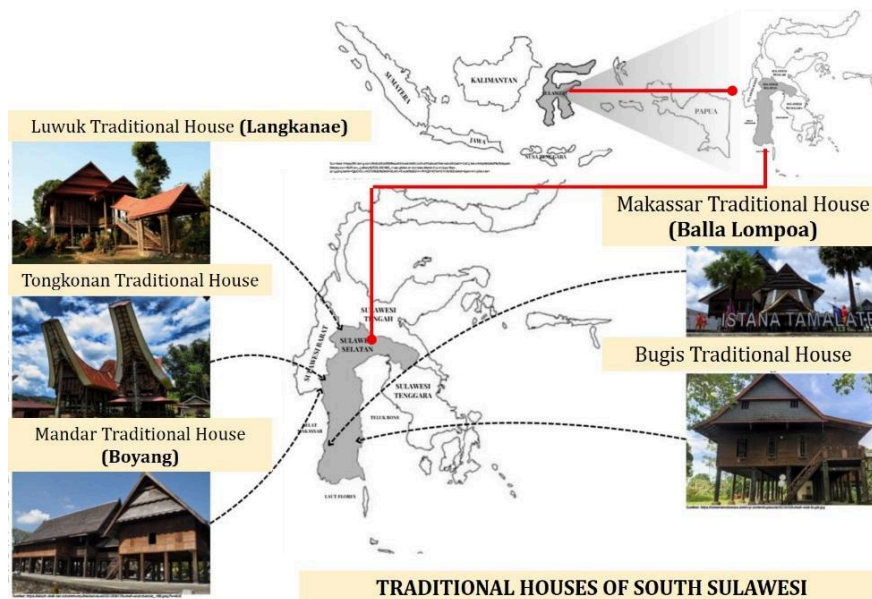
Keywords: juxtaposition, vernacular architecture, Langkanae, Tongkonan, Boyang, Balla Lompoa, Bugis traditional house

1. PREFACE

South Sulawesi, is reflected in the architecture of its traditional houses. There are five traditional houses in South Sulawesi that will be compared in this article, including Langkanae, Tongkonan, Mandar (Boyang), Balla Lompoa, and Bugis traditional houses. The selection of these five traditional houses is based on historical value, social function, and architectural uniqueness, each of which depicts the ethnic identity and traditions of the South Sulawesi people.

Langkanae Traditional House represents Makassar culture with a structure that reflects social hierarchy and power (Angraeni et al., 2018). Meanwhile, Tongkonan is a traditional house of the Toraja people with an architectural form rich in meaning (Pakan et al., 2018). Mandar (*Boyang*) reflects the life of coastal communities (Setiawan, 2022). As for Balla Lompoa, as a traditional Gowa house, it shows luxury and courage (Syamsuriadi et al., 2019). Finally, the Bugis traditional house, which has a distinctive design, depicts the traditions and local wisdom of the Bugis people (Laente, 2019) (Figure 1).

Figure 1
Traditional Houses in South Sulawesi



The character of traditional houses in South Sulawesi is included in the typical Austronesian building type. Referring to Waterson (2009), the architecture of buildings in Austronesia is usually a three-part house type (head-body-feet/the tripartite house), floors with different heights (the multi-leveled floor), the front roof of the house protruding out (outward-slanting gable), the walls of the living space protruding out (outward-slanting walls), the peak of the roof decorated (gable finials), the saddle roof (saddle-backed roof), and the difference in the use of the tip and root of the wood material (differential treatment of root and tip in the use of timber). The architecture of traditional houses in South Sulawesi that will be aligned also has the character of Vernacular Architecture. Based on the Charter on The Built Vernacular Heritage from ICOMOS (1999), vernacular buildings are the result of traditional and natural approaches used by communities to build their own houses. Therefore, vernacular buildings represent local characters that are responsive to the environment. Based on this, it can be concluded that the manifestation of vernacular architecture in South Sulawesi emerged and was formed based on the needs and responses to nature, society and culture.

This comparison aims to understand how each traditional house reflects cultural values, functionality, and architectural uniqueness related to its community. Through this analysis, hopefully readers can gain deeper insight into the diversity of traditional architecture of South Sulawesi and its essential role in preserving the nation's cultural heritage.

2. RESEARCH METHOD

Research approach

This study is a qualitative study using narrative-interpretive analysis methods to explore the architecture of traditional houses in South Sulawesi. Interpretive research is an investigation of socio-physical phenomena in a complex context, aiming to explain the phenomenon in narrative form (Groat & Wang, 2002). Data were collected through literature studies that included scientific journals and online sources related to the objects of observation. The narratives obtained from these sources were analyzed to identify key themes related to social and cultural

values, focusing on the traditional houses of Langkanae, Tongkonan, Mandar, Balla Lompoa, and Bugis.

Indicator

The indicators used in aligning study objects are: (a) *Proportion*: In the analysis of vernacular architecture, proportion becomes an important factor, not only as a visual element but also as a response to nature and prevailing values; (b) *Aesthetic Value and Symbol*: The aesthetic value of traditional house architecture in South Sulawesi can be seen in the beauty of the shape and details of the ornaments. Traditional houses function as symbols of cultural identity and social values. Each architectural element, such as color and ornament, has a certain meaning that reflects the traditions and spirituality of the local community; (c) *Rules*: The rules in the design of traditional houses in South Sulawesi are influenced by local traditions and cultural norms that are manifested in the layout, building materials, and orientation of the building; (d) *Tectonics*: Tectonic indicators in the architecture of traditional houses in South Sulawesi reflect the adaptation of buildings to geological and seismic conditions; (e) *Space and Architecture*: The space in a traditional house not only functions as a place to live but also as a social space that reflects community interaction, supports traditional activities and rituals, such as marriage and burial ceremonies. The space arrangement also shows the relationship between humans and the environment and how architecture functions to build the cultural identity of the South Sulawesi community.

Data collection and analysis

Data were collected through literature studies related to the object of study. This process aims to gain an in-depth understanding of the history, culture, and architectural characteristics of various traditional houses, such as Langkanae, Tongkonan, Mandar, Balla Lompoa, and Bugis. The narratives obtained from these sources were then analyzed descriptively to interpret the predetermined indicators. The results of the study are presented in the form of a narrative that combines findings from the literature study, providing a comprehensive understanding of the relationship between traditional house architecture and community life in South Sulawesi. Through this approach, the study aims to explore more deeply how traditional houses function as symbols of cultural identity and local community values.

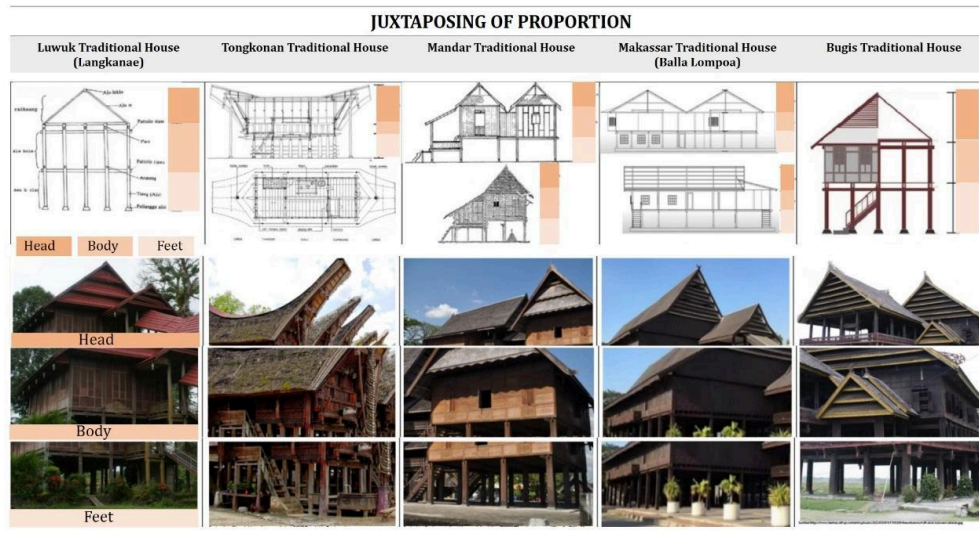
3. RESULT AND DISCUSSION

At this stage, 5 observation objects will be compared with the indicators of Proportion, Aesthetic Value and Symbol, Rules, Tectonics, Space, and Architecture.

Juxtaposing of proportion

The architecture of five traditional houses has been juxtaposed with a three-part house type: head, body, and foot (tripartite house). In addition, they use floors with different heights (multi-story floors). The front roof of the house juts out (gable roof sloping outward) like the living room wall sloping outward. The peak of the saddle roof is decorated (gable finials) (Figure 2). Figure 2 was interpreted by the authors based on Wasilah and Hildayanti (2016), Dhana et al. (2023), and Ihsan (2006).

Figure 2
Alignment based on Proportion

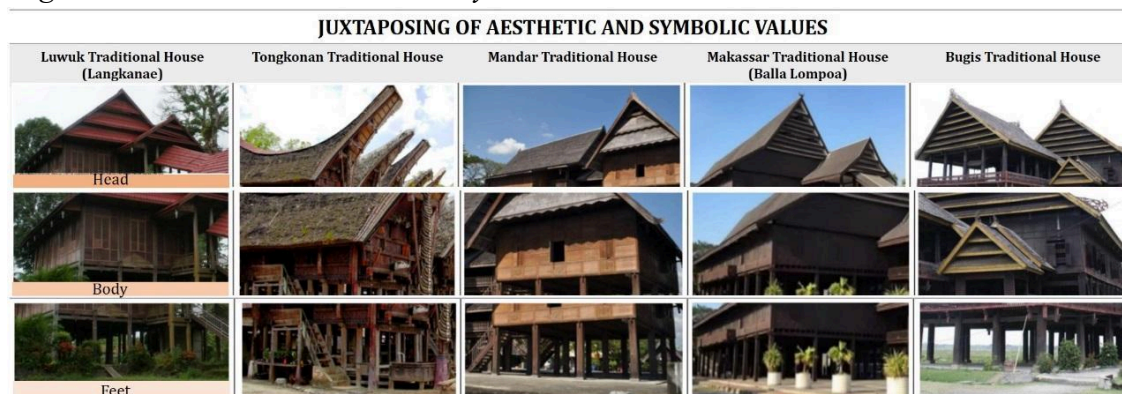


Juxtaposing of aesthetic and symbolic values

The gable roof of Luwuk Traditional House (*Langkanae*) symbolizes ancestral protection and spiritual power. Meanwhile, the roof's height reflects the homeowner's social status. The elongated design using wood and bamboo reflects harmony with nature. In addition, the house's large size reflects its owner's wealth and prestige. The wooden pillar symbolizes the balance of life, the higher the pole, the higher the social status of the owner. The inverted boat roof of *Tongkonan* symbolizes the journey of the ancestors of the Toraja Tribe. Meanwhile, the roof's height reflects the homeowner's social status. The elongated design reflects harmony with nature and indicates social status. The large size and intricate carvings depict the owner's wealth. The 1.5 to 2.5-meter-high pole symbolizes protection from natural threats. In addition, an odd number of poles reflects the owner's status. The pyramid roof of the Mandar Traditional House symbolizes the hope for peace, harmony, and prosperity. The elongated design shows social status and harmony with nature. The size of the pillars reflected the social status of the noble house and also symbolized the relationship between humans and nature.

The hip roof of Balla Lompoa symbolizes peace, harmony, and prosperity. Meanwhile, the tall pillars of a stilt house symbolize protection, strength, and the position of nobility. Wooden poles 1.5 to 2.5 meters high symbolize protection from natural threats. An odd number of poles indicates the owner's wealth. The two-sided sloping pyramid roof of Bugis Traditional House symbolizes the social status and wealth of the owner. Meanwhile, the height of the roof indicates the position of the owner. Houses on stilts with tall pillars symbolize protection and strength, and a high position reflects nobility. Symmetrical columns create visual balance and depict the relationship between humans and nature that is important in ritual and social life (Figure 3). Figure 3 was interpreted by the authors based on Wasilah and Hildayanti (2016), Lolo et al. (2021), Angraeni et al. (2018), and Yunus (2012).

Figure 3
Alignment based on Aesthetics and Symbolic Value

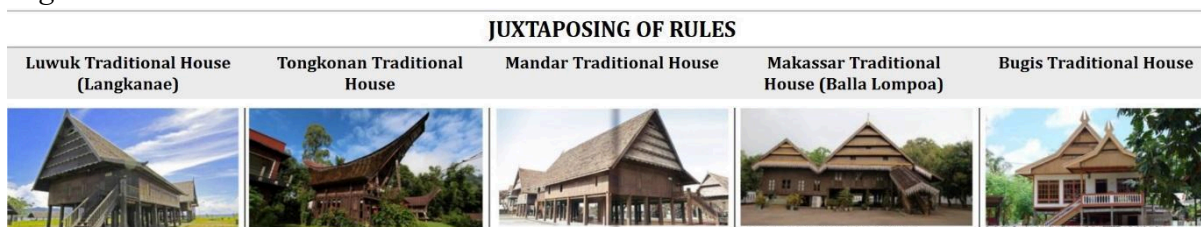


Juxtaposing of tules

The social class of people is represented by the form of *Langkanae* houses namely Aristocrats (large houses), merchants/farmers (simple houses), and common people (very simple houses). Building Direction is facing east as a symbol of new life. The number of Poles is odd, symbolizing luck. Building ritual performed before construction for safety. The Tongkonan houses symbolize social status, "Bola" for commoners while "Saoraja" for nobles. The direction of houses facing east/north is a symbol of life. The odd number of pillars such as nine for a noble house, reflects prosperity. The traditional rituals and choosing auspicious days play an important role in the sustainability of the houses.

The social status of Mandar people affected the form of their houses consisting of noble to common people. The direction of houses facing east is a symbol of life and luck. The odd number of poles symbolizes balance. The traditional rituals and choosing auspicious days play an important role in the sustainability of the houses. Similar to Mandar traditional houses, social status affected the form of Balla Lompoa and Bugis Traditional Houses that consisted of noble to common people. The direction of houses facing east is a symbol of life and luck. The odd number of poles symbolizes balance. The traditional rituals and choosing auspicious days play an important role in the sustainability of the houses. Traditional rituals are carried out to ask for blessing before construction (Figure 4). Figure 4 was interpreted by the authors based on Wasilah and Hildayanti (2016) and Pakan et al. (2018).

Figure 4
Alignment based on Rules



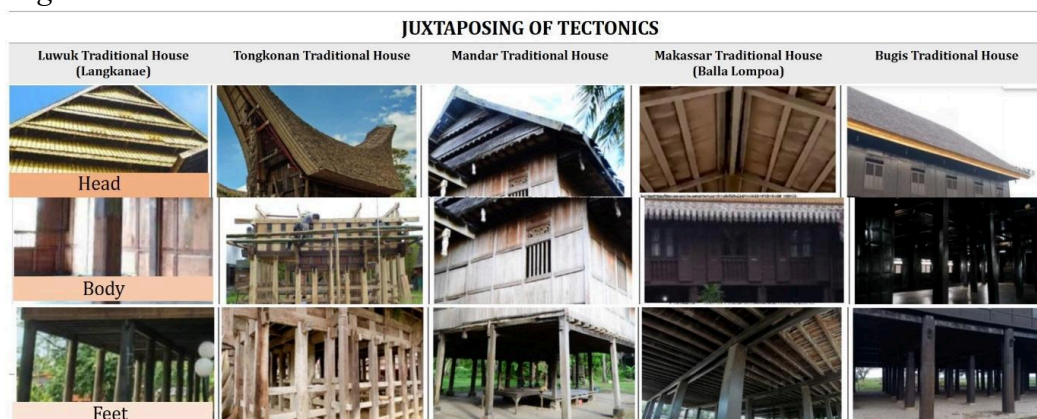
Juxtaposing of tectonics

Tectonically, the posts of the houses are connected to the beam using a fastening technique such as wooden dowels for stability whilst walls use breathable walls through traditional material such as rattan and wood (Figure 5). Figure 5 was interpreted by the authors based on Wasilah and

Hildayanti (2016) and Dhana et al. (2023). In the Langkanae house, clamps are used to fasten the roof to make it sturdy during construction. Walls made of wooden planks with board joints, and floors assembled to support the weight. The structure creates a sturdy, stable connection to withstand wind loads and forces, as well as provide flexibility against ground movements and weather changes. Meanwhile, In the Tongkonan house, the bamboo was arranged using a "stacked technique" with layered thatch leaves to prevent leaks and support water flow. Wood plank walls are assembled with tongue and groove joints to prevent gaps. The traditional joinery techniques with wooden pegs or ties create a sturdy, stable connection to withstand wind loads and forces, as well as providing flexibility against ground movements and weather changes.

The connection of the foot posts and foundation of the Mandar (*Boyang*) Traditional House uses wooden pegs or ties to create a strong, stable, and flexible connection against loads, wind and ground movement. The connection of the foot posts and foundation of the Makassar Traditional House (*Balla Lompoa*) and Bugis traditional houses use wooden pegs or ties, creating a sturdy and stable connection that can withstand loads and lateral forces from the wind, while also being flexible against ground movements and weather.

Figure 5
Alignment based on Tectonics



Juxtaposing of the meaning of space and architecture

The proportions and structure of the Luwuk (*Langkanae*) Traditional House are not only designed for comfort, but also reflect the culture, social status, and connection to nature and spirituality that are an important part of the community. Under (*sullu*) is the lower part of the house that is used as a place to rest. *Ale bola* is a section consisting of several plots, including the king's room, the queen's room, the room for storing heirlooms, and the room for officials. *Rakkeang* (attic) is the part used to store valuables. Meanwhile, the design and construction of Tongkonan reflect the close relationship between humans, nature, and spirituality. *Ulu Banua* (Northern Part) is a sacred space that stores sacred objects and family heirlooms. *Kale Banua* (Middle Part) is the core of the house for social interaction, gathering places, and daily activities. *Sumbung Banua* (Southern Part) is a functional space for the kitchen and daily work. The house faces to the north reflecting the spiritual values and social status of the Toraja people.

The Mandar Traditional House (Boyang) has a spatial division that reflects the traditional values of the Mandar community. *Tambiang* is an open space at the front for receiving guests and socializing. *Sali* is a semi-public space after *tambiang* for family gatherings and activities. *Pateanna* is a separate private space for rest and sleep. *Attic (Parri)* is a storage area above the

main room, not for social activities. In Balla Lompoe, *Bottom (Bawa)* under the house is used for storing goods and livestock also symbolizing the underworld. In addition, *Middle Part (Ale Bola)* is the main area for social and family activities that reflect human life. *Upper Part (Rumbia/Attic)*, the roof of the house with the highest status, stores sacred objects and is used for ritual activities. The Bugis Traditional House is a symbol of the social, cultural, and spiritual life of the Bugis people. *Rakeang (Attic)* is a storage room for valuables with spiritual significance. *Lelippuang (Front Room)* is the main room for receiving guests and traditional ceremonies, reflecting social status. *Alle Bola (Central Room)*: is a central room for family gatherings and socializing. *Awa Bola (Under the House)*: is the lowest space for storing agricultural tools and livestock, more functional (Figure 6). Figure 6 was interpreted by the authors based on Wasilah and Hildayanti (2016) and Carina et al. (2023).

Figure 6

Alignment based on the Meaning of Space and Architecture



Juxtaposing of traditional architecture in South Sulawesi

The common thread of the five traditional houses in South Sulawesi, namely the Tongkonan Traditional House (Tana Toraja), Bugis Traditional House, Makassar Traditional House (Balla Lompoe), Mandar Traditional House (Boyang), and Luwu Traditional House, can be seen from several main aspects that reflect the relationship between architecture, socio-culture, and nature. The following is a complete and detailed explanation of these similarities:

Multi-Storied Structure: Head, Body, and Feet

One of the similarities between the five traditional houses is the division of the structure consisting of the head (roof), body (main room), and feet (supporting pillars). This division has a strong symbolic meaning: (a) Head (Roof): A high and steep roof reflects social status, a connection with the spiritual world, and a symbol of protection; (b) Body (Main Room): The center of social and family life, spacious and decorated with carvings that indicate the owner's status; and (c) Feet (Supporting Pillars): A stilt house with pillars that protect against floods, animals, and humidity, as well as a symbol of stability and connection with nature.

Stilt Houses

The five traditional houses are built on stilts to protect against flooding and animals. The lower space is used to store goods or livestock. The height of the house reflects social status: tall houses such as Balla Lompoe and Tongkonan indicate nobility, while lower houses are for ordinary people.

Traditional Building Materials

Traditional houses in South Sulawesi use local materials such as ironwood, teak, and uru, which are strong and weather-resistant. The roof is made of *rumbia* leaves, *ijuk*, or shingles, which are resistant to heat and rain. These materials reflect local wisdom and the community's connection to nature.

Social and Spiritual Symbolism

Traditional houses in South Sulawesi are symbols of social status and philosophy of life: (a) Social Status: Noble houses such as Tongkonan and Balla Lompoa are larger and more carved, indicating wealth, while ordinary houses such as Sao Batara are simpler; (b) Spiritual Relationship: The roof reflects the relationship with ancestors, where its height indicates spiritual protection; and (c) Philosophy of Life: The structure of the head, body, and feet depicts harmony between humans, nature, and ancestors.

Rituals and Traditions in House Construction

The construction of traditional houses in South Sulawesi involves traditional rituals to obtain ancestral blessings and protection. Selection of a Good Day, the day of construction is determined through a ritual led by traditional elders. Construction Ritual, ceremonies are performed at important stages, such as erecting pillars or laying a roof, for the welfare of the house's occupants.

Direction and Position of the House

Most traditional houses in South Sulawesi face east, which is considered sacred. This direction symbolizes good luck, life, and hope for prosperity for the family living there.

Carvings and Ornaments

Not all traditional houses in South Sulawesi have elaborate carvings, but noble houses such as Tongkonan and Balla Lompoa are usually decorated with symbolic carvings depicting mythology, ancestors, and the owner's status. Ordinary family houses are simpler, with little or no ornamentation.

Division of Space in the House

Traditional houses in South Sulawesi have a clear division of space between public, semi-public, and private: (a) Front part: Used to receive guests and perform traditional ceremonies; (b) Middle part: A place for family gatherings and daily social activities; (c) Upper part: Storage area for valuables or sacred objects; and (d) Lower part: Used to store agricultural tools or as a place to live for livestock.

4. CONCLUSIONS & RECOMMENDATIONS

It can be concluded that the 5 traditional houses in South Sulawesi that were used as case objects are representations of the cultural wealth, social function, and environmental adaptation of the local community, as well as symbols of social status that are closely related to spiritual life and customs. In addition to being a place to live, traditional houses also function as centers for social, political, and ceremonial activities. The stage structure functions to protect its occupants from natural threats such as floods and wild animals and shows a close relationship with the surrounding environment. The division of proportions between the roof (head), body of the house (place of activity), and legs (supporting pillars) not only functions structurally but also has symbolic meaning related to spirituality, social life, and the status of the owner. The roof and structure of the house reflect social status, with noble houses usually larger and more ornamental than ordinary people's houses. Traditional materials such as ironwood and *rumbia* leaves, as well as connection techniques such as wooden pegs, ensure the durability and adaptation of the house to natural conditions.

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