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# Exploring Experience and First Impression in The Liminal Spaces (Case Studies: Corridors and Stairs in Campus Environment)

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**Abstract.** Humans and their feelings are a 'unique' study in architectural design, such as how humans behave in some spatial settings. Spatial settings are usually defined as an environment that contains specific activities. However, what about transitional spaces or corridors that only serve as intermediaries for 'some walking experience'? The discussion related to liminal space becomes interesting, mainly when studied from the perspective of architectural psychology. The objective of this study is to investigate human experiences and perceptions of liminal spaces, focusing on two locations: the corridors and the stairs at the campus. The research method used is mixed methods, with random samplings collected through an online survey to explore feelings, visuals, and hearings responses to liminal spaces. The study results show that respondents who have experienced being in a liminal space tend to have contra-perceptions of Alienation theory by Marx's, which can be attributed to the habits of the respondents in dealing with that space and their objective nature. Meanwhile, respondents with perceptions that align with Alienation theory tend to be influenced by their feelings and visual imagination. Moreover, respondents whose perceptions aligned with the theory expressed their discomfort and anxiety caused by unconducive room conditions. This research contributes to understanding human experiences and perceptions in liminal spaces with limitations including a small number of respondents and intangible indicators, making it difficult to explain perceptions in nominal terms. Thus, this research can broaden the understanding of architectural psychology and spatial perception.

Keywords: Liminal space, Alienation, Human behavior, Spatial experience, First impressions

## 1. Introduction

Understanding architectural space and its impact on individuals has been the subject of extensive discussion, emphasizing the importance of individuals' specific experiences (Hou *et al.,* 2023)**.** In this context, studying architectural psychology is essential to understand how people behave in specific spatial settings. Architectural psychology discusses the effect of the physical environment on human behavior, and liminal space is one of the exciting spaces to study. According to Van Manen (2014), liminal space is a transitional space that questions identity and allows changes in human thoughts and emotions. This space has characteristics that can influence the feelings and thoughts of humans. Liminal spaces can be found in various contexts, such as places of worship, shopping centers, or even inside buildings being renovated. This space often invites feelings of fear, anxiety, or even joy in human perceptions.

Previous research has discussed the influence of liminal space on human feelings. Research initiated by Rasmussen *et al.* (2016) shows that liminal space can influence human psychological well-being, especially in the workplace context. In addition, research conducted by Valtchanov and Ellard (2010) also shows that liminal space can affect the level of human concentration and affect task performance. In this article, the authors focus on the location of

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liminal space in the university campus environment. Moreover, other research conducted by Sengupta and Basu (2005) showed that the existence of liminal spaces in the hospital environment can affect patients' anxiety and psychological well-being. Even so, there is still an area of novelty in previous similar studies, especially in a more detailed understanding of human feelings and thoughts in liminal spaces, especially in the context of first impressions and experiences. In this article, the authors focus on the location of liminal space in the university campus environment, which is the object of corridors and stairs. The study aims to explore human emotions in these liminal spaces, focusing on experience and first impressions. This research is expected to understand how liminal spaces within the campus setting influence human feelings and how individuals' experiences and initial impressions shape their perceptions of these transitional spaces as they navigate them.

## Previous Studies

### 2.1. Liminal Space: the conditions in between

The concept of liminality refers to a conceptual understanding of the various phases within rituals that mark transitions in human life, such as initiation ceremonies where individuals exist in a state between two different states (Nord, 2021). Also, Brandberg (2022) mentioned that the term "liminal" is used in various disciplines, including psychology and spatial studies. Originating from the Latin word *limen* meaning threshold, it refers to the intermediate state or the transitional phase between point A and point B. This can be experienced both psychologically, within the realm of the mind, and spatially, within architectural contexts. Based on these definitions, the exploration of liminality can be approached through architectural methodologies, the study of human behavior, and the field of spatial psychology.

The terms of liminality have been employed in research examining different housing options for later life, including regular households, residential care homes, assisted living facilities, or long-term care facilities (Nord, 2021). Apart from discussing how liminality can be found in various typologies of buildings, liminality can also be seen as conditions that induce semantics, sensational feelings, and motivation (Malekpour and Motamedi, 2021). After conducting theoretical studies about liminal space, the authors have not found research regarding case studies of experience and first impressions in corridors and stairs in the campus environment. This has become a novelty and urgent in designing liminal spaces.

### 2.2. Liminal Space in Architecture Discourses

Liminal space in architecture refers to transitional or in-between spaces between two distinct areas or functions within a building or a larger built environment (Josian and Gandha, 2021). These spaces are often characterized by ambiguity, uncertainty, and a sense of movement or transition. Liminal spaces can be found in various architectural contexts, namely: (1) Thresholds, these are the spaces that mark the transition from the exterior to the interior of a building, such as doorways, vestibules, or entryways; (2) Corridors and hallways, these transitional spaces connect different rooms or areas within a building. They are usually long and narrow, lacking specific functions other than facilitating movement; (3) Staircases, stairs are inherently transitional elements in architecture, connecting different levels or floors. They often provide opportunities for unique spatial experiences as occupants ascend or descend through the building; (3) Atriums and courtyards, these open spaces within a building or enclosed by surrounding structures act as transitional zones between the interior and exterior; (4) Transition spaces in urban design, liminal spaces can also exist in the larger urban context, such as plazas, squares, or parks that serve as transitional areas between different urban blocks or neighborhoods (Purvis, 2023).

In this study, the focus of observation is on case studies (2) corridors and (4) staircases which are often found in public facilities, especially campuses or universities. From research conducted in elderly facilities, the arc corridor design has been proven to positively impact reducing anxiety and psychological pressure experiencing (Hou *et al.,* 2023). Moreover, corridors are not only a place to support the main activities that occur in a studio or office they even include more important activities. From research conducted by Sharif (2022), mentioned that corridors as places for casual, unavoidable, intrusive, informative, recreational, cooperative, disruptive, and celebrative interactions. In this research, the authors try validate whether similar research with different building typologies can provide new findings on the corridors of a building as liminal space.

Apart from choosing the corridor as a case study, the Authors also chose the stairs as a case study related to public facilities in the campus environment. According to Gay *et al.* (2019), stair used as a common lifestyle activity, is a moderate-to-vigorous physical activity that, despite often being brief in duration, may contribute to psychological health.

## 2.3. Theory of Spatial Psychology: Marx's Theory of 'Alienation'

Spatial psychology is a scientific discipline that studies the relationship between humans and the physical environment around them. In the psychology of space, several theories are used to understand human interaction with the surrounding environment. One of the relevant theories for this study is Marx's Theory of Alienation. Marx's Alienation Theory says that when humans work productively to meet their needs, they will be alienated from themselves and their environment (Petrović, 1963). In spatial psychology, this theory can be applied to understand how humans are connected to their surroundings. When humans feel alienated from themselves, they will also feel alienated from their surroundings. This can happen when the existing environment does not suit human needs or does not provide enough space for humans to express themselves and feel comfortable. In a liminal space, where humans are between two areas or in a transition process, the theory of alienation can provide a deeper understanding of human experience. When humans are in a liminal space, they can feel discomfort or anxiety because of an unfamiliar environment. This condition can reinforce feelings of alienation or separation from himself and his surroundings.

In the context of this research, the psychological theory of Alienation by Marx's is relevant to understanding how an individual's feelings toward liminal space are influenced by their physical environmental conditions. The concepts of alienation and feelings of alienation help express personal feelings about experiences in liminal space, whether they are feelings of fear, confusion, or uncertainty. This theory can also help understand how individuals respond to feelings of alienation in unfamiliar situations, such as liminal spaces. The individual may seek ways to reduce feelings of alienation, including seeking support from others or discovering more about the liminal space. Therefore, the psychological theory of Marx's Theory of Alienation is very relevant for understanding and analyzing personal feelings in liminal spaces and helping to explore how individuals can adapt to unfamiliar situations such as in liminal spaces.

Architects often pay attention to the design of liminal spaces as they contribute to the overall experience and perception of a building. Experiences and first impressions can influence how these transitional spaces are perceived and how they facilitate movement and transitions between different areas. This study explores the relationship between human perception and liminal space in the university or campus environment.

## 3. Methods

### 3.1. Research Locus

The location chosen for this case study is on campus and takes one of the buildings at the National Institute of Technology, Bandung. The area is in building 19 (C1), the connecting corridor between the final assignment courtroom and the toilet. The second case study took place in Building 21, namely the stairs connecting the language laboratory (C2), which connects the ground floor to the 2nd floor of the building (See Figure 3.1. below):

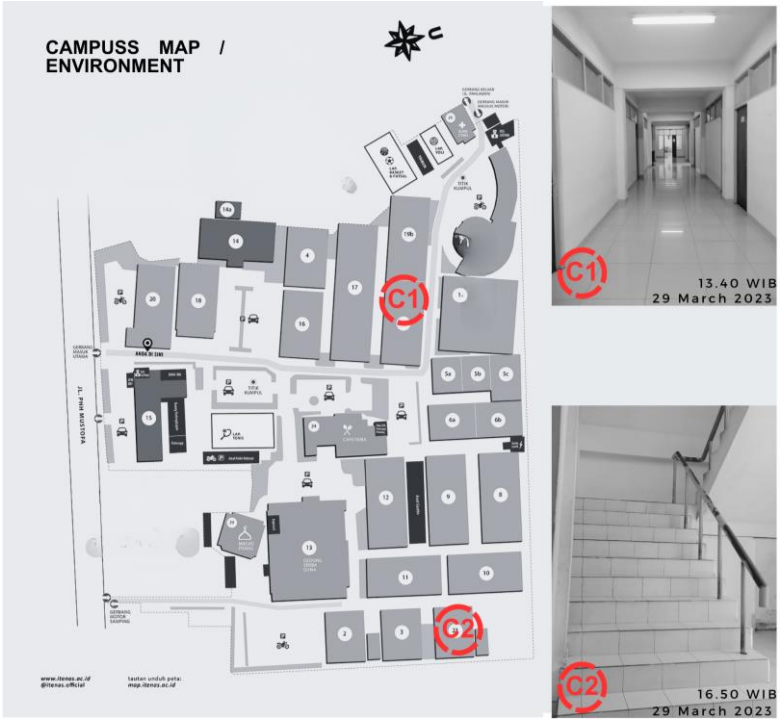


Figure 3.1. Location of Research Cases (Author, 2023)

In this research, the author observed case studies C1 and C2 over four months, from March to May 2023, according to the student lecture schedule, which took place from 07.00 to 17.00 (GMT+7). The space elements in the corridor are doors and Bouvenlights. The interior colours are dominated by cream and white, and neon lights are visible at approximately 4 meters. Stairs connect between floors in a building—the stairs on the left and a toilet on the right. The interior walls are creamy white, and the stairs have orange iron railings that have become porous and rusty. The condition of the stairs area is quite unkempt; some tiles are cracked, and the wall paint is faded.

Meanwhile, in the hallway area of the building, there are stairs at the right end of the corridor. White walls, exposed pillars and beams, plain solid wooden doors, and large bouvenlitches along the corridor walls dominate this area. There is a green trash can right in front of the stairs. The lighting in this corridor uses neon lights placed on the ceiling along the corridor. To be able to describe the specific area of the observation location, it can seen in the table below (see Figure 3.2. below):

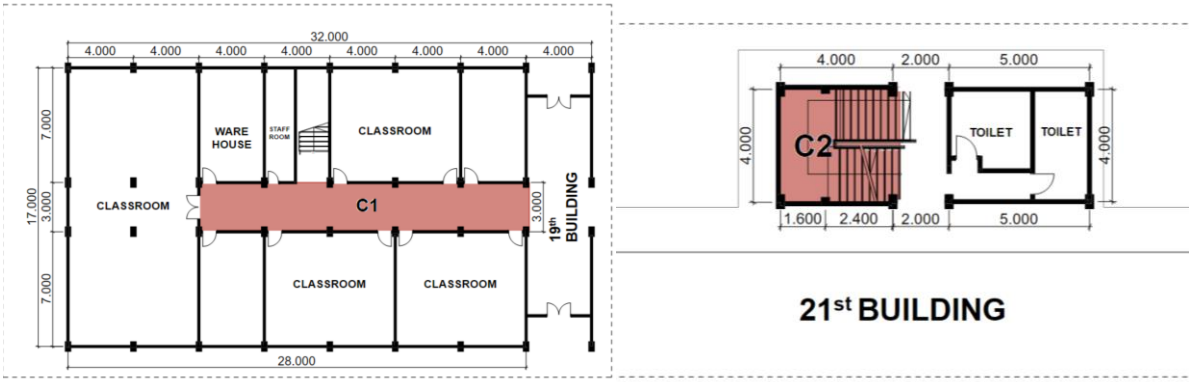


Figure 3.2. Floor Plan Location of Research Cases (Author, 2023)

The consideration in choosing observation objects in the form of corridors and stairs as a study case in discussing liminal space in the campus environment is because, in every building, the corridor is always a transition space that students pass through, both when waiting for class changes and preparing for exams. The stairs also become a liminal space connecting floors, where the stairs usually also become a space in between through which students walk and wait. Furthermore, these two objects are found in almost all public facilities, such as educational buildings. The campus has no other elevators at the observation location, so the only means of vertical transportation are stairs, and the existing corridor type is continuous and linear.

## 3.2. Sampling Characteristics

The targeted respondents consist of two groups: the general public (people from outside the campus) and the academic community, with age, ranges divided into three groups: below 17 years old (teenager), 17-34 years old (productive age), 35 - over 50 years old (mature age). Respondent data collection was done randomly by distributing online questionnaires. The sampling characteristics can be seen below (see Table 3.1. and 3.2. below):

Table 3.1. Respondent Grouping by Age Ratio and Gender Ratio C1 (author, 2023)

| C1 | Total respondent | Validation | Range of age | | | Gender | |
|---|---|---|---|---|---|---|---|
| | | | Teenager | Productive age | Mature age | Male | Female |
| Experience | 27 | 26 | 1 | 25 | 0 | 17 | 9 |
| Impression | 23 | 23 | 0 | 19 | 4 | 13 | 10 |

Table 3.2. Respondent Grouping by Age Ratio and Gender Ratio C2 (author, 2023)

| C2 | Total Respondent | Validation | Range of age | | | Gender | |
|---|---|---|---|---|---|---|---|
| | | | Teenager | Productive age | Mature age | Male | Female |
| *Experience* | 6 | 5 | 0 | 5 | 0 | 6 | 0 |
| *Impression* | 44 | 41 | 1 | 36 | 4 | 16 | 25 |

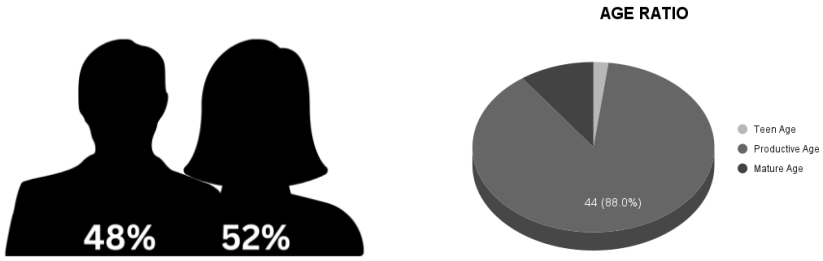


Figure 3.3. & Figure 3.4. Respondent Gender Ratio and Age Ratio (Author, 2023)

The research methodology used in this study involves the integration of quantitative and qualitative data collection and analysis techniques. The aim is to combine the advantages of the two ways to produce research results that are more thorough, reliable and offers a more robust comprehension of the issue or query than either approach alone (Creswell, 2018). Data collection was carried out using the Google form questionnaire, which consisted of questions about the response to the feelings, sights, and hearings of the respondents when they were in the liminal space (for respondents who had already experienced the liminal space presented) as well as their first impressions of the liminal space presented (for respondents who have not experienced liminal space). The research framework can be seen below (see figure 3.5. below):

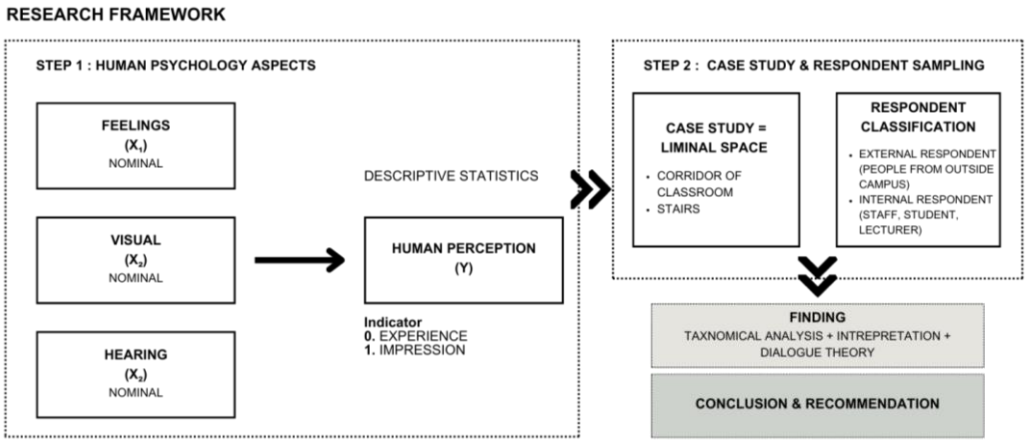


Figure 3.5. Variables in Research Model (Author, 2023)

The authors started the data collection process by sending Google Form questionnaires to the determined respondents. Authors also provide a brief explanation of the research objectives and procedures for filling out the questionnaire. After the data collection period, authors try to analyze the collected data using data analysis techniques appropriate to the type of data obtained. Descriptive statistics were used to analyze the quantitative data, while a method of categorizing respondents' answers based on emerging categories was utilized for the analysis of qualitative data. Data obtained from the Google Forms questionnaire is processed and interpreted descriptively by taking several samples from 'key persons' to provide meaningful insights built from direct descriptions of respondents through their own words.

The content analysis method was utilized to analyze the qualitative data derived from the participants' open-ended responses, facilitating the identification and categorization of emergent themes within their answers. We also use a data triangulation approach to test the correctness and reliability of the data. The triangulation approach combines qualitative and quantitative data from various sources to produce more accurate and in-depth findings. The

findings derived from this study aim to enhance our understanding of the underlying factors and their influence, leading to a deeper level of insight in the respective field of liminal space on human feelings, visuals, and audio. Moreover, this study can also be a reference for further study on architectural psychology and liminal space. The findings of this study will rely on the analysis of both the quantitative and qualitative data that were collected and examined.

## 4. Discussion and Results

Individual experience and perception of liminal space are complex and can be influenced by various factors. The results of this study reveal significant variations in respondents' experiences and perceptions of liminal space, particularly in cases C1 and C2. Discussion regarding experiences and impressions can be found below:

### 4.1. The Influence of Experiences in Liminal Space

While the theory of alienation highlights conflict and discomfort within liminal spaces, the findings of this research suggest that individuals with firsthand experience in such spaces hold diverse perceptions, indicating significant differences. The results can be seen in Table 4.1 and 4.2 below:

Table 4.1. Respondents' response from experiencing liminal space C1 (analysis result, 2023)

| Number | Terms | Space Perception | Factor | Age Ratio | Gender |
|---|---|---|---|---|---|
| 1 | Lonely, Horror, Empty, Uncomfortable | Alienation and Isolation | Hallucinations, Imaginative, Traumatic Experience | Productive Age (17-34 y.o) | Mostly Female Female 6, Male 3 |
| 2 | Comfortable, Peaceful, Relaxing | Against Alienation and Isolation | Atmosphere, Uncomfortable in Crowds, Calmness of the Room, Positive Minded | Productive Age (17-34 y.o) | Mostly Male Female 2, Male 6 |
| 3 | Indifferent | Neutral | Objective, Aware, Accustomed to space, Crowds, Don't Care | Productive Age (17-34 y.o) | Equal Female 5, Male 4 |

Table 4.2. Respondents' response from experiencing liminal space C2 (analysis result, 2023)

| Number | Terms | Space Perception | Factor | Age Ratio | Gender |
|---|---|---|---|---|---|
| 1 | Lonely, Horror, Empty, Uncomfortable | Alienation and Isolation | Hallucinations, Imaginative, Traumatic Experience | Productive Age (17-34 y.o) | Mostly Male Female 0, Male 1 |
| 2 | Comfortable, Peaceful, Relaxing | Against Alienation and Isolation | Atmosphere, Uncomfortable in Crowds, Calmness of the Room, Positive Minded | Productive Age (17-34 y.o) | Mostly Male Female 0, Male 1 |
| 3 | Indifferent | Neutral | Objective, Aware, Accustomed to space, Crowds, Don't Care | Productive Age (17-34 y.o) | Mostly Male Female 0, Male 3 |

In tables 4.1. and 4.2. respondents who have experience in C1 and C2 show a tendency that is against the explanation of spatial perception according to theory alienation. They tend to

have a more objective perception and focus on the goals to be achieved in liminal space, without experiencing significant discomfort. This finding aligns with previous research that suggests direct experience in a particular space can influence individual perceptions of that space (Salingaros, 2013).

This indicates that personal experiences and interactions with liminal spaces can form more complex perceptions, sometimes in line with existing theories. For example, respondents who are used to the atmosphere of liminal spaces and have specific goals while living in them may have different perceptions compared to people who only rely on theoretical knowledge about liminal spaces. R1 & R2 thought about C1 as a liminal space, they said, *"..I feel nothing inside C1, I just walked there because I already know and used to the condition.."*; *"..The way that I see C1 is similar to the way I see hospital corridor, it is gloomy and cold. Like I feel when I'm in C1 walking to classroom, the way I feel is nothingness or emptyness. So I can't describe it more.."*

Their perspective implies that perception of liminal space can be differentiate by the atmosphere of the space experienced by individual. Meanwhile direct experience on liminal space can impact feelings and emphasizes their insecurity of liminal space. Like one of many responden C2, they said*, "..The condition that I feel when I'm in a liminal space is influenced by the atmosphere of the room, such as minimal lighting and dim lights (flickering light) that make me imagine gloomy and scary things and felt someone is watching me..".*

## 4.2. Imagination and Impressions in Liminal Space

First impressions can significantly influence an individual's perception of liminal space, whether they have prior experience or are encountering it for the first time (see Table 4.3 and 4.4 below):

Table 4.3 Respondents' responses related to their impression about liminal space C1 (analysis result, 2023)

| Number | Terms | Perception | Factors | Age range | Gender |
|---|---|---|---|---|---|
| **1** | Desolate, haunted, empty, uncomfortable, scary, gloomy | Alienation and isolation | Hallucinations, imaginative, traumatic experience | Productive age (17-34 y.o) | Mostly male female 0, male 1 |
| **2** | Empty, relax, calm, like a hospital | Against alienation and isolation | Comfortable, quiet, neat, saturated | Productive age (17-34 y.o) | Mostly male female 0, male 1 |
| **3** | Indifferent | Neutral | Objective, aware, accustomed to space, hustle | Productive age (17-34 y.o) | Mostly male female 0, male 3 |

Table 4.4. Respondents' responses related to their impression about liminal space C2 (analysis result, 2023)

| Number | Terms | Perception | Factors | Age range | Gender |
|---|---|---|---|---|---|
| **1** | Desolate, outdated, scary, spooky | Alienation and isolation | Haunted, empty, desolate, uncomfortable, frightening, gloomy | Productive & mature Age (17 – 50 y.o or more) | Mostly female female 19, male 5 |

| | | | | | |
|---|---|---|---|---|---|
| **2** | Empty, relax, calm | Against alienation and isolation | Thinking positive, encourage to praying | Productive age (17-34 y.o) | Mostly male female 0, male 6 |
| **3** | Indifferent | neutral | Going stright as usual, nothing problem | Productive age (17-34 y.o) | Mostly female female 6, male 5 |

In the table above 4.3. and 4.4. shows that most respondents who have never been in a liminal space tend to have perceptions that align with the alienation theory. They can more easily imagine situations that might occur when they are in a liminal space. This may be due to their ignorance of actual experiences in that space, so their subjective perspective plays a more significant role in shaping their perception of liminal space. This finding supports previous studies which showed that ignorance could influence individual perceptions of the physical environment (Valtchanov & Ellard, 2010). In the context of alienation theory, differences in experience and imagination in dealing with liminal spaces illustrate the complexity of understanding the influence of psychological factors, culture, and individual experiences on the perception of space. Combining these factors influences the individual perception of liminal space and cannot be explained singly through one theory or approach.

For example, respondent R3 in C1 stated, *"..I walk quickly because I'm scared. I often come to campus, and when I pass through empty corridors, I walk fast or run.."*. In contrast, respondent R4 in C1 expressed, *"..I walk as usual, indifferent to the surroundings. Focusing on the future goal.."*. In C2, respondent R3 revealed, *"..I'm not really interested in going in, it feels uncomfortable..".* In similar, respondent R4 in C2 stated, *"..I'm afraid and hesitant to enter the building, especially when I'm alone.."*

From the statements above, R3 and R4 in C1 show a tendency that contradicts the theory of alienation as they still pass through and confront the liminal space despite feeling fear. However, the responses from R3 and R4 in Category 2 align with the theory of alienation when they feel uncomfortable, afraid, and hesitant to enter the liminal space.

Table 4.5. Data experience C1 and C2 (analysis result, 2023)

| **Data Experience C1 and C2** | | | |
|---|---|---|---|
| **Gender** | **Total respondent** | **Contra** | **Percentage** |
| Male | 23 | 14 | 60.87% |
| Female | 9 | 7 | 77.77% |

Table 4.6. Data impression C1 and C2 (analysis result, 2023)

| **Data Impression C1 and C2** | | | |
|---|---|---|---|
| **Gender** | **Total respondent** | **Contra** | **Percentage** |
| Male | 29 | 10 | 34.48% |
| Female | 35 | 7 | 20% |

After conducting a deeper analysis, we found new findings that show different patterns between male and female in terms of their experiences and impressions that align with the theory of alienation (See Table 4.5. and 4.6.). Based on the table above, the impressions of male respondents tend to be in line with the theory of alienation. However, after experiencing liminal spaces first-hand, their responses become inconsistent with the theory of alienation. In

contrast, for female respondents, their impressions tend to be contrary to the theory of alienation, whereas their direct experiences with liminal spaces are in line with the theory.

The research indicates that respondents who have experienced being in liminal spaces tend to have perceptions that contradict with Theory of Alienation, which can be attributed to the respondents' habits in facing such spaces and their objective nature. On the other hand, respondents whose perceptions align with the Theory of Alienation are often influenced by their feelings and visual imagination. Additionally, respondents whose perceptions align with the theory express discomfort and anxiety caused by the unfavorable conditions of the space. This study focuses on the complexity of individual perceptions of liminal spaces based on their experiences, imagination, and emotions, which shape the perceptions they create when in a liminal space.

In this study, a person's experience, first impressions and imagination when passing through or being in a liminal space provide a new perspective, especially in architectural studies. The design of a corridor and stairs in a campus environment needs to consider these three factors from the student's perspective. The findings in this study also show that a person's subjectivity in experiencing liminal space can be influenced by many aspects, such as personal experience, level of imagination, and other spatial feelings related to certain psychological conditions. Moreover, not all respondents in this study said being in a liminal space was scary or intimidating. Several factors can still be explained rationally, such as the feeling of darkness arising from a lack of lighting, the physical dimensions of space influencing the perception of tightness, and the shape of a linear corridor or staircase being less scary than a winding one. Some of these things are proof that even though liminal space is only a transition in-between space, it still needs to be considered because of the effects that can be felt psychologically by users who pass through it.

## 5. Conclusion

A liminal space is characterized as a transitional area that typically goes unnoticed by individuals passing through it. However, liminal spaces can be studied in greater detail, particularly regarding their influence on the cognitive perceptions of those who pass through them. The findings of this study reveal several important things related to individual experiences and perceptions of liminal space. Based on the conducted analysis and discussion, the following conclusions can be drawn:

1. Direct experience in liminal space appears to alter individual perceptions, so they tend to see it in a different light. This indicates that personal experience and interaction with liminal spaces can directly form more complex perceptions that are not in line with the theory of alienation.
2. Personal thoughts can influence perceptions of liminal space. This is due to one's ignorance of the experience in that space, so the individual's feelings and imagination play a more significant role in shaping their perception of liminal space that is in line with the theory of alienation.

Several limitations were found in this research modelling, such as the limited number of respondents who answered questions and observational indicators that were still intangible, such as perceptions that were difficult to explain in nominal terms. Suggestions that can be given for further similar studies are that a variety of observation locations is needed to be able to see differences in respondents' perceptions of liminal space. The selection of observation indicators is expected to be more specific to the tangible architectural aspects, such as lighting, materials, and dimensions of corridors or stairs that may be related.

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