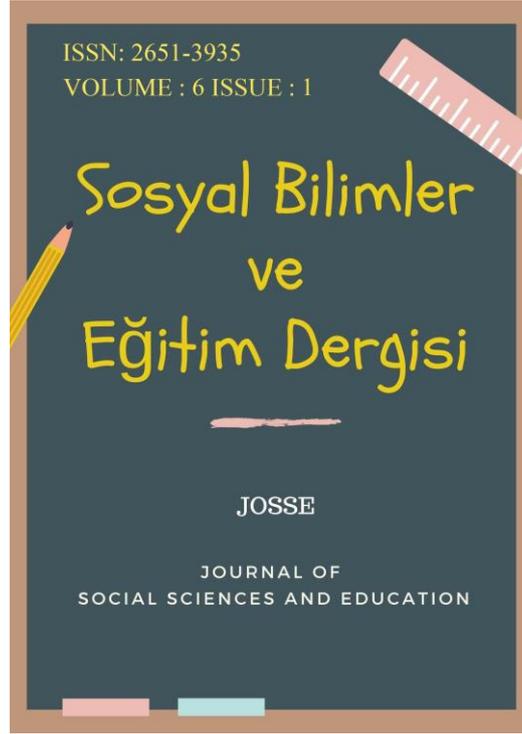


**JOURNAL OF SOCIAL SCIENCES AND EDUCATION (JOSSE)**



<https://dergipark.org.tr/tr/pub/josse>

**Analysis of the Movie Ratatouille in the Context of Spatial Scale**

**Emine KÖSEOĞLU<sup>1</sup>**

*Fatih Sultan Mehmet Vakıf University,  
Faculty of Architecture and Design,  
Department of Architecture  
Assoc. Prof.*

[koseogluemine@gmail.com](mailto:koseogluemine@gmail.com)

Orcid ID: 0000-0003-2457-7659

**Rüveyda Sena YÜCEL<sup>2</sup>**

*Fatih Sultan Mehmet Vakıf University,  
Institute of Graduate Studies, Master of  
Architecture Program  
Master of Architecture Student*

[ruveydasena.yucel@stu.fsm.edu.tr](mailto:ruveydasena.yucel@stu.fsm.edu.tr)

Orcid ID: 0000-0002-3217-4449

---

**Article Type:** Research Article

Received: 15.04.2023

Revision received: 27.05.2023

Accepted: 30. 05. 2023

Published online: 30. 05. 2023

**Citation:** Köseoğlu, E. & Yücel, R. S. (2023). Analysis of the movie Ratatouille in the context of spatial scale. *Journal of Social Sciences and Education*, 6(1), 29- 56.

## **Analysis of the Movie Ratatouille in the Context of Spatial Scale**

**Emine KÖSEOĞLU<sup>1</sup>**

*Fatih Sultan Mehmet Vakıf University, Faculty of Architecture and Design, Department of  
Architecture*

**Rüveyda Sena YÜCEL<sup>2</sup>**

*Fatih Sultan Mehmet Vakıf University, Institute of Graduate Studies, Master of Architecture  
Program*

---

### **Abstract**

When the space used in the cinema is examined in the context of the discipline of architecture and fictionalized with appropriate techniques, it can awaken different perceptions in the audience. Films created with this perceptual architectural concern enrich and support the subject and operation of the film with the spaces created in the film. Architectural space is a subject that needs to be addressed and examined in terms of creating the appropriate environment for the necessary perceptions in the film to pass on to the audience. At the same time, scale is an important architectural parameter in terms of providing distinguishability and intelligibility in the space. Objects that are opposite to each other in scale come together and are distinguished and noticed. By using this method in movies, the message that needs to be emphasized can be conveyed to the audience more easily. It is aimed to read the place from a different point of view through a living creature with a different size than the usual human dimension in the movie Ratatouille which brings together a mouse and objects different from it in terms of scale. The film was found worth examining on the grounds of this feature. Case study is chosen as the research design in this study. The scenes to be examined were selected using purposive sampling technique. Thematic analysis was used while reading the scenes according to the concept of scale. As a result, four main themes were determined: character-human scale, and character-object scale, character-space scale, character-urban scale.

**Keywords:** Architecture in cinema, spatial perception, scale in cinema, architectural scale, Ratatouille

---

### **Research Article**

*Received: 15.04.2023*

*Revision received:  
27.05.2023*

*Accepted: 30.05.2023*

*Published online:  
30.05.2023*

---

<sup>1</sup> Corresponding author:

*Assoc. Prof.*

[koseogluemine@gmail.com](mailto:koseogluemine@gmail.com)

*Orcid ID: 0000-0003-2457-7659*

<sup>2</sup> *Master of Architecture Student*

[ruveydasena.yucel@stu.fsm.edu.tr](mailto:ruveydasena.yucel@stu.fsm.edu.tr)

*Orcid ID: 0000-0002-3217-4449*

## **Introduction**

Space is defined as the three-dimensional extension of the universe surrounding the human being, with different forms of relationships, distances and intervals between people and objects (Altan, 1993; Gür, 1996; Kuban, 2018). In filmmaking, space is a parameter where the senses and emotions desired to be aroused in the audience can be concretely planned within the film (Tan, 2018; Sakhaei, 2022). The film would make the audience feel as much as possible in the movie cognitively, both with the locations chosen and the shooting angles of the locations. Spaces, especially in cartoons and animations, as a product of the imagination of the directors, allow much more flexible and extraordinary space formation and space perceptions (Pallasmaa, 2007; Pallasmaa, 2012; Tobe, 2017). Sometimes, in a fictional sense, they can give the audience the experience of looking through the eyes of a character in a different scale, or they can introduce the audience to a universe in other dimensions by playing spatial scales.

In order for each object to be used in the design of the space to be read, its comparison and limitations should be determined by combining them with objects different from it in terms of size and appearance. In order to determine this, it is necessary to act on the concept of scale. Scale is a concept that generally requires comparison with the size of something or something else taken as a reference (Ching, 2002). It gives information about how small or how big the thing being handled is. To make a definition about scale, we need to be able to compare its dimensions with something we already know. Human scale is mostly used to define how small or large the space and all the elements it contains (Ching, 2002). However, when it comes to rereading the spatial scale from a different perspective, it may be an alternative fictional approach to refer to living things in different dimensions rather than humans.

Ambrose, Harris, and Stone mention that in terms of design disciplines, scale is a method that enables comparisons between items of different sizes. In space design, apart from being a mathematical concept that can be calculated with a mathematical expression, scale also has a semantic dimension because it is a phenomenon that can be perceived and interpreted by the senses (Ambrose et al., 2010). Because the reality of space is not limited to its physical components. Space should not be perceived as a passive empty product because it always contains other meanings (Lefebvre, 2014).

While considering the film in the architectural sense at the spatial scale, studies on cinema, architecture, scale and animation in general attract attention. Chappel's article "Films on Architecture", published in 1973, can be cited as one of the earliest studies in the literature on cinema and architecture. In this didactic and at the same time explanatory study, the contribution of the use of architectural elements to the film is mentioned. On the one hand, Kaçmaz Erk (2009) similarly emphasized this relation in her book "Architecture in Cinema: A Relation of Representation Based on Space" by pointing out whether or not the space is foreground in a film, it would play a crucial role while noting that cinema also affected architectural spaces. Tawa (2022), on the other hand, unfolds the atmospheric aspect of spaces in the movies in the book "Atmosphere, Architecture, Cinema: Thematic Reflections on Ambiance and Place" while illustrating the relational concepts such as ambiance, mood, and techtonics of cinematic atmosphere. Wilson (2022) shows how modern architecture and its spatial element are widely used cinema and movies. Yıldırım and Kavut (2022) approached fictional space from a very up-to-date perspective by relating metaverse concept with the Matrix universe. How Turkish cinema used architectural spaces is also subject to several studies. For instance, Akyol Altun (2022) investigated spatial symbols of traditional-modern dilemma's conflicts in Yeşilçam Cinema. Bulu and Kavut (2021), handled architectural space in cinema in terms of design issues by focusing on morphogenesis effects. Ergün Bilgili and Dinç Kalaycı (2021) attempted to read the relationship between architecture and cinema through the concept of place. Kızılaslan (2021) handled the architectural space issue in cinema regarding landscape architecture. Türkmen and Kavut (2021) approached architectural space in movies by examining the effect of steampunk trend on space representation. Ölçer Kanbur (2022) examined the concept of spatial scale in the movie *The BFG*.

Very few studies on the movie *Ratatouille* could be noted. Sudhagar (2018) examined the movie in terms of its impact on culinary tourism by analysing the reviews provided by the viewers and found that the movie created positive impression in the viewer's minds. Tunç Kalebaşı (2020) analysed the movie according to the Maslow's Hierarchy of Needs. She specifically focused on the characteristics of the self-realizing individual and found that the characteristics of the self-actualized person are to communicate effectively, to value himself and others, to be loved and counted, to be helpful, to be understanding, to show patience and persistence, to never give up and to be problem-centered. Kusumah and Haryudin (2019) studied indirect expressions in social interaction when examining the movie. Allen (2009) discussed and reviewed the movie regarding family, friendship, and work. After surveying the

literature from this perspective, no study was found examining the concept of scale in the movie *Ratatouille* with regard to a perspective to architectural space. So our study aims to fill this gap.

In this study, *Ratatouille*, which was produced in 2007, produced by PIXAR, written, and directed by Brad Bird, and was awarded the Oscar for the best animated film of its time; analyzed in the context of spatial scale. Remy, a mouse, who is one of the main characters in the movie offers the viewer the opportunity to experience how the space is seen through the eyes of a mouse. The movie *Ratatouille* intensely shows how the things we use in our daily life; the buildings we pass by the city we live in have a relationship with a mouse. For this reason, the script of *Ratatouille* was deemed appropriate to be analyzed in terms of scale due to its characters and cinematographic methods, and it was aimed to detail the ways in which the film handled the scale.

## **Method**

### **Content of the Movie**

A mouse named Remy dreams of becoming a chef, despite being the most annoying animal to have in the kitchen, which indiscriminately eats everything his family finds in the trash. When fate throws Remy into the sewers of Paris, he finds himself under a restaurant made famous by his culinary hero, Auguste Gusteau. He crosses paths with Linguini, who he meets in the kitchen and whose main occupation is a waitress, who does not understand cooking. Despite the obvious dangers of being an unexpected and certainly unwelcome visitor to the kitchen of a fine French restaurant, Remy's passion for cooking prompts a funny and exciting rat race (IMDB) that soon turns the Parisian culinary world upside down.

### **Model**

This study was formed with an inductive approach in general. Qualitative research design (Creswell, 1994) was used in this study. Qualitative research serves as a tool for discovering and understanding meanings which individuals or groups attach to social or human problems (Creswell, 2009). It aims to understand phenomena by creating knowledge specific to them rather than hypothesis testing (Tavşancıl Tarkun, 2000) and is generally descriptive and inductive. This study focuses on understanding the concept of scale in a more perceptual sense with its relation to the built environment in various scales changing from

object scale to city scale using qualitative research approach. In this context, case study which is one of the qualitative research design models (Creswell, 1994) was chosen for this study. Case study approach requires investigating situations within their current context or setting (Yin, 2014: 32). The movie *Ratatouille*, -expressive with its characters that direct the reader to a kind of scale investigation- was handled a case in this study.

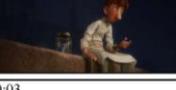
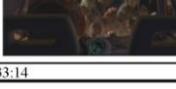
### **Sample**

Scenes containing implications of the phenomenon of scale were selected through purposive sampling. Purposive sampling is a widely used method in qualitative research where individuals or groups having particular knowledge or experience is relevant to an investigation are selected. Availability and willingness of potential participants also play important roles in selecting them (Palinkas et al., 2015). When dealing with visual works such as films, scenes considered most appropriate for the subject matter -in this case scenes from the movie *Ratatouille*- were preferred while selecting samples within the scope of purposeful sampling.

During initial readings, emphasis was given on identifying paragraphs that had high relevance regarding scale-sense-perception content as both expression and context when determining suitable quotes for analysis.

Based on the scenes captured from the movie as a sample, 24 scenes containing the phenomenon of scale and the spaces within the scene were examined (Table 1).

*Table 1. The Scenes Analyzed*

| Scenes-Chronologically   |  |   |
|--|--|---|
| S-1<br><br>0:03:36    | S-2<br><br>0:04:08    | S-3<br><br>0:05:39    |
| S-4<br><br>0:10:57    | S-5<br><br>0:17:07    | S-6<br><br>0:21:21    |
| S-7<br><br>0:21:25    | S-8<br><br>0:21:49    | S-9<br><br>0:22:22    |
| S-10<br><br>0:24:26   | S-11<br><br>0:29:49   | S-12<br><br>0:30:03   |
| S-13<br><br>0:32:28   | S-14<br><br>0:33:38   | S-15<br><br>0:34:41   |
| S-16<br><br>0:37:52  | S-17<br><br>0:40:40  | S-18<br><br>1:01:01  |
| S-19<br><br>1:15:51 | S-20<br><br>1:15:56 | S-21<br><br>1:21:56 |
| S-22<br><br>1:33:14 | S-23<br><br>1:34:22 | S-24<br><br>1:34:28 |

### Data Collection Tools

Data was collected from the movie Ratatouille using document review technique. Document review is one of the stages in document analysis which involves data collection and analysis. Prior to conducting an analysis, documents are examined through various stages such as quick scan, speed reading, review and focused reading. These stages can be repeated for effective data collection (Bretschneider et al., 2017).

In this study's context, a similar approach was taken where initial scanning and quick readings were done before subject-oriented readings aiming to collect more accurate data from the movie.

### Data Collection and Analysis

Thematic analysis was used to analyze the sensory and perceptual aspects of space in this study. Thematic analysis is a qualitative research method that aims to identify patterns, or

themes, within data. These themes help researchers better understand the phenomenon being studied. In thematic analysis, codes are derived from raw data and grouped according to their common characteristics to form clusters and ultimately themes (Alhojailan, 2012).

Various techniques were used to present the findings as a result of the thematic analysis (Blignault & Ritchie, 2009). The findings were first presented with descriptive readings. Then, the codes were found after the descriptive narrations were formed. Codes representing basic segments of raw data related to the phenomenon of scale were identified from these narrations derived from the scenes using Boyatzis' definition (1998) as guidance. As the next step various clusters were created from the codes by grouping them. As the next step, the themes were created by grouping the clusters under the concept of space scale, which formed the main topic of the article.

## **Findings**

### **1. Scene Descriptions Towards the Codes**

The shooting angle of the two-storey house, which appears at the beginning of the movie, first descends between the branches of a high tree, and proceeds to see the whole house from a very close place to the ground. From the very beginning of the movie, there was a reference to the scale plays to be made in the movie, as it would be encountered with high-low shooting angles and a small-sized lead role. The two-storey house, which can be considered as normal size, looks bigger and imposing than the eye of the mouse. A few minutes later, the house was shown with the lead role in the movie, and it is seen how the house looks from the eyes of the mouse, again with the opening from below (S-2) (Figure 1).



**Figure 1.** *Scene 2*

Later scenes of the movie show Remy and his father's reciprocal conversation on a chair. When Remy and his father are facing each other, they are in the middle of the chair, and

they look quite small compared to the chair. The difference between the wood of the resting part of the chair and the size of the mice confirms this situation. The chair, which is used as a sitting device by humans, changes its function in the case of two mice and is almost used as a stage tool. In this scene, the difference in scale between Remy and his father and the object used by a human such as a chair can be read (S-1) (Figure 2).



**Figure 2.** *Scene 1*

When it comes to the scenes where Remy is with another mouse or his family flock, the places are handled from a larger frame and the crowd of the flock has become distinguishable. In the following minutes, Remy and his brother are walking through the town, passing in front of the objects belonging to the city in the town. In one scene, Remy and his brother are walking in front of a stone wall and a tractor next to it. This scene provided the opportunity to make a scale comparison between mouse and urban objects (S-3) (Figure 3). The film then moves to the interior of the townhouse where Remy and his family live on the roof. While the mouse flock is in the attic, the roof deck they are on collapses. The whole flock of mice are scattered throughout the house with the roof covering and they are running away. This scene shows both the crowdedness of the flock and the scale differences between the objects in the room and between the mice (S-4) (Figure 4).



**Figure 3.** *Scene 3*



**Figure 4.** *Scene 4*

In the seventeenth minute of the movie, Remy watches the skyline of Paris from a high place. In this section, the scale relationship between a very large-scale space such as a city silhouette and a very small-scale entity such as a mouse draws attention. In the face of the size of the city, the character of Remy was not approached very closely, and this scale was tried to be reflected from a different, more objective perspective (S-5) (Figure 5).



**Figure 5.** *Scene 5*

In kitchen scenes, scale plays appear in many subjects, from shooting angles to Remy's relations with kitchenware. Along with the kitchen scenes, the character of Linguini came into play. In the dialogues of Linguini, who is human, with other chefs, the shooting angle is adjusted to the level of the human eye, and in the scenes with Remy in the kitchen with other chefs, the angle is adjusted from a point very close to the ground. The human scale is shown in gigantic proportions in the scenes where Remy watches and flees people. For example, the fire that emerged while the female chef was cooking was very frightening to Remy, who was under the stove, and he was looking for a safe place so that the fire would not harm him (S-6) (Figure 6). Trying to avoid the people in the kitchen, Remy risks being trampled under the feet of another chef who is about to step on him as he escapes. When viewed through the eyes of the mouse, it is understood that the chief's foot is on the scale of crushing Remy's entire body (S-7) (Figure 7).



**Figure 6.** *Scene 6*



**Figure 7.** *Scene 7*

The scale relationship that Remy establishes separately with the objects in the kitchen is also discussed in many scenes. Remy, who was in danger of being crushed and seen by the chefs, threw himself under a wheeled shuttle. It is safe in this range where a person's hand can only fit and can move easily (S-8) (Figure 8). Remy, who managed to get on the counter, watches the whole kitchen over the counter. In this way, the difference in scale between a general kitchen size and a mouse size can be distinguished in large-scale scenes (S-9) (Figure 9). Then, he wants to intervene in the food cooked in the pot without anyone seeing it, he slides off the handle of the ladle and descends from the pot to the counter (S-10) (Figure 10). These three scenes show Remy's life relationship with objects of different scales.



**Figure 8.** *Scene 8*



**Figure 9.** *Scene 9*



**Figure 10.** *Scene 10*

In the movie, after the characters of Remy and Linguini met in the kitchen, bilateral dialogues and scenes were included. In these scenes, one can read both the difference between the human scale and the mouse scale, as well as the bodily communication Linguini has with Remy in daily life as a whole human body. At the thirtieth minute Linguini grabs the glass jar containing Remy and tries to communicate with the startled Remy. In this scene, Linguini's hand and jar are comparable to Remy's size (S-11) (Figure 11). Immediately after, the scene in which Remy and Linguini sit side by side in the jar was passed. In this scene, both characters are shown as they are, from a distant view, without angle plays. In this way, the viewer can read the size difference between the two characters (S-12) (Figure 12).



**Figure 11.** *Scene 11*



**Figure 12.** *Scene 12*

In the scenes that come to Linguini's house, Linguini holds Remy in his hand and shows his house. It is seen how Remy's character is in communication with objects such as refrigerator, sink, door in a house that can be considered small rather than a big kitchen or city (S-13) (Figure 13). In the scene where Remy prepares an omelet for himself and his roommate in Linguini's small electric stove, Remy prepares an omelet for himself and Linguini on two plates of the same size. One omelet is quite large compared to the other. Due to the size difference between the omelets, which omelet is prepared for whom and the scale difference between them can be seen (S-14) (Figure 14).



**Figure 13.** *Scene 13*



**Figure 14.** *Scene 14*

By the thirty-fourth minute of the movie, Linguini is holding Remy on his hand. Behind them is a street silhouette with buildings belonging to the city of Paris. Although the buildings in the silhouette are not huge, they are two-storey and normal-sized houses. But the

scene is handled from a very close to ground angle. For this reason, the houses are easily visible from behind Remy and Linguini and appear considerably larger than them. The scene presents the same mouse, human and city at the same time, and scale plays are performed by realizing this with an unusual shooting angle. Many scale parameters in the movie appear in the same scene (S-15) (Figure 15).



**Figure 15. Scene 15**

Remy then gets on Linguini's head to show Linguini the idea he has in mind, and grabs Linguini's hair, which can be considered the same size as himself, and pulls it left and right, thus giving Linguini a command (S-16) (Figure 16). Later in the movie, Remy will often be found on Linguini's head and in his chef's hat. He watches Linguini's conversations with other chefs in the kitchen through the hat, and how the mouse sees people through the hat is also covered in the movie. The chefs, whom Remy sees translucently through the fabric of the hat, are at eye level with the chefs in perspective (S-17) (Figure 17).



**Figure 16. Scene 16**



**Figure 17. Scene 17**

With Remy falling out of Linguini's hat and getting lost in the city, Remy was introduced to the scale of the city and encountered a world on a much larger scale than his own. This time he is not in Linguini's hand or hat, but directly on the ground and alone. He was in danger of being crushed by the feet of cars and people passing over him on the road, and he tries to explore the city from the grid gap by hiding inside the grate of a manhole on the road. The scale relationship that Remy establishes with objects is enriched with vehicles such as cars and motorcycles on the road (S-18) (Figure 18).



**Figure 18.** *Scene 18*

In the scenes where Linguini and Remy tour their new house, a room consisting of a bed made of a wooden jewelry box-like material and an armchair made of pins, prepared for Remy's dimensions, is built in front of the window of this house, which can be considered large (S-19) (Figure 19). In the later scenes of the movie, Linguini takes Remy, and they watch the Eiffel Tower and the skyline of the city of Paris together. As in the previous silhouette scene, Remy is again in Linguini's hands, but this time the shooting angle is handled from behind and directly in front of them. This scene can be considered noteworthy in that it simultaneously handles the scale relationship between mouse and human (S-20) (Figure 20).



**Z**



**Figure 20.** *Scene 20*

Towards the end of the movie, the mouse flock that makes up Remy's family comes into play again, as the people working in the kitchen quit their jobs. Each of the rats who undertake to cook all the dishes are working on every food in the kitchen. In a scene where Linguini enters the kitchen unaware of the mice, one of the mice trying to hide from Linguini hides among the asparagus, while trying to eat a bunch of grapes that are close to him in size and hanging next to him (S-21) (Figure 21). The swarm of mice, which dominates the whole kitchen, covered the whole kitchen with its crowd (S-22) (Figure 22). Mice running around on counters and floors use all food and kitchen utensils as required by their size. They grate the cheddar by sliding on a grater with cheddar of the same size as themselves and mix the food by holding the ladle from the edge of the pot (S-23) (Figure 23). In the following minutes, they seized the chief's car to catch the inspector who came to inspect the kitchen, and the inspector, who saw the mouse flock covering the whole car from the window of the car, was astonished by the crowd of mice. The crowd of mice that have taken over the entire car is quite distinctive in this scene (S-24) (Figure 24).



**Figure 21.** *Scene 21*



**Figure 22.** *Scene 22*



**Figure 23.** *Scene 23*



**Figure 24.** *Scene 24*

## **2. From Codes to Clusters and From Clusters to Themes**

When the scenes of the film, which are seen as decisive in the context of scale, are examined, common points are determined in the scenes where characters and objects of different scales are in relation with each other. In addition to many parameters that have a scale relationship with Remy, the scale relationship that the side characters establish with each other and with the external environment is also noteworthy. In some scenes, more than one scale relationship exists in the same scene, and these scale perceptions, which are tried to be created with different cinematic techniques, are supported. All scale relationships in scenes where more than one scale parameter coexists are explained in the findings section, but the scale relationship, which is thought to be used most dominantly in the scene while categorizing, is added to the header.

The house scene (S-2), which appears at the beginning of the movie, is also shown in the later scenes of the movie. Apart from this house in a town, different spatial elements belonging to the town or city are also included. The tractor and the stone wall encountered in the scene called S-3 can be counted as outdoor elements that a person visiting a town from the outside will encounter. In the film, not only the town but also the outdoor elements of a city are included in the context of scale. In the city scene displayed on S-18, Remy establishes a scale relationship with the city roads and cars. In these three scenes, the processing of the

scale differences between Remy and the outdoor elements we encounter in daily life was seen as a common feature and these scenes were gathered under **Mouse-Environment cluster**.

Remy is seen with the skyline of Paris in the S-5 scene, where Remy feels left alone by being separated from his herd. Here, besides Remy's smallness, Remy's loneliness in the face of the big city skyline and the size of the city was emphasized, and the difference in scale between the city and the mouse was noted. Remy, who came together with Linguini due to the plot of the film, was first handled with a street silhouette in the city (S-15) and then with the Paris city silhouette (S-20) in Linguini's hands. In these scenes, Remy is no longer alone compared to the previous silhouette scene (S-5), but is looking at his friend Linguini, feeling happier and safer. The city skyline of Paris is important both in terms of conveying Remy's emotions to the audience and being able to clearly read the scale relationship between the city-mouse-human. These scenes, which deal with Remy together with city silhouettes, are gathered under the **cluster of Mouse-Silhouette**. These scenes, in which Remy's relations with all the elements of the city are clustered, **are themed as the Animal-City Scale** (Table 2).

**Table 2.** *Formation of Animal-City Scale Theme*

| Scenes |   | Codes                               | Clusters          | Themes            |
|--------|---|-------------------------------------|-------------------|-------------------|
| S-2    |  | Remy-Exterior Space of the House    |                   |                   |
| S-3    |  | Remy-Traktor-Stone Wall             | Mouse-Environment |                   |
| S-18   |  | Remy-Vent-Road-Cars                 |                   |                   |
| S-5    |  | Remy-Paris Sihouette                |                   | Animal-City Scale |
| S-15   |  | Remy-Linguini-Street Sihouette      | Mouse-Silhouette  |                   |
| S-20   |  | Remy-Linguini- Paris City Sihouette |                   |                   |

There are many small elements that nurture and support the scale relationship that Remy and other mice have established with the city and places from the broad perspective.

While examining the house inside the town house, the interior of the house and the furniture inside as well as the exterior of the house are references for us to understand the scale. In the first scene where this relationship is seen in the movie, in the scene where the mouse flock escapes from the collapsed hall ceiling (S-4), the spatial relationship of the whole hall with the mice is seen. When it comes to the final parts of the movie, in which swarms of mice flock to the kitchen, all the mice in these scenes work together with the kitchen utensils. As it is difficult to distinguish each item separately, the S-23 scene, shot with a wide shooting angle, where all these kitchen utensils and mice are together, can be given as an example. In the scene where the herd tries to stop the inspector who came to seal the kitchen (S-22), the relationship with the mouse herd surrounding the car from all four sides is emphasized from the interior of the car as the mice surround the car from all four sides. These three scenes were seen similar in terms of the multiplicity of the mouse flock and the relationships they established with the interior and were gathered under the **cluster of Mouse Flock-Indoors**.

Considering the scale relations established with the interior, there are notable scenes in which the main character, Remy, has a one-to-one relationship with the space, as well as the scenes with a swarm of mice. In the scene where Remy is under the service truck (S-8), it can be read that Remy has created an interior unique to his dimensions by using the service vehicle as a shelter, and at the same time, how the kitchen interior is seen from under a service vehicle. In the scene in which Remy watches the entire kitchen, a mouse is again handled together with the entire interior (S-9). In the later scenes of the movie, Remy goes to Linguini's small house and examines it again, encountering an interior style he has never encountered before (S-13). In all the three scenes mentioned, Remy has established a scale relationship with the entire interior. For this reason, these three scenes are gathered under the **Remy-Interior cluster**. These scale relationships that mice establish individually and as a flock with interior spaces are grouped under the **Animal-Space Scale theme** (Table 3).

**Table 3.** *Formation of Animal-Space Scale Theme*

| Scenes |   | Codes                              | Clusters            | Themes |
|--------|---|------------------------------------|---------------------|--------|
| S-4    |  | Mouse Flock-Room of the Town House |                     |        |
| S-23   |  | Mouse Flock-Kitchen and the Items  | Mouse Flock-Indoors |        |

|      |   |                                   |                    |
|------|---|-----------------------------------|--------------------|
| S-22 |  | Mouse Flock-Car                   |                    |
| S-8  |  | Remy-Shuttle                      | Animal-Space Scale |
| S-9  |  | Remy-Kitchen                      | Remy-Interior      |
| S-13 |  | Remy-Linguini-Indoor of the House |                    |

When the interior scenes are examined in more detail, the objects in the space can also be considered decisive in understanding the perception of scale in the film. At the beginning of the movie, one can read Remy talking on a chair with his father (S-1), and the size difference of the chair, which is an interior item, between the mice. Especially in the scenes in the kitchen, the materials that Remy and other mice relate to vary. Remy and the other rats are intertwined with the food in the kitchen, the utensils in which the food is made, and this facilitates the comparison of scale in the audience. The scene where Remy slides over the ladle (S-10) is one of the distinctive scenes where Remy is together with kitchen utensils. As the end of the movie approaches, the room that Remy prepares in Linguini's new house is an important scene about how Remy uses daily materials (S-19). Scenes in which Remy, as a main character, have one-to-one relationships with objects, are brought together under the **Mouse-Item cluster**.

Since the movie is a movie about food and it is frequently included in the scenes, it was deemed appropriate to cluster it separately from the items. First, the omelet (P-14) that Remy made at Linguini's house can be considered a remarkable scene in this sense. In the last parts of the movie, the kitchen interior has been used by mice and the mouse herd trying to cook all the dishes, in general, cooks the food larger than their own size with their own methods. With all these methods they have developed, the scale between them and the food can be clearly seen. It was thought that the scenes of a mouse hiding among asparagus after flocks of mice were hiding in the kitchen (S-21), and mice grating a cheddar larger than their own size (S-24) could be gathered under the **Mouse-Food cluster**. In the movie, the scale relationship between the interior and all the materials belonging to the interior space with Remy and mice was brought together under the name **Animal-Object Scale theme** (Table 4).

**Table 4.** *Formation of Animal-Object Scale Theme*

| Scenes | Codes   | Clusters   | Themes              |
|--------|---|------------|---------------------|
| S-1    |  Remy-His Father-Chair           |            |                     |
| S-10   |  Remy-Pan and Ladle              | Mouse-Item |                     |
| S-19   |  Remy-Linguini's Hand-Remy's Bed |            |                     |
| S-14   |  Remy- Plate, Pan and Omelette   |            | Animal-Object Scale |
| S-21   |  Mouse-Asparagus-Grape           | Mouse-Food |                     |
| S-24   |  Mouse Flock-Grater-Pan         |            |                     |

One of the most important elements that make up our perception of scale in our daily life is the person himself. The Linguini character and other people are the biggest helpers in our perception of the dimensions of the Remy character in the movie. In particular, the sincerity in the bilateral relations of Remy and Linguini characters is supportive in understanding the size difference between the two. The scene with Remy in a jar in Linguini's hand (S-11) shows us the scale relationship that both the jar object and Linguini's hand establish with Remy from a close perspective. The scene where they are side by side at the same time (S-12) shows the difference in physical dimensions between them from a distance. The scene where Remy tries to command Linguini with his hair is also supportive in understanding the size difference between a normal sized human and a Mouse (S-16). The scale relationship between Remy and Linguini is brought together under the name of the **Remy-Linguini cluster**.

Although Remy does not have a one-on-one dialogue with other human characters, he is in a relationship because he carries the same space. The scene where he escapes from the chef cooking with a hot frying pan (S-6), the scene where another chef is about to be trampled under his feet, and the scene where Linguini watches people through his hat (S-17) both show Remy's relationship with different types of people to the audience and show Remy's character

to the audience. He emphasized the giganticness of man through the eyes of God. Based on these three scenes, the **Mouse-Human cluster** was created. These human-based clusters are important in terms of distinguishing the issue of scale by the audience. These two clusters have been generalized under the **Animal-Human Scale theme** (Table 5).

**Table 5.** *Formation of Animal-Human Scale Theme*

| Scenes | Codes  | Clusters      | Themes             |
|--------|--|---------------|--------------------|
| S-11   |  Remy-Linguini's Hand-Jar         | Remy-Linguini | Animal-Human Scale |
| S-12   |  Remy-Linguini-Jar                |               |                    |
| S-16   |  Remy-Linguini and His Hair       |               |                    |
| S-6    |  Remy-Human-Pan                  | Mouse-Human   |                    |
| S-17   |  Remy-Other People from the Hat |               |                    |

The scale relationship Remy established with Linguini and other people was gathered under the theme of Animal-Human scale. Remy's relationship with items and food and the relationship that mouse flocks establish with items are gathered under the theme of Animal-Object scale. The scale relationships established by Remy and other mice with various indoor spaces were gathered under the theme of Animal-Space scale. Remy's relationship with objects such as cars and sewerage belonging to the city, along with the roads of the city and the entire silhouette of the city, was gathered under the theme of Animal-Urban Scale. When the themes with which the character establishes a scale relationship are examined, the common feature of all of them is that they are spatial parameters. Therefore, all themes come together under the concept of scale. The conclusion reached as a result of these findings is schematized in the table shown (Table 6).

**Table 6.** *Thematic Analysis of the Movie*

| CODES                               |      | CLUSTERS            | THEMES              | CONCEPT |
|-------------------------------------|------|---------------------|---------------------|---------|
| Remy-Exterior Space of the House    | S-2  | MOUSE-ENVIRONMENT   | ANIMAL-CITY SCALE   | SCALE   |
| Remy-Traktor-Stone Wall             | S-3  |                     |                     |         |
| Remy-Vent-Road-Cars                 | S-18 |                     |                     |         |
| Remy-Paris Sihouette                | S-5  | MOUSE-SILHOUETTE    | ANIMAL-CITY SCALE   |         |
| Remy-Linguini-Street Sihouette      | S-15 |                     |                     |         |
| Remy-Linguini- Paris City Sihouette | S-20 |                     |                     |         |
| Mouse Flock-Room of the Town House  | S-4  | MOUSE FLOCK-INDOORS | ANIMAL-SPACE SCALE  |         |
| Mouse Flock-Car                     | S-22 |                     |                     |         |
| Mouse Flock-Kitchen and the Items   | S-23 |                     |                     |         |
| Remy-Shuttle                        | S-8  | REMY-INDOORS        | ANIMAL-SPACE SCALE  |         |
| Remy-Kitchen                        | S-9  |                     |                     |         |
| Remy-Linguini-Indoor of the House   | S-13 |                     |                     |         |
| Remy-His Father-Chair               | S-1  | MOUSE-ITEM          | ANIMAL-OBJECT SCALE |         |
| Remy-Pan and Ladle                  | S-10 |                     |                     |         |
| Remy-Linguini's Hand-Remy's Bed     | S-19 |                     |                     |         |
| Remy- Plate, Pan and Omelette       | S-14 | MOUSE-FOOD          | ANIMAL-OBJECT SCALE |         |
| Mouse-Asparagus-Grape               | S-21 |                     |                     |         |
| Mouse Flock-Grater-Pan              | S-24 |                     |                     |         |
| Remy-Linguini's Hand-Jar            | S-11 | REMY-LINGUINI       | ANIMAL-HUMAN SCALE  |         |
| Remy-Linguini-Jar                   | S-12 |                     |                     |         |
| Remy-Linguini and His Hair          | S-16 |                     |                     |         |
| Remy-Human-Pan                      | S-6  | MOUSE-HUMAN         | ANIMAL-HUMAN SCALE  |         |
| Remy-Human Foot                     | S-7  |                     |                     |         |
| Remy-Other People from the Hat      | S-17 |                     |                     |         |

### Discussion and Result

When we look at the parameters that determine the perception of space in the movie, the scale parameter is only one of them. When the scenes in the movie that make up the sample are examined, it can be seen with the variety of codes and themes that even the scale creates many different parameters in itself and the selected sample offers a rich content on this subject in the movie reading made only on the concept of scale. Remy character, who appears in the film, meets with the big event that happened in his small-scale world, and the world, which is quite large-scale than himself, is processed in the film with very different methods. In the applied methods, the power of cinematography and shooting angles, and the endless imagination of animation and the possibility of playing with scale were utilized as Ryan and Lenos mentions (2020).

The results of this study yielded captures some codes from the descriptions of the selected scenes after several encounters to the scenes by the authors. Varying encounters and intersections of the chareacters in the movie with other characters, with objects, and with spaces enhanced to possibility to observe how the phenomenon of scale positioned while forming indirect and direct communications. In order to talk about a scale fact there need to exist at least two subjects or objects to communicate and compare (Wang & Zhu, 2008). In this sense, the codes detemined in the movie reflect this comparative atmosphere chronologically: Remy-His Father-Chair, Remy-Exterior Space of the House, Remy-Traktor-Stone Wall, Mouse Flock-Room of the Town House, Remy-Paris Sihouette, Remy-Human-

Pan, Remy-Human Foot, Remy-Shuttle, Remy-Kitchen, Remy-Pan and Ladle, Remy-Linguini's Hand-Jar, Remy-Linguini-Jar, Remy-Linguini-Indoor of the House, Remy- Plate, Pan and Omelette, Remy-Linguini-Street Silhouette, Remy-Linguini and His Hair, Remy-Other People from the Hat, Remy-Vent-Road-Cars, Remy-Linguini's Hand-Remy's Bed, Remy-Linguini- Paris City Silhouette, Mouse-Asparagus-Grape, Mouse Flock-Car, Mouse Flock-Kitchen and the Items, Mouse Flock-Grater-Pan.

These wide-ranging codes could be grouped into clusters to reflect the spatial relation with scale explicitly while still including the characters: Mouse-Environment, Mouse-Silhouette, Mouse Flock-Indoors, Remy-Indoors, Mouse-Item, Mouse-Food. Remy-Linguini and Mouse-Human were exceptions not including spatial scale directly yet still contribute to the understanding of the concept of scale in terms of communication aspect. Finally, the clusters could be grouped into themes of the movie's concept of scale: Animal-City Scale, Animal-Space Scale, Animal-Object Scale, Animal-Human Scale diversifying from macro scales to micro scales of space the help of salient subjects of the movie.

The examination of the use of scale in the intended animation film space in the study was conceptualized with various codes and themes taken from the movie scenes. When we look at the points where the scenes in the film are seen in common regarding the scale, to understand the size of an object in vehicles such as movies and books, which we cannot experience live seeing and touching, the object must coexist with another object of different dimensions. This situation allows people to create a perception by comparison, albeit unintentionally. The perception process becomes easier when the objects to be compared are also objects known to human perception. In this sense, Ching (2002) illustrates the importance of existence of relativity in relation to comparison while conceiving the phenomenon of scale. In the movie, the fact that the mouse is in the human hand all the time allows the audience to perceive the scale difference by comparing the mouse scale with their own scale. In addition to human scale, the relationship of scale with objects and the city also has an important role in the perception of scale. But in general, when the subject of scale is examined in the film, it is seen that the person who creates the audience perceives the scale by looking at the relationship between all the elements that make up the space.

## **Recommendations**

In this study, it is attempted to understand and reveal the concept of scale with its spatial dimensions through the lens of a movie and with its distinct non-human characters forming the story from their eyes. We -as human- use the spaces designed for us in several scales which are consistent with our body sizes. People generally do not have an awareness on the features of the spaces they live in. An awareness may arise, for instance, if the spaces do not fit the bodies that uses the spaces. The movie *Ratatouille* gives us the chance to look at the spaces from an eye of a little animal -a mouse. As Remy and his friends move in the spaces and adapt the spaces and spatial elements according to their body sizes, it is clearly seen how the concept of scale is important in the design of our built environments. Cinema can be a very affective tool to make people live that they cannot have the chance to live in real life. Also cinema aims to evoke several emotions or imaginations which should be used as an advantage to generate empathy for some extraordinary yet vital situations.

This qualitative analysis of the movie *Ratatouille* added a layer to such perspective. Some re-reading of movies and re-presenting them to unfold the hidden or embedded messages the contain would help the audiences to gain more aware experiences. Especially the issues like scale which is quite perceptual, hence hard to concrete would be discussed fluently. So the researchers should refer to fictional worlds more when examining such perceptual issues.

## **References**

- Akyol Altun, D. (2022). Use of space in Yeşilçam Cinema in the context of symbolization of traditional-modern dilemma. *GRID - Architecture Planning and Design Journal*, 5(2), 276-300. <https://doi.org/10.37246/grid.1061060>
- Allen, B. (2009). Family, friendship and work in *Ratatouille*. *Screen Education*, 54, 137-143. <https://search.informit.org/doi/10.3316/ielapa.877774363559913>
- Altan, İ. (1993). Mimarlıkta mekân kavramı. *Psikoloji Çalışmaları*, 19, 75-88.
- Ambrose, G., Harris, P. & Stone, S. (2010). *Görsel mimarlık sözlüğü*. Literatür Publishing.
- Blignault I. & Ritchie J. E. (2009). Revealing the wood and the trees: Reporting qualitative research. *Health Promotion Journal of Australia*, 20(2),140-5. <http://dx.doi.org/10.1071/HE09140>

- Boyatzis, R.E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage Publications.
- Bretschneider, P., Cirilli, S., Jones, T., Lynch, S. & Wilson, N. (2017). Document review as a qualitative research data collection method for teacher research. In *SAGE Research Methods Cases Part 2*, SAGE Publications.
- Bulu, A. & Kavut, İ. E. (2021). Kurgusal mekanlarda morfogenez etkisinin incelenmesi. *Mimarlık ve Yaşam*, 6(3), 831-844. <https://doi.org/10.26835/my.926835>
- Chappell, S. A. (1973). Films on architecture. *Art Journal*, 32(3), 301-304. <https://doi.org/10.2307/775814>
- Ching, F. D. (2002). *Mimarlık: Biçim, mekân ve düzen*. YEM Publishing.
- Creswell, J. W. (1994). *Research design: Qualitative & quantitative approaches*. Thousand Oaks. Sage Publications.
- Ergün Bilgili, G. & Dinç Kalaycı, P. (2021). Mimarlık ve sinema arakesitinde yer ve yersizliği okumak: Ahlat Ağacı filminde ruhun yitimi. *SineFilozofi*, 6(12), 1025-1043. <https://doi.org/10.31122/sinefilozofi.823794>
- Gür, Ş. Ö. (1996). *Mekân örgütlenmesi*. Gür Publishing.
- IMDB. (2022, 09 November). *Ratatuy*. Retrieved from: <https://www.imdb.com/title/tt0382932>
- Kaçmaz Erk, G. (2009). *Architecture in cinema: A relation of representation based on space*. Lambert Academic Publishing.
- Kızılaslan, S. (2021). Peyzaj mimarlığı kapsamında sinema sanatında mekan tasarımının değerlendirilmesi: Avatar filmi örneği. *Sanat ve Tasarım Dergisi*, 11(2), 548-565. <https://doi.org/10.20488/sanattasarim.1049048>
- Kuban, D. (2018). *Mimarlık kavramları: tarihsel perspektif içinde mimarlığın kuramsal sözlüğüne giriş*. YEM Yayın.
- Kusumah, R. Y. & Haryudin, A. (2019). An analysis of animation movie “Ratouille” that reflecting the politeness of off record strategies. *Project (Professional Journal of English Education)*, 2(3), 341-344. <http://dx.doi.org/10.22460/project.v2i3.p341-344>
- Lefebvre, H. (2014). *Mekânın üretimi*. Sel Publishing.
- Ölçer Kanbur, E. (2022). Mimarlık ve sinema etkileşimi bağlamında ölçek kavramının “The BFG” filminin mekân kurgusu üzerinden incelenmesi. *Turkish Online Journal of Design Art and Communication*, 12(1), 49-70.
- Palinkas, L.A., Horwitz, S.M., Green, C.A., Wisdom, J.P., Duan, N. & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method

- implementation research. *Adm Policy Ment Health*, 42(5), 533-44.  
<https://doi.org/10.1007%2Fs10488-013-0528-y>
- Pallasmaa, J. (2007). *The architecture of image: existential space in cinema*. Helsinki: Rakennustieto.
- Pallasmaa, J. (2012). The existential image: Lived space in cinema and architecture. *Phainomenon*, 25, 157-174. <https://doi.org/10.2478/phainomenon-2012-0020>
- Ryan, M., & Lenos, M. (2020). *An introduction to film analysis* (2nd ed.). Bloomsbury Publishing.
- Sakhaei, H., Bitoria, N. & Azizmohammad Looha M. (2022). Spatial stimuli in films: Uncovering the relationship between cognitive emotion and perceived environmental quality. *Front. Psychol.*, 13, 940882 <http://dx.doi.org/10.3389/fpsyg.2022.940882>
- Sudhagar, D.P. (2018). A critical review analysis about the movie Ratatouille and its impact on culinary tourism, *International Journal of Qualitative Research in Services*, 3(1), 70-76. <https://doi.org/10.1504/IJQRS.2018.091564>
- Tan, E. S. (2018). A psychology of the film. *Palgrave Commun*, 4(1), 82. <https://www.nature.com/articles/s41599-018-0111-y>
- Tawa, M. (2022). *Atmosphere, architecture, cinema: Thematic reflections on ambiance and place*. Palgrave Macmillan Cham.
- Tobe, R. (2017). *Film, architecture and spatial imagination*. Routledge.
- Tunç Kalebaşı, E. (2020). Abraham Maslow'un ihtiyaçlar hiyerarşisi kuramı ile bir film çözümleme denemesi: Ratatouille. *Uluslararası Sosyal Araştırmalar Dergisi*, 13(69), 1285-1295. <http://dx.doi.org/10.17719/jisr.2020.4041>
- Türkmen, A. & Kavut, İ. E. (2021). Steampunk akımının sinemada mekân temsiline etkisinin "Ölümçül Makineler" filmi üzerinden incelenmesi. *Tasarım Mimarlık ve Mühendislik Dergisi*, 1(2), 71-87.
- Wang, Y. & Zhu, S. C. (2008). Perceptual scale-space and its applications. *Int J Comput Vis*, 80, 143-165. <https://doi.org/10.1007/s11263-008-0138-4>
- Wilson, C. S. (2022). A survey of the representation of modern architecture in the cinema. *Journal of Design for Resilience in Architecture and Planning*, 3, 60-65. <https://doi.org/10.47818/DRArch.2022.v3si071>
- Yıldırım, B. & Kavut, İ. E. (2022). Kurgusal mekânın bilimsel ve felsefi boyutları: The Animatrix – The Second Renaissance bölümüne metaverse çerçevesinden bakmak.

*ARTS: Artuklu Sanat ve Beşeri Bilimler Dergisi*, Special Issue of Digitalization, 115-144. <https://doi.org/10.46372/arts.1142724>

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage.