

An Approach to the Understanding of Pictorial Space: A Methodological Proposal Based on Three Case Studies

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Received 28 March 2016; accepted 21 August 2016; published 24 August 2016

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Abstract

Space and time coordinates are two key parameters in our construction as cultural and social beings. They provide us with reference points in the creation of artistic images with full symbolic significance. With the aim of reflecting on pictorial space, an exercise was designed for second year undergraduate students at the Faculty of Fine Arts in the University of Vigo (Spain). This exercise, conducted under the subject Space-Time Processes, consisted in the student's election of a single pictorial artwork from the history of art in order to subsequently carry out a pictorial intervention involving a dialogue with the space portrayed in the original artwork. From a qualitative methodological approach, an analysis of three cases was undertaken. This proposal promotes a type of active learning that lets the students take centre stage on the teaching-learning process, where they confront image comprehension as a group of visual and constructive codes loaded with meaning.

Keywords

Space, Pictorial Creation, Perspective, Artistic Education

1. Introduction

Space and time coordinates are two key parameters in our construction as cultural and social beings. They provide us with reference points in the creation of artistic images with full symbolic significance.

In order to apprehend space built upon perspective, it is necessary to understand how that spatial situation was produced and what it meant in relation to humanistic culture. Perspective is etymologically linked to *seeing clearly*. It comes from Latin although with a Greek origin, and has been classified in many cases as an art form,

but delving deeper into definitions from architecture and art, it is more of a method closer to science. After having analysed several definitions of the term, and according to the encyclopaedic dictionary of Art and Architecture (*Diccionario enciclopédico de Arte y Arquitectura*, 2011), we can define *perspective as the set of methods whose objective is representing in a plane or surface (having two dimensions) the surrounding objects and space (having three dimensions) in the form and disposition of their visual appearance* (which implies considering a viewer). From a historical point of view, the Greeks were more concerned with a natural and clear representation of things than with space. Perspective, as we understand it, was divided by the Greeks into two concepts: *Skenographia*, corresponding to lineal perspective; and *Skiagraphia*, being the shading or *chiaroscuro* technique. According to Panofsky (1991), the Greeks' perspective was not developed any further because artists could not represent what philosophers could not conceive: they understood space as a continuous whole.

In the Middle Ages, art served the interests of religion, which prevented perspective from evolving and took it back to modes of representation prior to those of the Greeks. What mattered was not the distance between the viewer and the object, since the size of objects was linked to hierarchy. From the point of view of space, the Middle Ages meant a mode of conceiving and representing rather devoid of nuances and contrivances. Man, always at the expense of God's will, cannot achieve a clear-cut level of autonomy, and consequently, neither his own way of seeing or perceiving, nor his spatial disposition in the world. Represented space was biased by the unfathomable space of divinity. In this way, every composition tends to be guided by a distinctive hierarchy in which God Almighty presides over every scene in its different symbols and formal features. There is a transit point from a figure to the next one in such a way that each one has its own autonomy, but they all are part of a wider totality which is portrayed with a straight pedagogical purpose. In pursuit of depth, the only technique used is a superposition of some forms over others, but they are always flattened and two-dimensional.

It is not until the Renaissance that the spatial understanding through perspective achieves its full development. It uses reason as a source of knowledge in reaction to sacred texts and medieval conventions; there is a cult of the classical Greek and Roman traditions.

As a consequence of those changes and new ideas, perspective, in terms of plasticity and from the spatial point of view we are dealing with, is defined and developed from three aspects that affect the techniques used, namely:

1) Classical perspective, that of the placement of figures in a plane obtaining perspective from their overlapping.

2) Linear perspective, where there is a point on the horizon towards which all the lines converge. A connection is established by means of visual rays between the viewer's eye and infinity, a new concept. The world and the endless space were opposed to the Euclidean mathematical notion of finite space. Involving the infinite in the finite becomes a novelty (Panofsky, 1991).

Another significant feature was the distance from the point of view to the plane of the image, that is, the framing (Fernández-Fariña, 2010). Depending on this distance, a feeling of larger or smaller depth, more or less brightness of surfaces, was attained. The relationship between interior and exterior, as conveyed in architectural elements such as rooms, windows, doors and other possible items, will be a means to unify the different elements in the scene (Selma, 1996; Stoichita, 2005).

3) Atmospheric perspective, in which a sense of depth is created through the use of colour by softening tones. The figures do not shape up against a neutral background; they are modelled using *chiaroscuro* of black and white values according to a pre-established gradation. This results in a pseudo-transparent space that will appear in images such as those of Velázquez, who has been called the painter of air. The play with light and shadow, sharp in the foreground and blurred towards the background, constitute what Leonardo called *sfumato* as tones turn more and more greyish. The brightest colours tend to appear in the foreground while less saturated ones are placed at the background (Alberti, 1976).

While during the Renaissance the spatial conceiving of artworks is determined by the use of perspective, in the Baroque perspective is handled more freely, in a search for its limits and in a constant play between what is in the scene and what remains outside.

Space-building strategies are manifold:

- Division of planes inside the painting in such a way that several scenes, even those with different lights and blurring, are brought together (e.g., *Las Hilanderas* by Velázquez).
- Use of dark backgrounds leaving an indeterminate space at the back of the scene. This enables foregrounds to show sharply contrasting and dramatic light and dark areas. Forms lose their edges looking as if they were

- bound to a dark background, going off-stage (e.g., Caravaggio).
- Elements in the foreground appear to be coming out of the canvas towards the viewer's space: ledges, papers, trays (e.g., Still lifes by Sánchez Cotán).
 - There is an awareness of the viewer's gaze and the space he/she occupies in such a way that, through the gaze of the characters in the scene, the observer is included in the game of relationships inside it. An outstanding example is the painting *Las Meninas* (Stoichita, 2000: p. 151).
 - The Renaissance notion of painting as window is extended, in a display of rhetoric, to incorporate additional windows that provide the scene with more light. A landscape or outdoor scene is sometimes included and, more importantly, so is an awareness of what is outside the scene forming part of the world (e.g., J. Vermeer).
 - Being painting influenced by theatre, drapery and large pleats are used to open the scene and provide the painting with strong theatrical effects. The characters' poses are theatrical as well, such as those of Caravaggio.
 - Another device used during the Baroque is the mirror, which refers to the distance between reality and image. Occasionally, a face and its reflected image have nothing to do with each other. Thus, an unanswered question between reality and representation arises and becomes one of the baroque testing grounds allowing for a redevelopment of symbols in painting (Gállego, 1978; Searle, 1995). In connection with the use of the mirror are other elements in the Vanitas, such as flames, hourglasses, sacred texts, skulls, whips, weighing scales, jewels... Rather than related to space, all these items have more to do with a temporal component since, from a moralistic view, man's sojourn on earth is banal, and what really matters is moving away from a materialistic lifestyle so that man can reach eternity and spirituality.
 - There is an interest in entering and painting spaces that would be esteemed contrary to good taste, tending towards disarray but corresponding to times of luxury and excess. Thus, we see paintings of pantries full of food being devoured by dogs, or tables after bountiful meals with leftovers scattered through the scene in a disorderly, inharmonious manner.
 - Similarly, we find the so-called cabinets of wonder, nothing else than collections found in palaces. It is imperative to clarify this concept of collection as a way to own and organize the world. Cabinets are spaces of showiness whose rhetorical boast is represented within pictorial and spatial codes. Intimacy and outward appearance are combined to make the audience participant in what is owned and relished in private.
 - It is also important to emphasize the presence of symbols referring to the space external to the scene, such as letters and writings, or maps (Alpers, 1987). In this respect, it is interesting to note that the conceptualisation of space in the western world was understood as an idea of an absolute continuum derived from Euclidean geometry, perfectly represented by the system of perspective. Perspective, as a spatial representation system, is thus associated with a form of controlling the world. It is a unique gaze, that of the west, which is established as dominant over others and must be reflected in the construction of maps. Space, consequently, is associated with power, and therefore, with control.

Once the representation method is specified and mastered in the Baroque, further enquiries about the pictorial space will come up boosted by innovative strategies. A new necessity to articulate space through light, colour, atmosphere and the relation figure-background and pictorial matter becomes a point of interest. Thus, in the nineteenth century, adjusting three-dimensional reality to a painted flat surface means delving into the plasticity of paint conceived mainly as colour stains. The image is gradually shaped through the overlapping of those colour stains, always investigating its flat condition. This gave way to methods that disregarded the mathematical accuracy of perspective in order to emphasise chromaticism, time within the painting and breakups in the relationship between figure and background. The artist's feelings also gained their own space in the painting. In the twentieth century, the pictorial space will be mainly built by applying thick layers of paint to a flat surface. The two-dimensional nature of the canvas is now a main concern, leaving aside the fiction implied by three-dimensional representations of reality. Experimentations on this matter during the Avant-Garde will coexist with the culturally accepted perspective system that articulates our way of looking at and representing space.

This whole spatial conception belongs to the Enlightenment with man's reason trying to apprehend worldly space by means of his knowledge systems. This leads to a question on how we understand the spatial features of images and, consequently, on how we build them. On this subject, it is important to refer to the artists' writings where they reflect on artistic practice (Meana, 2001, 2013, 2015).

This essay takes the conception of pictorial space as the basis for an analysis of the parameters and constructive strategies the perspective system makes use of (Navarro de Zuñiga, 1996). It poses a creative spatial

transformation to modify the aforesaid parameters. Specifically, we propose an artistic exercise to encourage the students to reflect on the notion of space after observing images taken from art history. Establishing a dialogue with historical masters of our visual culture entails an exercise on sensibility, listening, understanding and articulation of pictorial space.

2. Design of the Proposal

From a qualitative methodological approach, we develop an analysis of three cases that reach the objectives intended. The development of this proposal is included in a subject called Space-Time Processes for second year undergraduate students at the Faculty of Fine Arts in the University of Vigo (Spain). These students are expected to acquire sufficient competence in spatiotemporal processes associated to the static image and a fundamental understanding of the pictorial space (for other uses of this exercise see Pérez-Fabello, Campos, & Meana, 2014). This exercise takes place at the painting atelier in small groups during two weeks.

The exercise consists of two stages:

First: Election of a pictorial artwork. Students are to choose a pictorial artwork by an artist from a list proposed by the teacher. Then they must analyse the space portrayed with the help of images, outlines, drawings and sketches. These materials serve as a basis for studying and approaching the creative processes used by the author with a special attention to the spatial strategies exhibited in the original artwork. The students are encouraged to collect all the information available on the artist and his/her working method, particularly with regard to the spatial coordinates. This includes finding out whether the artwork belongs to a series, whether the artist regularly uses the same procedure to generate space, whether the artwork was conceived as a major one in his or her career or was a minor piece conceived as a previous research for another artwork, etc.

Second: Executing an artwork. Based on the previously chosen image, the student must carry out a pictorial work which opens a dialogue with the space portrayed in the original image. This dialogue must be based on a new articulation of space by generating extensions, openings, complexities, new atmospheres, and adequately integrating what is created with the already existent. In order to achieve this, the student needs to analyse the spatiotemporal representational codes used by the artist in his or her artwork: colour, lights, chiaroscuro, *sfumato*, perspective, windows, mirrors, characters' way of looking, inclusion of the viewer in the scene, indoors-outdoors, architecture, maps, texts, scene overlapping or others.

The pictorial techniques required for the execution of the exercise are graphic and dry techniques for sketches and outlines, and acrylic or oil paint for the final work. Image manipulation by means of computational procedures is not allowed in the making of the final work. Digital processing is permitted in the analysis and in-depth study of the initial artwork, but it cannot be applied to the formal construction of the final image.

3. Purposes of the Exercise

The purpose of the exercise is:

3.1. Of an Aesthetical Order

Since the students are invited to choose an artwork. In making a choice, the students must determine how and what they do it for. The decision is initially made according to sensibility and "taste". Students must find the image on the internet or at the library. The choice aims to predispose the students to observe artworks they are not used to see. In the same way, when choosing, they are already pondering over the possibilities of dialogue and transformation of the artwork since, through the process of visualization, they are already mentally considering the possibilities of transformation and modification of the original space.

3.2. Of a Perceptive Order

As the capacity to observe and analyse images is enhanced. Both an aesthetic appreciation and a significant development of the ability to visually read the image come into play, predisposing the student to plan and design the required transformations.

3.3. Of a Formal and Constructive Order

Since the student gets actively involved in the pictorial construction of a space akin to the one the artist has

planned for his/her work. In addition, the student must be able to alter it establishing a dialogue with infinite creative possibilities.

3.4. Of a Cognitive Order

Via an understanding of the articulation of the resulting space, its subsequent spatial representation codes and their meanings.

4. Development of the Proposal through the Analysis of Three Case Studies

The exercise proposed has been repeatedly carried out along four academic years. Over the course of those years we ended up delimiting the image choice options the students must initially consider. In the former editions the students were free to choose. After having repeated the exercise, we noticed that a series of artists and artworks appeared repeatedly, so in the fourth edition we decided to offer a limited list of works taking into account the students' preferences.

As an example of our proposal we have selected American artist Edward Hopper. The reason is twofold: first, he is one of the most chosen by the students; and second, he is the author of a great amount of works that allow for the development of our didactic objectives. In his works, scenes illustrate key spatial factors suitable for the students to recreate by altering or subverting many of their aspects (Kranzfejder, 2006). From a constructive and formal point of view, it is feasible for the students to engage in dialogue with this author's paintings since they are relatively simple and offer a wide vocabulary of spatial resources. Additionally, his work succeeds in depicting a suspenseful atmosphere that noticeably catches the students' eye.

This case study is focused on three sample works that exemplify the starting point of the proposal as well as its subsequent development, where students project meanings and articulate the sense intended by the artist, extending and contextualizing it. These case studies are classified according to three different concepts:

Case 1. *Space of nature vs. Space of civilization*. Observing the work *Room by the sea*, 1951, we find Hopper combining an open outdoor space, that of the sea with its corresponding reference to the line of the horizon, and an indoor space occupied, for the most part, by a void where a play with light and shadow is produced. At the back of the scene, there is an allusion to human presence conveyed by the furniture, a fragmented painting, and a partial view of a carpet. Between both sides of the picture, left and right, a kind of confrontation or duality is produced where both spaces meet. The painting shows a keen sense of composition.

With regards to an aesthetical objective, the start-up image exerts an attraction due to its combination of indoor space and open outdoor space: the finite, intimate and tangible is opposed to the immeasurable sea, with the latter related to a large extent to the romantic sensibility of the sublime.

The very same idea leads to perceptively join the orthogonality of indoor space with the open vastness hinted at by the line of the horizon.

From a formal and constructive standpoint, both architectural construction and light and shadow effects bring the student to consider how the out-of-sight part of architectural space could be, or how the scene would be completed if seen from a different angle of the room with its corresponding casting of light and shadow. In the student's proposal we see that the viewpoint has moved away, some water appears in the foreground and the view of the backside room has been widened (see **Figure 1**).

From a cognitive perspective, the student has comprehended the scene and has engaged in a dialogue with it extending the sense of void and isolation to the entire architecture. He/she aimed for an increase in the tension between the inhabited and the uninhabited, between a reference to civilization and a natural, open space. The central part enhances the feeling of emptiness, a motive Hopper plays with in most of his work. In the student's image (see **Figure 1**), the viewer's viewpoint is moved away and the room is turned into, so to speak, a raft or island that helps increase the sense of isolation by placing the sea at the foreground. At the other end, the scene of the room has been widened, and so has a sense of abandonment in spite of the charm of the image, brought about by the handling of light.

Case 2. *Architecture of isolation*: Taking as a starting point Hopper's painting *Office in a small town*, 1953, we observe a worker through a window who, in turn, is watching a scene of city roofs and balconies. Everything is surrounded by architectural elements and contrasting lights.

From an aesthetical point of view, the interest of the painting resides in the architecture as well as in the different window framings and the open, bright sky which produces an appealing play of light and shadow.



Figure 1. Student's exercise based on the painting *Rooms by the sea* (1951) by E. Hopper.

From a perceptive point of view, both the window and the supposed gaze of the character are crucial to ponder on the space of the gaze. We, the viewers, are introduced in the scene as voyeurs who, placed at the same height, observe the character but are drifted away by means of the shadow at the foreground.

From a formal and constructive stance, the spatial superposition of shadows at the foreground marks a telling difference, by way of a filter (Stoichita, 2005), between the viewer's space and the space of the painting: that of the town. Equally, the introduction of an advertising sign acts as a text that refers to a more metaphorical space, that of desire, in a society that tends to promote consumerism. The sign has been clearly intended for the viewer to see, introducing our space of contemplation inside the painting.

Within a cognitive framework, the selected exercise (see Figure 2) strengthens the role of the architecture by suppressing the character and leaving the inside empty. It is centred in the place of the viewer, who is alluded to by the presence of a powerful shadow at the foreground cast by some ornamental items. On the other hand, the presence of a piece of advertising in front of the viewer's eye serves as a focal point in the scene, which is even more distressing than those of Hopper as this one is absolutely devoid of characters. The empty office stands out making the whole architectural indoor space even more neutral and inhospitable. A tension arises between the inside and the outside, the architectural duality public/private and the viewer's inner life as opposed to social life out in the city.

Case 3. *The human subject's vision.* In Hopper's *Chop Suey*, 1929, we can see the interior of a cafe where two female figures are sitting at a table. The light comes in from the right side of the image creating a play of light and shadow that helps build the space inside. A partial view of the sign with the name of the business can be seen through the window.

Aesthetically, the allure of this painting by Hopper lies in the many plastic resources with which he creates the general atmosphere of the scene. There are secondary conversational situations at the tables, there is an overall indoor atmosphere and a relationship between internal and external space. Equally important is the reference to conversation, particularly to silent words, which are also referred to in the sign hanging on the façade. It is the ambience what makes the image attractive for the students to choose.

From the point of view of perception, the student's exercise presents a much less contrasted scene in terms of light, which provides the space with a significant softness and overshadows Hopper's division interior/exterior. The character looking squarely at the viewer has been removed and the only remaining character is the woman with her back towards the viewer, as if we, the spectators, were to put a face to that character (see Figure 3).

From a formal and constructive standpoint, a sense of self-absorption is stressed by the lonely figure's attitude while waiting. The visual sensation of waiting and absence grows with the coat hanging in the coat stand. The student has opted for the suppression of characters so as to generate a resonance around the only figure on stage.

Within the cognitive framework, the spatial relationship is constructed by means of a play of light and shadow between interior and exterior space. The introduction of an advertising sign is noteworthy as it points to language



Figure 2. Student's exercise based on the painting *Office in a small town* (1953) by E. Hopper.



Figure 3. Student's exercise based on the painting *Chop Suey* (1929) by E. Hopper.

as one more relevant element. Here, the space of conversation is replaced with a solipsistic monologue. The presence of the sign, in relation to space, refers to a specific place: that of the character's experiences. Those experiences involve language, words, naming, and specifically in the isolated figure, the character's interior dialogue or interior monologue.

5. Conclusion

As noted in the three proposals selected above, a close relationship is established between the chosen artist and the student. The exercise fosters research, study, and comprehension of the selected artwork encouraging the student to analyse it in terms of space construction and pictorial execution. By the same token, it enhances the student's observational capacity and image analysis as well as the ability to understand representation and space construction. From a formal and constructive stance, the student learns to interpret spatial representational codes. He acquires a series of creative techniques since he/she is urged not only to reproduce, but to intervene in

a chosen representation space either by expanding it, altering it, creating paradoxes or by using his/her own interventional techniques.

By virtue of this exercise, the students achieve an insight into major painters of all times through a creative process: based on previous artwork, the students have to solve creative and compositional problems on a know-how basis.

Furthermore, as a consequence of this exercise, in obtaining the desired objectives, the students acquire the capability to understand images cognitively, not only from a sheer consumerist point of view but also from their own construction of meaning. This brings on a larger visual culture. One of the final goals of the students is conceiving the image as a construct that needs to be paid close attention to, not only according to the author's taste but also to a certain intentionality charged with meaning and messages.

The students learn to handle and incorporate visual constructive codes in their creative process. The handling of those constructive techniques is closely related to the message conveyed by the image. Thus the students become aware of the relationship between the construction modes of an image and its message, conveyed at a sensitive, perceptive, formal and cognitive level. It has been proved that creating an image according to the exercise proposed implies an understanding of spatial techniques such as framing, relationships between internal and external parts of architecture, superposition, play with light and shadow and use of written texts. All in all, we believe this proposal promotes a type of active learning that positions the student in a leading role in his own process of teaching-learning

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