

Crossing the boundaries of film and architectural pedagogy

Dr Graham Cairns, Writtle School of Design, Chelmsford, Essex

Abstract

In this paper the potential role film has as an educational tool in the field of architecture design will be discussed. It will document workshops done by the author with students of architecture and interior design in both the UK and Spain. It will show how students are able to analyse film and directorial techniques to understand how film directors look at / use space. It will also show how that understanding has been used by students in their own designs projects to discover and explore previously hidden possibilities in spatial layouts and arrangements.

Specifically, it is a paper on the relationship between film and spatial design. However, in a general sense, it is a paper about the potential of interdisciplinary design thinking in an educational context.

It is based on a constructive approach that deliberately attempts to force architecture students to address their own subject through schemata they are not used to. As a result, it is an approach that naturally obliges them to reconsider their standard ways of working and thinking.

Keywords / concepts: Architecture, film, space defamiliarization, storyboards, spatial filming.

Introduction

Cinema has been a natural testing ground for architects examining alternative approaches to their discipline ever since its inception at the end of the 19th century. Similarly, it has been a natural arena in which film directors have worked on their own particular take on spatial issues (Neumann, 1996). In some cases this has resulted in the development of spatial concepts as complex as those found in the work of many architects.

The author of this paper was trained as an architect but has worked for a number of years in video art. This paper then treads the boundaries

between these two disciplines and documents attempts made to cross these boundaries in architectural pedagogy. It documents a workshop that the author has developed and run in various formats for approximately 10 years. The case study dealt with here is from work with Spanish students and in this particular case began with a series of introductory lectures and screenings of iconic films. All the images and sketches included here were used and produced by students.

This introduced students of architecture to the terminology, filmic and architectural concepts described in the paper. In this paper these introductory examinations are not included and consequently what we have are the four stages of filming and design activities they go through in their attempts to transfer their learning from film into their designs for architecture.

Design workshop. Stage 1

Building on ideas found in the work of Dietrich Neumann and Francois Penz (Neumann, 1996; Penz, 1997) the workshop commences with introductory screenings and lectures that lead on to Stage One of the workshop which involves an analysis of the spatial models employed by a variety of different directors. It focuses on certain celebrated scenes that epitomise their style and involves the use of storyboards, plans and sections as tools of investigation. The aim is to deepen our understanding of spatial cinematographic construction. The example selected here is the mutiny scene from the Sergei Eisenstein classic *The Battleship Potemkin* and involves students engaging in Eisenstein's theories of montage (Eisenstein, 2010), Figure 1.



Figure 1

By using the storyboard to isolate each shot in the scene, the students identified that three fixed cameras were used to film single actions from different positions and angles, Figure 2. As a result, perspectives from below, the side and from above are all created.

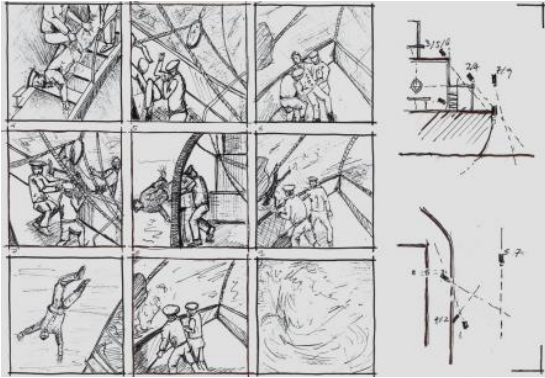


Figure 2

In addition to the graphic fragmentation that this inevitably produces, in some shots the frame of the camera is twisted so as to create diagonal and fragmentary compositions. Consequently, the various trajectories and movements of the protagonists conflict with the orientation of the camera and further heighten the sense of dynamism initiated by the positioning of the cameras. These initial spatial and compositional decisions represent the first steps in the constructive process of the director.

This construction is continued in the post production process where the most important factor in the creation of the work undoubtedly occurs: the editing. Intended to deconstruct the unity of both the space and the action filmed, Eisenstein's editing is definable as a type of collage.

Design workshop. Stage 2

The process of applying the cinematographic lessons taken from these exercises to actual architectural design begins in the second stage of the workshop when, momentarily, the use of storyboards is put to one side. At this stage, the aim of the workshop is to investigate and understand the site used for the later design projects; in this case the Cebada Market in Madrid, Spain, Figures 3 and 4. Rather than employ a

photographic camera or sketch book, the tool chosen for this investigation is the film camera. Underlying this decision is a deliberate attempt to identify and highlight the building's hidden cinematographic characteristics. In other words, an attempt is made to identify its filmic potential.



Figure 3



Figure 4

In the type of narrative cinema with which we are most familiar, the entire filming process revolves around certain important actions or events. Examples may include a fight between two actors or a simple conversation between two romantic protagonists. In such cases there are clear parameters that help orientate the director when taking decisions about the method of filming to be used. Typical in this sense would be the use of multiple viewpoints and rapid fragmentary editing to add dynamism and conflict to the fight scene. Similarly, it may be that a more intimate scene, say a conversation between two lovers, is filmed with longer takes, or indeed in one continuous shot. The aim here would be to stress the self absorbed tension of the moment.

In contrast however, the filming of a site or a building in order to facilitate its architectural or spatial analysis does not have any sort of narrative drive to help determine the cinematic techniques employed. This *spatial filming* then tends to be a purely formal exercise in which attempts are made to counter this absence of narrative by making the film visually interesting. This results in the employment of visual characteristics such as the use of tilted frames and multiple view points, or the employment of unusual camera angles to distort the eye's normal perspective. It is a formalist approach found in the work of many of the early twentieth century's avant-garde filmmakers such as Sergei Eisenstein, Dziga Vertoz and Walter Ruttmann, all of whom explored the relationship between film and architecture in different ways (Vertoz, 1984), Figures 5 and 6.



Figure 5



Figure 6

This formalistic approach to the filming process is further heightened by the employment of the filming styles introduced in the earlier stages of

the workshop; fragmentary, static or continuous and fluid, for example. What results from all of this is that certain characteristics of the space that would not normally be considered of importance, or even identified, become central to our way of looking. What becomes clear is that depending on the method of filming employed, one begins to identify different but equally inherent spatial characteristics.

In a sense, what is occurring is a form of spatial defamiliarization; the reinterpretation of the building's spatial characteristics by virtue of its presentation in unfamiliar formats (Andrew, 1976). This inevitably leads to the identification of a different set of spatial qualities; qualities that may even be called cinematographic. In this sense, film is a medium employed to deliberately facilitate our reinterpretation of space.

Design workshop. Stage 3

The third stage of the workshop returns once again to the use of storyboards. However, instead of being employed purely for cinematic analysis they are now used in a way that more directly facilitates spatial design. This is done by setting the scene examined earlier in the site of the design project. Consequently, what we have here is the mutiny scene from *The Battleship Potemkin* now visualised in the Cebada Market, Figure 7

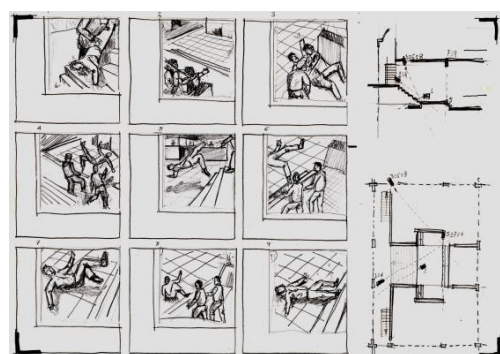


Figure 7

In this process the designer is obliged to examine this new architectural setting for particular cinematographic characteristics that would facilitate the recreation of the scene in a storyboard format. Consequently, just as occurred earlier with the employment of the video camera to record the building, the use of storyboards

directs the attention of the designer to the site's cinematographic, rather than architectural, qualities.

In this specific case, the entrance zone was identified. Here there are platforms at different levels which are interconnected by a number of individual staircases. This relatively irregular spatial distribution facilitates the selection of multiple camera view points, as well as the possible recreation of the dynamic choreography realised by the actors. Figures 8 and 9.

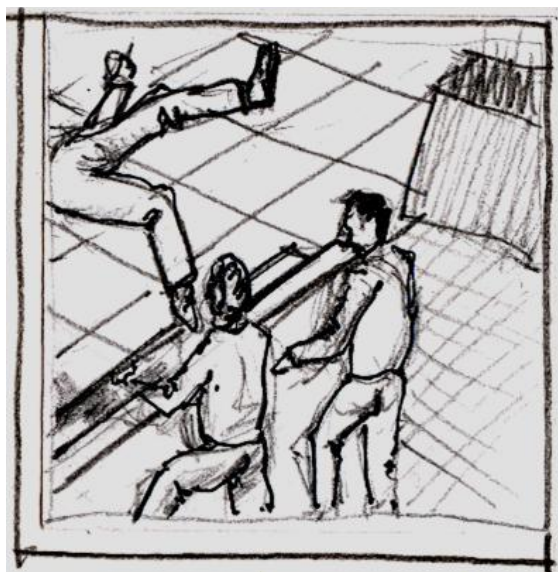


Figure 8



Figure 9

These storyboards are done by one group of participants whilst others design different

storyboards based on alternative scenes from other films. Together, they result in the identification of quite different spatial and cinematographic characteristics depending upon the nature of the scene in question.

What occurs at this point then is a continuation of the process of *defamiliarisation* that obliges the designer to look at an architectural space from a cinematographic perspective. However, it goes beyond the mere visual recording of those cinematographic characteristics on film and begins to consider their application in the context of given physical actions and movements. This move towards considering the visual and physical questions is an important step in the gradual broaching of purely architectural design proposals that follow.

Design workshop. Stage 4

Before these purely architectural questions are introduced, however, there is one more storyboard made in the fourth stage of the workshop. On this occasion, the storyboard is not based on a scene from a film, but rather a typical event related to the architectural program selected for the workshop. In the year of the examples used here, the architectural project was the design of a small sports stadium/centre. Consequently, each participant of the workshop was asked to identify one typical action associated with that type of project, and to subsequently make a storyboard of it set in the site.

The example shown here centres on the moment in which two basketball teams leave their respective changing rooms and walk onto the court together. It is based on a continuous style of filming and consequently employs long takes and a moving camera. The students document the proposed movements of the camera in plan and section and thus consider the space from a cinematographic perspective one more time.

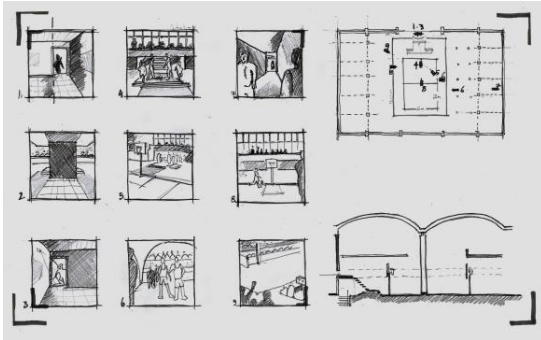


Figure 10

These storyboards are set in the site of the design project and deal with actions typical of that type of project, Figure 10. As a result, it is inevitable that some of the ideas contained in them will be directly applicable to the designs proper that follow. For example, we see the use of frontal and back lighting effects that are later introduced into the design proper, Figure 11. Similarly, there is a proposal by students in the storyboard for the use of a path marked out on the floor by a change in floor finish. This is intended to emphasise continual movement and is applied easily in the real proposal that follows.



Figure 11

Both these examples would fit perfectly in the category of 'aesthetic factors' described earlier, given that they are equally applicable in both an architectural and a cinematographic context/space. They are thus indicative of the close relationship developed by students between cinematographic exercises and architectural projects at this stage of the workshop.

Design workshop. Stage 5

In Stage Five participants pass from storyboards to actual design proposals for the project. As mentioned previously, in the case of these examples the project chosen was a small sports stadium/centre. Essentially, participants work in standard ways at this point and the aim is to find multiple ways of incorporating ideas, concepts and visual effects studied in film into the spatial design proposals put forward.

At its most basic level this may involve the repeated use of a lighting effect or floor finish design as just described. However, more interestingly, it may involve the creation of visual effects that require a certain level of abstraction in their transition from one medium to another. In some cases it may even involve the employment of cinematic spatial concepts as models for architectural spatial planning. In running this workshop it has been identified that most of the design proposals use one or other of these strategies.

Consequently, they have been categorised into what is referred to as three strategies for transference; three ways in which cinematic ideas can be incorporated into architectural design. The first of these categories is called the strategy of *direct incorporation* and represents the type of understanding of film and architecture that tends to dominate the literature available; an understanding of set design and questions of mise-en-scene (Neumann, 1996).

By way of contrast, the second category identified involves a more creative manipulation of cinematic effects. It is referred to as the *strategy of analogy*. In the framework of this model one finds architectural effects based on cinematographic techniques such as the long take, the cut and, as in the example seen below, the fade. Simply explained, the fade involves the closing and/or opening of a scene with an image that disappears or emerges from a blackened screen. It is incorporated by students into their proposals here through the use of glass walls that are partly transparent and partly opaque, Figure 12.

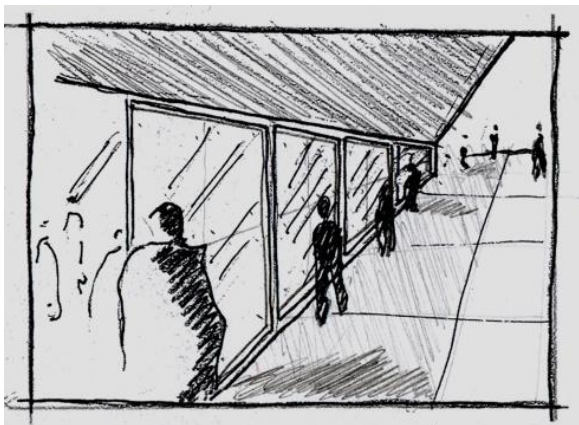


Figure 12

At one end of the wall the glass is opaque. However, along its length it gradually lightens until at the near end it becomes completely transparent. Thus, as users move along it and prepare themselves to enter the stadium, the interior of the building is gradually revealed – just as a cinematic scene is gradually revealed by the use of an introductory fade. Other design features that follow this *strategy of analogy* include the incorporation of the cinematic cut and the dissolve, both of which produce interesting spatial effects when applied by spatial designers; a technique found in the work of the architect Jean Nouvel (Nicolin, 1997). At this stage, students are beginning to apply a type of thinking to their architectural designs that comes from the realm of film and we see the creative results emerging from the contradictions and conflicts of applying this double language of film and architecture.

At an even more abstract level there are examples in these design proposals of the third category of approaches; the conceptual *strategy of transference*. Here the cinematic effects translated into architectural design tend to be spatial concepts rather than visual effects. They consequently require an even greater level of adaptation or abstraction in order to be carried out effectively. Their effect on the architectural project is far more fundamental.

In the example shown here, the students have used the filming style of Jean Renoir as inspiration for the design of a lobby space in which various actions take place in different depth planes, Figure 13. The entrance zone of the stadium proposal is

thin and long. The linearity of this space is emphasised by the surface decoration of the walls but also by the lineal disposition of the access ramps placed along its side. These ramps add to the dynamism of the initial view, underline the lineal perspective of the space and optically unify its different depth planes. The cinematic references at play are various.

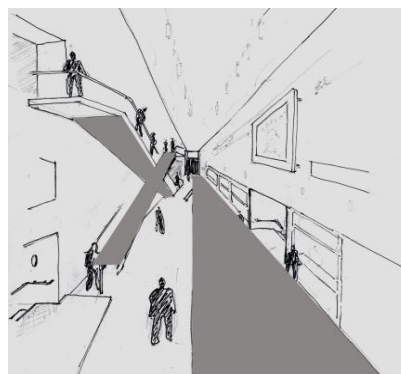


Figure 13

Jean Renoir was a director that tended to film using long takes. As discussed previously with regard to *Citizen Kane*, this filming style obliges directors to use deep space compositions in which he could organise actions in different depth planes. This clearly happens here with a spectator at one end of the entrance zone seeing people enter in the background of the image.

However, Renoir also tended to control the movements of his actors in very specific ways; coordinating lineal movements from fore to background in great detail, for example. This characteristic was central to the decision to position the ground floor entrance doors and the upper level access points to the upper stands at opposite ends of the space. This architectural spatial arrangement proposed by the students thus instigates a series of continuous and lineal movement vectors as spectators are obliged to journey along the entire length of this central zone in opposing but parallel directions.

The clear influence of Renoir on the spatial design of this proposal is continued in the design of the stands themselves. Here we see an approach to spatial organisation that radically changes the standard practices of this type of project. In

cinematographic terms, one of the most notable and fundamental aspects of Renoir's filming was his use of a 360 degree movement style for the camera; instead of limiting the camera to a position on one side of the action, the camera is free to move all around it. It is an approach that produces a much more fluid and holistic sense of space and action referred to as *360 degree space* (Bordwell, 1997), Figures 14 and 15

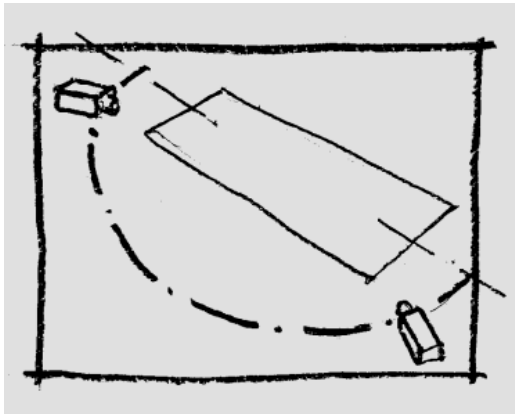


Figure 14

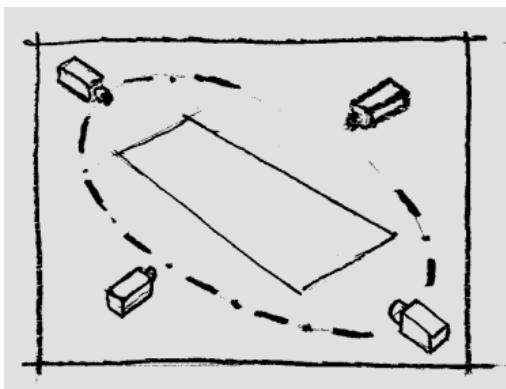


Figure 15

Transposed to small scale stadium design this idea involves inverting one of the standard characteristics of this building type; its division of seating into sections that are separated by vertical access routes. This project proposes separating them by horizontal access routes so that spectators are not restricted to one side of the action but can walk around the entire perimeter of the court without spatial interruption; again we see students rethinking architectural conventions as a result of their *thinking through the medium of film*. Figures 16 and 17.

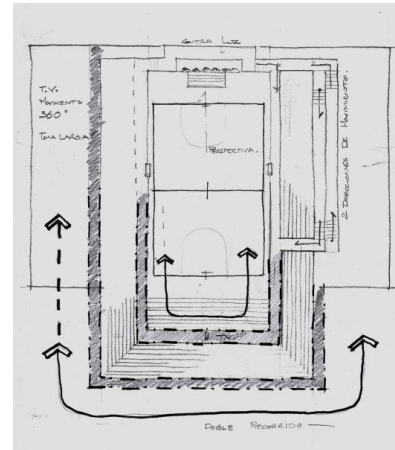


Figure 16

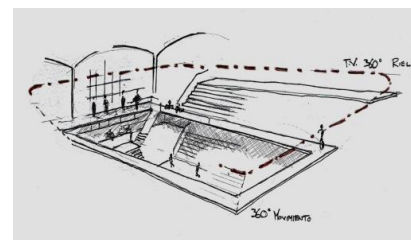


Figure 17

Clearly, this design idea reveals an understanding of spatial sequence, duration of view and movement that goes beyond considering films as sources of ideas for illumination or isolated optical tricks. In fact, it could be argued that what ideas such as these actually reveal is the employment of *cinematographic spatial models* as templates for architectural design itself. Cinema is used as a source of spatial concepts.

Conclusion

The design ideas put forward in a workshop like that documented here may contain problems and some contradictions at the level of architectural design. However, they do represent examples of students enriching their 'design vocabulary' with a series of visual and spatial effects that result from their deep engagement with the visual language of film. In some cases this does not seem to lead to any great transformation of normal architectural thinking and involves a creative process of imitative adaptation. For example, when students rework a lighting effect seen in film into an architectural proposal we see an example of quite simple creative reworkings of film's visual repertoire in the design context. However, in some

of the other reconsiderations of standard spatial approaches, we find that what we are privy to are quite radical techniques that involve students applying new schemata to their understanding of standard architectural issues.

Once we see students treating a wall as a visual effect analogous to a 'fade', or a change in scale from one room to another as representative of a 'cut', we are clearly evidencing a major hybridization of the designer's imagination. Similarly, when we find students reconsidering a tried and trusted architectural planning system, as in the case of a 360 degree approach here, we are witnessing a significant breaking of rigid design schemata. In these instances, what we have is an example of constructivist learning in which schematas are broken down and new mental frameworks are developed, and it is in these moments than that we see the full creative potential of an interdisciplinary approach to spatial design teaching and learning.

Bibliographical note:

This paper is a continuation of work commenced by the author in a Spanish language book:

Cairns, G (2007) *The Architect Behind the Camera; a spatial vision of cinema* [El arquitecto detrás de la cámara; una visión espacial del cine]. Abada Editores, Madrid.

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