Reconstructions, Remakes and Sequels:
Architecture and Motion Pictures

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ABSTRACT

Motion pictures can illustrate worlds that have never been. They may show fantastic depictions of the future or an interpretation of the past. In either case, they have the power to reach millions of people across cultures, generations, and educational backgrounds with visions of our environment that do not exist in our everyday world.

The study of imaginary worlds in this design studio case study is limited to motion pictures that postulate unique, or new environments rather than those films that faithfully attempt to document or reconstruct reality. In this sense, the movies used for study have a lineage traceable to Georges Melies "who came to film from illusionism and the theater," rather than to the reality of the Lumiere brothers who came from photography which ultimately would lead to "cinema-verite."

Discussions, assignments and presentations in the studio are organized to provide students with an opportunity to gain a different awareness of architecture and use varying stimuli as source material for design. The study of architectural history, art, formal principles of design, visual perception, and media are required in order to complete the reconstructions and creations of proposed environments.

All student work throughout the entire semester is created with electronic media and the computer is used as an integral component of the studio enabling analysis and study, design, model creation, and animation. The available capabilities of computer graphics in the studio enables students to explore analytic and synthetic issues of design in motion pictures in a manner not readily available when restricted to traditional media. Through the use of digital media we have an opportunity to better understand the imaginary worlds for what they communicate and the ideas they contain, and therefore create an opportunity to modify our own concept of architecture.

FRAMEWORK OF STUDIO

A design studio focusing on the study of architecture in movies is a multiple media investigation of architecture and motion pictures in a single semester elective studio offered to fourth and fifth year students after a three year core in a five-year undergraduate professional program. The studio relied on various types of electronic equipment in order to accomplish the work: from consumer type VCRs to personal computer IDE-card based digital recording systems with non-linear editing capabilities. All design work in this case study was created EXCLUSIVELY on computer - from preliminary studies to model creation to walk-throughs. The class was developed after more than ten years of teaching architectural design studio with CAD/graphics as the primary (and often only) design and presentation medium, and after three years of experimental work about architecture in motion pictures in a non-medium specific elective seminar.

Each student selects and obtains a copy of a movie from an approved list to study. The choice of movies includes a broad range from science fiction to comedy - each of which has sets initially existing in the imagination of the designer(s). "Historical" films to be studied contain sets that are imaginary or interpretive sets for past locations. Students may study movies not on the list based on availability and upon approval of the instructor. (Any movie studied must contain original sets that do not faithfully document reality and that contain identifiable formal ideas that can be subjected to architectural study.) All movies are available on videotape (VHS) to facilitate access, viewing, and detailed study. A television monitor and VCR are available in the studio for student use.

The semester begins with a series of lectures and discussions introducing relevant issues. Topics include an introduction to the history of set design and film making, examples of critical analyses of important motion pictures,
value systems inherent in the built environment as found through architectural analysis, and discussions of significant essays and readings about architecture and motion pictures.

Students study and analyze their selected movie and the imaginary worlds contained therein. A description of the primary physical sets found in the movie is prepared by each student as a prerequisite to analysis and reconstruction. Discussions of the social and historical context of the movie as well as the "message" of the motion picture in relation to its imaginary world are held in class.

Each student is required to create a three-dimensional digital model of a reconstruction of the original set as if it were an actual place. The reconstruction is based on an examination of the fragments presented serially in the movie. Students are required to use their own creativity and analytic skill when converting sets that were not designed as architectural (or even three-dimensional) places into single, coherent models. The filling in of missing pieces is based on 1) an architectural analysis of the portions of the set(s) seen; 2) careful study of the scenes in the movie with particular attention paid to views from one scene towards another and to movement by characters from one place into another; and 3) the ability to create precise perspective views consistent with actual scenes in the motion picture. Assumptions must be made explicit when resolving internal inconsistencies (such as an interior space being too large to fit into its alleged exterior shell). Students are required to present rendered images of the model showing views that can and cannot be seen in the original movie, an animated walk-through, and two-dimensional representations consistent with architectural conventions that can facilitate discussions and comparisons between the various formal architectural visions.

Upon completion and presentation of the reconstruction phase of the semester, each student develops a scenario - in writing - for either a sequel to, or remake of, the original motion picture. The proposed narratives are discussed as a group in class. As part of the narrative development, influences by architecture or allied arts on the original movie are considered. Any "re-defining" of architectural or stylistic intents and values by the movie are analyzed when considering the sequel or remake. Utilizing pedagogical methods familiar to students in the design studio, drafts are critiqued and re-written.

Students create digital places for their new movie as architectural proposals for the settings in which the activities based on their narrative can take place. Consistent with the reconstructions, the new proposals are presented with architectural representations, a sequence of rendered images of the three-dimensional model, and an animated walk-through. The final presentation consists of a combination of printed drawings and images mounted on boards, slides, and large screen video projection of the animations (up to eight minutes each). Both the original reconstruction and the new proposals are presented at the final review to facilitate discussion by critics.

REASONS FOR STUDY

Like childhood photographs in a family album, movies become a unique way of "remembering" an era or place - even one that has never existed or could exist. Because of their widespread dissemination, and as part of our collective memories, motion pictures are a prominent part of our culture and the "architecture" contained within them help frame public expectations for our environment. Furthermore, the interest in movies is not limited to any particular time, place, or culture, and, in turn, the subjects of motion pictures reflect a cultural and generational variety that is relevant to a wide range of individuals. It is important for future architects to be aware of, and familiar with, such an important medium and its messages if they are to participate in the collective effort to build spaces for society. By studying motion pictures, we may learn how non-architects perceive both the environments in which we all exist as well as aspirations for (and anxieties about) future environments.

EDUCATIONAL GOALS

An important goal of the studio is to have students think about, become aware of, and question all that they see in the visual environment and to recognize that influences on, and stimuli for, architecture can be found in a variety of places. As the students study their selected films they develop an increased awareness of how architecture participates in, influences, and is part of, the development of the arts (cinema, painting, furniture, industrial design, etc.).

Robert Weine's Cabinet of Dr. Caligari, an expressionist avant-garde masterpiece, was created at the same time that Hans Schrner, Max Tavt and Lyonel Feininger were creating architecture. Film sets for Marcel L'Herbier's L'Inhumaine in 1924 were created with assistance from Robert-Mallet Stevens and Fernand Leger. The
extraordinary sets of Fritz Lang's *Metropolis* were produced more than two decades after Antonio Sant'Elia began to create his futuristic drawings. Pilasters in the Babylonian set of the Ishtar Gate for D.W. Griffith's *Intolerance* have details resembling the massive cornices of Frank Lloyd Wright's Larkin Building, built ten years before the movie was filmed. Yet, while architecture influences motion pictures, the reverse may also be true. Michael Graves' creatures stop the Swan Hotel in Orlando reflect an attitude not dissimilar to that which placed the animals on the buildings and columns at Griffith's Ishtar Gate. And John Portman's Marriott Marquis Hotel in Atlanta exhibits some of the spatial and evocative qualities found earlier in the 1936 H.G. Wells classic, *Things to Come*.

**Study of the architectural "styles" found in movies and their roles in the story of the film generate discussion and result in study about the social goals and meaning of architecture.** The Modern Movement was started, in part, with social aspirations. New architecture was going to create a new society with better opportunities for the masses. Yet many movies co-opted stylistic clichés (free standing columns, glass curtain walls, dramatic "Floating" staircases, and so on) and depicted them as the property of the elite and wealthy (Albrecht 1986). Major architectural sets and achievements in movies such as *Metropolis* and *Blade Runner* are seen as representing the evil, the wealthy, and/or the government. However, in other films like *Lost Horizon* and *Things to Come*, Modernism plays a significant role in the saving and/or rebirth of society. And in others, like *Duck Soup*, it is the backdrop to comedic activity.

**By watching and discussing the various films, students are expected to gain an understanding about what society thinks about architecture and what architecture has to say about society from the perspective of non-architects.** Jacques Tati in *Playtime* pokes fun at the impersonal nature of Modernist architecture as he gets "lost" in a myriad of identical cubicles in an open office plan and walks disorientedly into glass walls in an airport (that the viewer first is made to think is a hospital). The movie goes on to spoof the "universality" and lack of site specificity of the Modern Movement, showing travel posters for various vacation spots in the world with the same beach front hotel in each picture. A private home in Barry Levinson's *Toys* is a Modernist cube with a "flip-down front" that gives an appearance of a traditional grand residence when someone comes to visit. Suburbia is satirized in both character and set in Teri Burton's *Edward Scissorhands*. The hero of Terry Gilliam's *Brazil* is a renegade HVAC repairman (Robert DeNiro) who cuts through the bureaucracy of society represented by over-designed mechanical systems and buildings. New buildings in Los Angeles in Ridley Scott's nihilistic *Blade Runner* are approached only by air as the street level urban fabric is abandoned to decadence.

Individual opportunities for in-depth investigation are available to students. Based on the movie selected, specific periods of architectural history must be studied. Individual work is shared during oral presentations/interim reviews and discussions. By studying an "historical" film, the history of the period in which the movie supposedly takes place must be studied in order to determine the accuracy of the sets and to be able to ascertain where the influences actually were. The (supposedly) Babylonian sets in *Intolerance* were actually an imaginative mixture from multiple sources. A study of Cecil B. DeMille's *Cleopatra* shows that the "Egyptian" sets are as much Roman as Egyptian and the "Roman" sets are as much Greek as Roman. (In fact, it appears that the same basic set was used for both Roman and Egyptian scenes with components moved and props added.) An analysis of Reinhardt's and Dietler's *A Midsummer Night's Dream* necessitates study of Baroque, Greek, and Roman architectural history. Toinonike Kinugasa's *Gate of Hell* leads one to an investigation of both Japanese medieval architecture and Japanese watercolor. Even in films that are not considered historical, the set design may still reflect a distinct period of architectural history. Expressionism is important in *Swengali* and *The Cabinet of Dr. Caligari* (among others). The study of Art Deco is significant in such diverse films as *The Wizard of Oz* and *Grand Hotel*. Various periods are studied with different films.

The requirements of the studio provide opportunities for a variety of source materials to become part of, or used in, the design process. The set of precedents from which students may learn is expanded beyond the traditional list. Depending on the intent of an individual's project, entire paradigms for newly created imaginary worlds have to be developed in the studio.

The reconstruction of architectural sets gives students practice in principles of formal analysis of architectural proposals. Only after a careful archeological-like analysis of the fragments presented does one realize that a number of sets in Fellini's *Satyricon* are rationalist/modernist frame-like structures. A study of architect-hero Howard Roark's Enright Building in *The Fountainhead* (meant to be a triumph of Miesian modernism) shows that there are picturesque interior views and angles that compromise the "purity" of the rectangular perimeter emphasized in exterior views. By analyzing various scenes in the movie *Toys*, one discovers that the scale of portions of the interior section and the exterior massing of the Zevo Toy Factory don't match. An idealized village in *How Green Was
My Valley is based on a goal oriented linear system, with the Church and mine transposed in importance and physical placement.

Students increase their awareness of the significance of architectural detail on human activity, perception of space and scale, and impact of color. A view of John Barrymore bunching over to pass through a doorway in Svengali, or the creation of a model displaying the extra high doorknobs in Metropolis, make one acutely aware of the power of architecture and scale in a way that a comment like "your doorknobs are high" in a studio critique would not. The shifting hues in Dick Tracy are used to alternately focus attention on architecture and actress/actor. The impact of environmental control systems (lighting, acoustics, and ventilation) are all made humorously and unforgettable evident in the satires Mon Oncle and Playtime. Issues sometimes taken for granted become significant elements in the design.

Skills in the utilization of CAD/graphics and animation in the analysis, design, and presentation processes are developed in the studio. Video production, three-dimensional modeling, rendering, image processing, interactive color studies, animation, and the introduction of non-objective sound to presentations are all learned in the studio and used extensively. A non-traditional presentation with varying elements must be orchestrated by each student.

The study of motion pictures and the creation of animations, acclimatize students to the idea of understanding buildings and spaces serially. The expanding use of electronic media in the design process allows students and architects to design with time-dependent phenomena and animation. With computers, designers can more easily evaluate their own proposals in a manner that is consistent with the visual experience that people have come to expect from movies. Designing and presenting serially also gets students comfortable with the idea of sharing their ideas with others (clients, regulatory agencies, etc.) in an engaging manner that removes a layer of abstraction for non-architects. With judicious viewpoint placement, animation puts both the designer and viewer "in the action" or, in this instance, in the space.

Because the models at all phases of the process were digital, test animations and renderings could be made at any time. Studying from moving pictures, and forcing oneself to evaluate new work serially in animation, would have only been possible with old style flip books in the past. Animation created by drawing individual frames is so time consuming that it is impractical in a design studio and, if done at all, would have resulted only in a recording of previously made decisions prior to a final presentation.

Students become aware of design issues in the related fields of set design, film production, graphic arts, photo compositing, and animation - and have an opportunity to use their tools in the architectural design process. In an era in which distinctions between design fields are blurring, students in an undergraduate program have the opportunity to investigate some of the potentials of various fields for which an architectural education is valuable. Furthermore, students who are familiar with the means and media used by people who influence the collective visual expectations of society may be better positioned to participate in the creation of architecture. Practice is gained in cross-disciplinary analysis as connections are discovered by students between architecture and other fields - from industrial design to literature.

Communication skills (writing, speaking, and discussion-leading) that are important components of general education in an undergraduate program are reinforced by the studio requirements. The importance of creativity is made clear in the context of writing. The creation of the narrative (and the requirement to defend its premise) for the sequel or remake reinforces the idea that architecture is a setting for human activity. When designing the remake or sequel it becomes obvious that what one creates in words has the potential to impact what one creates as an architectural proposal. Remakes in the particular studio experience studied varied considerably from the development of a new color-based expressionist paradigm for The Cabinet of Dr. Caligari to the relocation of original settings to new ones including the transfer of a Welsh mining town setting in How Green Was My Valley to an offshore oil well in the North Sea, the relocation of Lost Horizon's Shangri-La from Tibet to a moon orbiting Jupiter, and a remake of The Beloved Rogue in Nazi Germany. Sequels tended to require a greater literary effort than the remakes in order to develop a coherent narrative that built on the original, while still requiring the design of a new three-dimensional context. Sequels in the study included the expansion of Steven Soderbergh's Kafka with a new Kafka-like story about torture in the guise of scientific study as well as the discovery of a "new" Shakespearean sequel to The Tempest (which formed the basis of Peter Greenaway's Prospero's Books) titled "Miranda's Island."

Cooperative study is fostered when students discover that one movie being studied may be a "descendent" of another movie being studied in class. Additional cooperation between students is necessary to become facile with the new tools at their disposal.

Finally, there is value in building excitement about design, creativity, and the future of architecture while having fun watching and talking about interesting architectural proposals that are found in, and created for, movies.
CONCLUSION AND CAVEAT

It should be made explicitly clear that although the computer was an integral and important component of the studio, the technology was not the primary focus - CAD/graphics was the medium most logically used for the analysis and design projects. Utilizing only traditional media, it would have been virtually impossible to accomplish the pedagogical requirements for the study in a one semester studio. CAD/graphics enabled students to study and design with consideration of an enormous number of issues in a short time including color, transparency and materiality, time-dependent phenomena, distortion and transformation of form, image and mood, focal point as perceived from various positions, issues of arrival and departure from a place, etc.

There were some unexpected problems, however, in the design studio relating to animation creation. Watching many good movies raised the level of expectations the students had for their own work. While it is relatively easy to create an animation, issues of camera location and movement, as well as speed of movement, proved to be a time consuming process and the level of success varied. There is a difference between the education of an architect and that of a filmmaker. There was also the desire/need to include sound in the animations. The use of non-objective sound was not part of the initial design process and there was a mad scramble at the end (rather than being integral throughout) to overlay narration and music in student animations without the assistance of anyone truly knowledgeable in the field. The tradeoff between detail for still images and movement through simpler models became excruciatingly clear. With buildings approaching a high level of detailed design, uncompressed animations required file sizes up to three gigabytes each which, at this time, proved to be burdensome. Storage of large files and movement of these files across the network in order to put them onto tape occasionally overwhelmed the system and time had to be diverted to file management. As a beneficial side effect, however, it forced students to make judgments about what was important to the project - and why - in a situation in which almost anything was possible.

It is noted that movies are not architecture and do not bear the responsibility to the built environment that architecture ultimately does. Movies do not have the same structural, environmental, and programmatic concerns that are found in architecture. Nevertheless, there is much to learn about architecture (and enjoyment to be had) by studying the wonderful and highly imaginary worlds found in motion pictures.

APPENDIX I - (A PARTIAL) SELECTION OF MOTION PICTURES FOR STUDY

- 8 1/2 (Federico Fellini)
- A Midsummer Night's Dream (Max Reinhardt and William Dieterle)
- Adventures of Baron Munchausen (Terry Gilliam)
- Anzhi (Yakov Protazanov)
- Babes in Toyland (Gus Meins and Carl Rogers)
- Blade Runner ( Ridley Scott)
- Brazil (Terry Gilliam)
- Bride of Frankenstein (James Whale)
- Cleopatra (Cecil B. DeMille)
- Dick Tracy (Warren Beatty)
- Dr. Mabuse - The Gambler (Fritz Lang)
- Dodsworth (William Wyler)
- Duck Soup (Leo McCarey)
- Edward Scissorhands (Tim Burton)
- Gate of Hell (Teinosuke Kinugasa)
- Grand Hotel (Edmund Goulding)
- Gulliver's Travels (Dave Fleischer)
- How Green Was My Valley (John Ford)
- Intolerance (D W. Griffith)
- Kafka (Steven Soderbergh)
- Lost Horizon (Frank Capra)
- Metropolis (Fritz Lang)
- Mon Oncle (Jacques Tati)
- Moon 44 (Roland Emmerich)
- Pepe Le Moko (Julien Duvivier)
- Playtime (Jacques Tati)
- Prospero's Books (Peter Greenaway)
- Samson and Delilah (Cecil B. DeMille)
- Satyricon (Federico Fellini)
- Siegfried/Kirchhilde's Revenge (Fritz Lang)
- Svengali (Archie Mayo)
- The Beloved Rogue (Alan Crosland)
- The Cabinet of Dr. Caligari (Robert Weine)
- The Egyptian (Michael Curtiz)
- The Flinstones (Brian Levant)
- The Fountainhead (King Vidor)
- The Thief of Bagdad (Raoul Walsh)
- The Wizard of Oz (Victor Fleming)
- Things to Come (William Cameron Menzies)
- Tim Burton's Nightmare Before Christmas (Henry Selick)
- Toys (Barry Levinson)
APPENDIX II - STUDENT CREDITS

Batour, Amado: Kafka
Franchina, Lorenzo: Duck Soup
Gleissen, Mark: Satyricon
Kelvin, Jihan: Blade Runner
Khan, Ricardo: Things to Come
Kowito, Gregory: Gulliver's Travels
Luna, Juan: The Thief of Bagdad
Malak, Kristen Brett: Prospero's Books
McNulty, John: Lost Horizon
Onowski, Sherri: How Green Was My Valley
Santinho, Jose: Toys
Shani, Eli: Metropolis
Tome, Juan Diego: The Cabinet of Dr. Caligari
Vitale, J. Stevens: A Midsummer Night's Dream
Ybarra, Ricardo V: The Beloved Rogue

ILLUSTRATIONS

Figure 1. Scene from "Miranda's Island," a proposed sequel to Prospero's Books
Figure 2. Sectional organization based on set of How Green Was My Valley

Figure 3. Plan based on set of How Green Was My Valley

Figure 4. Sectional organization inspired by Things to Come

Figure 5. Inconsistencies between internal and external house dimensions based on How Green Was My Valley

Figure 6. Linear organization based on set of How Green Was My Valley

Figure 7. Three-dimensional organization inspired by Things to Come
Figure 8. Columns, inspired by the set of The Thief of Bagdad

Figure 11. Sequel to A Midsummer Night's Dream

Figure 9. Remake of The Beloved Rogue

Figure 12. Remake of The Beloved Rogue

Figure 10. Sequel to Kafka

Figure 13. Sequel to Kafka
Figures 14-16. Recreation of Metropolis

Figures 17-19. Remake of Metropolis
Figures 20-22. Recreation of The Cabinet of Dr. Caligari

Figures 23-25. Remake of The Cabinet of Dr. Caligari
REFERENCES


ACADIA 1996