NEW DIMENSIONS OF COLLAGE: COLLISION, JUXTAPOSITION AND BLENDING
Applications in the Representation of Architectural and Urban Spaces in Film

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The beginnings of collage may be a distinctly 20th century phenomenon, as prior to this period, the evolutionary changes in the forms and presentations of art and architecture may not have appeared so radically different as to seem to collide when juxtaposed or layered. The birth of the cinematic arts coincides with the explosion of the multitudinous stylistic preoccupations of the early 20th century, which alongside intense social and political changes, led to a re-visioning of the city. The new modern styles of both art and architecture contrasted remarkably with previous historicist modes, whether hung side by side in a gallery, or adjacently situated in an urban environment. Architectural spaces in the films of the early 20th century appropriated this changing language. Film itself was very much a 20th century art form that contrasted quite sharply with previous live forms of entertainment. For various reasons, some purely artistic and some largely technical, cinema adopted collage-like means of construction in its representations of the architectural and urban spaces in film.

Film is situated in the zone of the humanities that lies between Art and Architecture. Although film can be seen as an art form, it is able to explore the development of architectural and urban spaces, often in experiential and experimental ways that go beyond the capabilities, intentions and physical limitations of commercially constructed buildings and spaces. It is therefore able to draw its inspiration, techniques and content from both arenas. Film also draws its own special criticism *as* an art form, due to its dependency on mechanical reproduction.[1] In many of the applications of collage to film, its use elevates the piece to a level of art form that takes great advantage of the same mechanical methods of reproduction that elicited criticism in the first half of the 20th century. Film's ability to both incorporate as well as move beyond the static photographic image changes the artistic references by which it is analyzed.

Collage can be defined as an abstract form of art in which photographs, pieces of paper, newspaper cuttings, string, etc. are placed in juxtaposition and fixed to the pictorial surface.[2] This is further clarified by art historian Lewis Kachur by saying that "although collage is considered an "abstract form of art", the materials used are pictorial and textual representations of recognizable objects, but when placed next to each other, these representations may lose their autonomous meaning by creating a new, collective." The terms assemblage[3] and montage are also drawn into the definition as either clarifications or more specific applications of collage. Assemblage interprets the notion of layering and juxtaposition more broadly to include a wider range of three dimensional works that can include film. The term montage[4] can more closely be used to explore applications in the photographic arts. In the case of photomontage, it is recognized that the disparate elements may or may not be blended to create a unified whole. The issue of blending is critical to the appreciation of collage in its application to film. In most instances it is the motive of the art director of a film to obscure the tricks, illusions and methods of construction from the viewer. This requires careful examination of the film to both understand and appreciate its construction, which is likely not clearly apparent.

With reference to these terms, a matrix of manifestations and applications of collage in film can be defined. Because film is comprised of a series of linked frames, each which can be considered as a composition in its own right, the idea of collage can be considered within

the single frame, in the design and construction of the set, or in the ways that the frames/sequences are linked.

Differentiating Collage in Film, Architecture and Art:
The idea of collage as it applies to cinema needs to be differently considered than previously established in the field of art, as materials, methods, dimensionality and the intentions of the medium are quite unique to the production of film environments. The collage work of artists such as Pablo Picasso, exemplified by *Compotier avec fruits, violon et verre* (1912), or Margaret Mellis[5], who incorporated found objects from the seashore into physical constructions, treats the arrangement of actual forms in quite a different way than might be expected when creating a traditional set for a movie. There are also varying explorations in film, from those intentionally exploring abstract phenomenon to ones that are attempting to create a convincing replication of reality. The subject matter of film varies from pure graphic or abstract explorations to the realistic depiction of urban spaces.

Film also draws differently on the facets of time and sequence. In film, methods of collage need not be limited to a compositional mix of representational styles, forms or objects that exist "side by side" or within the same frame. In its ability to work with sequences, film also introduces the notion of time into its manipulations of collage that allow the medium to evolve well beyond the two and three dimensional limitations of flat art, sculpture and even architecture. Contrasts and varying systems of representation can work between adjacent sequences and serve to either connect or disconnect the action and setting. The ordering of sequences can incorporate a type of alternation that is a reflection of the passage of time. These could be typified by the "before" and "after" an incident; past, present and future of a scene; or alterations of the scene that might reflect a change of state of mind (neurosis, psychosis or phobia), rather than the passage of time.

Initially, the generation of collage like forms in films was derived from similar work with still images. Photomontages were given extra life with the addition of movement and layering when adapted for film. These collage methods directly relate to the artistic forms of early Avant-garde films such as *Ballet Mécanique* by Fernand Léger (1924) or *Emak-Bakia* (1926) by Man Ray. These films were not intending to create a place to accommodate action as much as to explore various aspects of technique and form as disparate elements were combined, juxtaposed and overlaid. These films used collage within each frame via an adaptation of photomontage, odd use of camera angles/focus or simply by the arrangement of the objects being filmed. They also used collage in the arrangement of the sequences, which typically jumped from one to the next without benefit of a transition (i.e. fade or dissolve), with the intention of inducing unease and anxiety in the viewer. Many artists were simultaneously creating in the areas of film and fine art, so many of the techniques and applications provided for the cross fertilization of ideas and innovations.
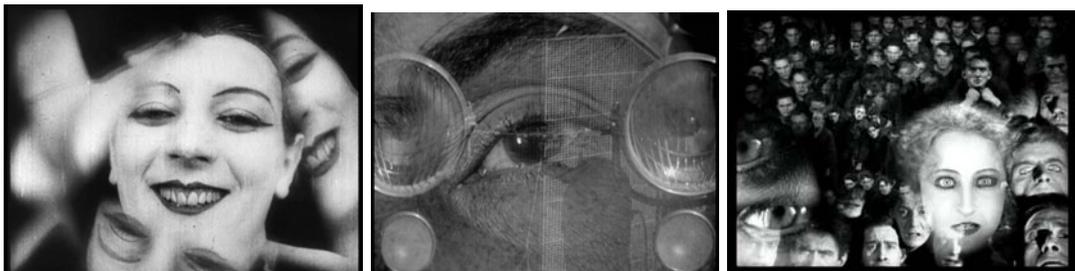
Fig 1: *Ballet Mécanique, Emak-Bakia and Metropolis*: using similar photomontage collage effects with a focus on "eyes"

Many of these early Avant-garde films did not therefore address the creation of overtly architectural spaces. They did establish the means by which the more narrative films would begin to incorporate elements of collage into the design of their settings as well as into sequencing and the use of continuity versus discontinuity. For example, classic photomontage was adapted with the use of swirling motion to surround Robot Maria in *Metropolis* (1927) with the leering eyes of the crazed revelers at the nightclub. This sequence was set within a narrative film that employed more traditional architectural and urban settings and scene transitions.

The Interpretation of the Urban Environment through Collage:
Early representations of the city in film saw the emergence of two distinct intentions. On one hand, film was being used in a documentary style, to record the actual physical construct of the city. On the other, it was being used more creatively to make a social comment on the changing political and social times. The latter films can be seen to make widespread use of collage-like techniques in the construction of their sets as the means to manipulate reality in order to feed into the desired commentary.

> "Typical of the Expressionist cinema in its early stage is its deliberate escape from reality and the stylistic 'anti-naturalistic' treatment of its powerful *mise en scéne* abilities, which includes a unique abstraction and in a sense a purification of the streets, which are no longer true replicas of existing objects and landscapes but instead a stripped-down version of reality, an archetypical 'dream-like' environment (Umwelt) which exaggerates fantasies of the studio imagination to perfection."[6]

The Cabinet of Dr. Caligari (1922) was produced at a highly experimental time in the development of Modern Art and Architecture. As film historian Mike Budd states in his over-narration of the film,

> "The key to understanding this film is to understand the two broad and opposing cultural traditions operating within it. First, the popular, commercial tradition of story continuity and realistic imitation of the world. And second, the artistic, non commercial tradition of discontinuity, modernism and active transformation of the world…."[7]

Due to its forceful use of the discontinuity style, the film stands out in contrast to most others of the same period, and although "caligarisme"[8] is considered to have been highly influential, the preference for "painterly" versus "architectural" settings was debated[9], the nature of the painting eventually becoming subservient to the more overtly architectural constructions that were created to form urban settings. The discontinuity style was as well not widely adopted, both becoming characteristics of more dystopic films in later years.

The Expressionist sets of *Caligari* are created via a literal, very theatric wallpapering of abstract painting over the angled planes that define the urban spaces within the film. Actual shadows overlay painted shadows in the scenes. This montage-like interplay allows us to see the murder of Alan, without actually seeing the deed.[10] Collage is used within the narrative sequence to provide the contrast necessary to give clues to the "story within the story". The highly Expressionist sets are set against more ordered environments to contrast the insane versus the sane scenes of the film, thereby giving clues to the existence of the framed story. The framed story also manipulates the use of sets that are essentially identical, but that have been rendered one in Expressionist motifs and the other more traditionally, to layer the story of the film. This creates an effectual collage "between" the scenes, as they create contrasting layers within the film.

Fig 2: *The Cabinet of Dr. Caligari (1920)*

German cinema of the post WWI period preferred the use of the studio for its film-making This fed into interpretations of the urban and architectural environment that were simultaneously independent of the constraints of reality while being limited by technology and finance. The studio environment also allowed for purposeful manipulation of light, which added another artistic layer to the setting. Film environments were dependent on architects for their definition. "The architect's façades and rooms were not merely backgrounds, but hieroglyphs. They expressed the structure of the soul in terms of space."[11]

Narrative films tended to use a combination of live establishing shots and studio sets. Joe May's *Asphalt* (1928) gave the appearance of being set in Berlin due to the inclusion of live footage at its opening. The balance of the film uses staged sets. This begins the formulaic base for the simple collage-like layering of many films of this period where, "The image condenses an idea of the metropolis rather than an actually existing space, conveying mood more than geography."[12]

Fig 3: Establishing shot (left) and set (right) for *Asphalt*.

The shooting environment for early German films fed into the collage-like creation of the settings. The glass houses of the early 1920s gave way to the use of repurposed airport buildings. The large interiors that were fully electric lit, enabled the set designers to better manipulate the environments, including time of day and lighting effects. The cityscape was established through the use of large backdrops. The sets were able to be constructed at a realistic scale under the direction of "film architects", whose role was to reinterpret the urban environment in light of the needs of the film.[13] This combination of set layered against backdrop was often, but not always, interspersed with exterior live images, adding to the sense of collage or mixed media.

Connecting And Disconnecting Film Environments With Collage Through Editing:
Between the documentary and the narrative, an alternate exploration of the city emerged in the form of the "City Poem".[14] *Berlin, the Symphony of a Great City* (1927), directed and edited by Walter Ruttman and photographed by Karl Freund, and Dziga Vertov's *Man with a Movie Camera* (1929) are the critical reference points for this typology. In Berlin, the structure of the film is set in five acts, looking at the life of the city from dawn until dusk. Its scenes are short and cut together either without transitions, or with fade through connections. The vignettes are thereby connected by montage and collage.[15] In reference to *Berlin*,

> "Coming from a background of abstract graphic design and painting, and having earlier made pioneering abstract experimental shorts, Ruttmann created and manipulated factual material to express the 'feel' of his city through refined abstract patterns and design methods. … Ruttmann's fascination with endless motion and mechanics transforms the city into a machine devoid of human content."[16]
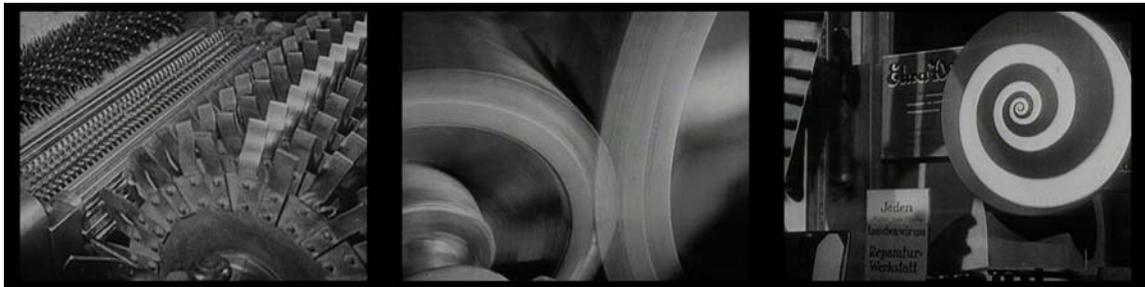
Fig 4: *Berlin Symphony of a Great City* – focus on machines and machine action

Even the vignettes that included people were either filmed or edited in such a way as to focus on the motion, particularly repetitive movement in the scene. From a social and political perspective, the humans were suggested to mimic the heavy impact of industry and machinery on the life of the city.

Where Ruttmann's more abstract editing of the vignettes against criteria of music and time of day tended to de-emphasize the importance, rank or personality of the people within his collage, Vertov's film is about "Life caught unaware"[17]. The focus of the film is the people.

Fig 5: *Man with a Movie Camera* – focus on people and the act of filming

Vertov also makes a point of including both himself and the camera lens in the film, indicating the nature of the perspective of the piece. He tends to make more use of special effects within the frame and the vignette, which tends to increase the feeling of collage in the film. Like Ruttmann, many of the vignettes include macro views of industrial processes and machinery. This aspect of the commentary created about the social environment of the

period was pervasive throughout the majority of films of the period. Although not obvious within the urban environment per se, it was important to the message of the film to include and emphasize the impact of industry and its role in urban changes. The abstract and artistic inclusion of these elements, through collage and montage in the films, was able to visually redefine the city to include industry.
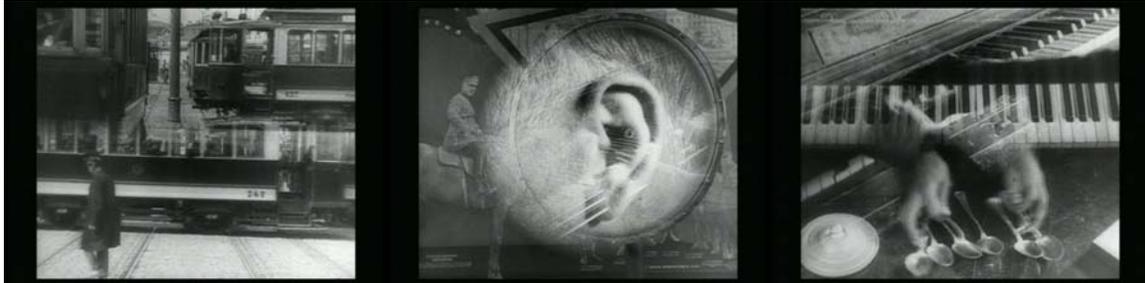

Fig 6: *Man with a Movie Camera* – use of film effects

This type of representation or vignette can be seen to link even the more narrative of the films to this "city poem" documentary style. The opening sequences of Fritz Lang's *Metropolis* (1927) make particular reference to the machines that rule the life of the city, and the scenes that provide the transition to the future world in *Things to Come* (1936) also focus on machine actions. The keen display of interest in the role of machines and industrialization in society becomes a classic method of collage in films of this period, linking the narrative film, to the city poem documentary and the abstract avant-garde experimental pieces. Most seem to be characterized by an additional captivation with circular motion.
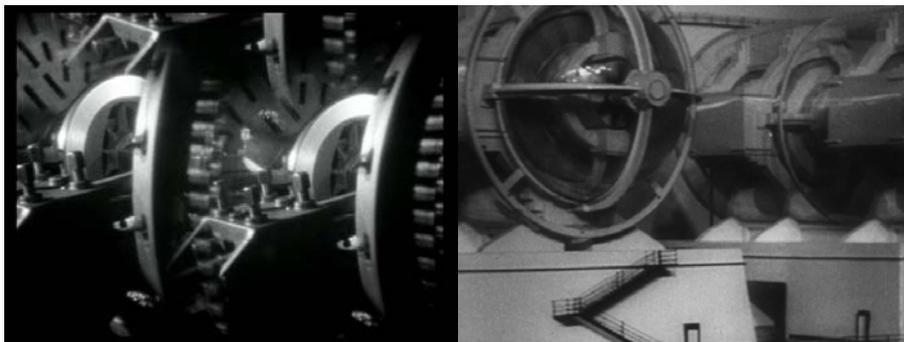

Fig 7: Opening scene in *Metropolis* (left) and transition scene in *Things to Come* (right)

Where the standard narrative story would use cinematic devices to ensure a seamless flow from scene to scene, collage can be employed to purposefully disrupt the flow, evident in the discontinuity style. Architecturally contrasting environments can be sequenced to create a sense of disconnection between sequences. Where the stylistic differences are acute, this can also allow a recognizable series to be established in the larger entity of a film, establishing a rhythm. Two methods of collage that use exaggerated contrast to heighten the differences between scenes are juxtaposition and collision. Collision differs from juxtaposition in the tendency for an increased sense of conflict by the combination of the two adjacent styles. This can reference any of the architectural style described by the actual set, or cinematic devices such as camera use, macro view, shooting angles, lighting, music and other effects.

The means by which the sequences are edited or joined, and the use, or not, of transitions, can be used to either connect or disconnect the environments that are being depicted within the film. In cases where the same person or scene is revisited several times throughout the

film, a type of thread or continuity can be established that, although is not a narrative per se, can begin to read like one in such an abstracted presentation of the city. The contrasting motions within the vignettes of both *Berlin* and *Man with a Movie Camera*, as well as the abrupt transitionless splicing of the multitude of disparate parts, reinforces the feeling of collage, or discontinuity, within the sequencing of the film. This gives a particular "non documentary" feel in the presentation of the *city poem*. Collage is used to refocus our impression of the metropolis on issues of industrialization and mechanization.

UNIQUE TYPES OF FILM BASED COLLAGE:

Varying states of collage or feelings can be created in film applications. Collage, by its definition, tends to combine contrasting or disparate elements within the same frame or piece of work. The degree of contrast or way in which these are combined can modify the mood of the film and the presentation and reading of the urban or architectural environment. The sequential nature of a film presents some unique opportunities for the application of some collage effects.

Collision:
A state of collage can seem to exist when different art forms or methods of representation collide. Collision can occur within the film, where disparate styles may be used within the same scene or in adjacent scenes, or be the byproduct of a heightened contrast between the environment represented in the film and the normalized state of the environment contemporary to the viewer. Including the nature and design of the environment of the viewer into the equation extends the expression and impact of the collage outside of the boundary of the film itself. Whether the film is viewed from an elaborate 1920's movie house, complete with live orchestra, or on a plasma monitor with included audio, alters the connection of the viewer to the piece and requires a different interpretation. This also infers that the distance between the release of the film and the time in which it is being studied, will also impact this aspect of the collage.

Such could be said about the film environments as represented in *The Cabinet of Dr. Caligari* (1920). Although there is a consistency in highly theatrical the German Expressionist sets used within the film, these contrast so severely with the architecture of the time, as to give a sense of collision. In this case the extremity of the sets assists the architecture in providing the level of apprehension and angst in the narrative of the film. The piece relies on this feeling of unease provided by the collision of styles to enhance the mystery of the framed stories in the film.

Berlin makes use of collision in the nature of the editing of adjacent vignettes. There is a high degree of contrast in content between most scenes that are spliced together without a softening transition or introduction. This use of collision is unique to film and differentiates it from the other art forms.

Juxtaposition:
Juxtaposition differs from collision in that the disparate environments or vignettes tend to interrelate in less jarring, more subtle and sometimes constructive ways. Again, this can occur within a specific scene in the film, as well as between the settings in adjacent sequences in the film.

In Fritz Lang's *Metropolis* (1927) the home of Rotwang sits juxtaposed with the more grand scale of the urban space in which is it situated. The sense of the uncanny associated with the inventor's house would be less heightened if it were not set within an environment that provided a contrast of both scale and architectural style. We find juxtaposition used as well

between different scenes as a result of changes in urban scale. The use of scale models and animated effects for the dense urban space in which the Tower of Babel is situated illustrates a contrast of materials and methods to create the spatial effects of the film. There is a unique sensibility to the scenes that employ the scale models. The scales in the film are either large enough to include live actors, or miniature so as to be unable to include other than stop motion traffic. The lack of a mid range scale, as is the norm in contemporary film, heightens the contrast that leads to this feeling of collage due to juxtaposition.

Fig 8: *Metropolis* – Rotwang's house (left) and the Tower of Babel (right)

In these examples it is evident that the creation of the settings in the film also draws on collage methods in the use of mixed media. Cinema stretches this through its ability to juxtapose scenes of scaled objects. Where Rotwang's house was built to nearly full scale, the urban center at the right of Fig. 8 was built as a large scale model. The level of detail achieved in the scale model, combined with the positioning of the camera is used to make the transition between scenes of dissimilar scales of objects appear more seamless. However, without scenes that form a middle ground, a level of disjuncture is inevitable.

Time: The Fourth Dimension
Collage, when it is used in 2 and 3 dimensional works normally produces an essentially static or stationary object. Layering, juxtaposition and collision simultaneously exist at a single point in time. The object itself does not change even if the terms of reference of the viewer may change with the passage and context of historical time. Within a film, the passage of time can be included as one of the elements of collage.

This is often done where the director wishes to use the same setting, but needs to highlight either the passage of time or a different state of mind. In the film *Things to Come* (1936), based upon H.G. Wells' book of the same title, the varying depictions of *Everytown* of Pre and Post War Britain create a layering in the film that results in the feeling of collision. Although *Everytown* is meant to be merely representative of any British city of the mid 1930s, the visual layering used in the construction of the sets employs the familiar shape of St. Paul's Cathedral in the background, establishing the initial layer of the collage. The physical, constructed sets provide depth to the scene. The time period therefore establishes itself in the year 1936 in a setting comprised of a range of representational types. The media might also be seen to include the 1936 inhabitants of *Everytown*, incorporating their period appropriate costuming. The establishment of time in reference to the dress of the inhabitants feeds into aspects of collage later in the film.

The Post War scenes retain recognizable remnants of the 1936 city, essentially refiguring the pieces in much the same way as a sculptural collage that uses found objects and

changes their meaning through rearrangement, layering and juxtaposition. In the case of this film, the juxtaposition occurs between sequences within the film, as opposed to within the same frame. In this case the use of collage is also able to use the mental reference of these objects in their original orientation/context as a direct result of the sequence of action of the film.

The act of war is represented within the film by a series of scenes that make primary use of overlay, montage and collage. These editing methods also emphasize the passage of time and explain the degradation of *Everytown* that transpires as a result.

Fig 9: *Things to Come* – pre and post war setting versus 2036

The detailed views of Post War *Everytown* highlight recognizable elements and signs from the 1936 version. The act of war and subsequent destruction of the buildings has resulted in a harsh rearrangement of the elements that have been in part adapted by the Neo Medieval residents to sustain life. The town resembles an architectural collage of sorts. This rearrangement of found objects can also be seen in the costumes, which reflect an adaptation in keeping with the downturn of civilization and the demise of industrialization. The lack of order that these urban and societal collages represent, enhances the contrast with the civilized order represented in Pre War *Everytown*. The presentation of the pristine future environment, adds yet another layer of contrast to the montage of images that were are to presume represents the evolved urban idea of *Everytown*.

Fig 10: *Things to Come* – collage in building fragments and clothing

The type of exploration and application of collage that was used in *Things to Come*, established a precedent that has been followed in the creation of disaster films into the contemporary period. Disaster films, by their nature, tend to fracture the timeline, creating remarkably different urban environments that are purposefully positioned in a collision based collage, to enhance their effect in the narrative of the film. Whether using physical or digital settings, there is formulaic use of the recognizable urban architecture of the city as the classic establishing shot. Iconic elements are destroyed, dismembered and rearranged, resulting both in a feeling of collision or anxiety, heightened by the ability to contrast the before and after settings within the film. Contemporary examples would include *Armageddon* (1998), *The Day After Tomorrow* (2002) and *I Am Legend* (2007). Destruction or rapid environmental degradation reconstitutes the architectural elements and allows for

their collage like repositioning in the set. Where an actual disaster would naturally reposition the architectural fragments, film set designers reposition them artistically to create an effect, thereby ascribing collage properties to the compositions. These objects are designed to be found and rearranged, quite unlike the driftwood on the shore. The arrangement of the parts is purposefully designed and fabricated. It is not the result of accident.

Fig 11: *Blade Runner* and *I Robot* – mixing old and new icons

The collage based use of time in film may also be used to depict urban or architectural environments of the future. A level of credibility and realism is possible when the film uses known, contemporary or iconic scenes, or architectural elements within the film, and layers over futuristic interpretations. Films such as *Blade Runner* (1982), *The Fifth Element* (1989), and *I Robot* (2004) establish the locale through the use of familiar icons or contemporary settings. Where the iconic building elements that Ridley Scott used in *Blade Runner* may be overpowered by the dominance of the future vision of Los Angeles, the architecture of Chicago is clearly represented alongside future buildings in *I Robot*. The architecture of *Blade Runner* that is meant to reflect contemporary L.A. has undergone transformations (aging, water, weather and environmental degradation) that form yet another layer in the collage. The current and future architecture of the Chicago of *I Robot*, appears in crisp adjacency, eliminating the blending layer of age/weathering that is used in *Blade Runner*.

BLENDING TO BLUR THE LINES OF COLLAGE – THE DIGITAL REALM:

Collage in the Depiction of the City in Contemporary Film:
This division in the representational styles associated with the (re)presentation of the city in film has continued to this day. The notion of the dream-like state of the city persists, and purely political or social motives for altering urban realities have been supplemented by the desire to examine both disaster and the potential of our urban future. The more dystopic speculations can be seen to tie closely back to some of the ideas illustrated in early Expressionist German film.[18] In all cases, collage is heavily used as a means to manipulate the sensibility of the depiction of the urban environment, as various elements are incorporated into this modified view of the city. Contemporary film is responding to a change in the intention of urban representations.

The use and manifestation of collage in the architectural and urban environments in film has also undergone remarkable change with the evolution of technology. Urban representations in film have been able to respond to and be influenced by a change in film making technology. Early films were highly reliant on the effective combination of physical sets, scale models, matte paintings, painted glass plates and location shooting. Except in highly abstract or Avant-garde productions, the desire was normally to create a degree of realism in the settings in order to allow the viewer to relate to the suggestions of the commentary. In contemporary films, digital tools have been added to the palette. The use of digital tools,

special effects, and post production editing, have transformed the representation of settings on all levels. Where many of the same methods of set production may be used, digital tools can allow for a seamless blending, that is often capable of blurring the lines between disparate elements in the set, making the use of collage less apparent to the eye. This ability makes it more inviting to incorporate varied elements into the collage of the city, as fragmentation of the image can be minimized or made to disappear.

The Use of Recognizable Architecture in Digitally Modified Film Environments:
Cinema often uses the establishing shot as a means to locate the film within a certain urban environment, time, place or city. Historically these would have been constructed as large matte paintings that may have accentuated the more recognizable architectural elements associated with the place. As film technology improved, matte paintings evolved to become large scale photographic images that were able to incorporate the actual skyline and buildings and were often presented very realistically. Presently these can be used as the digital images that replace the green screen filming backdrop, allowing for controlled interior staged filming to appear to be filmed on location, thereby adding another potential for the effective use of collage.

The use of existing contemporary urban environments as the visual base for the creation of future environments provides the opportunity to pre vision or preview the potential realities of our urban futures. This is easily seen in films like *I Robot* (2004), through the montage like creation of a city that pastes together live images of existing architecture with futuristic digital creations. Digital tools can make it appear seamless by blending the tonality and character of the disparate media together, but it is still evident to the sensibility of the viewer that the basis of the scene is a photo montage. In *I Robot* the use of familiar Chicago architecture establishes the scene and provides an historical contrast with the inserted digital architecture. The effect of the collage is to help the audience understand the time lapse factor, while helping them feel comfortable in, or at least relate to their present understanding of the existing urban environment of Downtown Chicago.

Digital editing has made possible the effective and seamless incorporation of fragments of existing architecture or urban settings into a modified environment. Where historically an overall establishing shot may have been used to locate the setting, often only at critical points in the film, contemporary film can stitch representations of existing buildings or settings, wherever appropriate, throughout the film. Digital incorporation of actual architectural elements allows for artistic modifications of the same. Buildings can be repositioned and rescaled, which to the trained observer, enhances the sense of manipulation and collage in the film. The representation of the Empire State Building in *Sky Captain and the World of Tomorrow* (2004) and the *Spiderman* series of films (2002,4,6) does precisely this. Buildings are moved about like actors on the set, like the reordered elements in a traditional collage.

In the films *I Robot* (2006), *The Day after Tomorrow* (2004) and *Sky Captain and the World of Tomorrow* (2004), either actual or highly realistic digital images of the architectural icons of New York and Chicago are incorporated into the urban environments of the films. The combination of digital images, green screen, physical sets and live actors, creates a collage that is capable of presenting a convincing alternate urban reality to align with each film narrative. Compared to the collage work of historic films such as *Asphalt* and *Things to Come*, contemporary films' use of digital means, has completely removed the rough edges and tell tale signs of collage from the film. It is the feeling of "too perfect to be real", or the uncanny, which is able to provide the clues as to the generation of the setting.

Digital manipulations in film environments can easily give rise to a sense of the creation of "The Uncanny Valley". This term was developed to define the inner feelings of unease or discomfort that arise when viewing robotic figures that are very close to seeming human, but are still oddly "off".[19] This discussion also includes the original Freudian exploration of the Uncanny, which in translation categorized architecture as either "homely" (comfortable and familiar) or "unhomely" (haunted and giving rise to feelings of urban desolation). In this instance the creation of the collage may use juxtaposition or collision combined with a mixture of media, real and digital buildings, to created blended environments that because of their simultaneous connection and disconnection with reality, may give rise to a sense of the uncanny. Where some of the aforementioned digitally modified environments can appear genuine and therefore mask the evidence of collage, the sense of the uncanny in digital images can reveal it again.

Anthony Vidler in his essay "Warped Space: Architectural Anxiety in Digital Culture"[20] and subsequent book entitled "Warped Space"[21], makes the positive connection between the case of the Unhomely, of which Freud writes, the Avant-garde conception of space, and the condition of Modern architecture. The anxiety of which Vidler writes includes the digital architectural environments of film and games, and relates the same to the way that modern digital means enable the creation of complex buildings such as those of Libeskind or Gehry, whose approach to the making of forms and space relies on complexity and discontinuity.

> "This warped space shares with modernism an emphasis on the nature of space as a projection of the subject, and thus as a harbinger and repository of all the neuroses and phobias of that subject. Space, in this ascription, is not empty, but full of disturbing objects and forms, among which the forms of architecture and the city take their place."[22]

In many ways the labyrinthine urban spaces to which Vidler, via references to Walter Benjamin's rereading of spaces of Berlin refers[23], are the spaces that characterize contemporary creations of digital urban environments in film. As the complexity and discontinuity able to be represented in contemporary film increases, so do the deeply labyrinthine characteristics of the urban environments that they represent. The simple editing techniques of *Caligari*, characterized by the entry and exit of the characters at the beginning and ending of connecting scenes has given way to a complex weaving of environments that often leave us little or no clue as to their relationships or connections. This again increases the sense of collage through assemblage. The willingness of these films to purposefully modify the arrangements of known artifacts to suit the art direction or narrative, results in the anxiety of the labyrinth.

CONCLUSION:

This paper has illustrated a matrix of manifestations and applications of collage in film that arose with the birth of the art form in the early 20th century, alongside other Modern means of expression in art and architecture that to a broad extent, form the basis of similar techniques in film today. The use of collage has allowed for a dynamic set of artistic interpretations of the relationship between architectural forms, and the city, as well as permitted the exploration of city based ideas both abstract and futuristic. Film's compositional dependency on the use of a series of linked frames, each of which can be considered as a composition in its own right has permitted the development of an intense set of opportunities for the exploration of collage, montage and assemblage in films. As has been demonstrated in a wide range of early and contemporary films, the idea of collage can be considered within the single frame, the design and construction of the set, or in the ways that the frames are linked. The narrative and connected spatial implications as we move

through a film can be associated with the way that we design for the movement through and understanding of actual spaces. The examination of the role of collage in film has relevance in its own right, but could also assist in the creation and understanding of complex contemporary architectural and urban environments.

Notes:

[1] Benjamin, Walter. Illuminations. The Work of Art in the Age of Mechanical Reproduction.

[2] collage. Dictionary.com. *Dictionary.com Unabridged (v 1.1)*. Random House, Inc. http://dictionary.reference.com/browse/collage (accessed: September 06, 2008).

[3] assemblage. Dictionary.com. *Dictionary.com Unabridged (v 1.1)*. Random House, Inc. http://dictionary.reference.com/browse/assemblage (accessed: September 06, 2008).

[4] montage. Dictionary.com. *Dictionary.com Unabridged (v 1.1)*. Random House, Inc. http://dictionary.reference.com/browse/montage (accessed: September 06, 2008).

[5] http://www.margaretmellis.com/

[6] Penz, Francois, editor and Maureen Thomas. Cinema and Architecture: Melies, Mallet-Stevens, Multimedia. P. 13

[7] The. Cabinet of Dr. Caligari. DVD. Narration by Mike Budd. (00:01:07 to 00:05:23)

[8] Film Architecture and the Transnational Imagination: European Set Design in the 1920s and 1930s. P. 57

[9] Film Architecture and the Transnational Imagination: European Set Design in the 1920s and 1930s. P. 46

[10] Kracauer, Siegfried. From Caligari to Hitler. P. 75

[11] Kracauer, Siegfried . From Caligari to Hitler. P. 75

[12] Film Architecture and the Transnational Imagination: European Set Design in the 1920s and 1930s. p.48

[13] Film Architecture and the Transnational Imagination: European Set Design in the 1920s and 1930s.p.47

[14] Penz, Francois, editor and Maureen Thomas. Cinema and Architecture: Melies, Mallet-Stevens, Multimedia. P. 18

[15] Penz, Francois, editor and Maureen Thomas. Cinema and Architecture: Melies, Mallet-Stevens, Multimedia. P. 18

[16] Penz, Francois, editor and Maureen Thomas. Cinema and Architecture: Melies, Mallet-Stevens, Multimedia. P. 21

[17] Penz, Francois, editor and Maureen Thomas. Cinema and Architecture: Melies, Mallet-Stevens, Multimedia. P. 21

[18] Neumann, Dietrick. Film Architecture: Set Designs from Metropolis to Blade Runner. The entire text is dedicated to making this connection via a detailed look at a number of early German films and contemporary dystopic examples.

[19] http://www.haftamag.com/2006/07/31/uncanny-valley/

[20] Impossible Presence: Surface and Screen in the Photogenic Era. "Warped Space: Architectural Anxiety in Digital Culture." P. 285

[21] Vidler, Anthony. Warped Space.

[22] Impossible Presence: Surface and Screen in the Photogenic Era. "Warped Space: Architectural Anxiety in Digital Culture." P. 289

[23] Impossible Presence: Surface and Screen in the Photogenic Era. "Warped Space: Architectural Anxiety in Digital Culture." P. 297