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THE HIDDEN ARCHITECTURE OF CINEMASCOPE SET DESIGN

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ABSTRACT

Almost seventy years after the popular success of the CinemaScope film, The Robe, *inaugurated the widescreen era, there remains little critical understanding of the design logic of wide format films. Drawing on the evidence gained from an examination of nearly two hundred CinemaScope films, this essay focuses on the earliest of CinemaScope films,* How to Marry a Millionaire *(completed before* The Robe *but released after it), to offer a radical re-thinking of how set design is the key to widescreen aesthetics. The essay illustrates how, from the very beginning of CinemaScope production, a pair of grids were used to determine the composition of the frame and placement of actors within it, jobs that were normally ascribed to the director. Thus, far from being mere background, the grid-defined film sets add to the general sense of heightened interconnectedness that, like narrative and plot, satisfy a viewer's desire for order and coherence.*

#CinemaScope, #set design, #composition, #grid, #rabatment

> *Geometry is the grammar, so to speak, of the form.*
> *It is its architectural principle.*
> —*Frank Lloyd Wright,* The Japanese Print: An Interpretation

Dorota Ostrowska could be describing the current state of scholarship about widescreen films in her essay entitled "Magic, Emotions and Film Producers: Unlocking the Black Box of Film Production," when she observes that "we don't understand yet how to see a film as shaped by its process of production, as a representation of this process as opposed to the representation of reality." This is because, as Ostrowska goes on to explain,

most critics and scholars think about the films from the position of a spectator, thus emphasising the social and cultural perspective linked to film reception rather than to film production. At the same time little effort seems to go towards establishing a conceptual link between the processes of filmmaking and the aesthetic object that is film, resulting from these processes. (Ostrowska 2013, 151–152)

What is required, she concludes, is "Seeing images in terms of the process of their production" (Ostrowska 2013, 152).

With almost no access to production materials that might provide guidance to understanding the production process of widescreen films, "seeing [widescreen] images in the process of their production" might seem an insurmountable challenge were it not for the solution to a similar problem that architectural historians found when trying to understand Frank Lloyd Wright's design process. Wright left few preliminary drawings or explicit explanations for the design process of any of his buildings. In "The Integrated Ideal: Ordering Principles in Wright's Architecture," Robert McCarter suggests how, despite this lack, one might begin to discern Wright's design process by studying individual buildings:

[T]he insights into the process of making must be drawn first from things: the buildings themselves. Analysis and design are here understood to be reciprocal; by subjecting Wright's designs to formal and spatial analyses, we may reveal the marks of their making. Wright's process of design went

from the general to the particular, therefore analysis should go from the particular (building) to the general (principle). Thus we may work our way "backward," attempting to draw out from the architecture the ordering principles that shaped it. (McCarter 2005, 286)

This essay follows the same methodology. It is based upon working backward from the results of the formal analyses of nearly two hundred widescreen films to the principles that guided their visual construction. The images of the sets built for the films were examined as though they were the final two-dimensional drawings prepared by set designers. A statement by Lyle Wheeler, longtime head of Twentieth Century-Fox's art department quoted by Beverly Heisner in *Hollywood Art: Art Direction in the Days of the Great Studios* justifies this assumption:

The art director was the one who said what went into the construction of the set, and his design had to be followed exactly by the crew and the set dressers. No liberties were taken with the art director's designs. (Heisner 1990, 203)

Because my analyses reveal that the fundamental rules defining widescreen aesthetics were embodied in the set designs for widescreen films, my discussion differs radically from how set design is treated in the current literature. Set design is generally analysed in relation to narrative, as described in the highly regarded *Sets in Motion: Art Direction and Film Narrative* by Charles Affron and Mirella Jona Affron (1995). While I do not ignore narrative entirely, my focus is more fundamental, centring on the rules that guide the production of set designs. In addition, where standard surveys of cinematic set design tend to focus on exceptional sets of great size, unusual design, or elaborate detail, my discussion concerns the average or typical set. Finally, in contrast to the unacknowledged assumption that sets are designed from scratch for each film, I define the foundational rules common to set design in all widescreen films, regardless of studio, genre, or specific set designer. The rules I describe appear to have been part of the industry's rationalisation of set design.

Specifically, I discuss the sets designed by Lyle Wheeler and Leland Fuller for *How to Marry a Millionaire* (Twentieth Century-Fox, 1953), the very first CinemaScope film to go into production. Focusing on one of the earliest CinemaScope films tests the received opinion was that the first CinemaScope films were cinematically deficient, as expressed by François Truffaut in his essay "A Full View":

Certainly—the extracts that have been shown prove it—the first films made in CinemaScope will be mediocre. [...] We shall have to wait for the shooting of a film in CinemaScope to be as natural an occurrence as an ordinary flat black and white film before directors can enjoy the same kind of freedom. (Truffaut 1985, 274)

As my discussion will demonstrate, there is nothing tentative or uncertain about the filmmakers' initial use of the CinemaScope format for the rules guiding CinemaScope composition were already clearly defined when the sets were first designed.

Not surprisingly given the standardisation of film production, my analysis of nearly two hundred films revealed that the design of CinemaScope sets was guided by a pair of grids. One grid, laid over the outline of the CinemaScope frame, divided the area within the frame into a number of equal columns. In practice the number of columns ranged from three to sixteen. In almost all of the films I examined, once the number of columns was decided for a film, the same columned grid guided the composition of all the sets for that film. The grid used in laying out the sets for *How to Marry a Millionaire* divided the frame vertically into ten equal columns (see fig. 1). Partially overlaying this grid on frames from the film reveals how the grid lines guided the placement of elements in every set.
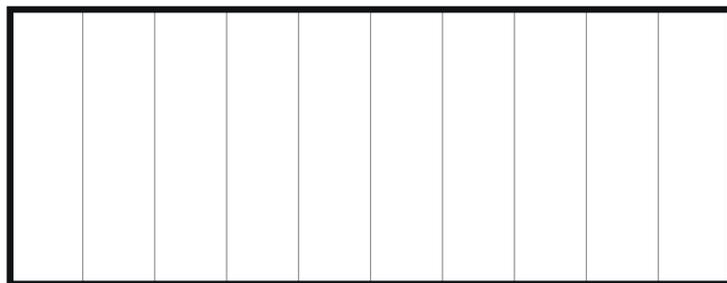
FIGURE 1.
The Ten-Column Grid.

FIGURE 2. How to Marry a Millionaire. *Source: The Walt Disney Company.*

The most obvious example of the grid's presence occurs in a powder room sequence where Loco Dempsey (Betty Grable) poses before a slightly curved bank of four mirrors (fig. 2). Grid lines coincide with the frames of the mirrors. (It is worth noting how the band that curls around the lamp on the right of the frame mimics the swirl of Loco's pose as reflected in sequential stages in the mirrors.) Moments later, Pola Debevoise (Marilyn Monroe) also poses in the front of the mirrors. Earlier in the film, Schatze Page (Lauren Bacall) strikes a similar pose,

FIGURE 3. How to Marry a Millionaire. *Source: The Walt Disney Company.*

hands on hips and without reflections in front of a wall of windows in an apartment (fig. 3).

The following frame occurs at the beginning of a long take at the start of *How to Marry a Millionaire.* Schatze, in the company of a rental agent named Benton (Percy Helton), inspects a posh New York City apartment she hopes to rent as part of her scheme to find a wealthy man to marry (fig.4). Reading from the right, a column is placed along a grid line; a doorjamb coincides with a grid line, the edge of a shelf abuts a grid line; a jig in the wall coincides with a grid line, as does a corner of the wall; the corner of a display cabinet aligns with a grid line; two grid lines define the width of a doorway; and the edge of a lamp rests against a grid line. In this way the grid defines the placement of the details that fill the frame in an orderly, rational manner.

FIGURE 4. How to Marry a Millionaire. *Source: The Walt Disney Company.*
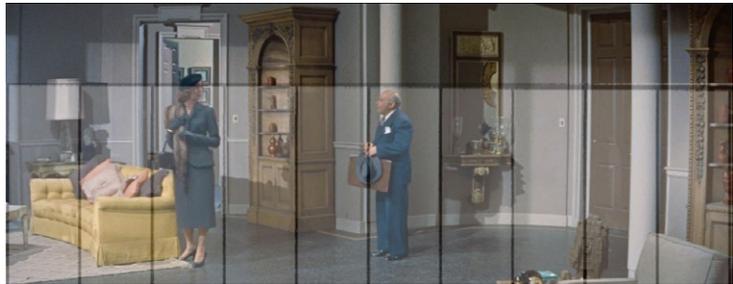
As the shot continues, the camera follows Schatze's inspection of the room (fig. 5). At this moment in the shot, she pauses as Benton tells her that the apartment's owner has left the country to avoid having to pay back taxes. The shot reveals the patio outside the apartment and the view of the city as seen through a wall of windows. Here, again, the composition of the set has been guided by the ten-section grid. The precision with which the framing of the window aligns with grid lines is especially impressive. Next, without a cut, the camera follows Schatze to a table where she sits to write a check to rent the apartment (fig. 6), a shot which reveals another view of the set. Partially overlaying the same ten-column grid shows how it was used to compose this view of the set.

FIGURE 5. How to Marry a Millionaire. *Source: The Walt Disney Company.*

FIGURE 6. How to Marry a Millionaire. *Source: The Walt Disney Company.*

The ten-section grid is used consistently to compose other views of the apartment at different times: a hallway outside its entrance, a view just inside the entrance after the furniture has been removed, a wider view of a similarly empty living room, and a view of a bare expanse of wall (figs. 7–10).
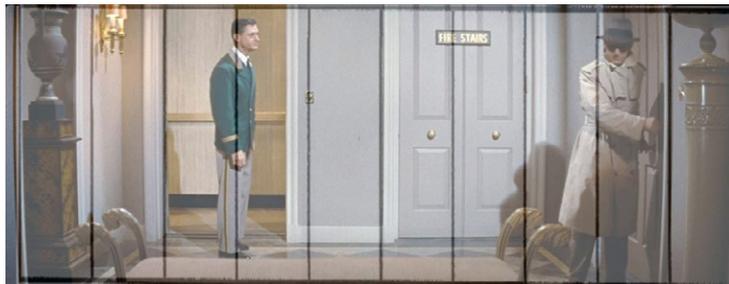
FIGURE 7. How to Marry a Millionaire. *Source: The Walt Disney Company.*

FIGURE 8. How to Marry a Millionaire. *Source: The Walt Disney Company.*

Occasionally, as in figure 8, a grid line does not have a corresponding match in a set's design; at times, the corresponding match may be the edge of a shadow, as in figure 9, where the match is the edge of a shadow above the fireplace.

FIGURE 9. How to Marry a Millionaire. *Source: The Walt Disney Company.*

FIGURE 10. How to Marry a Millionaire. *Source: The Walt Disney Company.*

Elsewhere in the film, the grid guides the composition of a fancy restaurant, Tom Brookman's (Cameron Mitchell's) office, the hotel lobby from which J. Stewart Merrill (Alex D'Arcy) telephones Pola, and the train car in which Loco travels to Maine with Waldo Brewster (Fred Clark), see figs. 11–14.

The explanation for why such care has been taken to use the grid to compose each view of the set is probably the same as the explanation that philosopher Noël Carroll offers for the satisfaction that audiences derive from a film's narrative:

Our experience of actions and events in movies differs radically from our normal experiences; movie actions and events are so organised, so automatically intelligible, and so clear. The arresting thing about movies, contra realist theories, is not that they create the illusion of reality, but that they reorganise and construct, through variable framing, actions and events with an economy, legibility, and coherence that are not only automatically available, but which surpass in terms of their immediately perceptible basic structure, naturally encountered actions and events. Movie actions evince visible order and identity to a degree not found in everyday experience. This quality of uncluttered clarity gratifies the mind's quest for order, thereby intensifying our engagement with the screen. (Carroll 1985, 93)

FIGURE 11. How to Marry a Millionaire. *Source: The Walt Disney Company.*

FIGURE 12. How to Marry a Millionaire. *Source: The Walt Disney Company.*

FIGURE 13. How to Marry a Millionaire. *Source: The Walt Disney Company.*

FIGURE 14. How to Marry a Millionaire. *Source: The Walt Disney Company.*

One need only substitute "sets" for "actions and events" to see the applicability of Carroll's explanation for the pleasure derived from the consistency of sets uniformly composed according to the same grid. The use of the same grid to arrange the set throughout the film offers audiences the experience of a rationally ordered world.

The second grid applied to all the set designs in the film is created by the rabatment of the rectangular CinemaScope frame. Rabatment uses a length equal to the height of the frame to construct squares at both ends of the frame. Because the squares do not fill the frame entirely, the unfilled space between them looks like a vertical rectangle at the centre of the frame. Rabatment has been used by artists as a guide for laying out the details of a rectangular composition since at least the fourteenth century, as illustrated by Giotto's rectangular fresco, *Trial by Fire of St. Francis of Assisi before the Sultan of Egypt* (circa 1315–1320, Florence, Santa Croce, Cappella Bardi, lower right wall, fig. 15). The sultan's throne, flanked by squares, fills the central rectangular space between the squares.

FIGURE 15. *Giotto*, Trial by Fire of St. Francis of Assisi before the Sultan of Egypt *(ca. 1315–1320).*

Figure 16 illustrates the rabatted frame:

FIGURE 16. *The rabatted frame.*
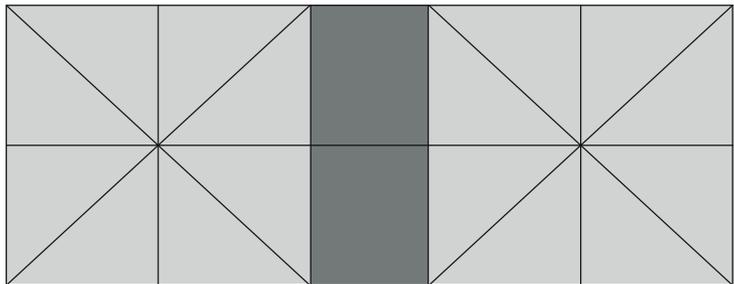
I have added vertical and horizontal mid-lines and diagonals to the squares. In addition, I have shaded the central vertical rectangle to increase its visibility in my discussion of its use. The central vertical rectangle is designed into every set near its middle. Overlaying this rabatted frame on the initial shot of Schatze Page as she surveys the apartment shows how the grid's vertical rectangle fits precisely

between the left edge of the mirror's frame and the point at which the back of the tall display case abuts the wall (fig. 17). The position of the vertical rectangle is important because it quite often marks the place where a lone actor, or for the moment, where a less important actor should be positioned. Claiming that the disposition of actors is determined by the rabatted grid is a radical assertion that contradicts long-standing received opinion.
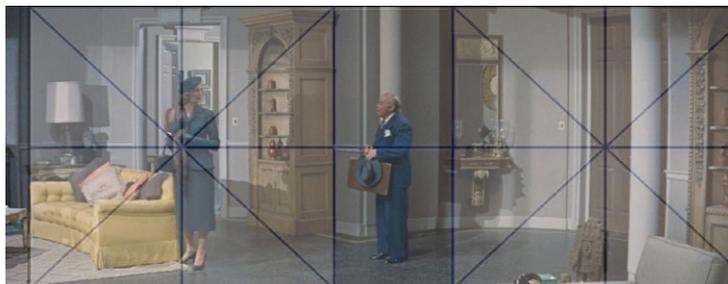
FIGURE 17. How to Marry a Millionaire. *Source: The Walt Disney Company.*

The disposition of actors within the motion picture frame is usually explained as the result of blocking or staging: how a director chooses to arrange the position and movement of actors in relation to the camera. Something other than this traditional notion of blocking, however, seems to determine the actors' positions in CinemaScope movies. John Belton senses this in *Widescreen Cinema* where he describes two unusual, recurrent arrangements he has noticed for positioning actors within the CinemaScope frame:

Most typically, the frame was composed with the primary figure of interest in the centre, with the secondary figure (or figures) placed to the right or left. (Though exact symmetry tended to be avoided because it "deadened" the composition [...].) The effect of this strategy was to redirect the spectator's attention around figures grouped to either side of the literal centre of the screen, that is, to "recentre" them around an "eccentric" focal point [...]. Yet another strategy, used less often than the other two, involved the placing of figures at the centre of the right or left half of the image, with the remaining three-quarters of the image left empty of narratively significant information. (Belton 1992, 200–201)

Belton does not offer any explanation for these positionings. The rabatted grid provides the missing explanation.

The still of Schatze Page and Benton appear to be a variation of the strategies Belton describes (fig. 17). In the shot, the least important character, Benton, occupies the vertical rectangle at the centre of the frame, while the important character, Schatze, stands on the mid-line of the left square. The right square is "empty of narratively significant

information." (Belton 1992, 200–201) In fact, this arrangement is quite common when there are only two actors in a shot. Another common arrangement is to position each actor on the midline of the squares in a two shot (fig. 18). The final shot in this scene repeats the initial positions of the actors, with Benton again within the vertical rectangle but with Schatze now on the mid-line of the right square (fig. 19).

FIGURE 18. How to Marry a Millionaire. *Source: The Walt Disney Company.*
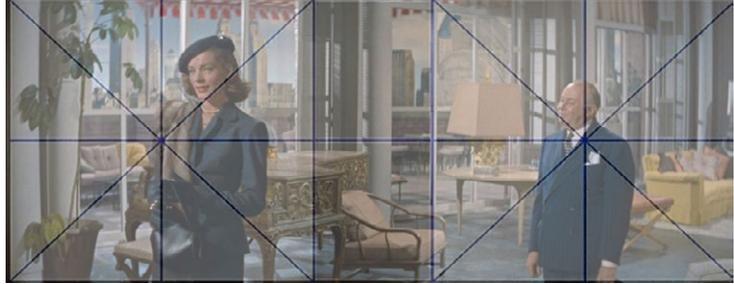
FIGURE 19. How to Marry a Millionaire. *Source: The Walt Disney Company.*
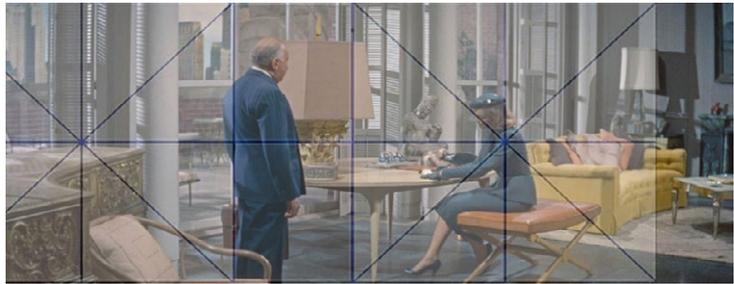
In much the same way, the rabatted grid also accommodates groupings of three, four, or more actors (figs. 20–22). To begin with, Pola occupies the vertical rectangle, alone, while she talks with J. D. Hanley (William Powell) and Mrs. Page who are positioned on the vertical midlines of the left and right squares respectively. When Loco Dempsey joins Pola in the vertical rectangle, the three shot becomes a four shot as the camera moves closer and reframes the group. A group of five figures aligns two with the central vertical rectangle while positioning the film's three main characters on or near the mid-lines of the squares.

FIGURE 20. How to Marry a Millionaire. *Source: The Walt Disney Company.*

FIGURE 21. How to Marry a Millionaire. *Source: The Walt Disney Company.*
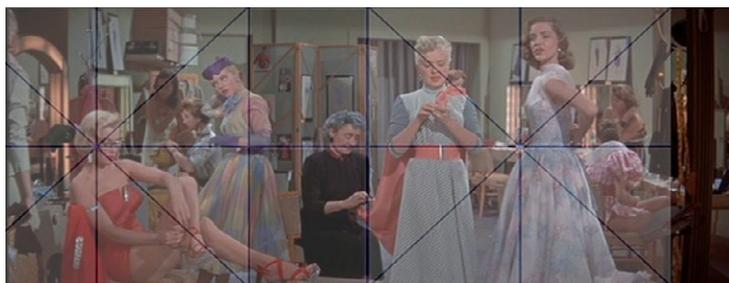
FIGURE 22. How to Marry a Millionaire. *Source: The Walt Disney Company.*

How to Marry a Millionaire adapts traditional shot/reverse shot cutting to the CinemaScope format by moving the actors further apart. With the rabatted grid overlaid on the pair of shots, each actor is positioned by the mid-line of a square. The wall trim and architectural detail of the set define the central vertical rectangle of the grid (figs. 23–24).

FIGURE 23. How to Marry a Millionaire. *Source: The Walt Disney Company.*
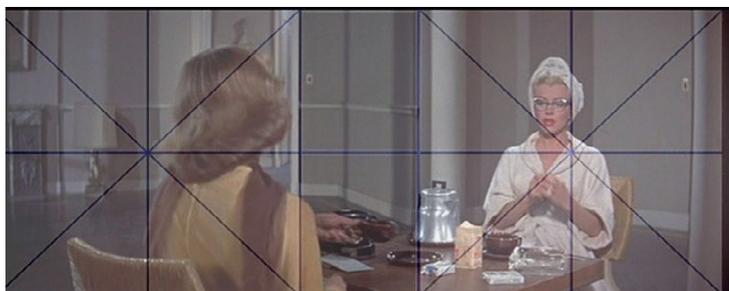
FIGURE 24. How to Marry a Millionaire. *Source: The Walt Disney Company.*

Finally, Freddie Denmark (David Wayne), who has gone into hiding in order to avoid arrest for tax fraud, returns to the apartment that the women have sublet from him in order to retrieve a document from the wall safe in a bedroom. He needs the document to prove himself innocent of tax fraud (fig. 25). Eight shots trace his movements from

FIGURE 25. These stills from How to Marry a Millionaire *show how the architecturally defined central vertical rectangles contribute to visual continuity from shot to shot. Source: The Walt Disney Company.*
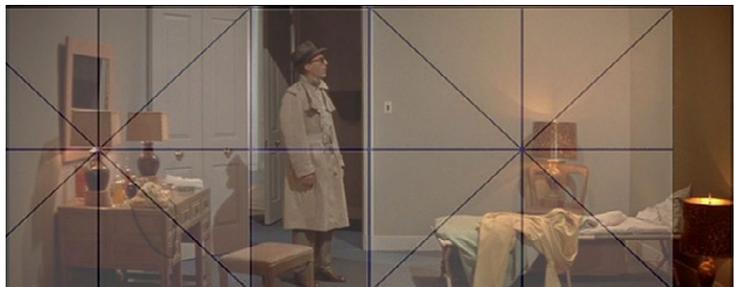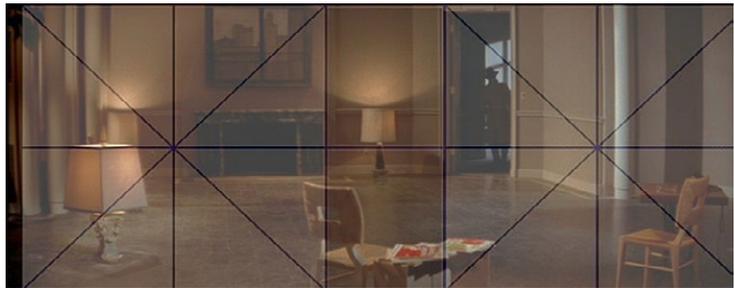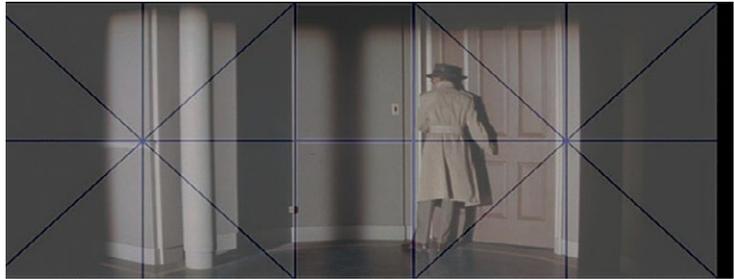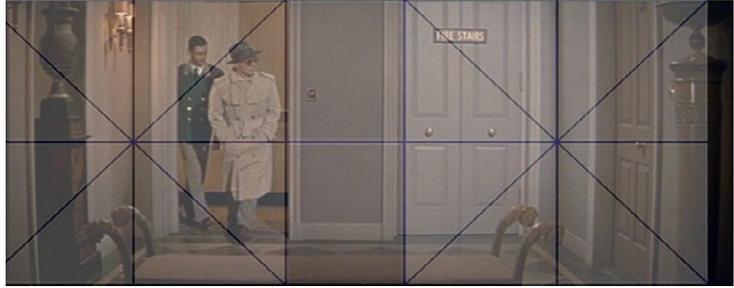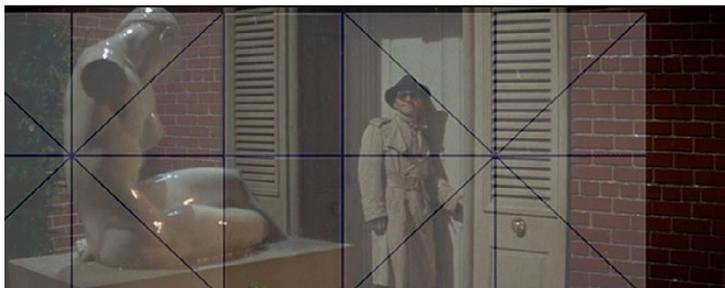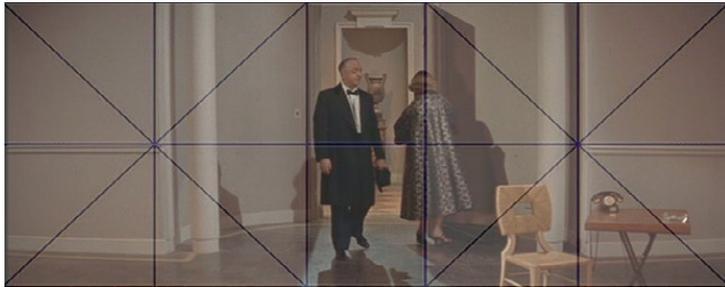
the hallway outside the apartment, through the apartment to the wall safe in a bedroom closet, to how he hides on the terrace when Schatze and J. D. Hanley return unexpectedly to the apartment. Visual continuity from shot to shot is based upon how architectural details define the central vertical rectangle near the centre of each frame.

Adjusting the frames slightly so their central vertical rectangles are aligned further clarifies their visual continuity from shot to shot. The first two shots merit closer attention for what they reveal about the modular nature of the film's sets. To begin with, the wall between the elevator and the door to the stairs in the hallway in the first shot is identical to the section of wall inside the apartment between the door and the dark panel. In addition, the size and shape of the doorway to the stairs in the first shot is continued in the second by the door of the apartment. Similarly, to the left of the central vertical rectangles, the width of the elevator and adjacent sliver of wall in the first shot is continued in the second shot by a similarly shaped and defined section of wall. In both shots, these additional continuities precisely fill the spaces between the vertical rectangle and the vertical mid-lines of the adjacent squares.

Looking closely at the film's sets with the aid of these grids begins to open the black box that *How to Marry a Millionaire* has been in standard accounts of early CinemaScope filmmaking. The columnar and rabatted grids expose the fully developed aesthetic that guided the film's visual logic. To be sure, both director Jean Negulesco and cinematographer Joseph MacDonald, are important to the creation of the film, but in some ways, as this essay has demonstrated, they remain subservient to the dictates of its set design. To the extent that the grids standardise the film's design as an industrial process, the subtle variations with which the designers define the central vertical rectangle of the grid and incorporate it into the set designs disguises its presence. In redirecting the attention usually accorded the director and cinematographer to set designers, then, this essay begins to recognise the central aesthetic importance of set design to widescreen films.

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