Perception

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A study of how mobile photographers capture architecture, and how social media restructures the way we view space and interpret design intentions

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Professor Jonathan Louie
Introduction
Image and Perception
Image Types
Representational Tactics
Building Classification
In today’s age of technology, online media allows wider access to architectural photos and information. Through images provided by architectural firms, magazines, amateur photographers, official websites, and social media, one can experience a building to an extent, without ever visiting that physical place. This greatly impacts the discipline of architecture, as the general public is able to view, interpret, and criticize works without the consent or the input of the architect. Before the rise of social media, architects had great control over what information and images were released for a project, controlling the perception of the general public.

“If we accept that the experience of architecture may now be inseparable from the experience of its imagery, and that photography may now belong to the very same networks of spectacle, it becomes clear that an independent and critical photography of architecture is as vital as it is endangered.”

---David Campany, Architecture as Photography: Document, Publicity, Commentary, Art
“Perception does not know the concept of infinity; from the very onset it is confined within certain spatial limits imposed by our faculty of perception”

---Erwin Panofsky, Perspective As Symbolic Form
Image, especially related to social media platforms like Instagram, has the capacity to warp how we perceive architecture compared to the intent of the architect. As Erwin Panofsky says in “Perspective As Symbolic Form”, “Perception does not know the concept of infinity; from the very onset it is confined within certain spatial limits imposed by our faculty of perception” (30). Image provides these spatial limits by interrupting any possible infinities and cropping context to the frame or screen. It flattens 3D buildings to 2D and forces the viewer to rely on tactics such as shadow to allude to 3D presence. Photos uploaded to Instagram by the general public provide a snapshot view of a piece of architecture, forcing a viewer’s perception to align with the information the image provides. On Instagram, a user is forced to adhere to the “instagram square” which is a way of taking Panofsky’s idea of perception imposing spatial limits, and reversing it, as the spatial limits of the “square” warp our perception of a building, seemingly altering its form, editing portions out, and perhaps undermining the intended architectural strengths.

For example, at the Salk Institute, the main court was intended to be a stark, symmetrical point of focus. Louis Kahn purposely designed identical facades when viewed from this point, and it is the most photographed part of the project. On Instagram, most users prefer to photograph the project when the shadows are most prevalent, therefore disrupting the symmetry of the space as seen in the top example. The bottom image is mirrored, to indicate the intended symmetry of the architect. Most professional photos are taken with different lighting so that elements like shadow don’t interrupt the symmetry or the stark quality of the space. In reality, most times of the day that you would visit this site, shadow would be present in the court. Therefore, the Instagram images are more successful in depicting a realistic view of the space as opposed to professional photographs where lighting is either provided artificially or purposely taken when no shadow is present.
How are architects adapting to this new fast image circulation and heavy reliance on image to represent architecture? According to curator Elias Redstone, architects are beginning to realize the social power of image and are beginning to rely on photographs to create an icon out of a building. While this is true, this thesis contends that informal images on the internet are more successful at representing architecture and its relationship to the viewer as opposed to professional photographs that are released by a firm for marketing purposes. In an essay written for the exhibition *Constructing Worlds: Photography and Architecture In The Modern Age*, David Campany discusses how photographs of architecture have three qualities: documentation, commentary, and publicity. Right now, professional photographs of architecture rarely have a commentary and are strictly for publicity when released by the designing firm. Instagram photographs, on the other hand, give amateur photographers the agency to make their photographs works of art, creating a commentary on architecture everywhere while allowing viewers to relate directly to the space.
"I guess I am suggesting that architects today... are very often aware of the iconic building needing to be instantly recognized, needing it to be distinctive. Since most people will experience these buildings through the media, the way the building will sit within a photograph is being considered by architects”

---Elias Redstone, as told to Noelle Bodick of ArtSpace
Formal Images are ones published by an architect for the project, professional photos that are used to represent the building for marketing, taken to accompany an article, or appear on an official website. These photos are always edited using professional software. Formal Images that are published for a project aim to give the viewer a sense of what it is like to be in that setting, but these photos are wildly unsuccessful. They do not allow the viewer to establish a relationship with a building, but instead alienate the viewer by showing them a setting that they will never be able to experience in reality. Often superficial and heavily edited, these formal photographs do not reveal much about the qualities of a space or the general understanding of the building layout due to scale, point of view, and the lack of people. One will never see a building in reality that appears like it does in a professionally published photograph.
Informal Images are categorized by those taken on a mobile device by an amateur photographer or member of the general public and uploaded to the internet via social media platforms such as Instagram. These images may or may not be edited using mobile applications. Instagram photos are purposely heavily edited as amateur mobile photographers attempt to create idealized images. Despite the intent to create idealized images, these photos are much more successful at depicting the qualities of space and establishing a personal relationship with the architecture. These photographs are taken from a realistic point of view at eye level, and often include relative scale figures, giving a viewer a much more realistic sense of the space. Part of the reason that these informal photos are more successful is the way they use tactics from historical representation, like those used by Piranesi. Some examples of these are shadow/light, perspective, scale figures, and aspects of visual deceit.
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A Brief History Of Representation

31,000 BCE

Chauvet-Pont-d’Arc

Caves, France

The first representational paintings made on cave walls depicting Paleolithic life

1300 AD

Giotto di Bondone

A break with the Byzantine style is made, and Giotto turns to more naturalistic representation painting using depth and temporal realism to depict a single moment in time

Filippo Brunelleschi

An experiment on linear perspective is carried out based on a treatise by Leon Battista Alberti

Vicenzo Scamozzi

Scamozzi completes Palladio’s Teatro Olimpico and employs an illusion technique in the stage scenery

1500 AD

Ambrogio Lorenzetti

Lorenzetti paints the Annunciation, and is credited with one of the first works with accurate linear perspective

1700 AD

Giovanni Battista Piranesi

The “Vedute” and “Carceri” series depict a technique of shadow and perspective to create the “sublime”

Picturesque Movement, England

An aesthetic movement during the Enlightenment focused on the sublime and the beautiful in the English countryside. An emphasis was placed on promenade and forced views

1700 AD

Joseph Nicephore Niepce

The photograph was invented using paper coated with silver chloride and fixed with nitric acid

1900 AD

James Clerk Maxwell

The color photograph is invented by a physicist

William Michael Harnett

The invention of the illusion technique, Trompe l’oeil by an American painter

Filippo Brunelleschi

An experiment on linear perspective is carried out based on a treatise by Leon Battista Alberti

Vicenzo Scamozzi

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The “Vedute” and “Carceri” series depict a technique of shadow and perspective to create the “sublime”

William Michael Harnett

The invention of the illusion technique, Trompe l’oeil by an American painter

Philipp von Zehn

Inventor of the Holga Camera

James Clerk Maxwell

The color photograph is invented by a physicist
Giovanni Battista Piranesi is known for his 18th century etchings depicting the sublime. He took particular interest in the antiquities of Rome as well as fictitious scenarios such as prisons. The two engravings at right embody many tactics used to create the feeling of the sublime.

Four main tactics used by Piranesi that carry over to modern photography are shadow, relative scaled figures, perspective, and visual deceit. These tactics are much more prevalently found in informal images such as Instagram photos, as opposed to professional formal photography. It is because of the use of these tactics that informal photographs are much more successful at connecting the viewer to the space. These tactics create depth, show space from a normal eye level, and allow the viewer to place him or herself in the setting and visualize how he would relate to the subject of the image. The subsequent pages explore in further detail the four categories of strategies and how they aid the viewer as opposed to alienating him like formal photographs do.
Historically, shadow has been used to allude to the context of the object pictured. Since the frame limits the view and forces the viewer to see only a cropped version of the actual space, shadow can imply the presence of a grand structure that otherwise might be unknown to the viewer. Piranesi uses shadow very blatantly in his work, creating the illusion that the building just outside the frame is enormous compared to what it actually is. Since the viewer cannot see this structure, he is forced to believe Piranesi, giving Piranesi control of the perception of the entire setting.

When thinking about space, shadow is one of the best tactics to compare 3D space to 2D projections. Image itself is a transition from 3D to 2D and adding dramatic shadows helps that image translate space to the viewer even though he is not in that physical space. Shadow is especially important when interpreting depth of an image, and almost allows the image to hover in the realm of 2.5D, between a flat 2D projection and a 3D actuality. This middle dimension is what allows viewers to begin to connect with the space and imagine themselves in that place. A photograph with limited depth of context takes away from the viewer’s ability to connect with that space. This is one of the reasons that informal photographs, like those of Instagram, are the future of architectural photography.
Informal photographs taken today, specifically on Instagram, widely use Piranesi’s tactic of shadow. While these amateur photographers use shadow for some of the same reasons, this type of modern architectural photography uses shadow for some additional reasons.

In the image on the upper right, the context of the photograph is intentionally cropped out to emphasize the scale of the structure of Santa Maria del Fiore in Florence. However, context is added back in by use of shadow. When understanding the architecture pictured, it is important to realize the dialogue between the cathedral and the baptistery. While the Instagram square doesn’t allow for a photograph to capture both structures in the same frame to understand their relationship, the shadow provides a different way of understanding this connection. In this way, Instagram creates a new way of displaying architecture and spatial relationships.

The image on the bottom right uses shadow to create depth, context, and pattern. If one was unfamiliar with the structure of the space pictured, he might not know that the columns continue around the corner. The shadow allows the viewer to make this assumption, as the columns not pictured have been added back into the picture through shadow. This also adds depth to the image, further strengthening the idea of perspective. Lastly, the shadow presents a new repeating pattern like the support bars on the top, the vaulting, and the columns.
Since Piranesi was very focused on exaggerating the grandeur and scale of architecture, one of his most used and most successful tactics is relative scale figures. As shadow was used to suggest the scale of architecture outside of the frame, relative scale figures were used to show the scale of the architecture that was depicted in the image. These figures almost always appear miniscule to emphasize grand scale.

Not only do these figures serve scale purposes, but they also help add context to as to the use of a space. Whether the figures are working, conversing with each other, or observing an event, the details in relative scale figures often can help a viewer very easily tell the purpose of an ambiguous space.

In today’s age, architectural renderings often include figures performing a certain activity related to the space to relay this same message. Unfortunately, professional architectural photos typically do not include any figures at all, alienating the viewer from the image. While the setting is idealized, it is difficult for a person to connect himself to the space without a sense of how a person measures up. An image is especially successful if the photograph is taken from a point of view that can be achieved by the viewer, such as eye level.
Often, on Instagram, users aim to make idealized images. When it comes to including people in these images, the figures are mostly either not present, or in a large and anonymous quantity. When there is a large quantity of people, the image conveys a great, accurate sense of scale and allows the viewer to get a sense of the spatial qualities. For example, is the space light or dark? Open or very enclosed? Are the people all watching something communally as in the top left photo? Or are they mingling independently as in the bottom right photo. Since a large group of people are essentially anonymous, a viewer can put himself in the place of any of those people to get a sense of how he might relate to the space.

Even in Instagram images where people are not present, the viewer can immediately put themselves in the setting because of the point of view. Since Instagram photos are taken with a mobile device, the point of view is always taken from the point of view of the photographer. Many professional images are taken with a wide angle lens, or from an unrealistic point of view. This alienates the viewer by confusing him, altering his perception in a false way as he would never be able to view the scene in reality, the way that it is depicted.
Perspective has always played an important role in representation throughout history and into the modern day. It is the fundamental tool for representing 3D architecture correctly in two dimensions. Sometimes, the goal is to make the perspective very apparent, while other times it is camouflaged.

In Piranesi’s *Carceri* series, the perspective is generally correct as denoted by the red objects in the diagram. However, the series of angles of the beams as well as the stair handrails serve to distract from this perspective. In most of his works, the vanishing point is located out of the frame, leaving the rest of the image up to the imagination of the viewer. By setting up this perspective, the viewer can easily assume a general idea about what extends beyond the boundaries of the image.

The idea of emphasizing correct perspective relates back to relative scale figures, but in this case, the relative scale figure is the viewer. Perspective is always tailored to the viewer’s position relative to the space, and if the viewer was located in a different position, the perspective would be altered and the object viewed in a different way. When perspective is correct and emphasized, a viewer can easily put himself into the space and see how he would relate to the architecture.
On Instagram, there is a wide audience for images where one point perspective is emphasized. One can browse photos of this nature with the hashtags #perspective #perspective #focalpoint and many other variations. These one point perspective images are so popular due to their idealized nature. They often include only one, or perhaps no scaled figures as to not interrupt the language of the photograph.

Like in Piranesi’s photos, both photographs on the right use the tactic of trying to camouflage the direct one point perspective with beams, supports, and other strong linear language that does not adhere to the same perspective lines. This creates a kind of “tunnel vision” culminating in a focal point. The supports are important to the construction of the photograph because they create a connection between the structure of the image and the structure of the object that is being represented. This is another way of bridging the gap between 2D and 3D space.
Visual deceit is a tactic that has been around throughout the history of representation just as some of the others discussed previously. Purposely manipulating the relationship between the viewer and the object or the subject of the photo and the object is part of the agency that comes with the idea of image. The photographer has the capacity to manipulate a scenario by tricking the eye using depth, reflection, or confusion through conflicting details.

Stemming from his use of perspective, Piranesi confuses the viewer’s eye by adding heavy shadows and detail which distracts from his broken perspective. As highlighted in red, the piece of the stairway appears to go through an arch that is on the same plane. Physically, this is not possible, but his combined use of other tactics allows it to go slightly unnoticed and look like it’s supposed to be that way. In this series, Piranesi was showing the intricacy of these fantasy prisons, which explains his desire to use visual tricks.
The idea of visual deceit brings up the issue of photographing a building according to what the architect intended. Some architects purposely plan trickery into their work, using tactics like tromp l’œil to get an effect in real life. Most times, however, images of visual deceit are taken of instances that the architect did not intend. Again, Instagram is providing us with another way to gain access to photographs that depict architecture in a new way.

Photographers, especially amateur mobile photographers, have the advantage of always being prepared with a camera and having the ability to more readily capture a moment in time that can be uploaded instantly. Because of this, temporary visual deceit can easily be captured. These temporary occurrences can be due to light conditions or the placement of secondary objects such as people, animals, or cars. In a professional photo, you don’t get to see how these ordinary things might affect a building because a photographer would normally remove them from the frame.
“Upon this picture plane is projected the spatial continuum which is seen through it and which is understood to contain all the various individual objects”

---Erwin Panofsky, Perspective As Symbolic Form
On Instagram, famous works of architecture are widely documented. These photographs often capture the most iconic, or well known aspects of a project and aim to appear idealized. When looking at a collection of informal photographs for a particular project, one can see how different the space appears depending upon how the Instagram user has treated their photograph using the four tactics of shadow, scale figures, perspective, and visual deceit.

Louis Kahn's Salk Institute easily can be categorized as a “focal point” project because of the iconic court between the two sections of the building. As seen from the group of photographs on the left, all of these photographs are depicting the same view, but each user has shown the space a little differently. Despite this fact, all are taken in ways that allow the viewer to picture himself in the space.

If one was to only look at the group of Instagram photographs on the left, it is hard to get a sense of the actual building itself. The “focal point” category is so focused on this one view emphasized by the architect that the project is actually undermined by being hardly depicted. The group of photographs on the right are also from Instagram, and begin to show a little more of the building itself. This is why it is important to look at Instagram photographs as a whole collection as well as individually, to help get an overall sense of the building in a focal point project.
Professional photographs of the Salk Institute still generally adhere to the characteristics of the focal point category, but are less successful in relating the space to the viewer. As seen in the images on the right, only one of the three is taken from the traditional center of the court. Even so, the camera placement is very high which makes it hard for a viewer to see himself in the space. As shown by Piranesi, relative scale figures can help this dilemma, and the bottom image tries to employ this tactic, but the camera angle still makes the viewer feel like he is a spectator rather than participating in the space. The top image is the least successful at placing the viewer in the space. It is taken from a place at the end of the water channel, where visitors cannot go. While it is a nearly perfectly symmetrical image, and depicts a lot of the architecture of the project, it is an unrealistic image for the viewer to recreate in person. Overall, the Instagram photographs, especially as a collection, are more successful at helping the viewer relate to the space.
Another category of architecture on Instagram is Facade. Many times, the general public can’t get access to the inside of a building, or they are drawn to the building from its facade whether they recognize it or not. The Centre Pompidou by Richard Rogers and Renzo Piano is an iconic example of a building that is captured mostly for its unique facade. Of course, it is also photographed in other ways as shown by the Instagram photographs on the left, but these types of images are few and far between compared to the facade shots.

Facade is a very telling category because mobile phones do not have a wide angle and can almost never capture a full facade without using another application with a panoramic function. Due to this restraint, all Instagram photographs of facades show the viewer exactly what he or she would see in the same position. As seen from the photographs on the right, these images can be placed together to form a panoramic view of the facade as one would see it from the plaza outside. This is yet another instance where viewing images as a collection can help a viewer gather a much greater overall understanding of the building.
With professional photographs of facades, a wide angle lens is often used to capture the entire length equidistant from the viewer as shown in the image to the right. This image was released by the designing firm to promote the project, so it understandably shows the facade in a cohesive way as it would have appeared in design drawings as an integral part of the building’s system design.

Instagram undermines this idea by not being able to support images of this same nature. The human eye can not look at a building in panoramic form, so it crops the image and bends it in your periphery. The Instagram square takes this idea to an extent and confines your image to a snapshot of the scene. It is up to the viewer to continue the image beyond the confines of the frame. Technically, you could stand far away from the building to capture the entire facade, but in the case of Centre Pompidou, the plaza does not allow for you to get far enough away to take this photograph. One could gather that information from looking at a collection of Instagram photos as some show views looking out from the building as well (pictured on the previous page). The axon here shows areas where the building is most often photographed. Second to the general facade, the upper level is photographed most due to the viewing deck as well as the fact that the circulation is on the outside of the building, giving people access to take photographs from there.
Works Cited


