Five Rings to Rule Them All / Olympus The Architecture of the Olympics & Global Media

Harsha Royyuru

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ABSTRACT

900 million people across the globe tuned in to watch the London 2012 Olympic Opening Ceremony on television. The International Olympic Committee’s (IOC) own broadcasting division circulated over 100,000 hours of coverage to respective national networks, extending the breadth of the Olympic telecast into every one of the 204 participating countries. At the conclusion of the Games, more than 1 billion views had been recorded on NBC’s YouTube webpage specifically designed for Olympic coverage. In a time when occupation of space via digital media is the preferred method of experience, what is the agency of the architect? Stadiums once designed for hundreds of thousands are left empty while ceremonies and events are choreographed for live television audiences. Not only has architecture become a picturesque backdrop in a finite number of pixels, but the crafting of experience has been delegated to filmmakers, broadcast media conglomerates, and social media users. If the habitation of the Olympic Park now occurs primarily in digital space, this must become the realm of the architect.

This project operates through the analysis and imaging of several concepts situated within and outside of architectural discourse in order to redefine the role of the architect before it becomes obsolete.

The role of architecture in the Olympic Movement has shifted from dependence on outdated physical and infrastructural models to integration with broadcast, digital, and social media on a fundamental level.

Through the design and occupation of these spaces created in media, architecture has the potential to redefine Spectator, Spectacle, and Site and thus reinvent the Olympic Games.
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EXECUTIVE SUMMARY

There is no event in the world quite like the Olympic Games. Building on centuries of tradition and yet modernizing at every turn, it is unique in its ability to transcend both time and space and therefore exist as a collection of ideals. And yet the reality of the Olympics is that it leaves a trail of damage in its wake. Host cities experience a great deal of unrest due to the massive and rapid need for new infrastructure and construction – take Athens 2004 and the current state of the Greek economy as an example. Legacy movements, or a city’s attempt to reappropriate Olympic venues and stadia after the Games, are often apathetic and rarely successful. The current controversy over the use of the London Olympic Stadium is proof that one of the most advanced cities in the world has trouble adapting an international stadium into its cultural fabric. Its pending ownership by the popular West Ham football team has been contested and revoked several times in the past year.

The heart of this problem lies in architecture – the Olympic Movement is siteless and timeless. Citius, Altius, Fortius is a motto representing the will of the human body and imagination, not the necessity for a multi-billion dollar stadium. The Games are able to move from city to city every four years, but are delivered to the world through television via the Olympic broadcast no matter the location. If 99% of the world experiences the Olympic Games through television or live streaming, then the massive amount of construction going on at ground level is only for the purpose of an infinitesimal amount of people. A small fraction of the audience makes economic decisions with massive implications.

This is a backwards model. I liken it to the set of a stage production; if the Olympics as a whole are a performance to be watched on television, then surely the stadiums are only props, and they should be designed and built in a way that allows their disassembly after the performance is over. Theater professionals refer to this as “striking the set”. Instead cities are forced to formulate Legacy projects that rarely take off.

What if architecture were to challenge the role of broadcast media in portraying the Games? As a profession, architects shy away from the digital as an area for design because they claim it does not involve physical, habitable space. I contend that they are wrong.

In every aspect of our lives, and especially when we assume the role of Olympic Spectator, we inhabit digital space as we watch. When we sit on our couches in the United States and watch a Japanese swimmer win a medal in London, we are all suddenly transported to the same place at the same time. Broadcast media, specifically television, has achieved a kind of spatial simultaneity that still eludes architecture. What if an architect could harness the capacity of a broadcast?
What if, in the context of the Olympics, the digital space of co-habitation experienced by every viewer at once were the architectural design, rather than a stadium which becomes obsolete after four weeks of consistent use? What does it mean for architecture when such focused, yet shared digital environments are created? And why is this not an area for architects to operate?

For my architectural thesis and Capstone project, I reconsider the role of broadcast and digital media in the Olympic Games. I propose a media-based construct which will allow every spectator to experience the Olympics, giving them the illusion they are in the stadium. What I envision is a digital reality that is more immersive than the act of watching television, allowing the audience to connect with the Games more fully than a traditional viewer. This is not only exciting on a technological level, but could seriously reduce the financial and infrastructural impact of the Games on the ground.

To be clear, I do not challenge the athletic, competitive aspect of the Games. Physical competition, as far as I can conceive, is a group activity that must occur in the same time at the same place. The notion of celebrating athletics together as a people must, for the time being, manifest itself as a mass event where athletes can compete together and break down international boundaries. This is the most integral and, frankly, most timeless aspect of the Olympic initiative.

Where I intervene is the space in between the spectator and the Games. If we conceptualize our viewing of the Olympics in layers, the television spectators exist at the outermost layer, relying on the vehicle of mass media to transport them to the Games. In between are the companies and officials who decide what content viewers see, when they see it, and where they see it on television. The innermost layer consists of the athletes and performers providing them with content to view. The role of the spectator is changing with the advent of social media, live streaming, and the nuances of broadcast differences in every country. The BBC in London, for example, broadcast a different Opening Ceremony in 2012 than we got to see on NBC in the United States, creating two different groups of viewers. Architecture cannot intervene in the act of performance in this case. Where it can, however, is in between these layers – at the level of broadcast media. Instead of marketing officials, what if architects decided what viewers saw, when they saw it, and in what way? Is this not already what we do with buildings? Why do we relinquish this control in the viewing of our work for these broadcast media events? Surely architecture can operate in mass media, in a digital realm of habitable space.
The research for this project begins with a consideration of media’s role in the Olympics. Much of our perception of the Games comes from the widespread dissemination of the photography and video associated with them and the Movement. Technology in the Olympics has advanced rapidly, with the switch from film to digital photography, portable video recording, and the connectivity enabled by the Internet. Architecture, on the other hand, has remained, in essence, re-hash-es of the Coliseum model – a bowl-shaped aggregation of seating and decorative ornamentation on the exterior. The Bird’s Nest, while arguably stunning in photography, is a prime example.

This project proves, through rigorous analysis of occupancy, viewership, and media exposure across the past five summer Olympic Games, that we are fast approaching the age of the Media Games. It is actually becoming more convenient to watch the scripted, reconstituted NBC primetime broadcast than it is to make the effort to go to an event in person. In fact, residents of London who watched a rehearsal of London 2012’s Opening Ceremony in the stadium said that they were unable to understand a single thing as they watched because the entire ceremony had been scripted for television, not the in-stadium audience.

The mass broadcast of Olympic content creates public images, or collective memories and perceptions, of entire cities and time periods. Architectural theorist Kevin Lynch suggests that this is the future of imaging the city, and this project contends that it is – but at the moment, this fundamental restructuring of the world’s psycho-spatial organization is left in the hands of media conglomerates at NBC. Again, if this seems unbelievable, consider that practically no one, myself included, knew where Sochi, Russia was before it was announced as host of the 2014 Winter Olympics. Now we not only know, but as a society we have a collective image of the city’s organization and architecture – all because of media.

Imagine a media environment for the Olympics. It’s not much of a stretch when one considers the overwhelming barrage of broadcast and social media that occurs when the Olympics are, quote on quote, “on”.

Imagine a responsive architecture and experience that can address nationalities, affiliations, and demographics.

Envision choice – one of the tenets of interactivity in media – in the viewing of and interacting with Olympic content. On the ground there are several athletic and performance events happening simultaneously. NBC feeds us only the ones featuring Americans, and only the ones sure to generate viewership. For a fan of a particular athlete or event not celebrated by their home country, choice is a feature of urbanity and space that linear broadcast does not offer.
In Lynch’s terms, Image the City. Rather than reducing the city of London to cropped images of Big Ben and Tower Bridge, imagine an Olympic media environment that fully integrates the “public image” of that city before and after the event. This would allow for exploration and a revival of interest in the Host City as a city, rather than a pretty and debt-riddled backdrop. Cities function best when they can be explored. Architects can make exploration cool again.

And lastly, dare to imagine what this could do to the sanctity of the stadium. Venues are already chopped, cropped, resized, and reimagined by the media. What if this were voluntary on the part of the architect? What does a given view do to a person’s perception of architecture, and then collective perceptions about it? What if something as simple as choosing a viewing angle could be a choice?

This is the backbone of the project, a fully immersive virtual reality construct to replace the broadcast media of the Olympic Games. If television has linearized spatial understanding, virtual reality - a fast approaching future – will spatialize it again, and therein lies the opportunity for the architect.

In architectural discourse, this is a design research project. I capitalize on a large amount of history and data and formulate a provocation for design, rather than resolving one myself. My interest is in beginning an incredibly multi-disciplinary conversation rather than claiming that architecture can solve this problem alone.

What this project hopes to achieve is a reimagined understanding of architecture’s role in media. This project was never truly about the Olympics, but about how we have allowed the work of spatial exploration to be passed to media professionals interested only in viewership and “hits”. This project is a spatialization of a previously linear media experience – turning the act of experience itself into an urban condition to be explored. By actually designing in media for media, perhaps architecture can reclaim Spectator, Spectacle, and Site. And by combining this knowledge with a vision for a collective space for shared experience, perhaps we as a community can change the nature of global human interaction.
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Image credits: LOCOG and IOC (London 2012)

All photographs taken by author unless stated otherwise
THE OLYMPIC GAMES AS A GLOBAL MEDIA CONSTRUCT
FIVE RINGS TO RULE THEM ALL
interface (n.) realm of interaction between user and content

spectator (n.)
1. user who watches Spectacle without capacity to affect outcome
2. performer who actively creates and influences Spectacle

spectacle (n.) elaborate performance emblematic of greater shared values and ideals, meant to evoke sentiment

site (n.) characterization and/or caricatureization of a place, usually host city or country, in media and popular culture

media (n.) any method of communication that does not rely on firsthand experience; platform for the reproduction of experience
THE CHARACTERS
The role of interface in transmission

THE STADIUM
Structure, Camera Angles, and Surface

THE GAMES
Economic impact and scale, trends over time

THE PARK
The mental space of spectating

THE ARCHITECT & THE DIGITAL
Precedent projects and film

THE NEXT
Tokyo 1964, Tokyo 2020, Japan’s digital culture, Mexico 1968, and Rio 2016

THE PROVOCATION
The role of the digital in architecture
"The interfaciality of software is of particular interest in large part because software is now asked to structure flows of social organization in ways that used to be the assignment of architecture...how software itself is an envelope in the manner described...of physical and virtual envelopes, architectural envelopes, and software envelopes, nested within one another?"

Benjamin Bratton, *Surviving the Interface: the Envelopes, Membranes and Borders of Deep Cosmopolitics*
THE CHARACTERS

1. Spectator / Athlete
2. Spectator / Architecture
3. Architecture / Interface
The directional relationship between spectator and athlete is the most fundamental and designed interaction in the entire Olympic event. The spectator's closeness with the athlete is cultivated first through official broadcast and still imagery — either photographs or video shots — where the athlete's performance is accentuated to the fullest. The athlete's image then further interacts with the spectator through the use of social media. The athlete becomes a character with a distinct persona in social media, which allows for a certain familiarity that is then exploited in official media — such as closeups of Michael Phelps' mother after he wins an event as part of the official broadcast.

Image credits: IOC (London 2012), Facebook, Twitter, Instagram, BBC
ATHLETE / SPECTATOR

An entirely different relationship exists in the opposite direction. While the spectator's sole function is to observe performance, the athlete is simultaneously a performer and a spectator of another kind. The bidirectional interactivity of social media allows for athletes to communicate directly with their fans before, after, and even during important events, shortening both time and distance between inhabitants of two different spaces and allowing athletes to actively observe the performance of spectating. And the importance of the televised broadcast has turned athletes into actors - constantly aware of cameras, figures such as Usain Bolt have utilized the remote camera eye of the international spectator to achieve international recognition.

Image credits: IOC (London 2012), LOCOG, Facebook, Twitter, Instagram, BBC
The relationship between spectator and architecture can be divided into two categories because Olympic architecture acts in two ways: as an interior or as an exterior. When the architecture is designed to be viewed from the inside, it is referred to as INTERIOR. Images like the one to the right, which crops the architecture, use the stadium to frame a space—thus the spectator’s eye. Though the image shows the scale and context, it is the performative aspects of the architecture that are emphasized. Images like this provide a spatial backdrop in which spectators can project themselves through imagery. They show both scale and context and are instrumental in the formation of a mental spatial construct of the Olympic Park.

Photo cropping makes this an interior space for mental projection rather than an exterior one.

Image credits: IOC (London 2012),
ARCHITECTURE / SPECTATOR

Imagery like the example to the left displays architecture as an object rather than a backdrop. The spectator is positioned out of context and out of scale in relation to the architecture and therefore has difficulty in displacing himself. Aerial photography creates an EXTERIOR architecture. Footage of the Olympic Games always relates to architecture in only one of these two ways: either the spectator is positioned within the space of the image, thus creating an interior experience, or the spectator is positioned so far outside of and out of scale with the architecture that it becomes an object. The scales in between are not experienced by the Olympic Spectator.
This diagram is adapted from the work of Dan Saffer, Interaction Designer. The changing media conditions of the Olympic Games necessitate a redefinition of architecture. In order to accommodate a growing need for virtual, media-based experiences, the definition of architecture can change to include elements of interaction design, information architecture, user experience design, visual design, and sound design. The architecture of media experiences adapts to the changing needs of the audience, reflecting the evolution of media design and user interaction.
"[Beijing 2008's] Bird's Nest and Water Cube stood out more than any of London's venues. Their designs were truly Herculean, truly Olympic in scale."

Professor Rick Burton, Syracuse University
Interview on Monday, October 14, 2013 at Falk School of Sports Management
THE STADIUM

1. Structure
2. Surface
3. Camera Angles
London Olympic Stadium
Populous
The function of the Olympic Stadium is changing. These iterations explore a stadium which emphasizes differing levels of spectator engagement and physical needs. If one eliminates the services and spectator seating involved in a stadium - a possibility which may not be too far in the future - the essential function of the building is to serve as a grand spotlight and backdrop for interior athletic activity.

1. Existing section
2. A stadium without services, emphasizing the Spectator
3. A stadium which acknowledges the remote location of the Spectator
Exaggerated Spotlight System

Sculptural Frame as Form

Display Screen (for athletes)

NO Spectator Seating

ONLY Athlete Performance Space

[Diagram of a structure with labeled parts]
If the majority of the world only experiences this architecture as viewed on television, then the only part of the building that needs to be built is that which is visible on camera. This pair of diagrams first locates all of the cameras present in the main stadium at London 2012 and then projects a future where stadiums might be defined entirely by their on-camera visibility. The second diagram shows a stadium which has been cut away to maximize efficiency, but retains the same appearance on camera.
This exploration proposes the spatialization of experience as a surface, provided that this experience is built out of imagery. The drawing to the left transposes overlaid photographic imagery of London's Olympic Park onto a digital surface created from the points of origin of each of the photographs. By joining together space and imagery, one can begin to understand the role that imagery has in the craft of space - and through the design of both, a new type of architecture.
Brief Overview of Atlanta 1996 - London 2012

Image credits: Google Earth
Credits: IOC. Atlanta 1996 Marketing Fact File.
IOC. Sydney 2000 Marketing Fact File.
IOC. Athens 2004 Marketing Fact File.
IOC. Beijing 2008 Marketing Fact File.
IOC. London 2012 Marketing Fact File.
Former site of CENTENNIAL OLYMPIC STADIUM, now home to Georgia Dome and Georgia International Congress of 11 million available tickets, 8.5 million were sold - the highest of any Olympic Games compared to 8.5 million physical spectators, 3.1 BILLION watched the Olympics on television = 100 people

The 1996 Games used venues in FIVE STATES, including the Citrus and Orange Bowls in Florida = 24 hours.

NBC offered 162 HOURS of programming.

The Olympic Ring 3 mi. radius from center of Atlanta

27 Venues were used for the 1996 Olympics

The total cost of the 1996 Olympics was $1.8 BILLION.
Of 7.25 million available tickets, 6.7 million were sold compared to 6.7 million physical spectators, 3.7 billion watched the Olympics on television.

For the 2000 Games, NBC offered 440 hours of programming to 228 million viewers.

220 countries participated in the Olympic broadcast.

8.7 million visitors to olympic.org

11.3 billion search hits

The total cost of the 2000 Olympics was $6.6 billion.

Sydney Olympic Park, including the Olympic Stadium, Aquatic Centre, Tennis and Hockey Stadiums, Dome and Exhibition Complex, SuperDome, Baseball Complex, and International Archery Park.
Of 5.3 million available tickets, 3.8 million were sold compared to 3.8 million physical spectators, 3.9 BILLION watched the Olympics on television = 100 people

For the 2004 Games, NBC offered 1210 HOURS of programming

35 VENUES were used for the 2004 Olympics

$11.2$ the total cost of the 2004 Olympics was

ATHENS OLYMPIC PARK, including the Olympic Stadium, Aquatic Centre, Tennis Centre, Velodrome, and Indoor Hall

3800 TOTAL HOURS of media were made available = 500 hours

GREEK HERITAGE inclusion of venues and sites such as The Acropolis, The Panathinaikon, and Marathon

220 COUNTRIES participated in the Olympic broadcast

The first Games to be broadcast in HIGH DEFINITION
Of 6.8 million available tickets, 6.5 million were sold compared to 6.5 million physical spectators, 4.3 BILLION watched the Olympics on television.

= 24 hours for the 2008 Games, NBC offered 2200 HOURS of programming on television & online.

37 VENUES were used for the 2008 Olympics, including the Beijing Olympic Green, including the Bird's Nest Stadium, Aquatics Center, Water Cube, Indoor Arena, Tennis Center, Archery Field, Convention Center, and Hockey Field.

5000 TOTAL HOURS of media were made available, with 1400 hours of content were available on NBC television, 2200 hours were streamed online for the first time.

105.7 MILLION visitors to olympic.org.

6 MILLION watched on mobile phones.

21 MILLION views on the first official YouTube channel.

32.6 MILLION viewers watched the opening ceremony alone.

NBC's official website for the Olympics achieved 1.3 BILLION views, 53 MILLION users, 25.5 MILLION video streams, and 10 MILLION hours of video consumed.

The total cost of the 2008 Olympic Games was $43 BILLION.
Of 8.5 million available tickets, 8.2 million were sold compared to 8.2 million physical spectators, 3.6 BILLION watched the Olympics on television = 24 hours for the 2012 Games, NBC offered 5535 HOURS of programming on television & online, reaching 219.4 MILLION viewers. 31 VENUES were used for the 2012 Olympics. The total cost of the 2012 Olympics was $13.9 BILLION, including the QUEEN ELIZABETH OLYMPIC PARK, including the Olympic Stadium, Aquatic Centre, Basketball and Handball Arenas, Velodrome, Hockey Stadium, Tennis Centre, and Water Polo Arena. 5600 TOTAL HOURS of media were made available = 500 hours of cameras used, including 44 slo-mo and 33 HD. 1.9 BILLION video streams across 170 affiliated websites, 59.5 MILLION views on the official YouTube channel, 2700 HOURS of content a combined 5600 HOURS of coverage were available via television and internet. NBC’s official website for the Olympics achieved 1.9 BILLION page views. 3D coverage debuted with 230 HOURS available. 31.1 MILLION primetime viewers on NBC.
“Technology and mechanisation [sic] enabled live coverage of the Olympic Games since Tokyo 1964. Additionally, the Internet condensed the flow of information about the Games since Atlanta 1996. The world became a ‘global village’.”

Holger Preuss, “Economic Dimension of the Olympic Games”

Above: Aquatic Centre, London 2012 (Zaha Hadid Architects)

Left: Yoyogi National Gymnasium, Tokyo 1964 (Kenzo Tange Architects)
Prior to the Games, the London Organizing Committee for the Olympic Games (LOCOG) commissioned and circulated 52 aerial images of the Olympic Park to be used by media outlets. These were the officially licensed photographs of the Park from the air (discounting any taken during the Opening Ceremony and then the Games). The Spectator’s conception of the Olympic Park, then, is entirely created and controlled by these images. This collage is a representation of this media bias.
THE PARK

1. Atlanta 1996
3. Sydney 2000
3. Athens 2004
4. Beijing 2008
5. London 2012
The International Olympic Committee (IOC) retains ownership of all imagery after each Olympic Games is done. To access these images, you must visit www.olympic.org, the official IOC website which contains a slideshow for each Olympic Games for a variety of reasons including the transition from film to digital photography and media budget. This study involves:

- Atlanta 1996 (528 photos)
- Sydney 2000 (904 photos)
- Athens 2004 (1006 photos)
- Beijing 2008 (2521 photos)
- London 2012 (1740 photos)

Each photograph can be classified into one of following FIVE categories:

- London 2012 (1740 photos)
- Beijing 2008 (2521 photos)
- Athens 2004 (1006 photos)
- Sydney 2000 (904 photos)
- Atlanta 1996 (528 photos)
Any image which frames or is framed by architecture, be it a venue constructed for the purpose of the Games or the architectural context of the Host City. Until Beijing 2008, these were a rare occurrence and often happened incidentally.
Any image which depicts athletes in action, usually including architectural context.
Any image which depicts official insignia, colors, or other symbolism of the IOC and Olympic Movement; also includes imagery of official ceremonies and rituals, such as medal awarding, Opening/Closing Ceremonies, and the torch relay.

Image credits: IOC (Beijing 2008)
Any image which contextualizes itself through depiction of any aspect of the Host City or its culture, as well as any image which frames or focuses on the official logo of the particular Games (i.e., "Beijing 2008"). Images depicting caricaturing of city or its culture, as well as any image which frames or focuses on the official logo of the Host City are also included.

SITE
Any image taken to act as a piece of art; shows clear compositional intent, including portraiture; typically used as filler alongside journalistic information but does not contain athletic content; typically a macro shot.

Image credits: IOC (Beijing 2008)
Using the color scheme shown on previous pages, each photograph was coded and plotted onto a map of the Park in which it was taken. The map boundaries were selected by locating and centering each Park. Photographs taken outside the visible bounds of the Park were flagged with flags.
A highly decentralized Games, Atlanta’s venues spanned from Tennessee to Florida.
In contrast to Atlanta, Sydney’s Park featured a majority of its Olympic venues.
While Athens Park was still fairly centralized, most of the photography took place off-site in ancien locations and historically relevant locations.
BEIJING 2008

Not only was Beijing’s Park the most centralized of all five studied, but it featured the most imagery as well - the Bird’s Nest and Water Cube accounted for most of the photography.
London utilized a centralized Park, off-site locations such as O2 Arena and Excel Center, and historic sites like Westminster and Big Ben.
Utilizing the data gathered in the previous model set, each Park was visualized in three dimensions according to the following guidelines:

1. Non-Olympic context is removed to simulate "The Olympic Park" as we conceive of it only through imagery and not on-site knowledge. Therefore this "Park" is false - a simulation of the virtual space a viewer mentally generates when his only knowledge of the space is media imagery. It is a collage of venues, landscapes, and landmarks based only on the set of images provided by the IOC for each Games.

2. Venues with the most exposure (i.e. the most photos plotted) are scaled the largest. Size in plan here is unrealistic, but representative of media coverage.

3. Venues with the highest physical capacity are lifted, generating a false topography that reads as a graph of occupancy.

4. The Park itself is scaled based on media exposure. As Beijing 2008 has the most photographs, it is the largest.
Turner Field, formerly Olympic Stadium
Occupancy: 86,000
ANZ Stadium, formerly Olympic Stadium
Occupancy: 110,000
PARK AS COLLAGE

Each iteration of the Olympic Park carries with it the residue of its predecessors. Each venue embodies the latest in a trajectory of ideas regarding performance, staging, audience, and space. Each Park hearkens to the past while anticipating the Next. With the increasing placelessness in Olympic architecture, the Park has become a context-less amalgam of forms and references suspended in virtual space. This remarkable construct can be accessed only by the viewer - it is not designed, built, or even straightforwardly imaged, yet it is the detritus of the Olympic Games.
The real world is not impervious to play and by definition, games are not necessarily fiction.

Susana Ruiz, Take Action Games
Digital Witness Symposium, Syracuse University's Newhouse School of Communications
Thursday, October 10, 2013
THE ARCHITECT & THE DIGITAL

1. Toyo Ito, *Architecture in a Simulated City*
2. Henry Jenkins, *Game Design as Narrative Architecture*
We have transformed ourselves so that we could reverse the poles of reality and unreality by the simple manipulation of an image. We have developed images completely unconnected to any other physical reality. The simulated life has proliferated into other forms of communication and commerce. We need to make fictional or video-image-like architecture; and secondly, we need to make that architecture ephemeral and temporary.

Toyo Ito, Architecture in a Simulated City
The film adaptation of the popular Parker Bros.’ board game Clue, adapted from the British Cluedo, relies on the spatialized nature of the game for plot development. This analysis maps the film, through stills, onto the space of the game board. The interpretation of cinematic experience from an “open” world gaming experience is a process that has been repeated at varying degrees of success in the video game industry. Its reversal could prove to be a useful technique for enhancing the currently cinematic experience of watching the Olympics.

“Narrative comprehension is an active process by which viewers assemble and make hypotheses about likely narrative developments on the basis of information drawn from textual cues and clues. As they move through the film, spectators test and reframe their mental maps of the narrative action and the story space. In games, players are forced to act upon those mental maps, to literally test them against the game world itself.”

Henry Jenkins,
Game Design as Narrative Architecture
THE SHINING (1980)
“Complexity was produced within the abstract relationships of plan and section. This flattening of space allowed architecture to achieve portability and operational efficiency... The abstraction of architectural designs into digestible compositional imagery encouraged a discourse around a unified discipline.”

Michael Meredith and Hilary Sample

Everything All At Once
The 1982 film *Tron* set a precedent for the combination of a digital open world and cinematic linear storytelling.
THE NEXT

1. Tokyo 1964 / Tokyo 2020
2. The Disney Model

Research made possible through Crown/Wise-Marcus Award
In Tokyo, IMAGE ACTS AS ARCHITECTURE. Architecture melts into Image. Real simulates virtual.
TOKYO 2020: HERITAGE AND BAY ZONES

The bid that the Tokyo delegation presented to win the commission for the 2020 Games involved two zones within the master plan: the Heritage Zone, including several venues from the Tokyo 1964 Games as well as other historic sporting events, and the Tokyo Bay Zone, capitalizing on new space on the developing waterfront for dozens of new venues and the Olympic/Paralympic Village, which will convert to a housing project in the Legacy phase. This drawing represents my own visit to the each of these locations, marking the time taken to visit each venue as well as relative location and age. The Tokyo Metro system is already highly efficient and accessible to English speakers, so this map operates on the assumption that no changes will be made in anticipation of the Games - it will take approximately 45 minutes to go from the heart of the city in Shinjuku to the new venues in Toyosu. Also of interest is the varied age of the Japanese venues - the oldest being the Imperial Palace Gardens to be used for Cycling events and the newest being the waterfront development which has yet to commence.
There are several key similarities between the Disney and Olympic architectures. On a corporate level, both are run by private companies, with the Olympics often being forgotten. On an architectural level, their designs rely on a uniform template modified slightly to suit the specific location. However, the interventions vary from city to city, yet the underlying philosophy is universal and uniform. What Disney does, perhaps more successfully, is engage the visitor's suspension of disbelief as well as celebrating its caricature of its host culture. Olympic Architecture should similarly capitalize on the theatricality of the Event.
<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>1955</td>
<td>Disneyland, Anaheim, CA</td>
<td>Disneyland</td>
</tr>
<tr>
<td>1971</td>
<td>Lake Buena Vista, FL</td>
<td>Walt Disney World</td>
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<tr>
<td>1983</td>
<td>Urayasu, Chiba, Japan</td>
<td>Tokyo Disneyland</td>
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<tr>
<td>1992</td>
<td>Marne-la-Vallée, Paris, FR</td>
<td>Disneyland Paris</td>
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<tr>
<td>2005</td>
<td>Penny’s Bay, Lantau Island</td>
<td>Hong Kong Disneyland</td>
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<tr>
<td>2015</td>
<td>Pudong, Shanghai, China</td>
<td>Shanghai Disney Resort</td>
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The relationship between media and the Olympic Games has been a topic of discussion since Hitler’s first broadcast in 1936. The 1968 Games in Mexico City were characterized by the introduction of color television as well as the remarkable modernity and uniformity of their graphics while the 2016 Games in Rio de Janeiro will be identified by the contemporaneity and reusability of their stadium architecture as well as, presumably, a greater involvement in social and digital media than any Games prior. As the method of image creation in the Games and other world events changes, the constant and most popular mode of representation is photography. The technique of capturing the photograph has changed drastically since its inception, but it is still possible to compare events a century apart because of the salience of the medium. Though the same renaissance that affects infrastructure affects imagery before each Olympic Games, the photograph persists as the most timeless and effective mode of representation.

Photography carries special historical importance in Latin America, particularly because of its role in the Mexican Revolution in 1910 and beyond. In fact, the photograph has played an integral role in the worldwide dissemination of Mexican events starting with the Revolution and carrying through the Tlatelolco Massacre associated with the 1968 Olympics. It is impossible to assess the imagery that comes out of the student riots of 1968 without drawing comparisons to every Mexican revolt prior. The international consumption of this imagery of popular uprising culminates in today’s photography of street riots in Rio de Janeiro preceding the 2014 World Cup and 2016 Olympics. Though the student revolt surrounding Mexico 1968 and workers’ riots leading up to Rio 2016 are sparked by different social and political factors, the important commonality they share is in the specific use of photography for propaganda and sensationalism on an international scale. The similarity in content and presentation of this photography across a century is telling not only of a greater Latin American self-image, but of the rest of the world’s understanding of revolution in this part of the world—catalyzed and accelerated by the visibility of the Olympic Games. Interestingly, the events have many differences in their causes and circumstances, yet their representation is made similar as if to draw this comparison from the viewer.

Before I begin, I must be clear in my intention. The student riots in Mexico City in 1968 and the workers’ and anarchists’ riots in Rio de Janeiro, Sao Paulo, and Brazilia in 2013, though both influenced by the Olympics, are wholly different in circumstance, execution, and reception. What I seek to understand is the similarity in their imaging and subsequent international representation. Of course, there are underlying themes and motifs in both which speak to a greater field of protest or revolt photography irrespective of place. But I contend that within the images shown in this paper is a specific and biased presentation of each event along with an overt attempt to draw similarities between two frankly different socio-political phenomena. The knee-jerk tendency to analogize Mexico 1968 and Rio 2016, and particularly the protests preceding them, is obviously because of some generalizations made about Latin America as a region—but what interests me is the role of imaging in perpetuating these generalizations and reinforcing the belief that the two events are in some way connected.

The comparison between the architecture of Mexico 1968 and Rio 2016 must be carefully drawn, in part because of the large time difference and in part because much of the construction for Rio de Janeiro’s Olympic Park has not yet begun. Because this analysis deals with imaging so closely, for the purpose of this argument, the architectural renderings of Rio de Janeiro will act as “photographs”—or at least the inspiration for future photography in 2016.

The design of public spaces in Mexico City in 1968 in conjunction with their photography had a singular purpose far more pointed than that
This began years earlier with Mexico's self-representation in a spate of World's Fairs and Expos and culminated in the XIX Olympiad. The graphic identity of Mexico '68 was similarly pur-poseful, and the fact that it manifested as urban artworks in public plazas was a testament to the symbiosis of culture and sport. The Olympics were not simply a stage for international competition, but a platform for cultural expression and identity. The symbolism of public space was not a new concept in Mexico City, as the protests preceding the '68 Games took full advantage of the Zócalo for its imagistic and ideological connotations, taking precedence from the imagery of the Mexican Revolution in the appropriation of public space.

2 Ibid.

The body of citizens in revolt against the administration, against the particular injustices brought on by the Olympics, was made up of students, workers, and intellectuals. The demonstrations in the Zócalo, Plaza de las Tres Culturas, and other public spaces were a direct challenge to the state's authority and a call for change. The appearance of the imagery of protest is, at first, eerily similar to that of the events immediately preceding the Tlatelolco Massacre. The utilisation of important municipal public spaces for protest is a universally powerful phenomenon, but the staging and image of these events in Rio de Janeiro have never been so similar to Mexico '68. What makes Rio different, then, is that its events are actually wholly dissimilar to the student riots in '68. The protests in Rio have been fraught with violent anarchists and vandalism, sparking police retaliation rather than the unmitigated police brutality that so horrifically spawned the imagery of the Tlatelolco Massacre. The protests in Rio have been a continued assertion of the right to protest and a reminder of the historical and cultural significance of public space in Latin American society.


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Yes, the initial protest shown in the attached image started with a peaceful march by a teachers' union, but it was quickly overtaken by anarchists (see Fig. 2). The cause for interest is in Rio's own desire—or more likely the desire of the international media—to analogize this protest imagery with that of Mexico. The unfolding of events, including participants, demands, and results, are different in both cases, yet the modes of representation and thus the world's reaction are so similar (see Figs. 6 and 7).

Imagery of Rio 2016's Olympic Park tells a different though similarly compelling story of mirroring. Though photography of the Olympic architecture in Rio is lacking, the design of architectural rendering pending construction is telling of the compositional techniques that will eventually be employed for this purpose. Little is known about the motivation behind this imagery, especially considering the earliness of the current design phase. However, preliminary renderings show that the public space between venues in the main park will feature a similar geometric, artistic ground patterning to Mexico '68—notable not only because of its halfhearted justification by the master planners, but because Rio 2016 will be the first Games since 1968 to feature urban artwork on the ground and at this scale. The visual similarity to the groundscape design at Mexico '68 is painfully clear, though the same desire to represent the conflation of local histories and rituals in space is not analogously present. Instead, the imagery comes off as whimsical, the groundscape an afterthought (see Figs. 4 and 5). The relationship to Mexico '68 is superficial, but immediate and impossible to ignore, thus inviting further comparisons. If rendering itself is to be a form of imaging, perhaps even a subset of photography, this composition and staging is intentional to the core.

This analysis cannot answer as to why the analogy between Rio 2016 and Mexico 1968 is so easily made. Perhaps their situation in Latin America lends to generalization and stereotyping. Perhaps the international population accepts the idea of volatile revolution in this part of the world. These are certainly not the only events of their kind, yet they are depicted nearly in isolation. Few other protests against Olympics-related offenses have been given such visibility, and fewer still have been compared across time. What is interesting, then, is the carefully curated role of imaging in this comparison process, in both the capture and representation of photographs for an international audience. The imagery coming out of Rio has been deliberately made similar to that of Mexico, though it is unclear by whom and for what purpose. But more than any other Games in the years between them, Mexico 1968 and Rio 2016 will be known as the Games imaged alongside revolution.

Figure 1: "We had to 'deconsecrate' the Zocalo".

Poniatowska, Elena. Massacre in Mexico. pg. 179.

Figure 2: "Protest outside Municipal Assembly in Rio". Reuters. "Riots in Brazil". http://www.reuters.com/article/slideshow/idUSRTX143AM#a=6

Figure 3: Untitled. Yew, Wei ed. The Olympic Image: The First 100 Years.

Figure 4 and 5: "Olympic Park by AECOM"

Frearson, Amy. Dezeen Magazine, 3 September 2013.

Figure 6: "They...lopped his hair off with a bayonet". Poniatowska, Elena. Massacre in Mexico. pg. 187.

Figure 7: "Demonstrator detained". Reuters, shown in The Guardian. http://www.theguardian.com/world/2013/jul/19/rio-riots-pope-security-fears"
ARCHITECTURE MUST EMBRACE THE DIGITAL.

By studying architecture’s role in the Olympics, I know this is inevitable. The Olympics present a fertile testing ground for the merger of architecture and virtual space for dozens of reasons, the most important being their spectacularly high visibility.

Atlanta 1996 had the highest attendance of any Olympic Games in history. When compared to the scope of Beijing 2008, one has to wonder - where did those $43 billion go if not towards increasing attendance? Yet the most gargantuan Games of all time, creating a broadcast that is still talked about five years later, were aimed at the virtual Spectator instead of the physical one. Today we experience all architecture (not just the Olympic variety) through Interface, whether that is as simple as a television screen or as complex as The Overlook Hotel created through Kubrick’s cinematography. Architects design buildings, media representatives design broadcasts, and nobody decides how the two go together.

I intend to design an Interface: not a building, but a method of content presentation that challenges the norms of digital media, virtual space, and architecture as we know it. The Olympics have proven in the past eight years that our understanding of space can be controlled entirely by businessmen at NBC. If architects do not reclaim their right to the design of experience, they will become obsolete.

Architecture’s currency is not in buildings, but in images. Precedents shown in this book prove that images have an innate capacity to evoke sentiment and create experience. What are the Olympics but a celebration of imagery, whether that is the photograph of Usain Bolt breaking a record or Beijing’s 2008’s awe-inspiring Opening Ceremony? This imagery has a paradoxically integral tie to architecture because architects have no power over its final execution.

Through an architecture that provokes a certain type of imagery, media broadcast - the prevalent mode of experience - can become a space for design. Through the design of interface and the manipulation of virtual space, architects can again play a role in an increasingly digital world.
OLYMPUS
A Global Media Construct for the Olympic Games
This is a sample of broadcast annotation from NBC’s Sochi 2014 Olympic Telecast.
ARCHITECTURAL GROUND FLOOR PLAN


Preuss, Holger. *The Economics of Staging the Olympics: A Comparison of the Games 1972-2008*. Cheltenham,


Torres, Cesar R. “A Philosophical Case for the Live Broadcast of the Olympic Games’ Opening and Closing Ceremonies.” Paper presented at IOC’s OSC Postgraduate Grant Selection Committee Meeting, Lausanne, Switzerland, 2012.


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