A Journey Through the Evolution of Stadia: How the Colosseum Moved into America

Anthony F. Mangione
Xavier University, Cincinnati, OH

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A Journey Through the Evolution of Stadia:  
How the Colosseum Moved into America 

A Senior Thesis for the Honors Bachelor of the Arts Program  
by Anthony Mangione 

Xavier University  

Director: Jenny Shives  
Committee: Dr. Jeffrey Cooley and Bruce Erikson 

“Where the crowds gather history is made.” 
- Spiro Kostof, architectural historian and professor at the University of California, Berkeley.
Introduction

“We are all witnesses.” This phrase hangs on a sign that is spread across the entire side of a building in downtown Cleveland with the signature Nike swoosh trademark below it. This is the advertisement slogan with which Nike supports Lebron James, the man thought to be the next Michael Jordan, or better than him.¹ But the phrase itself is something to think about. “We are all witnesses.” It is true; we are all witnesses and have been for roughly 2,780 years, when the first sports fans gathered on the sloped hillsides of Olympia to watch a footrace that grew into what we call the Olympic Games. From that moment on, western society deemed public viewing to be a quintessential part of sport itself and a part of western culture.

The demands of these early spectators were immediate, and are ultimately the same that spectators have today: “Will they be able to find a place to sit or stand? Once in place, will they be able to see properly? And will they be able to find a toilet without missing any of the action?”² Soon, the embankments at Olympia provided sufficient seating for 45,000 spectators, and aqueducts and wells were built to quench their thirst. Over the years, eventually a new stadium and hippodrome were built. The upper class VIPs were even given stone benches for a heightened sense of comfort. Several centuries later, the Romans established the model of the stadium permanently for the world in the Flavian amphitheater, better known as the Colosseum, a multi-story venue.

¹ One of these Nike commercials features James taunting, “You don’t want to be me, you want to be better than me.”
complete with an intricate crowd-circulation system and a retractable canvas cover to keep her fans cool and protected from the hot, Mediterranean sun.

This ancient model of the stadium has continued to fulfill the similar needs of the spectator today: a place to sit or stand, a great view, concessions to quench thirsts and defeat appetites, and reasonably close-by bathrooms all designed to maximize the spectator’s time spent being a “spectator.” As a result, the model has remained virtually unchanged. The structures of today are built with some different techniques and materials, and technology has left its mark on the ancient model as well, but the model is still the same today. It serves the same purpose. Side by side, the Roman Colosseum and, say, Ohio Stadium at The Ohio State University, do not appear that different. It is recognizable that they serve or served for the same function: mass viewing, “witnessing,” whatever occurred on that intriguing space in the center. An ancient Roman would find something very familiar about attending a football game at Gillette Stadium in Foxboro, New England. In fact, contemporary stadium designers could only imagine putting forth a stadium that was equivalent in meaning and sophistication to the Colosseum.³

John Bale, a scholar who specializes in the history of athletics, suggests a four-stage model to present a simplified explanation for the evolution of stadia that is applicable to all sports.⁴ In stage one, the sport has permeable boundaries, weak or no rules of exclusion, a lack of spatial limits, uneven terrain, spatial interaction between

³ Sheard, iix.
players and spectators, and diversified land use. In stage two, there is enclosure; the limits of the pitch are defined, and players are segregated from spectators. In stage three, partitioning takes place; embankments and grandstands are used, there is payment for entry into the event for spectators, the land becomes signified as specialized use for the sport, and the spectators begin being segregated by social class. Finally, in stage four, there is surveillance on an enclosed ground with perhaps a synthetic field and a concrete bowl, a television replay screen, aesthetic considerations during planning and construction, total crowd segregation, rules of exclusion, and strong impermeable boundaries. This model can and will be applied directly to both the ancient Greek and Roman models of the stadium as well as the evolution of the modern model.

Figure 1: Pictoral demonstration of John Bale’s four stage model. Arrows represent player and spectator movement and boundaries.
This paper will describe the differences and highlight the similarities between antiquity and the modern era in stadium design, construction, materials, and function as well as social implications of and connections to the stadium in an effort to demonstrate that we are forever indebted to the classical model of the stadium. Through detailed description of ancient stadia, and then a description of the evolution of modern stadia in America and Europe, this paper will show that the classical model, which was perfected in the Colosseum, is a direct influence upon our stadium model, even though the Colosseum and our stadium model evolved to their pinnacle forms in completely different ways. This will be shown using examples of various stadia across several eras beginning in the 1850s when sports were first codified. These examples will emerge from a variety of sports in an attempt to demonstrate that the influence is relatively universal.

This research will focus on the period of time up to the peak use of the Colosseum and after the 1850s, when sport was codified and professionalized. Beginning with the examination of the ancient stadia as well as the writings of the ancient Roman architect, Vitruvius Pollio, as well as Pausanias the Traveler, this paper intends to clearly state what the classical model was, and then to illustrate through the research of modern scholarship in the field of sports architecture that the ancient model is largely unchanged, and, though the materials and techniques used today are much stronger than those used in antiquity, they remain incredibly similar and would never been improved upon without the advancements made by the Greeks and Romans.
Modern architecture, a field which operates largely upon precedent, has not and would not be so bold as to veer too far from the ancient model.
Chapter 1: Overview of the Ancient Stadia in Greece and the Colosseum in Rome

Greece

In 776 BCE, the world witnessed the ancient Greeks give birth to what would become one of the greatest and most anticipated sporting events of all time, the Olympic Games.\(^5\) A truce was established among the various and typically hostile Greek peoples for a month so that the games, set at four-year intervals called Olympiads, could take place in the sacred city of Olympia in the Peloponnesus without hostilities.\(^6\) The only event at that time was a footrace of 192 meters, the length of the stadium.\(^7\) Within a short period of time, Olympia became one of the greatest centers of athletics, which were closely tied to Pan-Hellenic religion during this era of the Olympic Games.\(^8\)

While we may imagine the Olympic Games as a variety of sporting events in competition for points of national pride, the ancient Olympic Games, for the Greeks, were primarily a religious event.\(^9\) Before the Games began, sacred heralds were sent out to proclaim the Games to all of Greece, and a sacred truce was declared for a month before and after the Games to ensure the Games could go on without interruption between amicably behaving Greek peoples, who were typically hostile.\(^10\) Out of the five days appropriated for the Games, two and a half days were primarily devoted to

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\(^6\) Darling, 41.
\(^8\) Darling, 41.
\(^10\) Amos, 83.
religious worship and activities. The tradition of religion combined with games was not uncommon to the Greeks, and Homer documents this in the funeral games for Patroklos (Iliad, Book XXIII).

The site of the 8th century BCE footrace is not known, but the seventh century saw great expansion for the games, including wrestling, boxing, the pentathlon, the double-course footrace, and horse and chariot races. By the sixth century BCE, the Temple of Hera, the Prytaneion, and, most importantly, a stadium for footraces were built. Situated to the east of the Temple of Hera, the stadium sat in a valley between hillsides, so that the embankments on either side of the track provided seating for spectators. Typically, the Greeks always chose to build stadia and theaters against one hillside, so that it would only be necessary to build up the opposite embankment for greater seating and improved viewing. Spectators sat on the north and south side embankments of the Kronos hill, which was mounded with fill to cover the extinct wells used in the Archaic period. The embankments provided seating for almost 24,000 spectators. Stadia in the Greek cities of Thebes, Epidauros, and the later stadium at Isthmia were also situated between hillsides. Vitruvius Pollio, the ancient Roman architect (c.80-15 BCE), writes of the preference for this characteristic to be evident previous to the construction of a stadium in his writings, de Architectura, a book

11 Darling, 42.
14 Romano, 222.
15 John, 3.
explaining the fundamentals of architecture for a variety of structures: “The foundation walls will be an easier matter if they are on a hillside.”\textsuperscript{16}

Vitruvius was discussing theaters in this quotation, but theaters and stadia were constructed similarly. When regards to stadia, Geraint John, Rod Sheard, and Ben Vickery, retired sports architects and the forerunners for modern stadium design scholarship, all agree that “Their [stadia’s] kinship with the Greek theatre is unmistakable; these are essentially elongated theatres for the staging of spectacular physical feats.”\textsuperscript{17} Several books on the ancient architecture of Greece and Rome often group the two together in the same chapter. In fact, the Colosseum is also known as the Flavian amphitheater, and hosted both shows and games. Several authors who write on the subject of stadium design agree as well to the striking similarities of the theater and the stadium on several levels.\textsuperscript{18} Sports historian, John Bale, even insists that the stadium is identical to the theater in every regard except for the fact that the theater’s audience is typically better-behaved, and that the ending of a sporting match is not in a written script.\textsuperscript{19}

In the fourth century BCE, the Olympic Games became more secular though, and the new stadium was constructed outside the sacred grounds at Olympia.\textsuperscript{20} The visitors who came to Olympia shifted their primary focus to the games themselves, and the

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\textsuperscript{17} John, 3.
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\textsuperscript{19} Bale, 38.
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\textsuperscript{20} Darling, 42.
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religious activities became mostly a formality. The new stadium improved upon the games through new features. A series of marble slabs were introduced as starting and stopping points for the footrace.\textsuperscript{21} This new location in Olympia provided a course that was 192 meters long by 32 meters wide with bigger earth embankments.\textsuperscript{22} Also, embankments were added on the eastern and western sides of the racecourse as well for a total of four embankments.\textsuperscript{23} These embankments allowed standing room for 45,000 spectators and a few seats for officials and judges.\textsuperscript{24} Pausanias describes this Stadium, which had existed for some time before his visit:

“Now the stadium is an embankment of earth, and on it is the seat for the judges. Opposite the judges is an altar of white marble; seated on this altar a woman looks on at the Olympic Games, the priestess of Demeter Chamyne, which office the Eleans bestow from time to time on different women. Maidens are not debarred from looking on at the games. At the end of the stadium, where there is the starting place for the runners, there is, the Eleans say, the tomb of Endymion.”\textsuperscript{25}

The stadium had two entrances: one for the public, called the Pompic entrance, and the other used by the judges and athletes, called the Secret entrance.\textsuperscript{26} Completely covered by earth, this Secret entrance was 32 meters long and vaulted with an elongated arch, creating an entrance tunnel.\textsuperscript{27} Vitruvius demonstrates the notion behind the style of these entrances and exits: “The different entrances ought to be … built in a continuous straight line, without turnings, so that the people may not be crowded

\begin{itemize}
\item \textsuperscript{21} Heinz Schobel, \textit{The Ancient Olympic Games} (Princeton, NJ: D. Van Nostrand Company, 1965), 49.
\item \textsuperscript{22} John, 3.
\item \textsuperscript{23} Romano, 127.
\item \textsuperscript{24} John, 3.
\item \textsuperscript{25} Romano, 68.
\item \textsuperscript{27} Schobel, 52.
\end{itemize}
together when let out, but may have separate exits from all parts without obstructions.”

Already, John Bale’s model can be readily applied. The games, which originally were so closely tied with religion, became codified and popularized. The Greeks had demonstrated stage two of Bale’s Model by doing so. Stage three of Bale’s model is directly represented by the embankments that the fans of the Olympics sat on to observe the games. Through this discussion, one can note the high level of sophistication that the Greeks had already achieved by the sixth century BCE.

Stadia have been excavated in Greece at Athens, Delphi, Epidaurus, Halieis, Isthmia (two of them), Nemea, and Olympia (also two). There are also unexcavated stadia known from archaeological evidence in Greece at Mt. Lykaion, Messene, Nemea, Sikyon, Tegea, Troizen, and Argos. Lastly, there are other stadia known only from written sources, predominately from Pausanias the Traveler, at Hermione, Mainalion, Mantinea (two of them), Megalopolis, Pheneos, Argos, and Sparta. The stadia at Ephesus, Delphi, Nemea, and Athens were all constructed on a flat plain rather than between two hillsides. In these cases, the track was required to be excavated before construction, which allowed for seating tiers on the sides of the track that provided better sightlines. The stadia at Halieis and the earlier stadium at Isthmia had artificially flanked embankments for spectator seating. Regardless of the location’s terrain, all of the stadia in ancient Greece were laid in a U-shape, and the straight end

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28 Vitruvius, 138.
29 John, 3.
was the starting line. In this way, stadia are especially similar to theaters in that they are both U-shaped, with stadia only being a continuation of the ends in a parallel fashion to provide seating all along the race for both the spectators and judges. The last Olympic Games were celebrated in 393 CE, after which emperor Theodosius I (R. 379-395 CE) outlawed pagan sanctuaries, including the games. The stadium fell into disuse and was buried under the sediment and soil deposits of two rivers until its discovery in the 19th century by archaeologists.

Rome

The foremost example of stadium architecture from ancient Rome is the Flavian Amphitheater, better known as the Colosseum. Described as “the greatest exemplar of this building type and has seldom been surpassed to this day as a rational fusion of engineering, theatre, and art,” the Colosseum serves as one of the greatest landmarks of the ancient Romans. Construction was begun in 70 CE by the emperor, Vespasian (R. 69-79 CE), and was finished twelve years later by his sons Titus and Domitian, paid for handsomely by these Flavians and the spoils of the first Jewish-Roman War both to fulfill Rome’s need of a permanent amphitheater and to establish political clout. The result was essentially the combination of two theaters to form an ellipse.

The outer ring of the Colosseum rises to almost sixty meters, a total of four stories high to form, at the top, a giant ellipse of 189 meters by 155 meters. This was possible through an ingenious design: a complex series of barrel-vaults and arches.

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30 Darling, 43.
31 John, 4.
33 Regina, 176.
located within each story, which distributed the enormous weight of each story across a foundation that widened at the base.\textsuperscript{34} Scholars argue that these four stories held anywhere from 48,000 people to as many as 60,000.\textsuperscript{35} Because of the remarkably intelligent design of this impressive structure, excellent sightlines for every spectator were achieved without the use of hillsides, making the Colosseum a free-standing structure.\textsuperscript{36}

The eighty arches used for the foundation at the ground level provided eighty entrances, all marked for the entry of specific citizens, as admission was free but all seats were rigidly assigned.\textsuperscript{37} This agrees with Vitruvius’s writings: “the different entrances ought to be numerous and spacious.”\textsuperscript{38} This many entrances combined with the myriad of well-planned internal ambulatories and access passages have led many to claim that the entire Colosseum full of 50,000 or more people could be evacuated in a “matter of minutes.”\textsuperscript{39} Furthermore, to accommodate the masses of people, there were fountains and latrines present for public use.\textsuperscript{40}

The Colosseum was constructed primarily of travertine, concrete, marble, various stone, and timber.\textsuperscript{41} However, the extensive use of timber led to several structurally damaging fires that demanded heavy repairs, the earliest occurring in the

\textsuperscript{34} John, 4.
\textsuperscript{35} Regina, 178.
\textsuperscript{36} John, 4.
\textsuperscript{37} Regina, 177.
\textsuperscript{38} Vitruvius, 138.
\textsuperscript{39} John, 4.
\textsuperscript{40} Regina, 178.
\textsuperscript{41} Regina, 173-175.
140s CE and the most severe in 217 CE. Nothing remains of the wooden upper tier seating, used by the Plebians. Further analysis of this complex structure will yield great insight to the genius of its design and the precedents it set for all stadia of the future.

Figure 2: Contemporary night view of the remains of the Colosseum.

Chapter 2: The Colosseum: The Amphitheater Becomes the Model of the Stadium

It is important to reiterate that the Colosseum is an amphitheater. The term amphitheater literally means “double theater,” and the term was first coined by Vitruvius to emphasize that an amphitheater is created through the connection of two theaters’ U-shaped seating structures. The first amphitheaters were constructed in the second century BCE. Hillsides and embankments, very similar to the ancient Greek stadia, supported these first amphitheaters, found in the Roman provinces and cities of Capua, Cuma, and Liternum. What is more notable is that these amphitheaters were

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42 Regina, 173.
43 John, 5.
elliptical too, just like the Colosseum. These first amphitheaters served as models for the designers of the Colosseum. A good example is the amphitheater in Pompeii, built just after 80 BCE, which is now excavated and stands today. The Colosseum, the Flavian Amphitheater, was the “fullest architectural expression” of the amphitheater model, and once it was created, it was imitated across the empire.

Many issues and demands were raised in the planning of the Colosseum. The emperor, Augustus (R. 27 BCE – 14 CE), was the first to have the idea of building a Roman amphitheater in media urbe, but it was Vespasian who first implemented the plan, which his sons Titus and Domitian then completed. The various needs of such a massive structure posed major problems in planning. An intricate underground service area would be needed for preparation of the numerous technical requirements for the elaborate nature of the games. The service area was necessary in order to “accommodate the hundreds of people engaged in diverse but complementary activities and allow them to work together in a relatively limited space.”

Several other needs were encountered as well. A hierarchical seating design that would accommodate the various classes, especially those members of the upper class who had important distinction, was needed. Likewise, since the building would hold such a large number of people, there was a need for the ability to evacuate the building quickly in case of emergency. Finally, due to the fact that events could take place all day, transporting and draining water to and from fountains and lavatories would be

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45 Gabucci, 100.
46 Gabucci, 103-104.
47 Gabucci, 103.
necessary.46

When observing the current state of the Colosseum today, one can deduce that the plan for the Colosseum, at its most basic principle, was a “series of concentric circles, leading in from the vast perimeter wall to the space of the arena in the center.”□ The conception of its design would have been too laborious a duty for just one designer or architect, there must have been several. These designers and architects most likely built much of their plans upon ratios and standard units. For example, the ideal ratio of the arena is 5:3, length to width.49 It is likely that the planners intended for the arena to be 300 by 180 Roman feet, which meant that the arches would had to have been widened beyond their original width of twenty feet.49 Thus, the arena floor was reduced to 280 by 168 Roman feet.□ Despite the fact that Vitruvius’s first-century architectural guidebook survives, our understanding of how Roman architects actually went about their duties, and what the balance was between traditional practical craftsmanship and highly technical and mathematical calculations of loading, proportion, lines of sight and so forth, is largely based on educated guessing. Putting aside however much guesswork and estimation the Roman craftsmen employed, their skill can be observed in the precision of the work they did. The inside corridors, which were all meant to be five meters wide everywhere in the amphitheater, vary by less than one percent at any given point.

46 Keith Hopkins and Mary Beard, The Colosseum (Cambridge, MA: Harvard University Press, 2005), 127. 49 Hopkins and Beard, 143. 50 Hopkins and Beard, 143. 51 Hopkins and Beard, 145. 52 Hopkins and Beard, 144.
The excavation portion of the project alone was an impressive and cumbersome accomplishment. A firm in England recently produced a quote of twenty-eight and a half million pounds for the excavation and foundation work alone for the Colosseum, not including the plumbing systems necessary. An estimated 220,000 tons of soil and dirt had to be excavated and/or transported for the Colosseum without any mechanical equipment. The entirety of the earth was moved by ox-carts, sweat, and muscle. Dirt had to be transported in order to fill the previous lake that had been situated where the Colosseum is today, and then even more dirt had to be removed to make room for the amphitheater. 33,000 tons represents the estimated total amount of dirt that had to be removed from the area.

The materials used in making the Colosseum bring to light some impressive numbers. The foundation itself was thirteen meters high and made of concrete mixed with horsehair and leucite, an impermeable volcanic rock, for rebar reinforcement. The foundation was retained by a three-meter-thick concrete and rock wall covered in brick. The Romans constructed brick walls in whatever shape necessary to create the forms needed for the concrete they were about to pour. They used this technique in the foundation and other levels as well.

After concrete, Travertine was the building material of choice in the Colosseum. To put the amount of travertine used in modern terms, an estimated 110,000 cubic

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53 At the current exchange rate, this equates to over 41 million US dollars.
54 Hopkins and Beard, 146.
56 Gabucci, 104.
57 DuTemple, 42.
meters of travertine were used in the amphitheater, each weighing an average of four and one half tons. It was mostly employed for the construction of floors in each tier. As construction progressed, brick and cement walls were used more often than travertine in order to lessen the weight put on the foundation, which allowed for the lightening of the entire structure from bottom to top. The builders could afford to do this because the lower walls were not supporting as much weight.

HYPERLINK "http://upload.wikimedia.org/wikipedia/commons/f/f1/L-Kolloseum.png" INCLUDEPICTURE

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58 DuTemple, 32.
59 Gabucci, 107.
almost nothing of this remains, but the entire exterior was highly decorated and painted.

Although

Figure 4: Theater of Marcellus in Rome, note the similarity in consecutive arches in comparison to the Colosseum.

The eighty entrances themselves were very important to the overall efficient functioning of the Colosseum. Of the eighty arches, sixty-eight were for public entrance and exit, six for
civil and religious figures, and six for players and athletes. The high number of entrances is in response to the need for a regulated flow of people entering and moving around inside the Colosseum. The seating areas were called maeniana and each seat was called a locus. The seats of an amphitheater, according to Vitruvius, should be between sixty and sixty-five centimeters deep and no more than forty centimeters high, and the Colosseum’s seats agree with these numbers. Sixty-two percent of the seats were reserved for the emperor and his attendants, guests, senators, equestrians, and the wealthiest of citizens, twenty percent were reserved for the wives and daughters of the wealthy, and only eighteen percent of the seats were left for slaves, foreigners, and the plebians. Numbers above each arch correspond to admission tickets that strictly directed people quickly and efficiently to their seats. Different routes and entrances were reserved for different classes for quick exit and entrance and to prevent any intermingling of classes. We know from Suetonius that the seating hierarchy of the Colosseum was based upon the seating hierarchy conceived by Augustus for all public games:

“He corrected and reorganized the extremely confusing and dissolute way in which people attended the games, urged by a certain offense to a senator who had gone to Pozzuoli to attend the famous games, but could not find a seat because of the large crowd. Therefore, he decreed that at every public show the first row of seats should be reserved for senators. In addition, he prohibited the ambassadors of free peoples from sitting in the orchestra in Rome, when he discovered that some libertines had been sent. He separated the military from the rest of the people. He assigned a section to married

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63 Gabucci, 99.
64 Gabucci, 132.
65 Vitruvius, 140.
66 DuTemple, 46.
67 Gabucci, 135.
68 Gabucci, 140.
men from the plebs, one for underage youths, and one nearby for their tutors. He did not allow anyone who wasn’t wearing a toga to sit in the center of the cavea. The women were now allowed to sit only in the highest seats, while before they had been in the habit of sitting anywhere they liked. Only the Vestal Virgins were assigned a place in the theater, set apart from the others in front of the box of the praetor.”

The interior of the amphitheater matches the exterior’s grandeur. The floor of the arena was made of wood, probably oak, and was strewn with sand for footing and blood absorption. The total arena surface area was 3,609 square meters. The walls and floors in the structure differ depending upon in what class section they were situated. For example, the senator section had marble floors and walls as well as marble steps. The majority of the flooring in the structure consists of small bricks starting on the second level. The floor on the first level was made from the foundation’s rock, and it does not seem that any attempt was ever made to level it.

One of the finer points of sophistication within the Colosseum was the velarium, the canopy which kept the amphitheater’s temporary residents out of the scorching sun. It was supported by a complex system of ropes, two hundred and forty in all, that were socketed into projecting corbels across the top tier. The job of controlling the ropes was given to the Misenum fleet’s sailors, due to the skill the job required during any change in weather and winds. It is believed that these sailors used some instrumentation to know how much tension to put on the ropes depending on the weather and wind.

The underground infrastructure beneath the arena floor was astonishingly ahead of its time. This underground service area, called the ipogeo, which is now visible since the arena floor is gone, was a system of corridors in which hoists, pulleys, and winches were employed to move scenery and heavy equipment used in the events. Archaeological evidence indicates the frequent use of oil lamps in the underground area. One can visualize the terrifying and eerie nature of the underground: “It does not take much imagination to see that this [the underground] must have been a

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69 Hopkins, 122.
70 Gabucci, 127.
71 Gabucci, 99.
72 Gabucci, 117.
74 Gabucci, 119.
75 Gabucci, 151.
76 Gabucci, 150.
hive of sweating labour: slaves, skilled stage-hands, animal trainers, hunters, wild animals in their cages, chained criminals, and presumably some of the gladiators, all packed together in tiny cells and passages.

The complex plumbing and drainage system of the Colosseum, planned before laying the foundation, is one of great achievement in design and engineering. Without the numerous drains in the underground that aid in the complex’s drainage, the amphitheater would have flood after any severe weather. Almost three thousand linear meters of tunnels and channels, most accompanied by pipeline to distribute water into and away from the amphitheater, were part of the system. Numerous fountains and lavatories were plumbed throughout the amphitheater.
The construction of the Colosseum within the city, in media urbe, as well as the structure’s permanence and achievement of panopticism substantiates the claim that the Romans at least partially demonstrated Bale’s fourth stage of his model. Without the modern technology of video replay screens, the Romans managed to make the games the center of attention for the entire Roman empire for extended periods of time. Furthermore, the social excitement that surrounded the games demonstrates the importance of the Colosseum: it was not just a place where these games occurred; its name meant several days of fun and excitement, panem et circenses, “bread and circus games.”
As stated before, how the Romans accomplished such accuracy and sophistication in engineering is not entirely known. Scholars agree that the task required vast amounts of skilled and unskilled slave labor, experienced craftsmanship, and a high degree of technical and theoretical architectural mastery on the part of the chief designers. This great convergence of art and design blended with skilled craftsmanship on a scale of such magnitude is what resulted in the Colosseum becoming both the stadium model perfected and the “emblem of Rome par excellence.” “The Colosseum canonized the architectural type of the monumental amphitheater throughout the Roman Empire.”

Chapter 3: Sport before 1900:

77 Hopkins, 137.
78 Hopkins and Beard, 142.
79 Gabucci, 156.
80 Gabucci, 236.
81 Gabucci, 9.
82 Welch, 129-130.
The Road to Stadium Rebirth after the Codification of Professional Sports

Following the peak use of the Colosseum, the use of stadia and amphitheaters declined and sports became a leisure activity of the wealthy, and architecture turned its focus to the construction of Cathedrals. The rebirth of sports is necessary to discuss in order to demonstrate the evolution of stadia before 1900. The revival of the stadium as an important structure to contemporary society can, in many ways, be attributed to Great Britain. British university students invented every field event that comprises what is known as the “track meet,” and they established the distances for competitive swimming, rowing, and horse-racing. The first soccer goalposts, the first boxing gloves, and the first stopwatches all come to us from England.81

The initial reintroduction of sports from England came about in the formal footrace. The race was established in the 15th and 16th centuries in England to determine the fastest “footmen,” who were required to run before a coach to guide the coach’s horses. Written records from the 16th century exist of a man named Langham, who ran a total of 148 miles in forty-two hours including his sleeping time! By the 18th and 19th centuries, the sports of walking, whose athletes were called pedestrians, and boxing were the two latest sport phenomena in England. Regarding the sport of walking, the English took a keen interest to the distance a man could walk in an hour’s time. The most famous pedestrian of England was Robert Barclay Allardice (1779-1854), known as “Captain Barclay,” who walked 110 miles in 19 hours and 27 minutes in a muddy park.

England’s other popular sport, boxing, was formulated at this time as well. Boxing’s rules, referees, and point system all evolved in England in the 18th century. James Figg (d. 1734) emerged as the first great boxer and national celebrity of England, who fought over 300 fights and lost only one contest while he was ill to an opponent he later defeated. Figg made enough prize money to construct an amphitheater on his property, in which he earned extra money by training fledgling boxers on the side. This spawned an industry of trainers, which resulted in the mass production of sporting print, tip sheets in the sporting press, and the first practical athletic training literature since ancient Greece. Established rules and codifications seemed to have been necessitated by sports betting, which began as early as the 17th century in England.

The first codification of a team sport began in England as well, namely soccer, which the British and most other nations call football. Before 1863, when the first set of formal rules for soccer was written down, soccer was more of a folk sport. Richard Mandell gives a good account of what early football was like before codification:

“A most usual rule was that the ball might not be handled, only kicked; therefore

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84 Mandell, 141.
85 He was known to be able to lift at least a half-ton (1000 lbs.).
86 Mandell, 150.
87 Mandell, 146.
88 Mandell 148-149.
89 Mandell, 153.
90 Mandell, 144.
91 John Bale, Sport, Space and the City (London: Routledge, 1993), 16.
‘football.’ There were few rules and they were never written. Old men and women and children were not excluded. Spectators might join in and people could change sides. Injuries and deaths were most frequent when the teams (which could easily number a hundred to a side) were rival villages with ancient enmities—which were perpetuated by injuries during the football games. In such contests the intervening distance—which could be more than two miles—provided the area over which a stuffed pig’s bladder was pulled to and fro. There were no referees or time outs. The game could last a whole day. The melee was more important than a victory. With darkness contestants and spectators abandoned themselves to riotous drunkenness.”

A type of folk-game soccer was played in Italy as well. As early as the 16th century, calcio was played in the Piazza Sante Croce in Florence. While the game is regarded as a forerunner to soccer, the rules and gameplay are much more similar to rugby. To this day, calcio storico (“historic football”) is played in a “museumized” form in the Piazza Sante Croce in a makeshift arena of sand. The games are very violent, and spectators from all over Florence come to watch the competition every year in June and July on constructed wooden and aluminum bleachers. Four teams represent each quadrant of Florence, and the fans of each team are strongly attached to them. Noting the violence of the sport and the sand floor, one can see the striking resemblance this sport has to the spectacles of the gladiator performances in the Colosseum.

The early 19th century saw English preparatory school students play some variety of the game of soccer with smaller prescribed areas, smaller goals, and teams of equal numbers. Previous to written rules, each school that played soccer in England had its own set of home rules. Since the Rugby School, whose rules evolved in the 1830s and 1840s, allowed some players to carry the ball with their hands during play, rules needed to be written down to establish some unity between competing teams. The Laws of Football Played at Rugby School resulted in 1846, which led to over twenty different rugby clubs practicing and playing in London by 1863. Finally, in 1863, the Rugby Union and Association Football formed in response to the continuous disagreements between the two leading sets of rules, the feet-only variety (soccer) and the ball-handling variety (rugby), the latter of which became vastly popular in American colleges. In accordance with the first formal rules in 1863, soccer added a crossbar to the goal posts to put a vertical limitation on scoring. In 1882, a touchline was added to the official rules of soccer as well to demarcate players’ territory from that of the audience, and rugby did this as well in 1891. English football became one of the most

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92 Mandell, 155.
93 John Bale, 14.
94 Home rules are very common to this day in unofficial sporting events, such as sandlot baseball, where so-and-so’s house is foul territory, or a ball hit off of that brick wall is still in play, etc.
95 Mandell, 156.
96 Bale, 16.
97 Bale, 16.
successful exports to Europe in the later 19th century.

By the early 19th century, several games were integrated into the standard life of students at English college preparatory schools, for boys ages ten to eighteen, which led to the standardization of rowing events, cross-country footraces, and football. The first recorded instance of admission charges for spectators occurred at the Aston Villa in 1874. By the 1880s, grandstands were introduced, or rather reintroduced, and fields were often situated next to or between embankments, just as in ancient Greece.

During the period, the architect Archibald Leitch designed the two-tier, “double-decker,” grandstand made of steel. This was a notable advancement in the evolution of spectatorship. According to 1880’s attendance records of soccer matches in England, spectatorship ranged from 700 to 20,000 fans, and in 1896 the Football Association Cup Final drew a crowd of 79,300.

Meanwhile, in America, the earliest popularized spectator sport was horse-racing, most likely because of the availability of affordable horses and grazing land. By 1776, there were twenty-seven horse-breeding farms in Virginia alone, which were not required to follow the same strict rules and regulations that they met with in England.

A general description for American sport before the codification of sports is that “American sport … was English sport transmitted and adapted.”

And then came baseball. Thought to be a unique American sport, baseball is most likely the descendant of an ancient English folk game called “rounders,” which involved a similar concept of running around four bases. In 1845, the first set of baseball’s rules was written down. Since they were written down in America, baseball was believed to be exclusively an American sport, which was quintessential to its development in America, originating in New England. Many factors contributed to baseball’s success in America, most notably because baseball “fortuitously appeared among a population eager for it.” Before the game was twenty years old, leagues and players’ organizations had formed, newsletters were written, and delegates to rules-change meetings were appointed. Baseball was (and still is) the game of patriots, and the myths were more important than the facts.

Baseball did meet with some opposition and controversy in the 1860s. Most of the resentment stemmed from religious organizations, most notably Christians, who were outraged that a baseball player might make a greater salary than a Christian minister. This religious opposition to spectator sports in general did not fade quickly, as evidenced by the fact that baseball was not played on Sundays until 1920. The dangers of football and the immorality of horse-race betting also faced opposition. The good that resulted from their objections was the safety that was enforced. Protective equipment and restrictive

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98 Mandell, 153-154.
99 Bale, 18.
100 Bale, 19.
101 Mandell, 179.
102 Mandell, 180.
103 For example, Abner Doubleday invented baseball in Cooperstown, New York in 1839.
104 Mandell, 181.
105 Mandell, 182.
rules evolved for the safety of the players. As a result, American authorities considered the sport benign. The first ballpark builders, along with the founders of sports magazines, editors of sports pages, promoters of prizefights, manufacturers of sporting goods, and developers of country clubs, all operated in a fertile and accepting atmosphere in America.102 The ease of attaining venture capital from America’s banking system aided in the development of baseball, both in the team expansion in leagues as well as the construction of ballparks.102

With the expansion of the railroad, team-to-team competition was facilitated in the 1840s and 1850s, which made agreed-upon rules necessary. These rules became popularly known, as demonstrated by the fact that it was the most popular game played at military bases and prisoner camps during the Civil War, in both the North and the South, because so many used the same rules.103 Postbellum America witnessed great expansion for baseball as several teams began competing in tournaments, and the Cincinnati Red Stockings made a transcontinental tour in 1869. Finally, in the 1870s, “Leagues” were established under profit-oriented managerial control.104 The teams needed permanent places to play, and the first ballparks and grandstands came about, usually made of wood or, on occasion, steel. Typically provided by the electric street railways at the end of their lines to stimulate their revenue, the athletic facility, namely the ballpark, became a sign of the American civilization, and it attracted permanent residents.104

American colleges and universities also stimulated the growth of sports in America. The state of Ohio alone had 37 colleges and universities by 1880, while England had only four. By 1904, over 250,000 young Americans were enrolled in colleges and universities, and, due to their less rigorous curriculum in comparison with England’s universities, they developed what is known today as the “extra curriculum.”105 Harvard and subsequent American colleges were more or less rustic imitations of Oxford and Cambridge. The first sporting event between colleges was a boat race between Harvard and Yale on Lake Winnepesaukee, New Hampshire in 1852.105

American colleges and universities also began developing their own varieties of English Rugby football in the 1860s and 1870s, and the game evolved rapidly in the 1880s and 1890s. The spread of its popularity eventually became unstoppable, even by the college authorities and religious groups that strongly opposed its roughness. The gridiron embodied similar violence through sport in comparison to the gladiators of the Colosseum. The children of wealthy Americans made up the majority of college students in America, and these students were familiar with Greco-Roman culture. In many ways, the game of football and its stadia is an example of these students applying what they learned. The football stadia to come were built in the classical style and echoed much of the Greco-Roman era. Although baseball, track and field, and rowing were all growing during this period, American football generated the greatest appeal and enthusiasm, which achieved the greatest heroes and the most notoriety, and, more importantly, the most alumni support and big state appropriations.106

The codification of sports in both America and England reflects the development of society in this period, which now saw space as a primary geographical expression of social power and control. As cities arose to great social epicenters, the space within them was carefully planned.

106 Mandell, 182.
107 Mandell, 183.
108 Mandell, 184.
109 Mandell, 187.
110 Mandell, 188.
111 Bale, 15.
and manipulated to demonstrate both pride and domination within the city. Buildings, arenas, and parks among other structures and spaces were designed with intentions beyond their primary functionality; they were made both to beautify the city as well as signify a city’s citizens’ control over that space. The ballpark and the football stadium were appropriated for the citizens’ place to play. In the football arena, specifically, a city’s team attempted to control that ground, and the citizens of a city took pride in a team’s ability to do so. Already, America and England were on their way to stage three of John Bale’s evolutionary model. The games had developed rules, separated spectators and fans, and charged admission for a seat in the grandstands.

By the 1890s, Americans were no longer curious about British sport. The same forces that made the young nation a populous industrial power fueled American sport. The first wooden and steel grandstands went up, the first admissions were charged to spectators, and fans became attached to teams and players. With the game rules codified and the fans’ attention captured, the stage was set for rapid growth and expansion as America first, then followed by England and the rest of the world, soon rediscovered the importance and genius of the stadium.
composed of some combination of concrete, festivals, and social attachment to the ballparks were being constructed all over America, and several colleges and universities would follow.

The Ancient Olympic Games

At the turn of the century, American colleges had specific college colors, college yells, and college mascots. Harvard opened a reinforced concrete stadium in 1903 that seated 57,000 spectators, despite the fact that only 5,000 students were enrolled at the time. Several colleges and universities would follow Harvard’s lead in the next few years, building massive stadia composed of some combination of concrete, steel, and brick so that their school’s team might become the object of sports fans’ attention and affection. Structures for ballparks in which professional baseball players would play were going up all over America, which Americans and sports fans alike called by the names of fields, parks, and grounds. It would not be until the construction of Yankee Stadium, which became known as the “Big House” and the “House that Ruth built,” that Americans would instill the word “stadium” into the baseball vernacular and call their parks by that name, despite the fact that football stadia had gone by that name for decades. One author of the times, writing in 1931, notes: “There has been a rapid increase in the construction of stadia in the United States during the last ten years. Not only universities but cities, public schools and private agencies are also joining the stadium ranks and building large structures to accommodate crowds which attend the athletic activities, festivals, pageants and other large community events. Three-fourths, at least of the existing 144 stadia have been built within this ten-year period and many more are being projected.”

Within a span of 15 years, Philadelphia’s Shibe Park (1908), Pittsburgh’s Forbes Field (1908), Chicago’s Comiskey Park (1910), Boston’s Fenway Park (1912), Cincinnati’s Crosley Field (1912), Detroit’s Navin Field (which later was renamed Tiger Stadium) (1912), Brooklyn’s Ebbets Field (1913), Boston’s Braves Field (1913), Chicago’s Weeghman Field (which was later renamed Wrigley Field) (1914), and Yankee Stadium (1923) all opened their gates to the American public, which allowed for the rapid spread of baseball across America. Football stadia at colleges and universities would follow their lead. The places where dreams became reality were being constructed all over America, and social attachment to the ballparks.

116 Papanicolaou-Christensen, 78.
117 Papanicolaou-Christensen, 80.
118 Papanicolaou-Christensen, 81.
119 Papanicolaou-Christensen, 82.
120 Papanicolaou-Christensen, 86.
121 Judith Swaddling, The Ancient Olympic Games (Austin, TX: University of Texas Press, 2008), 102.
122 Mandell, 188.
124 Bale, 32.
125 Huus and Cline, 3.
themselves was immanent.

Some say that the charm of Fenway Park is that it was your father’s ballpark. Indeed, most fans will fight to the death against its inevitable and impending destruction. And the destruction is inevitable; Fenway will undoubtedly follow the leads of Tiger Stadium and Yankee Stadium, which were both recently razed. One sportswriter and Red Sox fan, Dan Shaughnessy, writes:

“As you read this, there are baseball fans sitting in wide, cushy seats, watching a game in a spacious, state-of-the-art stadium with sprawling parking lots, polished bathrooms, and international food courts. Those spoiled fans might even be sitting in a climate-controlled dome, enjoying all the comforts of the twentieth century. Their hometown ballpark, like most new parks today, is a palace of awakening desire. Going to the game is like going to a new shopping mall.”

Fans are not taken aback by the age and dilapidated nature of Fenway. They overlook this to note that this is where Babe Ruth pitched the Sox to a World Series Championship in 1918. Their affection for Fenway is not so much concerned with what the park is, but what it is not. Fenway Park is not a multiplex or sports and convention center; it is not attached to a shopping mall or Hard Rock Café; and a dome with a retractable roof does not cover it. In fact, the name itself is part of what fans love about Fenway Park. It is a park that has green grass, fresh air, and is a fine place to take the family for an afternoon. The list of America’s best known parks, such as Yellowstone, Central, and Yosemite, must also include Fenway.

The site chosen for the construction of Fenway, an area known as the “Emerald Necklace,” which was a ring of parks that brought fields of green to the Boston area, was no accident. The area was owned by Fenway Realty Company, from whom the Taylors, the owners of the Red Sox at the time, had bought a good amount of stock. The project broke ground on September 25th, 1911, and on October 15th, 1911 a sketch of the future park appeared in the Boston Globe along with an article that stated that there would be seating for 28,000, 365,308 square feet would be allotted for the park, and stands of only the most approved type would be built. The project was estimated to cost $1,000,000. At the time, several ballpark owners were having tremendous trouble with obtaining insurance for their facilities, due the high risk of fires that often occurred in wooden parks. Thus, concrete and steel was chosen for the materials of Fenway, and the Charles Logue Building Company built a state-of-the-art steel-and-concrete ballpark for the Taylors at a cost of approximately $650,000 without the use of any public funds.124 The originally planned right field bleachers were not built, bringing total seating
capacity to 23,000. The entire façade of the building was covered in red brick, and originally no upper deck was installed. The original seats in the park were made of oak. Several seats were added for the 1912 World Series, of which only some were removed, making the capacity during the World Series 34,100 and the 1913 season capacity 32,000.

After the first exhibition, played on April 9, 1912 against Harvard (Boston won 2-0 after the game was called on account of snow), the first two games were rained out. The news of the opening of the park was diminished by the dismal news of the H.M.S. Titanic, which sank in that same week. The first league game finally played was against the New York Highlanders, in which the Sox won 7-6 in eleven innings in front of 27,000 fans.

One of the problems the architects of the park ran into during construction was the immovable Albany Railroad just behind left field. The railroad could not be moved or eliminated, which meant that the wall in left had to be made higher since the distance from home plate could not be increased; in short, the builders had to keep the hitters honest. During the dead-ball era, most thought that this monster wall in left would never be cleared, the feat itself considered to be impossible and heroic. However, in just the sixth game played there, the wall was cleared in a homerun by Red Sox backup first baseman, Hugh Bradley, who only hit two homeruns in his entire career. One of the signature features of Fenway’s characters is the irregularly-shaped outfield. The wall in left is what evolved into the “Green Monster,” and is arguably the most famous feature of any ballpark. The “Green Monster” is part of what makes Fenway a hitter’s park. Originally stated to be 315 feet, it was discovered later that it was actually about 309 feet and a few inches, and this has led to a league rule that any new ballpark’s walls built today must be at least 325 feet from home plate. There is almost no foul space in Fenway.


Shaughnessy, 34.

Shaughnessy, 19.

Curt Smith, Our House: A Tribute to Fenway Park (Lincolnwood, IL: Masters Press, 1999), 27.

Shaughnessy, 42.
Mangione 31

?ln ???????????Charles??Henry??“Lucky”??Charlie”??Weeghman??one??of??Chicago’s??upcoming??entrepreneurs??who??had??recently??purchased??baseball’s??Federal??League??Chicago??Chiefs??asked??Zachary??Taylor??Davis??to??design??his??team??’s??ballpark???Davis??was??no??stranger??to??the??task??!
?he??designed??Comiskey??Park??which??opened??in???????
?on??the??south??side??of??Chicago??Built??for??ta??May??

?price??tag??Comiskey??was??the??first??“kiteshaped”??park??which??set??precedent??for??every??ballpark??that??was??built??after??Comiskey??and??was??later?“sited”??the??world’s??greatest??baseball??palace”??and??“the??largest??field??devoted??to??baseball??in??the??United??States”??The??plans??for??Weeghman??Park??were??actually??much??more??modest??than??the??plans??for??Comiskey??but??the??project??was??by??no??means??a??small?undertaking??There??would??be??not??seating??down??the??left??side??of??the??field??no??upper??deck??and??no??ornamentation??on??the??park’s??interior??façade??but??a??curved??stand?????
?feet??long??would??be??built??and??the??plans??called??for?????
?bricks??and????????

??cubic??feet??of??concrete142????Four??thousand??spectators??attended??the??opening??ceremony??where??Weeghman??promised??the??park??to??be??an??“edifice”??of??beauty”??that??would??be??ready??for??baseball??by??April??????????????????????????????????????just??seven??weeks??away05??????
??Concrete??runways??and??seats??slabs??were??poured?????Steel??banners??were??installed??that??provided??seating??for?????
?fans??????????These??seats??represented??the??only??ones??in??fair??territory143????Another????

?could??sin?ln??the??curved??grandstand144??????The??field??area??was??the??largest??of??any??other??existing??at??this??time??and??the??distance??to??the??left??and??right??field??walls??respectively??was?????
??and????????feet????????????cubic??yards??of??soil??were??bailed??in??and??four??acres??of??blue??grass??were??installed??on??the??soil??!
?Just??as??Weeghman??promised??the??field??opened??on??Thursday??April??????????and??the??Chiefs??beat??Kansas??City??????????in??front??of
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145????

142 Kush, 12.
143 Selter, 63.
144 Kush, 12.
145 Kush, 14.
Figure 7: Chicago’s Mayor Thompson throws out the first pitch on opening day at Weeghman Field.

After the first couple of games, complaints from the fans compelled Weeghman to move the wall in left field back twenty-five feet, making left center fifty feet further from home plate. The original measurement of the left field wall from home plate was only 302 feet, which resulted in nine homérums in the first three games (which was unheard of in the dead-ball era). In the following season, the Bleacher in right was removed and another, twice as large, was constructed in left. The Chifeds won the 1915 Federal League pennant, and then the League folded. Weeghman quickly acquired ninety percent of the Chicago Cubs franchise from Charles P. Taft, the former U.S. president’s brother, for $500,000. Three years later, Weeghman found himself deep in debt and sold the team to William Wrigley, the recent chewing gum entrepreneur. He and his son, Phillip, enlarged and improved the park and renamed it “Wrigley Field.” He became so wealthy that he purchased Catalina Island off the coast of southern California without ever seeing it, intending for its purposes to be the Cubs spring training facility. In 1923, the grandstand was reconstructed to extend all the way down both foul lines, and two larger steel-framed bleachers were erected, one to replace the old ones in left and the other to be added in right. In 1927 and 1928, the upper deck was built, and in 1937, an entire new bleacher was built from foul line to foul line with a new scoreboard, all of which remains the same to this day. Thus, Wrigley field was born; a child that soon grew into what Cubs’ fans know today as the “friendly confines.”

The talk of 1923 was the new Yankee Stadium; the place where Babe Ruth hit sixty

146 Selter, 64.
147 What is interesting to note is that no complaints were ever made about the right field wall, which only measured 298 feet from home plate.
148 Kush, 15.
149 Jacob, 6.
150 Kush, 15.
homeruns and the home of Murderers’ Row. Opening day, April 18, 1923, the Yankees presented their response to the cozy home-style Ebbets Field, home to the late Brooklyn Dodgers. Yankee Stadium was a massive corporate-minded stadium, equipped with a sophisticated arrogance and a “we’re better than you” attitude. New York Times reported that 74,200 (a number that was admitted to be padded at a later date) were in attendance on Opening Day, when Babe Ruth baptized the “House that Ruth Built” with his three-run homer to right.

Yankees owner, Jacob Ruppert, purchased the land where Yankee Stadium was situated in 1921. The stadium was built in two years, with the original plans calling for an unheard-of three-deck grandstand to encircle the entire stadium. The original structure boasted a capacity of 85,000 and was complete with a running track. The stadium was used for prizefights and even a rodeo in addition to being the home of the New York Yankees. The actual park ended up having the grandstand wrap around home plate, not even extending all the way to the foul poles, but rather just barely past the first and third bases. A huge wooden bleacher that extended from 157th to 161st streets on River Avenue enclosed the rest of the field. A concrete bleacher would replace this wooden one over the years, beginning in 1928. Since this new bleacher had individual seats that gave each fan more room, the maximum occupation of Yankee Stadium was reduced to 67,163 after the completion of the concrete bleacher in 1937. The scoreboard at Yankee Stadium, with its two-foot high letters, was visible to all spectators at twenty-five feet high by forty feet long. Yankee stadium, along with the Los Angeles Coliseum, are among the first to employ floodlighting for night games.

Yankee Stadium’s drainage problems and their solutions set precedent for several other stadium and ballpark projects. The Yankees discovered quickly that the need to reschedule games due to washout was not profitable. Since the games had to be rescheduled on other gamedays when the opposing team was still in town (a.k.a. double-headers), the owners often took a loss in comparison to two separate game days. A drainage system was installed in Yankee Stadium, using grades of .5 to .8 percent to drain water to gutters and ditches through a series of caps,150 and rarely posed a problem during play.

Meanwhile, colleges and universities in America began constructing monoliths for their fans, namely massive concrete stadia designed much more for function than aesthetics. The preliminary studies and plans for Ohio Stadium, the future football stadium for the Ohio State Buckeyes, were revealed at the American Institute of Architects convention in May, 1921. The head architect, Howard Dwight Smith, won an exhibition medal in the class “public buildings,” for the beautiful entrance, the magnificent towers at the ends of the horseshoe, and the awe-inspiring view of the entire stadium from the air that was demonstrated in the plans.152

151 This term was often used to describe the New York Yankees’ hitters after 1918, and most popularly the first six hitters of the 1927 Yankees: Earle Combs (BA .356), Mark Koenig (BA .285), Babe Ruth (BA .356), Lou Gehrig (BA .373), Bob Meusel (BA .337), and Tony Lazzeri (BA .309).
152 Ron Smith, The Ballpark Book (St. Louis, MO: The Sporting News, 2003), 41.
153 Ron Smith, 42.
154 Ron Smith, 45.
156 Shannon, 153.
157 Serby, 22.
158 The sewer caps only presented one minor interference with play, during Game Two of the 1951 World Series when Mickey Mantle fell due to the drainage hole cover. Yankees fans held their breath as Joe DiMaggio made a spectacular circus catch to save the error.
159 Serby, 40.
stadium was considered an example of good stadium architecture at this time and opened on October 7, 1922.

Ohio Stadium, also known as “The ‘Shoe,” demonstrates a Classical style of architecture, highly influenced by Greek and Roman theaters, amphitheaters, and stadia. The Greek theater is certainly responsible for the arrangement of box seats, aisles, and the plan of the circular end. However, it seems that the Roman amphitheater model is that which Ohio Stadium is most indebted. The plan of Ohio Stadium is horseshoe, to which a grandstand in the opening of the “U” was later added. The horseshoe has three centers, which were arranged in high similarity to the theater at Epidaurus in Greece. The arrangement of the seats, in terms of their heights, is also arranged similarly to those at Epidaurus, providing unobstructed sightlines to the field.\textsuperscript{156}

The Roman theater was often built above ground and not into the sides of hills, just as contemporary stadia are often constructed. The expression of vastness and magnificence that accompanies Roman amphitheaters is similar to those stadia constructed recently in America. The use of the shapes of the arch, the vault, and the dome in the Colosseum in Rome and other amphitheaters are frequently repeated in both Ohio Stadium and other stadia built around the same time.\textsuperscript{157} Ohio Stadium has direct representation of all of the following aspects present in the Colosseum: “Elliptical plan, entrances for each separate portion, wide corridors running all around the building, entrances through portals to seats from ramps and stairways, continuous passageways, and the placing of seats for distinguished people.”\textsuperscript{157}

The upper deck resembles the upper range of seats in the Colosseum, however, modern structural science is what made the upper deck possible. Steel is the only material used in the construction of Ohio Stadium that was not used in the construction of the Colosseum. While different types of stone were used in both the construction of the Colosseum and Ohio Stadium, it is the predominant use of concrete in both structures that is most noteworthy, especially how both have employed an “architectural use of concrete in a logical manner with a frankness of material expression.”\textsuperscript{157} The main feature of the entrance to Ohio Stadium is the coffered semi-dome, which is reminiscent of the dome of the Pantheon in Rome. Both have square-shaped coffers, which contain designs that foreshorten their appearance. The semi-dome serves to both decorate the exterior as well as lessen the weight of the structure. To this day, the field does not have lights; special lights must be brought in for night games. Therefore, we may attribute many features of Ohio Stadium to the influence of the Classical architecture of Rome, which set precedent for the stadia of this period.

\textsuperscript{160} Arthur Francis Deam, \textit{The Influence of Classical Architecture in the Design of the Ohio Stadium} (Columbus, OH: The Ohio State University, 1921), 2.

\textsuperscript{161} Deam, 2.
\textsuperscript{162} Deam, 3.
\textsuperscript{163} Deam, 4.
\textsuperscript{164} Deam, 5.
\textsuperscript{165} Deam, 6.
\textsuperscript{166} Deam, 9.
\textsuperscript{167} Deam, 12.
\textsuperscript{168} Mandell, 191.
accomplishments. Yankee Stadium set many precedents for future stadia projects, including size, considering the average stadia capacity of the time was 20,000. Sightline equations were developed, and structural steel and concrete emerged as the building materials of choice. Drainage systems and electronic scoreboards became standard, and arguments and plans for combining football and baseball stadia together were initiated. Meanwhile, in Great Britain, soccer grounds and stadia were being developed solely for the purpose of playing soccer by the 1920s. The rest of Europe designed and built multi-sport facilities as well. The best example of these is the Berlin Olympic Stadium. Completed in 1936 for the Olympic Games that year, the stadium holds 250,000 people and embraced the era of the “concrete stadium, the stopwatch, and the manicured lawns.” Hertha Berlin FC still plays there to this day, and the stadium is still capable of hosting an Olympic Games.

Chapter 5: Stadia after the Great Depression

Although not greatly detrimental to baseball initially, the Great Depression soon left its toll on baseball and other professional sports. Despite the Depression, the builders of the Cleveland Municipal Stadium persevered until completion. The stadium opened on July 31, 1932, in which the Indians lost to the Philadelphia Athletics 1-0 in front of a then-record crowd of 80,184. This huge stadium on Lake Erie was part of an interesting distinction for the Cleveland Indians. The team was the only one ever to use two parks regularly: the Indians invariably played Sunday, big night, and holiday games at Municipal Stadium, but continued to play day games in quaint League Park, which only held 21,414.167 The benefit was that it was more economical to operate League Park, despite the fact that it was the smallest in the American League for several years. In 1947, the entire Indians schedule was moved to Municipal. Another interesting feature of the stadium was the outfield. From home plate to dead center was 490 feet, and no player ever hit a homerun to straightaway center field into those bleachers. A movable fence was constructed to shorten the distance to center and, until a rule was made by the American League in the 1950s, the Indians owner, Bill Veeck, moved the fence

169 Serby, 10.
170 Serby, 30.
171 Serby, 18.
172 Bale, 20.
173 Bale, 21.
174 Shannon, 92.
175 Ron Smith, 255.
176 Shannon, 92.
The Mistake by the Lake.” Despite the stadium’s lack of physically distinctive features, many series depending on how it favored the Indians.

Following Cleveland Municipal, there would not be another Major League ballpark built until 1953, when the Milwaukee Brewers built County Stadium. After the Great Depression and World War II, professional baseball teams made their way to the Midwest and the country. Previously unknown Los Angeles’ Dodgers’ Stadium was built for the “moving” Brooklyn Dodgers, and in 1938, the St. Louis Cardinals and the Philadelphia Athletics took residence in the stadium. The prevalence of floodlighting, which became standard by the fifties, popularized the night game, which gave baseball a man y other sports much-needed revenue and a newfound place in American entertainment.

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After the first couple of games, complaints from the fans compelled Weeghman to move the wall in left field back twenty-five feet, making left center fifty feet further from home plate. The original measurement of the left field wall from home plate was only 302 feet, which resulted in nine home runs in the first three games (which was unheard of in the dead-ball era). In the following season, the bleacher in right was removed and another, twice as large, was constructed in left. The Chifeds won the 1915 Federal League pennant, and then the League folded. Weeghman quickly acquired ninety percent of the Chicago Cubs franchise from Charles P. Taft, the former U.S. president’s brother, for $500,000. Three years later, Weeghman found himself deep in debt and sold the team to William Wrigley, the recent chewing gum entrepreneur. He and his son, Phillip, enlarged and improved the park and renamed it “Wrigley Field.” He became so wealthy that he purchased Catalina Island off the coast of southern California without ever seeing it, intending for its purposes to be the Cubs spring training facility. In 1923, the grandstand was reconstructed to extend all the way down both foul lines, and two larger steel-framed bleachers were erected, one to replace the old ones in left and the other to be added in right. In 1927 and 1928, the upper deck was built, and in 1937, an entire new bleacher was built from foul line to foul line with a new scoreboard, all of which remains the same to this day. Thus, Wrigley field was born; a child that soon grew into what Cubs’ fans know today as the “friendly confines.”

The talk of 1923 was the new Yankee Stadium; the place where Babe Ruth hit sixty

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146 Selter, 64.
147 What is interesting to note is that no complaints were ever made about the right field wall, which only measured 298 feet from home plate.
148 Kush, 15.
149 Jacob, 6.
150 Kush, 15.
homeruns and the home of Murderers’ Row. Opening day, April 18, 1923, the Yankees presented their response to the cozy home-style Ebbets Field, home to the late Brooklyn Dodgers. Yankee Stadium was a massive corporate-minded stadium, equipped with a sophisticated arrogance and a “we’re better than you” attitude. New York Times reported that 74,200 (a number that was admitted to be padded at a later date) were in attendance on Opening Day, when Babe Ruth baptized the “House that Ruth Built” with his three-run homer to right.

Yankees owner, Jacob Ruppert, purchased the land where Yankee Stadium was situated in 1921. The stadium was built in two years, with the original plans calling for an unheard-of three-deck grandstand to encircle the entire stadium. The original structure boasted a capacity of 85,000 and was complete with a running track. The stadium was used for prizefights and even a rodeo in addition to being the home of the New York Yankees. The actual park ended up having the grandstand wrap around home plate, not even extending all the way to the foul poles, but rather just barely past the first and third bases. A huge wooden bleacher that extended from 157th to 161st streets on River Avenue enclosed the rest of the field. A concrete bleacher would replace this wooden one over the years, beginning in 1928. Since this new bleacher had individual seats that gave each fan more room, the maximum occupation of Yankee Stadium was reduced to 67,163 after the completion of the concrete bleacher in 1937. The scoreboard at Yankee Stadium, with its two-foot high letters, was visible to all spectators at twenty-five feet high by forty feet long. Yankee stadium, along with the Los Angeles Coliseum, are among the first to employ floodlighting for night games.

Yankee Stadium’s drainage problems and their solutions set precedent for several other stadium and ballpark projects. The Yankees discovered quickly that the need to reschedule games due to washout was not profitable. Since the games had to be rescheduled on other gamedays when the opposing team was still in town (a.k.a. double-headers), the owners often took a loss in comparison to two separate game days. A drainage system was installed in Yankee Stadium, using grades of .5 to .8 percent to drain water to gutters and ditches through a series of caps,150 and rarely posed a problem during play.

Meanwhile, colleges and universities in America began constructing monoliths for their fans, namely massive concrete stadia designed much more for function than aesthetics. The preliminary studies and plans for Ohio Stadium, the future football stadium for the Ohio State Buckeyes, were revealed at the American Institute of Architects convention in May, 1921. The head architect, Howard Dwight Smith, won an exhibition medal in the class “public buildings,” for the beautiful entrance, the magnificent towers at the ends of the horseshoe, and the awe-inspiring view of the entire stadium from the air that was demonstrated in the plans.152

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151 This term was often used to describe the New York Yankees’ hitters after 1918, and most popularly the first six hitters of the 1927 Yankees: Earle Combs (BA .356), Mark Koenig (BA .285), Babe Ruth (BA .356), Lou Gehrig (BA .373), Bob Meusel (BA .337), and Tony Lazzeri (BA .309).
152 Ron Smith, The Ballpark Book (St. Louis, MO: The Sporting News, 2003), 41.
153 Ron Smith, 42.
154 Ron Smith, 45.
156 Shannon, 153.
157 Serby, 22.
158 The sewer caps only presented one minor interference with play, during Game Two of the 1951 World Series when Mickey Mantle fell due to the drainage hole cover. Yankees fans held their breath as Joe DiMaggio made a spectacular circus catch to save the error.
159 Serby, 40.
Mangione 39

stadium was considered an example of good stadium architecture at this time and opened on October 7, 1922.

Figure 8: Postcard of Ohio Stadium, ca. 1930-1950.
Ohio Stadium, also known as “The ‘Shoe,” demonstrates a Classical style of architecture, highly influenced by Greek and Roman theaters, amphitheaters, and stadia. The Greek theater is certainly responsible for the arrangement of box seats, aisles, and the plan of the circular end. However, it seems that the Roman amphitheater model is that which Ohio Stadium is most indebted. The plan of Ohio Stadium is horseshoe, to which a grandstand in the opening of the “U” was later added. The horseshoe has three centers, which were arranged in high similarity to the theater at Epidaurus in Greece. The arrangement of the seats, in terms of their heights, is also arranged similarly to those at Epidaurus, providing unobstructed sightlines to the field.156

The Roman theater was often built above ground and not into the sides of hills, just as contemporary stadia are often constructed. The expression of vastness and magnificence that accompanies Roman amphitheaters is similar to those stadia constructed recently in America. The use of the shapes of the arch, the vault, and the dome in the Colosseum in Rome and other amphitheaters are frequently repeated in both Ohio Stadium and other stadia built around the same time.157 Ohio Stadium has direct representation of all of the following aspects present in the Colosseum: “Elliptical plan, entrances for each separate portion, wide corridors running all around the building, entrances through portals to seats from ramps and stairways, continuous passageways, and the placing of seats for distinguished people.”157

The upper deck resembles the upper range of seats in the Colosseum, however, modern structural science is what made the upper deck possible. Steel is the only material used in the construction of Ohio Stadium that was not used in the construction of the Colosseum. While different types of stone were used in both the construction of the Colosseum and Ohio Stadium, it is the predominant use of concrete in both structures that is most noteworthy, especially how both have employed an “architectural use of concrete in a logical manner with a frankness of material expression.” The main feature of the entrance to Ohio Stadium is the coffered semi-dome, which is reminiscent of the dome of the Pantheon in Rome. Both have square-shaped coffers, which contain designs that foreshorten their appearance. The semi-dome serves to both decorate the exterior as well as lessen the weight of the structure. To this day, the field does not have lights; special lights must be brought in for night games. Therefore, we may attribute many features of Ohio Stadium to the influence of the Classical architecture of Rome, which set precedent for the stadia of this period.

Figure 9: Coffered semi-dome entrance to Ohio Stadium.

By 1914, the innovation of American sport had slowed, but what it meant to be an American had evolved to include the acceptance of the myths, the spectatorship, and the “manchat” of the sports news. This set the stage for the 1920s, where the heroes of the gridiron, the diamond, and the ring were created and witnessed by millions of fans who were concerned with their

160 Arthur Francis Deam, The Influence of Classical Architecture in the Design of the Ohio Stadium (Columbus, OH: The Ohio State University, 1921), 2.
161 Deam, 2.
162 Deam, 3.
163 Deam, 4.
164 Deam, 5.
165 Deam, 6.
166 Deam, 9.
167 Deam, 12.
168 Mandell, 191.
accomplishments. Yankee Stadium set many precedents for future stadia projects, including size, considering the average stadia capacity of the time was 20,000. Sightline equations were developed, and structural steel and concrete emerged as the building materials of choice. Drainage systems and electronic scoreboards became standard, and arguments and plans for combining football and baseball stadia together were initiated. Meanwhile, in Great Britain, soccer grounds and stadia were being developed solely for the purpose of playing soccer by the 1920s. The rest of Europe designed and built multi-sport facilities as well. The best example of these is the Berlin Olympic Stadium. Completed in 1936 for the Olympic Games that year, the stadium holds 250,000 people and embraced the era of the “concrete stadium, the stopwatch, and the manicured lawns.” Hertha Berlin FC still plays there to this day, and the stadium is still capable of hosting an Olympic Games.

Chapter 5: Stadia after the Great Depression

Although not greatly detrimental to baseball initially, the Great Depression soon left its toll on baseball and other professional sports. Despite the Depression, the builders of the Cleveland Municipal Stadium persevered until completion. The stadium opened on July 31, 1932, in which the Indians lost to the Philadelphia Athletics 1-0 in front of a then-record crowd of 80,184. This huge stadium on Lake Erie was part of an interesting distinction for the Cleveland Indians. The team was the only one ever to use two parks regularly: the Indians invariably played Sunday, big night, and holiday games at Municipal Stadium, but continued to play day games in quaint League Park, which only held 21,414. The benefit was that it was more economical to operate League Park, despite the fact that it was the smallest in the American League for several years. In 1947, the entire Indians schedule was moved to Municipal. Another interesting feature of the stadium was the outfield. From home plate to dead center was 490 feet, and no player ever hit a homerun to straightaway center field into those bleachers. A movable fence was constructed to shorten the distance to center and, until a rule was made by the American League in the 1950s, the Indians owner, Bill Veeck, moved the fence

169 Serby, 10.
170 Serby, 30.
171 Serby, 18.
172 Bale, 20.
173 Bale, 21.
174 Shannon, 92.
175 Ron Smith, 255.
176 Shannon, 92.
every series depending on how it favored the Indians.

The stadium was built without the “physical quirks and nuances that gave other early-era ballparks personality.” □ Cleveland Municipal was, in every sense of the word, a “stadium.” The inside concourses were “dingy, damp, concrete walkways and corridors that circled and branched endlessly,” and seats in the higher altitudes of the stadium were obstructed by steel girders. A combination of neglect over the years and the fact that the stadium was better suited for football, of which the Cleveland Browns took advantage, led to the nickname of the stadium, “The Mistake by the Lake.” Despite the stadium’s lack of physically distinctive features, many great football and baseball memories have come out of Cleveland Municipal stadium, including the most infamous bleacher section in all of football, the “Dawg Pound.”

Following Cleveland Municipal, there would not be another Major League ballpark built until 1953, when the Milwaukee Brewers built County Stadium. After the Great Depression and World War II, pro baseball teams began to find a home in the United States. At that time, there were only 16 major league ballparks in the country. Some of these included the Cleveland Municipal Stadium, which had a seating capacity of 36,000, and had been built in 1950. The stadium was home to the Cleveland Indians baseball team, which had been in existence since 1901. The team had been a member of the American League since 1901, and had won three World Series championships, in 1920, 1924, and 1948.

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stadium in Europe (more extensively), cricket in Europe and Asia, and various basketball and hockey arenas.

“We are all witnesses.” And if we were not, then stadia would not be what they are today. In many ways, it seems that sport has become a religion in America. Just the
phrases used to describe plays such as “miraculous catch” or “divine performance” hint at this. In fact, ballparks have commonly been referred to as “green cathedrals.” Attendance at the games is worship, and this analogy serves to better demonstrate just how much the stadium means to a city; it is a community-building center that strengthens unity among citizens of the *polis*. Having successfully echoed antiquity’s model of the stadium, who knows what is next in line for stadium evolution. One thing remains certain, football will always remain as one of America’s favorite entertainments, and baseball, the greatest American pastime, will continue to remind us that “diamonds are forever.”
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