

The Indiana Jones Effect

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Nearly every person who inquires about what I'm studying in college has the same reaction, "Wow, so you're going to be the next Indiana Jones?" At first it was amusing but then I began to wonder if people really did perceive archaeology to be the whip-carrying, pistol-shooting, action-packed profession that it is made out to be in the media. This project's purpose is to see if the Indiana Jones persona has infiltrated the perception of the general public to the point that it is affecting the profession of archaeology, and to lay to rest many of the delusions and misconceptions that surround the archaeological community. Three main issues must be analyzed in order to address this hypothesis: 1) the popular, media-constructed image of archaeology, 2) the actual scientific and methodological practices of archaeologists, and 3) the interface between these two elements.

Indiana Jones is perhaps the most widely recognized popular image of an archaeologist because of the trilogy of films in which he is the main character. *The Adventures of Indiana Jones'* first installment, *The Raiders of the Lost Ark*, debuted in 1981. Over the next eight years, two more films were released, *The Temple of Doom* in 1984 and *The Last Crusade* in 1989. All three of these films were directed by Steven Spielberg and produced by George Lucas, both of whom are well established filmmakers and won numerous awards for their collaboration on this project. In order to come to a studied understanding of Indiana Jones, known as Indy in these films, the *Raiders of the Lost Ark* and *The Last Crusade* were analyzed to decipher what aspects of his character make him believable enough to influence people's perceptions. Both of these films have similar plot constructions centering on Indy attempting to prevent biblical artifacts from falling into the hands of Hitler and the Third Reich during the 1930's.

Raiders of the Lost Ark endeavors to explain the location and power of the legendary Ark of the Covenant. This religious artifact is surrounded by controversy, especially whether or not it ever existed and about its current resting place. Biblical authors first mention the Ark in regards to its construction (Exodus 25: 10-22), and later it is reported to be carried into Canaan during the Israelite Conquest (Joshua 3-4), as well as being carried by priests at the fall of Jericho (Joshua 6). The last mention of the Ark is during the reign of Josiah when it is placed in the Temple permanently (2Chronicles 35: 3). Scholars have conjectured many different hypotheses



about the current whereabouts of this relic. One of the most popular is that the Ark was either destroyed during the Babylonian conquest or that it was buried in an undisclosed location in Jerusalem prior to the destruction. Some scholars postulate that King Solomon's son by Queen Bathsheba, Menelik, stole it away to Ethiopia,¹ and others claim that the Egyptian Pharaoh Shishak took the Ark with him back to Egypt after his invasion c.925 BCE (I Kings 14: 25-28). The last scenario is used in *The Raiders of the Lost Ark* to explain Indy's discovery of the Ark in the ancient Egyptian city of Tanis, Shishak's capital city.

The Last Crusade similarly deals with another biblical treasure, the Holy Grail. Like the lost Ark, the Holy Grail has many legends surrounding its existence and final resting place. One possible scenario is of Joseph of Arimathea carrying the Holy Grail with him to France, which is where *The Last Crusade* story places the beginning of the Nazi search for the Grail. From there

¹ Hancock, Graham. *The Sign and the Seal: The Quest for the Lost Ark of the Covenant* (New York: Crown Publishers, 1992), 5.

another story is interwoven about three brothers from the Crusades. These brothers are entrusted with protecting the Grail, but they also place markers along their travels, which give clues to the location of the Grail. Indy deciphers the inscriptions on these stone markers and successfully navigates to the Grail's hidden cave.

Besides the intriguing story lines, the films include a good deal of action and adventure, all of which aided in making them some of the most popular movies of cinematic history. Because of the films' popularity, they became the first wide-spread representations of archaeology as a profession and serve as an archetype for a media-constructed archaeological character. The films also served as a general base from which to organize my focus groups and classroom surveys. A clip from *The Last Crusade* was used specifically to gauge how the participants reacted to Indy's character, and also to judge their familiarity with the trilogy. Focus groups and surveys were utilized in order to assess what people on Lycoming's campus think about archaeology.² Three separate focus groups were held in order to study the difference in opinion between archaeology majors, non-archaeology majors, and professors. The two student groups were chosen at random, and the professors were selected from outside of the archaeology program in order to avoid partial responses. I also wanted to see if there was a difference in opinion between a younger age group, as compared to an older audience. Since the focus groups centered on a smaller group of people, two sets of surveys were also conducted in Western Civilization I history classes in order to gain more data. The same questions were used within the focus groups and surveys, and mainly centered on the participants' individual views of what is entailed in archaeology as a profession.

One of these questions pertained to the participants' exposure to the field of archaeology, including television programs and documentaries. Consistently one particular television series

² Appendix A

kept appearing, the History Channel's *Digging for the Truth*. This series premiered in 2005 with a total of thirteen episodes in the first season. The program's premise is to send its host, Josh Bernstein, on different expeditions to "unlock the world's greatest mysteries."³ Episode topics from the first season include Nefertiti, Pompeii, the Lost Tribe of Israel and the Great Pyramids. These topics, as does most of the first season, deal with historical mysteries that have never been solved, and two episodes copy directly from the Indiana Jones films to discuss the Ark of the Covenant and the Holy Grail. It may also be plausible that in order to differ from *Raiders of the Lost Ark*, the *Digging for the Truth* program focused on the possibility that the Ark was taken to Ethiopia, and still remains there under the protective watch of religious guardians. In addition to studying the show's layout, it was necessary to analyze the show's host, Josh, to see what his role was in the series and if he adopted any of Indy's attributes in order to portray a credible archaeological persona, which would reinforce the idea of the actuality of the Indiana Jones Effect.

Indy's influence has also spread past the world of media and into the realm of amateur archaeology, especially into the field of biblical archaeology. Within recent years biblical archaeology has been criticized for becoming a commercialized treasure hunt, and for not being based on sound scholarship. One of the conjectured reasons is because of the prevalence of amateur archaeologists who aspire to find particular biblical artifacts in hopes that they will support the biblical text. I chose to focus on the work of Ron Wyatt and his Wyatt Archaeological Institute because of his most acclaimed discovery, the remains of Noah's Ark, and because he is a self-proclaimed Christian who comments about his research, "We have prepared our research in this volume as an affidavit of the total accuracy and validity of the

³ *Digging for the Truth: The Complete Season 1* (A&E Television Networks, 2005)

Word of God.”⁴ Wyatt’s Noah’s Ark excavation has many similarities to the Indiana Jones movies because it deals with a disputed biblical artifact, and because there is no definitive historical or archaeological record to support Wyatt’s theory. In order to establish the credibility of Wyatt’s excavations and archaeological practices, his book, excavation journals, and film were researched. Wyatt’s scientific discoveries and theories were also compared to the academic opinion of Dr. Richard Erickson, professor of Astronomy and Physics, who teaches Geology at Lycoming College. Dr. Erickson analyzed Wyatt’s argument about the discovery of Noah’s Ark in the middle of a lava flow, in order to see whether Wyatt’s reasoning was sound.

Finally, the work of professional archaeologist, Dr. Susan Redford, was compared to the work of Ron Wyatt and his colleagues. Dr. Redford gave an interview during which she discussed her ongoing excavations in Egypt, and also her opinions on popular archaeological representations and amateur archaeology. This interview also served as orientation to the theories, methodologies, and practices standard in academic archaeology. However, before understanding the work of current archaeologists, a firm understanding of archaeology’s beginnings was necessary to follow the progress of archaeology from a disorganized pursuit to a scientifically organized profession. These included William Foxwell Albright, who is considered the father of biblical archaeology and was the first to combine the biblical text with concrete archaeological evidence. Sir Flinders Petrie also made significant contributions to the field by identifying the significance of a tel as “a mound of many cities”⁵, and also by first using pottery for chronological dating.

⁴ Wyatt, Ronald E., *Wyatt Archaeological Research’s Discoveries Volume*, (Nashville: Wyatt Archaeological Research Publications, 1995).

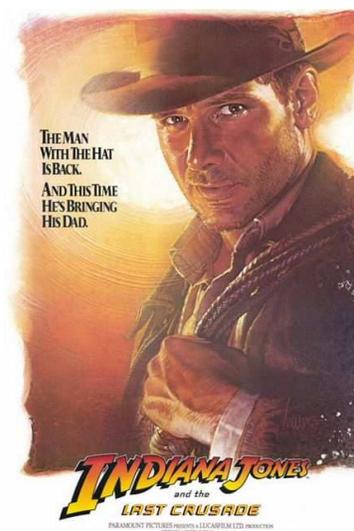
⁵ Albright, William Foxwell, “The Chronology of a South Palestinian City, Tell el-Ajjul” *The American Journal of Semitic Languages and Literature*, (1938): 337-359.

After carefully comparing popular media portrayals and actual archaeological information, looking at all of the elements together allowed for the decipherment of their impact in the academic archaeological community. The media-created image of archaeology is impacting not only those who watch these films and other historical documentaries, but also scholarly research and a line needs to be drawn between the two. Are these perceptions harmless, or have they done permanent damage to the archaeological record? A thorough study of the interface between popular archaeological media, and the scholarly archaeological community shows that there is an Indiana Jones Effect, which impacts the perception of popular culture, as well as the work of archaeologists throughout the world.

The Man behind the Hat

Indy's main contribution to the field of archaeology is the prototypical image of what an archaeologist should look like. He consistently is shown wearing his brown fedora, button down cotton shirt, and leather pouch slung over his shoulder. He is also the first Americanized movie character to portray the demeanor and temperament of an archaeologist. However, there is more to Indy's character than just his appearance. There is something about the character that suspends viewers' disbelief and makes the Indiana Jones Effect powerful enough that it influences modern documentaries and archaeological excavations.

There are three main elements which are essential in determining the credibility of the Indiana Jones character. Indy's realistic archaeological pursuits achieve suspension of disbelief which is highly important to the movies. First, he shows his dedication to scholarship by



2- www.indianajones.com;
Original movie poster for
*Indiana Jones and the Last
Crusade*

teaching at Marshall College. Many early archaeologists were scholars in their own right, but also became professors in order to instruct others on the methodologies of archaeology, as well as about the history of ancient civilizations. Most modern archaeologists become at least part-time professors in order to have a college or university sponsor their excavations, and provide suitable atmospheres for publication of their research. Indy additionally uses his link with Marshall College to find a suitable home for his recovered artifacts in their museum. The belief that historical artifacts should be preserved for future generations is a founding principle of archaeology, and would be nearly impossible without the aid of museums.

Another example of Indy's academic talents is his mastery of dead languages, including Latin and Greek. This is an incredibly important skill in professional archaeology. Most Near Eastern archaeologists are able to translate at least two ancient languages, and many are fluent in numerous ancient and modern languages, including but not limited to Hebrew, French, German and Egyptian hieroglyphics. Being able to decipher inscriptions can prove to be invaluable to an excavation because it can date a site based on the dialect used, and also give additional information about an ancient people or event. Eventually, in order to uncover the location of the Holy Grail in *The Last Crusade*, Indy must first translate an inscription from one of the three stone markers left behind by the knights of the Crusades. Indy is not only capable of translating the inscription, but also dating the Latin grammatical structure and syntax, which provides the proper chronology for the marker. Even Indy's interaction with the Nazis lends believability to his character because Hitler was indeed a growing political power during the middle to late 1930s, and certainly would have been a force to reckon with throughout Europe.

Indy may be held in high academic regard as a professor and have an uncanny ability to translate texts, but he also makes mistakes, which is a second important element to his persona.

Viewing audiences are able to relate to Indy because throughout the movies he makes errors, which gives him an element of humility and makes him more human. For example, in *The Last Crusade* Indy is forced to make his way through a network of challenges in order to reach the Holy Grail. The first one requires Indy to correctly spell out the name of God, which he knows is Iehovah. However, he makes a mistake and begins the spelling with a 'J', which is a German transliteration of the original Hebrew, which could not have appeared in a Latin inscription, since the Latin alphabet does not include the letter 'J'. While this may seem like a minor spelling mishap, this is something that a well educated viewer can latch on to and feel a connection with Indy and his adventures.

Indy's witnessing of the opening of the Ark of the Covenant from the *Raiders of the Lost Ark* film creates a connection with the audience because any biblical scholar and most educated people would be aware of the Ark's immense power and would know not to look into the Ark for fear of being struck down by God's power. One particular biblical passage recounts the power of the Ark to bring plagues upon Israel's rival nations, namely the Philistines, and also to kill those who did not please the Lord (I Samuel 6). It is also written that the Ark was carried in front of the Israelites during their military conquests in Canaan, so that God's power would aid in the conquest of their enemies (Joshua 6). This knowledge is crucial in understanding Nazi interest in the artifact, and also in getting Indy out of trouble and saving his life, serving as yet another point of connection between the viewer and the archaeological hero.

Thirdly, Indy deals in fringe archaeology. This arena of archaeology is usually reserved for artifacts and theories surrounded by high levels of skepticism and contention. Two highly discussed artifacts of fringe archaeology are the Ark of the Covenant and the Holy Grail, both of which are discussed in the two films. Both of these objects are surrounded by skepticism as to

whether they actually exist, where their current location is, and what powers they may possess. Because they are so controversial, scholars and amateurs alike speculate about these objects, leaving many to wonder what the real story is behind them. These artifacts are also extremely interesting and commonly known, because of their relation to the Judeo-Christian culture. Followers of these religions look for proof of these artifacts' existence because it substantiates their belief, and because of that an audience feels a connection to these films which provide them with answers. The films also take advantage of many open-ended possibilities to conjecture about the whereabouts of the artifacts. Indy presents the best of both worlds by setting out to find a plausible story underneath all the myth, and discovering the objects at the same time. These films may not give the best historical explanation for these artifacts' location, but they do give enough evidence to draw in an audience and make them believe in the story line.

All of these factors taken together suspends disbelief about Indy as an archaeologist and also establishes a close connection with the viewer. To make the movie more entertaining a good amount of adventure and intrigue are added in, but they are usually centered around foreign jungle tribes or ancient booby traps. These elements may seem exaggerated, but the fact that they are somehow connected to a foreign, remote location can make the average movie fan believe that this could happen to any archaeologist. After all Indy does not ask to be put in perilous situations, he gets dragged into them while searching for historical treasures.

Survey Says...?

After identifying the elements that created the suspension of disbelief surrounding Indy's character, analysis of popular perception through focus groups and surveys provided evidence of the Indiana Jones Effect. There were a total of seventy-two participants who were all given a

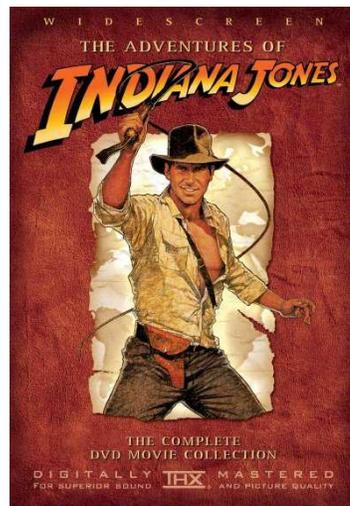
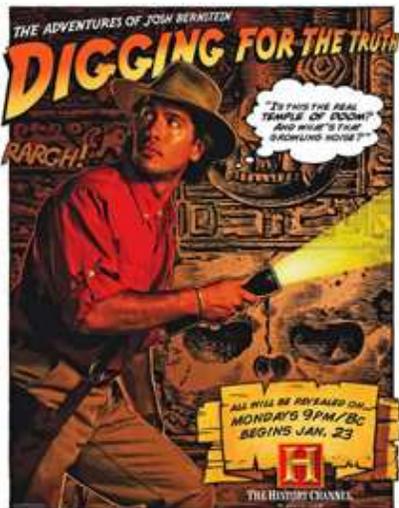
questionnaire which they were asked to fill out as completely and truthfully as possible.⁶ The focus groups were completed over a span of two weeks and involved a total of six students and two professors. Three of the students were archaeology majors, and the remaining three were from unrelated majors. The professors were also from outside the archaeology major. In addition to filling out the questionnaire, the focus group participants were asked to engage in a discussion about their answers, which was recorded for later analysis. Although these discussions were very insightful, low attendance in the focus groups provided insufficient data, and necessitated other means of collecting information. The questionnaires were then handed out as surveys in two consecutive class periods of Western Civilization I in order to collect a significant amount of statistical evidence.

The questionnaire began by asking the participants to describe their image of a typical archaeologist including gender, location, clothing and equipment. The results showed that 57% of those surveyed envisioned a male archaeologist, while 13% imagined a female, and 26% were unspecific as to gender. One necessity to an archaeologist's wardrobe, mentioned by 24 people, was some form of head protection, usually a baseball cap or bandana. While covering the head is very important in arid desert environments, what was surprising was that 15 people specifically described an "Indiana Jones" style hat. Out of the total participants, 60% remarked that an archaeologist should always wear khaki colored clothing, and among the remaining 40%, no other color was mentioned. Nearly 70% of the participants pictured archaeologists in arid locations, namely Egypt/Middle East, but there were also a few mentions of jungle or Amazon-like locales. It is interesting to note that the majority of participants believed excavations took place in the same areas as those in the Indiana Jones films, namely Egypt in *Raiders of the Lost Ark*, and the Amazon in *Temple of Doom*.

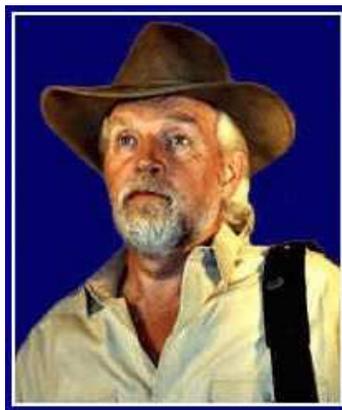
⁶ Appendix B

Participants also viewed two different movie clips as part of the questionnaire. One clip was taken from *The Mummy Returns* made by Universal Studios in 2001, and another was from *Indiana Jones and The Last Crusade*. The participants were asked to judge these clips on how they believed an excavation would proceed in regards to their methodology and the appearance of the archaeologists. The first clip from *The Mummy Returns* was taken from the beginning of the film in which the two main characters Eddie and Rick O'Connell, played by Rachel Weis and Brendan Fraser, are excavating in a dark inner chamber of an ancient Egyptian temple. The participants of the survey consistently commented on the tools which Eddie, as a trained archaeologist, used during this scene. The tools shown consisted of brushes and small chisels, which corresponded with the participants' image of an archaeologist, and also with the delicate treatment of artifacts which they described in their questionnaire. Rick on the other hand, smashes in a wall by using a crow bar after getting frustrated with the tediousness of Eddie's small tools. Of the 29 participants who discussed tools on their questionnaire, all of them commented on the believability of Eddie's method and the implausibility of Rick's destructive nature. The second film clip from *The Last Crusade* shows Indy beginning his search for the stone marker which will lead him to the Holy Grail. Indy does a fair amount of destroying property in this clip, including breaking through a floor tile in a library and dismembering a skeleton in the catacombs to create a torch. However, unlike the use of a crow bar to break down a wall, Indy's methods were not nearly as harshly criticized. Instead the participants responded that they believe the clip to be less "Hollywood" and more realistic because of setting the scene in a dingy, cob web covered catacombs laden with skeletons. The greatest contention was over Indy's appearance. Instead of wearing his usual khaki clothing and fedora, he was shown in a suit, which did not correlate with the participants' vision of an archaeologist.

Following the data, a fairly specific picture of an archaeologist develops. Based on majority results an archaeologist is a male who dresses in light-weight khaki clothing, wears an “Indiana Jones” hat, and is typically found somewhere in the desert. He also is found in exotic locations and may have to be destructive or become involved in dangerous situations in order to find what he is seeking. The data alone is convincing that the Indiana Jones Effect indeed impacts the perception of the population. What is even more convincing is the survey-created description of an archaeologist compared to the pictures of the archaeological characters being studied in this thesis.



3 www.DiscoveryChannel.com; original billboard for Digging for the Truth's first episode
 4 www.indianajones.com; Cover to DVD collection



5 www.wyattmuseum.com

The top left picture is a promotional billboard for the History Channel series *Digging for the Truth*, the top right picture is from the original movie poster for *Raiders of the Lost Ark*, and last is an image of Ron Wyatt, founder of the Wyatt Archaeological Institute. All three of these archaeologists are men who are wearing brown or khaki clothing, and all of them are wearing the quintessential “Indiana Jones” hat. The *Digging for the Truth* billboard is clearly exploiting the popularity of the Indiana Jones films to sell its own program, and Ron Wyatt appears to be using the same philosophy to draw attention to his Archaeological Institute. Additionally, all of these images match the description given by a majority of the focus group and survey participants. This data supports the thesis that the Indiana Jones Effect has had a significant impact on popular beliefs. It is also a good starting point for understanding the relationship between Indy and archaeological media.

Digging for the Truth

As is evident from the images above, the promotional materials for both *The Adventures of Indiana Jones* and History Channel’s *Digging for the Truth* are strikingly similar. The *Digging for the Truth* poster even goes so far as to use the same typeface and one of the locations, the Temple of Doom, as the Indiana Jones trilogy. The host, Josh Bernstein, is in acceptable archaeological attire and the ad implies that he is the one out looking for these lost artifacts and locations. The reality is that Josh is merely the host of the show, who does indeed travel to exotic locations but does not participate in a real archaeological excavation. Rather Josh travels the globe seeking expert opinion about different artifacts, monuments or ancient cultures. These bits of information are then put together within the hour-long program to create a plausible explanation for the viewing audience.

Josh has absolutely no archaeological credentials, but the show uses the same tactics as the Indiana Jones movies to suspend disbelief and make Josh seem like a credible archaeologist. Most of the *Digging for the Truth* episodes discuss elements of fringe archaeology, including the Ark of the Covenant, the Holy Grail, and the mummy of Nefertiti. All of these topics are extremely open-ended and have no concrete archaeological record to support or refute any information given in the episode. Josh's role is to interview experts and form a plausible story that is believable to the viewing audience. Whereas Indy serves as his own expert, Josh must use experts within the scholarly community to support the show's ideas. This lends much more credibility to the program because academics are thought to be much more reliable and trustworthy than any other personal opinion. While Josh is not an archaeologist or scholar -he actually graduated from Cornell with a degree in psychology- he takes on the role of an archaeologist by tracking down clues to understand some remote and mysterious artifact or aspect of history.

Josh also fits into the mold presented by the surveys. He certainly fits the stereotypical image, and he also travels around to remote corners of the world on a regular basis, usually several in one episode. *Digging for the Truth* also came up in responses to another question on the survey which dealt with exposure to the field of archaeology. Some of those surveyed had actually participated in archaeological digs, but those who had not seemed to live vicariously through television. Several participants stated that they loved the History Channel series, including professors and archaeology majors who almost seemed ashamed that they were such huge fans of the show. They all were aware that *Digging for the Truth* was just a television program, but they religiously tuned in to see what Josh would "uncover" next. For those who are not experts in archaeology, television documentaries and series are the closest exposure they will

have to a real archaeological dig. This fact makes viewers much more likely to believe the information because they will not have any other experiences to contradict what is portrayed on television. At least for the period of the show the suspension of disbelief is clearly evident and the Indiana Jones Effect continues to play a prominent role in archaeological media.

Amateur Archaeology

Media has undoubtedly affected archaeological exposure and the image which is presented to the general viewing public. However, I believe it has also become an instrument used by amateur archaeologists to lend credence to their excavations. It seems that the Indiana Jones Effect has leaked into the minds of some who believe that they can unearth priceless historical artifacts without proper training or methodology, and nowhere is this concept more evident than in the field of biblical archaeology. This particular area of archaeological work has been hotly debated since its beginnings in the nineteenth century. Most early biblical archaeologists were biblical scholars who hoped to go out and unearth evidence of sacred places by using the Bible as their only guide. Over the span of a century, archaeology became more of an interdisciplinary process where more precise methods and techniques were employed to determine the location and importance of a site.⁷ Yet even in modern times there are those who abandon the established practices of scientific archaeology, and set out to make believers of the biblical skeptics. One of these men is the late Ron Wyatt, founder of the Wyatt Archaeological Institute in Tennessee. Wyatt is not a trained archaeologist, nor has he ever taken courses in archaeological methodology. Wyatt became interested in the field of archaeology after an article in *Life Magazine*'s September issue in 1960. The article contained an image capture by a satellite of a boat shaped formation in the mountains of Ararat in Turkey, and explained that a Turkish

⁷ Fagan, Brian, "Short History of Archaeological Methods, 1870 to 1960", in *Handbook of Archaeological Methods: Vol. 1*, eds. Herbert Maschner and Christopher Chippindale, (Lanham: AltaMira Press, 2005), 40.

military officer claimed that this formation was the remains of Noah's Ark. Wyatt immediately became interested in this site because of its religious significance, and planned to one day visit the site. Over the next several years, Wyatt's ambition to visit the site turned into a desire to excavate the site in order to validate the Bible.⁸ Between 1977 and 1987 Wyatt and several others attempted to prove that this



6 www.wyattmuseum.com; Boat-shaped formation in the mountains of Ararat

rock formation was in fact Noah's Ark.

Because he never received proper permits or brought in an academic archaeological team to excavate the site, Wyatt was only ever able to collect what was visible on the surface of the boat-shaped formation.⁹ Wyatt's scientific analysis consisted of metal detectors, some radio carbon dating and mostly personal conjecture. Wyatt claims that many scholars and scientists discredited his findings, including Prof. Salih Bayraktutan, head of the Noah's Ark Commission at Ataturk University, because of their lack of faith. He claims that some are blind to his discoveries because they are followers of Satan, which he quotes from 2Thessalonians 2:11, "And for this cause God shall send them strong delusion, that they should believe a lie: That they all might be damned who believed not the truth, but had pleasure in unrighteousness."¹⁰ Many scholars have been up in arms over excavations similar to these, some even pertaining to other Noah's Arks around the world, because of their negative impact on the field of archaeology.¹¹

⁸ Wyatt, Mary Nell, *The Boat-Shaped Object on Doomsday Mountain*, (Nashville: Wyatt Archaeological Research Publication, 2004) 1.

⁹ Ibid, 48, 54.

¹⁰ Wyatt, Mary Nell, *Wyatt Archaeological Research's Discoveries Volume*, (Nashville: Wyatt Archaeological Research Publication, 1995) 30-35.

¹¹ Jaroff, Leon, "Phony Arkaeology" in *Time Magazine*, 5 July 1993, 51.

Amateur archaeologists are receiving press because of their exciting finds, but have caused numerous black eyes to scholars when they are found to be false claims. Their erroneous claims about artifacts have influenced popular opinion to believe that archaeology is a treasure hunt between money hungry “archaeologists” and overly eager museums fighting over the best prize. A recent example is the controversy over the James ossuary.¹² This 2000-year-old bone box surfaced in the collection of Obed Golan, an antiquities collector in Tel-Aviv, bearing the inscription: “James son of Joseph, brother of Jesus.” Eventually it caught the attention of biblical scholars, who became very curious about the authenticity of the ossuary. Andre Lemaire, a leading scholar in the translation of Semitic inscriptions, was one of the first to examine the writing on the box. He believed that the inscription was real, and if it had been a fake, it would have been the best forgery that he had ever seen.¹³ Many other scholars flew in from around the world to examine the James ossuary while it was on display at the Royal Ontario Museum, and overall consensus seemed to be that the box was a real artifact. The box was scientifically analyzed and dated to 63 A.D., but scholars believed that the inscription had been added at a later date.¹⁴ Later, during an investigation at Golan’s house, a basement lab was discovered which contained evidence that Golan had been forging inscriptions onto other ossuaries and selling them to the highest bidder. Golan is now in the middle of a trial to substantiate the James ossuary and other ossuaries’ authenticity, but undoubtedly this dilemma has scarred the credibility of the biblical archaeology community.¹⁵

¹² Mayell, Hillary, “Burial Box may be that of Jesus’ Brother, Expert Says”, *National Geographic*, October 2002, http://news.nationalgeographic.com/news/2002/10/1021_021021_christianrelicbox.html (accessed March 26, 2007).

¹³ Hershel Shanks and Ben Witherington, *The Brother of Jesus*, foreword by Andre Lemaire, (New York: Harper Collins, 2003) 245-265.

¹⁴ Mayell, Hillary, “Jesus Box is a Fake, Israel Experts Rule”, in *National Geographic*, June 2003, http://news.nationalgeographic.com/news/2003/06/0618_030618_jesusbox.html (accessed March 27, 2007).

¹⁵ Shanks and Witherington, *Brother of Jesus*, 265-273.

The controversy over amateur archaeology continues up until very recently with the supposed discovery of Jesus' family tomb in Jerusalem. The Discovery Channel aired a special entitled *The Lost Tomb of Jesus* on March 4th, 2007, which claims that six ossuaries found in a tomb excavated in the 1970's are all members of Jesus' family.¹⁶ Once again this endeavor has been highly criticized because no professional archaeologists worked on the documentary, and the entire theory has been pieced together with little viable evidence and too much personal conjecture.¹⁷ The director of the documentary, Simcha Jacobovici, is a film-maker by trade and has no archaeological training. In order to uncover the "lost tomb," he and his crew had to dig into a shaft at an apartment complex in Jerusalem, but failed to acquire proper permits. They were quickly removed from the premises by the Jerusalem Department of Antiquities and the tomb was re-covered. Sadly Simcha and his crew were able to get inside the tomb briefly, before being caught, and undoubtedly caused irreparable damage to the tomb in the process. While scholars around the globe believe this discovery to be a sham, nearly four million viewers tuned in to watch this documentary.¹⁸ This only serves to support the idea that the public is highly interested in aspects of fringe archaeology and that archaeological media has clouded popular opinion through inaccurate, amateur endeavors.

The Real Deal

The truth of the matter is that archaeology is not intriguing or fast paced enough to capture the attention of general audiences. Accredited digs very rarely receive such wide spread media attention because they seldom make groundbreaking discoveries comparable to the lost tomb of Jesus. Field work is a long, tedious process which involves detailed stratigraphic

¹⁶ "The Lost Tomb of Jesus". <http://www.discoverychannel.com> (accessed 26 March 2007).

¹⁷ Scham, Sandra, "The 'Jesus Tomb' on TV", *Archaeology*, 3 March 2007.

¹⁸ Friedman, Matt. "Jesus Tomb not Mary Magdalene's", *Associated Press*, March 2007, <http://dsc.discovery.com/news/2007/03/14/jesuscritic_arc_02.html?category=history&guid=20070314140000> (accessed 27 March 2007).

analysis, as well as hours of work cataloguing pottery pieces and skeletal remains. This would hardly draw the attention of millions of viewers. However, the history and practice of archaeological research and methodology is quite interesting and important when studying the past. No profession has had such an impact on the understanding of ancient and modern societies as the field of archaeology.

Archaeology began to develop into a scientific profession in the late 1800's. Alexander Conze, a German scholar, is credited as the first archaeologist to give some organization and thought process behind his excavations. His first dig was at the shrine of the Cabiri in the northern Aegean Sea on the island of Samothrace in 1871.¹⁹ Conze always had an architect on site to ensure that the buildings he was excavating would remain structurally stable, and also to analyze the construction methods and architectural style. This is one of the first examples of combining cultural history with archaeological evidence. Conze's student, Ernst Curtius, later excavated the ancient site of Olympia from 1875 to 1880, where the original Olympic Games were held each year. Curtius' team uncovered the stadium, surrounding buildings and temples all under the watchful eye of an expert architect.²⁰ At the end of each season, Curtius would relinquish all found artifacts to a museum that would later house all the collections from this series of excavations. In addition to preserving the material culture from the site, Curtius also published all of his findings with photographs and detailed drawings of the excavation sites. This advance opened up the archaeological record to the world, and most importantly to other archaeologists to aid in their research.

While these expeditions continued in Greece, an Englishman was embarking on his own field work which would prove revolutionary to archaeology as a science. General Henry Lane-

¹⁹ Fagan, Brian, "Short History of Archaeological Methods, 1870 to 1960", in *Handbook of Archaeological Methods: Vol. 1*, eds. Herbert Maschner and Christopher Chippindale, (Lanham: AltaMira Press, 2005), 41.

²⁰ *Ibid.*, 41.

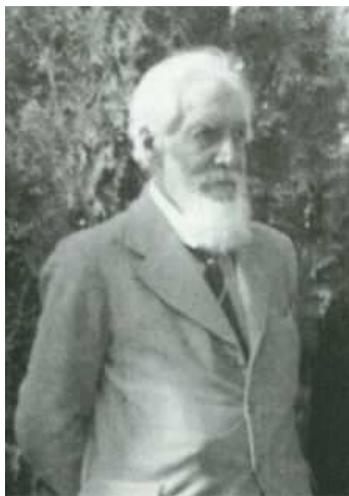
Fox Pitt-Rivers became interested in archaeology after reading Charles Darwin's *Theory of Evolution*. Pitt-Rivers hypothesized that as humans evolved into more sophisticated beings over time, so to did the material culture of civilizations. Pitt-Rivers is most well known for his excavations in the English countryside at his estate of Cranborne Chase. Pitt-Rivers was extremely, if not overly meticulous in his work, and documented every piece of evidence found, even down to seeds. His greatest contribution to the field, however, was his observance of stratigraphy. This revolutionary practice was used to study the description and interpretation of stratification, or layering of deposits. Stratigraphy then determines the sequence of these deposits in a historical order.²¹ Pitt-Rivers observed stratification in his excavations by clearing sites down to bed rock, but leaving pillars along the way which preserved all the strata, or all the layers of deposits. Any artifacts found within the individual stratum were mapped, catalogued and drawn and put in proper chronological order in comparison with other artifacts from the site.²² All of this documentation was compiled into a four-volume publication, *Excavations on Cranborne Chase* (1887-1898), but sadly Pitt-Rivers' contributions would go unnoticed until decades later.

While Pitt-Rivers was the first to recognize the significance of strata to an excavation, Sir William Flinders Petrie was the founding father of accurate dating methodology with the use of stratification. Thanks to the advances of Sir Flinders Petrie, archaeologists began to look at stratigraphy to study the layers of habitation and destruction, and also to aid in determining the chronology of a site. Petrie was trained as a surveyor, and in 1880 completed the first full scale

²¹ Mills, Barbara J. and Vega-Centeno, Rafael, "Sequence and Stratigraphy" in *Handbook of Archaeological Methods, Vol. 1*, eds. Maschner and Chippindale (Lanham: AltaMira Press, 2005), 177.

²² Fagan, Brian, "History of Archaeological Methods", 43.

survey of the Giza Pyramids. In his book *Methods and Aims in Archaeology*, Petrie commented about his travels in Egypt, “It is sickening to see the rate at which everything is being destroyed,



and the little regard paid to preservation.”²³ As Petrie began conducting his own digs in Egypt he became known as a ruthless stickler for detail, whose workers would spend hours every night drawing and cataloguing countless potsherds. One of these workers, Howard Carter, would later go on to discover the tomb of King Tutankhamen in the Valley of the Kings. At the site of Naqqada, Petrie truly developed his theory on the importance of pottery. After

discovering hundreds of tombs, Petrie and his team set about recording all of the burial goods and laying out detailed plans of each tomb. As he began to sort through the different types of pottery left as burial offerings, Petrie was able to piece together a steady progression from the most rudimentary of pot forms, to elaborately decorated vessels. Petrie used the pots to date all of the tombs, and thus developed the method of sequence dating. He was also able to use pottery fragments from Naqqada and other Egyptian sites to date the period of Minoan and Mycenaean excavations because of the active trade between these civilizations. This form of dating became known as the cross dating method. In addition to his innovative use of pottery, Petrie also identified the importance of the Near Eastern *tell* as a mound of many cities piled on top of each other.²⁴ Petrie’s excavations in Palestine were the first example of systematically “peeling back” the layers of a *tell* to reveal the various layers of civilization.

Another founding father, William Foxwell Albright, who excavated in Palestine from 1922 to 1927, combined all of this information together along with biblical research, geography,

²³ Fagan, Brian, “History of Archaeological Methods”, 44.

²⁴ Mazar, Amihai, *Archaeology of the Land of the Bible: 10,000-586 BCE*, (New York: Doubleday, 1992), 11.

and ancient Near Eastern history to form the basis of biblical archaeology.²⁵ Albright put all of these elements together in his excavations throughout the Near East in order to prove the historicity of biblical figures, especially the exploits of Joshua. Another archaeological founder, Mortimer Wheeler, was also instrumental in changing archaeology from a treasure hunt into a scientific discipline by continuing to build on the advancements made by Petrie, Albright, and others. Throughout all of his excavations from the early 1920's to the 1960's, Wheeler focused on broader theoretical questions, instead of searching for specific artifacts or ancient sites. He also revived the techniques which Pitt-Rivers pioneered during his Cranborne Chase excavations, and succeeded in permanently altering the course of archaeological history.²⁶

A Method to the Madness

The foundations of archaeological methodology established the importance of thorough research, which was greatly enhanced thanks to the technological advances of the twentieth century. While archaeologists still record data on site by hand, computer software has aided archaeologists in using that data to its fullest potential. Programs such as Archaemath, developed by Uzy Smilansky, allows archaeologists to use mathematical and computational methods to analyze ceramics and lithics, or stone works.²⁷ Software, like SPSS, also greatly aids in calculating significant statistical information, which now makes up a majority of evidence gathered from the field. Basic understanding of statistics and quantitative analysis is now knowledge required for most archaeologists. Additional programs can be used to analyze seriation, correspondence analysis of artifacts, and mapping. One of the leading systems for this purpose is the Bonn Archaeological Software Project (BASP) developed in Germany in 1973.²⁸

²⁵ Mazar, Amihai, *Archaeology of the Land of the Bible*, 12.

²⁶ Fagan, Brian "History of Archaeological Methods" 54-55.

²⁷ Computerized Archaeology, www.weizmann.ac.il/complex/uzy/archaeomath.html, (accessed 18 April 2007).

²⁸ BASP, www.uni-koeln.de/~al001/basp.html, (accessed 18 April 2007).

Geographic Information Systems, or GISs, also allow archaeologists to input several different databases into one program and determine their effect on each other.²⁹

In addition to the technological advances, archaeology has widened its horizons to encompass numerous other related fields. Whereas early excavations focused only on biblical or historical evidence, current archaeological teams involve an entire gamut of disciplines.

Geologists, ecologists and anthropologists are commonly employed to study the environment of a site and its impact on the culture being studied. Chemists, biologists, and botanists study material remains and their significance to a dig. As preservation becomes increasingly important to the field of archaeology, chemists are being widely sought after to preserve artifacts or to clean them for better analysis. Just as Conze and Curtius both had architects on their sites, so too do modern archaeologists. Architects, as well as engineers, ensure the structural stability of a find, particularly in tomb or cave excavations. They can also analyze building techniques and tools. In order to study human skeletal remains, osteologists and forensic scientists are commonly asked to study diseases, deformities and cause of death. Crew members are often designated as staff artists and photographers who are charged with the crucial responsibility of recording artifacts *in situ*, or as they lay in the ground. Artists, along with epigraphers, language experts used for translation of inscriptions, provide most of the material record from dig sites.³⁰

Clearly archaeology has made significant advances from disorganized treasure hunts, to technologically advanced excavations that can involve numerous teams of researchers.

Technology has also allowed archaeology to branch into areas beyond the surface of the earth.

Marine archaeology is becoming increasingly popular and allows divers to uncover the ruins that

²⁹ Gillings, Mark and Wheatley, David, "Geographic Information Systems" in *Handbook of Archaeological Methods*, Vol. 1, eds. Maschner and Chippindale, (Landham: AltaMira Press, 2005), 373-375.

³⁰ Chippindale, Christopher, "Colleagues, Talking, Writing, Publishing" in *Handbook of Archaeological Methods*, Vol. 2, eds. Maschner and Chippindale (Landham: AltaMira Press, 2005), 1339-1371.

have been lost to the sea. This field began by exploring ship wrecks, but has now expanded into studying sunken islands and coastlines along Italy and Greece.³¹ Thanks to these expeditions, a great deal of information can be gained from artifacts to which archaeologists previously never had access.

Whether an excavation is on the surface of the earth or submerged in water, once a comprehensive team is assembled, dig directors must begin laying out the plans for their site. Any archaeological fieldwork requires patience and detailed study of the three main types of archaeological evidence. While definitions of these types may vary among field schools, they essentially consist of objects, surfaces, and deposits.³² Objects consist of material remains, whether man-made, bones, rocks, charcoal pieces, etc. Surfaces are not only the tops of excavation sites, but the division layers between strata, walls, floors, and pits. A deposit is an individual stratum, but also walls that cross through strata, and fill used in pits or to stabilize architectural structures.³³

In order to collect data efficiently on these types of evidence, archaeologists divide their site into workable segments, or units, which allow for small sections of a much larger site to be viewed at one time. The size of these units is dependent upon the archaeologist's decision, such as 1 x 1m, but they should be consistent throughout the excavation. These units can be plotted on a map according to the four cardinal points (N, S, E, and W) or they can be oriented to a topographical feature on the site.³⁴ The layout of these units all together forms a grid, which the archaeologist can then use for accurate record-keeping of artifacts. The process of laying out

³¹ Feulner, Mark A. and Arnold, J. Barto, "Maritime Archaeology" in *Handbook of Archaeological Methods, Vol. 1*, eds. Maschner and Chippindale, (Lanham: AltaMira Press, 2005), 277-279.

³² Glassow, Michael A., "Excavation" in *Handbook of Archaeological Methods, Vol. 1*, eds. Maschner and Chippindale, (Lanham: AltaMira Press, 2005), 134.

³³ *Ibid.*, Table 5.1, 134.

³⁴ *Ibid.*, "Excavation", 136.

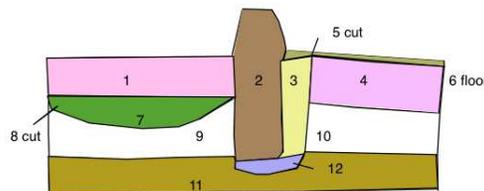
grids and marking coordinates of an excavation used to be an inexact science at best. Most of the time, trenches and grids were laid out haphazardly, and crossed all over the field, overlapping each other. Today mapping software can be used to accurately lay out a grid off of a designated survey point. The United States Geological Survey, or USGS, developed several software applications, as well as compiled an extensive database to aid in proper cartographic layouts.³⁵ In addition to strategically setting up grid patterns, balks and boundary walls are implemented to study the stratigraphy of a site. Balks are unexcavated areas of soil, which are left in tact to study stratigraphy. Balks can be left in between each unit which creates a series of separate pits across the site, or they can be left along particular grid lines. Boundary walls are left along the perimeter of the grid and often prove useful in studying the variance of stratigraphy throughout the site.³⁶ Once stratification in balks and boundary walls are analyzed they can be used to determine the chronology of a site. Pitt-Rivers and Petrie made these first basic discoveries about stratification, but it was not until the 1970's that the next great advancement was made in accurate stratigraphic analysis, thanks to the work of Dr. Edward Harris.

Through his excavations, Harris developed a new method of assembling individual strata from earliest layers at the bottom of a unit to the latest layers at the top. By the early 1970's, Harris compiled all of his research and developed the first widely used laws of stratigraphy: 1) The Law of Superposition, which states that within a series of strata, the upper layers are younger than the lower layers. 2) The Law of Original Horizontality, which states that any layer deposited in the earth has a tendency to lie in a horizontal position, 3) The Law of Original Continuity states that any deposit layer, or any feature that crosses through several layers, will be bounded by a basin, and 4) The Law of Stratigraphic Succession, implies that any unit of

³⁵ USGS Mapping Science Software, <http://ask.usgs.gov/mapsoftware.html> (accessed 18 April 2007).

³⁶ Glassow, Michael A., "Excavation", 150.

stratification is placed in a sequence between the bottom of the stratum above it, and the top of the stratum below it.³⁷ All four of these laws are still widely used by archaeologists today along with Harris' other development, the Harris Matrix. The Matrix is a diagram used to map the entire stratigraphic sequence of a site. The example shown here illustrates how a simple Harris Matrix is constructed, moving from the earliest layers at the bottom, to the latest layers at the top.³⁸ The top picture shows a sectional diagram

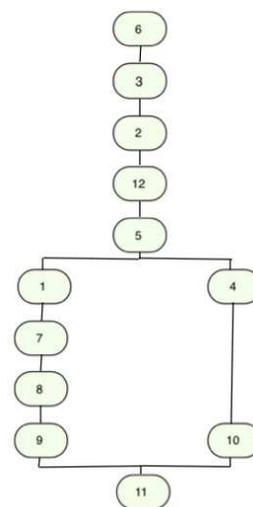


7- Sectional diagram of strata

of the strata found within a particular unit as seen in the balk. The bottom picture is the Harris

Matrix of this unit. The oldest stratum, 11, is

placed at the bottom, and the remaining levels are arranged in their proper historical order. Notice that levels 9, 8, 7 and 1 are on the left and levels 10 and 4 are on the right because of their division by 5, 12, 2, 3, and 6. Level 5 is a modern trench dug to place in a wall, signified by level 2. The remaining levels are fill surfaces used to stabilize the wall. As is evident, the numbers are assigned depending on when they were uncovered, and not based on their chronology.



8- Harris Matrix of above diagram

These matrices are very important tools used by archaeologists in helping them understand their particular site. There are many other tools used as well, some of which were used by archaeology's founders, and some of which have recently been adapted to archaeological research. A few of these were originally used by geologists and geophysicists to study rock formations and other material

³⁷ Mills, Barbara J. and Vega-Centeno, Rafael, "Sequence and Stratigraphy" in *Handbook of Archaeological Methods*, Vol. 1, eds. Maschner and Chippindale, 196.

³⁸ *Ibid.*, 198-199.

buried deep within the ground. The simplest of these is a ground penetrating radar device, which uses sonar waves to map out objects in the soil. Much more advanced instruments, such as a cesium vapor magnetometer, and an electromagnetic conductivity meter, help archaeologists determine where excavation would yield the most results.³⁹ In addition to technological tools, an archaeologist employs an arsenal of shovels, trowels, picks and brushes. Shovels quickly clear surface layers as long as there is no possibility of damaging artifacts. Trowels, usually a mason's pointing trowel, are used for more delicate work around artifacts *in situ*, and also for clearing floors, walls, and cutting clean edges in balks.⁴⁰ Dental picks and brushes expose and remove delicate objects and also aid in cleaning them. In addition to uncovering objects within a unit, metal screens easily sift through buckets of dirt to uncover any smaller objects that may have been overlooked.

The Indiana Jones movies and most archaeological documentaries definitely do not delve into nearly this much detail on the basics of methodology and field excavation. They do, however, touch on the steps leading up to an archaeological dig. Dr. Susan Redford, professor of archaeology at Penn State University, is well versed in the steps necessary to embark on a dig. She is the current director of the Akhenaten Tomb Project in Luxor, Egypt, and recently finished excavations at the Parannefer Tomb in the Theban Necropolis at Luxor.⁴¹ While she is quick to point out that movies about archaeology are strictly Hollywood, there are a few elements that do correlate with professional archaeology. Redford states that it is necessary for a dig director to have a Ph.D. or they will not be able to receive permission to dig in their desired location. She also highlights the importance of a university or museum relationship because such institutions will be willing to sponsor and fund digs. As previously mentioned, the Indiana Jones character

³⁹ Glassow, Michael A., "Excavation", 138.

⁴⁰ Ibid., 141

⁴¹ Dr. Susan Redford, interview by the author, Williamsport, PA., 22 March 2007.

serves as a professor at Marshall College, whose museum director, Marcus Brody, is always keen to receive any important artifacts Indy finds, and place them in the collection at the museum. In return, Brody aids Indy by sponsoring his treks around the globe. While receiving funding is not always that easy, once sponsorship is arranged, the proper paperwork must be filed with the government of the country where the dig is to take place. In Dr. Redford's case, she works exclusively in Egypt, and claims that once proper sponsorship and funding is arranged it is fairly easy to receive a concession for a particular site. However, unlike archaeology in the 1930's, all the artifacts uncovered must stay within the country in which they are found. Although it is true that most major museum collections have been started with artifacts that had been taken out of their country of origin, this is because the wealthy of society could afford to buy them. Thankfully, if Indy tried to take his finds back to the United States today, he would be prosecuted and forced to pay a large fine. Redford states that archaeologists are in constant contact with the country in which they are excavating and proper measures are taken to ensure that nothing is stolen.⁴²

While archaeologists are very careful about not losing any of their artifacts, there is still a high threat of tomb robbery. Redford encountered this first hand when robbers snuck into Parennefer's tomb through a burial shaft and made off with numerous beads, figurines, and an extremely intricate mummy covering. Luckily the artifacts were recovered and are now stored in proper facilities. Similar to Indy, Redford and all archaeologists hope that the artifacts uncovered will be put on display in museums and be available for further study. Redford commented that a current project is underway in Egypt to build small museums on the site of major excavations so that prominent artifacts can be displayed and enjoyed by the public, instead of being buried in a warehouse. Thanks to the implementation of antiquities departments, as well as antiquities

⁴² Redford, interview, 22 March 2007.

police, the confiscation of artifacts into the black market has been significantly decreased over the years. While objects can still find their way into the wrong hands, museums are now very careful to receive only legitimate items for fear of being prosecuted and losing their collection.

In addition to storing artifacts in proper facilities, Redford notes that the field of archaeology has come a long way in a century, but remnants of early expeditions are still visible today. Both she and her husband, Dr. Donald Redford, have encountered evidence of previous excavations from the early 1900's. She claims that while early archaeologists certainly did a great amount of work to further the field, they sadly did a lot of irreparable damage by ripping artifacts out of their archaeological context (their place within the strata) and destroying the stratigraphy itself. Many areas of the Redfords' site in Mendes are full of pits that early archaeologists dug to find treasures, and are now unable to be excavated.⁴³ While it is very unfortunate that so many sites have been damaged by early excavators, or looted by tomb robbers, a great amount of conservation work is now under way to preserve the sites that have been excavated. Redford says that Egypt now requires conservation and preservation of artifacts to take place on site. She also says that another important element of conserving these sites is to publish information about excavations. Most countries require archaeologists to publish material about digs in scholarly journals on an ongoing basis, with a complete publication due within a five to ten year period.⁴⁴ This not only allows current scholars to study each others' research, but it allows others to glean information from these sites in the future. Redford is very enthusiastic about the quality of scholarship that is constantly moving into the field of archaeology. Students are becoming better trained, and also receiving much higher levels of education than in previous years. Archaeology, in general, is one of the most competitive fields to get into because of the

⁴³ Redford, interview, 22 March 2007.

⁴⁴ Ibid.

scarcity of job positions, as well as the exceedingly high qualifications of the applicant pool. Redford is confident that archaeology, specifically Egyptology, will continue to move in a positive direction with new technology, better methods, and excellent scholars to conduct excavations.⁴⁵

Interface of Media-Constructed and Scientific Archaeology

In order to determine whether the media-constructed image of archaeology has impacted the profession of archaeology, Ron Wyatt's Noah's Ark excavations were analyzed. Wyatt pertained to this thesis better than other amateur archaeologists because he took on the persona of Indiana Jones but also embarked on excavations throughout the Near East. Wyatt played into the media image through his dress, as previously discussed, but also by portraying a battle of good versus evil in his excavations, and adding in elements of action and adventure. As stated earlier, Wyatt conducted his Noah's Ark excavations to validate the word of God in the Bible. He believed that by uncovering biblical artifacts he was disputing the evil of Satan, and glorifying God. While this battle between God and Satan is not exactly the same as Indy fighting the Nazis, there is still an element of good versus evil. Wyatt also nurtured the belief that he was fighting against the established practices of the scientific world which refutes the Bible because it believes in evolution. Wyatt said in his journals, "What do real archaeologists say about this? – do they think it's the ark? There is no better answer than this, leading archaeologists and scientists say that the earth is millions of years old and that you and I descended from monkeys."⁴⁶ Clearly Wyatt believed that the Noah's Ark excavations not only fought against evil, but also fought to disprove non-Christian teachings of science. While Wyatt may have been against scientific thought, he claimed to have studied archaeology and history as thoroughly as

⁴⁵ Redford, interview, 22 March 2007.

⁴⁶ Wyatt, Mary Nell, *Wyatt Archaeological Research's Discoveries Volume*, 11.

possible in order to conduct a valid excavation.⁴⁷ Wyatt's journals and book *The Boat-Shaped Object on Doomsday Mountain* were studied to determine whether Wyatt conducted a methodologically sound excavation, or whether he merely put forth the image that he was performing scientific field work.

As mentioned in the methodology section, an archaeologist must first obtain permits and funding to conduct an archaeological survey of a site. Wyatt was not trained as an archaeologist; he was a worker in a chemical factory before going on his search for Noah's Ark. When he made his first trip to Turkey to study the boat-shaped formation in the mountains of Ararat he went merely as a tourist. Once he had seen the site he was convinced that he needed to excavate the site and prove his theory. However, throughout the course of his "excavations" at this site from 1977 to 1987, Wyatt never received proper permits from the Turkish government to do field work. Wyatt did not even apply for the permits himself his team member, Dr. William Shea of the Biblical Research Institute in Maryland, applied for the permits instead.⁴⁸ He was continually rejected, and, for the next decade, Wyatt was only able to collect evidence from the surface of the feature. He also used metal detectors and scanners to map out what lay a few feet beneath the ground.⁴⁹

In the eyes of "real archaeologists" as Wyatt calls them, his work in Turkey was not an excavation at all, but mere surface studies of a site. With regard to receiving proper permits from the Turkish government, Wyatt neglected to follow the steps necessary to acquire such documentation. First, he should have applied for the permits himself since he was serving as dig director. He needed to have submitted a proposal outlining the place, time, and reason for the excavation, as well as proper documentation to verify that Wyatt was an accredited

⁴⁷ Wyatt, Mary Nell, *Boat Shaped Object*, 1-2.

⁴⁸ *Ibid.*, 48, 54.

⁴⁹ *Ibid.*, 58-62.

archaeologist.⁵⁰ Secondly, he should have secured proper funding for his dig by submitting proposals for grants, which involves a similar write-up process, but involves finding an organization that supports the proposer's research hypothesis.⁵¹ Thirdly, if Wyatt was approved for his field work, he should definitely have followed the regulations of the country in which he was working. At times he blatantly ignored the laws of Turkey, namely those prohibiting the use of metal detectors, which at the time were illegal.⁵² He also ran into trouble acquiring proper visas, as in 1978, when he and his sons were imprisoned for illegally entering Saudi Arabia to investigate Mt. Sinai for another "excavation."⁵³ In addition to not obtaining proper documentation, Wyatt never obtained a proper archaeological team either. Since Wyatt was never trained as an archaeologist, he should have employed scientists who were professionally trained to perform scan readings, analyze the site, and conduct tests on samples collected. Instead, Wyatt composed his team of friends, and sometimes total strangers, who believed in his theory about the boat-shaped formation in the mountains of Ararat.

But what was Wyatt's theory? The article in *Life Magazine* in 1960 stated that a Turkish



army captain had spotted this formation while flying over the region of Mt. Ararat, but no mention was made that this indeed was Noah's Ark. Based on this article and photograph, Wyatt formed his own hypothesis. According to the biblical text, Mt. Ararat was the landing place of Noah's Ark after the destructive flood

⁵⁰ Redford, interview, 22 March 2007.

⁵¹ Love, Michael, "Funding Archaeological Research" in *Handbook of Archaeological Methods*, Vol. 2, eds. Maschner and Chippindale, (Lanham: AltaMira Press, 2005), 1306.

⁵² Wyatt, Mary Nell, *Boat Shaped Object*, 7.

⁵³ *Ibid.*, 8.

had receded (Genesis 8:4). Wyatt knew that Mt. Ararat was an active volcano and had erupted multiple times over the past hundreds of years. Because of this, Wyatt hypothesized that the ark had been carried, by a lava flow, down from the tops of Mt. Ararat to the valley in which the boat-shaped formation was photographed. He claimed that the lava had encased the ark and preserved it until the lava slowly began to deteriorate.⁵⁴ Wyatt theorized that as the wood became exposed through the lava, the ark was petrified by replacement. This means that the individual molecules of the wood used to construct the ark would have been replaced over time by other minerals.⁵⁵ Wyatt also argued that while the ark had been constructed with wood, it was held together by metal fixtures. Wyatt mapped these out across the length of the formation with the use of metal detectors. He also had a piece of what he believed to be a metal fitting analyzed in a laboratory to determine its composition. The results showed that this fixture contained 8% iron, 11% aluminum, and 11% ferric oxide.⁵⁶ Eventually Wyatt was also able to obtain a piece of what he believed to be petrified wood. This he had analyzed for organic and inorganic content, which showed that the sample contained .0081% inorganic compound and .7019% organic compound.⁵⁷ Wyatt pieced together all of this information and formulated the conclusion that this boat-shaped formation was indeed Noah's Ark, which had been petrified and preserved within a lava flow. He also concluded that Noah had used metal fixtures to hold the ark together, and that these fixtures, as well as the wood, had been so well preserved because the ark had been petrified as it was exposed by the deteriorating lava.

This scenario at face value may seem convincing, but when Wyatt's theories are compared to scientific fact, a much different story emerges. First, is it possible that an ark made

⁵⁴ Wyatt, Mary Nell, *Discoveries Volume*, 7.

⁵⁵ *Ibid.*, 25.

⁵⁶ *Ibid.*, 8.

⁵⁷ *Ibid.*, 17.

of wood could have survived being carried down a mountain side by a lava flow? Dr. Richard Erickson, professor of Astronomy and Physics at Lycoming College, is an expert on the study of volcanoes. He argues that it is highly unlikely that the ark could remain intact for a number of reasons. Lava flows' temperatures usually range from 800 to 1000 degrees Celsius, or 1400 to 1800 degrees Fahrenheit. These exceedingly high temperatures undoubtedly would have reduced the wooden ark to ashes, which only requires a temperature of 500 degrees Celsius, or 1000 degrees Fahrenheit to burn.⁵⁸ However, Erickson states that there have been instances where organic objects have been preserved in lava flows if they are covered by water. He uses an example of a basalt lava flow in Washington State, where a pocket was found within the flow by excavators. Upon further investigation, the excavators found that the pocket had once been a dinosaur that had been caught up in the lava flow. The dinosaur was so well preserved because it had probably been lying in a pool of water, which formed a thin barrier around the dinosaur when the lava enveloped it.⁵⁹ If the ark were to have survived being surrounded by lava, it would have to have been completely covered in water. This however was not the case as there are no bodies of water on Ararat large enough to submerge an ark this size.

Next, there is the issue of metal fixtures having been used to hold the ark together. According to biblical chronology, Noah's Ark would have been constructed during the Chalcolithic Period, which was around 3300 B.C.E.⁶⁰ The only metal used at that time period, as evident from the archaeological record, was copper. This metal was not apparent in the results from the sample which Wyatt claimed was a metal fixture. Erickson suggests another possibility for the presence of these metals. Iron and aluminum are the second and third most common metals in the earth's crust. While their usual measurements are 5% and 8% respectively,

⁵⁸ Dr. Richard Erickson, interview by the author, 4 April 2007.

⁵⁹ Ibid.

⁶⁰ Mazar, *Archaeology of the Bible*, 59.

measurements of 8% and 11% are not outside the realm of normal variance.⁶¹ In addition to the metal samples, Erickson also considered the results for the sample of “petrified wood” taken from the formation. In his opinion, it is impossible for the wood of the ark to be already completely petrified because it is not old enough. Pieces of wood that are 6000 years old have barely begun to petrify; in order for complete petrification through replacement, which Wyatt suggests, the ark would have to be nearly thirty million years old.⁶² Wyatt’s dating of the ark also poses a problem as he believes that the ark is only 4,500 years old, which makes it even more improbable that the ark would be completely petrified.

Lastly, Erickson investigated the photograph of the boat-shaped formation which Wyatt claims is the biblical ark. Since it is nearly impossible that a wooden boat would have survived in a lava flow, Erickson investigates suggests other possibilities for the formation. One possibility is that the structure is an intrusive dike. Dikes are sheet-like structures which are produced when magma is forcefully exerted through fractures in the ground. Dikes can range from less than a centimeter thick to more than a kilometer, but most are only a few meters thick and resemble vertical wall structures.⁶³ Erickson believes that this would account for the thin walls forming the boat shape, and states that it is possible that fractures can result in such elliptical shapes.⁶⁴ However, he states that the feature more closely resembles a breached eroded dome. These domes are formed when bedrock is pushed upward and results in large folds within the sedimentary strata. When these folds produce a circular or elongated form, they are referred to as

⁶¹ Dr. Richard Erickson.

⁶² Dr. Richard Erickson.

⁶³ Tarbuck, Edward J. and Lutgens, Frederick K., *The Earth: An Introduction to Physical Geology*, (New York: Macmillan Publishing Company, 1993) 71-72.

⁶⁴ Erickson, interview, 4 April 2007.

domes.⁶⁵ When these three images are compared it is clearly evident that the boat-shaped formation resembles both of these structures.⁶⁶

The evidence discrediting Wyatt's claims is convincing. However, Wyatt not only has inconclusive evidence for his hypothesis, he also has very little material evidence because of his poor methodological skills. As previously discussed, appropriate methodological practices includes establishing a grid pattern, excavating individual units, and observing stratigraphy, which Wyatt was incapable of doing because he lacked the proper permits. He did conduct metal detector scans which picked up on traces of the metal found a few feet beneath the surface level, but that was as far as he could study. Because he did not conduct a proper field excavation, Wyatt's theories were even more ignored by the archaeological community. With only surface sample results, there is no conclusive evidence that can support the Noah's Ark theory.

In addition to a complete lack of archaeological excavation, Wyatt has extremely poor documentation. The photographs contained within his journals and books are poor quality at best, and no more than a few of them record evidence of the site being studied. There are also no drawings in either publication, probably because there was no material evidence to record. Though Wyatt paid particular attention to the walls of the boat-shaped object, which he claimed exposed the ribbing of the ark, there are no drawings or detailed photographs of this feature anywhere.⁶⁷ As Dr. Redford noted, scholarly publications are also a crucial aspect of thorough documentation. Wyatt never published in any journals or publications besides his newsletter which he and his wife printed at the Wyatt Archaeological Research Institute. Wyatt did not publish his results, unless they were accidentally leaked to Turkish newspapers.⁶⁸

⁶⁵ Tarbuck and Lutgens, *The Earth*, 385.

⁶⁶ Appendix C

⁶⁷ Wyatt, Mary Nell, *Discoveries Volume*, 26.

⁶⁸ *Ibid*, 35.

Although Wyatt's findings on Mt. Ararat seem to be improbable at best, Wyatt's efforts were undaunted. In the years following the "excavations" in Turkey, Wyatt went on to claim discovery of Sodom and Gomorrah, the route of the Exodus, Mt. Sinai, the burial cave of Jesus Christ, and the Ark of the Covenant.⁶⁹ It is with these subsequent discoveries that it becomes apparent that Wyatt is clearly dealing in the realm of fringe archaeology. With every new discovery he gained more followers and benefactors who were convinced by his pursuits. As previously mentioned, objects within the realm of fringe archaeology are intriguing, but also widely known. Those who heard about Wyatt's discoveries undoubtedly were drawn to his findings because they sought answers about these mysterious artifacts and proof of the Bible. Just as with the Indiana Jones films, and *Digging for the Truth*, Wyatt's excavations suspended disbelief for his followers because they appeared legitimate at face value, and they were interesting enough that excessive convincing was unnecessary. It is also important to note that religious beliefs played a key role in acceptance of these discoveries. Those who wanted proof that the biblical text was real would be much more likely to believe Wyatt's "research" because it provided plausible explanations. The same issue arose in very early biblical archaeology. Those excavators wanted proof that the events of the Bible were real, so they made the evidence fit into a particular scenario, which sometimes turned out to be incorrect.⁷⁰

Issues such as these cause dissension in the academic community. The Indy-constructed image of an archaeologist has infiltrated into public opinion to the point where it lends support to these false excavations. At worst, these people believe that they can go out and conduct their own excavations without proper training or permission, as in the case of Wyatt, and run the risk of destroying a valid archaeological site. While Wyatt did not conduct destructive field work, his

⁶⁹ Wyatt, Mary Nell, *Discoveries Volume*, 45, 62, 95, 109.

⁷⁰ Fagan, "Short History of Methods", 40-41.

false claims have undoubtedly disillusioned many Christians and archaeology enthusiasts alike. His unsubstantiated “research” also perpetuates the impression that archaeology is merely a profession of treasure hunters whose only interest is to find well known artifacts for the sake of gaining popular recognition, or worse, to sell these artifacts for riches. It is very disheartening that untrained people are allowed to conduct their own excavations with no intent of benefiting the study of archaeology, but only to gain glory for themselves.

Conclusion

Through my study I was able to conclude that there is indeed an Indiana Jones Effect. It begins with Indy whose character is able to suspend disbelief throughout *Raiders of the Lost Ark* and *The Last Crusade* not only to entertain audiences, but to have them believe that archaeology is the profession portrayed in the films. The focus groups and surveys confirmed that popular opinion reflects the Indiana Jones Effect in its imagination of archaeologists’ appearance, as well as archaeologists’ practices in the field. This was evident in the participants’ reaction to the movie clips from *The Mummy Returns* and *The Last Crusade*. The Effect then travels into television documentaries and programs such as *Digging for the Truth*. Josh Bernstein is an excellent example of a television personality who takes on Indy’s persona to enhance his credibility. This program also shows how artifacts of fringe archaeology play a role in the Indiana Jones Effect because they are captivating to viewing audiences. These artifacts are both mysterious and intriguing, and therefore audiences are more drawn to watch these programs. There is also a large number of people who have heard of these artifacts, such as the Holy Grail and the Ark of the Covenant, and want answers, which programs like *Digging for the Truth* provide. This same principle applies to documentaries such as *The Lost Tomb of Jesus*, which drew in over four million viewers to gain answers to their archaeological questions. This

documentary, as well as the discoveries of Ron Wyatt, shows how religion further suspends disbelief because people want proof that the Bible is a real account.

It is not until the media-constructed image is compared with actual archaeological practices that the extreme differences between the two become apparent. While Dr. Susan Redford admits that the Hollywood image helps to draw in prospective archaeologists, their illusions are quickly remedied when confronted with the systematic practices of archaeological methodology.⁷¹ Archaeology is not glamorous, nor is it Hollywood, instead it involves calculated data gathered from in depth study of artifacts. Archaeology's founding fathers, such as Curtius, Pitt-Rivers, Petrie, Wheeler and Harris, established practices and laws which laid the foundation for proper field excavation. Archaeology is now a scientific discipline that concentrates on data collected from potsherds, stratigraphy, and skeletal remains. It is also a highly advanced technological profession thanks to database programs as Archaeomath, BASP, and SPSS that allow for extensive statistical analysis in conjunction with GIS systems, which interpret data for its most effective use in archaeological research. Actual archaeological excavations are slow and tedious, and very seldom result in the uncovering of great treasures. Archaeology is no longer a profession focused on finding the greatest prize. Rather it aims to understand the great civilizations of the past and come to a more learned understanding of world history.

Thankfully the Indiana Jones Effect has not infiltrated the practices of professional archaeologists, but it is extremely evident in amateur archaeology. One of these amateurs, Ron Wyatt, believed that his excavations did not need to answer to scientific explanation because scientific laws go against biblical teaching. Nevertheless, Wyatt portrayed himself as an archaeologist, again borrowing from the media-constructed persona, to convince himself and

⁷¹ Dr. Susan Redford, interview by the author, March 22, 2007.

countless others that his discoveries were real. Wyatt's Archaeological Research Institute provided an academic façade, which people believed because of its implied scholarly status. The same tactic is employed in *Digging for the Truth* when Josh interjects scholarly opinion into the episodes to make the topics dealing with fringe archaeology appear more credible. Indy also portrays an academic angle through his movies because he is a professor. Viewing audiences believe that a professor is supposed to engage in scholarly pursuits, and therefore Indy's adventures do not seem nearly as improbable as long as they serve an academic purpose.

While *The Adventures of Indiana Jones*, *Digging for the Truth*, and even Ron Wyatt make entertaining stories, a line must be drawn between fictional archaeology and realistic archaeology. Wyatt's excavations provide a sobering example of how one person can have total disregard for established archaeological methods and scientific research, and yet still have people believe in his claims. Wyatt's website, publications, and institute all aim at one goal, to put him on the archaeological map and make people believe that his discoveries are real. Even if he did in fact uncover Noah's Ark, the route of the Exodus, and the Ark of the Covenant, he never did enough in-depth research to fully analyze his finds. He claims to have found all of these artifacts within a twelve year span,⁷² yet most excavations of a single site take at least that long to investigate if not decades longer. While archaeologists are happy to have their research publicized, sometimes including television documentaries, their main intent is not to impress viewers with the biggest discoveries in the shortest period of time. Wyatt and others like him play into the media-constructed image to receive public support, and funding. They seek out the unknown mysteries of the past, like Noah's Ark and the Ark of the Covenant, formulate a reasonable hypothesis, and back it with poor archaeological evidence.

⁷² Wyatt, Mary Nell, *Wyatt Archaeological Research's Discoveries Journal*

I am not claiming that archaeology is overrun with these erroneous excavations, but they are certainly apparent. Media is a powerful element to archaeology, and most archaeologists will not ignore the fact that it draws people into the field. The problem comes when people adopt a popular image of archaeology to receive attention and false credibility, when in reality their research is completely unfounded. This paper shows that the general public is more willing to believe a man wearing a fedora and khakis, who practices poorly executed methodology, than a woman, such as Dr. Redford, who spends years sifting through pieces of pottery and bone to reconstruct a moment in history. This is where the Indiana Jones Effect has taken its toll on the archaeological profession. Shows like *Digging for the Truth* and *The Lost Tomb of Jesus* receive the attention of millions of viewers, while documentaries on real archaeological digs receive a fraction of this attention. It is time that real archaeologists receive the attention they deserve instead of being upstaged by someone who promises a bigger find. While the media about archaeology makes for interesting television, it does not reflect the hard work and research that has made archaeology into the field that it is today. The Indiana Jones Effect certainly holds a place in archaeological history, but it is time that it stays in Hollywood where it belongs.

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Appendix A

I conducted my focus groups over a series of two weeks in November 2007. I planned to have anywhere from 8-10 participants per focus group, which were arranged in three separate categories, archaeology majors, non-archaeology majors, and professors. I chose all of the participants at random. The archaeology majors were chosen from the roster on the archaeology website, and the non-archaeology majors and professors were chosen at random from the student directory. I intended to have professors from varying disciplines, and because of that I did not allow for more than one professor from a department to participate in a focus group at a time. My intention was to have several series of focus groups, but lack of response only allowed me to conduct three total sessions.

I sent an e-mail to each of the intended participants explaining that I was conducting a focus group for my honors thesis in Archaeology. I did not explain my topic or material which I intended to cover in the group. Unfortunately I had very few confirmed participants for each group, and some of those who confirmed that they would be able to attend did not show up.

The questionnaire in Appendix B was used in the focus groups, and later in the surveys of Western Civilization I. I did not discuss the questions with the participants, aside from listening to their feedback from their individual responses. No background information was given for the movie clips, other than to list the movies that they were taken from. The focus group participants were encouraged to discuss their responses with one another, and these conversations were recorded with their permission. The classroom surveys did not allow for this type of interaction, and therefore only the written answers were used to collect data.

Appendix B

Picture an archaeologist. What are they wearing? What gender are they? What country are they in? What equipment do they have?

What exposure have you had to the field of archaeology or archaeologists?

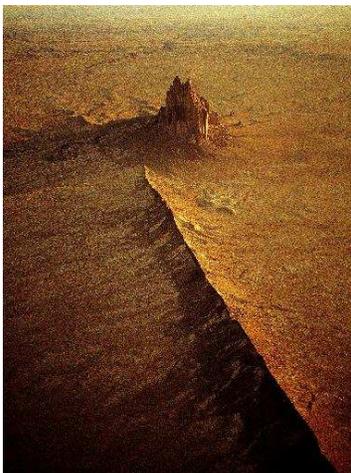
With whom do archaeologists interact? What is involved in their work?

Film Clip Reactions:

1) The Mummy Returns-

2) Indiana Jones: The Last Crusade-

Appendix C



9- www.earthscienceworld.com/images/
Intrusive dike



10- www.earthscienceworld.com/images/;
Breached dome



11- www.wyattmuseum.com/; Boat-shaped formation