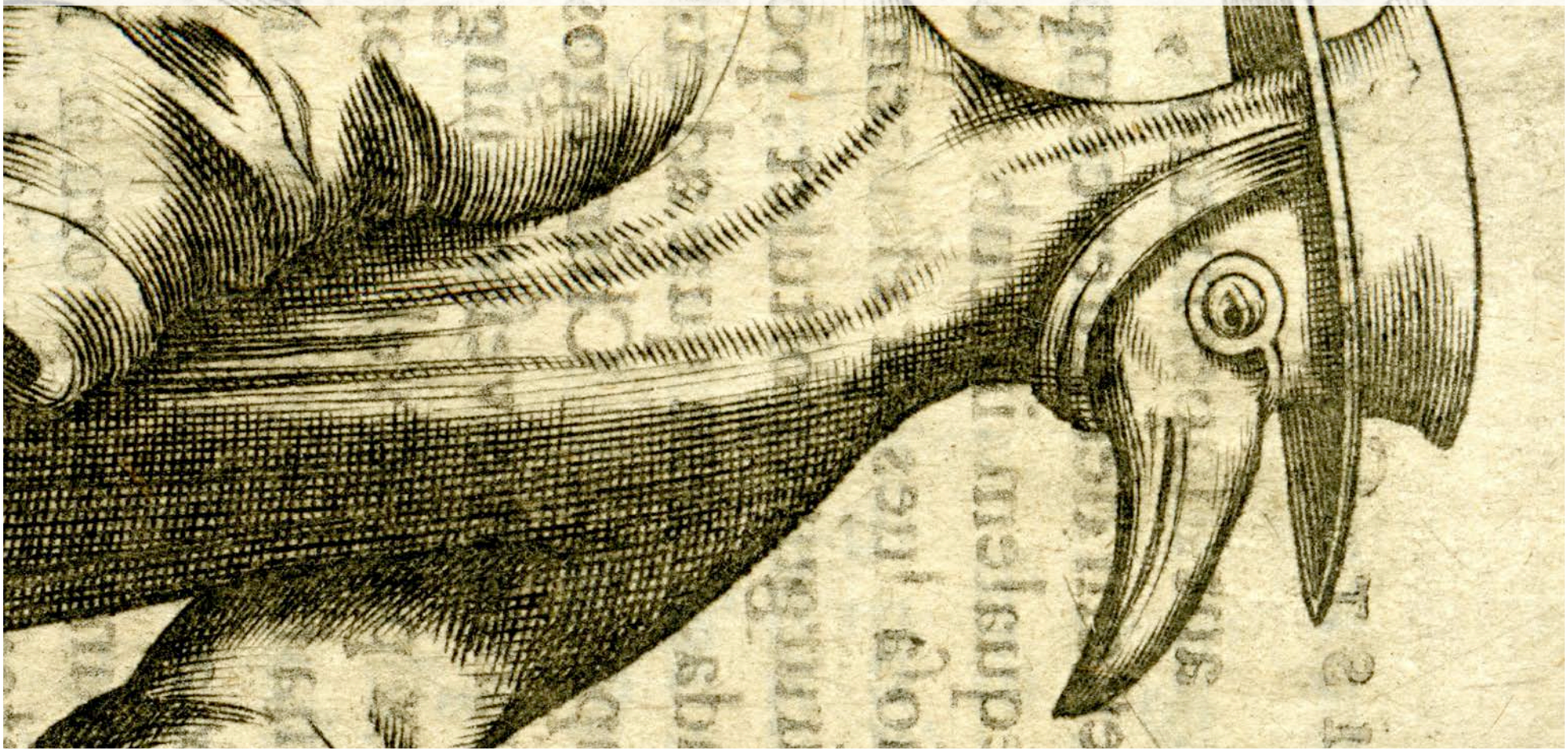
SCOURGE

DISEASES THAT SHAPED HISTORY



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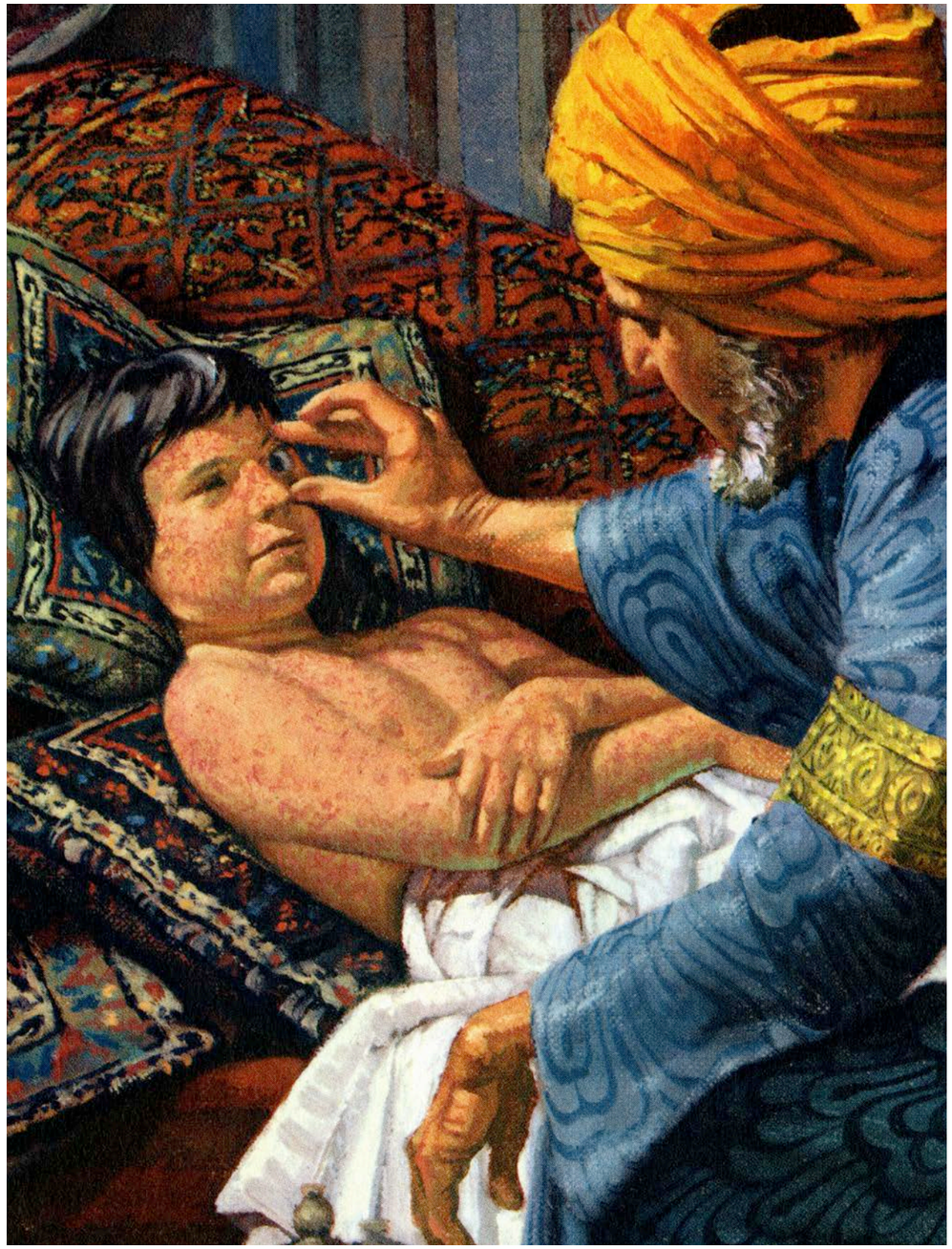

SCOURGE

DISEASES THAT SHAPED HISTORY

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Department of Art and Art History and
The Reynolds-Finley Historical Library and the
Alabama Museum of the Health Sciences

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Front Cover Image:
(Detail)
Depiction of a plague doctor from *Thomae Bartholini Historarium Anamatomicarium Rariorum*, 1661

Title Page Image:
(Detail)
Rhazes and Arabic Medicine, 1958

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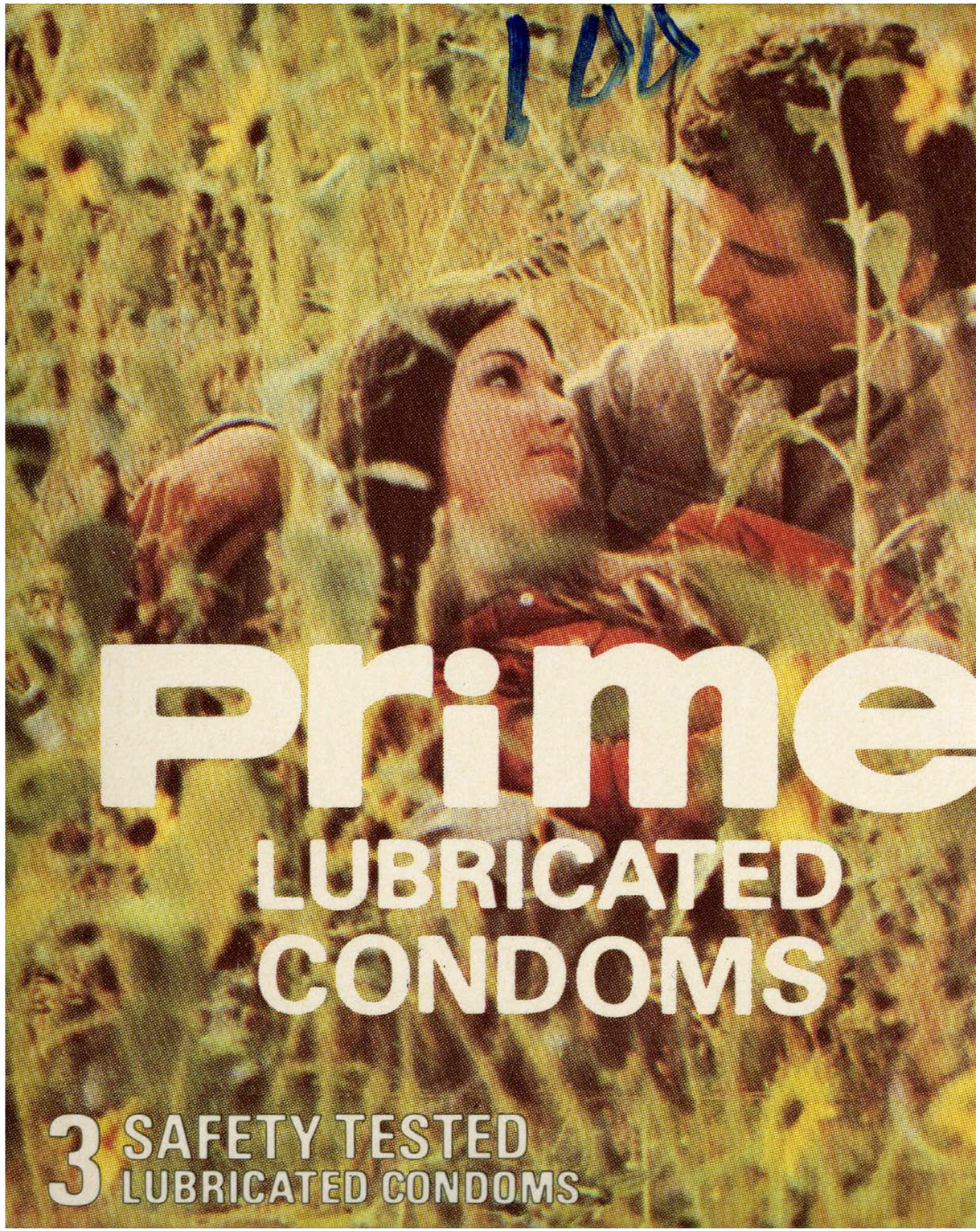


Foreward

During the Fall semester of 2018, in our art history capstone course in the Art & Art History Department at the University of Alabama at Birmingham (UAB) we have been working in conjunction with the Reynolds-Finley Historical Library and the Alabama Museum of the Health Sciences to create the exhibition Scourge: Diseases That Shaped History. During the course of the semester, led by Assistant Professor Noa Turel, we have applied our art history experience to conduct research, develop content for different audiences, curate an exhibition, and present research at a symposium. Our group has had the opportunity to exercise our skills for planning public outreach and programming.

Scourge: Diseases That Shaped History is an exhibition that explores three major diseases that helped to define the history of modern medicine and the healing arts. Using the collections from both the Reynolds-Finley Historical Library and the Alabama Museum of the Health Sciences, we assessed the objects within each collection while making connections and creating a theme that would be of intertest to the museum and library visitors and those visiting from across the campus of UAB. The history of the Bubonic Plague, syphilis and smallpox are comprehensively presented throughout the exhibition by incorporating illustrations, texts and objects, while also presenting significant items from the collections that visually tell the story of each of these diseases. We explore the treatments for these diseases and how they ultimately were used to heal the sick and eradicate these epidemics.

We presented the history of the Bubonic Plague from two points of view, each focused on the role of medicine and “remedies” thought to heal this devastating disease. It was believed that religion could help heal the sick by using amulets and receiving protection from Saint Sebastian and Saint Roch. Many took a more dangerous approach in their attempt to cure the Bubonic Plague. They used a form of treatment called bloodletting as well as other, experimental forms of treatment often delivered by Plague Doctors.

Prime Lubricated Condoms

It was eventually discovered that both smallpox and syphilis could be treated with the use of medicine. The introduction to the modern-day vaccine was discovered by Dr. Edward Jenner with his smallpox vaccination. This exhibition explores the way in which the vaccine was discovered and how, in its early days, a fiery debate ensued between a pro and anti-vaccination camps.

The history of syphilis and its influence on medical history and world history as a whole is explored. From the days of the “French Disease” to the advent of Penicillin, the Syphilis portion of Scourge surveys the saga of the venereal illness through books, photographs, samples of medications, and other curiosities.

Our overall goal is to have visitors leave the exhibition with knowledge about these diseases and to educate our visitors on the progress of modern medicine and the importance that it bears today.

Acknowledgments

We would like to thank our professor, Dr. Noa Turel, for her guidance and knowledge and for the curatorial opportunity that she so graciously helped facilitate for our senior exhibition.

A special debt of gratitude goes out to Margret Balch and Anna Kaetz at the Reynolds-Finley Historical Library and Stefanie Rookis at the Alabama Museum of the Health Sciences for their generosity and support from the onset of this exhibition. During this memorable semester, while we conducted our research, they have graciously shared invaluable information and their personal experiences with curating and research that will continue to help us throughout our careers.

We would also like to thank our families, friends and loved ones for their time and support throughout our undergraduate career. We could not have done it without you!

Kelsey Jones
Oakleigh Pinson
Tina Ruggieri
Brooklynne Todd

(Detail)
The History of the Great Plague in London, in the Year 1665 : Containing Observations and Memorials of the Most Remarkable Occurrences, Both Public and Private, That Happened during That Dreadful Period, 1819 Daniel Defoe, Henry Corbould, J. Tuck, Henry Teape, John Offor

What is the Bubonic Plague?

The Bubonic Plague was a devastating epidemic disease. The genome, Yersinia pestis, was spread to humans through fleas. Many during this time believed that the Plague was spread through unappealing smells, although direct contact is what ultimately spread the disease. Densely populated and urban areas that had problems with rat infestations were affected the most. Characterized by a bacterial pathogen, the Bubonic Plague was known to show itself by the development of buboes (a swollen lymph node in the groin or armpits). Bacteria of the plague would multiply in the lymph node closest to the location of entry of the disease. The first record of this disease was the Justinian Plague (541 AD), which continued to break out frequently for the subsequent 200 years. The next wave of the plague, labeled “Black Death,” wiped out nearly 60% of Europe’s population. Although this devastated the population, Europe’s labor shortages soon paved way for new technological and social advances.

Depiction of a plague doctor from *Thomae Bartholini Historarium Anamatomicarium Rariorum*, 1661

Shaped Like a Beak, Filled with Perfume: Exploring the Design of the Plague Doctor

Brooklynne Todd

The Plague Doctor is an iconic symbol of the Bubonic Plague. When one thinks of the Plague, if he does not think of rats, black hands, and dead bodies, his mind most likely has the imagery of a somewhat unsettling individual with a beak-like mask, wide-brimmed hat, and long, dark coat invading his thoughts. There also may be some questions that he thinks about: why did the Plague Doctors wear this outfit? Who came up with it? What is it made out of, and what are the components? What did the designer of the uniform hope to accomplish, and were his hopes even realized?

It is important to know some general information on the Plague Doctor before delving into more detail on his outfit. A plague doctor was an individual who would treat patients who had fallen ill from the Bubonic Plague. They were typically hired by different towns and cities where the Plague had taken over, and they treated anyone and everyone who was sick, since the cities and towns paid their salaries.[1] Many people hired this way were not experienced or fully trained surgeons or physicians; some were aspiring physicians looking to make a name for themselves, and there were others that were doctors that struggled to establish their own successful medical practice.[2] Some of their methods for treatment included bloodletting and putting leeches on buboes.[3] These doctors were also not allowed to interact with the general public in any way (they were only allowed to be around the sick) out of fear of spreading the disease, and would even be placed on quarantine in some occasions if the city felt that they were a risk to spread anything.[4] Many people were absolutely terrified of Plague Doctors, as they most likely believed that seeing them or having them come into contact in any way was a sign of certain death.

Along with treating people who had become ill from the Bubonic Plague, Plague Doctors were also partially responsible for recording the number of deaths in public records that were from the illness.[5] They were also witnesses for the wills of dying patients, and were also called upon to advise patients in how to conduct themselves before their death.[6]

The outfits that these Plague Doctors wore when they were treating the sick have an interesting history. Not every doctor wore the iconic costume, but a number of them did. It is also important to note that the outfit that people know of today is not always what was worn by physicians; rather, it came later in the time-line of the Bubonic Plague. Charles de l'Orme is often credited for the design of the Plague Doctor outfits.[7] De l'Orme was the chief physician to Kings Henri IV, Louis XIII, and Louis XIV of France.[8]

In 1619, Charles de l'Orme had the idea of a complete head-to-toe protective uniform for physicians, similar to soldier's armor of the time.[9] This uniform consisted of different elements, which included a long gown, either made out of waxed canvas or leather that went from the wearer's neck down to his ankles, a pair of leggings, boots, gloves, and a hat that indicated the individuals wearing the outfit were physicians that were all made out of leather.[10] Plague Doctors also had a cane equipped on them, in order to be able to examine the patient without actually touching him directly.[11]

The most iconic and recognizable element to the Plague Doctor uniform was the mask. The mask that was worn by the Plague Doctors was a bird-like one, complete with glass spectacles so that the individual wearing it would be able to see properly.[12] It was most likely made from leather, like the rest of the outfit, and de l'Orme wrote on the mask, saying that it has a "nose half a foot long, shaped like a beak, filled with perfume with only two holes, one on each side near the nostrils, but can suffice to breathe and to carry along with the air one breathes the impression of the drugs enclosed further along in the beak."[13] The mask was typically stuffed with different spices and herbs that included juniper berry, mint leaves, cloves, myrrh, and rose petals, among others.[14] It was believed that the Plague Doctor suit would be effective in keeping the sickness out by protecting the physician wearing it from miasma, or the highly unhealthy and unpleasant odors in the air, while he would treat the patient.[15] During this time, many people believed that the Plague was spread through miasma that would be emanated from rotting organic matter. The miasmatheory of disease

was eventually debunked in the late 19th century in favor of the germ theory, which holds that specific diseases are spread through specific germs, rather than bad air.

The central goal of de l'Orme's design of the Plague Doctor outfit was to design clothing for physicians to wear that would ultimately offer total protection against the Bubonic Plague. Unfortunately, it does not seem that it really prevented them from contracting the disease from the patients that they were taking care of. It is probable that many of the Plague Doctors ended up sick and dying themselves due to the lack of understanding that they had of how disease spread and the actual lack of protection that they had for themselves due to their outfits.

The Plague Doctor is only a small piece of the massive history behind the Bubonic Plague. They played a monumental part in the epidemic, in ways that are both good and bad. While they did do what they could at the time to help as many people as possible, they are also most likely partially responsible for helping accelerate the spread of the illness. What is the most memorable aspect, though, is the attire. The influence that military garb had on Charles de l'Orme, along with what one can only imagine as some sort of raw creativity on de l'Orme's part, made the Plague Doctor outfit what it was, and how people know it today. The fully leather and waxed canvas attire is questionable, in terms of function and fashion, but, if it was not effective in its purpose, it is certainly effective in capturing the fear and imagination of the people then, and certainly the people now.

[1] Carlo Cipolla. "The Medieval City." In *A Plague Doctor*, by Henry Miskimin (Yale University Press, 1977), 68

[2] Ibid, 65.

[3] Ted Byfield, *Renaissance: God in Man, But Amid Its Splendors, Night Falls on Medieval Christianity*. Vol. 8. Society to Record and Explore Christian History, (2010): 37.

[4] Robert S. Gottfried, (1983). *The Black Death: Natural and Human Disaster in Medieval Europe*. Simon & Schuster, 126.

[5] Joseph Patrick Byrne, *Daily Life during the Black Death*. (Greenwood Publishing Group, 2006): 170.

[6] Wray, Shona Kelly. *Communities and Crisis: Bologna during the Black Death*. (Leiden and Boston: Brill, 2009): 312

G. L. T.; "THE PLAGUE DOCTOR," *Journal of the History of Medicine and Allied Sciences,* Volume XX, Issue 3 (1 July 1965): 276. Accessed November 27, 2018, https://doi.org/10.1093/jhmas/XX.3.276.

[7] Christine M. Boeckl, *Images of Plague and Pestilence: Iconography and Iconology*. Truman State University Press, 2000, 15.

[8] The Cincinnati Lancet-Clinic 89 (1903): 317.

[9] Ann G. Carmichael, and Arthur Sweetman McGill. "SARS and Plague's Past" in *SARS in Context: Memory, History, Policy*. Edited by Jacalyn Dufflin. Queen's University Press, 2006, 57.

[10] Center for Advanced Study in Theatre Arts. *Western European Stages*. Vol. 14. 2002. Boeckl, 15.

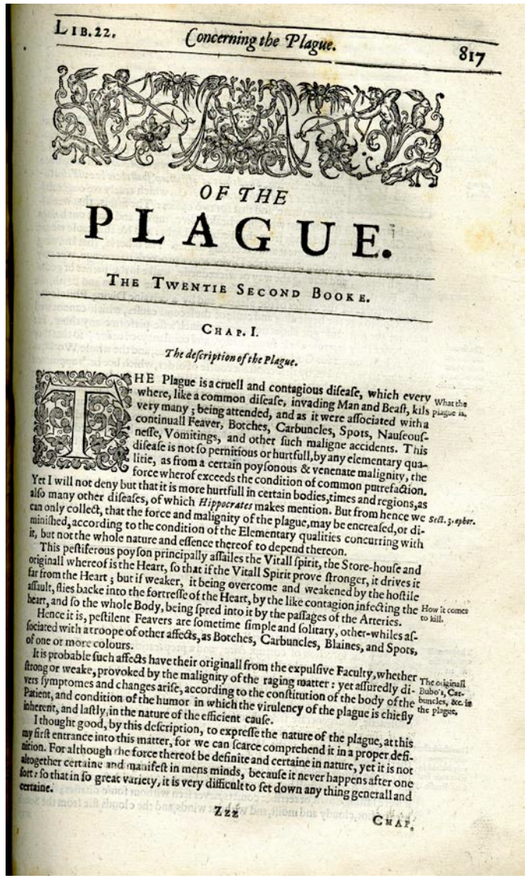
Leonard Fabian Hirst, *The Conquest of Plague: A Study of the Evolution of Epidemiology*. Clarendon Press, 1953. Carmichael, 57.

[11] Joseph Patrick Byrne, *Encyclopedia of Pestilence, Pandemics, and Plagues*. ABC-Clio, 2008, 505.

[12] Pierre Vidal, Myrtille Tibayrenc, and Jean-Paul Gonzalez. "Chapter 40: Infectious Disease and Arts." In *Encyclopedia of Infectious Diseases: Modern Methodologies*, 680. John Wiley and Sons, 2007.

[13] Ibid.
[14] Byrne (Daily), 170.
[15] Irvine Loudon, *Western Medicine: An Illustrated History* (Oxford, 2001): 89.

Exhibition Plates



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OF THE

PLAGUE.

THE TWENTIE SECOND BOOKE.

CHAP. I.

The description of the Plague.

THE Plague is a cruell and contagious disease, which every where, like a common disease, invading Man and Beast, kils very many; being attended, and as it were associated with a continuall Feaver, Botches, Carbuncles, Spots, Nauseousnesse, Vomitings, and other such maligne accidents. This disease is not so pernitious or hurtfull, by any elementary qualitie, as from a certain poysonous & venenate malignity, the force wherof exceeds the condition of common putrefaction. What the plague is.

Yet I will not deny but that it is more hurtfull in certain bodies, times and regions, as also many other diseases, of which *Hippocrates* makes mention. But from hence we can only collect, that the force and malignity of the plague, may be encreased, or diminished, according to the condition of the Elementary qualities concurring with it, but not the whole nature and essence thereof to depend thereon. *Sect. 3. epher.*

This pestiferous poyson principally assailes the Vitall spirit, the Store-house and originall whereof is the Heart, so that if the Vitall Spirit prove stronger, it drives it far from the Heart; but if weaker, it being overcome and weakened by the hostile assault, flies backe into the fortresse of the Heart, by the like contagion infecting the heart, and so the whole Body, being spred into it by the passages of the Arteries. How it comes to kill.

Hence it is, pestilent Feavers are sometime simple and solitary, other-whiles associated with a troope of other affects, as Botches, Carbuncles, Blaines, and Spots, of one or more colours.

It is probable such affects have their originall from the expulsive Faculty, whether strong or weake, provoked by the malignity of the raging matter: yet assuredly divers symptomes and changes arise, according to the constitution of the body of the Patient, and condition of the humor in which the virulency of the plague is chiefly inherent, and lastly, in the nature of the efficient cause. The originall Bubo's, Carbuncles, &c. in the plague.

I thought good, by this description, to expresse the nature of the plague, at this my first entrance into this matter, for we can scarce comprehend it in a proper definition. For although the force thereof be definite and certaine in nature, yet it is not altogether certaine and manifest in mens minds, because it never happens after one sort: so that in so great variety, it is very difficult to set down any thing generall and certaine.

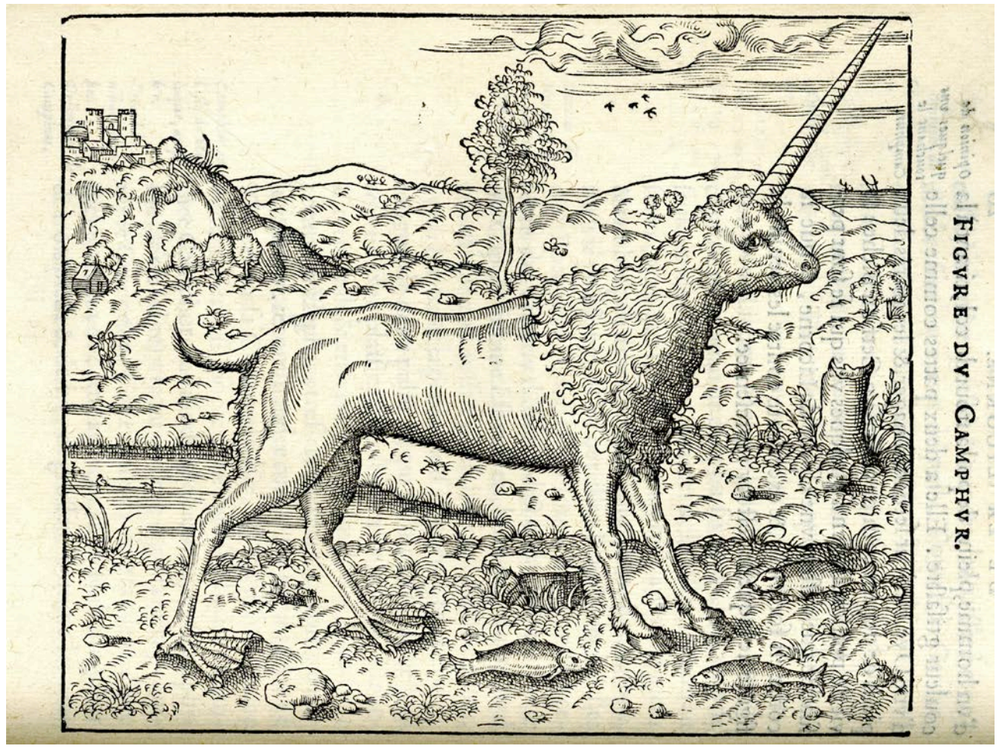
Zzz CHAP.

Title page from chapter 22 of *The Workes of That Famous Chirurgion Ambroise Parey, Translated out of Latin And Compared with The French*, 1634.

Ambroise Paré was a French physician, considered to be the father of modern surgery. This particular book covers a plethora of different things, mainly different surgical procedures, as well as treatment of bone fractures and how to manufacture artificial limbs. Along with this, he also dedicated chapters to different diseases, with the Bubonic Plague having its own chapter. In this, Paré discusses the causes of it, and how to prevent the disease and different remedies that were commonly used to combat it, as well. For example, one remedy that the believed prevented the Plague was drinking what was known as “treacle water,” which was water with roots of various plants mixed with wine and plant juices.

Depiction of a plague doctor from Thomae Bartholini
Historarium Anamatomicarium Rariorum, 1661

The plague doctor is arguably one of the most well-known figures of the Bubonic Plague. Physicians were hired by different towns to take care of individuals who were inflicted with the Plague. The vast majority of these doctors were not fully trained to care for others. They were either aspiring physicians trying to make a name for themselves, or they were lower-ranked doctors that struggled to establish a successful medical practice. The beak-like mask was typically filled with spices and other aromatic items to protect them from the putrid air. Many people during this time believed that the Plague was spread through unappealing smells.



Depiction of a unicorn from *Discours d'Ambroise Paré, Conseiller,et Premier Chirugien du Roy*
Ambroise Paré, 1582.

Along with a definitive book of medical procedures and diseases, Ambroise Paré wrote Discours d'Ambroise Paré, Conseiller, et Premier Chirugien du Roy that focused slightly more on the Bubonic Plague and different remedies for it. One remedy that is discussed in this particular book is the health benefits that a unicorn possessed. Unicorn horns were seen as a sort of cure-all for a number of different ailments, like snake bites and epilepsy, for example, and the Plague was no exception. Unicorn horns (which were most likely horns from a rhinoceros) were typically ground into a fine powder and inserted into food, beverages, and other medicines and ingested.

Leech Gatherers, nd

Another common method of bloodletting was the use of leeches, which was referred to as “leeching,” and, less commonly, “leechcraft”. Leeching was the process of applying leeches to the skin to drain blood out of the body. The leeches would be left on the patient’s body until he would faint. Fainting from leeches was seen as beneficial in the healing process. They are still used today, although not for draining blood. It has been shown that leeches help restore blood flow to damaged veins, and they are occasionally used after tissue grafts or reattachments of appendages.

Fleam, c. mid-1850s

A fleam is a handheld instrument that was used for bloodletting. While this is a tool that was used on humans, it was more commonly used on animals in a veterinary setting. Lancets were more frequently used on humans. The purpose of the fleam was that it was a way to make an incision and get to a vein for drawing blood. The triangular-shaped blade would be placed over the vein and struck with a fleam stick. The strike of the fleam stick resulted in a quick and easy penetration that left little risk to the person operating it.

Bleeding set, before 1900

Bloodletting was one of the leading remedies that people turned to during the Bubonic Plague. It had been a go-to for treating illnesses, like smallpox and diabetes, for example (people even did bloodletting for acne), thousands of years before, and even a few hundred years after. It is still used in some cultures today to fight off illnesses. Bloodletting kits were developed in the 19th century by surgeons and barber-surgeons, and it was mostly carried out by the barber-surgeons. The most common method of bloodletting during this time was called a phlebotomy. This method is where the blood would be drawn from one of the external veins. For example, in the forearm or the neck.

Lancet, nd

A lancet is a tool that was used for bloodletting, most commonly used on humans. It is still used today for surgical purposes, but it looks different than the lancets used in the 19th century. It is a small instrument with a sharp blade attached that was used to make incisions.

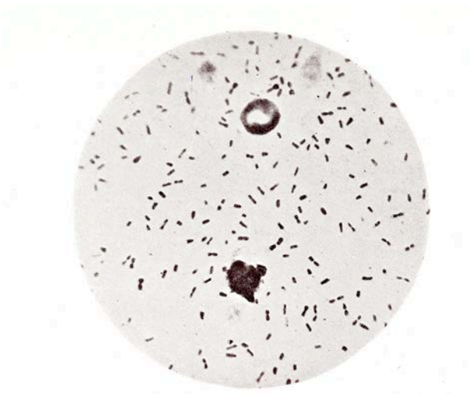


Fig. 1.

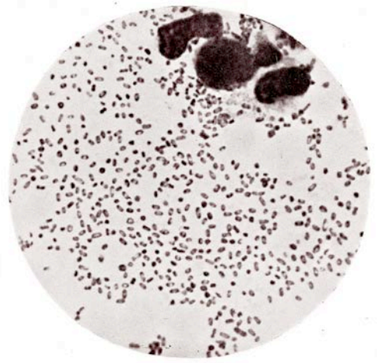


Fig. 2.

Microscopic image of the juice of a bubo from a man
infected with the Bubonic Plague
Stories in the *Bacteriology and Etiology of Oriental Plague*
E. Klein, MD, FRS, 1906

The name for Bubonic Plague comes from buboes. Buboes are swollen, inflamed lymph nodes that are found in the armpit and groin area. Many physicians believed that draining the juice from buboes would aid in ridding the patient of the Plague, but it usually ended up having the opposite effect, and it typically made the patient even sicker, along with spreading the disease.

Bloodletting from the head and neck in
Traité complet de l'anatomie de l'homme
2nd edition
M. Bourgery, Claude Bernard, and N.H. Jacob

For hundreds of years, the subject of where to make incisions was a subject of debate among many medical professionals. Some thought that blood should be drawn from the sight of the ailment, which was called "derivative bleeding," while others believed that blood should be drawn from the opposite side of the body, called "revulsive bleeding." Bloodletting was eventually incorporated into general treatments for the sick, and some patients would lose over half of their entire blood volume in one sitting. In an effort to promote good health, many people would participate in routine bleeding every spring and fall.

(Detail)
Saints Cosmas and Damian, 1517
Feldtbüch Der Wundtartzney

What is a Saint?

Saint Sebastian became commonly known as one of the patron saints of the Plague due to his association with arrows and well-known martyrdom. Saint Sebastian represents the martyr who has given his life to defeat the disease. Saints of the Middle Ages were not simply spiritual guides, but physical protectors as well.

Saint Roch, another patron saint of the Plague, was more localized in his endeavors. Many sought after his guidance and healing because he reflected the needs of the afflicted people of the time. People saw him as innocent and kind, marking him to be the ideal candidate of protection against and healing from the plague.

Saints Cosmas and Damian were the patron saints of medicine and surgery; having been raised in a strict Christian household, Cosmas and Damian relied heavily on prayer and their Christian virtue to aid them in healing. Over time they established a common name for themselves by accepting no fare for their services, furthermore indicating their saintliness. Eventually martyred, the two brothers are consistently represented as symbols of surgery and medical practice. Though these saints are not specific to the Plague, they represent the same ideals as Sebastian and Roch.

(Detail)
Galeni Sexta Classis Eam Chirurgie Partem Amplecticur…, 1550
Lucantonio and Tommaso Giunta

The Pious and the Plague

Kelsey Jones

Figure 1:
Opthalmodouleia, 1583
Georg Bartisch

The Middle Ages experienced a height of religious relics and entities in regards to protection against and healing from epidemic disease. Many turned to the aid of common saints, such as Saints Cosmas and Damian, Roch, and Sebastian. Amulets, both magical and secular, became popularized for their ability to ward off and extract diseases from people's bodies.

Religious relics, such as amulets and charms, provided ease of mind to those facing the harsh conditions of epidemic outbreak. Powers, categorized both by evil and good, were documented in the natural world as angels guided divine power and demons controlled unfortunate events.[1] Following specific terms of regularity, angels and demons were to adhere to a certain level of natural normalcy as to not trespass on the powers of God.[2] The Catholic Encyclopedia claims amulets to be "generally inscribed with mysterious formulae and used by the pagans as a protection against the maladies."[3] Though amulets were often seen on the borderline of religious orthodoxy and pagan culture, they can commonly be traced back to biblical emblems which were more generally accepted.

Ultimately, amulets were known to possess special powers in order to endow good fortune. Though the physical description of these trinkets ranged widely, it was their spiritual qualities that were overtly valued. Some amulets were treasured for their natural pharmaceutical abilities, while others were cherished solely on their principles of magic. Textual amulets (Figure 1) relied on standard images and texts but incorporated modern concepts as well. Often times, these amulets would contain gemstones that represented another entity; "manus Christi", made of crushed pearls, represented Christ's hands. Scientists of the time believed that this ingestion would stop the decay inside the human body.[4]

Medical professionals seemed to mention these more magical amulets in a negative context; understandably so, a successful magical amulet would challenge early modern medicine theory. On the other hand, many amulets were created on more natural pretenses taking the shape of pouches with chemicals inside. These amulets operated under the theory of invisible attraction and

Figure 2:
Saints Cosmas and Damian, 1517
Feldtbüch Der Wundtartzney

repulsion; the poisonous chemicals placed inside the amulets would attract the toxic miasma from the diseased person to itself. [5] In theory, these amulets worked because they possessed the occult powers of nature.[6] Scholars endorsed the idea of these powers of nature as to not support the idea of preternatural ("outside the natural") of angelic powers.

Saints Cosmas and Damian were commonly known for centuries as the patron saints of medicine and surgery.[7] (Figure 2) From a young age, the two brothers were raised under strict Christian virtue and combined their medical abilities with their spiritual knowledge. Through practice of prayer and piety, Cosmas and Damian performed healings deemed divine and became renowned for their saintliness.

The Plague proved no different in necessity for divine protection. Saint Roch, patron saint of the plague, thrived in celebrity during the Middle Ages. Recognized for his protection against and healing from the disease, Saint Roch amassed a following.[8] The development of more modern medication and experimental surgeries was emerging, but the traditional reliance on holy relics dates back before Middle Ages. Arguably, the use of saints as public administration allowed many to believe there was something to be done to prevent the plague, by praying to and worshiping these individuals.

Saint Sebastian is a household name of martyrdom. Sebastian consistently declared his compassion for those persecuted, particularly in the name of Christianity.[9] Nonetheless, he served as a patron saint of the Plague for his general empathy and unwavering faith that allowed him to heal. Sebastian has several symbols to set him apart from other saints (usually depicted as a martyr, bound to a tree or stake), but he is primarily represented pierced with arrows. The tale of his martyrdom explains that he was ordered to execution by arrows, though he recovered after being nursed back to health.[10] Although he was eventually executed, the account of his survival from the first attempt succeeds in promoting his divinity.

A vast majority of Plague art surrounded the idea of death; the persistent theme prevailed as many did not foresee an end to the epidemic.[11] Dating back to classical mythology, arrows are a symbol of pestilence. Legend tells that a divine archer would assign punishment for different sins and transgressions, pestilence being its own punishment.[12] Linked in their punishment and survival, it is clear that many would look to this Saint for guidance. Desperation and fear of the disease sponsored the saint and his miraculous ability to overcome.

The Middle Ages witnessed a vastly rampant disease in the Plague, yet its religious iconography stood as a strong line of defense to those who participated. Many relied on prayer and compassion, while others felt it necessary to employ physical symbols for protection and healing.

[1] Cerný, Karel. "Magical and Natural Amulets in Early Modern Plague Treatises." *Sudhoffs Archiv* 97, no. 1 (2013), 85.
[2] Ibid.
[3] Maurice Hasset. *Amulet*. In: The Catholic Encyclopedia. New York (1907) Accessed November, 28 2018.http://www.newadvent.org/cathen/01443a.htm.
[4] Cerný, 94.
[5] Ibid, 97.
[6] Ibid, 97.
[7] Leo M. Zimmerman. "Cosmas and Damian, Patron Saints of Surgery." The American Journal of Surgery 33, no. 1 (1936): 160-68.
[8]Irene Vaslef. THE ROLE OF ST. ROCH AS A PLAGUE SAINT: A LATE MEDIEVAL HAGIOGRAPHIC TRADITION, 1984, ProQuest Dissertations and Theses.`
[9]P G. Armand, *Saint Sebastian and the Black Death*. "Biusante.parisdescartes.fr." 1998, Accessed November, 28 2018. http://www.biusante.parisdescartes.fr/ishm/vesalius/VESx1998x04x01x023x030.pdf
[10] Ibid, 24.
[11] Ibid, 26.
[12] Ibid, 26.

Image Credits:

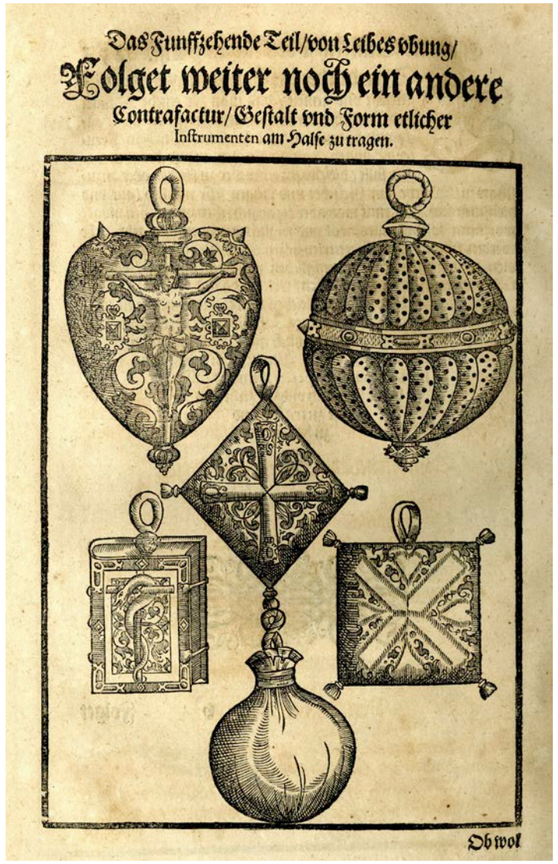
Figure 1: Bartisch, Georg, *Opthalmodouleia*, 1583. Reynolds-Finley Historical Library, University of Alabama at Birmingham, Birmingham, Alabama.

Figure 2: Der Wundtartzney, Feldtbüch, *Saints Cosmas and Damian*, 1517. Reynolds-Finley Historical Library, University of Alabama at Birmingham, Birmingham, Alabama.

Exhibition Plates

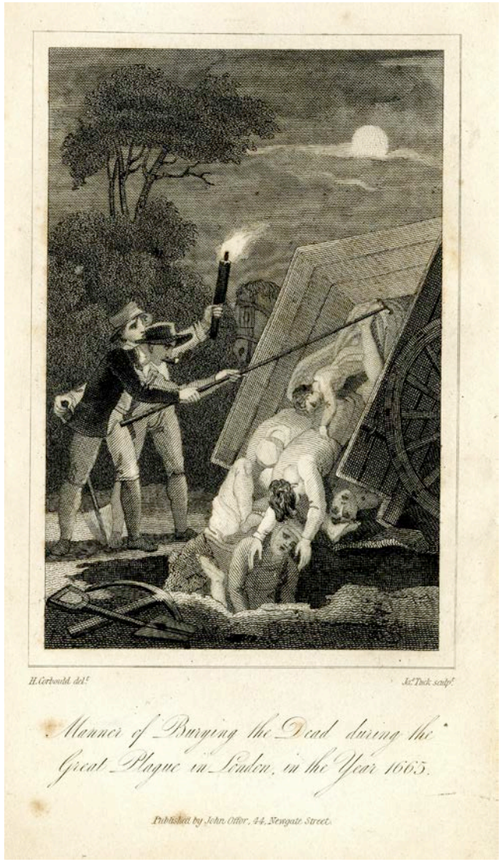
Saints Cosmas and Damian
Feldtbüch Der Wundtartzney
1517

Saints Cosmas and Damian were the patron saints of medicine and surgery; having been raised in a strict Christian household, Cosmas and Damian relied heavily on prayer and their Christian virtue to aid them in healing. Over time they established a common name for themselves by accepting no fare for their services, furthermore indicating their saintliness. Eventually martyred, the two brothers are consistently represented as symbols of surgery and medical practice.



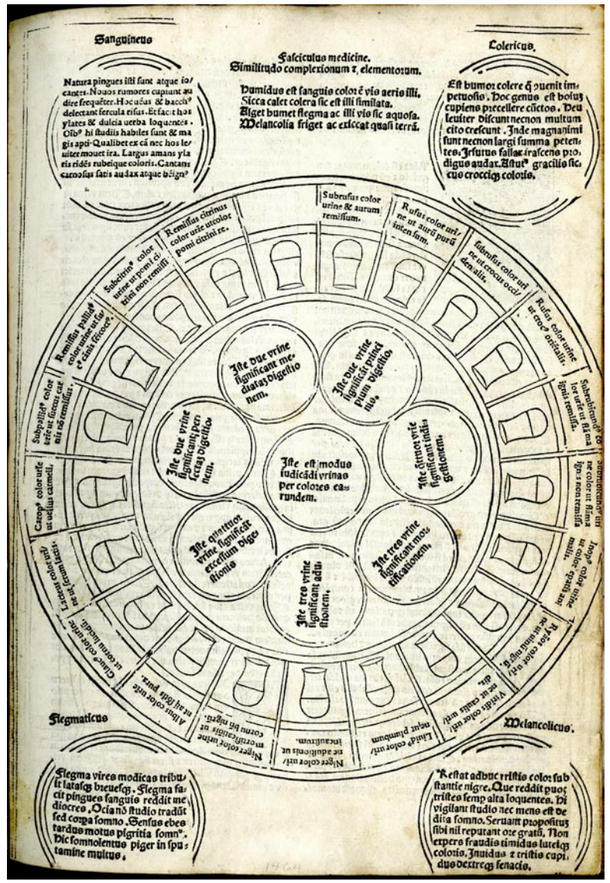
Opthalmodouleia
Georg Bartisch
1583

Religious trinkets were often used alongside worship and prayer in order to secure one's fate. Items, such as the amulets pictured, were often created in regards to health and medicine. While some amulets were entirely magical and spiritual in design, others were more naturalistic in their approach. New scientific developments in medicine led people to believe that certain chemicals placed within an amulet would either extract the disease or protect them from it.



The History of the Great Plague in London, in the Year 1665 : Containing Observations and Memorials of the Most Remarkable Occurrences, Both Public and Private, That Happened during That Dreadful Period
Daniel Defoe, Henry Corbould, J. Tuck, Henry Teape, John Offor, 1819

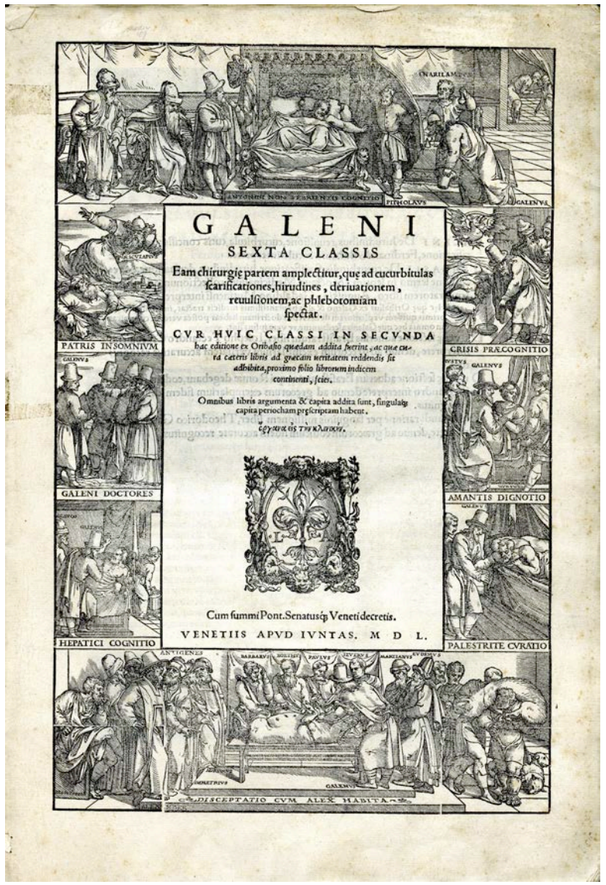
In this print, those who did not survive the plague are being placed in mass graves. At the time, with Europe losing such a vast percentage of their population, many were not buried alone but alongside others. Though many were dying quickly, the bodies were often placed purposefully, sometimes with religious trinkets or coins from their former lives.



Four Humors and Urine Chart The Fasciculus
Medicinae of Johannes De Ketham,
Alemanus,1491
Joannes de Ketham

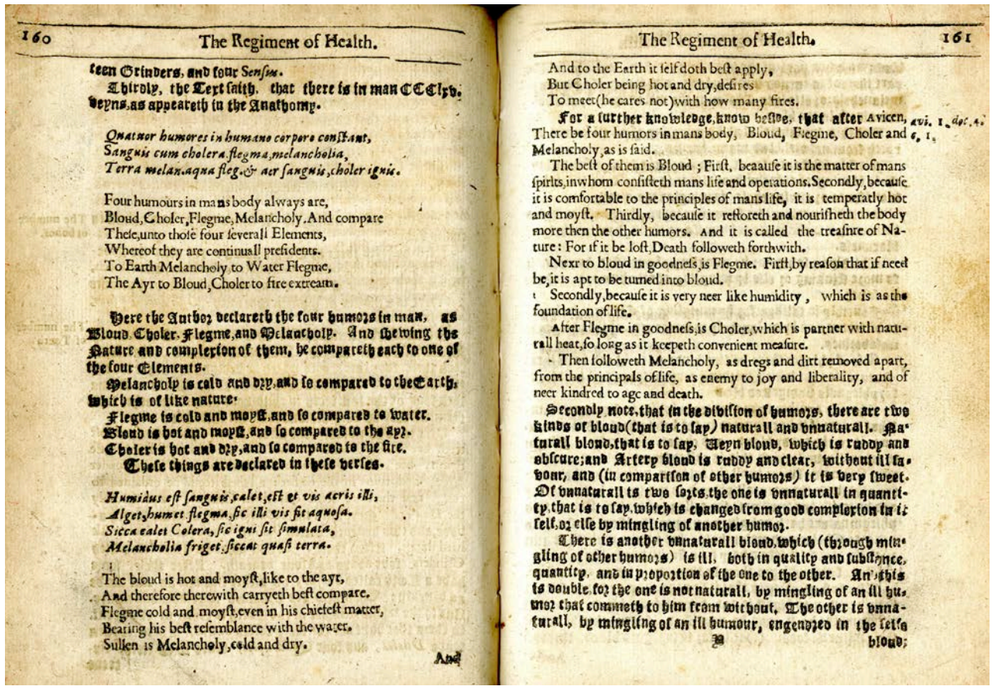
"Assimilation between Complexions and Elements: Blood is humid and warm, similar to the nature of air. Choler is dry and warm and thus resembles fire. Phlegm is cold and humid and thus similar to the nature of water. Black bile is cold and dry lie earth."

The four humors represented the four fluids of the body that influenced both mental and physical health. The four humors, black bile, yellow bile, phlegm, and blood were said to be in balance if one was in perfect health. During the Plague period, many practiced bloodletting as a way of balancing the four humors. Though the theory of the four humors has been discredited since its time of popularity, it served as an easily understood method of treating otherwise unexplainable illness. As seen in the chart, urine was also used to test the illnesses of the body and to determine proper medical action.



Galeni Sexta Classis Eam Chirurgie Partem Amplecticur…, 1550
Lucantonio and Tommaso Giunta

Galen was a leading Greek physician during second-century CE. Throughout his life, Galen attempted to prove that every bodily ailment could be solved by application of nature. Believing that the four humors of the body were responsible for all mental and physical health, Galen also classified all personalities into the four categories as follows: phlegmatic, sanguine, choleric, and melancholic. This compilation of images showcases scenes from the life of Galen, demonstrating his successes and healings. Bloodletting was a medical practice that thrived during the Plague epidemic; many tried to regulate their four humors and establish an equilibrium.



160 The Regiment of Health.

teen Grinders, and four *Sensus*.

Thirdly, the Text saith, that there is in man CCClxv. Veyns, as appeareth in the Anathomy.

Quatuor humores in humano corpore constant,
Sanguis cum cholera, flegma, melancholia,
Terra melan. aqua fleg. & aer sanguis, choler ignis.

Four humours in mans body always are,
Bloud, Choler, Flegme, Melancholy, And compare
These, unto those four severall Elements,
Whereof they are continuall presidents.
To Earth Melancholy, to Water Flegme,
The Ayr to Bloud, Choler to fire extream.

Here the Author declareth the four humors in man, as Bloud, Choler, Flegme, and Melancholy. And shewing the Nature and complexion of them, he compareth each to one of the four Elements.

Melancholy is cold and dry, and so compared to the Earth, which is of like nature.

Flegme is cold and moyst, and so compared to water.

Bloud is hot and moyst, and so compared to the ayr.

Choler is hot and dry, and so compared to the fire.

These things are declared in these verses.

Humidus est sanguis calet, est et vis aeris illi,
Alget, humet flegma, sic illi vis sit aquosa.
Sicca calet Colera, sic igni sit simulata,
Melancholia friget, sicca: quasi terra.

The bloud is hot and moyst, like to the ayr,
And therefore therewith carryeth best compare.
Flegme cold and moyst, even in his chiefest matter,
Bearing his best resemblance with the water.
Sullen is Melancholy, cold and dry.

And

The Regiment of Health. 161

And to the Earth it self doth best apply,
But Choler being hot and dry, desires
To meet (he cares not) with how many fires.

For a further knowledge, know besides, that after Avicen, There be four humors in mans body, Bloud, Flegme, Choler and Melancholy, as is said. *avi. 1. doc. 4. c. 1.*

The best of them is Bloud; First, because it is the matter of mans spirits, in whom consisteth mans life and operations. Secondly, because it is comfortable to the principles of mans life, it is temperatly hot and moyst. Thirdly, because it reforeth and nourisheth the body more then the other humors. And it is called the treasure of Nature: For if it be lost, Death followeth forthwith.

Next to bloud in goodness, is Flegme. First, by reason that if need be, it is apt to be turned into bloud.

Secondly, because it is very neer like humidity, which is as the foundation of life.

After Flegme in goodness, is Choler, which is partner with naturall heat, so long as it keepeth convenient measure.

Then followeth Melancholy, as dregs and dirt removed apart, from the principals of life, as enemy to joy and liberality, and of neer kindred to age and death.

Secondly note, that in the division of humors, there are two kinds of bloud (that is to say) naturall and unnaturall. Naturall bloud, that is to say, Veyn bloud, which is ruddy and obscure; and Artery bloud is ruddy and clear, without ill savour, and (in comparison of other humors) it is very sweet. Of unnaturall is two sorts, the one is unnaturall in quantity, that is to say, which is changed from good complexion in it self, or else by mingling of another humor.

There is another unnaturall bloud, which (through mingling of other humors) is ill, both in quality and substance, quantity, and in proportion of the one to the other. And this is double, for the one is not naturall, by mingling of an ill humor that commeth to him from without. The other is unnaturall, by mingling of an ill humour, engendred in the self same

B bloud;

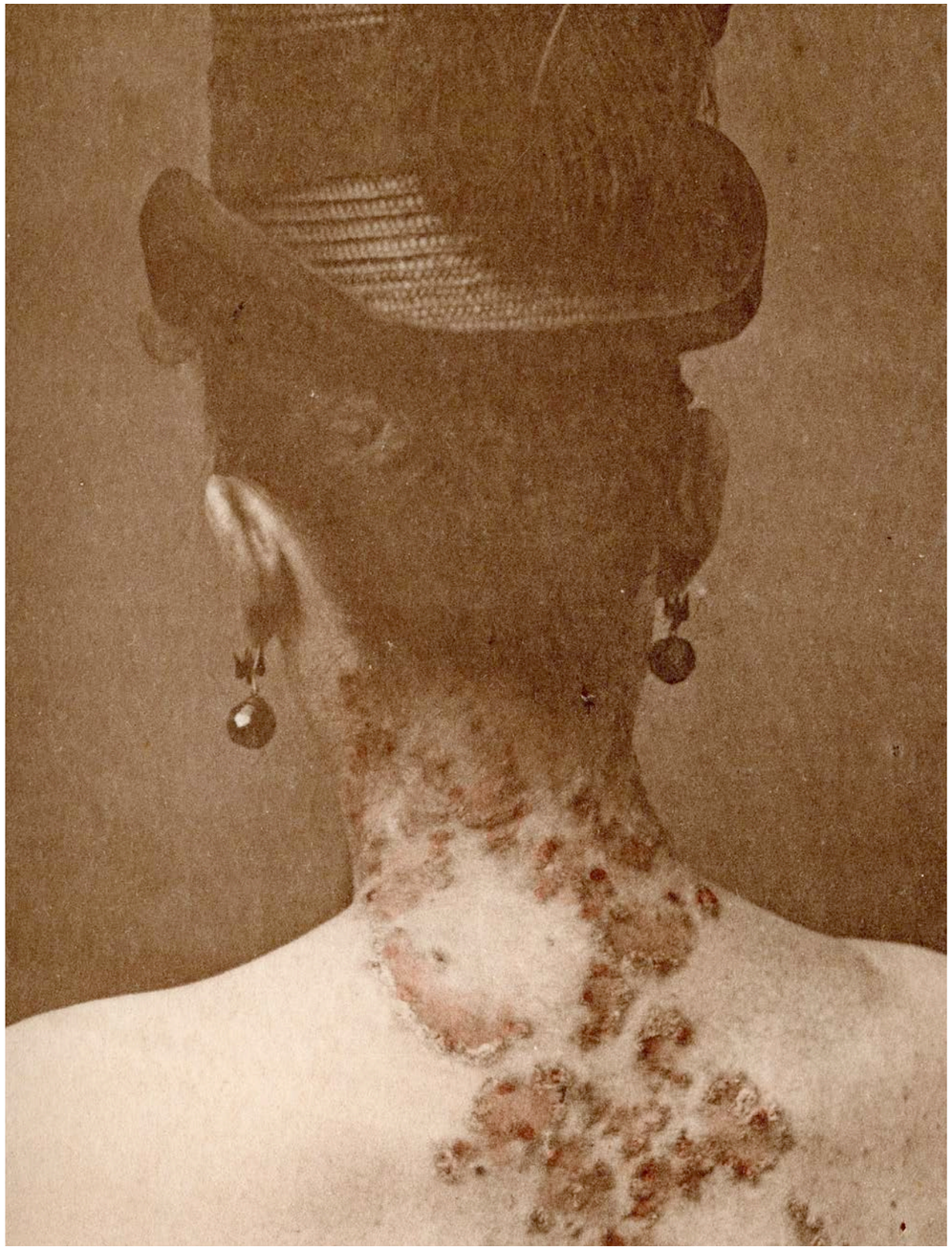
Regimen Sanitaitis Salerni, 1513
John Harrington

This book describes the four humors and their affects on the human body. More than a physical association, the four humors correlated to the four elements of the Earth. Blood is said to be the best of all humors, as it is the matter of man's spirit and nourishes the body more than the other humors. Phlegm is next, resembling humidity as the foundation of life. Thirdly is choler, which is partnered with natural heat. Lastly is melancholy, similar to dregs or dirt in nature; melancholy is stated to be the enemy of joy and kindred to death.

The Stereoscopic Skin Clinic
circa 1910

What Is Syphilis?

Syphilis is a bacterial disease that is caused by the organism Treponema Palladium, and is mainly transmitted through sexual contact, but can be spread through any contact with the bacterium and mucosal membranes. The disease manifests itself in four stages: Primary, Secondary, Latent and Tertiary. In the first stage of the disease, a painless sore can be seen at the site of initial infection. The Secondary stage is systemic, resulting in a rash on the body, swollen lymph nodes, and other general signs of illness. This resolves on its own and leads to the latent stage, which can last for years. In the tertiary stage, the disease spreads to other parts of the body and can cause damage to the brain and other internal organs, causing serious complications. Contemporary treatments can stop the progression of the disease into the latent and tertiary stage, therefore the latter two are very rare in today's society. This disease bears historical significance because it wreaked havoc in Europe, peaking around the 16th century, but remaining a problem to the present day. Before the name Syphilis was bestowed upon the malady, the affected nations would name it after the place with which they were experiencing political dissent. An example of this is it being called "The French Disease" by Britain and "The Spanish Pox" by France. This exhibit contains journey throughout the history of Syphilis, its treatments, and its modern effects on sexual health.



Photographic Illustrations of Cutaneous Syphilis
George Henry Fox
1881

Maladies in Montmartre: Sexual Health in the time of Toulouse-Lautrec

Oakleigh Pinson

Figure 1:
Photographic Illustrations of Cutaneous Syphilis
George Henry Fox
1881

"Everywhere and always ugliness has its beautiful aspects; it is thrilling to discover them where nobody else has noticed them".[1]

Henri de Toulouse Lautrec

The word *scourge* has a mostly negative connotation, with synonyms such as blight, plague, and menace. Most humans fear disease, and would come to a collective consensus that it is the epitome of ugliness. As Toulouse-Lautrec said, however, there is a certain beauty in the grotesque. Featured in George Henry Fox's medical volume *Photographic Illustrations of Cutaneous Syphilis* (1881), a series of hand-tinted photographs are displayed. The images therein are hauntingly beautiful, and are made for diagnostic purposes, containing case studies and facts about their respective illustrations. One of the most exquisite of these images is that of a woman, shown from behind, displaying the characteristic rash that is present in secondary syphilis (Figure 1). She is shown seated, in all of her finery, the bodice of her dress pulled down to expose the eruptions of her skin. The delicate hues of the photograph add an ephemeral delicacy to her, despite the recognizable "ugliness" that exists. The rash almost appears as an accessory, as opposed to a malady. This figure elicits memories of the intimate images that were done by the bohemian artist Henri de Toulouse-Lautrec, painter of can-can dancers and prostitutes. He befriended them, and showed them in a light that no other artist had in the past. He found beauty in the darkness, splendor in sickness. In this discourse, the treatment of women in the art of Lautrec will be explored in relation to sex work and Syphilis, a disease that was basically a death sentence in this era before antibiotic treatment. It is estimated that 70 percent of all prostitutes had the disease at the close of the 19th century, and Montmartre, the region of Paris that Lautrec called home, was an epicenter of nightlife.[2] We shall survey several of these works and try ourselves to find beauty in the grotesque.

France during the mid to late 19th century was an interesting place. Coming on the heels of the French Revolution, various governmental changes were taking place throughout the era. From the First Napoleonic Empire to the Third Republic, political differences were rife.3 In the realm of the arts, there were also revolutions abound. Artists were growing tired of the aged academic tradition of the Salons, and going out into the world for the first time and painting things as they were.4 A major hub for the freethinking and avant-garde was nestled in a small region of Paris, the aforementioned Montmartre. From this place, major figures from Impressionism, Realism, and later cubism would arise5 and this nonconformist culture was formed. These were the Bohemians, and they were to become some of the most renowned artists in history. Not only was Montmartre a place for these like-minded artists to gather, it was also a place where nightlife and brothels were ubiquitous. It was a time of excess, when illicit hedonisms were desired by many, including the aristocracy.[6]

Perhaps one of the most famous artists to depict this lifestyle was Henri de Toulouse-Lautrec. He is known for his portrayals of the underbelly of Paris, seeking to depict those who were not normally shown in a positive light. He, in a way, elevated the Parisian underground to the level of 'high art", using swirling and vivid colors and lines. In his short career, he painted cabaret dancers, prostitutes, and other members of the bohemian milieu. With the bright lights and loud music, however comes a dark side. The grotesque reality of disease came with this new found sexual freedom.

Henri de Toulouse Lautrec was a peculiar man, in physical appearance as well as in philosophy. He was dwarfed by genetic abnormality and injury, and actually came from the aristocratic class.[7] He blossomed as an artist while facing numerous illnesses as a child and went on to study under painters that did follow the academic tradition of classical subjects.[8] Upon settling in Montmartre, his career really began to flourish. His favorite subjects were women, and he became a "court painter" of sorts in the celebrated Moulin Rouge nightclub, painting

Figure 2:
Henri De Toulouse-Lautrec
Jane Avril
1893

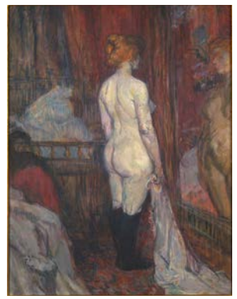


Figure 3:
Henri de Toulouse-Lautrec
Woman Before a Mirror
1897

can-can dancers such as *Jane Avril*.[9] (Figure 2) He gained notoriety as a leading poster painter in Paris, producing posters for dancers and nightclubs.[10]

In juxtaposition with the paintings of these wild and wonderful women, we see a very intimate portrayal of the opposite side of the coin. Here a personal and profound depictions of marginalized women, such as prostitutes, can be observed. He was an outcast himself, which feasibly caused him to be very sympathetic towards other people who were ostracized.[11] He gives these people humanity when the majority of society would rather take it away. He viewed these women as his companions and contemporaries, and would show them in personal situations where one would see into their psyche. A striking example of this type of work is his *Woman Before a Mirror* (Figure 3) from 1897. It shows a woman from behind, much like the photograph from Fox's medical text. She is shown looking into a mirror, the blurred image of the front of her body can be barely seen by the viewer. She is confined to a brothel, staring out into the mirror, taking consideration of her body. The viewer cannot discern what her emotions are, but one could infer that she is evaluating her life as it is. It is a profound image that is thought-provoking, and shows the benevolence of this "other…a person that would have otherwise been abhorred by society at large.

Syphilis is a bacterial disease that is primarily sexually transmitted, and with an underground society that was rife with orgiastic tendencies, one can infer that it was more than a small problem in a place such as Montmartre. Prostitution was regulated in Paris at the time, and these women would have been subject to inspections.[12] These inspections were to keep their customers from the impending doom that came along with a diagnosis of Syphilis.[13] At this time, Syphilis would have been a death sentence because this was an era that lacked antibiotics, which would go on to become the primary treatment for the disease. Since it would have gone untreated, there are many complications that could arise from the disease, including an eventual descent into complete madness if the bacteria infect the brain.[14] In Lautrec's painting, titled *Medical Inspection, Rue Des Moulins* (Figure 4) from 1894, one of these very inspections are shown. Another brothel interior

Figure 4:
Henri De Toulouse-Lautrec
Rue De Moulins, 1894

is revealed, in all of its rich and decadent glory (much like the setting of *Woman Before a Mirror*). Toulouse-Lautrec made his residence in a brothel for a time, so he would have been up close and personal with the sex workers and would be able to depict them as they were.[15] Two women are in the foreground, shown in garish fashion, waiting in line to be examined to ensure that they were fit for their work. They are shown with no undergarments, their skirts gathered in their hands to offer a final covering before they are looked over for any indications of disease. Toulouse-Lautrec made his residence in a brothel for a time, so he would have been up close and personal with the sex workers and would be able to depict them as they were.[16] The way in which Lautrec captures this moment, with bright and tawdry coloration a la his paintings of members of the upper echelons enjoying raucous evenings in the nightclubs, elevates them to the social strata of the former. He again finds beauty in a moment of possible indignity, these women who are earning a living by doing something that most people see as a study in depravity, by portraying them in an almost sympathetic light. He gives them a chance to show their humanity, especially in their desire to protect any trace of decorum they may have left.

Lautrec died in 1901, at the age of 36, perishing from complications of alcoholism and a possible case of tertiary Syphilis (he was known to have not only painted the women in the brothels, but also patronized them).[17] His paintings, posters, and lithographs are some of the most recognizable works from the late 19th century.

How do the works of Lautrec and the *Photograph of Woman With Syphiloderma* from George Henry Fox's medical text compare? The answer is predominately the way in which the figures are treated in their respective works. In both of these, the women are portrayed elegantly and sympathetically, adding a benevolence to the malevolent. In Fox's manual, the woman is shown from behind, in a similar way that nudes would be tastefully shown in 19th century art, a photographic example of which is Jean-Louis-Marie- Eugène Durieu's creation *Draped Model* (Figure 5) from circa 1854. The graceful way in which

Figure 5:
Jean-Louis-Marie-Eugene Durieu
Draped Model 1854

the figures are posed are very comparable. It is an academic rendering using a very modern technology. Fox's manual does not treat any of the patients shown as mere medical illustrations as most do. There is a certain magnificence within the photographs, and many of the people contained are posing as if for a portrait, merely wearing their disease (and with the stigma of the disease, their shame) as a decoration.

Henri de Toulouse Lautrec, as well as the enterprising but unknown person that created the photographs in the medical text likely had one thing in common: to see the beautiful in the monstrous, the majesty in the malady. Toulouse-Lautrec is one of the more recognizable figures in the history of art, and his creative and intrepid spirit brought life to an underground community who would otherwise been marginalized. The women in his paintings probably never thought that they would one day be on a museum wall. This is how art transcends reality and allows us to also find beauty, "everywhere and always."

[1]Henri de Toulouse-Lautrec, Theodore B. Donson, Marvel M. Griepp, *Great Lithographs by Toulouse-Lautrec*, Courier Corporation, 1982
[2] Salaam Semaan, Don C. Des Jarlais, and Steve Bice. "Sexual Health in Art and Science" *Emerging Infectious Diseases* 12, no 11 (2006) 1782-88
[3] BBC News, "France Profile-Timeline," BBC News. November 19, 2018. Accessed December 1, 2018. https://www.bbc.com/news/world-europe-17299605.
[4] Sylvie Buisson, Christian Parisot, *Paris/Montmartre: Mecca of Modern Art 1860-1920*,(Paris, France: Bayard Press, 1996), 10-11.
[5] ibid
[6] ibid
[7] Montmartre, 68
[8] Core Michael. "Henri de Toulouse-Lautrec (1864-1901)," *Helibrunn Timeline of Art History*, New York. The Metropolitan Museum of Art, 2000. Accessed November 25, 2018, http://www.metmuseum.org/toah/hd/laut/hd_laut.htm.
Jason Rosenfeld, "The Salon and The Royal Academy in the Nineteenth Century", *HelibrunnTimeline of Art History*, New York, The Metropolitan Museum of Art, Accessed December 2, 2018, https://www.metmuseum.org/toah/hd/sara/hd_sara.htm.
[9] Montmartre, 78
[10] Michael
[11]Michael
[12] Mike McKiernan, "Henri de Toulouse-Lautrec Medical Examination, *Rue des Moulins(1894)*: North wall fresco, lower panel 5.398 m X 13.716 m. Detroit Institute of Arts, Detroit, USA", Occupational Medicine, Volume 59, Issue 6, September 1, 2009, 366-368, Accessed November 25,2018 https://academic.oup.com/occmend/article/59/6/366/1433135.
[13] Ibid
[14] Centers for Disease Control and Prevention, "Syphilis Fact Sheet," Accessed November 25, 2018, https://www.cdc.gov/std/syphilis/stdfact-syphilis.htm.
[15] McKiernan

[16] Ibid
[17] Ibid

Image Credits

Figure 1: George Henry Fox, *Photographic Illustrations of Cutaneous Syphilis*, EB Treat and Company, New York. 1881. Reynolds-Finely Historical Library, University of Alabama at Birmingham, Birmingham, Alabama.

Figure 2: Toulouse-Lautrec, Henri de. *Jane Avril*. 1893. Metropolitan Museum of Art, New York. Accessed November 30, 2018. https://www.metmuseum.org/toah/works-ofart/32.88.15/

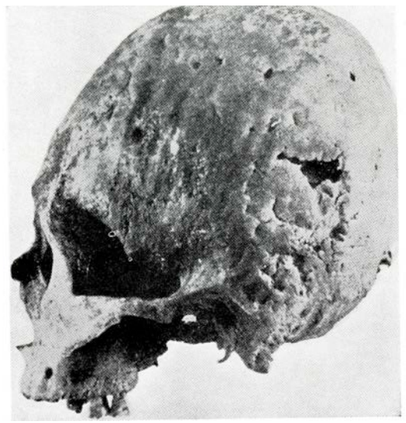
Figure 3: Toulouse-Lautrec, Henri de. Woman *Before a Mirror*. 1897. Metropolitan Museum of Art, New York. Accessed November 30, 2018. https://www.metmuseum.org/art/collection/search/438018

Figure 4: Toulouse-Lautrec, Henri de. *Rue De Moulins*, 1894. National Gallery of Art,Washington, DC. Accessed November 30, 2018. https://www.nga.gov/collection/artobject-page.46544.html

Figure 5- Durieu, Jean-Louis-Marie-Eugene, *Draped Model*. About 1854. J. Paul Getty Museum, Los Angeles, California. Accessed November 30, 2018. http://www.getty.edu/art/collection/objects/54183/jean-louis-marie-eugene-durieu-drapedmodel-french-about-1854/?dz=0.5000,0.7215,0.39

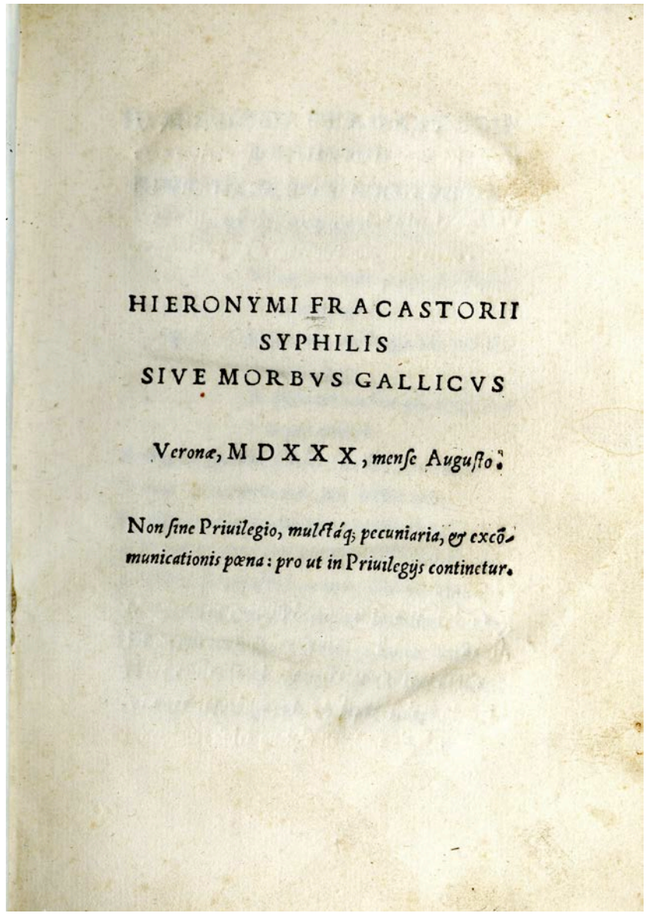
Exhibition Plates

Illustration plate of Syphilitic Infectious agent, *Treponema Palladium*, synthesized from the spleen of a fetus. From A System of Syphilis, Volume I by D'arcy and J. Keough Murphy. Oxford University Press



Ancient Syphilitic Skull From Paracas, Peru. From *The History and Epidemiology of Syphilis* by William Pusey, 1933

There is a modern debate about where Syphilis originated. The long-believed paradigm is that it was brought from the "New World" by the Spanish, however in the 20th century scholars hypothesized that it was a disease that had existed but evolved into a more potent type. This is an example of the bone degeneration that would be seen in someone with Tertiary Neurosyphilis from the Americas.



HIERONYMI FRACASTORII
SYPHILIS
SIVE MORBVS GALLICVS

Veronæ, M D X X X, menſe Auguſto.

Non ſine Priuilegio, mulctáq; pecuniaria, & excõmunicationis pœna: pro ut in Priuilegijs continetur.

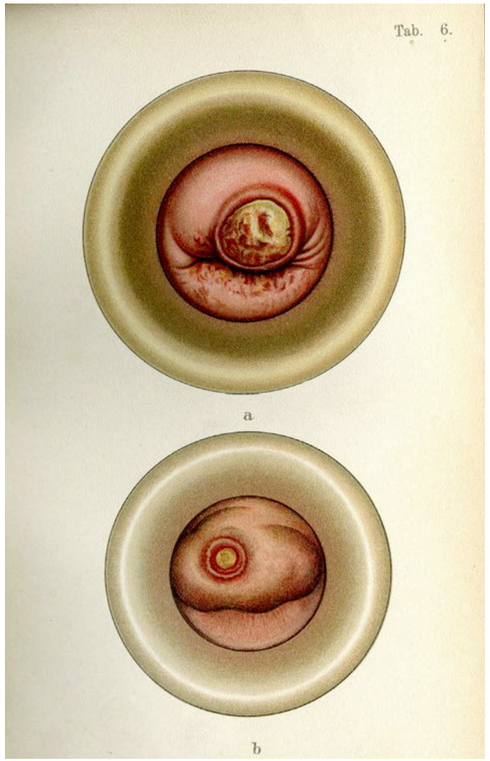
Syphilis Sive Morbus Gallicus
Hieronymus Fracastoro

The word "Syphilis" was coined by Hieronymus Fracastoro, a physician in the 16th century in his poem, Syphilis Sive Morbus Gallicus. In this poem, a shepherd, named Syphilus is struck down by divine intervention with the disease as punishment.

This is a first edition of the poem, printed in 1531.

Photographic Illustrations of Cutaneous Syphilis
George Henry Fox
1881

This is a hand-tinted photograph of a woman with a syphilitic rash, one that would be very common in someone with Secondary Syphilis.



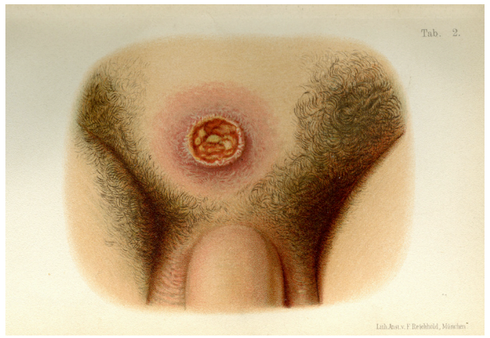
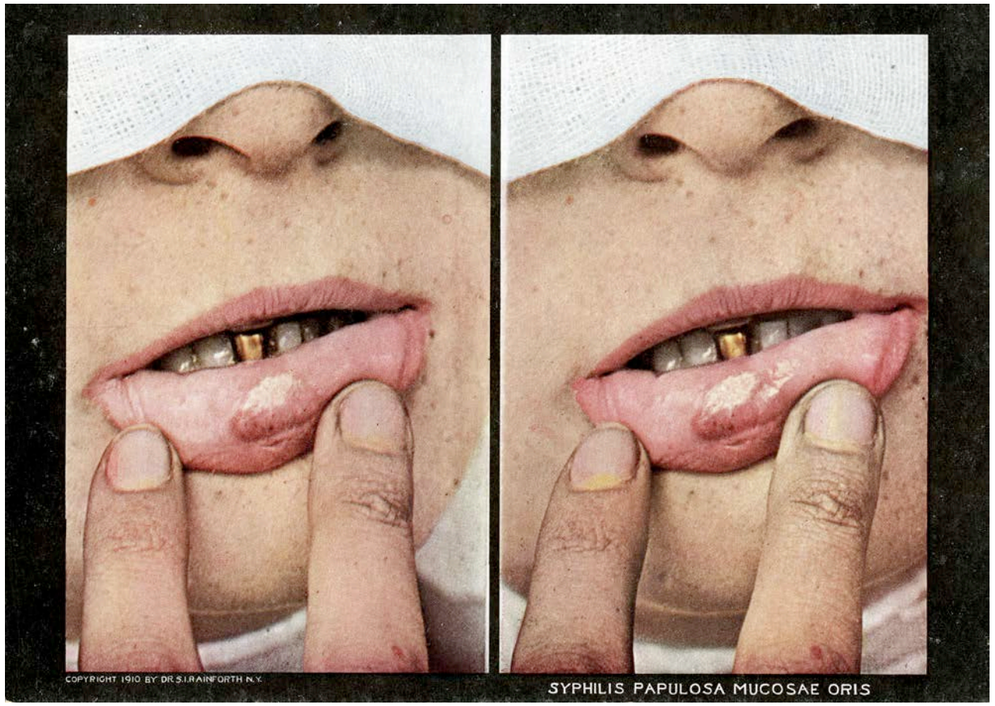


Illustration Plates from *Atlas of Syphilis and the Venereal Diseases*
Franz Mra□ek, 1898

This is an example of what a primary syphilitic lesion may look like in the pubic area of a male patient. These are usually painless and\ will resolve on their own, even without treatment.

In women, sometimes the chancre is more difficult to see because of anatomical differences. Pictures is a syphilitic lesion of the cervical tissue in a female patient.



The Stereoscopic Skin Clinic
Stereoscope Card
circa 1910

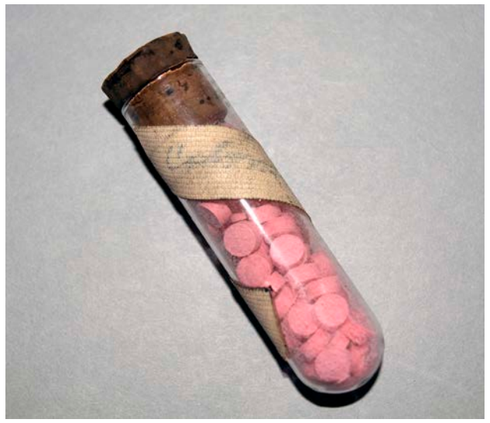
This image, meant to be viewed through a stereoscope for medical students, shows another type of syphilitic lesion (primary stage) in which the person contracted the disease through the oral mucosa.


VLRICHI DE HVT
TEN EQ. DE GVAIACI MEDICINA
ET MORBO GALLICO LIBER
VNVS.

Ulrich von Hutten, De Guaici Medicina Et Morbo Gallico from 1519.

Guaiacum is a resin that comes from a tree native to the Americas. During the 16th Century, there was a theory that diseases could be cured by things that came from the land of said disease's origin. The common theory was that the disease came from the Americas, therefore the "magical" medicine would be the cure. It was lauded as one of the earliest treatments of Syphilis in Europe. The author of this book was a German Knight that had a tempestuous lifestyle, eventually succumbing to Syphilis himself.

Brown Calomel Bottle with Tablets
Eli Lily and Company, nd

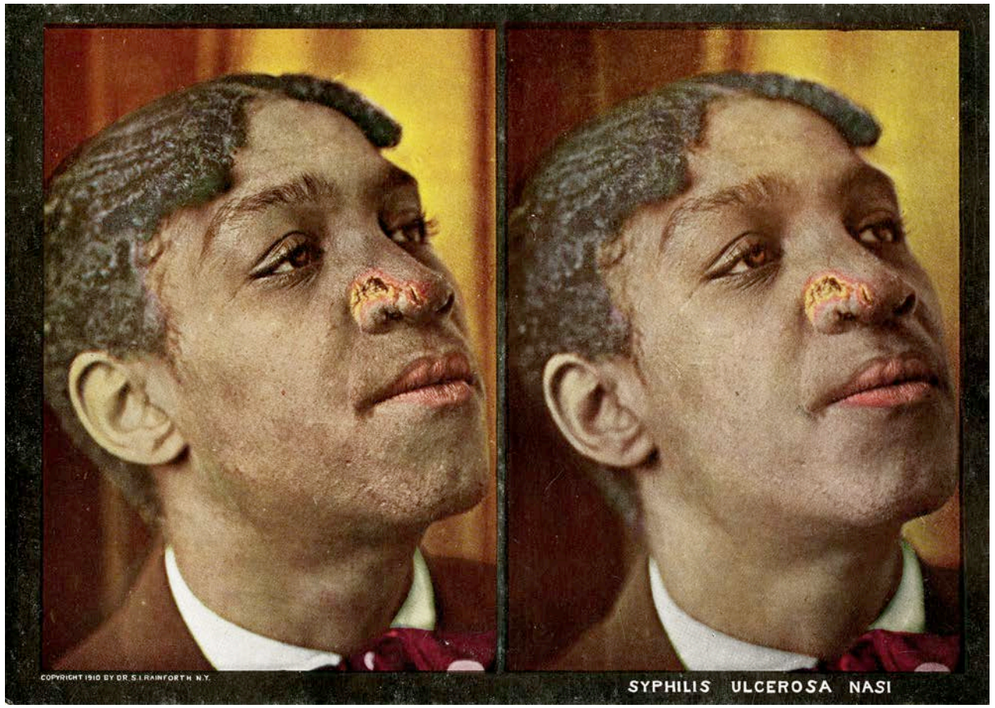


Calomel Tablets from late 19th – early 20th Century

Treatments for Syphilis through the ages.

For as long as the "pox" has been affecting people, physicians have been trying different cures on victims. Some of these were as toxic to the system as the disease itself.

"For a night with Venus, A lifetime with Mercury"…
Mercuric agents were used in the treatment of Syphilis since its arrival in Europe at the end of the 15th century. Mercury itself is incredibly toxic and would be more toxic to the body than Syphilis itself. Shown here are two different examples of Calomel, which is also known as Mercurous Chloride, both in tablet form. There would also have been topical preparations as well as those for injection.



The Stereoscopic Skin Clinic
Stereoscope Card
circa 1910

One of the perhaps lesser known effects of the tertiary stage of the disease is the degeneration of the nose. This is an example of the early stage of "saddle nose", where the bridge of the nose folds into itself and can eventually deteriorate completely.

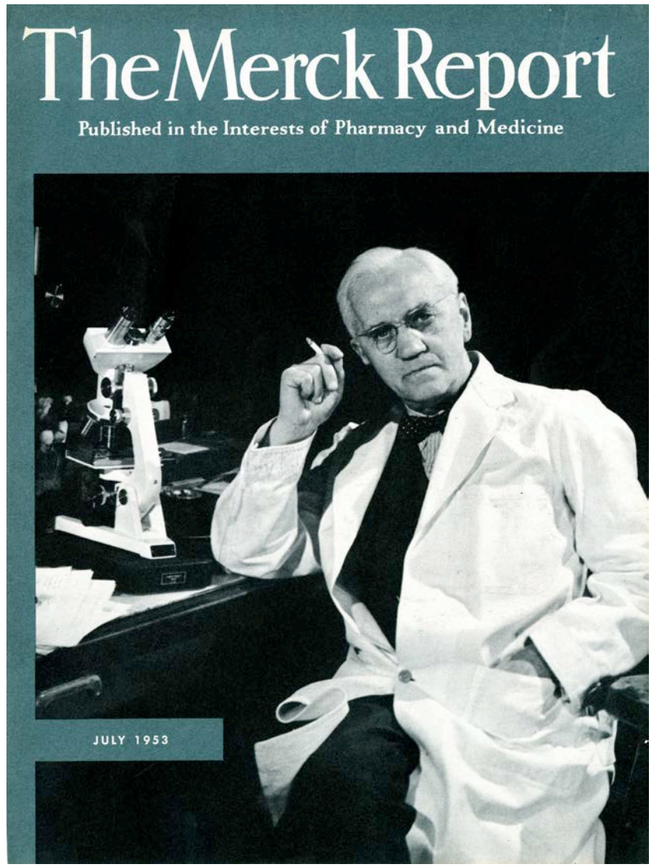
Salvarsan Ampoules
The Hynson and Wescott
and Company

Salvarsan was deemed a "wonder drug" when it was synthesized in 1910 by Paul Ehrlich. I was an arsenic-based compound that was injected into the patient over a period of 18-24 months (also sometimes with mercury and bismuth). His discoveries led to the upsurge of chemotherapeutic agents in the 20th century.

Hypodermic Needle
Becton, Dickinson, and Company

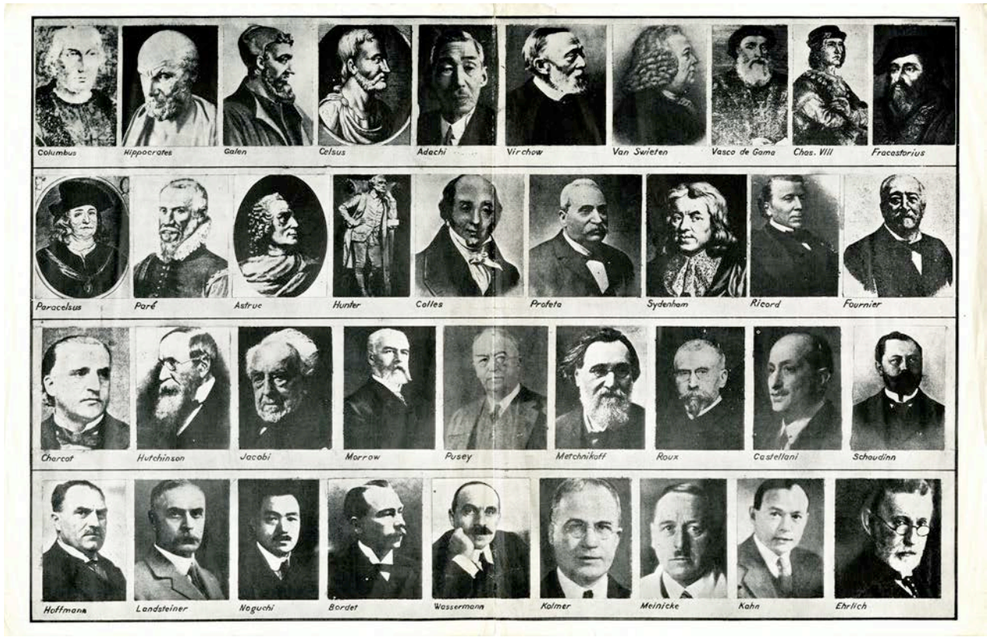
Penicillin Container
Sigma Chemical Company

Penicillin is lauded as one of the greatest innovations in medical science. It was, and still is used widely in the treatment of various bacterial infections. It is widely considered as the best treatment for Syphilis by the medical community. It only takes one injection to cure syphilis, as opposed to the year and half it would have commonly taken with salvarsan.



Dr. Alexander Fleming on the cover of the
Merck Pharmaceutical Report, 1954

Dr. Alexander Fleming was the discoverer of Penicillin. As the story goes, he was experimenting with certain strains in the Staphylococcus family. He was then away from his laboratory for a time and upon his return, he noticed that some of his bacterial cultures had acquired mold. Around this growth, the bacteria had been eradicated. Upon this observation, he and his colleagues went on to synthesize one of the world's first antibiotics. It got its name from the mold that was used Penicillium, and thus, Penicillin was Born.



Hall of Fame in Social Hygeine
Magazine Clipping circa 1957

This compilation of faces shows different physicians and other medical practitioners that have made a difference in the field of “social hygiene” (AKA sexual health). Three people shown in this picture are included in this case, Hieronymus Fracastoro, William Pusey, and Paul Ehrlich.

Ramses Condoms, Texide "Rubber Sheaths",
and Prime Lubricated Condoms

A History of The Raincoat…Condoms have been a part of humanity since ancient times. From Ancient Greece, to Rome, to China, the condom has been used again and again as a guard from disease (even before the advent of Germ\ Theory!). In regards to Syphilis, Gabriele Fallopio described an early linen condom, tied with ribbons to protect against the "Morbus Gallicus". Many iterations of prophylaxis have been used throughout the centuries, being made from materials ranging from animal skin to the linings of the intestinal tract, and oftentimes were reusable. In the 19th Century, Charles Goodyear developed the process of Vulcanizing Rubber, making mass production of rubber condoms possible. Rubber latex was formulated in the 1920's, creating what we know today as the modern condom. Condoms are one of the best ways of not only preventing pregnancy, but also one of the best defenses against Sexually Transmitted Infections including Syphilis. Here we see three fabulous examples of Condom Packaging from the 20th Century.

CDC | CDC Home | Search | Health Topics A-Z
MMWR
Weekly
May 8, 2009 / 58(17);463-467

Primary and Secondary Syphilis --- Jefferson County, Alabama, 2002--2007

In June 2006, the Alabama Department of Public Health (ADPH) requested assistance from CDC to investigate and control a multiyear epidemic of syphilis in Jefferson County. The county had experienced a decrease in primary and secondary (P&S) syphilis cases, from 279 in 1995 to nine in 2002. By 2005, the incidence had begun to rise substantially, culminating with 238 cases in 2006 and 166 in 2007. Beginning in August 2006, CDC assisted the Jefferson County Department of Health (JCDH) in investigating the increase in cases and in planning control measures. This report summarizes the results of that investigation, which found that the characteristics of cases during 2002--2004 differed substantially from cases during 2005--2007. Declines in U.S. syphilis rates, which reached their lowest point in 2000, led to optimism that syphilis elimination (defined as the absence of sustained syphilis transmission) in the United States was possible, and CDC's National Syphilis Elimination Plan was launched in 1999 (*1*). Although increased U.S. syphilis rates in the early 2000s have been reported to be associated primarily with transmission among men who have sex with men (MSM) (2), the findings from this investigation indicate reemergence of syphilis among women and heterosexual men in Jefferson County. Public health officials in other areas should remain alert for similar epidemiologic shifts. Public health departments should facilitate access to effective treatment in sexually transmitted disease (STD) clinics or other settings, consider selective screening in high-prevalence populations (e.g., in correctional settings), and ensure adequate partner notification and treatment.

Outbreak Investigation

Jefferson County includes the city of Birmingham, and in 2007 was the county of residence for 658,779 persons (*3*), 14.2% of the state population. Most of the population is white (56.3%), black (41.2%), or Asian (1.3%), and 2.9% are of Hispanic ethnicity.* The county is served by one public STD clinic. During 2002--2007, 60.2% of all P&S syphilis cases in the county were reported from this clinic. By Alabama state law, clinicians and laboratories must report syphilis cases and positive

Morbidity and Mortality Weekly Report, May 9, 2009.
The Centers for Disease Control and Prevention

Syphilis is still a disease that manifests in the population, even in our own backyard! From 2002-2007, an outbreak of Syphilis was reported to the CDC, and then published in the MMWR (Morbidity and Mortality Weekly Report). Hundreds of patients were presenting to a public STD clinic with the symptoms of Primary and Secondary Syphilis. In response to the outbreak, a massive public health campaign was launched and photographs of Syphilitic symptoms were posted on Billboards, the sides of buses, and on television. This is a copy of the very MMWR that reported the numbers of cases received.

Traité de la petite verole
1771

What Is Smallpox?

Smallpox was a serious and infectious disease caused by the Variola virus. It was spread throughout the world. There are two different strains of the virus, Variola Major and Variola Minor. The key difference between the two strains was their mortality rates: 20% for the Variola Major vs. less than 1%. for the Variola Minor. Smallpox was a devastating disease; traveling through large populations. Skin lesions (pustules) caused by smallpox are distinctive and cover the entire body.

The exact origin of smallpox is unknown. However, it is believed that smallpox dates back to the Egyptian Empire around the 3rd century BCE (Before the Common Era). In 4th-century CE (to the Common Era), there were descriptions of cases that resembled smallpox throughout China. Similar cases were also seen in India in the 7th century CE and in Asia Minor in the 10th century CE. One of the first doctors to discuss and treat smallpox was Al Rhazes, who lived in Baghdad from around 864 to 930 CE.

In 1796, Dr. Edward Jenner observed that milkmaids were coming down with cowpox, a similar disease to smallpox, without being infected by the smallpox virus. Dr. Jenner began experimenting with cowpox by exposing humans to the disease. Through these particular experiments, Dr. Jenner observed that humans were no longer coming down with the smallpox virus once they were exposed to the cowpox virus. Dr. Jenner's experiments helped create the modern-day vaccine.

In 1959 the World Health Organization initiated a plan to completely rid the world of Smallpox. However, due to lack of funds, they were not able to totally eradicate the disease. In 1967, the Intensified Eradication Program was started, with laboratories strategically placed all over the world producing a higher quality vaccine. During this time, the bifurcated needle was implemented along with mass vaccination campaigns and the development of a surveillance system to investigate cases of smallpox. By 1952-53 smallpox had been eliminated in North America and Europe. By 1971, smallpox was eradicated from South America, in Asia by 1975 and in Africa by 1977. The last reported case of smallpox contracted naturally was in 1975 by a three-year-old from Bangladesh, Rahima Banu. We now live in a Smallpox free world.

Vaccination
1808
Ferdinand Smyth Stuart, ESQ

The Use of Caricature within the Smallpox Vaccination Debate

Tina Ruggieri

Since the early 1800s, propaganda, political satire, and caricatures have been used to sway public opinion on the vaccination debate, and since that time, things have not changed all that much. While searching the topic vaccination debate on the Internet, you will run across headlines such as: "Shrek and Aladdin Writer Uses Racism to Promote Anti-Vaxxer Message", "Social Medicine: The Effect of Social Media on the Anti-Vaccine Movement", "Chip & Joanna Gaines Baby Checkup Photo Hijacked by Vaccination Debate."[1] This fiery debate began with the discovery of the smallpox vaccination in the late 1790s. Since that time, millions of people were affected by one of history's most destructive scourges, an epidemic dating back to antiquity, and a disease that wiped out millions across the planet.

The exact origin of smallpox is unknown. However, it is believed that this disease dates back to the Egyptian Empire around the 3rd century BCE.[2] Pharaoh Ramses V may have died from smallpox at the age of 40 in 1157 BCE.[3] Descriptions of illnesses that resembled smallpox exist from 4th-century CE China. Similar cases were also seen in India in the 7th century and in Asia Minor in the 10th century.[4] One of the first physicians to study and treat smallpox was Rhazes (Abú Bakr Mohammad ibn Zakaríyá Ar-Rází).[5] Rhazes (865 to 925 CE) was the Chief Physician at Baghdad Hospital and considered by many to be the greatest medical doctor of the Islamic world in his day.[6]

In 1796, the British physician Edward Jenner began experimenting with smallpox vaccinations by using strains from the cowpox virus. Dr. Jenner believed that these vaccinations would ultimately eradicate the horrific disease. However, due to the findings of Dr. William Woodville, Director of the London Smallpox and Inoculation Hospital, many thought these vaccinations actually helped to transmit diseases such as smallpox.[7] Dr. Woodville found that two-thirds of those who were vaccinated developed smallpox, and so the vaccination debate began.[8] And with this debate, came the propaganda, political satire and caricatures persuading people to abstain from any and all vaccinations.

Figure 1:
Vaccination
Ferdinand Smyth Stuart, ESQ, 1808

Figure 2:
The Cow-Pock-or-the Wonderful Effects of the New Inoculation!
James Gillray
1802

One graphic example of this particular form of satire is titled *Vaccination* (Figure 1). This illustration was completed in 1802, and included in the book *A Warning Voice to the Parliament* by Ferdinand Smyth Stuart, ESQ, 1808. In this work, the unknown artist visually represents this new form of treatment (smallpox vaccination) with a cow-like monster. However, its jaw and mouth are similar to that of a crocodile, with large teeth and elephant-like tusks. The animal's feet are similar to a lion's paw, while its ears are jagged like a saw. The monster's entire body is covered in oozing pustules, all labeled with names such as "Pestilence", "Plague", "Foetid Ulcers", "Leprosy" and "Pandoras Box."[9] The use of the title Pandoras Box is particularly interesting, as it was used intentionally as a metaphor for Dr. Jenner's development of the smallpox vaccination. Pandora's Box is defined by the English Oxford dictionary as "a process that once begun generates many complicated problems."[10] In Classical Geek mythology, Zeus gifts a box to Pandora, instructing her never to open it. However, her curiosity gets the best of her and after opening the box, she releases all of the miseries and evils onto the world.

Also seen in this gruesome illustration is Dr. Jenner and two doctors tossing three baskets of naked infants into the jaws of the monster. This motif refers to Jenner's experimentations with the smallpox vaccination conducted on infants and young children.[11] The fourth doctor, possibly Dr. Woodville, is seen shoveling the excrement infants into a dung cart.[12] Each of the four Doctors are shown with horns and tails similar to those of the hungry beast. As the beast defecates it releases the infants, now with horns on their heads. By illustrating the doctors and the infants with horns and tails like that of the monster, the illustrator is sending a clear message, that many people during this time opposed this form of treatment.

The satirical hand-colored etching by James Gillary, *The Cow-Pock-or the Wonderful Effects of the New Inoculation*, 1802 (Figure 2) is another popular example of how artists in the early 1800s took a stance on vaccinations. Gillray gives the viewer a disturbing look inside a vaccination institution. Through the

open doorway flows a line of patients looking for a treatment to their illnesses. Dr. Jenner stands as the focal point of the etching.[13] He is holding the outstretched arm of his female patient while she sits in the chair before him. She cautiously looks back at Dr. Jenner as he gashes her arm with a knife. A young boy offers up from his bucket, "Vaccine Pock hot from ye Cow."[14] Seen on the young boy's sleeve is a patch that reads St. Pancras and sticking out from his pocket is a 'Benefits of the Vaccine Process' pamphlet.[15] A pregnant woman, seen on the right of the composition, is giving birth to a cow while another is projecting from her mouth. Many of the patients in the early stages of the vaccination process see large pustules covering their body, while others have cows bursting through their sores. In Gillray's portrayal of the vaccination process, we see the consequences of patient's actions.

When looking closely at the scene, we also see how the artist offers subtle religious commentary on the efforts of Dr. Jenner. On the back wall of the clinic is a picture of kneeling worshipers praying to a golden calf. This is an obvious reference to Exodus 32 when the Lord said to Moses, "Go, get down! For your people whom you brought out of the land of Egypt have corrupted *themselves*."[16] While waiting for Moses to return from Mt. Sinai, those in which he brought out of the Land of Egypt, built a golden calf and kneeled before it. Before Moses was even able to return with the ten commandments, the second commandment, "thou shalt not make unto the any graven image" was already being broken.[17] Many believe that man was created in God's image, and that if one was inoculated with substance from an animal, they would assume the characteristics of that animal.[18] Many people believed that inoculation was going against the will of God.

Figure 3:
Vaccination against Smallpox, Mercenary & Merciless Spreaders of Death & Devastation Driven out of Society
Issac Cruikshank
1808

Cartoons and satirical works of art often argue both sides of the inoculation and vaccination debate.[19] For example, in Isaac Cruikshank's hand-colored etching, *Vaccination against Smallpox, Mercenary & Merciless Spreaders of Death & Devastation Driven out of Society*, 1808 (Figure 3) he depicts more positive view on vaccinations.[20] Dr. Jenner is again cast as the central figure within the composition, standing between two colleagues while holding a vaccination knife in his right hand.[21] The words, 'Milk of human Kindness' are etched into the blade.[22] He appears to be speaking to three inoculators with similar yet larger knives with blood dripping from their blades and the words 'The curse of human kind' etched into them. "Oh Brothers, Brothers, suffer the love of Gain to be Overcome by Compassion for your fellow creatures, & do not delight to plunge whole Families in the deepest distress, by the untimely loss of their nearest and Dearest relatives."[23] Dr. Jenner seems unaware of a wreath that reads "The preserver of the Human Race" being placed upon his head by a flying cherub. Spotted, deceased children are laying in the foreground, while a spotted mother, baby and husband are seen in the distance. Unlike in the work titled Vaccination, 1802, in this particular etching, it appears that vaccinations are positively represented in this satirical work, and represented in a positive way. While, inoculation is shown negatively, this represents the changing attitude towards the newly developed smallpox vaccination.

These three examples of satirical art were used in the vaccination debates during the early 1800s. They were created by artists to criticize and mock human faults by using humor and irony for entertainment, to express their frustrations and facilitate political and social change.[24] Two hundred years later the vaccination debate rages on through outlets such as social media. One particular position, regarding vaccines today, is that some believe they cause or contribute to autism.[25] Social media provides a vehicle for people to reshape and deliver information. Unlike the satirical etching the early 1800s, platforms such as Facebook and Twitter can disseminate information to millions of people within seconds. Some information on these platforms, as we have learned in the last few years, can often be inconsistent or even false. Many artists today make work based upon the social and political viewpoints and continue to bring about issues, such as vaccination, to the forefront of people's minds.

[1] For purposes of making a case on social media influences, I conducted a Google search and found a few article titles. No information was pulled from these articles to influence this essay.
Ryan Britt. *'Shrek' and 'Aladdin' Writer Uses Racism to Promote Anti-Vaxxer Message*. "Yahoo! Finance." November 26, 2018. Accessed November 29, 2018. https://finance.yahoo.com/news/shrek-aladdin-writer-uses-racism-161002791.html.
"Chip & Joanna Baby Checkup Photo Hijacked by Vaccination Debate." *Crosswalk.com*. September 12, 2018. Accessed November 29, 2018. https://www.crosswalk.com/blogs/religion-today-blog/chip-joanna-baby-checkup-photo-hijacked-by-vaccination-debate.html.
Social Medicine: The Effect of Social Media on the Anti-Vaccine Movement. "Infectious Disease Advisor," October 31, 2018. Accessed November 29, 2018. https://www.infectiousdiseaseadvisor.com/prevention/anti-vaccine-sentiment-social-media-opinion-validating/article/811235/.
[2] *Smallpox*. "Centers for Disease Control and Prevention." August 30, 2016. Accessed November 29, 2018. https://www.cdc.gov/smallpox/history/history.html.
[3] Abbas M. Behbehani. "The Smallpox Story: Life and Death of an Old Disease." *Microbiology and Molecular Biology Reviews* 47, no. 4 (December 1983): 456.
[4] Centers for Disease Control and Prevention.
[5] Behbehani, 457
[6] ibid
[7] Baxby, Derrick. *Jenners Smallpox Vaccine: The Riddle of Vaccinia Virus and Its Origin*. (London: Heinemann Educational Books, 1981), 5
[8] ibid
[9] *Vaccination*. "British Museum," Accessed November 29, 2018. https://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=1468382&partId=1&searchText=vaccination&page=1.
[10] *Pandora's Box* "OED Online." July 2018. Oxford University Press. http://www.oed.com/viewdictionaryentry/Entry/11125 (accessed November 28, 2018).
[11] The book is Dr. Edward Jenner's case studies of how the vaccination worked on many different young children and infants.
Edward Jenner. An Inquiry into the Causes and Effects of the Variolae Vaccinae: A Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire, and Known by the Name of the Cow Pox. Birmingham, Ala.: Classics of Medicine Library, 1978.
[12] *Vaccination*.
[13] *The Cow-Pock-or-the Wonderful Effects of the New Inoculation!*.
"British Museum," Accessed November 29, 2018. https://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=1638225&partId=1&searchText=vaccination&page=1.
[14] Ibid.
[15] Ibid.
[16] Exodus 32:1-25
[17] Exodus 20:3-6
[18] Baxby, 6.
[19] Gareth Williams. "Dr Jenners House: The Birthplace of Vaccination." *The Lancet* 378, no. 9788 (July 23, 2011): 307-08. doi:10.1016/s0140-6736(11)61154-9.
[20] *Vaccination against Small Pox, or Mercenary & Merciless Spreaders of Death & Devastation Driven out of Society*. "British Museum," Accessed November 29, 2018. https://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=1670695&partId=1&searchText=vaccination&page=1.
[21] Ibid.
[22] Ibid.
[23] Ibid.
[24] Paul von Blum. "Satire." *Oxford Art Online*.(2003) 28 November 2018. http://www.oxfordartonline.com/view/10.1093/gao/9781884446054.001.0001/oao-9781884446054-e-7000076124.
[25] Elena Conis. *"Vaccine: The Debate in Modern America by Mark A. Largent (review). Bulletin of the History of Medicine* 87, no. 3 (2013): 491-492. https://muse.jhu.edu/ (accessed November 28,2018).

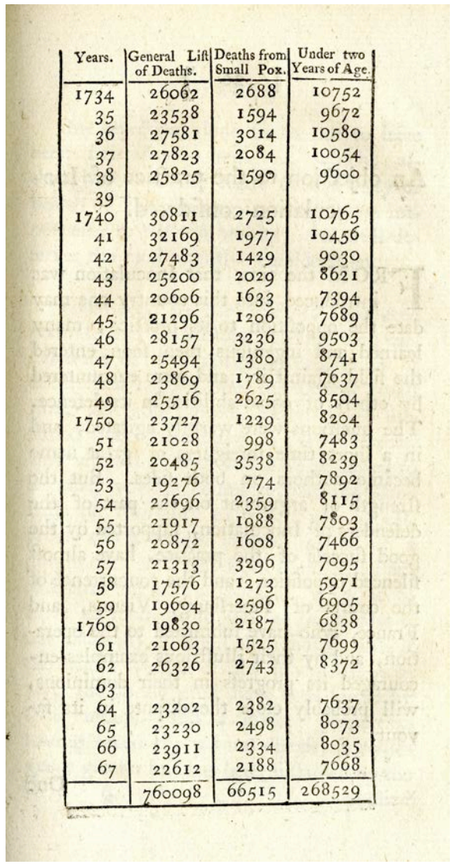
Image Credits:

Figure 1: Stuart ESQ, Ferinand Smyth. *Vaccination* from *A Warning Voice to the Parliament*, 1808. Reynolds-Finley Historical Library, University of Alabama at Birmingham, Birmingham, Alabama.

Figure 2: Gillray, James. *The Cow-Pock-or-the Wonderful Effects of the New Inoculation!*, 1802. The British Museum, London, England. Accessed November 28, 2018. https://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=1638225&partId=1&people=18459&peoA=18459-1-7&page=1

Figure 3: Cruikshank, Issac. *Vaccination against Smallpox, Mercenary & Merciless Spreaders of Death & Devastation Driven out of Society*, 1808. The British Museum, London, England. Accessed November 28, 2018. https://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=1670695&partId=1

Exhibition Plates

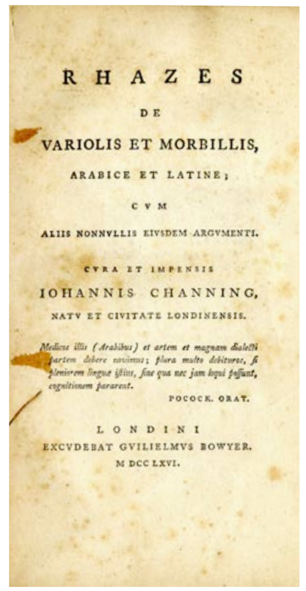


Years.	General Lift of Deaths.	Deaths from Small Pox.	Under two Years of Age.
1734	26062	2688	10752
35	23538	1594	9672
36	27581	3014	10580
37	27823	2084	10054
38	25825	1590	9600
39			
1740	30811	2725	10765
41	32169	1977	10456
42	27483	1429	9030
43	25200	2029	8621
44	20606	1633	7394
45	21296	1206	7689
46	28157	3236	9503
47	25494	1380	8741
48	23869	1789	7637
49	25516	2625	8504
1750	23727	1229	8204
51	21028	998	7483
52	20485	3538	8239
53	19276	774	7892
54	22696	2359	8115
55	21917	1988	7803
56	20872	1608	7466
57	21313	3296	7095
58	17576	1273	5971
59	19604	2596	6905
1760	19830	2187	6838
61	21063	1525	7699
62	26326	2743	8372
63			
64	23202	2382	7637
65	23230	2498	8073
66	23911	2334	8035
67	22612	2188	7668
	760098	66515	268529

Thoughts on General and Partial Inoculations
Baron Thomas Dimsdale
1776

This chart illustrates the devastation of the smallpox disease before the practice of vaccination. For example, in 1767, the last year on the list, the number of deaths from smallpox was 2,188. This accounted for about 10% of the deaths that year. Smallpox was an epidemic disease that needed to be studied and eliminated.

Rhazes and Arabic Medicine, 1958
One of a series: A History of Medicine in Pictures
Parke, Davis & Company
Original painting by Robert A. Thom



RHAZES
DE
VARIOLIS ET MORBILLIS,
ARABICE ET LATINE;
CVM
ALIIS NONNVLLIS EIVSDEM ARGVMENTI.
CVRA ET IMPENSIS
IOHANNIS CHANNING,
NATV ET CIVITATE LONDINENSIS.

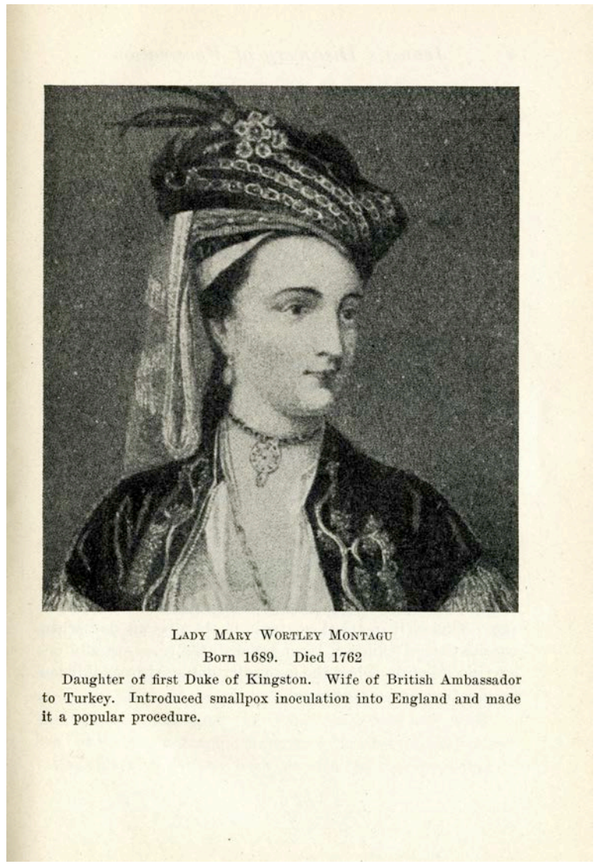
Medicos illis (Arabibus) et artem et magnam dialecti partem debere novimus; plura multo debituros, si pleniorem linguæ istius, sine qua nec jam loqui possunt, cognitionem pararent.

POCOCK. ORAT.

LONDINI
EXCVDEBAT GVILIELMVS BOWYER.
M DCC LXVI.

Rhazes de Variolis et Morbillis, Arabice et Latine
Rhazes (Al-Razi)
1766

Dr. Rhazes was one of the first to publish text on children's diseases, such as measles and smallpox. During this time, Medieval medicine was used in clinical observations and in the observations of symptoms, such as the distinctive cutaneous eruptions of smallpox. In *A Treatise on the Small-Pox and Measles*, Rhazes identified that these were two separate diseases. Rhazes thought that Hippocrates' and Galen's concept of the 4 humors was incorrect while recognizing that the skin was a link to internal disturbances. He observed that when someone was exposed to smallpox and survived, they were no longer susceptible to the disease.



LADY MARY WORTLEY MONTAGU
Born 1689. Died 1762
Daughter of first Duke of Kingston. Wife of British Ambassador to Turkey. Introduced smallpox inoculation into England and made it a popular procedure.

Image of Lady Mary Wortley Montague
Edward Jenner and the Discovery of Smallpox Vaccination
Louis H. Roddis, 1930

Lady Mary Wortley Montague was the daughter of the first Duke of Kingston and the wife of Mr. Wortley Montague, a successful politician during the reign of Anne and George I. A great poet, she was recognized as beautiful and witty and was considered an important figure in the court of the first Hanoverian kings of England, beloved by the Pope. Her husband became the British Ambassador to Turkey, and she was known to give vivid accounts of her travels that elevated her status in the literary world. While visiting Constantinople, Lady Montague was introduced to the practice of inoculation. She and her infant son were inoculated against smallpox, and she wrote a letter describing it to a friend. Her vivid accounts of smallpox inoculation were read by many and she became a pioneer in bringing the innovation to England.

A Malaba Woman invoking the Goddess of Smallpox and carrying Fire on her Head symbolic of the disease

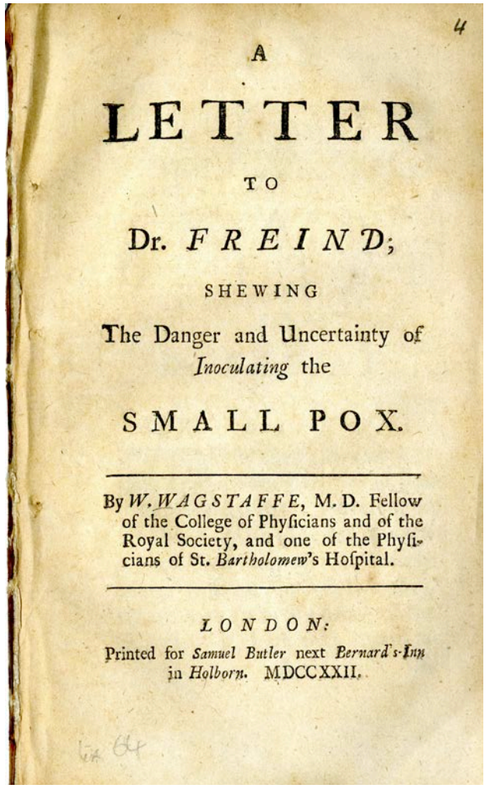
From a native drawing

The History of Inoculation and Vaccination for the Prevention and Treatment of Disease
Canadian Medical Association
1913

This illustration is of a woman evoking Sitala, the Indian Goddess of Smallpox. Sitala is known to both spread and heal the disease. Her attributes include a broom and a water vessel, and she is often depicted carrying them while sitting atop a donkey, wearing a winnowing fan on her head. In this depiction, the worshiper has many of these same attributes as Sitala in order to honor her.

Traité de la petite verole, 1771.

The origin of Smallpox is unknown. However, there was evidence of Smallpox cases as early as the 4th Century CE in China. Created in Peking (present-day Beijing), *Traité de la petite verole,* 1771 is written in French and illustrated by a Chinese physician that documented cases first hand. This illustration is a unique hand colored rendering of a young boy with a severe case of smallpox with blood streaming from his nose. The delicate way in which this was rendered illustrates the artistic ability of its creator.


4

A

LETTER

TO

Dr. *FREIND*;

SHEWING

The Danger and Uncertainty of *Inoculating* the

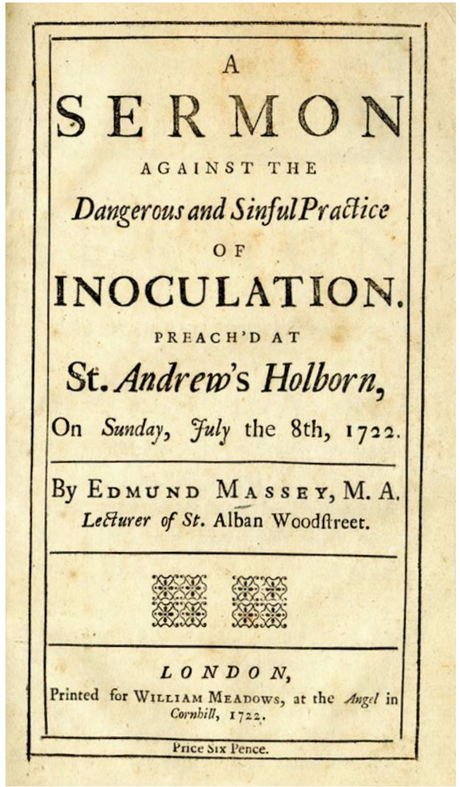
SMALL POX.

By *W. WAGSTAFFE*, M. D. Fellow of the College of Physicians and of the Royal Society, and one of the Physicians of St. *Bartholomew*'s Hospital.

LONDON:

Printed for *Samuel Butler* next *Bernard's-Inn* in *Holborn*. MDCCXXII.

A Letter to Dr. Friend
William Wagstaffe
1722


A

SERMON

AGAINST THE

Dangerous and Sinful Practice

OF

INOCULATION.

PREACH'D AT

St. *Andrew's Holborn*,

On *Sunday*, *July* the 8th, 1722.

By EDMUND MASSEY, M. A.
Lecturer of St. Alban Woodstreet.

LONDON,

Printed for WILLIAM MEADOWS, at the *Angel* in *Cornhill*, 1722.

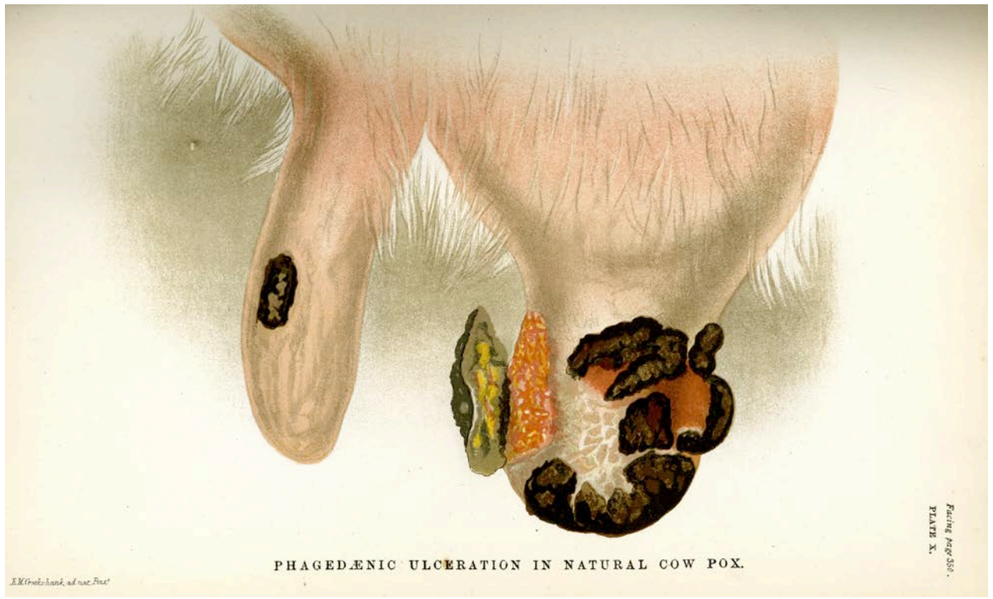
Price Six Pence.

A Sermon against Inoculation
E. Massey
1722

Prior to Dr. Edward Jenner developing vaccinations, the main treatment of smallpox was inoculation. Inoculation, also known as variolation, was believed to be a preventative treatment of smallpox. In the inoculation process, one would scratch the human form of the smallpox disease into an open wound on the arm or one would have to inhale the pustule through the nose. This was a dangerous way to prevent the disease. Many would end up contracting smallpox after this procedure. Many people would speak against the use of inoculation by describing the dangerous effects that it could have on a person, often resulting in their death.

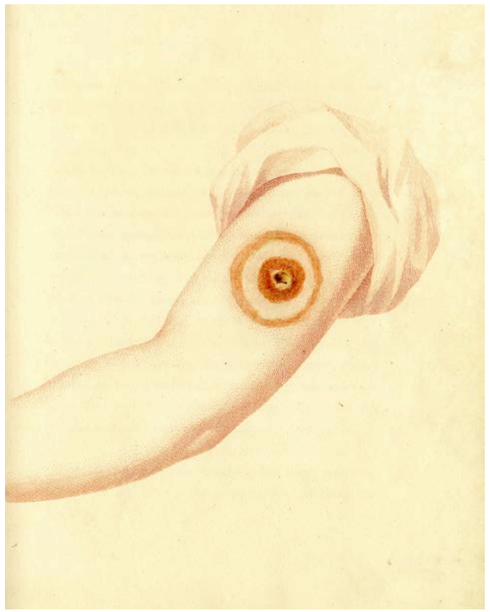
Album Comique, Le Petite Vérole
Charles Aubry
1823

Album Comique is a compilation of caricatures and illustrations about various diseases, such as smallpox. This particular illustration, *Le Petite Vérole*, depicts a sitting bourgeois man who has contracted smallpox. The French text that accompanies this illustration discusses the man went out for a walk around Luxembourg, and flyers describing an outbreak of smallpox within the city. The man, concerned, rushed home and called the doctor to give him a vaccination. However, by the time the doctor arrived the man already had smallpox but did not believe it to be true so he had to be shown in the mirror the truth of his disease. The children are being rushed away in order to not be exposed any longer to the disease.



Phagedænic Ulceration in Natural Cow Pox
from *History and Pathology of Vaccination*
Vol. 1 A Critical Inquiry
Edgar M. Crookshank, M.B.
1889

Phagedænic Ulceration in Natural Cow Pox depicts a severe case of cowpox infecting the teats of the cow. Cowpox begins with white specks upon the cow's teat and over time develops into an ulceration. Eventually the disease would spread causing mortification of the teats and ultimately the death of the cow. Dr. Jenner observed that milkmaids were immune to cowpox and then were immune to smallpox due to their exposure to the cowpox virus.



[38]

was fimilar to that noticed in Cafe XVII., with this exception, its being free from the livid tint obferved in that inftance.

CASE XX.

FROM William Summers the difeafe was transfered to William Pead a boy of eight years old, who was inoculated March 28th. On the 6th day he complained of pain in the axilla, and on the 7th was affected with the common fymptoms of a patient ficken ing with the Small-pox from inoculation, which did not terminate 'till the 3d day after the feizure. So perfect was the fimilarity to the variolous fever that I was induced to examine the fkin, conceiving there might have been fome eruptions, but none appeared. The efflorefcent bluſh around the part punctured in the boy's arm was fo truly characteriſtic of that which appears on variolous inoculation, that I have given a repreſentation of it. The drawing was made when the puſtule was beginning to die away, and the areola retiring from the centre. (See Plate, No. 3.)

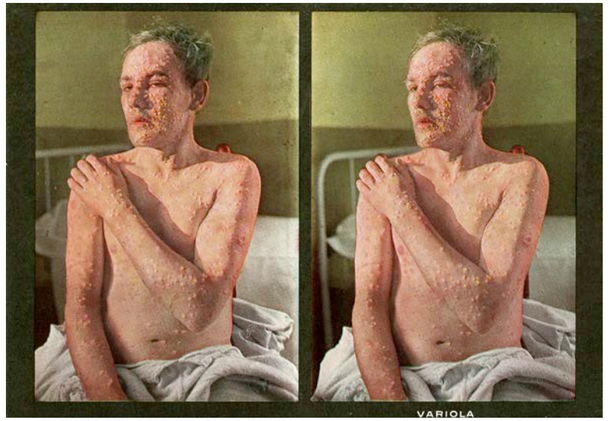
CASE

An Inquiry into The Causes and Effects of The Variolæ Vaccine
Edward Jenner, M.D. F.R.S. &c.
1798

This case study by Dr. Edward Jenner illustrates the use of cowpox as a vaccine to prevent humans from getting the smallpox virus. The use of the cowpox virus in preventing the spread of smallpox, was a major discovery by Dr. Jenner. This discovery lead to the vaccination of smallpox in humans and eventually to worldwide eradication.

Vaccination from *A Warning Voice to the Parliament* Ferinand Smyth Stuart ESQ
1808

The art of caricature was, and still is, often used to express an opinion on sensitive subjects. Caricatures are pictures, descriptions, or imitations of a person or thing in which the characteristics are drastically exaggerated in order to create a comic or grotesque effect. In the caricature, Vaccination, we see an animal resembling a cow with different pustules covering its body. The doctors, with horns on their heads, are feeding infants to the cow and the anti-vaccination forces are headed to save the infants. The cow-like animal is the symbol of the new vaccination and this satirical print is conveying that pro-vaccinators are evil and getting a vaccination might lead one to have characteristics of the monster.



The Stereoscopic Skin Clinic, c.1910

Stereoscope images were viewed by medical students through a stereoscope device, which operated on a principle similar to glasses for modern-day 3D-movies. The stereoscope helped the left and right photo merge visually to create a three-dimensional image. The three people pictured are infected with the smallpox virus (Variola). These images depict how severe this virus was and that the pustules created by smallpox would cover the entire body.

"Edward Jenner Testing Vaccination Upon His Son."
From the Original Statue by Giulio Monteverde, nd.

This is a print of a marble sculpture by Giulio Monteverde depicting Dr. Edward Jenner injecting a vaccine into his own son. The statue is located in Galleria Nazionale d'Arte Moderna in Rome. Through his publication An Inquiry, published in 1798, it is well known that Dr. Jenner performed many vaccination experiments on children, including his own son.

Jenner: Smallpox is Stemmed, 1960
One of a series: A History of Medicine in Pictures by
Parke, Davis & Company
Original painting by Robert A. Thom

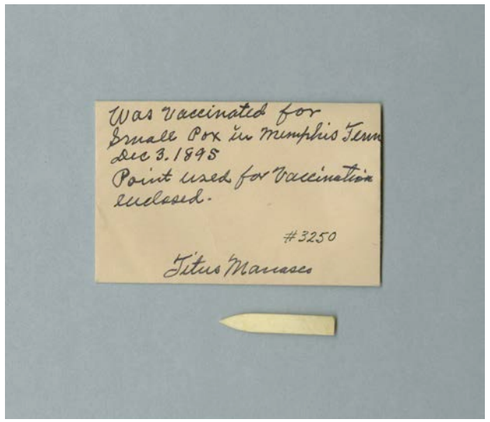
Dr. Edward Jenner was an English physician. *Jenner: Smallpox is Stemmed*, 1960 is an image depicting the first vaccination. The very first vaccination was conducted in his apartment in Chantry House, Berkeley, Gloucestershire. On May 14, 1796, exudate from a cowpox pustule on the hand of a dairymaid, Sarah Nelmes, was inserted into scratches on the arm of the eight-year-old James Phipps. This vaccination was successful; however, Dr. Jenner did received criticism for his work. Dr. Jenner was able to prove his theories time and time again. Eventually, vaccinations were widely accepted as lifesaving.


PLATE X.

Photograph of child, taken on the eighth day of vaccination with glycerinated vaccine lymph, which, as shown in Plate I. Fig. 2, was found, when tested by the method of plate-cultivation, to be free from extraneous micro-organisms.

Vaccination Its Natural History and Pathology
S. Monckton Copemam
1899

This image of mother and child, was taken eight days after the vaccination was administered to the infant. It is common for people to have symptoms of the smallpox virus when given the vaccination. However, they do not ultimately contract the virus. The CDC states that 95% of people who received the smallpox vaccination were prevented from getting the smallpox virus.



Vaccination Point, 1895

Smallpox Vaccination, c. 1950s

Prior to the development of the bifurcated needle, a small piece of plastic or ivory, with a point at one end, was used to administer the smallpox vaccination. The tip of the pointed piece of plastic or ivory would be inserted into an open wound or small cut on one's arm. The development of the smallpox vaccination was one of the great moments in medical history. On May 8, 1980, two centuries after Dr. Edward Jenner published his findings on smallpox and on vaccinations, the World Health Assembly declared that the world was free of the smallpox virus.

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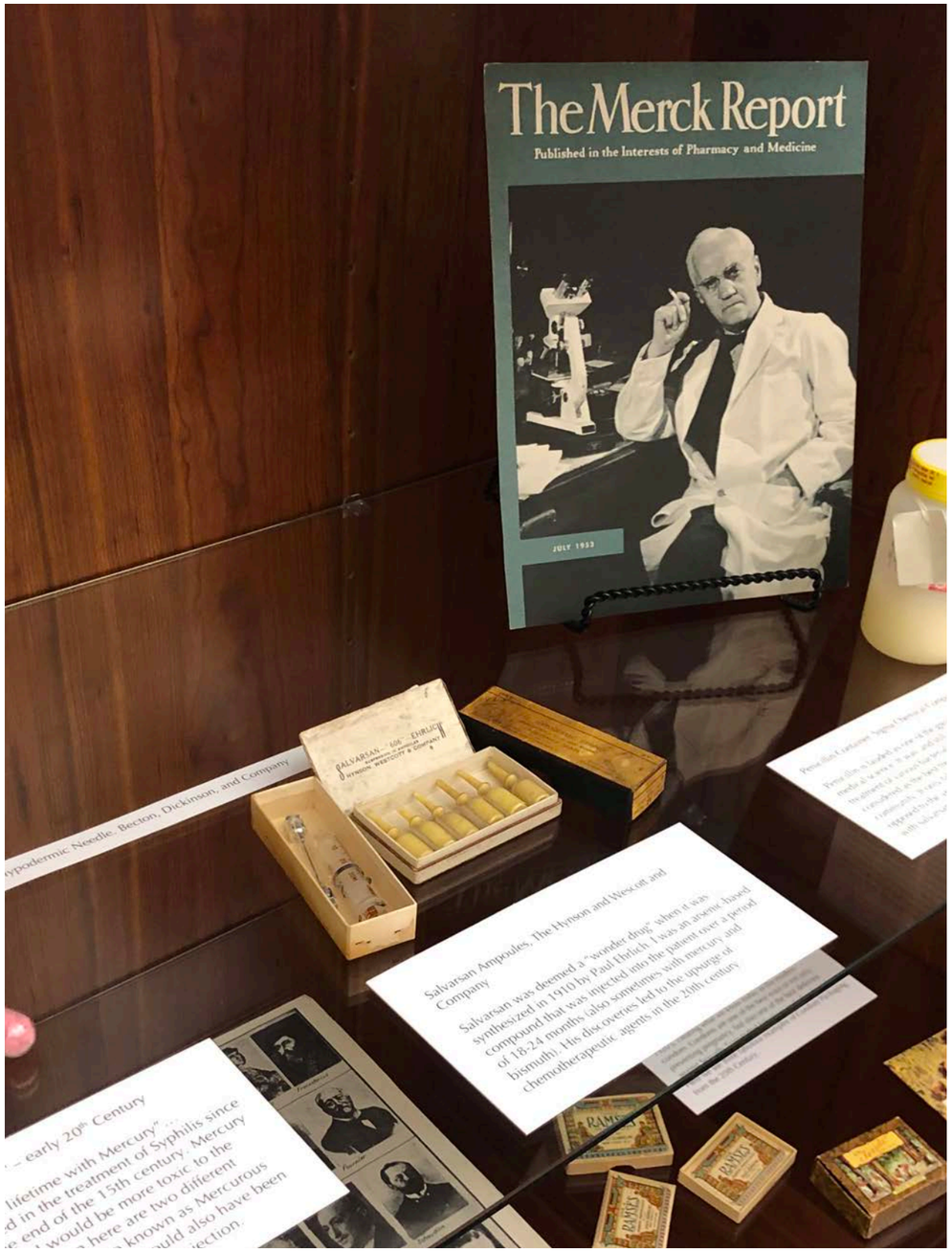
Vaccination Its Natural History and Pathology: 1899
S. Monckton Copeman
This image of mother and child, was taken eight days after the vaccination was administered to the infant. It is common for people to have symptoms of the smallpox virus when given the vaccination. However, they do not ultimately contract the virus. The CDC states that 95% of people who received the smallpox vaccination were prevented from getting the smallpox virus.
"Edward Jenner Testing Vaccination Upon His Son"
From the Original Statue by Gaulci Monteverde
This is a print of a marble sculpture by Gaulci Monteverde depicting Dr. Edward Jenner injecting a vaccine into his own son. The statue is located in Galleria Nazionale d'Arte Moderna in Rome. Through his public trial, An Inquiry, published in 1798, it is well known that Dr. Jenner performed many vaccination experiments on children including his own son.
Jenner: Smallpox is Stemmed, 1960
One of a series: A History of Medicine in Pictures by Parke, Davis & Company
Original painting by Robert A. Thom
Dr. Edward Jenner was an English physician. Jenner: Smallpox is Stemmed, 1960 is an image depicting the first vaccination. The very first vaccination was conducted in his apartment in Chantry House, Berkeley, Gloucestershire. On May 14, 1796, exudate from a cowpox pustule on the hand of a dairymaid, Sarah Nelmes, was inserted into scratches on the arm of the eight-year-old James Phipps. This vaccination was successful; however, Dr. Jenner did received criticism for his work. Dr. Jenner was able to prove his theories time and time again. Eventually, vaccinations were widely accepted as lifesaving.
SMALLPO
VACCINE


The Merck Report
Published in the Interests of Pharmacy and Medicine
JULY 1933
SALVARSAN — 606 — EHRLICH
HYNSON, WESCOTT & DUNNING, INC.
Hypodermic Needle, Becton, Dickinson, and Company
Salvarsan Ampoules, The Hynson and Wescott and Company
Salvarsan was deemed a "wonder drug" when it was synthesized in 1910 by Paul Ehrlich. It was an arsenic-based compound that was injected into the patient over a period of 18-24 months (also sometimes with mercury and bismuth). His discoveries led to the upsurge of chemotherapeutic agents in the 20th century.
– early 20th Century
lifetime with Mercury"
d in the treatment of Syphilis since
e end of the 15th century. Mercury
would be more toxic to the
here are two different
known as Mercurous
ould also have been
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PLAGUE.

SCOURGE

DISEASES THAT SHAPED HISTORY

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