HISTORICAL EPIDEMIOLOGY

HIST 703 / Spring 2023 / ICC 206A / T 3:30-6:00pm EDT-EST / Prof. Tim Newfield ICC 520F /
timothy.newfield@georgetown.edu / Office Hours W & Th 10:30-11:30 or by appointment /

How have climate change, colonialism and conflict shaped the distribution and toll of infectious disease? When have pathogens globalized? Did the emergence of cholera, malaria, measles or smallpox result in widespread loss of life? To what extent are we to blame for our long history of illness? In what ways have gender, poverty and race shaped epidemiological burdens? What role can historians play in global health today and in the scientific study of disease? How and why have our understandings of diseased pasts evolved? Was SARS-CoV-2's spillover unpredictable and unprecedented? Can we already write the history of the next pandemic? This course in disease history considers the global past of infectious disease. Topics addressed cover the planet and span millennia – from tuberculosis' alleged 'out-of-Africa' trek and the zoonotic origins of major human pathogens, to plague's extinct European foci and the ecological triggers of modern-day emerging diseases, to the emergence of international control efforts and disease surveillance. The course is interdisciplinary. Written sources of all sorts (from ancient annals to SARS2 stats) are married with the fruits of pertinent paleosciences (paleo-pathology, -genomics and -climatology) and anthropology to flesh out our evolving history with infectious disease. Students will be introduced to the methods of multiple fields of study relevant to disease history and learn the advantages and challenges of working across disciplines. They will gain historical perspective on the global health issues we face today and begin to acquire how an understanding of diseased pasts can help us now.

The course is discussion-based. An effort is made to tackle big themes/major topics and also to dive into case studies/histories of particular disease outbreaks. Students are expected to read a number of assigned readings weekly and to prepare for, and participate in, a class discussion. Knowing the assigned readings and participating are vital to success in this class. If a student cannot attend a class, they must get in contact with the professor. There is no textbook. Readings will be made available on Canvas. Students will read articles, chapters and primary sources, upwards of 9 works per week. Many readings are short (<10 pages), however. Please prepare accordingly.

Goals

- Acquire an understanding of the nature and practice of historical epidemiology, of the evidence-based study of past disease, and of the value of historical perspectives in global health;
- Establish that history is not simply a collection or series of self-evident facts, that health and disease history evolves, that its evolutions have ramifications for both our grasp of the past and the present, and that evidence-based analysis is central to historical epidemiology;
- Improve critical reading, writing and presentations abilities;
- Expand ability to tackle and employ complex causal analysis;
- Increase capacity to situate current events in global health into historical context, to think historically for the purpose of critically analyzing contemporary concerns, from newly emergent diseases to the influence of climate change on infectious disease burdens, and the globalization of pathogens. In relation to this, be able to put the SARS-CoV-2 pandemic and responses to it in historical perspective.

Grading

Participation	50%	Weekly
Meet w Tim	0%	On or before 9 February
Research Paper Prospectus	5%	3 March
Lightning Talk	10%	11 April
Research Paper First Submission	20%	21 April
Research Paper Second Submission	20%	10 May

Grading Scheme

Letter	GPA	Percentage	
A	4.0	94-100%	Flawless (or very near it!)
A-	3.67	90-93%	Excellent
B+	3.33	85-89%	Very Good
B	3.00	80-84%	Good
B-	2.67	75-79%	
C+	2.33	70-74%	
C	2.00	65-69%	Adequate
C-	1.67	60-64%	
D+	1.33	55-59%	
D	1	51-54%	Minimum Pass
F	Failure	<50%	Failure

Infrequent Zooming (for the occasional class and office hours)
https://georgetown.zoom.us/j/7409574324?pwd=WlZaWEp3akJHWHVUZjdSMDRhSDM3UT09
Password: lues

Office Hours
Two one-hour blocks of time have been set aside for office hours. If neither time works for you, please be in touch. Please use the appoint calendar to reserve an office hour time-slot. When copying and pasting the link, make sure not to copy an additional space at the end of the link. Individual appointments are 15 minutes in length, but if you would like to meet for longer, please book back-to-back appointments.
https://calendar.google.com/calendar/selfsched?sstoken=UU4zdkRGUkRnUzlEfGRlZmF1bHR8NzUwNzA4YWY5OGE5ODJjMjAzMTNjZGE1Zjc2ZmIyZDg

Office hours:
-- In person (ICC 520F) or on Zoom W 10:30-11:30
-- On Zoom Th 10:30-11:30
https://georgetown.zoom.us/j/7409574324?pwd=WlZaWEp3akJHWHVUZjdSMDRhSDM3UT09
Passcode: lues
Meeting ID: 740 957 4324

Graded Activities and Assignments
1) Participation / Weekly / 50%
Demonstrating awareness of the topics and issues covered in the assigned readings. Note well: students are not expected to read every word and every footnote, but they are expected to have a good idea of what each reading does (or attempts to do). Students should know an article/reading's thesis/argument/objective and conclusions, and the methods and evidence employed. Regarding scientific articles, there is no real need to dive into hyperspecifics – into the calibration of a particular molecular clock or the statistics used to control for contamination in a pathogen DNA laboratory – but consider how history (the discipline, methods, sources) are used (or could be used) in scientific articles and what role a historian could play (or does play) in scientific articles. In sum, students are to know the readings, what the readings purport to do and what the readings actually do, and how the readings fit together. It is highly recommended that students read the readings in the order listed.

3) Research Paper Prospectus / 3 March / 5%
Researching, reading and synthesizing a range of scholarship on a given topic are valuable skills both in and beyond graduate school. They are central to doing History. Unsurprisingly, the major assignment for this class is an original research paper. This is a 'scaffolded' project. The first segment of the project is the 'Research Paper Prospectus', which is a short 750-word (not 700 words, not 800 word) write-up worth 5% of the grade and due via email on 3 March before 11:59pm as a Word or Google doc. This is meant to be a brief but polished introduction to your topic. For the Prospectus, students need to have identified a topic and five key/seminal pieces of scholarship relevant to it. They are to discuss (briefly) those pieces of scholarship, paying attention to different perspectives, sources, and arguments. Students are encouraged to use scholarship published over a number of decades (if possible), drawing on older but influential work (consult Google Scholar for citation counts) and cutting-edge/brand new publications. The Prospectus should also present a student's working thesis and situate their working thesis within the scholarship they have read (how it builds on or addresses that scholarship, how deviates from what has been done). The Prospectus should as well mention relevant primary sources/the sources one intends to use. No citations are necessary, though a bibliography is required. Bibliographic formatting is up to the student, but consistency is expected. There is no one way to write this prospectus – one can be creative.

Students are encouraged to develop a project for the semester that fits neatly within their own area of interest and expertise. Often a sharply-defined and narrow topic is the best way to go (not 'cholera in nineteenth-century Puerto Rico' but 'climate and the concession of cholera in Puerto Rico in 1856'). Papers can also be largely historiographical,

synthesizing and commenting critically on a debate or omissions in the literature, for example. Students are to meet with Tim about finalizing their topic on or before 9 February.

5) Lightning Talk / 11 April / 5%
This will be a 10-minute (not 8-minute, not 12-minute) presentation with Slides. Think of it as a short conference presentation, one that introduces a non-specialist audience to your topic and thesis. This is not simply a presentation of your Prospectus. It should evidence progress towards the first submission of your Research Paper. Historians typically read papers at conferences. For this talk, please prepare to speak to slides. You can use Index Cards if needed, but students are encouraged to speak directly to the audience.

6) Research Paper First Submission / 21 April / 20%
Once the Research Prospectus is behind them, students will begin crafting an original disease history research paper. The First Submission of this paper is to be as polished as possible, to include citations and a bibliography (style up to the student, but consistency expected), and to run 3,000 words (not 2,750 or 3,250 words), not including citations. Students are expected to incorporate, draw on and/or refer to at least 15 pieces of scholarship. If one's paper is historiographical, an additional 10 sources are to appear in the paper in some way. If not historiographical, primary source engagement is expected to be careful and as extensive as necessary. This first submission is due via email as a Word or Google doc on 21 April before 11:59pm via email. Note writing style counts. This assignment, like the Prospectus, is not long. It requires one to funnel a great deal of scholarship into a short paper. Every word counts. You must write clearly, economically and with flair.

7) Research Paper Second Submission / 10 May / 20%
Students are expected to digest and integrate comments and corrections Tim has made on the First Submission of their Research Paper and to email in the improved paper as a PDF by 11:59pm on 10 May

University policy on Title IX, Sexual Misconduct and Harassment
Georgetown University and its faculty are committed to supporting survivors and those impacted by sexual misconduct, which includes sexual assault, sexual harassment, relationship violence, and stalking. Georgetown requires faculty members, unless otherwise designated as confidential, to report all disclosures of sexual misconduct to the University Title IX Coordinator or a Deputy Title IX Coordinator. If you disclose an incident of sexual misconduct to a professor in or outside of the classroom (with the exception of disclosures in papers), that faculty member must report the incident to the Title IX Coordinator, or Deputy Title IX Coordinator. The coordinator will, in turn, reach out to the student to provide support, resources, and the option to meet. [Please note that the student is not required to meet with the Title IX coordinator.]. More information about reporting options and resources can be found on the Sexual Misconduct Website: https://sexualassault.georgetown.edu/resourcecenter. If you would prefer to speak to someone confidentially, Georgetown has a number of fully confidential professional resources that can provide support and assistance. These resources include: Health Education Services for Sexual Assault Response and Prevention: confidential email sarp@georgetown.edu Counseling and Psychiatric Services (CAPS): 202.687.6985 or after hours, call (833) 960-3006.

Absences
If you are unable to attend class on account of illness or injury, but you are well enough to participate in the discussion, please let the prof know and use the Zoom link above (listed in the Office Hour section) to join class. If you are unable to participate in a class discussion because of the observance of a major religious holiday, please let the prof know and you will be provided with the opportunity to make up missed participation marks.

Accommodations for Students with Disabilities
If you have a disability, you should contact the Academic Resource Center (arc@georgetown.edu) for further information. The Academic Resource Center is the campus office responsible for reviewing documentation provided by students with disabilities and for determining reasonable accommodations in accordance with the Americans with Disabilities Act (ADA) and University policies.

Curriculum

17 January Course Introduction

24 January COVID-19, SARS-CoV-2 and Historical Epidemiology Now – Why Bother and Who Cares?
Refresher: www.hopkinsguides.com/hopkins/view/Johns_Hopkins_ABX_Guide/540747/all/Coronavirus_COVID_19__SARS_CoV_2_
1) H. Wang et al., "Estimating Excess Mortality due to the COVID-19 Pandemic: A Systematic Analysis of COVID 19-Related Mortality, 2020-21," *Lancet* 399 (2022), pp. 1513-1536. **SKIM**
2) D. Morens et al, "Escaping Pandora's Box – Another Novel Coronavirus" *NEJM* 382 (2020), pp. 1293-1295.
3) D. Morens et al, "Pandemic COVID-19 Joins History's Pandemic Legion" *mBio* 11 (2020), e00812-20.
4) R. Peckham, "COVID-19 and the Anti-Lessons of History" *The Lancet* 395 (2020), pp. P850-852.
5) D. Jones, "COVID-19, History, and Humility" *Centaurus* 62 (2020), pp. 370-380.

6) K. Dionne et al, “The Politics of Pandemic Othering: Putting COVID-19 in Global and Historical Context” *International Organization* 74 (2020), pp. E213-E230.
7) H. Barker and C. Chen, “Pandemic Outbreaks and the Language of Violence: Discussing the Origins of the Black Death and COVID-19” *Chest* 162 (2022), pp. 196-201.
8) J. Webb, “The Historical Epidemiology of Global Disease Challenges” *The Lancet* 385 (2015), pp. P322-323.

Supplementary Readings
1) K. Harper, “Germs, Genomes, and Global History in the Time of COVID-19” *Journal of Global History* 15 (2020), pp. 350-362.
2) D. Jones, “History in a Crisis – Lessons for Covid-19” *NEJM* 382 (2020), pp. 1681-1683.
3) M. Green, “Emerging Disease, Re-Emerging Histories” *Centaurus* 62 (2020), pp. 234-247.
4) J. McNeill, “Bats, Battiness, and the COVID-19 Pandemic” *Environmental History* 25 (2020), pp. 635-639.
5) T. Newfield, “Nothing was the Same: Historical Parallels for the Coronavirus should be Avoided like the Plague” *The Globe and Mail* 26 April 2020: https://www.theglobeandmail.com/opinion/article-nothing-was-the-same-historical-parallels-for-the-coronavirus-should/
6) L. Piper, “Pandemic Relations” *Environmental History* 25 (2020), pp. 649-652.
7) R. Peckham, “The Crisis of Crisis: Rethinking Epidemics from Hong Kong” Bulletin of the History of Medicine 94 (2020), pp. 658-669.
8) N. Varlik, “Rethinking the History of Plague in the Time of COVID-19” *Centaurus* 62 (2020), pp. 285-293.
9) G. Patterson et al, “Societal Impacts of Pandemics: Comparing COVID-19 with History to Focus our Response” *Frontiers in Public Health* 9 (2021), 630449.
10) A. Erkoreka et al, “Coronavirus as the Possible Cause Agent of the 1889-1894 Pandemic” *Infectious Disease Reports* 14 (2022), pp. 453-469.

31 January Origins of Major Infectious Diseases
1) N. Wolfe et al, “Origins of Major Human Infectious Diseases” *Nature* 447 (2007), pp. 279-283.
2) J. Pearce-Duvet, “The Origin of Human Pathogens: Evaluating the Role of Agriculture and Domestic Animals in the Evolution of Human Disease” *Biological Reviews* 81 (2006), pp. 369-382.
3) I. Comas et al, “Out-of-Africa Migration and Neolithic Coexpansion of Mycobacterium tuberculosis with Modern Humans” *Nature Genetics* 45 (2013), pp. 1176-1182. **SKIM**
4) K. Bos et al, “Pre-Columbian Mycobacterial Genomes Reveal Seals as a Source of New World Human Tuberculosis” *Nature* 514 (2014), pp. 494-497. **SKIM**
5) Y. Furuse et al, “Origin of Measles Virus: Divergence from Rinderpest Virus between the 11th and 12th Centuries” *Virology Journal* 7 (2010), pp. 1-4. **SKIM**
6) A. Düx et al, “Measles Virus and Rinderpest Virus Divergence Dated to the Sixth Century BCE” *Science* 368 (2020), pp. 1367-1370. **SKIM**
7) Y. Li et al, “On the Origin of Smallpox: Correlating *Variola* Phylogenies with Historical Smallpox Records” *Proceedings of the National Academy of Sciences* 104 (2007), pp. 15787-15792. **SKIM**
8) A. Duggan et al, “17th Century Variola Virus Reveals the Recent History of Smallpox” *Current Biology* 26 (2016), pp. 3407-12. **SKIM**
9) B. Mühlemann et al, “Diverse Variola virus (smallpox) Strains were Widespread in Northern Europe in the Viking Age” *Science* 369 (2020), pp. 1-12. **SKIM**

Supplementary Readings
1) K. Harper and G. Armelagos, “Genomics, the Origins of Agriculture, and our Changing Microbe-Scape: Time to Revisit Some Old Tales and Tell Some New Ones” *American Journal of Biological Anthropology* 152 (2013), pp. 135-152.
2) G. Trueba, “The Origin of Human Pathogens” in A. Yamada et al eds., *Confronting Emerging Zoonoses* (Springer, 2014), pp. 3-11.
3) Y. Boucher et al, “The Out-of-the-Delta Hypothesis: Dense Human Populations in Low-Lying River Deltas Served as Agents for the Evolution of a Deadly Pathogen” *Frontiers in Microbiology* 6 (2015), pp. 1-9.
4) C. Brook and A. Dobson, “Bats as ‘Special’ Reservoirs for Emerging Zoonotic Pathogens” *Trends in Microbiology* 23 (2015), pp. 172-180.
5) B. Han et al, “Rodent Reservoirs of Future Zoonotic Diseases” *PNAS* 112 (2015), pp. 7039-7044.
6) K. Harkins and A. Stone, “Ancient Pathogen Genomics: Insights into Timing and Adaptation” Journal of Human Evolution 79 (2015), pp. 137-149.
7) S. Marciniak, “*Plasmodium falciparum* Malaria in 1st-2nd Century CE Southern Italy” *Current Biology* 26 (2016), pp. R1220-R1222.
8) D. Loy et al, “Out of Africa: Origins and Evolution of the Human Malaria Parasites *Plasmodium falciparum* and *Plasmodium vivax*” *International Journal for Parasitology* 47 (2017), pp. 87-97.
9) K. Alexander et al, “The Ecology of Pathogen Spillover and Disease Emergence at the Human-Wildlife-Environment Interface” in C. Hurst ed., *The Connections Between Ecology and Infectious Disease* (Springer, 2018), pp. 267-298.
10) C. Carlson et al, “Global Estimates of Mammalian Viral Diversity Accounting for Host Sharing” *Nature Ecology & Evolution* 3 (2019), pp. 1070-1075.
11) S. Duchêne et al, “The Recovery, Interpretation and Use of Ancient Pathogen Genomes” *Current Biology* 30 (2020), R1215-R1231.
12) A. Kocher et al, “Ten Millennia of Hepatitis B Virus Evolution” *Science* 374 (2021), pp. 182-188.
13) M. Letko et al, “Bat-Borne Virus Diversity, Spillover and Emergence” *Nature Reviews Microbiology* 18 (2020), pp. 461-471.
14) V. Rougeron et al, “Human Plasmodium vivax Diversity, Population Structure and Evolutionary Origin” *PLOS Neglected Tropical Diseases* 14 (2020), e0008072.
15) D. Streicker and A. Gilbert, “Contextualization Bats as Viral Reservoirs” *Science* 370 (2020), pp. 172-173.

7 February Ancient Plagues – What do We Know About Them?
1) Ancient Accounts of the Athenian and Antonine Plagues.
2) T. Morgan, “Plague or Poetry? Thucydides on the Epidemic at Athens” *Transactions of the American Philological Association* 124 (1994), pp. 197-209.
3) M. Papagrigorakis et al, “Typhoid Fever Epidemic in Ancient Athens” in D. Raoult and M. Drancourt eds, *Paleomicrbiology: Past Human Infections* (Berlin, 2008), pp. 161-173.

4) J. Gilliam, “The Plague Under Marcus Aurelius” *American Journal of Philology* 82 (1961), pp. 225-251. **SKIM**
5) R. Duncan-Jones, “The Impact of the Antonine Plague” *Journal of Roman Archaeology* 9 (1996), pp. 108-136.
6) J. Greenberg, “Plagued by Doubt: Reconsidering the Impact of a Mortality Crisis in the 2nd c. A.D.” *Journal of Roman Archaeology* 16 (2003), pp. 413-425.
7) R. Flemming, “Pandemics in the Ancient Mediterranean World” *IsisCB* Special Issue, S. Weldon and N. Sankaran eds. (2021), pp. 1-17.
8) T. Newfield et al, “The Antiquity of Smallpox in Doubt” *Journal of Roman Archaeology* 35 (2022), pp. 1-17. **SKIM**

Supplementary Readings
1) R. Salway and W. Dell, “Plague at Athens” *Greece & Rome* 2 (1955), pp. 62-69.
2) R. Littman and M. Littman, “Galen and the Antonine plague” *The American Journal of Philology* 94 (1973) 243-255.
3) R. Bagnall, “P. Oxy. 4527 and the Antonine Plague in Egypt: Death or Flight?” *Journal of Roman Archaeology* 13 (2000), pp. 288-292.
4) R. Bagnall, “The Effects of Plague: Model and Evidence” *Journal of Roman Archaeology* 15 (2002), pp. 114-120.
5) W. Scheidel, “A Model of Demographic and Economic Change in Roman Egypt after the Antonine Plague” *Journal of Roman Archaeology* 15 (2002), pp. 97-114.
6) C. Bruun, “The Antonine Plague in Rome and Ostia” *Journal of Roman Archaeology* 16 (2003), pp. 426-434.
7) C. Jones, “Ten Dedications ‘To the Gods and Goddesses’ and the Antonine Plague” *Journal of Roman Archaeology* 18 (2005), pp. 293-301.
8) C. Bruun, “La mancanza di prove di un effetto catastrofico della ‘peste antonina’ (dal 166 d.C. in poi)” In E. Lo Cascio ed., *L’impatto della ‘peste antonia’* (Bari, 2012), pp. 123-165.
9) R. Bagnall, “The Antonine Plague returns” *Journal of Roman Archaeology* 26 (2013), pp. 714-718.
10) K. Harper, “Pandemics and Passages to Late Antiquity: Rethinking the Plague of c.249-270 Described by Cyprian” *Journal of Roman Archaeology* 28 (2015), pp. 223-260.
11) C. Elliott, “The Antonine Plague, Climate Change and Local Violence in Roman Egypt” *Past & Present* 231 (2016), pp. 3-31.
12) R. Flemming, “Galen and the Plague” in C. Petit ed., *Galen's Treatise Περὶ Ἀλυπίας (De indolentia) in Context* (Brill, 2019), pp. 219-244.
13) S. Hübner, “The ‘Plague of Cyprian’: A Revised View of the Origin and Spread of a 3rd-c. CE Pandemic” *Journal of Roman Archaeology* 34 (2021), pp. 151-174.
14) B. McDonald, “The Antonine Crisis: Climate Change as a Trigger for Epidemiological and Economic Turmoil” in P. Erdkamp et al eds., *Climate Change and Ancient Societies in Europe and the Near East* (Springer, 2021), pp. 373-410.
15) T. Glomb et al, “Popularity of the Cult of Asclepius in the Times of the Antonine Plague: Temporal Modeling of Epigraphic Evidence” *Journal of Archaeological Science* 43 (2022), 103466.

***** Meet with Tim before end 9 February to discuss your research project. *****

14 February Plague at its Worst: The Black Death, 1346-53
EpiPrimer: https://www.who.int/news-room/fact-sheets/detail/plague
1) Medieval Accounts of the Black Death.
2) O. Bendictow, “The Original Outbreak and Early Spread of the Black Death in the Lands of the Golden Horde” & “How Many People Died in the Black Death?” in his *The Complete History of the Black Death* (Woodbridge: The Boydell Press, 2021), pp. 137-52, 869-76.
3) M. Green, “The Four Black Deaths” *American Historical Review* 108 (2021), pp. 1-30.
4) R. Hymes, “Epilogue: A Hypothesis on the East Asian Beginnings of the *Yersinia pestis* Polytomy” *The Medieval Globe* 1 (2014), pp. 285-308.
5) M. Spyrou et al, “The Source of the Black Death in Fourteenth-Century Central Eurasia” *Nature* 606 (2022), pp. 718-724.
5) S. DeWitte, “The Anthropology of Plague: Insights from Bioarchaeological Analyses of Epidemics Cemeteries” *The Medieval Globe* 2015 (2015), pp. 97-123.
6) N. Zedda et al, “Overall Frailty Gauged in Victims of the Italian Plague (Imola, 1630-1632): Was Plague an Indiscriminate Killer?” *Archaeological and Anthropological Sciences* 14 (2022), 10.1007/s12520-022-01670-8. **SKIM**
7) A. Izdebski et al, “Palaeoecological Data Indicates Land-Use Changes Across Europe Linked to Spatial Hereogeneity in Mortality during the Black Death” *Nature Ecology & Evolution* 6 (2022), pp. 297-306. **SKIM**

Supplementary Readings
1) F. Getz, “Black Death and the Silver Lining: Meaning, Continuity, and Revolutionary Change in Histories of Medieval Plague” *Journal of the History of Biology* 24 (1991), pp. 265-289.
2) J. Hatcher, “England in the Aftermath of the Black Death” *Past and Present* 144 (1994), pp. 3-35.
3) S. Cohn, “After the Black Death: Labour Legislation and Attitudes Towards Labour in Late-Medieval Western Europe” *Economic History Review* 60 (2007), pp. 457-485.
4) S. Cohn Jr., “The Black Death and the Burning of the Jews” *Past & Present* 196 (2007), pp. 3-36.
5) S. Pamuk, “The Black Death and the Origins of the ‘Great Divergence’ Across Europe, 1300-1600” *European Review of Economic History* 11 (2007), pp. 289-317.
6) D. Yeloff and B. van Geel, “Abandonment of Farmland and Vegetation Succession following the Eurasian Plague Pandemic of AD 1347-52” *Journal of Biogeography* 34 (2007), pp. 575-582 (& F. Ljungqvist et al, “Linking European Building Activity with Plague History” *Journal of Archaeological Science* 98 (2018), pp. 81-92).
7) S. Wray, *Communities and Crisis: Bologna during the Black Death* (Brill, 2009).
8) D. Mengel, “A Plague on Bohemia? Mapping the Black Death” *Past and Present* 211 (2011), pp. 3-34.
9) P. Buell, “*Qubilai* and the Rats” *Sudhoffs Archiv* 96 (2012), pp. 127-144.
10) M. Green, “Taking ‘Pandemic’ Seriously: Making the Black Death Global” *The Medieval Globe* 1 (2014), pp. 27-62.
11) N. Varlik, *Plague and Empire in the Early Modern Mediterranean World* (Cambridge, 2015).
12) C. Callow and C. Evans, “The Mystery of Plague in Medieval Iceland” *Journal of Medieval History* 42 (2016), 254-284.
13) B. Campbell, “The European Mortality Crises of 1346-52 and Advent of the Little Ice Age” in D. Collet and M. Schuh eds., *Famines during the ‘Little Ice Age:’ Socionatural Entanglements in Premodern Societies* (Springer, 2017), pp. 19-41.

14) M. Spyrou et al, "Phylogeography of the Second Plague Pandemic Revealed through Analysis of Historical *Yersinia pestis* Genomes" *Nature Communications* 10 (2019), 4470.
15) H. Barker, "Laying the Corpses to Rest: Grain, Embargoes, and *Yersinia pestis* in the Black Sea, 1346-48" *Speculum* 96 (2021), pp. 97-126.
16) N. Fancy and M. Green, "Plague and the Fall of Baghdad (1258)" *Medical History* 65 (2021), pp. 157-177.
17) P. Slavin, "Out of the West: Formation of a Permanent Plague Reservoir in South-Central Germany (1349-1356) and its Implications" *Past & Present* 252 (2021), pp. 3-51.
18) M. Green, "Putting Asia on the Black Death Map" *The Medieval Globe* 8 (2022), pp. 61-89.
19) R. Hymes, "Buboes in Thirteenth-Century China: Evidence from Chinese Medical Writings" *The Medieval Globe* 8 (2022), pp. 3-59.
20) J. Klunk et al, "Evolution of Immune Genes is Associated with the Black Death" *Nature* 611 (2022), pp. 312-319.

21 February No Class (Tuesday is Monday)

28 February A New World for Old Pathogens (the Depopulation of the Americas / the 'Genocide v Germ' Debate)
1) A. Crosby, "Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation in America," *William and Mary Quarterly* 33 (1976), pp. 289-299.
2) P. Kelton, "The Great Southeastern Smallpox Epidemic, 1696-1700: The Region's First Major Epidemic?" in R. Ethridge and C. Hudson eds., *The Transformation of the Southeastern Indians, 1540-1760* (Jackson, 2002), pp. 21-38.
3) J. Riley, "Smallpox and American Indians Revisited" *Journal of the History of Medicine and Allied Sciences* 65 (2010), pp. 445-477.
4) S. Archer, "Colonialism and Other Afflictions: Rethinking Native American Health History" *History Compass* 14 (2016), pp. 511-521.
5) L. Piper, "Freeze-Up, Break-Up and Colonial Circulation" *Journal of Northern Studies* 13 (2019), pp. 17-41.
6) T. Jones et al, "Historic and Bioarchaeological Evidence Supports Late Onset of Post-Columbian Epidemics in Native California" *PNAS* 118 (2021), e2024802118. **SKIM**
7) Å. Vågene et al, "*Salmonella enterica* Genomes from Victims of a Major Sixteenth-Century Epidemic in Mexico" *Nature Ecology and Evolution* 2 (2018), pp. 520-528. **SKIM**
8) R. Acuna Soto et al., "Drought, Epidemic Disease, and the Fall of Classic Period Cultures in Mesoamerica (AD 750-950): Hemorrhagic Fevers as a Cause of Massive Population Loss" *Medical Hypotheses* 65 (2005), pp. 405-409. **SKIM**

Supplementary Readings
1) J. Duffy, "Smallpox and the Indians of the American Colonies" *Bulletin of the History of Medicine* 25 (1951), pp. 324-341.
2) S. Cook, "The Significance of Disease in the Extinction of the New England Indians" *Human Biology* 45 (1973), pp. 485-508.
3) D. Alden, J. Miller, "Out of Africa: The Slave Trade and the Transmission of Smallpox to Brazil, 1560-1831" *Journal of Interdisciplinary History* 18 (1987), pp. 195-224.
4) R. Acuna Soto et al., "Megadrought and Megadeath in 16th Century Mexico" *Emerging Infectious Diseases* 8 (2002), pp. 360-362.
5) E. Fenn, *Pox Americana: The Great Smallpox Epidemic of 1775-82* (Hill and Wang, 2001).
6) N. Cook, "Sickness, Starvation, and Death in Early Hispaniola" *Journal of Interdisciplinary History* 32 (2002), pp. 349-86.
7) D. Jones, "Virgin Soils Revisited" *The William and Mary Quarterly* 60 (2003), pp. 703-742.
8) L. Nash, "Beyond Virgin Soils: Disease as Environmental History" in A. Isenberg ed., *The Oxford Handbook of Environmental History* (Oxford: Oxford University Press, 2014), pp. 76-107.
9) C. Cameron et al eds., *Beyond Germs: Native Depopulation in North America* (Arizona, 2015).
10) S. Archer, *Sharks Upon the Land: Colonialism, Indigenous Health, and Culture in Hawai'i, 1778-1855* (Cambridge, 2018).
11) V. Schuenemann et al, "Historic *Treponema pallidum* Genomes from Colonial Mexico Retrieved from Archaeological Remains" *PLoS Neglected Tropical Diseases* 12 (2018), pp. 2-20.
12) K. Giffin et al, "A Treponemal Genome from a Historic Plague Victim Supports a Recent Emergence of Yaws and its Presence in 15th Century Europe" *Scientific Reports* 10 (2020), 9499.
13) J. McNeill, "Disease Environments in the Caribbean to 1850" in P. Morgan et al, *Sea & Land: An Environmental History of the Caribbean* (Oxford, 2022), pp. 130-186.
14) Å. Vågene et al, "Geographically Dispersed Zoonotic Tuberculosis in Pre-Contact South American Human Populations" *Nature Communications* 13 (2022), 1195.
15) S. Joseph and J. Lindo, "The Evolutionary History of Infectious Disease in the Ancient Americas and the Pathogenic Consequences of European Contact" *American Journal of Biological Anthropology* … (2022), pp. ….

***** Email prospectus as Word or Google doc to Tim on 3 March before 11:59pm. *****

7 March No Class (Spring Break)

14 March Taking Aim at Disease: Late Medieval and Early Modern European Approaches
1) J. Crawshaw, "The Renaissance Invention of Quarantine" in L. Clark and C. Rawcliffe eds., *The Fifteenth Century XII: Society in an Age of Plague* (Woodbridge, 2013), pp. 161-173.
2) J. Henderson, "The Invisible Enemy: Fighting the Plague in Early Modern Italy" *Centaurus* 62 (2020), pp. 263-274.
3) C. Ermus, "The Plague of Provence: Early Advances in the Centralization of Crisis Management" *Arcadia* 9 (2015), pp. 1-5.
4) C. Ermus, "The Spanish Plague That Never Was: Crisis and Exploitation in Cádiz During the *Peste* of Provence" *Eighteenth-Century Studies* 49 (2016), pp. 167-193.
5) M. Inì, "Materiality, Quarantine and Contagion in the Early Modern Mediterranean" *Social History of Medicine* 34 (2021), pp. 1161-1184.

6) G. Rothenberg, “The Austrian Sanitary Cordon and the Control of the Bubonic Plague: 1710-1871” *Journal of the History of Medicine and Allied Sciences* 28 (1973), pp. 15-23.

Supplementary Readings
1) C. Cipolla, *Public Health & the Medical Profession in the Renaissance* (Cambridge, 1976).
2) A. Carmichael, *Plague and the Poor in Renaissance Florence* (Cambridge, 1986).
3) A. Carmichael, “Epidemics and State Medicine in Fifteenth-Century Milan” in R. French et al eds., *Medicine from the Black Death to the French Diseases* (Aldershot, 1998), pp. 221-247.
4) M. Kallioinen, “Plagues and Governments: The Prevention of Plague Epidemics in Early Modern Finland” *Scandinavian Journal of History* 31 (2006), pp. 35-51.
5) A. Kinzelbach, “Infection, Contagion, and Public Health in Late Medieval and Early Modern German Imperial Towns” *Journal of the History of Medicine and Allied Sciences* 61 (2006), pp. 369-389.
6) K. Bowers, “Balancing Individual and Communal Needs: Plague and Public Health in Early Modern Seville” *Bulletin of the History of Medicine* 81 (2007), pp. 335-358.
7) S. Cohn Jr., “The Italian Plague of 1575-1578: Transformation in Medical Thinking and Writing” in D. Curto et al eds., *From Florence to the Mediterranean* (Florence, 2009), pp. 343-362.
8) S. Cohn, *Cultures of Plague: Medical Thinking at the End of the Renaissance* (Oxford, 2010).
9) J. Crawshaw, “The Beasts of Burial: *Pizzigamorti* and Public Health for the Plague in Early Modern Venice” *Social History of Medicine* 24 (2011), pp. 570-587.
10) J. Takeda, “Plague, Commerce, and Centralized Disease Control in Early Modern France” in her *Between Crown and Commerce: Marseille and the Early Modern Mediterranean* (Baltimore, 2011), pp. 106-130.
11) J. Stearns, *Infectious Ideas: Contagion in Premodern Islamic and Christian Thought in the Western Mediterranean* (Baltimore, 2011).
12) B. Bulmus, *Plague, Quarantines and Geopolitics in the Ottoman Empire* (Edinburgh University Press, 2012).
13) J. Crawshaw, *Plague Hospitals: Public Health for the City in Early Modern Venice* (London, 2012).
14) K. Newman, “Shutt Up: Bubonic Plague and Quarantine in Early Modern England” *Journal of Social History* 45 (2012), pp. 809-834.
K. Bowers, *Plague and Public Health in Early Modern Seville* (Rochester, 2013).
15) Z. Blazina Tomic and V. Blazina, *Expelling the Plague: The Health Office and the Implementation of Quarantine in Dubrovnik, 1377-1533* (Montreal, 2015).
16) N. Varlik, “Plague Transformed: Changing Perceptions, Knowledge, and Attitudes” in her *Plague and Empire in the Early Modern Mediterranean World* (Cambridge, 2015), pp. 207-247.
17) J. Henderson, *Florence Under Siege: Surviving Plague in an Early Modern City* (Yale University Press, 2019).
18) A. Agresta, “From Purification to Protection: Plague Response in Late Medieval Valencia” *Speculum* 95 (2021), pp. 371-395.
19) N. Murphy, “Plague Hospitals and Poor Relief in Late Medieval and Early Modern France” *Social History* 47 (2022), pp. 349-371.
20) C. Udale, “Evaluating Early Modern Lockdowns: Household Quarantine in Bristol, 1565-1604” Economic History Review 76 (2023), pp. 118-144.

21 March Centuries of Dead and Sick Cattle
EpiPrimer: https://www.fao.org/animal-health/diseases/rinderpest/en/
1) P. Slavin, “The Great Bovine Pestilence and its Economic and Environmental Consequences in England and Wales, 1318-50” *Economic History Review* 65 (2012), pp. 1239-1266.
2) J. Broad, “Cattle Plague in Eighteenth-Century England” *Agricultural History Review* 31 (1983), pp. 104-115.
3) P. Phoofolo, “Epidemics and Revolutions: The Rinderpest Epidemic in Late Nineteenth Century Southern Africa” *Past and Present* 138 (1993), pp. 112-143.
4) S. Mishra, “Beasts, Murrains, and the British Raj: Reassessing Colonial Medicine in India from the Veterinary Perspective, 1860-1900” *Bulletin of the History of Medicine* 85 (2011), pp. 587-619.
5) D. Doeppers, “Fighting Rinderpest in the Philippines, 1886-1941” in K. Brown and D. Gilfoyle eds., *Healing the Herds: Disease, Livestock Economies, and the Globalization of Veterinary Medicine* (Athens, Ohio, 2010), pp. 108-128.
6) A. Woods, “The Construction of an Animal Plague: Foot and Mouth Disease in Nineteenth-Century Britain” *Social History of Medicine* 17 (2004), pp. 23-39.

Supplementary Readings
1) J. Faber, “Cattle-Plague in the Netherlands During the Eighteenth Century” *Mededelingen van de Landbouwhogeschool te Wageningen* 62 (1962), pp. 1-7.
2) L. Wilkinson, “Rinderpest and Mainstream Infectious Disease Concepts in the Eighteenth Century” *Medical History* 28 (1984), pp. 129-150.
3) C. Huygelen, “The Immunization of Cattle against Rinderpest in Eighteenth-Century Europe” *Medical History* 41 (1997), pp. 182-196.
4) S. Matthews, “The Cattle Plague in Cheshire, 1865-1866” *Northern History* 38 (2001), pp. 107-119.
5) D. Gilfoyle, “Veterinary Research and the African Rinderpest Epizootic: The Cape Colony, 1896-1898” *Journal of Southern African Studies* 29 (2003), pp. 133-154.
6) P. Phoofolo, “Face to Face with Famine: The BaSotho and the Rinderpest, 1897-1899” *Journal of Southern African Studies* 29 (2003), pp. 503-527.
7) A. Woods, “‘Flames and Fear on the Farms:’ Controlling Foot and Mouth Disease in Britain, 1892-2001” *Historical Research* 77 (2004), pp. 520-542.
8) W. Tiki and G. Oba, “Ciina – the Borana Oromo Narration of the 1890s Great Rinderpest Epizootic in North Eastern Africa” Journal of Eastern African Studies 3 (2009), pp. 479-508.
9) T. Newfield, “Livestock Plagues in Late Antiquity, with a Disassembling of the Bovine Panzootic of A.D. 376-386” *Journal of Roman Archaeology* 30 (2017), pp. 490-508.
10) A. McVety, *The Rinderpest Campaigns: A Virus, its Vaccines, and Global Development in the Twentieth Century* (Cambridge, 2018).

28 March Malaria: Colonial, Enclavist, and Partly Eradicated
EpiPrimer: https://www.who.int/news-room/fact-sheets/detail/malaria
1) J.-R. Kim, “Malaria and Colonialism in Korea, c.1876-c.1945” *Social History of Medicine* 29 (2015), pp. 360-383.

2) R. Roy, "Quinine, Mosquitoes and Empire: Reassembling Malaria in British India, 1890-1910" *South Asian History and Culture* 4 (2013), pp. 65-86.
3) N. Bhattacharya, "The Logic of Location: Malaria Research in Colonial India, Darjeeling and Duars, 1900-30" *Medical History* 55 (2011), pp. 183-202.
4) M. Johnson, "Swampy Sugar Lands: Irrigation Dams and the Rise and Fall of Malaria in Puerto Rico, 1898-1962" *Journal of Latin America Studies* 51 (2019), pp. 243-271.
5) G. Hochman, "From Autonomy to Partial Alignment: National Malaria Programs in the Time of Global Eradication, Brazil, 1941-1961" *Canadian Bulletin of Medical History* 25 (2008), pp. 161-192.
6) J. Nájera et al, "Some Lessons for the Future from the Global Malaria Eradication Programme (1955-1969)" *PLoS Medicine* 8 (2011), pp. 1-7.

Supplementary Reading
1) M. Jones, "The Ceylon Malaria Epidemic of 1934-35: A Case Study in Colonial Medicine" *Social History of Medicine* 13 (2000), pp. 87-110.
2) M. Cueto, *Cold War, Deadly Fevers: Malaria Eradication in Mexico, 1955-1975* (Woodrow Wilson Center Press, 2007).
3) R. Roy, "'An Awful, Unseen Visitant': The Return of Burdwan Fever" *Economic and Political Weekly* 43 (2008), pp. 62-70.
4) E. Carter, "Development Narratives and the Uses of Ecology: Malaria Control in Northwest Argentina, 1890-1940" *Journal of Historical Geography* 33 (2007), pp. 619-650.
5) E. Carter, "'God Bless General Perón': DDT and the Endgame of Malaria Eradication in Argentina in the 1940s" *History of Medicine and Allied Sciences* 64 (2009), pp. 78-122.
6) K. Ya Wen, "Anti-Malaria Policy and its Consequences in Colonial Taiwan" in K. Yip ed., *Disease, Colonialism and the State: Malaria in Modern East Asian History* (Hong Kong, 2009), pp. 31-49.
7) K.-C. Yip, "Colonialism, Disease, and Public Health: Malaria in the History of Hong Kong" in K. Yip ed., *Disease, Colonialism and the State: Malaria in Modern East Asian History* (Hong Kong, 2009), pp. 11-30.
8) P. Gething et al, "Climate Change and the Global Malaria Recession" *Nature* 465 (2010), pp. 342-345.
9) J. Webb, "Malaria in Africa" *History Compass* 9 (2011), pp. 162-170.
10 R. Gowland and A. Western, "Morbidity in the Marshes: Using Spatial Epidemiology to Investigate Skeletal Evidence for Malaria in Anglo-Saxon England (AD 410-1050)" *American Journal of Physical Anthropology* 147 (2012), pp. 301-311.
11) A. Adebtiba, "Traditional Medicine in the Fight Against Malarial Fever in Colonial Lagos: A Historical Exploration" *Nsukka Journal of History* 3 (2016), pp. 23-37.
12) X. Zhao et al, "Exploring the Spatiotemporal Drivers of Malaria Elimination in Europe" *Malaria Journal* 15 (2016), pp. 1-13.
13) J. Oluwasegun, "The British Mosquito Eradication Campaign in Colonial Lagos, 1902-1950" *Canadian Journal of African Studies* 51 (2017), pp. 217-236.
14) E. O'Gorman, "Imagined Ecologies: A More-Than-Human History of Malaria in the Murrumbidgee Irrigation Area, New South Wales, Australia, 1919-45" *Environmental History* 22 (2017), pp. 486-514.
15) G. Campbell, "Malaria in Precolonial Malagasy History" in G. Campbell, E.-M. Knoll eds., *Disease Dispersion and Impact in the Indian Ocean World* (Springer, Berlin: 2020), pp. 129-167.
16) S. Nasir et al, "Prevention of Re-Establishment of Malaria: Historical Perspective and Future Prospects" *Malaria Journal* 19 (2020), 452.
17) S. Ryan et al, "Shifting Transmission Risk for Malaria in Africa with Climate Change: A Framework for Planning and Intervention" *Malaria Journal* 19 (2020), 170.
18) M. Boualam et al, "Malaria in Europe: A Historical Perspective" *Frontiers in Medicine* 8 (2021), 691095.
19) B. Brabin, "Analysing Malaria Events from 1840 to 2020: The Narrative Told through Postage Stamps" *Malaria Journal* 20 (2021), 399.
20) N. Rehman, "Unsettling a Sanitary Enclave: Malaria at Mian Mir (1849-1910)" *Planning Perspectives* 37 (2022), pp. 27-52.

4 April Variolation, Vaccination and Colonial Smallpox (19th-20th Centuries)
EpiPrimer: https://www.who.int/health-topics/smallpox#tab=tab_1
1) M. Bennett, "Jenner's Ladies: Women and Vaccination against Smallpox in Early Nineteenth-Century Britain" *History* 93 (2008), pp. 497-513.
2) A. Rusnock, "Catching Cowpox: The Early Spread of Smallpox Vaccination, 1798-1810" *Bulletin of the History of Medicine* 83 (2009), pp. 17-36.
3) J. Banthia and T. Dyson, "Smallpox in Nineteenth-Century India" *Population and Development Review* 25 (1999), pp. 649-680.
4) M. Few, "Circulating Smallpox Knowledge: Guatemalan Doctors, Maya Indians and Designing Spain's Smallpox Vaccination Expedition, 1780-1803" *British Journal of the History of Science* 43 (2010), pp. 519-537.
5) A. White, "Global Risks, Divergent Pandemics: Contrasting Responses to Bubonic Plague and Smallpox in 1901 Cape Town" *Social Science History* 42 (2018), pp. 135-158.
6) A. Jannetta, "Jennerian Vaccination and the Creation of a National Public Health Agenda in Japan, 1850-1900" *Bulletin of the History of Medicine* 83 (2009), pp. 125-140.
7) D. Henderson, "The Eradication of Smallpox: An Overview of the Past, Present, and Future" *Vaccine* 29 (2011), pp. D7-D9. **SKIM**
8) S. Bhattacharya and C. D'Avila Pereira Campani, "Reassessing the Foundations: Worldwide Smallpox Eradication, 1957-67" *Medical History* 64 (2020), pp. 71-93.

Supplementary Readings
1) A. Carmichael and A. Silverstein, "Smallpox in Europe before the Seventeenth Century: Virulent Killer or Benign Disease?" *Journal of the History of Medicine and Allied Sciences* 42 (1987), pp. 147-68.
2) S. Krebsbach, "The Great Charlestown Smallpox Epidemic of 1760" *South Carolina Historical Magazine* 97 (1996), pp. 30-37.
3) P. Sköld, "Escape from Catastrophe: The Saami's Experience with Smallpox in Eighteenth- and Early Nineteenth-Century Sweden" *Social Science History* 21 (1997), pp. 1-25.
4) C.-F. Chang, "Disease and its Impact on Politics, Diplomacy, and the Military: The Case of Smallpox and the Manchus (1613-1795)" Journal of the History of Medicine and Allied Sciences 57 (2002), pp. 177-197.

5) J. Colgrove, "Between Persuasion and Compulsion: Smallpox Control in Brooklyn and New York, 1894-1902" Bulletin of the History of Medicine 78 (2004), pp. 349-378.
6) S. Bhattacharya, "WHO-Led or WHO-Managed? Re-Assessing the Smallpox Eradication Program in India, 1960-1980" in A. Bashford ed, *Medicine at the Border: Disease, Globalization and Security, 1850 to the Present* (New York, 2006), pp. 60-75.
7) L. Heinrich, "How China Became the 'Cradle of Smallpox': Transformations in Discourse, 1726-2002" *Positions* 15 (2007), pp. 7-34.
8) A. Offenburger, "Smallpox and Epidemic Threat in Nineteenth-Century Xhosaland" *African Studies* 67 (2008), pp. 159-182.
9) M. Bennett, "Smallpox and Cowpox Under the Southern Cross: The Smallpox Epidemic of 1789 and the Advent of Vaccination in Colonial Australia" *Bulletin of the History of Medicine* 83 (2009), pp. 37-62.
10) G. Hochman, "Priority, Invisibility and Eradication: The History of Smallpox and the Brazilian Public Health Agenda" *Medical History* 53 (2009), pp. 229-252.
11) W. Schneider, "Smallpox in Africa during Colonial Rule" *Medical History* 53 (2009), pp. 193-227.
12) H. Kawaguchi, "Faith Healing and Vaccination Against Smallpox in Nineteenth-Century Japan" in T.-J. Liu ed., *Environmental History in East Asia* (Routledge, 2013), pp. ….
13) B. Reinhardt, "How Smallpox Became a "Suitable Candidate for Global Eradication" *Journal of the Southern Association for the History of Medicine and Science* 1 (2015), pp. 171-194.
14) J. Cohen, "'Remarkable Solutions to Impossible Problems': Lessons for Malaria from the Eradication of Smallpox" *Malaria Journal* 18 (2019), 323.
15) L. Minsky, "Pursuing Protections from Disease: The Making of Smallpox Prophylactic Practice in Colonial Punjab" *Bulletin of the History of Medicine* 83 (2009), pp. 164-190.

11 April (On Zoom) Lightning Talks and Student-Selected Readings

18 April Taking Aim at Pathogens: International Disease Conferences ~1900 and Cholera with Dr. Benan Grams
1) V. Huber, "The Unification of the Globe by Disease? The International Sanitary Conferences on Cholera, 1851-1894" *The Historical Journal* 49 (2006), pp. 453-476.
2) A. Stern and H. Markel, "International Efforts to Control Infectious Diseases, 1851 to the Present" *JAMA* 292 (2004), pp. 1474-1479.
3) M. Low, "Empire and the Hajj: Pilgrims, Plagues and Pan-Islam Under British Surveillance, 1865-1908" *International Journal of Middle East Studies* 40 (2008), pp. 269-290.
4) I. Bolaños, "The Ottomans during the Global Crises of Cholera and Plague: The View from Iraq and the Gulf" *International Journal of Middle East Studies* 51 (2019), pp. 603-620.

Supplementary Readings
1) E. Brown, "Public Health in Imperialism: Early Rockefeller Programs at Home and Abroad" *AJPH* 66 (1976), pp. 897-903.
2) S. Palmer, "Central American Encounters with Rockefeller Public Health, 1914-1921" in G. Joseph et al eds., *Close Encounters of Empire: Writing the Cultural History of U.S.-Latin American Relations* (Duke University Press, 1998), pp. 311-322.
3) S. Carvalho and M. Zacher, "The International Health Regulations in Historical Perspective" in A.-T. Price-Smith ed., *Plagues and Politics: Infectious Disease and Policy* (Springer, Berlin: 2001), pp. 235-261.
5) N. Ersoy et al, "International Sanitary Conferences from the Ottoman Perspective (1851-1938)" *Hygiea Internationalis* 10 (2011), pp. 53-74.
6) C. Knab, "Plague Times: Scientific Internationalism and the Manchurian Plague of 1910/1911" *Itinerario* 35 (2011), pp. 87-105.
7) A. Sealey, "Globalizing the 1926 International Sanitary Convention" *Journal of Global History* 6 (2011), pp. 431-455
7) B. Bulmus, *Plague, Quarantines and Geopolitics in the Ottoman Empire* (Edinburgh University Press, 2012).
8) C. de Lima Chaves, "Power and Health in South America: International Sanitary Conferences, 1870-1889" *História, Ciéncias, Saúde* 20 (2013), pp. 1-23.
9) S. Kavadi, "Rockefeller Public Health in Colonial India" in A. Winterbottom et al eds., *Histories of Medicine and Healing in the Indian Ocean World* (Springer, 2016), pp. 61-88.
10) V. Hamed-Troyansky, "Ottoman and Egyptian Quarantines and European Debates on Plague in the 18302-1840s" *Past & Present* 253 (2021), pp. 235-270.

***** First Research Paper Submission as Word or Google doc via e-mail (timothy.newfield@georgetown.edu) before 11:59pm on 21 April. *****

25 April No Class (Tim in UK)

2 May Towards a History of Virus Hunting, Surveillance and Next Plagues
1) K. Jones et al, "Global Trends in Emerging Infectious Diseases" *Nature* 451 (2008), pp. 990-994. **SKIM**
2) D. Pigott et al, "Mapping the Zoonotic Niche of Ebola Virus Disease in Africa" *eLIFE* 3 (2014), e04395. **SKIM**
3) T. Giles-Vernick et al, "Social History, Biology, and the Emergence of HIV in Colonial Africa" *The Journal of African History* 54 (2013), pp. 11-30.
4) S. Thys, "Contesting the (Super)Natural Origins of Ebola in Macenta, Guina: Biomedical and Popular Approaches" in C. Lynteris ed., *Framing Animals as Epidemic Villains* (Springer 2019), pp. 177-210.
5) P.-M. David et al, "Hotspot or Blind Spot? Historical Perspectives on Surveillance and Response to Epidemics in the Central African Republic" *International Journal of Public Health* 65 (2020), pp. 241-248.
6) L. Fearnley, "Wild Goose Chase: The Displacement of Influenza Research in the Fields of Poyang Lake, China" *Cultural Anthropology* 30 (2015), pp. 12-35.
7) A. Lakoff, "Global Health Security and the Pathogenic Imaginary" in S. Jasanoff and S.-H. Kim eds., *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power* (University of Chicago, Chicago: 2015), pp. 300-320.

Supplementary Readings

1) N. Wolfe et al, “Bushmeat Hunting, Deforestation, and Prediction of Zoonotic Disease Emergence” *Emerging Infectious Disease* 11 (2005), pp. 1822-1827.
2) L. Fearnley, “Epidemic Intelligence: Langmuir and the Birth of Disease Surveillance” *Behemoth* 3 (2010), pp. 36-56.
3) J. Everts, “Announcing Swine Flu and the Interpretation of Pandemic Anxiety” *Antipode* 45 (2013), pp. 809-825.
4) A. Estrada-Peña et al, “Effects of Environmental Change on Zoonotic Disease Risk: An Ecological Primer” *Trends in Parasitology* 30 (2014), pp. P205-14.
5) A. Lakoff, “A Fragile Assemblage: Mutant Bird Flu and the Limits of Risk Assessment” *Social Studies of Science* 47 (2016), pp. 376-397.
6) C. Lynteris, “The Prophetic Faculty of Epidemic Photography: Chines Wet Markets and the Imagination of the Next Pandemic” *Visual Anthropology* 29 (2016), pp. 118-132.
7) C. Coltart et al, “The Ebola Outbreak, 2013-2016: Old Lessons for New Epidemics” *Philosophical Transactions B* 372 (2017), pp. 1-24.
8) K. Alexander et al, “The Ecology of Pathogen Spillover and Disease Emergence at the Human-Wildlife-Environment Interface” *Connections Between Ecology and Infectious Disease* 5 (2018), pp. 267-298.
9) J. Bonwitt et al, “Unintended Consequences of the ‘Bushmeat Ban’ in West Africa during the 2013-2016 Ebola Virus Disease Epidemic” *Social Science & Medicine* 200 (2018), pp. 166-173.
10) D. Becker et al, “Dynamic and Integrative Approaches to Understanding Pathogen Spillover” *Philosophical Transactions of the Royal Society B* 374 (2019), 20190014.
11) A. Lakoff, “What is an Epidemic Emergency?” in A. Kelly et al eds., *The Anthropology of Epidemics* (Routledge, London: 2019), pp. 59-69.
12) C. Carlson et al, “Global Estimates of Mammalian Viral Diversity Accounting for Host Sharing” *Nature Ecology & Evolution* 3 (2019), pp. 1070-1075.
13) A. Chin et al, “Pandemics and the Future of Human-Landscape Interactions” *Anthropocene* 31 (2020), 100256.
14) R. Gibb et al, “Zoonotic Host Diversity Increases in Human-Dominated Ecosystems” *Nature* 584 (2020), pp. 398-402.
15) S. Petrovan et al, “Post COVID-19: A Solution Scan of Options for Preventing Future Zoonotic Epidemics” *Biological Reviews* (2021), pp. 2694-2715.

***** Research Paper Second Submission as Word or Google doc via e-mail before 11:59pm on 10 May. *****