

PJAF 699D
Spring 2012

DISEASE, DISASTER, and DEVELOPMENT

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1207 Van Munching Hall
Thursdays
1:30 to 4:00

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Development – cultural, agricultural, industrial, social, economic, political – will be reviewed as a bringer of disease prevention and treatment and as a bringer of disease itself, from acute infections and poisonings to chronic conditions attributable to the “westernization” of diets. Then, development’s uncertain resilience in disaster and the developed world’s uneven response to disasters of various sorts – political, military, economic, environmental, geophysical, meteorological, nutritional, epidemic, epizootic, epiphytotic – will be considered, with particular attention paid to the performance of national agencies, international organizations, non-governmental organizations, institutions, charities, professions, and activists.

REQUIREMENTS

- *Attendance in class.*
- *Attention in class. Accordingly, no student computers, smart-phones, or tablets should be in use except for class-work purposes: taking notes, viewing electronic readings currently under discussion, debunking professorial assertions, et cetera. No surfing, no shopping, no e-mailing, no texting.*
- *Well prepared, well reasoned, and non-adversarial participation in class discussions.*
- *An at-home, open-everything, long-answer midterm examination.*
- *An individually written memorandum answering an approved research question and recommending practical policy solutions in order of their advisability. No recycling, please. Findings will be presented in class discussions in WEEKS 14 and 15 prior to e-mail submission.*
- *An in-class, closed-everything, short-answer final examination.*

Soft-cover reading

Ruth Levine, *Case Studies in Global Health: Millions Saved* (Jones & Bartlett, 2007); paperback, 172 pages; ISBN-10: 0763746207.

Soft-copy readings

Papers and links will be posted by course week at ELMS-Blackboard.

www.elms.umd.edu

ProMED

www.promedmail.org

All students throughout the course will subscribe to ProMED, as follows. Visit the ProMED website, and click “Subscribe” at the screen’s upper right. Enter your e-mail address, preferred salutation, first name, last name, and country. Click SUBSCRIBE. Then select the first option –

ProMED (English-language posts focusing on worldwide disease outbreaks in people, animals, and plants)

– and click “Submit Your Subscription Request.”

ProMED is free. No need to donate money, though ProMED is a distinctly low-budget operation, and a world without it would be more than marginally scarier than it is now.

Review *each* message – read some and just scan the titles of the others – all throughout the semester. Get a sense of the traffic, even if you can’t always make much sense of the content.

Discussion of ProMED highlights will begin each class starting with WEEK 2.

Weeks

1 The premodern in time and place

Th 1.26.12

Development defined, for our purposes • development debated, typically for ideological purposes • or on methodological grounds • a few minutes on progress • an idea with a past • development's types and complications • disease and development • disaster and development • disease and disaster • the inevitability of their interdependence • development in premodern places recapitulating development in premodern times • a dissonant variation on that theme

2 Into the Holocene

Th 2.2.12

Speciation • earliest migrations • immunity • the evolved variety • the herd variety • microbial ecology • human-microbial coevolution before animal domestication and human crowding • bands across the land bridge • immunogenetic implications • cultural implications • development implications • endowments as distributed at the Pleistocene's last melting • from scavenging-and-hunting to hunting-and-herding • nutritional implications • animal husbandry, pet-keeping, and rat-attracting • parasitism • vectors • viruses • smallpox • monkeypox • measles • "childhood" diseases • endemicity • wading • schistosomiasis • from slash-and-burn agriculture to settled agriculture • and deforestation • Han settlement of the Yangtze • the early and recurrent mixing of major Eurasian disease pools • the Antonine and Justinian plagues • Mongol expansion and the Black Death • a new world of vulnerabilities • European expansion and the first globalization of disease pools • the Columbian Catastrophe, still ongoing • and lesser catastrophes, generally slower than popularly imagined • political, demographic, and developmental consequences • syphilis • malaria • the evolutions of sickling and red-cell membrane peculiarities and lupus • DDT, permethrin, and bed nets • malaria-vaccination frustrations • new optimism

MS Case 1 Smallpox
MS Case 17 Measles

3 Traditional afflictions 1

Th 2.9.12

Neglected tropical diseases, NTDs • human African trypanosomiasis since Schweitzer • sleeping sickness in Africa's "green desert" • the tsetse fly • its symbiont and its passenger • the science of tsetse-fly suppression • a passage in India • dwelling-adapted Chagas vectors • guinea worm • diarrhea, vitamins, blindness, measles, and Apartheid

MS Case 8 Diarrhea
MS Case 11 Guinea worm
MS Case 12 Chagas

4 Traditional afflictions 2

Th 2.16.12

Water again • lymphatic filariasis, "elephantiasis" • blindness • from dietary deficiency • from worms • from bacteria • from viruses, trauma, and heat • chronic respiratory disease from in-dwelling cooking fires • sanitation • insects • leprosy, its imitators, immunology, curability, persistence, and persistently ambiguous causation • China's "recovered villages" • disorders of mood and reason

MS Case 4 Vitamin A
MS Case 7 Onchocerciasis
MS Case 10 Trachoma
MS Case 19 Cataracts

5 Demographic and health-systems transitions

Spontaneous transitions • planned transitions • fertility control • maternal mortality, morbidity, and disability • infant and child mortality • child and adolescent abuse • kidnapping • slavery • Africa's AIDS-orphaned child soldiers • health systems absent, undone, making mistakes, making do, and doing better • an iatrogenic explanation for Egypt's worst-in-the-world hepatitis C endemic • low-wage heart surgery for the no-wage farmer • China reforms, big-time

Th 2.23.12

*MS Case 6 Maternal mortality
MS Case 13 Fertility
MS Case 16 Neural-tube defects
MS Case 20 Hib*

6 Crowds, queues, contacts

Crowds • queues • contacts • development spreading disease • cholera • poliomyelitis • the Salk-Sabin distinction and grudge match • the Cutter incident, the SV40 problem, and the circulating vaccine-derived poliovirus (cVDPV) • information, misinformation, and disinformation • a polio-vaccine acceptance crisis in South Asia and West Africa • highways, mines, projects • megacity work queues • bars and brothels • HIV • HPV • tuberculosis, antimicrobial resistance, behavioral resistance, and rich-world pharmaceutical pricing • throwaways reused • development addressing disease

Th 3.1.12

*MS Case 2 HIV
MS Case 3 TB
MS Case 5 Polio*

Research question proposed

7 Addictions, poisons, malnutrition

Alcohol, alcohol substitutes, coca, khat • opiates and hepatitis B and C • tobacco, cardiopulmonary disease, skin and arterial aging, cancer, and the collusion of governments • poisons • brick tea, coal bricks, and skeletal fluorosis • dietary transitions • undernutrition, overnutrition, and malnutrition differentiated • cretinism today • the "Asian metabolic syndrome" and why it's not just Asian • the Pimas of Mexico and Arizona

Th 3.8.12

*MS Case 9 Poverty
MS Case 14 Tobacco
MS Case 15 Iodine deficiency
MS Case 18 Caries*

MIDTERM EXAMINATION distributed online. An at-home, open-everything, long-answer midterm test ranging over the first half of the course for e-mail submission to sprinkle@umd.edu by WEEK 9.

8 Famine

Why famines happen • and what they do • Bengal, 1770 • Thomas Malthus at the East India Company College, Haileybury, 1805-34 • the Great Irish Potato Famine, 1845-52 • the Ukrainian Holodomor, 1932-3 • the siege of Leningrad, 1941-4 • Bengal, 1943 • the Dutch hunger winter, 1944-5 • Biafra, 1968 • Bangladesh, 1974 • Ethiopia, 1984-5 • Niger, 2005-6 • Somalia, 2011-2 • famines of the future • prevention, preemption, relief

Th 3.15.12

Research question finalized

9 SPRING BREAK

Th 3.22.12

10 War and refuge

Murder of civilians • genocide • rape • collateral death, destruction, displacement • mining conflict minerals • running guns, drugs, people • damage to public-health infrastructure and organization • the refugee camp as a site of marginal security, subsistence nutrition, limited therapies, intense disease transmission, deepening depression, chronic shame, unpoliced violence, and organized crime • back-migration • often to escape, and inadvertently to spread, disease • typhoid • hepatitis E • trauma

Th 3.29.12

11 Environmental degradation

Physical geography as modified by human action • GPM's unheeded warning • Haiti • Nepal • torrents • desertification • crop

Th 4.5.12

failures, including fodder failures • livestock death • foot-and-mouth disease • culling • avian influenza in global commerce • epiphytotic in an era of globalized high-input clonal-planting agriculture • ground-water drawdown • arsenic mobilization • meningitis in the Sahel and at the Hajj • new hints of a better vaccine • SARS in East Asia • changes in vectoral range • heat • cold • sound • light • toxic industries • industrial accidents • Bhopal, 1984 • ship breaking in the Bay of Bengal • unintended industrial consequences • rabies and vultures in India • trawlers and bush meat

12 Geophysical and meteorological instability

Single-hazard exposure analysis • cyclones • droughts • floods • earthquakes • volcanic eruptions • landslides • multi-hazard exposure analysis • risk assessment • the Bam Earthquake, 2003 • the Great Asian Tsunami, 2004 • the Kashmir Earthquake, 2005 • Haiti, 2010 • contrasting experience in the rich world • Australia, 2010-11 • New Zealand, 2011 • Japan, 2011 • attendant injuries and illnesses • structural and infrastructural damage

Th 4.12.12

Discussions discussed

Weeks chosen (or assigned)

13 Response assessed

Impediments by disaster type • local response • spontaneous response by populace • organized response by government • and by others • Red Cross, Red Crescent, Red Crystal • local NGOs in general • rich-world response • national agencies, international organizations, foreign NGOs, institutions, charities, professions, activists, opportunists • the “relief industry” • raising funds • competing for victims, transport, venues, attention, and donations • too many cans • too many elbows • too many pockets • too little permanence

Th 4.19.12

Anxieties relieved

14 MEMORANDUM REPORTS 1

Th 4.26.12

First one half...

15 MEMORANDUM REPORTS 2

Th 5.3.12

...and then the other.

16 FINAL EXAMINATION

Th 5.10.12

The FINAL EXAMINATION, unlike the MIDTERM EXAMINATION, will be an in-class, closed-everything, short-answer test. It will range over the whole course, including questions prompted by memo reports in WEEKS 14 and 15.

17 MEMORANDUM DUE DATE

Th 5.17.12

Submit as a text file – doc, docx, or rtf – and also as a PDF to sprinkle@umd.edu.