Two Stealth Triumphs in Global Health

An observer—sitting perhaps on the moon to ensure his objectivity—looks down upon the earth, closely watching its many happenings, good and bad. His sole responsibility is to write an objective history of the most recent half-century, the years between 1962 and 2012, specifying the most wonderful of events touching the lives of humans. It is a formidable task considering the numberless events both trivial and substantial. And what criterion does this critical observer adopt for an event to be 'substantial'? He declares that anything that has materially enriched the lives and welfare of many millions—will meet the criterion of substantiality.

After sober deliberation and earnest review, this lunar observer identifies two discrete events that he regards as supremely significant in the affairs of humanity, one taking place on May 5, 1978, and the other on October 14, 2010; indeed, these were assuredly monumental events despite the fact that few living humans celebrate or even are aware of the profound meaning of these two happenings.

The first event occurred in Merca, Somali, when Ali Maalin, a local cook, contracted smallpox. He recovered and thus represented the last known case of natural smallpox, an infectious disease that has probably killed more humans in recorded history than any other disease. Through the 18th Century, for example, smallpox regularly killed over 400,000 persons, largely children, per year. The final eradication of smallpox was proclaimed by the United Nations in 1979, a year later.

And the second event also represented a triumph of concerted, scientifically-based strategies designed to overcome an economically disastrous infection called rinderpest. There are few global events to provoke the United Nations to express great joy. But in October of 2010, the UN proclaimed the utter extinction of the disease called rinderpest.

What is rinderpest? It is a German term describing cattle-plague, an infectious disease of domesticated cloven-hoofed cattle. For herds of cattle, rinderpest is a mortal contagion, known and feared since antiquity: Over the centuries it has been the periodic cause of much distress, and the wretched prelude to famine throughout Asia and Africa; and it is likely that murrain, the fifth plague of Moses (Exodus: 9) afflicting the herds of pharaoh, was rinderpest.

Mongol armies were vast, nomadic cities, accompanied by many civilians and herds of cattle. The Mongol invasions of eastern Europe, by the 13th Century, extended as far west as Poland and Hungary. It is probable that the merciless onslaught led by Batu Khan in 1237 brought the cattle pestilence to the heart of Europe. Rinderpest then entered the Europe's morbid history in the 13th Century, plaguing its cattle relentlessly until the late 20th Century.

Its cause was generally ascribed to ill-fortune or past human sin, but the writings of Bernadino Ramazzini (1633-1714), the renown professor of medicine in Padua, Italy, contended that it was not a form of divine retribution but rather a banal contagion much like other plagues.

The Papal States, at this time, occupied much of central Italy, and the Papal cattle were largely destroyed by rinderpest. Pope Clement XI (1649–1721) charged his personal physician, G. M. Lancini, with finding ways of aborting the pestilence. Lancini accepted Ramazzini's etiological presumption and conveyed this to the Pope who then ordered stern quarantine measures throughout territories under Roman Catholic jurisdiction. His papal edicts imposed the death penalty on farmers not immediately sacrificing sick animals and then quarantining their entire herd.

These stern measures proved to be effective, and in Catholic nations such as Italy, Spain and France, rinderpest was effectively controlled. In the Protestant nations of northwestern Europe, particularly the German states, however, the cattle plague continued unhindered. Transnational debates then ensued, alternately blaming the disease-discrepancies on a papal curse or the failings of Lutheran teachings. Ramazzini and his methods to abate contagion (human or cattle) were largely forgotten.

What is currently known about rinderpest? It is caused by a virus closely related to the measles virus and vulnerable to an effective vaccine. The obstacles hindering total eradication of rinderpest were not a lack of prophylactic vaccines but the unsettling effects of civil wars in Asia and Africa and the helter-skelter migration of refugees—and their cattle. Through transnational, concerted efforts, rinderpest was made extinct by October 14, 2010.

And thus, to one observer, the global eradication of two deadly viral diseases was identified as the most significant event of the 1962–2012 interval. Certainly, their eradication represents the first time that a communicable disease was made extinct through collective human action. Humanity may now hope to hear no further reference to their names other than in Sunday crossword puzzles.

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The author and his spouse/significant other have no financial interests to disclose.

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