
RELIGION & PHILOSOPHY

to play the father role that many patients seem to cherish. This concept of paternalism in medicine (sometimes called the "Marcus Welby syndrome") probably originated during the early Christian era, when illness was equated with God's punishment visited upon sinners and health was a blessing bestowed by a heavenly Father. Prayer, the laying-on of hands, and treatment with holy oils supplanted medication and treatment, and 2000 years of empirical medicine by the Babylonians, Egyptians, and Greeks were largely discarded.

Healing by faith exerted a magnetic power to draw new converts to Christianity, especially during the recurring waves of pestilence that ravaged the Holy Roman Empire during the first 500 years of the Christian era. The emotionalism of the child-father relationship established between patient and priestly physician was enhanced by the principle of charity that found expression in the Christian monasteries of 5th-century Italy.

Later, there was a gradual reconciliation with empirical medicine; by the 12th century, Church councils were forbidding monks and regular clerics to practice medicine. In 1242 the Holy Roman emperor Frederick II drastically undercut the authority of the Church by giving a medical school at Salerno exclusive right to examine and license physicians, a privilege hitherto reserved for papal legates.

The reemergence of fee-for-service medicine in medieval Europe encountered resistance from a public conditioned by hundreds of years of Christian charity. Kahn wonders if there is not "still locked deep within the public mind . . . a longing for that venerable Christian doctor who dispensed his medicine out of love for humanity and as God's agent on earth."

SCIENCE & TECHNOLOGY

*Losing the War
Against Malaria*

"Malaria Makes A Comeback" by Anil Agarwal, in *New Scientist* (Feb. 2, 1978), King's Reach Tower, Stamford St., London SE1 9LS.

The widely hailed 20-year-old malaria eradication program sponsored by the World Health Organization has failed. In those countries of Asia and Latin America where the disease had nearly been eradicated, there is now a serious resurgence. For example, India cut malaria cases from 100 million in 1952 to just 60,000 by 1962, but the incidence had grown to 6 million cases by 1976.

Worldwide, an estimated 200 million people suffer from malaria today. More than a billion people live in malaria-risk areas. Malaria, says Agarwal, editor of a London environmental news service, will not be

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eradicated in the foreseeable future.

Why the gloomy prognosis? The main reason is the rapid spread of insecticide resistance in mosquitoes. Today, 43 species of malaria-spreading anopheline mosquitoes are resistant to the organochlorine insecticides BHC and dieldrin; 24 to BNC, dieldrin, and DDT; 6 to both organochlorines, organophosphates, and carbamates as well. The use of insecticides BHC and dieldrin; 24 to BHC, dieldrin, and DDT; 6 to both organochlorines, organophosphates, and carbamates as well. The use of health purposes.

While the prospects for a malaria vaccine have recently brightened (it may be possible three to five years hence to demonstrate in animals whether a vaccine is practical), an effective vaccine for humans may be elusive. Unlike viruses, malaria must be contracted several times before any immunity develops. More disturbing is the critical need for antimalarial drugs now that some strains of the disease have been found to be resistant to chloroquinine.

The best hopes for the future, Agarwal reports, lie in programs like those in China and Vietnam aimed at destroying mosquito-breeding habitats, even though such efforts are slow, complex, and costly. (Habitat control can range from swamp drainage to covering pits, wells, and other man-made containers that hold standing water.) The resurgence of malaria, he says, is less a failure of science than a failure of social and political systems to develop a strong, popular commitment to control all communicable diseases.

Nature v. Nurture

"Science and Values: The Eugenics Movement in Germany and Russia in the 1920s" by Loren R. Graham, in *The American Historical Review* (Dec. 1977), 400 A St. S.E., Washington, D.C. 20003.

Is there such a thing as value-free science? Not really, says Graham, history of science professor at Columbia, who supports his contention by comparing two rival theories of human genetics that arose simultaneously in Germany and Soviet Russia in the 1920s.

In both countries, Mendelian genetics (a system of inheritance by genes) and Lamarckism (belief in the inheritability of environmentally acquired characteristics) were seen as reputable scientific theories and debated freely by prominent scientists. Politics were irrelevant to the "nature versus nurture" argument in Moscow and Berlin. For a time, many socialists and communists in Germany supported the study of hereditary improvement (eugenics); some proto-Nazis regarded it as a leftist perversion.

In the Soviet Union, it was not until 1925 that Marxist theorists expressed concern that some Russian eugenicists (who viewed the post-Revolution emigration of upper-class families as a serious loss to the genetic reserves of Russia) were emphasizing biological determinants of human behavior to the neglect of socioeconomic factors.