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 eugenists (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.

By the early 1930s, political doctrine had pushed the two countries into opposite paths. In the "nature-nurture" debate, nature won out in the extreme genetic doctrines of Nazi Germany, which sought to create a "master race" of genetically pure "Aryans." Nurture won out in Russia, where an equally unsubstantiated Soviet doctrine, epitomized by Trofim Lysenko's version of Lamarckism, ignored genes and sought in vain to produce better strains of food plants environmentally.

Graham concedes that there may appear to be a natural alliance between eugenics and conservative, even fascist, sentiments. But that link was not logically preordained and was certainly not perceived in the early 1920s. Scientists and others interested in eugenics covered a broad range of political beliefs in Weimar Germany and Soviet Russia. All scientific theory and technological innovation exists in a social and political setting, Graham concludes, and the consequences can be overwhelming.

The Endo-Ecto Controversy

"Warm-Blooded Dinosaurs: Evidence Pro and Con" by Jean L. Marx, in *Science* (Mar. 31, 1978), 1515 Massachusetts Ave. N.W., Washington, D.C. 20005.

In recent years, the notion that dinosaurs, as reptiles, were cold-blooded creatures (ectotherms) whose body temperatures fluctuated with that of the environment around them, has been challenged. Some paleontologists now argue that dinosaurs were warm-blooded (endotherms) like mammals and birds, and suggest that this explains the dinosaurs' ability to dominate the earth for 140 million years.

The central question is the dinosaurs' level of activity, observes *Science* staff writer Marx. Reptiles are often depicted as slow, sluggish creatures incapable of much sustained effort because they are cold-blooded, with low metabolic rates, and therefore do not produce enough energy for vigorous action. Only by taking advantage of environmental heat (i.e., basking in the sun) can they warm their bodies and raise their metabolic rates to high-activity levels. By contrast, warm-blooded endotherms are independent of their environments and have metabolic rates high enough to give them ready energy to hunt for food and escape their enemies.

Paleontologists Robert Bakker of Johns Hopkins and John Ostrom of Yale have concluded that dinosaurs do not fit the picture of the slow, sluggish reptile. Instead, they had long limbs, erect postures, and (probably) four-chambered hearts characteristic of present-day warm-blooded vertebrates. They had greater speed and agility than modern ectotherms (e.g., lizards) whose limbs project out to the side.

Other investigators point out that the image of the sluggish reptile is misleading; a reptile can move very rapidly when startled. Moreover, some cold-blooded reptiles (like the crocodile) also have four-chambered hearts. The dinosaur, given its large size, may have had a