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an almost impossible time frame and, at the same time, make appropriate trade-offs with energy efficiency, vehicle function (personal mobility), manufacturability, reliability, durability, safety, comfort, convenience, cost, and customer acceptance in a competitive market. The task is extremely complex and difficult, and we can use all the understanding and help we can get. Many members of the American Chemical Society are already involved in this effort. We appreciate the interest now evidenced by their former president.

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References and Notes

- Another 6 percent was lost during the same period because of weight additions required to meet safety regulations and other factors.
 Additional fuel economy gains will be realized in 1975 model cars as a result of a change in which product with
- in vehicle product mix.
- in venicie product mix.

 3. For a report of considerable basic combustion work in the latter area, see W. Cornelius and W. G. Agnew, Eds., Emissions from Continuous Combustion Systems (General Motors Symposium Series, Plenum, New York, 1972).

Marathoning

In response to Puretz, Young, and Baron (Letters, 14 Dec. 1973, p. 1082), I can only repeat that there has never been a reported death from coronary heart disease among marathon finishers of any age (1). Finishers are defined as those covering the 42.2-kilometer course in less than 4 hours. Only autopsied cases can be considered.

Puretz suggests that Paavo Nurmi might be the first such case, and Baron brings up Pheidippides; however, Nurmi never ran a full 42.2-kilometer course (2), and Pheidippides probably did not even exist (3).

Nurmi broke world records in races of up to 20 kilometers but refused to run marathon distances in practice for fear that it would slow him down. He was a remarkable middle-distance runner, not a marathoner. Puretz is mistaken about the 1928 Olympic marathon. The winner was a Frenchman, not Nurmi (who was not even entered).

The modern Tarahumara Indians, like the legendary Pheidippides, demonstrate their endurance with races of 160 kilometers and longer. The limiting somatic factor in these "marathons" is skeletal muscle rather than cardiac

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muscle. Deaths from cardiac or circulatory complications are unknown among the Tarahumara (4).

I agree with Young. It is the marathoner's life-style that protects him. The race only quantitates the benefits. Rehabilitation centers in Honolulu and Toronto have a formal distance-running program for those cardiac patients who wish to adopt this life-style. The marathon run becomes the natural "graduation ceremony" (5). The Hawaii Heart Association presented trophies to five such patients at their recent Honolulu Marathon (16 December 1973). These patients had trained for the marathon after recovering from one or more myocardial infarctions (6).

The American Medical Joggers Association was one of the cosponsors of the Honolulu Marathon. Only time will tell whether these marathoning heart patients will share the coronary protection of the Olympic athletes.

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 Honolulu Advertiser, 17 December 1973, p. D-2.

Rainfall in the Amazon Basin

Portig (Letters, 26 Jan. 1968, p. 376) and Feininger (Letters, 5 April 1968, p. 13) presented evidence that average annual rainfall in certain tropical Latin American countries was decreasing dramatically and that this decrease (as much as 24 percent from 1942 to 1967 in Colombia) was correlated with widespread felling of the Amazon basin forest. New data obtained in Ecuador in July 1973 suggest a disturbing major change in the overall picture of climatic changes in the western Amazon basin of South America.

On 10 July and 13 July 1973, during flights between Quito and Limoncocha (a missionary outpost in the Amazonian rain forest on the Río Napo in eastern Ecuador), a strong and widespread haze of smoke particles was observed

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