factor of 20. However, the conclusion that, in order for OTEC to be competitive with coal, the capital cost ratio of the two designs must be equal to the efficiency ratio is misleading. Neglecting for the moment fuel costs, the cost of electricity to a first approximation is determined solely by the appropriate capital investment cost, capital recovery factor, and plant factor. Thus, the thermal-to-electrical conversion efficiency of the plant does not even enter into the calculation.

When fuel costs are included, the conversion efficiency and the cost of fuel determine the contribution of fuel charges to the cost of electricity. If the comparison is between designs using two alternative depletable fuel choices, then the ratios of fuel costs and efficiencies determine the ratio of fuel costs. In a comparison of technologies based on a nonrenewable resource (coal) and a renewable resource (solar), the thermal-to-electrical conversion efficiency plays an unusual role, since the fuel for the technology based on the renewable resource is effectively available at no cost.

Accordingly, it is entirely conceivable that competitive electricity prices may be obtainable from OTEC facilities with capital costs that are in fact higher than those for a coal-fired unit with an equivalent capacity. Moreover, the fuel costs of a coal-fired facility are subject to future price escalations, while the "fuel" costs of an OTEC plant are fixed at the time of construction. Thus, the OTEC supporters do not have to meet the stringent requirements that are suggested by Duguay. Conversely, if the cost of mining and transporting coal contributes about 25 percent of the cost of electricity and maintenance costs are neglected, competitive OTEC plants may be implemented with capital investment costs as much as 33 percent higher than those of a coal-fired facility.

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Bipedalism: An Early Warning System for Miocene Hominoids

In the article "Human evolution: Hominoids of the Miocene" (Research News, 15 July 1977, p. 244), Gina Bari Kolata quotes David Pilbeam as speculating on possible morphological and behavioral effects brought about by environmental changes. Specifically, he suggests that the movements of Miocene hominoids into more open country (from forest) may have contributed to the smaller of the species of this group becoming bipedal as a partial consequence of changes in the way they fed.

In open grassland bipedalism would have an additional advantage for small hominoids. A small hominoid not possessing highly developed olfactory or auditory senses, foraging in relatively tall grass, would have difficulty scanning the surrounding terrain. Such a hominoid would be easy prey for a predator hunting by sight and capable of looking over the grass. Line of sight contact would not be essential, as the predator could track the "submerged" hominoid by the disturbance its movements created in the grass.

A hominoid of similar size capable of adopting a bipedal stance who was placed in a similar situation would be able to see over the grass (if it were not too tall) and thus become aware of an approaching predator much earlier than the nonbipedal hominoid. Even intermittent bipedalism would serve as an efficient early warning system.

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