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Strong analogies exist between biological evolution, autocatalytic chemical networks, and the development of technology over time. Artificial life models of evolutionary processes aim to elucidate and exploit the complexity-generating power of open-ended evolution in a heterogeneous ecosystem of changing fitness functions (niches). The concept of autocatalysis emphasizes how a network of such functions can work in tandem to produce self-sustaining elements that otherwise never could have existed without the network. Brian Arthur and others have drawn attention to the autopoietic nature of technological evolution, and the crucial role of multiple fitness functions (human needs) and shared components in generating combinatorially complex solutions. Arthur suggests that his model could, if properly adapted, spawn a new subfield of evolutionary computation. I intend to explore the relationship between the catalytic power of "exaptation networks" and the teleology of technology and artificial intelligence.