

was divided the less each person received. From this it followed that life was a constant struggle to see who could get more at the expense of the others who, consequently, would get less. If some, through their intelligence, daring, or sheer power, managed to gain a great deal, the share of the others diminished greatly and many suffered.

Today we are still thinking and acting strongly on the basis of this belief, but through modern science and technology I believe we can prove that the belief is no longer totally valid. In a sense, the pie can be made continually larger and more satisfying if only we who share it would devote the time and energy we spend disputing over each portion as intelligently, and perhaps as fanatically, to the solving of some very basic human problems. Perhaps developing new modes of human behavior could affect what many of us have always felt to be some kind of immutable economic or social truths.

To put it a bit more scientifically, although our world is not unlimited in its resources, we have potentially more than enough energy, materials, and space to sustain a population far greater than the number of people on earth today at a living standard at least as high as that enjoyed in most of the developed areas. I am not advocating that we reduce our efforts toward birth control. But I would like to point out that at the moment we are making use of only the most minute fraction of the energy and resources we know are available and much of which we already have the knowledge and technology to use. In another sense, we are enormously wasteful and inefficient and are just beginning to learn how meager our current efforts are compared with our potential. Let us take just one example. Today our major source of mechanical energy comes from the heat of combustion, the burning of fossil fuels—coal, gas, and oil. We are beginning a shift to nuclear power, which over the coming decades will make use of the world's vast supply of uranium and thorium and greatly expand our energy potential. The development and use of the "breeder" reactor, the technology of which we are hard at work on now, will give us an even greater amount of power—perhaps enough for thousands of years—and may radically expand our applications of energy, as I will point out in a moment. In common seawater there is still another fuel, the atoms of heavy hydrogen. If the energy in these atoms could be extracted through controlled thermonuclear fusion—a technology being pursued today—we could obtain from the Pacific Ocean alone enough energy to generate electricity for the entire world at its present rate of consumption for at least as long as the universe has existed. That would mean enough power for many billions of years!