



NASA

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models we’ve been discussing in the United States. One, was the Roosevelt 1930s mobilization, which led to our capabilities, in 1940-41. But the problem was, in pushing that, which is valid for today—to understand how an economy should be saved; how the world economy should be built up, go back to the United States under Roosevelt, during the period from Harry Hopkins coming into office, until we got into the war. That’s the model. But the problem was, this was done, in many people’s minds, it was done under wartime conditions. It was *not* actually done under wartime conditions; it was done under pre-war conditions. It was done, because the day that Roosevelt walked into his office, to occupy his office for the first time—Hitler had been made a dictator! Not just a Chancellor, but a dictator! Two weeks before. And once Hitler was made a dictator, anybody that knew anything, knew that World War II was inevitable! The question was, how was it going to occur, in what form? When? Where? But it was inevitable. Everybody who had any brains, knew the world was going to a general, global war, the day that Hitler was made a dictator, after the Reichstag’s burning—with the special order.

Now, because this Roosevelt recovery was done under wartime conditions, or these kinds of wartime conditions—pre-war, wartime conditions—the point was, if we’re raising the question of this kind of mobilization, won’t people inside the United States and outside the United States, think this means we’re going for war, or for empire? And you know

the mood in Europe, and other parts of the world, that’s the tendency; as well as in the United States.

So therefore, we said, “Wait—” and we’d been talking about it, but they decided to do it; they said, “Let’s take NASA.” What Kennedy did with his decision to put a man on the Moon within a decade: That was one of the greatest projects in modern history. It is one of the reasons he was killed, because he was going in a direction opposite to what his opponents wanted to go to—and this was a global issue. They killed him! And people inside the leadership of the United States were involved in that killing of him, and covering it up!

Now, the NASA model: We pulled together every facet of society, for a concept of man’s exploration of space. Now, man’s exploration of space, is not just a project. Man’s exploration of space, is asserting *man’s identity as a universal being*. Man is a creature in the universe. We are *in* the universe. We are part of creation. We are a creative part of creation. It’s in that, that we find our identity. We need nation-

## Kennedy’s Apollo Program Reshaped the U.S. Economy

President John F. Kennedy’s call on May 25, 1961, for the United States to have a goal of “landing a man on the Moon and returning him safely to Earth” by the end of the decade, put into motion the greatest peacetime mobilization of this nation’s scientific, engineering, and technological resources in history. The country’s industrial base, which had stagnated for the nearly two decades since President Franklin Roosevelt’s mobilization to win World War II, was thrust into becoming the leading technological driver for the real growth of the physical economy.

A very modest level of Federal funding for the National Aeronautics and Space Administration (NASA)—\$20 billion over eight years—was leveraged into the growth of thousands of large and small private companies, and directly over 400,000 highly skilled engineering and manufacturing jobs. In parallel, the new technology developed for Apollo was transferred by the companies developing them to the rest of the economy, with an estimated 4:1 return on the Federal dollar investment.

In order to go to the Moon, President Kennedy recognized, there had to be an explosive growth of new scientific manpower.

Over the course of the 1960s, NASA grants and scholarships were supporting more than 3,600 graduate students per year engaged in space science and technology research. Youth Science Congresses were held at NASA laboratories to engage younger students in discussions with sci-

states, as sovereign nations, in order to function. Because we need to have national cultures, as the basis for functioning. But we also have a higher identity, a higher identity which we share in common among nations. That higher identity is: *the nature of man as a creative being in the universe*. And therefore, we lift up our eyes to the heavens, and to say, "What are we going to do out there?" Who's in this neighborhood of the Solar System, who's going to take care of the Solar System? Who's available to take care of the Solar System—which has some threats coming up in periods ahead? *We* have the responsibility! Not we, necessarily living today. But our grandchildren, our descendants, will have that responsibility. And when we think of taking that responsibility, we rise above the pettiness which leads us into stupidity. We, for the first time, begin to realize, that we are *man in creation*. A creative being, *in creation*. And what you need at this time, in the United States, and around the planet, you need a sense of *man in creation*. You've got to lift people up, from the pettiness.

You see gambling, mass gambling; you see all these sicknesses, these diseases, these moral diseases of mankind. How can we lift mankind up, so, instead of being corrupt, mankind begins to see himself as what he is? And thinks about what his descendants are going to be. What mankind of his descendants are going to be.

And you need that kind of inspiration, because the things we're going to do, the goals we have, some can be realized in a short term; some in a longer period of time—two generations. Two generations is a good term to think ahead, 50 years. And that's not such a long time; if you think about those of us who've had some experience of the past 50 years, 50 years is a very short time. A lot of things can happen very quickly, in terms of 50-year terms. So, that's what's happened.

### Defeat the Financial Succubus

Now, the Democratic Party is going to move that way. And the enemy is going to move, too. And the enemy is not

entists. Scientists who had received their education thanks to the space program, fanned out into every facet of scientific endeavor and American industry.

Recently there has been hand-wringing in the scientific community, industry, and on Capitol Hill about the pathetic number of American students studying science and math. Only bandaid solutions have been proposed, so far. The Apollo program succeeded in creating an entire generation of scientists, because the nation had a mission which captured the imagination of especially the youth.

Along with the creation of the technical capability to tackle the challenge of putting men into space came the challenge of rebuilding industrial capacity to accomplish the mission. Every basic industry, from materials processing to auto manufacturing, joined in.

President Kennedy's investment tax credit, proposed 90 days after he took office, was geared to spur the purchase of capital goods. To assure the investments were *only* in durable goods, the credit applied only to domestic U.S. assets with a life of six years or longer. The combination of the investment tax credit, and the optimism generated by embarking upon the great project of space exploration, led to a record-setting \$40 billion capital spending plan by industry in 1962. The editors of *Fortune* magazine described this as "hitching the economy to the infinite."

A survey in the 1980s by *EIR*, of capital investment in the 1960s, revealed that the private expansion of factories and the purchase of capital goods began *before* one penny in government funding, through NASA, had resulted in any contracts for industrial firms. The private investment was based upon the changes in economic policy, and the expectations from the science-driver Apollo project.

### The General Welfare

President Kennedy was aware that a "rising tide would lift all boats," as the technological innovation and productivity gains from the Apollo program diffused through the economy.

But the social context for an Apollo program—from education and health care to civil rights for minorities—would also have to change. In a February 1961 message to Congress on education, President Kennedy stated that "the human mind is our fundamental resource," and called for smaller classrooms, better paid teachers, college scholarships, and investment in plant and equipment.

The same month, in a message to Congress on Health and Hospital Care, the President outlined his plan for guaranteed health care for the population, an expansion of hospitals and other health-care facilities, scholarships for health-care professionals, and a vaccination program, "aimed at the virtual elimination of such ancient enemies of our children as polio, diphtheria, whooping cough, and tetanus. . . ."

As a result of spending approximately \$20 billion over eight years through the Apollo program, American industry remade itself, in order to meet the challenge of exploring the infinite. There has been no more effective way to create greatly expanded skilled employment and force the upgrading of the economic and cultural levels of the population.

Today, when the great reservoir of skilled manpower in the U.S. machine-tool and auto industries is threatened with extinction, Kennedy's Apollo program stands as the paradigm of what should be done.

—Marsha Freeman