The Mars landing

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The successful landing on Mars by the rover Curiosity has evoked widespread public interest and enthusiasm. So many people visited NASA web sites to get the latest reports and download photographs of the landing and the Martian landscape that they crashed the space agency's servers.

Hour by hour, day by day, the ten advanced instruments on board Curiosity will be studying the planet which has long fascinated the imagination as the likely next stage for human exploration and development. The enormous expansion in mankind's scientific knowledge is a powerful blow not only against religious obscurantism but against the reactionary skepticism spread by idealist currents like post-modernism.

The Mars Science Laboratory was developed, built, launched and landed on that planet in order to increase scientific knowledge, with a particular focus on determining whether the conditions for the development of life-forms ever existed on Mars. (The landing zone, in the Gale Crater, was chosen because the wide range of rock layers and sediment would give a clearer picture of the history of the planet.)

The mission is already a triumph for modern science and engineering, building on the knowledge acquired in previous space missions, especially those of two earlier but much smaller rovers. Two NASA spacecraft currently in Mars orbit, the Mars Odyssey and the Mars Reconnaissance Orbiter, played invaluable roles, relaying communications from Earth, helping Curiosity during its final seven-minute descent to the planet's surface, and photographing the landing.

In that sense, the most recent Mars mission represents an extension of the collective labor of a highly skilled cadre of scientists and engineers, whose previous work made possible the triumph of last Sunday night. The landing was the product not of individual brilliance, but of collective teamwork (or perhaps collective brilliance, since no one would deny that those working together on Curiosity are remarkably intelligent and able).

The level of planning that went into the mission is one of its most remarkable aspects. Thousands of operations had to be programmed in advance so they could be executed by the spacecraft and its components. Given the vast distance from Mars to the Earth, with radio signals taking 14 minutes to travel one way during the landing period, it was impossible for Earth-bound engineers to direct Mars operations in real time. Hundreds of thousands of lines of software were written to provide the necessary instructions.

After the successful landing on Mars, the Obama White House issued a brief statement in the president's name presenting the achievement in nationalist terms. "Tonight, on the planet Mars, the United States made history," the statement began, adding that the landing "will stand as a point of national pride far into the future" and demonstrates "our unique blend of ingenuity and determination."

Obama's science adviser, John P. Holdren, sounded a similar note, saying in a press interview, "there's a one-ton, automobile-size piece of American ingenuity, and it's sitting on the surface of Mars right now." He went on to boast that the United States, with multiple Mars missions, was the only nation ever to land spacecraft successfully on another planet, ignoring the Soviet landings on Venus (ten Venera probes made soft landings and transmitted data between 1970 and 1985), the only spacecraft to reach that planet.

Despite efforts to portray it as a triumph for "American values," the successful Mars landing is the antithesis of the predatory individualism that Wall Street and its political servants in Washington and in the media invariably present as the only possible organizing principle of modern society. Neither the "market" nor the profit motive played any significant role in launching and landing on Mars the largest and

most advanced robot explorer ever sent to another planet.

The work of the NASA scientists and engineers, and their colleagues at Jet Propulsion Laboratory (part of the California Institute of Technology), is a living demonstration of the power of collective social effort and scientific planning. It inevitably begs the question why such methods could not be applied equally successfully to solving problems here on Earth: hunger, disease, unemployment, poverty, environmental devastation, war.

The White House statement pivoted from hailing the Mars landing to praising Obama's efforts to privatize the space program, described as "a vision for a new partnership with American companies to send American astronauts into space on American spacecraft." Here reactionary nationalism joins hands with imbecilic worship of the market.

Like every other aspect of American society, the space program is distorted and blighted by the dictatorship of the financial aristocracy. But the effect up to now has been indirect. There is no multi-millionaire CEO at NASA or JPL stuffing his pockets at the expense of the larger enterprise. All of the key decision makers involved in the Mars program are scientists or administrators with a science or space program background. Not a banker or corporate raider among them.

Those employed on the project are well-paid compared to the average worker in the United States, but they are clearly not "in it for the money." They are enormously engaged and dedicated—as the scenes of jubilation after the successful landing demonstrated.

While some of the giant aerospace companies found NASA contracting enormously profitable, the space program's history was far more closely bound up with the broader strategic concerns of American capitalism, going back to the early days of the "space race" with the Soviet Union, and Kennedy's famous pledge to put a man on the Moon by the end of the 1960s.

Such considerations faded to some extent after the collapse of the USSR—accounting at least in part for the declining support for NASA—but the US ruling elite has begun to raise them again, this time in relation to China. Restrictions on sharing satellite technology were first imposed in 1999. Last year, Congress imposed a ban on NASA funds being used to develop any program in conjunction with China without specific authorization.

The magnificent scientific achievements of the US space program—and its counterparts in Russia, China and elsewhere—can only be fully developed on a new basis, based on genuinely global collaboration among scientists and engineers of the entire planet. This means freeing space exploration, and every other human endeavor, from the straitjacket of competing capitalist nation-states and the insatiable appetites of a ruling elite that demands that all of society's resources be devoted to increasing private profit.