

Something's Happened to Yankee Ingenuity

By Bradley Graham

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It's been 53 years since Angus Campbell put the first automatic cotton picker to work. 70 years since Henry Ford rolled up his first Model T. 30 years since Du Pont introduced a super fiber called nylon and 30 years since Edwin H. Land marketed the first instant-purchase camera.

All of which helps recall a time when America's inventive spirit seemed undiminished and unwearying. Ideas flowed to the marketplace as fast and furious as mountain rapids flow downhill.

But what was once thought to be an endless stream of U.S. inventions has in recent years been trickling out less steadily and less competitively.

Consider these facts: The number of U.S. patents issued per year in 1971 and has declined steadily since. But the number granted to foreign inventors has increased steadily since 1963. In 1977, foreigners claimed 33 percent of all patents issued in the U.S. across a broad range of fields.

The U.S. balance of trade has worsened, due not only to increased oil imports, but also to more imports of foreign manufactured goods.

Production, which is partly a function of technological innovation, has slumped severely. In the past decade, the rate of growth in U.S. productivity has averaged only half of what it was the previous 20 years. In contrast, productivity growth rates in Europe and Japan have been on the rise.

From 1953 to 1958, U.S. investment in research grew at an impressive rate of 10 percent annually in inflation-adjusted dollars. However, in the U.S. over the past 10 years has shown essentially no growth in constant dollars. Further, a number of major U.S. corporations have announced recently they intend to spend even less on long-term basic research and more on development of short-term, quick-profit products.

In a world where power and prestige are often measured in terms of technological breakthroughs and self-

entific prowess, such trends are in fact disturbing.

For a nation that has always prided itself on its makers—on those jones alarm bells are going off all over. First, Michael Horevsky, a senior policy analyst in the Commerce Department, says the indicators imply that the rate of U.S. innovation is measurably down. It's very disconcerting.

Next, Dr. Alden Mean, director of research for the National Science Foundation, says, "There's no solid evidence to thing has happened to the once mighty office copier and the zipper—they are from a room to research lab.

Some insist it is in rapid decline, choked by an unfavorable economic climate, government regulation and perhaps, by the lethargy and shortsightedness of big business. Others say it has simply taken new forms, becoming more subtle and incremental in nature than grand and revolutionary.

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There is today a pervasive perception that the dynamic vitality of the U.S. economy is faltering. This perception appears to be founded on two concerns: first, that America is not as productive as it used to be; and second, that we are somehow not as inventive either. This is the first of two articles this month which will examine these concerns.

Either way, the country's genius for invention does not appear, at least, to be what it once was.

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major policy review of things to be done to foster innovation in private industry. The study is being coordinated by the Commerce Department and involves more than 15 agencies. A final report, including recommendations for the president, is expected by April.

But many experts say another study is hardly necessary. The worrisome state of innovation in America has been assessed and reported on many times since the first major policy review conducted by Commerce in 1957. In the interim, the problems only have become more obvious.

For one, the economic climate for innovation is poor. The financial incentives that in the past encouraged the rich and the bold to risk their money on slim-chance projects no longer exist, thanks to increases in the capital gains tax and higher rules on stock options. Inflation, too, has put the squeeze on capital investment by existing corporations.

Also, with the winding down of space and defense programs, government support of industrially performance research has diminished. Throughout the 1950s, the government annually supported more than one-

hundred times as much research as it does today. Writing in the July-August issue of the Harvard Business Review, Alfred Rappaport, professor of business at

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