

Business Briefs

Productive Triangle

Europe faces growth era says Italian minister

"This Europe will pull the rest of the world behind itself," Italian Foreign Minister Gianni De Michelis, who co-chairs the European Community for the next six months, told *Corriere della Sera* on Aug. 3.

"I am absolutely convinced that we are facing a really extraordinary era with a degree of economic growth that we have not seen for a long time. I do not hesitate to say that what has begun is a sort of *belle époque* of Europe which will last 15-20 years and more. All the preconditions are there and in this period Europe could grow 4 or even 5% every year. That is double the rate foreseen for the world economy," De Michelis said.

De Michelis stressed that "Germany is going to become the true super-locomotive which will pull the rest of Europe behind itself with advantages for everyone." "Already, the productive base of Europe is enormous," De Michelis added. "Western Europe together with the East and some emerging countries in the Mediterranean area will make up a population of over 1 billion people, which is a market four larger than that of the U.S. This is a geopolitical revolution of truly epochal dimensions."

De Michelis does not exclude "accidents" that may disturb these great changes, but he expressed confidence. "If America falls into a recession . . . we will help the economy of the U.S.A."

Labor

Skilled worker layoffs cause early deaths

The lie that the thousands of scientists, engineers, technicians, and production workers in the aerospace industry losing their jobs will find work in other parts of the "free market" economy, is contradicted by a study by Dr. Robert Eliot, who found these workers increasingly susceptible to disease and early death.

In 1967, Dr. Robert Eliot went to Cape Canaveral Florida as a cardiovascular consultant to the U.S. government. He found that aerospace workers, as young as 29, were dropping dead of heart attacks at an alarming rate. He states in his book, *Is It Worth Dying For?* "The problem was not the firing of rockets but the firing of people." These people, who had worked 16-hour days in critical jobs on a program with a national priority, suddenly found themselves living with the constant anxiety of losing their work and identity as skilled professionals.

From 1965 to 1973, the work force at the Cape was cut from 65,000 to 32,000, and Cape Canaveral was leading the nation in sudden heart attack deaths, drinking, drug-taking, and divorce.

When the space program picked up again in the mid-1970s with the Space Shuttle program, very few of these skilled people returned to the industry.

Health

Infant mortality could be reduced, study says

A cabinet-level study on U.S. infant mortality says that application of known technology and practices, at an annual cost of \$480 million—one-tenth of one percent of U.S. yearly health care expenditures—could save 10,000 of the 40,000 infants who die each year and prevent 100,000 cases of disability, including vision and hearing loss, mental retardation, and similar conditions.

Release of the study, chaired by Health and Human Services Assistant Secretary for Health James Mason is being delayed by the Bush administration, according to the Aug. 6 *New York Times*.

The group recommends 18 specific initiatives, including the expansion of Medicaid to cover 120,000 additional pregnant women and children in low-income families, an increase in spending on prenatal care, and new state mandates for Medicaid benefits for pregnant women. It notes that nearly 9 million American women of childbearing age have no health insurance, and that a quarter of all pregnant

women either begin prenatal care after the first trimester or receive no such care at all.

In the late 1970s, the U.S. Public Health Service declared a goal of reducing infant mortality to 9 per 1,000 live births within a decade, with no racial group having a rate over 12. The national average in 1987 stood at 10.1, with the rate for blacks at 17.9.

The report points to Japan as proof that "with a national commitment and accessible health services it is possible to make substantial improvements in infant health." In 1960, Japan's infant mortality rate was 20% higher than America's. Today, it is the lowest in the world, and about half that of the U.S.

Technology

Image processing to help Hubble aberration

Computer-based image processing techniques can restore about two-thirds to three-quarters of the degradation caused by spherical aberration in the Hubble space telescope, according to Robert Stachnik, chairman of the Space Telescope Image Processing Working Group, in an interview with *21st Century Science & Technology* on Aug. 3. The group was established when the telescope problem was discovered.

Stachnik, a senior staff scientist in the Astrophysics Division of NASA, said this estimate applied to cases where the object was reasonably bright. For the Space Telescope, "reasonably bright" wouldn't necessarily have to be very bright by other standards, he said.

Improvements in image sharpness even much greater than this can also be achieved, but at much greater cost, involving longer exposure times or multiple exposures, and more computer time. Those costs are now being assessed, Stachnik said.

Extensive testing of the Space Telescope's optical assembly has now shown that the primary mirror alone is almost certainly at fault, rather than the secondary or both mirrors, according to the Aug. 3 *New York Times*, confirming the earliest hypothesis. The inquiry headed by Lew Allen has now concluded that the prescription formulated at Perkin-Elmer

for grinding the primary was correct. Attention has now turned to manufacture, where the functioning of the null corrector is considered the most plausible culprit.

Nuclear Waste

New microwave process could reduce volume

A new process using microwaves could reduce the volume and weight of some nuclear waste by 87%, the Colorado engineering firm EG&G Rocky Flats has announced.

The newly patented device uses microwaves, which are high-frequency radio waves, to melt sludge-type waste at temperatures of up to 2,800°F. This vitrifies the waste, and the glass-like product is denser, more leach resistant, easier to handle, and safer to store. The process reduces the moisture content of the waste from 70 to between 10-20%.

Transuranic wastes—waste containing radioactive materials that are heavier than uranium—have a relatively low level of radioactivity but are long lasting and therefore require special handling and storage.

A demonstration project will begin in October using simulated waste. The process also has applications for non-nuclear industries like steel mills, refineries, and electroplating.

Space

Japan and U.S. sign new space accord

The United States and Japan signed agreements for several new space cooperation projects during NASA Administrator Adm. Richard Truly's trip to Japan in late July.

Agreements were signed for new projects including solar-terrestrial experiments to be done from Space Station Freedom, space microgravity experiments onboard Space Shuttle Spacelab missions, observation of the ozone layer through exchange of data being gathered on U.S. and Japanese spacecraft, and data ex-

change on environmental monitoring from space from complementary satellites.

A Japanese astronaut will also be part of a Japanese-Soviet crew which will leave for the Mirspace station on Dec. 2 to join a new Soviet two-man crew, which left Aug. 1, the Soviets are reporting, according to *NASA News*. The crew which left Aug. 1 will replace the cosmonauts who have been on Mir since February.

Economic Theory

Look to Germany, Pfaff tells U.S.

The United States should look for a model for reversing its economic decline to 19th-century Germany, with special emphasis on German scientific progress rooted in Germany's earlier "era of humanistic reform" and on the German commitment to national infrastructure and the creation of a customs union, writes William Pfaff in the Aug. 2 *International Herald Tribune*.

Germany was able to make changes to become a leading industrial power by the time of World War I in 1914. The change, Pfaff says, was "First, railways were built: a factor of fundamental importance. The German states and principalities united." Furthermore, "a customs union was created in 1834."

Pfaff quotes Princeton historian Harold James that "scientific education constituted a direct link between the era of humanistic reform and Germany's impressive economic performance several generations later." Germany's ambitious research programs "led to relative freedom and independence of academic activity, which produced a German scientific supremacy long before, in economics, Germany could even think about catching up with her rivals.

"The ideologically intoxicated faith, shared in Margaret Thatcher's Britain, that private industry will provide the communications infrastructure, trained manpower and long-term scientific research that the nation requires defies all evidence the past provides," Pfaff concludes.

Briefly

● **BULGARIA** is on the verge of facing widespread famine, the *Süd-deutsche Zeitung* reported Aug. 4. Industrial production has fallen by 10.8% since the beginning of the year. A growing number of children are suffering from diseases caused by undernourishment.

● **12 MILLION MEXICAN** children work in the informal sector, Adelor Gómez, head of a private service organization in Mexico City, has testified to the Federal District's house of representatives. He said the system denies children their human rights—to play, to education, and to health. Nationwide, 18.7% of the children who work are 5-9 years old, 63.9% are 10-14, he said.

● **OKLAHOMA OIL** production, at its current rate of decline, will fall to under 100,000 barrels per day by 1991, the lowest rate since 1919. If this rate continues to 1995, Oklahoma—the fifth largest oil-producing state in the U.S.—will be a net importer of petroleum for the first time in its history.

● **LAOS** signed three agreements on Aug. 3 with Japan's Foreign Minister Nakayama, that include assistance to agriculture and development projects, repair of the Nam Nguan Dam, and debt relief, according to the Bangkok paper, *The Nation*.

● **THE BRITISH** Confederation of Industry warned in its latest report that the British economy is "on the brink of recession." CBI warns that 10,000 jobs are being lost monthly, the failure rate of newly starting-up companies is increasing dramatically, and the high interest rate squeeze is "hurting manufacture, the very sector on which we rely for the future."

● **THE PHILIPPINES**, in the wake of an earthquake the third week in July, has asked foreign creditors for a two-and-a-half year suspension of debt payments, according to Philippine press reports.