# CounterPunch

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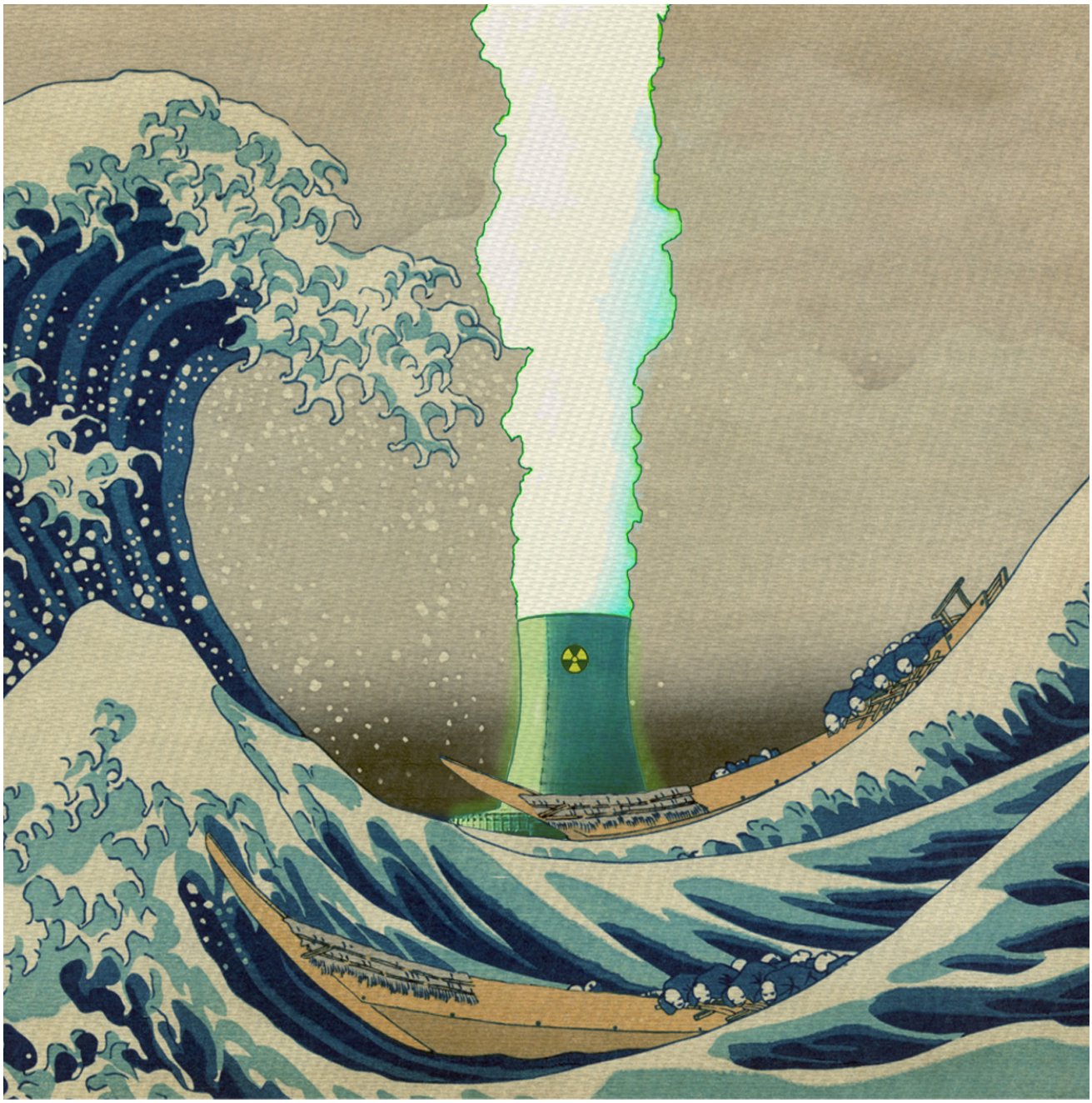

TELLS THE FACTS AND NAMES THE NAMES VOLUME 21 NUMBER 2

# Nuclear Power

## Dead in the Water it Poisoned

By John LaForge

On Feb. 11, 1985, the cover page of *Forbes* thundered, "The failure of the US nuclear power program ranks as the largest managerial disaster in business history, a disaster on a monumental scale..."

Fourteen months later, reactor No. 4 at Chernobyl exploded and burned for 40 days, spreading radioactive fallout across the entire Northern Hemisphere, depositing cesium-137 in Minnesota's milk and Japan's topsoil.

So how is it that Congressional representatives, TV network pundits, FOX ditto heads and even CNN program directors still promote nuclear power?

Part of the answer comes from American University researcher Judy Pasternak and her students. According to Pasternak's 2010 study, the nuclear industry spent $645 million over 10 years lobbying Capitol Hill, and another $63 million in campaign contributions over the same period. Between 1999 and 2008, these millions manufactured the canard that nuclear power is "carbon free," "clean" and can "help fend off climate change." Prior to this spending blitz, the US nuclear power program was, because of the shock of accidents at Three Mile Island in 1979 and Chernobyl in 1986, "pretty well dead in the water" – in the words of economist and author Jeremy Rifkin.

The lobbyists and check writers worked hard spinning the yarn that the richest and most pollution-intensive industrialists on earth were concerned about climate change and wanted to cut carbon emissions – but they didn't convince everybody.

Independent scientists, free of corporate blinders and the market imperative of short term profit, scoff at "green nuke" propaganda. Arjun Makhijani, President of Institute for Environmental and Energy Research, Amory Lovins, cofounder and Chief Scientist of the Rocky Mountain Institute, and Rifkin have all demonstrated how a nuclear "renaissance" – to replace the 400 old reactors now rattling apart worldwide and get to the total of 1,600 that Rifkin says are needed for a minimum impact on climate disruption — would require that we build three new reactors every 30 days for 40 years.

The impossibility of such a reactor-building offensive is evident all around the US.

Reactors at Vermont Yankee, Kewaunee in Wis., and San Onofre in Calif. are all down to dismantlement long before their licenses expire. Last November, TXU, Inc., owners of the Comanche Peak station 40 miles southwest of Fort Worth announced the cancellation of their long-awaited expansion. TXU intended to double its poison footprint and add two new reactors, but as Univ. of Texas engineering professor Ross Baldick told *Dallas Morning News*, "Currently, it's just not competitive with gas. Nuclear's capital costs are so high you can't win on it."

Exelon Corp., the largest commercial reactor operator in the US with 22, announced last June that it would scrap plans to expand production at two sites. The firm said it was cancelling construction at the La Salle station in Illinois and its Limerick site in Pennsylvania. In August, Duke Energy Florida cancelled its two-reactor Levy County project after estimated costs had rocketed 400% about $5 billion each to $24 billion. "It turns out," *Time* magazine reported, "that new [reactors] would be not just extremely expensive but spectacularly expensive." Duke previously suspended plans for new reactors at Shearon Harris, NC.

Switzerland will phase out all five of its reactors by 2034, and Germany will mothball its 17 by 2022. Italy has renewed its pre-Fukushima promise to go nuclear-free, and Taiwan is on the verge of a phase-out announcement. Venezuela and Israel, both of which had reactor plans, have cancelled them.

The "clean nuclear power" corner notably won the backing of a few VIPs, notably James Hanson, formerly of NASA, and *Whole Earth Catalogue* founder Stewart Brand. Less well noted is Amory Lovins' scathing deconstruction of the nuclear chapter of Brand's 2009 book *Whole Earth Discipline*. Lovins sums up "Four Nuclear Myths" this way:

"[E]xpanding nuclear power is uneconomic, is unnecessary, is not undergoing the claimed renaissance in the global marketplace … and, most importantly, *will reduce and retard climate protection*. That's because … new nuclear power is so costly and slow that … it will save about 2-20 times less carbon per dollar, and about 20-40 times less carbon per year, than investing instead in the market winners: efficient use of electricity and what *The Economist* calls 'micro-power,' comprising distributed renewables (renewables with mass-produced units, *i.e.*, those other than big hydro dams), and cogenerating electricity together with useful heat in factories and buildings." [Emphasis in original]

### Plumes of Disinformation

Another part of reactor greenwashing is the powerful influence of mis- and disinformation following the Great East Japan Earthquake, the resulting tsunami, and the catastrophic Fukushima radiation gusher that began March 11, 2011.

In reporting on the contamination of soil, tap water, rain water, groundwater, breast milk, vegetables, fish, baby food, animal feed, beef, and incinerator ash, radiation was and is almost always said to pose little or no "immediate" danger. This minimization is designed to and quite successfully does ease public concern and push Fukushima's ongoing radiocontamination from public consciousness.

Contaminated spinach and milk "do not pose an immediate health threat," NPR's Giles Snyder reported April 19, 2011. The Agence France-Presse reported October 6, 2011, "An ex-

posure of 100 millisieverts per year is considered the lowest level at which any increase in cancer risk is evident." However, as the US Nuclear Regulatory Commission says, "…any increase in dose, no matter how small, results in an incremental increase in risk."

An April 11, 2011 *Forbes* report flatly misstated the US EPA's published public warning about radiation. Noting that a Phoenix, Arizona, drinking water sample contained 3.2 picocuries per liter of radioactive iodine-131 from Fukushima, and that the EPA's maximum contaminant level is 3.0, the writer concluded, "EPA does not consider these levels to pose a health threat." In fact, the EPA officially warns that "there is no level below which we can say an exposure poses no risk."

This pattern of misstatement and official falsehood went to the very top of the food chain. Japan's Chief Cabinet Secretary Yukio Edano famously declared March 11, 2011, "Let me repeat that there is no radiation leak, nor will there be a leak." He later asked the public not to overreact to reports of radioactively contaminated food, saying, according to the BBC, "Even if you eat contaminated vegetables several times, it will not harm your health at all."

President Obama followed suit. Six days into the Fukushima disaster, he said, "We do not expect harmful levels of radiation to reach the United States..." Obama's carefully-worded lullaby was immediately translated by Mike Viqueira of NBC News into, "The president said there was absolutely no danger whatsoever," and the by NBC's news anchor who said there was, "no reason to be concerned on the west coast."

If only a president could stem the tide. Seventeen days later, *Forbes* reported that iodine-131 from Fukushima was found in drinking water in dozens of US cities from California to Massachusetts, from Washington to Alabama. The EPA found either iodine-131 or cesium-137, and even strontium-90, in milk from Washington, Arizona, California, Vermont and Hawaii.

A classic example of the trivialization of radiation risk is a 1989 *New York Times* report on a study of cancers caused by low doses of radiation previously thought to be harmless. Under the headline, "Higher Cancer Risk Found in Low-Level Radiation," the story said, "… [T]he new estimate that radiation is a more potent carcinogen than previously believed should cause no concern for the average person, experts said, because the public is not exposed to enough radiation to exceed levels considered safe." This is perfectly untrue. What should be reported is that the public is not usually exposed to radiation above *permitted* levels because *safe* exposures don't exist. Official government assessments make this clear.

## No Safe Dose

Authoritative warnings by the agencies that regulate radiation exposure are worthy of a detailed listing because of the literal consensus that's been reached *i.e.* There is no safe dose, and as Dr. Arjun Makhijani says, "Only zero exposure results in zero cancer risk."

- The National Council on Radiation Protection (NCPR) says, "…the Council assumes that, for radiation-protection purposes, the risk of stochastic [random] effects is proportional to dose *without threshold*…" (Emphasis added) In other words, "… every increment of radiation exposure produces an incremental increase in the risk of cancer."
- The EPA says, "…any exposure to radiation can be harmful (or can increase the risk of cancer)... In other words, it is assumed that no radiation exposure is completely risk free." Further, "Radiation is a carcinogen. It may also cause other adverse health effects, including genetic defects in the children of exposed parents or mental retardation in the children of mothers exposed during pregnancy."
- The Department of Energy says, "[T]he effects of low levels of radiation are … a very slight increase in cancer risk."
- The Nuclear Regulatory Commission says, "This dose-response model suggests that any increase in dose, no matter how small, results in an incremental increase in risk."
- The National Academy of Sciences in BEIR-VII, its latest book-length report on the biological effects of ionizing radiation, says "… that low-dose radiation acts predominantly as a tumor-initiating agent," and that "… the smallest dose has the potential to cause a small increase in risk to humans." The committee further judges it unlikely that a threshold exists for the induction of cancers…"

As science has come to understand the toxic, carcinogenic, mutagenic and teratogenic properties of even the lowest radiation exposures, the officially permitted dose – not a safe level – has dramatically decreased. In the 1920s, the International Commission on Radiological Protection (ICRP) set the permissible dose for radiation workers in medicine and industry at 75 rem per year. In 1936, the limit was reduced to 50 rem per year, then to 25 in 1948, to 15 in 1954, and to 5 in 1958 – where it remains to this day. (A rem is a measure of the biological damage of a given absorbed dose of radiation.)

Today, the permitted radiation exposure for the public has been reduced to one-20th of what's permitted for nuclear workers, or 0.25 rem per year. However, the ICRP's 1990 recommendation to again reduce worker exposures – this time *by three-fifths* – from 5 to 2 rem/year, has never been adopted by the United States, even after 24 years.

## Worst Ever Radioactive Pollution of Pacific Ocean Hasn't Moved US to test seafood

Radiation exposure and contamination should concern everyone because by all accounts the volume of radioactive materials discharged to the Pacific Ocean by Fukushima is the single greatest radioactive contamination of the sea ever observed. An estimated 27 "peta-becquerels" (27 million billion becquerels) of cesium-137 had already leaked or been deliberately dumped into the Pacific by October 2011. A becquerel represents one atomic disintegration/second.

Last July, Tokyo Electric Power Co., which owns the Fukushima wreckage, acknowledged that an additional 300 tons-a-day of highly contaminated water is leaking into the Pacific from the six-reactor station – and has been since the beginning of the disaster almost three years ago. The American Medical Association – following the revelation of massive ongoing leaks – called on the US government to "monitor and fully report the radioactivity levels of edible species sold in the United States."

Yet at present, US seafood is not regularly tested for cesium contamination, in spite of the large numbers of fish and other foods that have been found contaminated by Fukushima isotopes – including blue fin and albacore tuna caught off the US West Coast, grapefruit from Florida, and prunes, almonds, pistachios and oranges from California.

In this context, a coalition of public health and environmental groups petitioned the FDA in early summer demanding a drastic reduction in the amount of radioactive cesium allowed in food. The petition by members of the Fukushima Fallout Awareness Network (FFAN) declared that the arbitrarily high 1,200 becquerels-per-kilogram (Bq/kg) US limit is "ridiculous." The standard is between 120 times to 24 times weaker than Japan's.

The petition demands that US foods have no more than 5 Bq/kg of cesium-137 and -134, and that all food be tested and labeled with its cesium content. The FFAN reports that the devastated Fukushima reactors continue to leak more than 10 million becquerels of cesium-134 and cesium-137 per hour into the environment, "with no sign of stopping." The network said it was "alarmed" at the lack of testing currently in place to meet the threat of radioactive contamination in food. Because cesium-134 has a hazardous life of about 10-20 years, and cesium-137 has a hazardous life of about 300-600 years, the FFAN said, the threat of food contamination "is a long-term issue that deserves immediate attention."

## "Nuclear can't compete today"

Well before Fukushima's triple meltdowns staggered nuclear's future, Congress and the industry were struggling to ignore its abandonment by important players around the world and public condemnations made by former supporters, and since March 2011 major figures the world over are saying "No nukes."

Speaking in New York City Nov. 27, World Bank President Dr. Jim Yong Kim said, "The World Bank Group does not engage in providing support for nuclear power. … [O]ur focus is on finding ways of working in hydroelectric power, in geo-thermal, in solar, in wind... and we don't do nuclear energy." A week earlier, Kim said governments weren't doing enough to confront climate change, revealing that the WBG well knows that nuclear power is no answer.

World Bank directors may have adopted the recommendation of the US Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, which concluded in 2009 that governments can and should help stop nuclear weapons proliferation by "… discouraging … the use of financial incentives in the promotion of civil nuclear power."

More pointedly, Gregory Jaczko, who was Chairman of the NRC when Japan's Fukushima-Daiichi catastrophe started in 2011, warned in 2012 that "All 104 nuclear power reactors now in operation in the US have a safety problem that cannot be fixed and they should be replaced with newer technology…" When he left the NRC, the *Times* editorialized that "the country is losing a strong advocate for public safety who was always willing to challenge the nuclear industry and its political backers in Congress."

John Rowe, recently retired chairman and CEO of reactor-heavy Exelon Corp., said "unequivocally" in March 2012, "that new ones [reactors] don't make any sense right no... It just isn't economic, and it's not economic within a foreseeable time frame."

Germany's gas and electricity giant RWE Corp. announced in June 2012 that it would exit the nuclear power sector altogether and invest in solar power. As Germany's largest utility, RWE had been one of the most vehement defenders of nuclear power.

Even the president of the Nuclear Energy Institute, Marvin Fertel, told *Scientific American*, "We won't build large numbers of new nuclear in the US in the near term … Today, you ought to build gas." Bill Johnson, CEO of Progress Energy, one of the utilities filing for a reactor construction license but with no plans to actually build, said in in the same issue, "Nuclear can't compete today."

A year earlier, Siemens, the largest engineering conglomerate in Europe, fired a shot heard round the world, declaring that – following Germany's decision to close its reactors by 2022 – it would stop building new ones anywhere in the world. Siemens built all of Germany's 17 units. It was the first industry giant to announce such a departure. "The chapter for us is closed," said chief executive Peter Löscher.

Calling new reactors "too expensive," Jon Wellinghoff, the chairman of the US Federal Energy Regulatory Commission, said in 2009, "We may not need any, ever." Wellinghoff directly countered the industry's oft-heard complaint about meeting "base load" needs, saying that renewables "like wind, solar and biomass would be able to provide enough energy to meet base load capacity and future demand," since the US can reduce energy usage by 50 percent.

According to Jeffrey Immelt, CEO of the ubiquitous reactor engineering firm General Electric and one of nuclear power's staunchest defenders, "If you were a utility CEO and looked at your world today, you would just do gas and wind. ... You would never do nuclear. The economics are overwhelming."

Asked about Duke Power Florida's August decision to cancel new reactor plans, Peter Bradford, a former NRC com-

missioner, told the *Tampa Bay Times* that a nuclear construction boom "was just this artificial gold rush. And yes, it does show the renaissance is dead."

## Wind and Solar Power Sprint, Nuclear Crawls

The US installed 9,922 megawatts of wind power generation in 2009 breaking all previous records. The one-year increase was equal to the building of six large power reactors, or three times the giant 2,700 MW South Texas Project – and all in one/tenth the time it normally takes to build a single new reactor. And wind is now cost-competitive with natural gas for new electric generation. Wind power is being buoyed by an extension of the Investment Tax Credit for renewable energy.

According to the US Energy Information Administration (EIA), a research group within the Energy Department, wind power generation increased by 17.7 million megawatt hours between 2012 and 2013, while nuclear power generation grew my a mere 2.2 million MWh. On the sunny side, roughly $13 billion was invested in solar power projects in 2013, a tenfold increase over 2007.

This renewable clean power production in the US crossed a major milestone in January 2011, exceeding the amount of electricity generated by nuclear reactors, narrowly out-producing nuclear power during the first three months of 2011. One reason that solar power expansion is sprinting ahead of nuclear, is that its cost has plummeted. Duke University researchers found in 2010 that, "Electricity from new solar installations is now cheaper than electricity from proposed new nuclear."

*Workers at Fukushima nuclear plant site. Photo: Japan Times.*

## Gunning the Engines While Weakening accident Cleanup Regulations

Reactor "power uprates" boost the output of operating units beyond what their licenses first allowed by packing in more uranium fuel and running them harder. Uprates usually require replacement of giant pipes, pumps, valves, transformers and generators so the additional heat, pressure and steam can be controlled. Some reactors allowed to gun their engines are over 40 years old.

The NRC's record of approving uprate applications is alarming. Since 1977 the NRC has approved 149 uprate applications and has denied exactly one. Nick DiFrancesco, s project manager at the NRC – where the cookie cutter evidently meets the rubber stamp – told Nukewatch Jan. 7, "We don't' have a lot of denials."

More frightening still is that of the 23 reactors now operating in the US that are Fukushima clones (GE Mark 1 boiling water reactors, long known to be vulnerable to containment

failure during a severe accident). Fifteen of them have been granted power uprates. In fact, seven of the 15 have been granted *a second power uprate*. Sesquehanna's GE Mark II reactors in PA were granted a hair raising three power uprates.

Does your 1971 Caprice run pretty well with the original motor? With the industry and the NRC working overtime to fight or delay post-Fukushima safety improvements, how do you feel about the operators of GE Mark-Ones stomping the accelerator? Are you living within 50 miles of one of these rattle traps?

As the nuclear industry struggles against financial collapse, government regulators seem to have capitulated to political pressure to weaken radiation exposure standards after accidents and thereby save the industry hundreds of billions of dollars. On April 15, the EPA issued new Protective Action Guides (PAGs) for dealing with large-scale radiation releases – like Fukushima. The proposed PAGs represent a preemptive government bailout, because they would save reactor owners the nine-figure costs of currently required decontamination following large radiation releases. Eerily, the new PAGs seem to presume the premeditated inevitability of catastrophic releases that the industry can't afford to withstand. The likelihood of such events was cold-bloodedly conceded by NRC Commissioner James Asselstine who testified to Congress in 1986: "[W]e can expect to see a core meltdown accident within the next 20 years, and it … could result in off-site releases of radiation … as large as or larger than the releases … at Chernobyl."

Now that Fukushima has tripled down on Commissioner Asselstine's radiation roulette wager, real players in big electricity are running for the exits. Unlike Congressional hogs feeding at utility lobbying buffets, or commercial television executives who devour utility advertising checks, Wall Street isn't buying bank-busting liabilities like Fukushima which will cost Japan a minimum of $350 billion and which is relentlessly salting the entire Pacific Ocean with long-lived radioactive materials.

Big investors must smirk at sloganeering about "safe reactor designs" spouted in documentary hoaxes like "Pandora's Promise." They read headlines from Japan and recall the stinging deception purveyed by Lewis Straus of the Atomic Energy Commission who said electricity from reactors would be "too cheap to meter." And they can't forget *Forbes*' 1985 denunciation of nuclear power as industry's "largest managerial disaster."

Only add to *Forbes*' prescient epitaph that nuclear is also history's broadest and most and persistent health and environmental catastrophe.

**Only applied to items produced within the EU. When Japanese agricultural products are imported to the EU, Japan's provisional limits are applied.*

***Codex is a part of the UN Food and Agriculture Organization.* **CP**

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# Left Behind

## The Late, Great, American Middle Class

By David Macaray

*"We the people. They refute last week's television commentary downgrading our optimism and idealism. They are the entrepreneurs, the builders, the pioneers, and a lot of regular folks—the true heroes of our land who make up the most uncommon nation of doers in history. You know they're Americans because their spirit is as big as the universe, and their hearts are bigger than their spirit...America isn't finished; her best days have just begun."*

—Ronald Reagan, State of the Union Address, January 27, 1987

*"Statistical evidence already suggests that the American dream is fading."*

—The *Wall Street Journal*, March 31, 1989

There's been much concern over the decline of the American middle class, but there hasn't been much written about how we define it. What precisely is the "middle class"? How long has it been in existence? Is it an economic category based entirely on one's income, or does it also take into account one's life-style and social status?

In truth, there has never been a satisfactory, all-purpose definition of the term, other than, perhaps, the understanding that the "middle class" lies somewhere between the "working class" and the "upper class." But one can argue that, because there is such a disparity among people who claim to belong to the "middle," even that definition is insufficient.

For instance, can a person earning a modest $25,000 a year, and a person earning $125,000, both belong to the middle class? That spread seems too wide. Yet I heard an attorney, who earns $300,000 a year, tell a television audience that he considered himself to be a "middle class guy." Besides succeeding in making the rest of us feel that much "poorer," his self-assessment was indicative of just how elastic and malleable the term is.

The distinction between "working class" and "upper class" goes back to feudal Europe, where you had the peasantry at