

# Gary Milhollin: Nuclear Warrior

By George Hesselberg

Gary Milhollin is a nuclear warrior in a wrinkled trenchcoat.

He has carried his briefcase to Three Mile Island, where he was an administrative judge on a Nuclear Regulatory Commission panel deciding the future of the nuclear reactor there. He officially concluded management was inept.

His nuclear blasts have reverberated worldwide and have come in the form of carefully researched charges that the spread of nuclear weapons is out of control despite international regulations.

The wrinkled trenchcoat comes from being stuffed in overhead compartments during regular trips between Washington D.C., and Madison, where he has been a professor at the UW-Madison Law School since 1976. He splits his time evenly between the two places. His wife, son and daughter live near Washington.

During the past 18 months, while he has been on leave from the university, Milhollin has been a busy man.

As recently as last month, Milhollin helped persuade the government of Norway to use, for the first time since 1961, its rights to inspect heavy water sold to Israel nearly 30 years ago.

Heavy water, or deuterium oxide, is a rare isotope of hydrogen that can be used to make plutonium for atomic bombs.

The inspection, which a Norwegian Foreign Ministry official said would be requested "very shortly" of the International Atomic Energy Agency, would decide if Israel is following an agreement to use Norwegian heavy water only for peaceful purposes.

If it isn't, "Norway has have every right to demand the heavy water back," says Milhollin.

Milhollin's research also contributed to the international furor following reports in the Sunday Times of London, provided by an Israeli nuclear technician, Mordechai Vanunu, that Israel has already made at least 100 nuclear weapons.

Last fall, Milhollin sent nuclear-industry establishments in China and India into an uproar over his charges in an influential publication that India, possibly using heavy water from China, is evading international nuclear controls to increase its nuclear weapons-building capabilities.

For Milhollin, the topic of the spread of nuclear weapons has become nearly all-consuming in the past 18 months.

His reports and comments have been featured in the respected Foreign Policy quarterly and have made headlines worldwide, from the Times of India to Aftenposten in Norway and Nucleonics Week.

What has gotten Milhollin attention from New Delhi to Oslo, Washington to Paris, is apparently not only what he says but how he backs it up. He has credibility borne of experience, education and research.

"His work is always first-rate," said Doug Waller, who keeps track of nuclear-weapons issues as a legislative aide to US Sen. William Proxmire (D-Wis.).

Milhollin says he is not "another shrill voice at the rallies," nor does he wear his politics on a lapel button. In fact, he says he is neutral on nuclear energy.

He is an Indiana native with a degree in mechanical engineering from Purdue University, so when he talks about nuclear reactors, he has technical expertise.

He has been a visiting professor at the Woodrow Wilson School of Public and International Affairs at Princeton University and since January 1976, has been a professor at UW-Madison, teaching about contracts, conflict of laws and nuclear arms proliferation.

He has worked since 1975 as a consultant to the United States Nuclear Regulatory Commission as administrative judge, one of three members of an Atomic Safety and Licensing Board Panel. One of the people to be convinced a license to start a nuclear reactor is necessary is Milhollin.

"It helps," he says, "if you know a little about technology."

Milhollin, 48, is well traveled, an avid fisherman and tennis player, fluent in French, and worked for a Wall Street law firm for two years—one year in the firm's office in Paris, where he met his wife.

The combination of experience and his current position makes him a reliable source on nuclear-arms proliferation for specialist reporters from the Times, the Washington Post and the Wall Street Journal.

"I wandered into this arena partly by chance," he said between bites of a catfish lunch at the University Club.

"It is a way to use my technical and legal background for publicly useful work," he said.



*Prof. Gary Milhollin (Georgetown, 1965) joined our faculty in 1976, but recently has been "at home," suitcase in hand, around the globe. His research on nuclear law and arms has taken him from country to country and caused him to spend a significant portion of his time in Washington, D.C.*

*George Hesselberg, of the Wisconsin State Journal, caught up with Gary here in Madison, and wrote this article which originally appeared in his newspaper.*

*An "avid" tennis player, Gary is still recovering from a back injury sustained in a match with Dean Thompson.*

His nuclear "awakening" came just after he served as judge for hearings on the restart of the Three Mile Island nuclear reactor, he said.

"I concluded that the contribution of nuclear energy to electricity seemed to be on the decline, but the contribution of nuclear power to weapons seemed to be on the increase. I decided to spend my available time working on the weapons side."

He has concluded that "we have dangerously exaggerated our ability to control nuclear weapons," he said.

Milhollin's strategy has been to get the facts, educate the public, get the attention of all concerned, then demand that something—and he has been specific about what that something is—be done.

His research has propelled him into a bookwriting project, which he hopes to finish in six months, that is part textbook part detective non-fiction.

"It shows how the bomb could be slowed or even stopped, if the developed countries used their diplomatic powers and their power over the nuclear trade," he said, citing the Norwegian inspection example.

As for the detective work, Milhollin turned nuclear gumshoe, using government records and trade publication accounts to track nuclear exports all over the world. That is how he came up with the 20 metric tons of heavy water sold

by Norway to Israel in 1959 (the United States later chipped in with four more metric tons, first revealed by Milhollin) and how he discovered that Norway, in a secret agreement, retained the right of inspection over that material to make sure it was used only for peaceful purposes.

That is also how he came up with the statistics to show that India is somehow in possession of far more heavy water than it had the capacity to make alone, leading to the conclusion that India either diverted nuclear material from international inspection or imported it secretly from China.

These statistics and agreements are important, said Milhollin, because some of the unstable relatives in the world's nuclear family are getting nuclear bombs.

The responses from authorities in

India and Israel have ranged from "baseless" to "absurd." Israel, in fact, still formally denies it has nuclear weapons, a claim which had been contradicted by United States intelligence for 20 years. The responses have also included revelations about India's purchase of (strictly regulated) heavy water from the Soviet Union.

"These responses are frustrating, but they also indicate that the countries are not really afraid of the United States," said Milhollin.

"It is important that our State Department never contradicted me on the facts. They know I'm correct. If I were not, they would quickly say so, just to accommodate India," said Milhollin.

The "institutional memory" of the nuclear export business is weak, he says. No one remembers "who has received

what, under what controls."

"The Norwegian public did not know of the controls (over Israel's use of the imported heavy water), and our State Department didn't know, either, even though making bombs is about as flagrant a violation of the peaceful-use agreement as you are going to find," he said.

Because both Norway and Israel are allies of the United States, this country is in a position to pressure both those countries to follow the rules, said Milhollin.

So what?

"The whole nuclear export system is based on the notion that buyers will follow peaceful-use restrictions. If this case is what we already know it is, then the whole nuclear export business, including those restrictions, is a fraud," he said.

Milhollin points to the contradiction in United States' policy which is, he said, to retain current alliances, do little about proliferation, and accept additional risks.

So, "the United States is spending billions to control its own arsenal while Israel and Pakistan build arsenals over which there is no control at all."

It is not so odd, he said, that the Soviet Union is wearing a white hat when it comes to control over nuclear exports.

"They have been very strict, probably because their commercial interests came along later, and because they were less confident of being able to control other countries through simple promises," said Milhollin.

"We are lucky they have been so strict. Imagine if the Soviets gave to Cuba what the Norwegians and the United States and France gave to Israel."

Milhollin's own support comes from small grants from foundations: the Rockefeller Brothers Fund; the Ploughshares Fund; the W. Alton Jones Foundation; and the Winston Foundation.

For that, he gets an office and the part-time use of a secretary with the Natural Resources Defense Council in Washington D.C. His office is called the Wisconsin Project on Nuclear Arms Control, of which he is the director, staff and membership.

He has been on leave for the past 18 months but is now back teaching.

"I am only one person," he said.

"I am personally trying to make sure this is not swept under the rug. I am doing the original research, I am trying to bring pressure on governments to react. I'm trying to raise money, I'm teaching and I'm trying to finish the book," he said.

He shies away from anti-nuclear weapon causes, groups and rallies, he said.

"I just think nuclear power can be used in a safe way that doesn't include the bomb."

### Israel's A-Bombs and Norway's Heavy Water; The Steps to Revelation

[Heavy water is used in nuclear reactors to make plutonium, a nuclear weapon material]

Date	Norway	Israel
1959	Secretly sends Israel 20 tons of heavy water, enough to run the French-supplied Dimona reactor indefinitely	Secretly pledges peaceful use of the heavy water, and to allow Norway or the International Atomic Energy Agency to inspect it
1961	Makes its only inspection visit; sees the heavy water unused in drums	
1963		Starts Dimona reactor
1967-68		Begins extracting plutonium from Dimona's spent fuel
1976		CIA reports that Israel is making A-bombs with Dimona's plutonium
1979	Stockholm International Peace Research Institute reveals that Norway sent Israel heavy water in 1959	
1986 (Oct)		Former Israeli arms technician publishes photos of thermonuclear bombs made at Dimona
1986 (Nov)	Milhollin's study reveals Norway's inspection and peaceful use rights; shows that Dimona is run with Norway's heavy water	
1987 (Jan) (Feb)	Milhollin's Op-Ed and radio interview appear in Norway	
1987 (Feb)	Norway informally asks Israel for international inspection	Israel claims difficulty in complying
1987 (Sept.)	Norway formally demands international inspection	Israel formally refuses
1987 (Oct)	Norway announces that it will ask to do its own inspection	Israel's response unknown