

# Can We Stop Proliferation?

Ara Barsamian

Nuclear Non-Proliferation Institute; Morris Plains, NJ 07950 USA  
[www.nuclearnonproliferation.org](http://www.nuclearnonproliferation.org)

**“We will eat grass or leaves, even go hungry, but we will get our bomb”**

Zulfikar Ali Bhutto, 1974

## A Bit of History

History is not very encouraging: Stalin and USSR felt threatened enough to invest billions and uncounted gulag lives to go nuclear while its people were still starving after the second World War. Britain followed, impoverished by the war and loss of colonies, but desiring a “place at the table”. De Gaulle transformed a defeated France through a revival of the proud past “La Gloire de France”, fortified by its own “Force de Frappe”. Mao’s China got it through a misguided Soviet assistance and out-maneuvered Khrushchev who thought he can buy Mao’s subordination to follow his “line” criticizing Stalin’s excesses and cult of personality.

Then, there were others:

Israel felt vulnerable to the “Arab Hordes”, India felt vulnerable after defeat by China, South Africa apartheid regime threatened by the black liberation movement, Pakistan reacted to India’s nuclear test of 1974 and the partition war in which it “lost” what’s now Bangladesh, and more recently, North Korea xenophobia driving them to go nuclear.

All of the above countries developed the nuclear weapons infrastructure in secrecy, although they never pretended, when caught, that they were seeking nuclear electric power production.

The case of Iran is different: its justification for Uranium enrichment is generation of electricity, which is legitimate for all signatories of the Nuclear Nonproliferation Treaty if they allow IAEA inspectors to verify on the ground that that is indeed the case. The problem with Iran is refusing to be open and honest about its intentions, while also threatening another country, Israel, to “erase” it from the map.

All the above countries demonstrated that they can spare no effort to develop nuclear weapons, either for prestige reasons, or as a deterrent to a perceived or real enemy. Most of the countries with the exception of the US and South Africa were poor, either having just suffered through the deprivations of the 2<sup>nd</sup> World War, or were 3<sup>rd</sup> world countries with people surviving on a subsistence level. All of them were willing to sacrifice their peoples standards of living or worse to achieve nuclear weapons capability.

It is also crucial to understand that the **key to making a nuclear weapon is the availability of fissile material such as enriched Uranium or Plutonium**, so the effort

should concentrate on preventing the illicit procurement or production means of either of the materials.

The current US administration trivialized this prevention effort by putting on shows, such as the media “circus” with armed guards inside the already heavily armed and protected Oak Ridge Y-12 facility to “protect” the Libyan centrifuge cases or the bomb “blueprints” from being stolen by visiting members of US Congress, members of the cabinet, the US President, or members of the news media corp. A gullible news media played right along.



Photo credit: US DOE/NNSA

The point is that bomb design by itself, which is widely available, or centrifuge design, is not the important thing; a country’s government decision and funding of the industrial infrastructure to actually transform blueprints into fissile material production facility is.

### **Historical Proliferation Vectors**

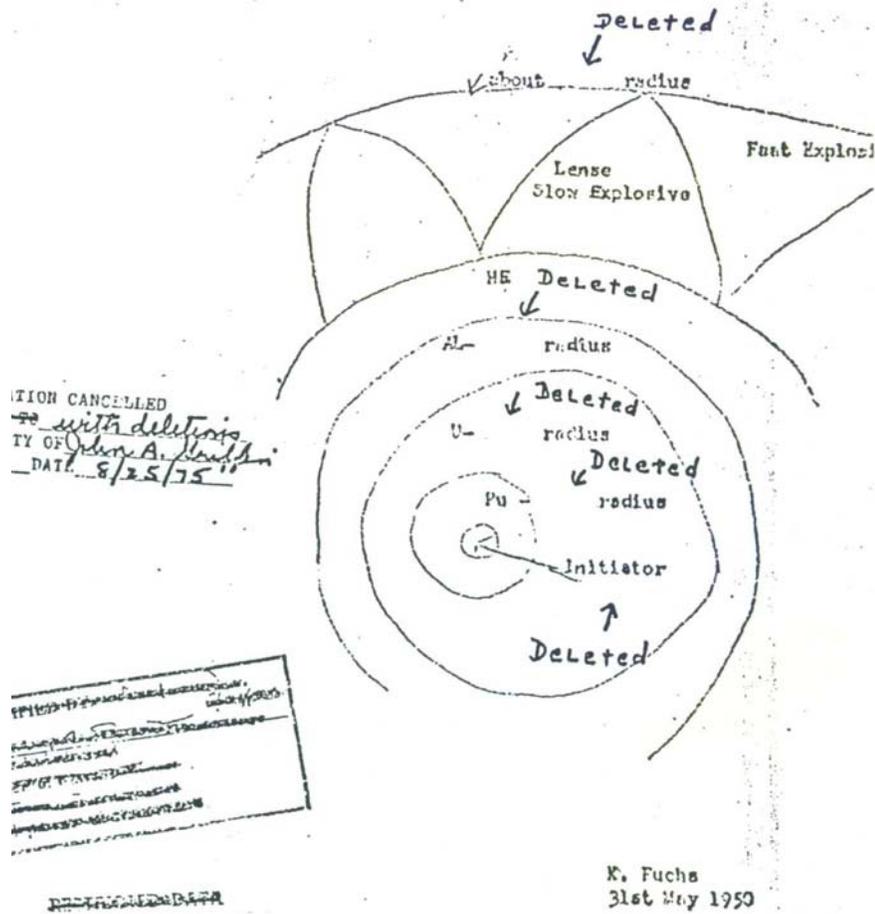
From the birth of the atomic age, the overt proliferation vectors were provided either through espionage, politically blessed assistance, or brazen sales.

Additionally, misguided efforts, such as the Eisenhower administration’s “Atoms For Peace” provided nuclear engineering training to non-Communist countries around the

world, including Iran. The then-USSR did provide training to its satellites, including China and N. Korea.

The vectors below show how most of the proliferation was actually done with the blessing of the major nuclear powers:

- US>>>USSR (via Klaus Fuchs [1], Ted Hall, and espionage network)
- US>>>UK via British Mission to Los Alamos (W. Penney [2], J. Tuck, K. Fuchs)
- France/US >>>Israel (direct assistance)
- Israel>>>South Africa (assistance, Vela event)
- USSR>>>China (direct assistance)
- USSR>>>N. Korea (indirect assistance)
- US>>>China (espionage network)
- China>>>Pakistan (direct assistance)
- The Netherlands>>>Pakistan (espionage network, indirect assistance)
- Pakistan>>>Libya (direct sales)
- Pakistan>>>N. Korea (direct sales)
- Pakistan>>>Iran (direct sales)



Most countries with the possible exception of USSR, China, and France, used open US information (reports, data bases, and computer programs) in their weapons design efforts, up to and including India, Pakistan, and Iran [3].

Now, potential future proliferants are being helped through international “peaceful” projects, such as the Inertial Confinement Fusion (ICF) projects in US, EU, Russia, and Japan, which are providing “state-of-the-art” training to cadres of thousands of “guest” scientists and engineers from around the world in the art of sophisticated “micro” fission and H-bomb design, complete with theory and computer simulation codes [4]. Who are the teachers? The major scientific leaders, who are also members of nuclear weapons labs from the US, Russia, UK, and France, and principal scientists from fusion research institutes in Germany, Spain, Italy, Switzerland, and Japan.

Many countries undertook nuclear weapons development in secret, the most famous ones in Sweden, Switzerland [5], and Spain. Even after signing the NPT, the programs still continued sub-rosa for a number of years until they were terminated.

Countries such as Germany, Italy, Spain, and Japan have both the means, including materials, and the know-how to produce nuclear weapons “overnight”; it is a conscientious decision by these countries governments not to do so. Countries such as South Korea and Taiwan have the know-how and the means to produce fission type nuclear weapons, but they had their “arms twisted” by the US not to do so. Other potential countries are in volatile areas, be it Middle East, or South America.

### **What Can Be Done/What Must Be Done?**

1. First, provide equal opportunity access to nuclear power under IAEA safeguards.
  2. Second, do not play favorites: do not reward countries that defied the Nuclear Nonproliferation Treaty, like India and others, with special “dispensation” to provide access to the Nuclear Suppliers Group. The recent approval of the India-US agreement is a disgrace.
  3. Detect and firmly shutdown proliferation vectors
  4. Third, negotiate, negotiate, negotiate a realistic economic and technical assistance on agreement to comply unconditionally with IAEA safeguards inspections.
  5. Fourth, be willing to use force: either a complete trade boycott, or military action to eliminate the nuclear threat.
- **A trade boycott** is effective if it is complete; currently both US, EU, Russia and China are trading with Iran at the tune of billions a year while “saber-rattling”; that is not a serious posture, and that is why Iran is defying it.
  - **Military action** is a solution of last resort. Since all countries saw what happened with Irak’s Osirak reactor, most chose to disperse, bury underground, and otherwise harden the nuclear sites. A classical surgical air strike with “bunker-buster” bombs will be ineffective[6]. To destroy them using conventional military means requires multiple steps:

- a. Neutralizing air defense sites and long range missile launch sites with EMP magnetoinplosive bombs, and missiles loaded with conventional HE warheads using SatNav/GPS (using “surplus” ICBM/IRBM?)
- b. “boots on the ground” – hundreds of commandos supported by massive air logistics, to insure the destruction of the key underground and other industrial sites – not just centrifuge enrichment plants, but also feed preparations and feed stocks
- c. If conventional eradication effort is unsuccessful, an attack with nuclear weapons could do the job, with tremendous loss of civilian life because of facilities dispersed in urban areas. The nation that does so will become a “pariah” state, isolated from all the other “civilized” countries. Obviously this is a dangerous, last resort alternative, since it can plunge a whole region and the world into prolonged physical, religious, and economic war.

When do you cross the threshold to military action? When facts on the ground threaten the existence of another country, in Iran’s case, threatening Israel. Facts qualifying for action would be, for example, preparations for a “cold tests” of a fission explosive. When do you know when you are there? You better have your spy satellites, airplanes, and spies on the ground not asleep on the job.

#### References

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