Taiwan's "Nuclear Option"?

Security Imperative and Normative Transformation

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Muthiah Alagappa, ed., *The Long Shadow: Nuclear Weapons and Security in 21st Century Asia* (Stanford University Press, 2008)

Main Findings

1. Nuclear weapons play an indirect but important role in national security strategies.
2. The primary role of basic deterrence (preventing large-scale conventional attack and deterring any form of nuclear attack against the homeland of a nuclear weapon state).
3. Asymmetric, diverse, and dynamic deterrence strategies.
4. General deterrence postures (as opposed to immediate deterrence).
5. The continuing relevance of extended deterrence (albeit less central than during the Cold War).
6. Systemic consequences: nuclear weapons reinforce security and stability.
7. Marginal impact on alliances.
8. Not a barrier to peaceful conflict resolution.
9. Forging a “new” nuclear order.

Main Arguments

1. To cope with its unique security challenges, Taiwan has adopted a broad security strategy combining elements of "hard power" with "soft power": (1) self-defense, (2) alliance (explicit or implicit), (3) economic statecraft, and (4) democracy.
2. While Taiwan's economic power and democratic example increase the international community's stake in Taiwan, ultimately its survival depends on its own conventional deterrence capabilities and U.S. commitment.
3. Since Taiwan has forsworn its own nuclear programs and China's objective concerning Taiwan is mainly *political* (unification), nuclear weapons play only an indirect role in Taiwan's defense strategy. Key question is whether the U.S. security commitment to Taiwan (including an implicit nuclear umbrella) remains credible.
4. While under certain conditions it is plausible to speculate Taiwan might reconsider its nuclear or other offensive options, Taiwan's most realistic security strategy remains a prudent blend of strengthening self-defense, maintaining U.S. political and military support, increasing the international community's stake in Taiwan, and avoiding giving China excuses to launch an unprovoked attack.

Frayed Nuclear Umbrella?

- The logics of “abandonment” and “entrapment” (Glenn Snyder) – favor weak or ambiguous commitment
- Taiwan was protected by the United States’ nuclear umbrella (extended deterrence) during the Cold War.

  -Became an issue when the U.S. under Nixon decided to normalize relations with China in the 1970’s

  -China isolated Taiwan from the international community so Taiwan had no recourse to global and regional security organizations such as the UN and ASEAN
- Taiwan was an “orphan” (Michael Mandelbaum)

  -Aligned with the United States during the Cold War

  The United States feared entrapment while Taiwan feared abandonment

  -Unlike the formal alliances the US has with both Japan and South Korea

  -After the United States established relations with China it had to reassess their relationship with Taiwan

  -Congress enacted the TRA (Taiwan Relations Act)

  -Policy of **strategic ambiguity** in that it does not guarantee that the United States will come to the aid of Taiwan but it does not rule it out, either (double deterrence)

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To Go Nuclear or Not to Go Nuclear?
Security, Power, and Identity

- Why do states seek nuclear weapons?
  - Coping with acute threat
  - Prestige and political clout
  - Technology and economic benefits
- Scott Sagan's three models of states's nuclear decisions
  - The "security model": states build nuclear weapons to increase national security against external threats, especially nuclear threats
  - The "domestic politics model": nuclear weapons are viewed as political tools to advance parochial domestic and bureaucratic interests
  - The "norms model": nuclear weapon decisions are made because weapons acquisition, or restraint in weapons development, provides an important normative symbol of a state's modernity and identity.
- Taiwan's nuclear strategy has depended upon the United States' foreign policy, which is influenced by the United States' national interest.
  - Extended deterrence (preserve alliance solidarity and US reputation)
  - Non-proliferation and arms control (enhance global security and norm development)
  - Commercial gain (quid pro quo of NPT)

Table 1: Timeline of Taiwan's Nuclear Program During the Cold War

1955	Atomic Energy Commission (AEC) founded to promote peaceful use of nuclear energy. Taipower created Atomic Power Research Commission. National Tsinghua University (NTHU) reopened in Hsinchu, with a Graduate Institute of Atomic Science.
1956	Taiwan opened its first nuclear reactor, provided by the U.S., at NTHU.
1964	China successfully tested nuclear weapons, stimulating Taiwan to develop a full-scale nuclear program.
1965	The predecessor of the military-run Chungshan Institute of Science and Technology (CSIST) was established. The proposed First Institute would become the Institute for Nuclear Energy Research (INER).
1967	The $140 million **Hsin Chu Project** was launched, consisting of primarily procuring and operating a heavy-water reactor, a heavy-water production plant, a reprocessing research lab, and a plutonium separation plant.
1968	ROC joined the Non-Proliferation Treaty (NPT). Supervision of INER was moved to AEC
1969	INER purchased a small heavy-water reactor (40-megawatt), dubbed Taiwan Research Reactor (TRR), from Canada, which became operational in 1973. INER served mainly to facilitate Taiwan's procurement of elements to produce plutonium.
1971	IAEA negotiation of safeguard agreement short-circuited by UN's transfer of recognition. Eventually, agreement reached so the US became the ultimate legal guarantor of Taiwan's non-nuclear status.

Table 1 (cont'd)

1974	CIA concluded that Taiwan was working toward a nuclear weapons capability and would be capable of producing a nuclear weapon within five years.
1976	Premier Chiang Ching-kuo promised Taiwan would not acquire its own reprocessing facilities or engage in any activities related to reprocessing.
1977	U.S. pressured Taiwan to dismantle reprocessing facilities and return US-supplied plutonium. Taiwan's nuclear program was brought under control, but concerns remained.
1978	President Jimmy Carter normalized relations with the PRC. Taipower's first nuclear reactor began producing electricity. Over the years, electricity generated by Taipower's six reactors, all U.S.-made, rose to 20% of Taiwan's electricity needs. The fourth nuclear plant, with two more modern reactors, is scheduled to operate in 2006-7 (with the delay in 2000, it was not finished as of March 2008).
1987	INER began building a multiple hot cell facility.
1988	Col. Chang Hsien-yi, Deputy Director of INER and a CIA spy, defected and revealed Taiwan's plans. CIA estimated Taiwan was within one or two years of developing a nuclear bomb. President Chiang Ching-kuo died. U.S. government agencies and IAEA inspectors shut down TRR and the hot cell. President Lee Teng-hui promised President Ronald Taiwan would agree to end conclusively and verifiably its nuclear weapons program.

Lessons from the Cold War Era

- Taiwan's nuclear weapon aspirations were driven by an acute sense of insecurity.
- The attitudes and actions of the United States – driven by its national interests – was a key enabling or constraining factor in Taiwan's tortuous nuclear weapons development program.
  - The Chang Hsien-yi Incident: traitor or disaster averted?
  - Near-nuclear capability?
- Taiwan's deep dependence on the U.S. security commitment gave the U.S. exceptional leverage over Taiwan's nuclear aspirations
  - Managing with a mixed strategy of preventing nuclear proliferation, maintaining near-nuclear capability, and sharing the fruits of peaceful use of nuclear energy.

Taiwan's Current Nuclear Orientation

- Taiwan today does not have a nuclear weapons development program. However, it has a fairly sophisticated civil nuclear power industry. Nuclear renaissance.
- Official government policy:
  - Four Nos: Will not develop, produce, store, or use nuclear weapons; or "Five Nos" (acquisition)
  - DPP antinuclear policy: delayed the 4th nuclear power plant and promoted "nuclear-free homeland"
- Taiwan is regarded as an "abstaining country" or "virtual nuclear power": It has the technical capacity but has made a political decision not to develop nuclear weapons.
- Why has Taiwan chosen **nuclear restraint** notwithstanding the severe existential threat it faces and uncertain U.S. security commitment?
  - Multi-faceted security strategy: conventional deterrence, soft power, and "nuclear option"
  - Utilitarian considerations
  - Normative transformation

Table 2: Factors Influencing Taiwan's Nuclear Decision

	Desirability (demand-side)	**Feasibility (supply-side)**
Enabling Factors	• to offset acute power asymmetry between China and Taiwan (quick "equalizer") • to ensure survival (existential deterrence) • last-ditch effort after being abandoned by the patron state	• Military nuclear technical expertise can be reconstituted? • Civilian nuclear technical expertise • Progress made in missile technology
Inhibiting Factors	• Opposition from the patron state (even a pretext for abandonment?) • Opposition from within Taiwan's democratic society • PRC's possible preemptive strike	• Military nuclear expertise degraded • Difficulty in material acquisition • Lack of test sites • Secrecy can't be assured

Taiwan Unlikely To Restart Program

- *Taiwan is unlikely to restart program for several reasons:
- United States' growing intolerance of other states' recent development of nuclear weaponry (i.e. Iran, Iraq and North Korea)
- Taiwan could jump start their own program if the United States begins to see China as a threat
- China could see the development of weapons as hostile towards them and in turn go on the offensive
- The cost outweighs the benefit. Hence, a "virtual" nuclear option.
- *DPP (Democratic Progressive Party) of Taiwan has a "five noes" policy towards Weapons of Mass Destruction:
- Will not develop, produce, store, use or acquire WMD
- Occasional "noises" on offensive weapons
- There is also the issue of identity in Taiwan that influences threat perceptions and security policies
  - Pan Blue vs. Pan Green
  - But as long as US security commitment is credible, this issue is moot, as Taiwan can forego the costly nuclear option.

Reasons that *Could* Allow for Re-opening

- Extraordinary scenario Taiwan might go nuclear:
  - There is a serious problem in the credibility of America's tacit extended deterrence commitment;
  - The U.S. is perceived as ready to abandon Taiwan in the face of Chinese assertiveness
  - The China-Taiwan balance has become so lopsided in China's favor that only nuclear weapons could restore it to some sort of balance.
- The impact on regional security is likely to be largely negative.
- The Nuclear Posture Review (2002) lists Taiwan contingency.
- Question of feasibility and desirability (enabling and inhibiting factors):

- Some argue that they have the capability of jump starting their program again because of their experiences and success in the past. However, others see it a a huge financial undertaking and cites technical difficulties.
- While some think that rearmament is a good idea, others do not out of fear of possible loss of protection of the United States

- So Taiwan has opted a combination of political and military strategies to shore up its security.
  - Politically manage relations with the U.S., China, and other friends such as Japan.
  - Militarily maintain air superiority and keep mum on the nuclear option.

Table 3: Status of Weapons of Mass Destruction

China vs. Taiwan, 2004

Indicator	China	Taiwan
Nuclear weapons status	Confirmed	None
Chemical weapons status	Probable	Suspected
Biological weapons status	Suspected	Suspected
Short-range ballistic missile status	Confirmed[a]	Confirmed[g]
Medium-range ballistic missile status	Confirmed[b]	None
Intermediate-range ballistic missile status	None	None
Submarine-launched ballistic missile status	Confirmed[c]	None
Intercontinental ballistic missile status	Confirmed[d]	None
Strategic bomber status	None	None
Strategic submarine status	Confirmed[e]	None
WMD commitments	BTWC, CWC, NPT[f]	NPT[h]

Table 4: Defense Spending and Economy (1990-2005)

	China			Taiwan		
	GDP ($ billions, PPP)	Defense expenditure ($ billions)	Defense expenditure (% of GDP)	GDP ($ billions, PPP)	Defense expenditure ($ billions)	Defense expenditure (% of GDP)
1990	413	11.3	3.1	151	8.7	5.4
1995	3,500	33.0	5.9	291	13.1	5.0
2000	4,500	42.0	3.9	386	17.6	5.6
2005	8,182	81.5	4.3	612	7.9	2.4

Conclusion

- Given the current security situation in East Asia, Taiwan has to walk a tight-rope with its security strategy. Comprehensive security strategy combining hard and soft power.
  - Strengthening its own defense, making the cost of Chinese attack unacceptably high.
  - Increasing the stake for the international community in Taiwan's economy and democracy.
  - Maintaining U.S. political and military support.
  - Refraining giving China any excuse to launch an unprovoked attack.
- Maintaining near-nuclear capability.
- Taiwan's case informs the continued (but evolutionary) role of nuclear weapons in state security and alliance management.