# AIR WAR COLLEGE AIR UNIVERSITY

# EVOLUTION OF CHINA'S NUCLEAR CAPABILITY IMPLICATIONS FOR U.S. POLICY

BY

James A. Sands Lt Col, USAF

# A PAPER SUBMITTED TO THE FACULTY IN FULFILLMENT OF THE CURRICULUM REQUIREMENT

Advisor: Admiral Pendley

MAXWELL AIR FORCE BASE, ALABAMA

14 April 95

#### **DISCLAIMER**

This study represents the views of the author and does not necessarily reflect the official opinion of the Air war College or the department of the Air Force. In accordance with Air force Regulation 110-8, it is not copyrighted, but is the property of the United States government.

Loan copies of this document may be obtained through the interlibrary loan desk of Air University Library, Maxwell Air Force Base, Alabama 36112-5564 (telephone 334-953-7223 or DSN 493-7233).

#### **ABSTRACT**

TITLE: Evolution of China's Nuclear Capability - Implications for U.S. Policy

AUTHOR: James A. Sands, Lieutenant Colonel, USAF

The strategic arms control process to reduce nuclear weapons and contain the proliferation of weapons of mass destruction is a center piece of the United States arms control policy. To be effective in arms control negotiations with the Chinese, the United States must understand China's past experience and perspectives regarding nuclear weapons. What drove the Chinese to develop nuclear weapons? What kind of force structure was required? How many? How would they deploy and employ these weapons? This paper will address these questions and argue the United States is negotiating arms control policies with the Chinese without a clear understanding of the Chinese perspectives, interests, and concerns.

### **BIOGRAPHICAL SKETCH**

Lieutenant Colonel James A. Sands is a missileer who has been working nuclear weapon and arms control issues throughout his career. He has served at the unit level as a missile crew commander, action officer at both MAJCOM headquarters and the Joint Staff and most recently at the Defense Nuclear Agency working nuclear research and development issues. Colonel Sands is a graduate of the Armed Forces Staff College and is currently attending the Air War College.

## TABLE OF CONTENTS

	DISCLAIMER	ii
	ABSTRACT	iii
	BIOGRAPHICAL SKETCH	iv
Chapter		
I.	INTRODUCTION	1
II.	RATIONALE FOR NUCLEAR DEVELOPMENT	4
III.	CURRENT FORCE LEVELS	8
IV.	NUCLEAR STRATEGY	12
V.	MODERNIZATION EFFORTS	17
VI.	ARMS CONTROL IMPLICATIONS	21
VII.	CONCLUSIONS	28
	BIBLIOGRAPHY	32

#### CHAPTER I

#### INTRODUCTION

With the end of the Cold War, the United States's foreign policy dramatically changed from a bi-polar to a multi-polar focus. The emphasis towards spending huge amounts of money on the military is decreasing and being replaced by economic, trade, and human rights concerns. There is, however, still great concern about nuclear weapons and their proliferation, the reduction of such weapons, and the United States's policies toward other nuclear weapons states. President Clinton, in his National Security Strategy of Engagement and Enlargement policy, emphasizes that the strategic arms control process, with its prescribed reductions in strategic offensive arms and steady shift toward less destabilizing systems, remains indispensable. The President goes on to say that:

Arms control can help reduce incentives to initiate attack; enhance predictability regarding the size and structure of forces, thus reducing fear of aggressive intent; reduce the size of national defense industry establishments and thus permit the growth of more vital, nonmilitary industries; ensure confidence in compliance through effective monitoring and verification; and, ultimately, contribute to a more stable and calculable balance of power.<sup>2</sup>

This process has been effective with the United States committed to the ratification and entry into force of both the SALT I and II treaties with the former Soviet Union. Contrary to this optimism with the former Soviet Union is the concern over China and their lack of involvement in the reduction of their nuclear arsenal.

<sup>&</sup>lt;sup>1</sup>A National Security Strategy of Engagement and Enlargement, The White House, July 1994, cited hereafter as NSSEE, page 12.

<sup>&</sup>lt;sup>2</sup>NSSEE page 12.

China's position on its own strategic arms reductions has been far more cautious and has reflected China's ambition to become a major power equal to at least Russia.<sup>3</sup> This caution is reflected in the Chinese response to the reciprocal unilateral strategic arms cuts announced by Moscow and Washington in 1991 and 1992 where China reiterated its approval of the goal of a "complete prohibition and thorough destruction" of such arms, but has now declared that only when Russia and the United States "cut their nuclear arsenal to China's level" would China join the process of nuclear disarmament.<sup>4</sup>

China has the third largest nuclear arsenal consisting of triad of nuclear forces: land based missiles, bombers, and submarine launched missiles. It is estimated, based primarily on the number of deployed launchers, that China has an arsenal of about 300 deployed nuclear weapons.<sup>5</sup> Why should the United States be concerned with a country which only has approximately 300 nuclear weapons? Author J. Mohan Malik provides insights by stating:

Geostrategically, China is Asia's largest mainland state. It dominates the Pacific Ocean and shares common land and maritime borders, most of them disputed and unsettled, with many states in the North-East, in South-East and in South Asia. It is the third largest nuclear weapon state in the world, not aligned with any super power, enjoys an overwhelming military superiority in terms of men under arms and military hardware, and has a reputation of resorting to force to seize what it claims to be its own.<sup>6</sup>

<sup>&</sup>lt;sup>3</sup>Harvey R. John, "Missiles and Advance Strike Aircraft - Comparing Military Effectiveness" (International Security, Fall 1992) cited hereafter as Harvey, page 78.

<sup>&</sup>lt;sup>4</sup>Harvey, page 78.

<sup>&</sup>lt;sup>5</sup>Nuclear Weapons Databook: Volume V - British, French, and Chinese Nuclear Weapons. (Westview Press, Inc. 1994) cited hereafter as NWD, page 358.

<sup>&</sup>lt;sup>6</sup>Malik, Mohan J. "Patterns of Conflict and the Security Environment in the Asia-Pacific Region: The Post Cold War Era" Asian Defence Policies, (Deakin Press, 1994) page 316.

Specifically, the fact that China is a nuclear power and is not aligned with any other great power impacts significantly on the United States's ability to conduct foreign relations in Asia. In order to effectively negotiate arms control issues with China, the United States should have a thorough understanding of the Chinese perceptions and history regarding nuclear weapons and their utility. Why did the Chinese develop nuclear weapons? How did they obtain them? How many do they believe they need? How do they deploy them? The answers to these types of questions are imperative for effective arms control negotiations with the Chinese. Accordingly, this paper will trace the evolution of China's nuclear weapons capability by addressing the rationalization for nuclear weapons, discuss China's nuclear forces, review their nuclear strategy, and conclude with implications for the arms control process with the United States.

#### CHAPTER II

#### RATIONALE FOR NUCLEAR DEVELOPMENT

To understand Chinese perspectives on nuclear weapons, one must first understand the Chinese rationale for developing such weapons. China has a long legacy of being occupied by foreign forces. The origins of China's nuclear weapons program can be traced to the founding of the People's Republic of China (PRC) itself and to the determination of the "new" China's leadership, especially that of Mao Zedong, that China should be a major world power, sovereign and independent, well-armed and a leader of the Communist world. China's status as a land power, its bitter experience of foreign intervention, and its traditional self-image of being at the center of the universe dictate that the Chinese defense establishment would focus on physical survival and national autonomy. As a result, the Chinese have always viewed the United States with great suspicion starting with its support for Chiang Kai-Shek and the Nationalists. A Communist Central Committee document drafted by Mao Zedong, 8 January 1949 entitled "The Current Situation of our Tasks in 1949" highlighted China's concern over United States involvement in supporting Chiang Kai-Shek:

Assessing the military situation, Mao asserted that Chiang's rule was doomed unless the United States rescued him. He then warned of the possibility that "the United States would send armed forces to occupy some of China's coastal cities and directly fight against us" and that it "might throw in its own forces to blockade China's ports."

<sup>&</sup>lt;sup>7</sup>NWD, page 327.

<sup>&</sup>lt;sup>8</sup>Zhang, Shu Guang, Deterrence and Strategic Culture, (Cornell University Press) 1992. cited hereafter as Zhang, page 273.

<sup>&</sup>lt;sup>9</sup>Zhang, page 19.

This perception was reinforced by the fact that the United States considered using, and arguably threatening the use of, nuclear weapons against China on several occasions during and after the Korean war and even deployed nuclear-armed B-29 bombers to Guam in 1951 for possible use against targets in China. In 1954-55, China again faced a crisis involving United States hints of nuclear weapon use, this time over the off shore islands held by Taiwan, thus reinforcing the lesson that nuclear weapons were useful when great powers maneuvered during times of crisis. Because of this "interference" by the United States, China felt the necessity for their own nuclear capability. China became a nuclear power because this status was viewed as the best way to guarantee national independence and also to stop the "nuclear bullying" by the United States. Mao went on to make it perfectly clear at an enlarged politburo meeting in April of 1956 when he said, "In today's world if you don't want to be bullied by others, we should have the atomic bomb by all means." Consequently, China felt the only way it could be truly independent of possible coercion was to develop a nuclear capability. Since the mid-1950s, China has made strong efforts within it's limited economic and technical capabilities to develop a modest nuclear force with specific objectives:

- help deter superpower or possibly other aggression and intimidation
- secure a strategic retaliatory capability in case of a nuclear war involving China
- demonstrate China's international power and reinforce Chinese national pride. 14

<sup>&</sup>lt;sup>10</sup>NWD, page 326.

<sup>&</sup>lt;sup>11</sup>Karp, Cowen. "Security with Nuclear Weapons? Different Perspectives on National Security" (Oxford University Press 1991) cited hereafter as Karp, page 191.

<sup>&</sup>lt;sup>12</sup>Karp, page 193.

<sup>&</sup>lt;sup>13</sup>Zhang, page 281.

<sup>&</sup>lt;sup>14</sup>Library of Congress. Congressional Research Service. "Chinese Nuclear Weapons and Arms Control Policies: Implications and Options for the United States" (Washington, 1994) cited hereafter as CRS 94, page 3.

In addition, the "nuclear card" was also seen as a useful tool during a crisis, if only to dissuade the United States from attempting to threaten China.<sup>15</sup>

Despite much talk of self-reliance, China undertook its nuclear weapons program with tremendous assistance from the former Soviet Union.<sup>16</sup> The Soviet Union basically designed and built the fledgling nuclear industry in China until 1960, when they abruptly ceased all nuclear cooperation and the two nations engaged in what the U.S. Central Intelligence Agency (CIA) called "their own cold war".<sup>17</sup>

After their relationship with the former Soviet Union soured, the Chinese continued their nuclear development program albeit at a much slower pace. Even so, considering the vast problems that China faced, the speed with which China implemented its program exemplifies the commitment of the leadership and the skill of Chinese scientists and workers.<sup>18</sup> The Chinese started their nuclear program in 1956 and conducted their first nuclear test in October of 1964.<sup>19</sup>

<sup>&</sup>lt;sup>15</sup>Karp, page 193.

<sup>&</sup>lt;sup>16</sup>Nuclear Weapons Databook, Volume V, page 327.

<sup>&</sup>lt;sup>17</sup>NWD, page 327.

<sup>&</sup>lt;sup>18</sup>Karp, page 193.

<sup>&</sup>lt;sup>19</sup>NWD, page 324.

#### **CHAPTER III**

#### **CURRENT FORCE LEVELS**

Estimates of the size and organization of Chinese nuclear forces vary, but available data and interviews with U.S. specialists suggest a Chinese arsenal having around 200-300 nuclear weapons, including fission weapons ranging from 20-40 kilotons in yields, and thermonuclear weapons ranging from 1-5 megatons in yield.<sup>20</sup> Delivery vehicles include land-based missiles, conventional bombers, and submarine-based ballistic missiles deployed on two nuclear powered submarines.<sup>21</sup>

The land based missile program genesis was in 1963 at the direction of a fifteen-member special commission to prepare a complete family of four different nuclear missiles, from short to intercontinental range.<sup>22</sup> The "Dong Feng" family, as it was called, envisioned four missiles having different ranges corresponding to different theoretical American targets: Japan for the DF-2, the Philippines for the DF-3, Guam for the DF-4, and the continental United States for the DF-5.<sup>23</sup> The DF-5, which is of most interest to the United States because it can reach the United States, is a liquid fuel, two-stage rocket with a range over 7500 miles.<sup>24</sup> It carries a warhead of 4-5 megatons in yield and is estimated that there are about ten of these missiles ready for use in the Chinese inventory.<sup>25</sup>

<sup>&</sup>lt;sup>20</sup>CRS 94, page 7.

<sup>&</sup>lt;sup>21</sup>CRS 94, page 7.

<sup>&</sup>lt;sup>22</sup>NWD, page 360.

<sup>&</sup>lt;sup>23</sup>John Lewis and Xue Litai, "China Builds the Bomb" (Stanford University Press, 1988) page 212.

<sup>&</sup>lt;sup>24</sup>CRS 94, page 12.

<sup>&</sup>lt;sup>25</sup>CRS 94, page 12.

The land based missile force is organized under the Second Artillery Corps, which according to CIA, is also known as the Chinese Strategic Rocket Force, the equivalent to the former Soviet Strategic Rocket Forces.<sup>26</sup> The Second Artillery Corps does not appear to be just another service, but rather a special organization under central control and heavily influenced by the Chinese public security apparatus and the scientific and technical communities.<sup>27</sup> It is thought that the missile forces are organized regionally according to type of missile into divisions that consist of regiments and their subordinate launch units (perhaps squadrons or flights).<sup>28</sup>

The development of the bomber for nuclear deployment has required considerable technical support from other countries. A specially modified Tu-16 bomber (designated "Badger" by NATO), of Soviet design and origin, was used for the first thermonuclear bomb test in 1968, and bombers have been used in at least 13 of 16 atmospheric nuclear tests.<sup>29</sup> China built its nuclear bomber force around two principal aircraft: the Tu-16 intermediate-range bomber (Badger) and the II-28 medium light bomber (Beagle) both transferred from the Soviet Union and subsequently produced by China.<sup>30</sup> While bombers were the earliest means of delivering Chinese nuclear weapons, they have not been accorded the same importance as the missile forces, presumably because of their range limitations and their increased vulnerability when flying through enemy defenses, specifically the former Soviet Union.<sup>31</sup> However, their capability and value as seen by other actors in the region are important to recognize as China continues to conduct foreign policy in regional affairs.

<sup>&</sup>lt;sup>26</sup>NWD, page 373.

<sup>&</sup>lt;sup>27</sup>Segal, Gerald Defending China, (Oxford University Press 1985), page 75.

<sup>&</sup>lt;sup>28</sup>NWD, page 373.

<sup>&</sup>lt;sup>29</sup>NWD, page 365.

<sup>&</sup>lt;sup>30</sup>NWD, page 365.

<sup>&</sup>lt;sup>31</sup>NWD, page 365.

The Chinese are continuing to develop their limited submarine capability. As with their other nuclear systems, the Chinese got started with help from the former Soviet Union. The Chinese began their quest for a sea based capability by reverse engineering the R-11FM, a sea-based version of the Scud A, in June of 1960.<sup>32</sup> It would take another twenty-five years, with great difficulty, before China deployed its first nuclear-powered ballistic missile submarine and submarine launched ballistic missiles.<sup>33</sup> This was due in large part to problems the Chinese encountered in developing a safe and reliable nuclear power reactor.<sup>34</sup> With regard to actual force structure it is expected that the Chinese will most likely build four to six small SSBNs.<sup>35</sup> Currently they have built two Xia-class nuclear powered submarines with 12 ballistic missile tubes.<sup>36</sup> It is believed that China's SLBM uses a solid-fuel, two stage rocket and has a range in excess of 1100 miles.<sup>37</sup>

<sup>&</sup>lt;sup>32</sup>NWD, page 368.

<sup>&</sup>lt;sup>33</sup>NWD, page 369.

<sup>&</sup>lt;sup>34</sup>NWD, page 369.

<sup>&</sup>lt;sup>35</sup>NWD, page 373

<sup>&</sup>lt;sup>36</sup>CRS 94, page 13.

<sup>&</sup>lt;sup>37</sup>CRS 94, page 13.

#### **CHAPTER IV**

#### **NUCLEAR STRATEGY**

China's over arching security strategy in the 21st century is to develop such a power base that China will never again suffer the degradation's it experienced in what China refers to as the "Century of Humiliation." <sup>38</sup> Beijing's political and military elite's see the period between the first Opium war and the Communist victory over the Kuomintang in 1949 as the time when China lost control of it's own destiny to the imperial powers of Britain, Japan, France, Germany, Russia, and the United States. <sup>39</sup> This history has passed on to China's political and military elite a strategic view that enshrines freedom from fear of domination by hostile powers as the core of national security strategy. <sup>40</sup> A major way to implement this strategy is to have a military capability both conventional and, more importantly, nuclear which will afford the Chinese a position in the world order where they will not be manipulated and/or coerced. China's nuclear strategy has never been as explicitly stated as those of some other countries. But it is believed that China has the following five objectives for their nuclear strategy: (1) Secure superpower status; (2) Preclude the possibility of intrusive diplomacy through nuclear coercion; (3) Deter other nuclear regimes (such as breakaway states from the former Soviet Union); (4) Retain a

<sup>&</sup>lt;sup>38</sup>Godwin Paul H.B., Schulz, John J., "China and Arms Control: Transition in East Asia." Arms Control Today, (Volume 24, Number 9. November 94) cited hereafter as Godwin page 7.

<sup>&</sup>lt;sup>39</sup>Godwin, page 7.

<sup>&</sup>lt;sup>40</sup>Godwin, page 7.

trump card for the eventuality that Japan may rescind her current pacifist policies for a military option and (5) maintain political and moral ascendancy over its regional rivals (such as India).<sup>41</sup>

The small number of nuclear weapons in the Chinese military limits their ability to have a counter-force strategy. Consequently, the Chinese have adopted a strategy of minimum deterrence. Paul Godwin and John J. Schulz in their "Arms Control Today" article point out that:

China's overall deterrence strategy is designed to preclude nuclear blackmail. The idea is to create a countervalue (city-busting) deterrent of sufficient size and range to guarantee that no enemy planner could use nuclear force, or threaten to use it, without the certain knowledge of Chinese retaliation at a level sufficient to make the costs too high.<sup>42</sup>

Recognizing that their nuclear forces cannot compete with the superpowers in either numerical or technological terms (e.g. accuracy), China must rely on raising the costs to a nuclear aggressor by insuring their force has a survivable retaliatory capability. This deterrent strategy requires the Chinese give the perception, real or unreal, to potential nuclear aggressors that they have the will to use nuclear force, their forces are survival, and there is a command and control apparatus in place for rapid retaliatory execution. This nuclear deterrent is advertised, but the operational employment of these nuclear forces is not. This is an important principle that deserves to be emphasized: deterrence strategies need to be advertised, whereas strategy for use (or operational strategy) under people's war requirements depends on withholding intelligence as to one's true intentions and places a high value on deception.<sup>43</sup>

<sup>&</sup>lt;sup>41</sup>Nair V.K., "Defence Forces and Nuclear Weapons in china's Foreign Policy" China Report 28:3 (1992) pages 222.

<sup>&</sup>lt;sup>42</sup>Godwin, Paul, and Schulz, John J. "Arming the Dragon for the 21st Century: China's Defense Modernization Program" Arms Control Today, (December 1993) page 6.

<sup>&</sup>lt;sup>43</sup>Dellios Rosita, "Modern Chinese Defence Strategy, Present Developments, Future Directions" (St Martins Press 1990) page 92.

In an effort to improve the credibility and a survivable retaliatory capability of their nuclear arsenal, the Chinese emphasize mobility and pre -launch survivability.<sup>44</sup> The means to accomplish this goal is rooted in the Chinese military art of war. Sun Zi put forth an aphorism, well cited throughout Chinese military history: "The essence of warfare is but the art of ambiguity."<sup>45</sup> Sun-Tzu also stated that, "Warfare is a matter of deception--of constantly creating false appearances, spreading disinformation, and employing trickery and deceit."<sup>46</sup> To effect ambiguity in perception, routine concealment is punctuated with selective and deliberate revelation.<sup>47</sup> China's land based missile force is characterized by its mode of deployment: dispersal, concealment, and mobility. The missiles are well concealed in man-made and natural caves amidst high mountains up to 15,000 feet above sea level, in deep gorges along the Yangzi River, and under the cover of thick tropical forestry in careful camouflage.<sup>48</sup> Occasionally, missiles are deliberately exposed to orbiting satellites or pictures are published in defense magazines.<sup>49</sup> Ambiguity is also enhanced by redundant revelation. One example is the PRC protection of its nuclear weapons testing base in Lop Nor against the reconnaissance of overflying super powers satellites by the construction of six identical-looking bases in the area.<sup>50</sup>

The United States Joint Staff has commented that:

<sup>&</sup>lt;sup>44</sup>Lewis, John and Di, Hua. "China's Ballistic Missile Programs: Technologies, Strategies, Goals" International Security (Fall 1992) page 25.

<sup>&</sup>lt;sup>45</sup>Lin, Chong-Pin, "China's Nuclear Weapons Strategy - Tradition within Evolution" (Lexington Books 1992) hereafter cited as Lin, page 21.

<sup>&</sup>lt;sup>46</sup>Sawyer, Ralph D. "The Seven Military Classics of Ancient China" (Westview Press 1993) page 155.

<sup>&</sup>lt;sup>47</sup>Lin, page 69.

<sup>&</sup>lt;sup>48</sup>Lin, page 52.

<sup>&</sup>lt;sup>49</sup>Lin, page 69.

<sup>&</sup>lt;sup>50</sup>Lin, page 62.

"These deployment practices pose severe targeting problems for any potential aggressor" and assure that China's missile forces cannot be destroyed in a preemptive nuclear strike. The survivability of some portion of the ballistic missile force is virtually guaranteed through launch unit mobility, hardened storage for launchers, concealment practices, and dispersal in mountainous terrain." <sup>51</sup>

The ultimate effect of this strategy is that no nuclear power can, with absolute assurance, completely destroy the Chinese nuclear capability. The Chinese view this capability as essential to prevent coercion by other nuclear countries and to their prestige in the international community.

Complementing this military strategy is the public statements the Chinese have made regarding their nuclear strategy. Specifically, China's public stance regarding nuclear weapons have the following three core tenets: (1) a no first use pledge; (2) for defensive purposes only; (3) and for the goal of total disarmament.<sup>52</sup> After its first nuclear detonation on October 16, 1964, China stated that it "will never at any time and under any circumstances be the first to use nuclear weapons." A corollary of this tenet is an unconditional pledge that China will not use nuclear weapons against non-nuclear states.<sup>53</sup> The second tenet is the development of nuclear weapons for the sole purpose of self-defense, with self defense defined as protecting the Chinese people.<sup>54</sup> And, finally, the third tenet is China's goal to completely ban and thoroughly destroy nuclear weapons by breaking the nuclear monopoly of the "Super Powers."<sup>55</sup>

We can see that China's nuclear strategy is imbedded in a two part strategy, counter-value retaliatory warfighting deterrent and a political policy.

<sup>&</sup>lt;sup>51</sup>NWD, page 370.

<sup>&</sup>lt;sup>52</sup>Lin, page 41.

<sup>&</sup>lt;sup>53</sup>Lin, page 42.

<sup>&</sup>lt;sup>54</sup>Lin, page 42.

<sup>&</sup>lt;sup>55</sup>Lin, page 42.

#### **CHAPTER V**

#### MODERNIZATION EFFORTS

The vulnerability of the Chinese retaliatory forces had become an ever more serious problem as foreign satellite reconnaissance technology and missile accuracy advanced after the late 1960s and especially after the SALT accords of 1972, when the Super Powers shifted their emphasis to a more qualitative arms race.<sup>56</sup> As a part of their modernization program, the Chinese emphasized two aspects, basing survivability and pre-launch survivability, and tried especially hard both to reduce the time needed for pre-launch preparations and to find less vulnerable basing modes.<sup>57</sup>

To achieve the aforementioned objectives, the Chinese are attempting to improve all three legs of their nuclear triad by continuing to fund their nuclear program and by acquiring the technological assistance of other countries, specifically the cash strapped former Soviet Union.

While the modernization program in the Armed Forces has been tailored within the existing fiscal constraints of the Chinese economy, the development and modernization of nuclear forces continues unabated.<sup>58</sup> Further highlighting this policy under China's "four modernization program," the military has been given the lowest priority, but nuclear weapons are considered separately and have been afforded the highest priority of all military programs.<sup>59</sup>

<sup>&</sup>lt;sup>56</sup>Lewis, John and Di, Hua. "China's Ballistic Missile Programs: Technologies, Strategies, Goals" International Security, 17:5-40 Fall 1992. cited hereafter as Lewis. page 25.

<sup>&</sup>lt;sup>57</sup>Lewis, page 25.

<sup>&</sup>lt;sup>58</sup>Nair, page 220.

<sup>&</sup>lt;sup>59</sup>Nair, page 220.

In addition to China placing a high value on modernization within its own resources, they also are looking for outside help primarily in the technology arena. Chinese nuclear weapon technology lags far behind that of the United States and Russia, with missiles believed to be far less accurate and lacking the ability to deliver multiple warheads to separate targets. With the demise of the former Soviet Union, Russia is cash strapped and is looking for buyers of their technology. A perfect match has been created with China looking to buy modern technology and Russia desperately wanting to sell theirs. This growing Sino-Russian relationship has resulted in the transfer to China of very sophisticated military technology and licensed production of advanced Russian Weaponry. Additionally, on November 9, 1993, Russian Defense Minister signed a five year military cooperation agreement that is expected to dramatically increase military transfers to China. It is clear that China is putting the resources into improving their nuclear capability into the 21st century. Where exactly are they concentrating this effort?

The People Liberation Army is currently modernizing its entire strategic missile force, including the doubling of its intercontinental ballistic missile force (ICBM) to 30 by the turn of the Century.<sup>62</sup> The ICBMs upgrades will also consist of solid fuel propellants and have the capability to carry multiple independently targetable re-entry vehicles (MIRV).<sup>63</sup> In particular, Beijing has been working for several years on improved and often longer range solid-fueled missiles. This is in line with trying to improve their pre-launch survivability. A solid-fuel capability would drastically decrease the time it would take to launch the missile, thereby increasing survivability. Chinese leaders are expected to

<sup>&</sup>lt;sup>60</sup>Lockwood, Dunbar "The Status of U.S., Russian and Chinese Nuclear Forces in Northeast Asia." Arms Control Today (Volume 24, Number 9. November 94) page 23.

<sup>&</sup>lt;sup>61</sup>Godwin, page 8.

<sup>&</sup>lt;sup>62</sup>Shambaugh, David "Growing Strong: China's Challenge to Asian Security Survival, The ISS Quarterly (Summer 1994) cited hereafter as Shambaugh, page 56.

gradually replace some of the older liquid-fueled missiles with more mobile, accurate and easily handled solid-fueled weapons.<sup>64</sup> But, more specifically, in terms of future research and development, China's ballistic missile industry will focus its efforts towards:

- promotion of strategic weapon survivability by stressing development of smaller, solidfueled and highly automated mobile missiles. Stealth technology and EMP protection will also be stressed.
- promotion of strategic missile strike capability by increasing accuracy and warhead yield.
- promotion of strategic missile penetrability.<sup>65</sup>

China is also thought to be interested in modernizing other capacities related to its nuclear forces such as early warning radar, intelligence and reconnaissance satellites, secure command and control equipment, better computers and other instrumentation useful in production and operation of nuclear weapons.<sup>66</sup>

Under most circumstances, it appears unlikely Beijing will aspire to much more than the Chinese equivalent of the French force de frappe.<sup>67</sup> As National War College scholar Paul Godwin has noted, Chinese doctrine does not speak "sufficiency", but rather the notion of "anti-nuclear blackmail." To this end, modernizing their nuclear forces to be both relatively invulnerable and able to hit Russian and United States cities are seen by the Chinese leaders as necessary.<sup>68</sup>

<sup>&</sup>lt;sup>63</sup>Shambaugh, page 56.

<sup>&</sup>lt;sup>64</sup>CRS 94, page 14.

 $<sup>^{65}\</sup>mbox{Kong},$  Yan and McCarthy, Tim. "China's Missile Bureaucracy" Jane's Intelligence Review (5:36-41 Jan 1993) page 41.

<sup>&</sup>lt;sup>66</sup>CRS 94, page 14.

<sup>&</sup>lt;sup>67</sup>CRS, page 15.

<sup>&</sup>lt;sup>68</sup>CRS, page 15.

#### **CHAPTER VI**

## ARMS CONTROL IMPLICATIONS

It is important to understand the positions of both the United States and the Chinese when discussing the implications brought about by arms control negotiations. Reviewing the United States policies pertinent to China and nuclear arms, President Clinton's policy on reducing strategic offensive arms and a steady shift toward less destabilizing systems is critical. More specifically, President Clinton's believes that regional arms control polices are vital and states that:

Future arms control efforts may become more regional and multilateral. Regional arrangements can add predictability and openness to security relations, advance the rule of international law and promote cooperation among participants. The U.S. is prepared to promote, help negotiate, monitor and participate in regional arms control undertakings compatible with American national security interest. We will generally support such undertaking but will not seek to impose regional arms control accords against the wishes of affected states.<sup>69</sup>

President Clinton's arms control policies with China suggest that the policies of the United States do not take into consideration China's perceptions and thoughts on nuclear arms. The following is a list of the positions the United States is taking on arms control issues which directly impact on the Chinese:

- The Clinton Administration favors deep cuts in nuclear weapons by the United States and Russia, presumably along with more modest curbs and possible cuts by the other nuclear powers.
- The Clinton Administration favors ending production of fissile material.

17

<sup>&</sup>lt;sup>69</sup>NSEE, page 12.

- The Clinton Administration favors a comprehensive nuclear test ban involving all nuclear powers.
- The Clinton Administration wants to extend the Non Proliferation Treaty (NPT) indefinitely in 1995.
- The Clinton Administration is developing advanced theater missile defense for the United States and is considering possibly sharing the system with Russia, Japan, South Korea and others.<sup>70</sup>

The Chinese bring a significant amount of past experiences to the arms control arena. China has distinct views of the international community which include perceptions of threats based on these past experiences. China views alliances with foreign nations (especially stronger ones) in a very distrusting fashion because it perceives the potential partner frequently has its own agenda it wishes to pursue, attempts to manipulate China for its own purposes and could draw China into extended disputes with the partners adversaries.<sup>71</sup> Chinese leaders and strategists also believe that alliances and tight alignments compromise security by limiting sovereignty and freedom to maneuver.<sup>72</sup> Although past experience has lended credence to these perceptions, the Chinese recognize that they will have to negotiate with the United States. Maintaining and developing a good relationship with the West, especially the United States is crucial to China's long term interest. This is not only because China needs the United States's help for its economic and technological modernization drive, but also because the relationship is critical for China's reunification plan and could also offer Beijing leverage in its relationship with Japan in the Asia-Pacific region.<sup>73</sup> In the end the Chinese want it both ways with regard to its relations with the United States. The best of all worlds from China's perspective would be to find itself in a multi-polar world in which United States global power declines absolutely and

<sup>&</sup>lt;sup>70</sup>CRS 94 page 20.

<sup>&</sup>lt;sup>71</sup>Shambaugh, page 45.

<sup>&</sup>lt;sup>72</sup>Shambaugh, page 46.

<sup>&</sup>lt;sup>73</sup>Zhao, Suisheng Beijing's Perception of the International System and Foreign Policy adjustment in the Post-Cold War, Journal of Northeast Asian Studies (Fall 1992) page 79.

regional powers, such as themselves, are able to resist external interference in their respective regions.<sup>74</sup>

Additionally, from China's perspective, the United States is pursuing restrictions in the arms control regime which could impact China's security and its ability to effectively conduct foreign policy. Specifically, China believes the ultimate desire of the United States is to weaken their capability through arms control negotiations and thus perceives that they must maintain a credible military capability. Ralph A. Cossa in his article, "China's Changing Security Environment: Implications for Northeast Asia Security" points to the following areas of concern for China:

- Three powerful neighbors (the US, Russia, and Japan) all with the ability to project power against China
- A complicated situation on the Korean peninsula that could degenerate into warfare
- Taiwan's growing independence movement and the fact that Taipei's military already has some air and sea superiority over the mainland's forces (since the PRC will never give up its reunification goal or one China policy)
- Possible social unrest in Hong Kong, supported by "foreign forces" (British and "others")
- Lingering territorial disputes, especially the Spratlys
- India's development of nuclear weapons and long-range delivery systems
- Nationalism in Inner Mongolia, Tibet and elsewhere in China which represents a potential internal security challenge. <sup>75</sup>

These are real concerns from the Chinese perspective and must be taken into consideration when discussing arms control issues with the United States. The Chinese have not been silent on all arms control issues and have actually applauded the efforts of the United States and Russia. However, there is no doubt they have a very clear perspective on what and where they want to go in the arms control arena.

The Chinese have outlined their position specifically regarding reduction of nuclear weapons, testing, and proliferation.

<sup>&</sup>lt;sup>74</sup>Zhao, page 76.

<sup>&</sup>lt;sup>75</sup>Cossa, Ralph A. China's Changing Security Environment: Implications for Northeast Asia Security, The Korean Journal of Defense Analysis (Volume VI No.1 Summer 1994) page 149.

Beijing officially applauded the signing of the Strategic Arms Reduction Treaty (START) I in July 1991; the May 1992 Lisbon Protocol committing Russia, Belarus, Kazakhstan and Ukraine to abide by START I; and the January 1993 START II Treaty. Any reduction in nuclear weapons by the "super powers" would be beneficial to the Chinese in light of their very small nuclear capability. Moreover, nothing would serve China's policy of peace better than to see all nuclear weapons prohibited, the existing arsenals destroyed and a comprehensive test ban concluded. China's own nuclear-arms control proposals reiterated that the onus for nuclear-arms reductions fell on the two biggest nuclear powers. China obviously feels that until the two largest nuclear powers, e.g. United States and Russia, have reduced the nuclear weapons significantly lower China must continue to keep their current levels and capability.

Beijing also sought to deflect pressure to participate in a nuclear-test moratorium, principally by emphasizing Chinese restraint with regard to its test explosions. China argues the fact the United States has conducted approximately 1050 nuclear tests, the former Soviet Union 700 tests and France 200 tests in comparison to China's 39. However, the Chinese have discussed a world-wide moratorium with the US Under Secretary of State Lynn Davis in late July of 1994 and have informed him that the Chinese support a comprehensive test ban but not until 1996. Beijing's commitment to

<sup>&</sup>lt;sup>76</sup>Sismanidis, D. V. Roxane, "China and the Post-Soviet Security Structure" Asian Affairs, An American Review (Spring 1994), cited hereafter as Sismanidis page 44.

<sup>&</sup>lt;sup>77</sup>Li Daoyu, "Foreign Policy and Arms Control: The View From China" Arms Control Today (Dec 93), cited hereafter as Daoyu, page 9-11.

<sup>&</sup>lt;sup>78</sup>Sismanidis, page 45.

<sup>&</sup>lt;sup>79</sup>Sismanidis, page 45.

<sup>&</sup>lt;sup>80</sup>Shen, Dingli, "Toward a Nuclear-Weapon-Free World" A Chinese Perspective. The Bulletin of The Atomic Scientists, March/April 94. page 51.

<sup>&</sup>lt;sup>81</sup>Sismanidis, page 45.

negotiate a comprehensive test ban only by 1996 -- a commitment undertaken in 1992 -- may relate to its estimate of how long it will take to fully test new warheads with higher yield-to-weight rations.<sup>82</sup>

The Chinese government has all along publicly adopted a serious and earnest attitude toward the issue of non-proliferation and opposed the proliferation of all weapons of mass destruction pending their complete elimination globally. <sup>83</sup> However their actions provide a different kind of perspective. On numerous occasions the United States has threaten and imposed sanctions on China for selling nuclear-weapons technology to third world nations, particularly Iran and Pakistan. <sup>84</sup> Although throughout the 1980s Beijing continued to publicly profess opposition to the spread of nuclear weapons, its rejection of the NPT also hampered its credibility on proliferation issues among Western and third world nations. <sup>85</sup> But since acceding to the NPT in March 1992, China has called the treaty "one of the most universally accepted international instruments in the field of arms control" and lauded its "positive role in preventing the proliferation of nuclear weapons."

Although China has "officially" touted their approval of the nuclear powers drastically reducing their forces, an agreement for a comprehensive test ban in 1996, and the non-proliferation of nuclear weapons, their behavior might say otherwise. For example, in 1993 a initiative by Japan to induce China to join India and Pakistan in negotiations foundered because of China's unwillingness to discuss conditions that might limit its nuclear program and capabilities in the region. <sup>87</sup> This raises questions if

<sup>&</sup>lt;sup>82</sup>Godwin, page 24.

<sup>&</sup>lt;sup>83</sup>Daoyu, page 9-11.

<sup>&</sup>lt;sup>84</sup>Sismanidis, page 48.

<sup>&</sup>lt;sup>85</sup>Sismanidis, page 45.

<sup>&</sup>lt;sup>86</sup>Sismanidis, page 45.

<sup>&</sup>lt;sup>87</sup>Sismanidis, page 47.

China is	willing to	seriously	engage in	arms	control	issues	which	will	benefit	everyone	and i	not jı	ast the
Chinese.													

#### **CHAPTER VII**

#### CONCLUSIONS

China is a country with over one fifth of the world's population, commands international nuclear weapons, enjoys veto power on the United Nations Security council and has one of the most dynamic and growing economies in the world.<sup>88</sup> It has a great and long history which has forged its beliefs and values. The United States must recognize the Chinese do not trust their actions. Incidents such as the United States support of Chiang Kai Shek, the use of nuclear blackmail during the Korean war, threats of trade sanctions and criticism of human rights in China all significantly impact the ability of the United States to conduct foreign relations with China. Chinese leaders are concerned with the emergence of the United States global preeminence, primarily because they believe it more likely the United States will continue to try to overthrow the Chinese Communist Party and continue to expand China's movement toward a more open capitalist economic system.<sup>89</sup> The leader of China reiterated this theme when he told his comrades in a Politburo meeting convened in April 1990 to discuss anticommunist upheaval in Eastern Europe:

"Everyone should be clear that under present international circumstances all enemy strength will be directed against China and the enemy will use every sort of pretext to create difficulties and pressures for us." 90

 $<sup>^{88}\</sup>mbox{Macke},$  Richard C. ADM, "Asia-Pacific Regional Security: Toward 2001" Defense Issues (Vol. 9 No. 78) page 3.

<sup>&</sup>lt;sup>89</sup>Joseph, William A. China Briefing, 1992, (Westview Press 1993) cited hereafter as Joseph, page 55.

<sup>&</sup>lt;sup>90</sup>Joseph, page 55.

There are two specific areas in President Clinton's arms control policies with China that could give credence to Chinese paranoia. First, the United States's insistence that China reduce its nuclear forces. To presume that the Chinese should cut their nuclear forces because the United States and Russia are significantly cutting their forces, is inviting a negative response from the Chinese. To expect the Chinese to understand why they should reduce their nuclear capability of 200-300 weapons when the United States and the Russians still have approximately 3000-3500 weapons is unrealistic. Additionally, the Chinese could point to France and Great Britain and ask how much they will reduce their nuclear capability. This kind of negotiation on the part of the United States reinforces mistrust and is reminiscent of the way the United States tried to "persuade" the Chinese to do things in the past.

Secondly, more mistrust is generated when the Clinton Administration proposes to develop an advanced theater missile defense for the United States and is considering sharing that capability with Russia, Japan, South Korea and other countries in the region. This capability could degrade the utility of the Chinese nuclear arsenal because of their small numbers and lack of sophistication and could possibly start an arms race in the region. What can the United States do to improve relations with the Chinese?

First and foremost the United States needs to build trust with the Chinese government. Both governments need to be more transparent regarding their actions and goals. Additionally, in order for the United States to effectively negotiate arms control policies with the Chinese, the Administration must have a clear understanding of the evolution of nuclear weapons in China so that best possible arrangements can be negotiated that will address both the concerns of China and the United States in the region. The United States should not expect China to reduce its nuclear capability until the United States and Russia reduce their capabilities to numbers approaching China's. China developed its nuclear capability to avoid being vulnerable to the Super Powers and to establish itself as an

independent strong sovereign nation. They are extremely paranoid of any actions by United States.

The United States must work at developing trust, transparency, and understanding in all aspects of political, military, and economic areas.

Where should the United States start? I believe the first place should be an increase in the military to military exchanges. The Peoples Liberation Army will play a significant role in the future of China. The United States through military to military exchanges can help to develop trust and transparency between our nations. Specifically, these exchanges could be with the Chinese Rocket Forces and the United States ICBM forces. This could prove valuable in understanding each country's capabilities and could lead to a more stable, safe and secure nuclear environment. Additionally, the United States through these type contacts could offer the Chinese nuclear "safety technology" for their nuclear forces which could also enhance stability. Finally, the United States should work with China and the other major actors in East Asia to establish sub-regional, or issue-specific, forums for consultation and coordination on security issues. A good example is the North Korean nuclear issue when China, along with the United States, Japan, Russia, and South Korea, met and discussed ways to diffuse the crisis. These kinds of interactions with the Chinese are ideal vehicles to build trust and work out mutual concerns in the region.

In the end, if the United States does not take the first step to recognize the Chinese perceptions of history, their rationale, and positions regarding nuclear weapons, the United States's ability to negotiate fair and effective arms control policies with China will have limited success.

<sup>91</sup>Eikenberry, Karl W. "Does China Threaten Asia-Pacific Regional Stability?" Parameters (Spring 95) page 98.

#### BIBLIOGRAPHY

- A National Security Strategy of Engagement and Enlargement, The White House, July 1994.
- <u>Congressional Research Service</u> Chinese Nuclear Weapons and Arms Control Policies: Implications and Options for the United States Washington, 1994.
- Cossa Ralph A., "China's Changing Security Environment: Implications for Northeast Asia Security" The Korean Journal of Defense Analysis, Volume 6, Number 1 Summer 94.
- Dellios, Rosita, Modern Chinese Defence Strategy, Present Developments, Future Directions, St Martins Press, 1990.
- Eikenberry, Karl W. "Does China Threaten Asia-Pacific Regional Stability?" Parameters Spring 95.
- Godwin, Paul and Schulz, John J. "Arming the Dragon for the 21st Century: China's Defense Modernization Program" <u>Arms Control Today</u>, December 1993.
- Gupta, Vipin, "The Status of Chinese Nuclear Weapons Testing" <u>Jane's Intelligence Review</u>, January 1994.
- Harvey R. John, "Missiles and Advance Strike Aircraft Comparing Military Effectiveness" International Security, Fall 1992.
- Joseph, William A., China Briefing, 1992, Westview Press 1993.
- Karp, Cowen, <u>Security with Nuclear Weapons? Different Perspectives on National Security</u>, Oxford University Press 1991 Library of Congress.
- Kihl, Young Whan and Grinter, Lawrence E., <u>Security, Strategy and Policy Responses in the Pacific Rim</u>, Lynne Rienner Publishers 1989.
- Kong, Yan and McCarthy, Tim, "China's Missile Bureaucracy," <u>Jane's Intelligence Review</u>, 5:36-41, Jan 1993.
- Lennox, Duncan, "China's Development of Ballistic Missiles" <u>Jane's Intelligence Review</u>, August 1991.
- Lewis, John and Hua, Di, "China's Ballistic Missile Programs: Technologies, Strategies, Goals," <a href="International Security">International Security</a>, 17:5-40, Fall 1992.
- Lewis, John and Litai, Xue, China Builds the Bomb, Stanford University Press, 1988.
- Li, Daoyu, "Foreign Policy and Arms Control: The View From China" <u>Arms Control Today</u>, December 1993.
- Lin, Chong-Pin, <u>China's Nuclear Weapons Strategy-Tradition within Evolution</u>, Lexington Books, 1992.
- Lockwood, Dunbar, "The Status of U.S., Russian and Chinese Nuclear Forces in Northeast Asia" Arms Control Today, Volume 24 Number 9, November 94.
- Lovejoy Jr., Charles D. and Watson, Bruce W., <u>China's Military Reforms International and Domestic</u> Implications, Westview Press, 1986.

- Malik, Mohan J., "Patterns of Conflict and the Security Environment in the Asia-Pacific Region: The Post Cold War Era," <u>Asian Defence Policies</u>, Deakin Press, 1994.
- McNaugher, Thomas L., "A Strong China" The Brookings Review, Fall 1994.
- Nair, V.K., "Defence Forces and Nuclear Weapons in China's Foreign Policy" China Report 28:3, 1992.
- <u>Nuclear Weapons Databook: Volume V British, French, and Chinese Nuclear Weapons</u>, Bolder, Co. Westview Press, 1994.
- Pollack, Jonathan D., "Sources of Instability and Conflict in Northeast Asia" <u>Arms Control Today</u>, Volume 24, Number 9 November 94.
- Ryan, Mark A., <u>Chinese Attitudes Toward Nuclear Weapons</u>, <u>China and the United States During the</u> Korean War, East Gate Book, 1989.
- Sawyer, Ralph D. "The Seven Military Classics of Ancient China," Westview Press, 1993.
- Segal, Gerald, <u>Defending China</u>, Oxford University Press, 1985.
- Shambaugh, David, "Growing Strong: China's Challenge to Asian Security Survival," <u>The IISS</u> Quarterly Summer 1994.
- Shen, Dingli, "Toward a Nuclear-Weapon-Free World: A Chinese Perspective" <u>The Bulletin of The Atomic Scientist</u>, March/April 94.
- Shulong, Chu, "From Seattle to Jakarta: The Sino-US Relations" <u>Beijing Review</u>, Volume 37, Number 46 November 1994.
- Sismanidis, Roxane D.V., "China and the Post-soviet Security Structure" <u>Asian Affairs, An American Review</u>, Volume 21, Number 1, Spring 1994.
- Waldron, Author, "China's Military Classics" Joint Force Quarterly, Spring 94.
- Wilhelm Jr., Alfred D. "China and The Region: Facing a Decade of Challenges" <u>Arms Control Today</u>, December 93.
- Zhao, Suisheng, "Beijing's Perception of The International System and Foreign Policy Adjustment in The Post Cold War" <u>Journal of Northeast Asian Studies</u>, Fall 1992.
- Zhang, Shu Guang, Deterrence and Strategic Culture, Cornell University Press 1992.