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Analysis of Nuclear Policies: British and Chinese Case Study

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Abstract

After the end of cold war, the roles and missions of nuclear weapons have been questioned due to the change of international politics. In the new century, should such possession and investment of nuclear weapons be worthwhile, if the old enemies vanished? What sort of nuclear forces would be of best interests for the nuclear weapon states in order to meet the challenges of new threats? These incentives constitute the necessity to re-examine current nuclear policy and revolution of nuclear weapon states. Among the five big states, the United States and Russia, which still possess the largest nuclear stockpile, seemly have been developing their new nuclear postures. The other three, although trying to do so, still show no clear patterns of change. As such, the author chooses the United Kingdom and People's Republic of China as research subject. By introducing several topics of analysis, such as external influences, no-first-use principles, strategic and tactical roles, counterforce and countervalue, etc., it is the wish of this paper to demonstrate the continuity and change of the nuclear postures of both countries under the new international environment.

Keywords：nuclear policy, Britain, China, no-first-use, counterforce, countervalue

Introduction

In terms of nuclear weapons states, the United Kingdom (UK) and People's Republic of China (PRC), which are influenced by the United States (US) and Soviet Union, but are by no means replicas of two superpowers, represent distinct packages of nuclear thinking and practices, as the readers can envisage. The analysis of their nuclear policies might possibly require drawing miscellaneous factors, including domestic and international politics, cultural and social contexts, economic implications, etc., into serious consideration. However, such divergences could not prevent academic interests of the author from exploring the essences of their nuclear policies. As the author believes, in a realist international environment, individuality of the state would make sense, but does not make the comparison impossible. To be sure, the British and Chinese Governments, as rational political actors, demonstrate very comparable patterns in several topics discussed in the later pages, just as the meaningful analysis of American and Soviet nuclear policies has ever displayed. Meanwhile, the author tries to focus this study on the discussions of policy dimension, particularly contemporary, rather than other non-governmental elements in order to depict a clear and consistent framework of the British and Chinese cases. This work, on which few researchers had done in the past, would be challenging, but by no means a mission impossible.

Methodologically speaking, the author has recognised the research difficulties to re-examine nuclear policies of these two countries. As expected, China seldom publicly declares, not to mention to renew its nuclear strategy, which is often shrouded in secrecy except some fundamental viewpoints. The ambiguity and opacity of Chinese military traditions furthermore complicate the true meanings between their lines. It would take researchers more time, by means of other subsidiary materials to carefully assess what the Chinese really mean. In the UK, there is also very little public and parliamentary debate on nuclear policy, except the 1950s and early 1960s. Access to information and parliamentary scrutiny of nuclear policy has become more difficult under Tony Blair's Government than under the Major and Thatcher Governments. Fortunately, there are still a range of documents published as part of the Ministry of Defence (MoD) reporting cycle, including MoD performance reports, MoD investment strategies, and occasionally a Defence White Paper, which can help

researchers on this subject.

It would be of use to more clearly reiterate the orientation of this work here so that the readers would not mistake the content of this paper. Firstly, this paper is a policy analysis, not technical oriented research. The statements and practices of the governments rather than scholarly discussions among academic circles would be paid more attention. By contrast, most Western nuclear analysts are inclined to evaluate a country's nuclear policy according to the sizes of weapons and personnel. Although this approach and data are absolutely essential, they are sometimes skewed against realities and politics. This paper would prefer to devote more pages to policy and doctrine analysis, which stipulates when and how a nation will use nuclear force against what type of enemy. Such research exploration on political objectives and military doctrines, as the author believed, is more corresponding to the real postures and policies of London and Beijing, whose nuclear strategies involve more political elements than those of superpowers.

Second, this paper is a topic analysis. To do a study of two different countries needs topics as basis of discussion so that such analysis and re-examination would not be just superficial descriptions. By introducing several related topics as follows, the author hopes to depict a clear picture on the nuclear policies of Britain and China while detecting similarities and differences of both cases.

General history of nuclear evolution

The history of nuclear weapon evolution would seldom be the same in countries, especially with distinct political and cultural variances. China, self-claiming as an oppressed victim by imperialists, developed its nuclear policy in the early 1950s due to the nuclear threat from the US. According to the then general assumptions of the Chinese, which were mostly influenced by the Soviets, the confrontations between the capitalist West and socialist East were inevitable so that China would expect a coming nuclear war in a short future. Responding to America's nuclear prevalence, the PRC, lack of credible nuclear capacities at that time, used Maoist "People's War" theory as its own countermeasure against nuclear threat, especially when the Soviet nuclear commitment was no longer reliable. While the Sino-Soviet relations went sour, the former elder brother became the nuclear nightmare. The Chinese began to assume that nuclear confrontation with the Soviets was conceivable, especially at the border crisis

of Zhenbaodao/Damansky in 1969. Compared with the increasingly normalisation of relations between Beijing and Washington, some Chinese missiles, though rare in terms of the number, were aimed at the Soviet cities. In the 1980s, Gorbachev's *perestroika* alleviated military tensions between Moscow and Beijing and the further collapse of the Soviet Union removed China's nuclear worries. After the first Gulf War in 1991, China's military were radically advised to review its nuclear policy and strategy under the concept of "local warfare under high technology". Ideas such as precision, limited, warfighting and even counterforce were widely discussed inside and outside the People's Liberation Army (PLA).

The evolution of British nuclear strategy was quite a different story, which combined three aspects including political, economic and bureaucratic elements. Such combination makes the British Governments, which initially viewed nuclear weapons as necessary guarantee toward world power status gradually accepted that an "interdependent" deterrence, rather than independent one, would be adequate to their own need (Paterson, 1997).[1]

The first and most important aspect of Britain's nuclear policy was about political dimension. On one hand, the objective of British nuclear policy is by comparison less complicated since its military threat has been the same until the end of the cold war. Countermeasures against the potential threat of the Soviet state power constituted the essence of British nuclear strategy. On the other hand, the British nuclear posture had been knowingly placed on the alliance of the US and North Atlantic Treaty Organisation (NATO). Since the 1957 White Paper, the British Government had decided to secure greater US strategic cooperation and to lay its nuclear posture on alliance (Navias, 1991).[2] Due to these alliance bonds, however, British nuclear strategy was becoming less independent. In contrast to other countries, there were more political and diplomatic considerations in nuclear policy-making, which indirectly forced Britain to pursue its political influence other than military power especially in Europe as its national interests.

Second, economic deliberation has also played an important part in Britain's nuclear policy. As well known, the British Governments had difficulties meeting the

[1] Robert Paterson, *Britain's Strategic Nuclear Deterrence*, (London: Frank Cass & co, 1997), p.56.

[2] Martin S. Navias, *Nuclear Weapons and British Strategic Planning: 1955-1958*, (Oxford: Clarendon Press, 1991) p.251.

balance of payment costs despite the economic improvement after WWII. Unsatisfactory economic performance, which lagged behind those of its major competitors, constrained Britain's defence, including nuclear development (Paterson, 1997).[3] Economic deficiency curbed the expansion of British nuclear stockpile and most of all, the research and development of delivery systems. Since the 1960s until now, the UK has given the seal of approval to the concept of "Minimal Deterrence". That is to imply, the British have viewed the size of its nuclear force adequate to deter aggression. Reliance on such assumptions, it, argued by the UK Governments, would permit a considerable reduction in conventional forces. The supposition of avoiding duplication and saving defence money had hardened Britain's reliance on the US.

Finally, the bureaucratic aspect, including the rivalry among Services for nuclear dominance and the struggle within the Governments always had momentous effects on the formation of British nuclear policy. From V-Bombers to Trident submarines, the evolution of British nuclear forces involved severe debates and competitions although such phenomenon was not novel in Western democracies.

External influences

Britain's nuclear policy had been influenced by the Americans since the very early stage of nuclear development although such relations were seldom fair as expected. At first, the post war unwillingness of the US to share nuclear development and research had pushed Britain embarrassingly into a chiefly indigenous programme until the 1954 revision of McMahon Act. The following unbalanced development had again frustrated the British dignity and independence. The US, as an ally, was rarely asking British participation on the formation of combined nuclear targeting planning against the Soviet threat. A noted scholar had made such comment: "Although a considerable amount of joint Anglo-American military planning was already under way, the question of the strategic employment of nuclear weapons was absolutely excluded."(Freedman, 1986)[4] Apparently, such ignorance was originated from the British need for American assistance, no matter in terms of politics and technology.

[3] Robert Paterson, op. cit., p.47.

[4] Lawrence Freedman, "British Nuclear Targeting", in Desmond Ball and Jeffery Richelson (eds.) *Strategic Nuclear Targeting*, (Ithaca: Cornell University Press, 1986), p.111.

An early but plain example was a report of 1948. This Government report was identified that Britain needed a minimum number of 600 bombs, in which two thirds would be met from the US stockpile. Until today, although the British Government always claimed that the UK Trident warheads are built to its own design, the comprehensive extent of nuclear cooperation with the US indicates that the UK is still highly dependent on US assistance (Butler and Bromley, 2001).[5]

Reliance on the US was further enhanced by the operation of NATO. As early as in the 1960s, Britain's strategic nuclear force had been committed to NATO and targeted in accordance with alliance policy and strategic concepts under plans made by the Supreme Allied Command Europe (SACEUR). Under the concept of "interdependence", the operational planes were formulated by the Nuclear Activities Branch at Supreme Headquarters, Allied Power Europe (SHAPE). General Strike Plan (a.k.a. Nuclear Operation Plan, NOP) was developed by SACEUR. Under the America's political and military dominance, however, NATO's nuclear deterrence, including the doctrines, predominantly would reflect the viewpoints and interests of the US. The full execution of the NOP would be in conjunction with the US Single Integrated Operational Plan (SIOP). As such, from planning, procurement to use and maintenance of the nuclear weapons, London had always been confined by Washington even though the British were dubious about US's continuing willingness to assure the security of Europe, especially at its own domestic risk. Although the end of cold war relieved the immediate nuclear threat to the UK, the collective and interdependent systems of NATO, in which American influence has always been lingering, still require Britain's involvement into nuclear scenarios, if any. No drastic changes seemingly will appear in a near future.

By comparison, China's nuclear development was less reliant except its early years for Soviet aids. The ruthless withdrawal of Soviet technological assistance in the early 1960s compelled the Chinese, who were seriously caring about the issue of "face", resume the nuclear development on their own. Unsurprisingly, such single-handed development made China's road to nuclear devices and delivery systems more difficult and inefficient. After the collapse of the Soviet Union, it has been believed that China had again increasingly acquired Russia's strategic technology, especially on

[5] Nicola Butler and Mark Bromley, *Secrecy and Dependence: the UK Trident System in the 21st Century*, BASIC Research Report, no. 2001.3, November 2001.

precision guidance and interim/long-range cruise missile systems (Military Intelligence Bureau, 2001).[6] However, such transfers could not possibly be comprehensive and systematic. Without foreign assistance, the limitations of nuclear technology and research still primarily constrained available options for the Chinese.

In terms of doctrinal influences, as the early but interrupted technical assistances, China perceived little nuclear conceptions from Moscow especially when it would like to make an ideological distinction from the revisionist Soviets. The Cultural Revolution (1966-1976) particularly strengthened the domestic and cultural elements in the formation of military, including nuclear strategies. It would not be too much wrong to argue that since the late 1960s, the basic Chinese nuclear policy was essentially of its own brainchild with specific political and cultural characters.

Although the Chinese strategists are always creative to produce marvellous military doctrines, the limitation of technology and sources has seriously restrained the feasible options for China's nuclear policy. With little nuclear arsenal, there was no much room to discuss "massive retaliation" or "assured destruction". It may be reasonable to agree that, according to the observation of two analysts, the Chinese have to make "a virtue out of necessity in the construction of their nuclear deterrent, accepting the technological constraints of the system and making rational choices under those constraints" (Gill and Mulvenon, 1999).[7]

Development on the delivery systems

The initial nuclear posture of the UK, as a self-styled Big Three after the WWII, was reflected by its preference on the air power, just as that of the Americans. Influenced by previous strategic concepts and bombardment experiences, the air force, precisely speaking, the strategic bombers were considered as the first and best candidate for nuclear delivery. Similar to the Strategic Air Command (SAC) in the US, V-Bombers and the Bomber Command undertook the most responsibility in the 1950s,

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[6] Military Intelligence Bureau, Taiwan, *Zhonggong Hesgenhua Xiankuang yu Weilai Fazhan zhi Yianjiu (The Research on China's Current and Future Development on WMD)* (Taipei: Military Intelligence Bureau, 2001), p.5.

[7] Bates Gill and James Mulvenon, *The Chinese Strategic Rocket Forces: transition to credible deterrence*, conference paper for "China and Weapons of Mass Destruction: implications for the United States", 5 November 1999, National Intelligence Council and Federal Research Division.

with doctrinal resistances of Navy's broken-backed warfare and Army's continental battles (Navias, 1991).[8] The 1953 Radical Review of defence policy further denied Navy and Army legitimacy to prepare a long nuclear war (Clark and Wheeler, 1989).[9]

Due to the technological and strategic influences by the Americans, since the 1957 Defence White Paper, which claimed that missiles could replace manned aircraft, the British had shifted their emphasis of nuclear delivery system to the submarines, which were believed to have better reliability, survivability and flexibility than the bombers and missile silos. In 1968, the Bomber Command was abolished and in-cooperated into the Strike Command. The remaining Vulcan aircraft were assigned to SACEUR in a tactical role and Victors were converted to tankers (Menaul, 1980).[10] The prevalence of the Polaris and then Trident SSBNs symbolised not only the transformation of strategic conceptualisation, but also Navy's triumph in the policy struggle among Services. The Polaris/ Trident dominance of nuclear deterrence has been lasted until today. After the withdrawal of the last WE177 bombs in March 1998, four Trident boats are now Britain's only nuclear force to remain "minimum deterrent".

British Strategic Forces		
Category	**The Military Balance (2002-2003)**	**note**
SLBM		
Trident D5	58 (range: 12,000 km)	Fewer than 200 operationally available warheads
SSBN		
Vanguard class	4 (Vanguard, Vigilant, Victorious, and Vengeance)	Each capable of carrying 16 Trident D5; no more than 48 warheads per boat, but each missile could carry up to 12 MIRV.
Source: IISS, The Military Balance 2002-2003, (London, IISS, 2003), p.60.		

For nuclear weapon states, if affordable, the pursuit for a nuclear triad may fulfil the request for full survivability and reliability. For developing countries such as

[8] Martin S. Navias, op. cit., p.69.

[9] Ian Clark and Nicholas J. Wheeler, *The British Origins of Nuclear Strategy 1945-1955*, (Oxford: Clarendon Press, 1989) p.183.

[10] Stwart Menaul, *Countdown: Britain's Strategic Nuclear Forces*, (London: Robert Hale, 1980), p.154.

China, a nuclear triad may be a too expensive path to go on. Almost from the beginning until now, China had an imbalance development in favour of missiles or rockets, which seemed to be the most feasible choice to the Chinese. The PRC currently possessed more than 400 nuclear devices. Most of them are believed to be related to missile uses, primarily land-based, although China had some other dated delivery systems such as one Xia-class (Type 092) SSBN and hundreds of H-6 (B-6 or Tu-16 Badger) bombers and Q-5 attackers (A-5).

Nearly at the same time to develop its A-bomb, China developed missiles by the assistance of the Soviets, and after the breakout of the Sino-Soviet relations, by the West-educated Chinese scientists until now. The struggles among Services to compete nuclear dominance was barely seen in China, which, rather than assigning major nuclear missions to a single Service, established an independent "Second Artillery", similar to the Soviet Strategic Rocket Forces as the fourth Service to undertake nuclear responsibility. The mission and role of the Second Artillery were at first nuclear, but in the 1990s, when the China's PLA was shocked by the American performance in the first Gulf War, it was additionally commissioned for conventional tasks in order to prepare a "local warfare under high technology". More and more missiles with various ranges were produced despite the stagnancy of its nuclear stockpile. Unlike the doomed fate of Bomber Command and SAC, the new combined missions make "Second Artillery" still important among Services as one part of China's "fist forces".

Chinese Strategic Missile Forces			
Missiles (Western designator)	**Range (km)**	**The Military Balance (2002-2003)**	**note**
ICBM			
DF-5A (CSS-4)	13,000+	20+	
DF-31	8,000	n.a	First brigade reportedly operational
DF-41	12,000	n.a	The DF-41 ICBMs are under development, and are not expected to be in service until approximately 2010.
IRBM			
DF-3A (CSS-2)	2,850	60-80	
DF-4 (CSS-3)	4,750	20+	
DF-21A (CSS-5)	1,800	50	At least 3 brigades deployed
SRBM			
DF-15/M-9 (CSS-6)	600	160+	25 launchers, 1 brigades deployed
DF-11/M-11 (CSS-X-7)	120-300	175	25 launchers, 2 brigades deployed
SLBM			
JL-1 (CSS-N-3)	1,700	12	
JL-2 (CSS-N-4)	8,000	n.a.	The JL-2 SLBMs under development.
Source: IISS, The Military Balance 2002-2003, (London, IISS, 2003), p.145.			

No-first-use principles

The UK, like other Western nuclear weapon states, has always refused to give an assurance of “no-first-use” (NFU) because it believes that such commitment would inevitably weaken deterrence and perhaps invite attack. In other words, Britain in principle reserves the right to use nuclear weapon first in response to an overwhelming non-nuclear assault if there are no other way defeating it. Such mentality indeed was out of the fear of the Soviet conventional invasion during the cold war. After the collapse of the Soviet empire, however, it should not exist but the

British Government still declined to accept NFU even though it had been advised to do so by many critics. While in opposition, the Labour Party had ever supported "a negotiated, multilateral no first use agreement amongst the nuclear weapon states and strengthened security assurances to non-nuclear weapon states in the form of an international legally-binding treaty" (Davis, 2002).[11] While in power, amidst rumours of pressure from the Pentagon, the Labours dropped the issue. The Strategic Defence Review (SDR) in 1998 also avoided any commitment of NFU. Obviously, there would not be a possibility to see Britain and NATO embracing the NFU policy in a short run.

Instead, the Blair Government emphasised the so-called "negative security assurance" (NSA), which was a long tradition of the British, as mediation for NFU. In 1978, the UK, together with the US and the Soviet Union at the third United Nations Special Session on Disarmament, pledged not to use or threaten to use nuclear weapons against non-nuclear weapon states parties to the Non-Proliferation Treaty (NPT) regime unless they were to attack Britain in alliance with a nuclear weapon state. In 1998 SDR, the Labour Government restated the existing NSA as its policy. Given in current circumstances, no nuclear weapon states, official or potential, would likely attack the UK by using nuclear weapons. The NSA policy would make Britain very close to a NFU posture.

By contrast, after the successful detonation of its first A-bomb in October 1964, the PRC immediately declared its NFU principle, which meant China would use nuclear weapons against its enemy first at no time and under no circumstances. This principle was constantly declared in every nuclear test or other public occasions concerning nuclear policy afterwards. The NFU principle, as a matter of fact, is one the few nuclear policies China had ever proclaimed, although its implications are quite controversial. To study China's nuclear strategy can never ignore its NFU policy.

Why did the Chinese choose to accept it when most Western nuclear powers refused to do? Although some scholars strongly questioned the verifiability of China's NFU pledge, there would be no sense to believe that China would play lip service for nothing. China's pursuit of the NFU policy may be to be associated with its view of the roles and functions of nuclear weapons. From China's perspectives, the NFU

[11] Ian Davis, *US-UK Nuclear Cooperation and the Future of the UK Trident System*, conference paper, Meeting of the All-Party Parliamentary Group on Security and Non-Proliferation, 5 February 2002, Westminster, London

principle is valued for its political effect. It would be useful not only for nuclear justification, but also for diplomatic propaganda. The proclamation of NFU could justify China's possession of nuclear weapons as an independent defence of the oppressed peoples, while making a vivid distinction from the imperialist nuclear owners. Such posture certainly could make perfect propaganda for the Third World countries.

In April 1995, the PRC made another official statement, declaring its unconditional provision of "negative security assurance" to all non-nuclear weapon states, at the same time undertaking to provide these nations with "positive security assurance." (PSA) In terms of PSA, China has agreed with the other four major nuclear weapon states, i.e., the US, Russia, Britain and France, to work within the Security Council to take "appropriate measures to provide...necessary assistance to any non-nuclear weapon State that comes under attack with nuclear weapons." (Ministry of Foreign Affairs, PRC, 1995)[12] The precise nature of the assistance is not elaborated, and the Chinese statement makes clear that this position does not in any way compromise its desire for a universal NFU pledge and unconditional NSA, nor does it endorse the use of nuclear weapons (Ministry of Foreign Affairs, PRC, 2000).[13]

The PRC is not so naïve to make NFU, NSA or PSA commitments without nuclear guarantee. In theory, nuclear weapons could be functional only if when China were under nuclear attack. However, the Chinese never ceased to imply that other side of NFU must inevitably include "second strike" and "nuclear retaliation", which would "inflict unacceptable damage on an enemy in a retaliatory strike". According to a CIA report, the Chinese will have 75-100 nuclear capable ICBMs (DF-5A, DF-31, and DF-41) and SLBMs (JL-2) aiming at the US before 2015. Most of them, which are four times as many as today will be mobile (Minshanbao, 2002).[14] In addition, there are strong evidences indicating that the Chinese have made their nuclear capable missiles to target at adjacent countries, even those non-nuclear weapon states. For

[12] Ministry of Foreign Affairs, PRC, *China's National Statement On Security Assurances*, (Beijing: Ministry of Foreign Affairs, PRC, 5 April 1995) Government publication.

[13] Ministry of Foreign Affairs, PRC, *Wuhe Anbao Wenti (Non-nuclear security assurance issues)*, (Beijing: Ministry of Foreign Affairs, 2000), electric version: http://www.fmprc.gov.cn/chn/2389.html

[14] Minshenbao, *Zhonggong Baimei Yuanchen Hedan, Erlingyiwu nian Miaozhun Meiguo (China's 100 Nuclear Missiles aiming at the US in 2015)*, (Taipei, Minshenbao, 11 January 2002), p. A2

example, China's DF-21s' basing and ranges suggest targets in places such as Japan, South Korea, Okinawa, the Philippines, or Vietnam. If true, as some observers believed, that China's target sets for the DF-3 included US bases in the Philippines and Japan. Such missile deployments potentially violates China's vow for NSA(Gill and Mulvenon, 1999).[15] The scepticism on China's sincerity remains.

Suspected Chinese Strategic Missile Bases			
Base Number	**Base Military Unit Cover Designator**	**Base and Selected Brigade Locations**	**Reported Missile Types**
51 Base	80301	*Headquarters:* Shenyang, Jilin Province *Brigades:* Tonghua (DF-3A and DF-21), Dengshahe (DF-3A)	DF-3A (CSS-2) DF-21 (CSS-5)
52 Base	80302	*Headquarters:* Huangshan (Tunxi), Anhui Province *Brigades:* Leping (DF-15), Lianxiwang (DF-3A)	DF-15 (CSS-6) DF-3A (CSS-2)
53 Base	80303	*Headquarters:* Kunming, Yunnan Province *Brigades:* Chuxiong (DF-21), Jianshui (DF-3A)	DF-3A (CSS-2) DF-21A (CSS-5)
54 Base	80304	*Headquarters:* Luoyang, Henan Province *Brigades:* Luoning (DF-5), Sundian (DF-4)	DF-4 (CSS-3) DF-5 (CSS-4)
55 Base	80305	*Headquarters:* Huaihua, Hunan Province *Brigades:* Tongdao (2 brigades of DF-4)	DF-4 (CSS-3)
56 Base	80306	*Headquarters:* Xining, Qinghai Province *Brigades:* Datong (DF-3A), Delingha (DF-4), Da Qaidam (DF-4), Liujihou (DF-3A)	DF-3A (CSS-2) DF-4 (CSS-3)
NA	80310	*Headquarters:* Baoji, Shanxi Province	NA
NA	NA	*Headquarters:* Yidu, Hubei or Shandong Province	DF-3A (CSS-2)

Sources: Bates Gill and James Mulvenon, *The Chinese Strategic Rocket Forces: transition to credible deterrence*, Table 2, conference paper, "China and Weapons of Mass Destruction:Implications for the United States", National Intelligence Council and Federal Research Division, 5 November 1999.

[15] Bates Gill and James Mulvenon, op. cit.

Counterforce and countervalue

Somehow different from America's targeting debate on "counterforce" and "countervalue", which were based on more military estimates, Britain's was more politically and economically complicated. In general, the British nuclear planning was out of the combined influences by strategic bombardment obsession during the WWII, the American "massive retaliation", the fear of enormous Soviet invasion and their own nuclear limitation. The strategy of "countervalue", by which the targets of nuclear attacks would be the Soviet cities, rather than military sites, was first considered by the UK Governments, especially if they were forced to encounter nuclear attacks alone, i.e., without American assistance. In addition, the British Government even publicly declared that the nuclear retaliation would be at the Soviet Union's heartland rather than at the point of conflicts. According to Anglo-American strategic assumptions, just as the nuclear bombardments in Hiroshima and Nagasaki, it was not immoral and would be justified to use nuclear weapons on enemy's population if "this could save the lives of more people". This was why the "Moscow Criterion", which implied that British force would reach and inflict unacceptable damage upon the Soviet capital, was born.

The UK did have its "counterforce" or "no-cities" strategy, too. If necessary, it was primarily to meet the targeting needs of NATO and America's SAC in order "to conduct, in concert with external forces, to neutralise enemy nuclear capacity, to destroy his ability and will to wage war, to disrupt his command and control, and destroy his land, naval and air force, including logistic support elements" (Lawrence, 1986).[16] Such consideration, however, must base on a collective framework involving American nuclear assistance. It would be less plausible to assume that the British, whose nuclear arsenal could just barely meet one third of their own defence need, would stick to such targeting priority without allied assistance.

In an economically more difficult China, targeting policymakers have no many choices as well. "Countervalue" strategy seemed to be the first and feasible option. Simply speaking, the goal of China's "countervalue" policy was to pursue the effective employment of missile forces in an effort to damage or destroy enemy's

[16] Lawrence Freedman, op. cit., p.120.

most populous cities under any of the circumstances by which hostilities were initiated. It was, however, almost an impossible illusion to China in its budding years when the capitalist US was the number one enemy. Short of effective long-range delivery systems, the PRC's nuclear deterrence against the US was almost invalid, even though this strategic impotence was not lasting long while Moscow replaced Washington as the capital enemy of China(Gill and Mulvenon, 1999).[17]

Due to the influence of the first Gulf War, debates about "countervalue" and "counterforce", however, were raised in China, especially in academic or research communities. Impressed by America's advanced equipments, China's leadership asked the military to develop capacities to "engage in a local warfare under high technology". Since the 1990s, China's "Second Artillery" was additionally assigned to conventional tasks. Accuracy and precision make the first priority for missile systems despite the fact that China's missile technology is still far lagging behind other militarily advanced countries. Reflecting this aspiration, some academics argued that the penchant of nuclear "counterforce" was increasingly forming even though this principle could never be officially declared (United Daily, 2001).[18] However, it cannot be denied that there would still be a long way for the Chinese to produce precision and penetration weapons to meet "counterforce" requirement. The PLA did select several foreign military bases as nuclear targets, but these bases are apparently hardened and attacking bases of such kind could hardly acquire any substantial strategic objectives. In addition, China currently has no intention to increase its nuclear arsenal, which was generally used for "second strike" (United Daily, 2000).[19] The most advantage China could take from its own few nuclear weapons, if necessary, is still the "countervalue" policy in order to retaliate upon the attackers who irresponsibly initiated the nuclear war.

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[17] Bates Gill and James Mulvenon, op. cit.

[18] United Daily, *Zhonggong Guanxuejie Jianyi, Youxiandu Jubei Kuozhang (Suggestions on limited military expansion in China's government and academic circles)*, (Taipei, United Daily, 15 February 2001), p.13.

[19] United Daily, *Zhonggong Hewu Jiemi, 1946-1972 (De-classification of China's Nuclear Secrecy, 1946-1972)*, (Taipei: United Daily, 1 April, 2000), p.13.

Strategic and tactical roles

From "People's War" to "Minimum Deterrence" to "Limited Deterrence", the Chinese nuclear development had been undergoing doctrinal evolution over the past decades among strategists. After Maoist "People's War" policy, which advocated guerrilla tactics and protracted warfare, many Chinese strategists argued that "Minimum Deterrence", requiring a single countervalue punitive strike on cities to deter, may best suit Chinese needs vis-à-vis gigantic nuclear stockpiles of two Superpowers. For the Chinese, tactical and strategic division of nuclear weapons was meaningless and unnecessary since, similar to the Soviet assumptions, a nuclear war must be a general war, control and limitation of nuclear forces would be unreal and impossible. Thanks to the end of cold war and impact of the first Gulf War, "Minimum Deterrence", had been seen as passive and incompatible with a future requirement for more flexible nuclear posture. "Limited Deterrence", which includes the introduction of limited warfighting capabilities; improved command and control and early warning systems; smaller, survivable, mobile, more accurate, and diverse cruise and ballistic missile nuclear delivery systems; and the addition of counterforce targets, has widely discussed, although Beijing Government has not yet declared it in public.

While the PLA is pursuing a capacity of engaging in a local war under high technology, "Limited Deterrence" approach should be able to respond to "any level of nuclear attack, from tactical to strategic", especially it was to discuss about the limited, counterforce, war-fighting capabilities of nuclear weapons (United Daily, 2000).[20] However, these are still unfeasible aspiration for the Chinese military for the time being. Tactical use of nuclear weapons, as "Limited Deterrence" required, needs more precision weapons and reconnaissance technology, which China could hardly acquire or produce in a near future. Technological restraints of such kind obviously will remain as one of the foremost obstacles for the realisation of "Limited Deterrence"

[20] United Daily, *Mei Ru Bushu NMD, TMD, Zhonggong Jiang Tiaozheng Hewu Guimo: Zhonggong Junkongsi sizhang Sha Zhkang jigao, zhonggong hewu liliang yizhi chuzai "zuidi xiandu weizhe" (If the US were to deploy NMD and TMD, China will be to adjust her nuclear stockpile: Director of Arms Control Sha Zhkang warned: the Chinese nuclear forces have always relied in limited deterrence)*, (Taipei, United Daily, 12 July, 2000), p. 13.

(United Daily, 2003).[21]

By contrast, the British had technically divided the use of nuclear weapons as "strategic" and "sub-strategic" roles since the cold war. Without a clear distinction, Britain's "strategic" use seemed to be applied in a general nuclear war, while the "sub-strategic" use in a limited nuclear war that would not automatically lead to a full-scale nuclear exchange. Such division, based on concepts of "escalation" and "flexible response", incurred severe doubts and criticism especially by the Soviet and Chinese strategists who disbelieved that a controlled nuclear war was plausible in reality. It was also questionable by scientists that whether cold war nuclear weapons could be accurate and precise enough to carry on so-called "sub-strategic" mission. Besides, the debates of "sub-strategic" use had also never subsided among British critics, who apparently preferred to take nuclear weapons as a special weapons primarily, and possibly only for political and diplomatic considerations, rather than for various military roles.

The "sub-strategic" use, although it never becomes a reality, had changed its nature at the end of the twentieth century, especially after 9-11 attack and had become a solution by the British Government for new threats, such as weapons of mass destruction (WMD) and ballistic missile defence (BMD) issues. According to a public document, "deterrence policy needs to be developed to focus on threats below the strategic level, and UK policy on BMD will need to develop in response to changes in the nature of the threat and the defensive capabilities available. Doctrine, planning and training and exercise policies must prepare to deter and defend against the use of (WMD).(Ministry of Defence, UK, 2002)"[22] The 2002 SDR New Chapter also states, the UK "must therefore maintain a wide and flexible range of military options, including conventional weapons with a capacity for precision and penetration so as to minimise incidental damage… But, crucially, (UK's) deterrent extends well beyond the military dimension to a response co-ordinated across Government and with friends and allies…. The UK's nuclear weapons have a continuing use as a means of deterring major strategic military threats, and they have a continuing role in guaranteeing the

[21] United Daily, *Whuafu Zhiku: Zhonggong Junshi Weixie Buliao Meiguo (CATO: Chinese Military Cannot threaten the US)* (Taipei: United Daily, 25 January, 2003), p.13.

[22] Ministry of Defence, UK, *Future Strategic Context for Defence*, (London: Ministry of Defence, 2002), paragraph 97.

ultimate security of the UK." (Ministry of Defence, UK, 2002)[23] Several other statements like these from the Labour Government have implied that the use of nuclear weapons to deter chemical and biological threats has not been ruled out, responding the US policy of "deliberate ambiguity", but must be under strategic level, i.e. "sub-strategic", vis-à-vis nuclear attacks for "strategic" retaliation. However, such classification was still yet verified by any official declaration.

Nuclear disarmament

During the 1950s and 1960s, owing to the threat of superpowers and the deficiency of nuclear capacities, the PRC frequently appealed to nuclear disarmament in public. In general, its nuclear disarmament policy comprised two major parts. On one hand, existing nuclear powers should discard the production of nuclear weapons and destroy what they had owned step by step. On the other hand, China also implicitly favoured nuclear proliferation, particularly in the Third World.

Such stance had wavered since the 1970s when China began to open to the West. By the early 1990s, the PRC's attitude substantially shifted to opposing nuclear proliferation (Wang Kuangyia, 2002).[24] The geographic scope of China's nuclear exports declined to cover mainly Iran and Pakistan,[25] the character of China's remaining nuclear exports gradually shifted to dual-use nuclear goods, and the relative contribution of these exports to nuclear proliferation accordingly shrunk. These anti-proliferation developments were enhanced by the gradual expansion throughout the 1990s of China's formal nuclear non-proliferation commitments (United Daily, 2001).[26] The PRC signed the NPT in 1992 and ratified the Chemical Weapons Convention (CWC) in 1997. The Comprehensive Test Ban Treaty (CTBT) was also

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[23] Ministry of Defence, UK, *Strategic Defence Review: a new chapter*, (London: Ministry of Defence, 2002), Box Deterrence, paragraphs 21, 23, 24.

[24] Wang Kuangyia (Deputy Foreign Minister, PRC), *Buduan Wanshan Fang Kuosan Jizhi, Sujin Guoji Heping Yu Fazhan: Zhongguo de FangKuosan Zhengce yu Shijian, (Continue to complete non-proliferation mechanism: China's policy and practice on non-proliferation)*, (Beijing: People's Daily, 16 October, 2002), electric version: http://www.fmprc.gov.cn/chn/35992.html

[25] United Daily, *Zhonggong Shidi Shiyou? Mei Buyingyou Huanxiang (Friend or foe? The US should not have illusion on China)* (Taipei: United Daily, 23 October, 2001), p.11.

[26] China joined the International Atomic Energy Agency (IAEA) as early as 1984.

approved in September 1996 (Ministry of Foreign Affairs, PRC, 2003).[27] In its 1995 White Paper on arms control and disarmament, the PRC Government stated its support for the establishment of nuclear-free zones in the Korean Peninsula, South Asia, Southeast Asia, and the Middle East. China is now a signatory to several nuclear-weapon-free-zone (NWFZ) treaties: the Treaty of Pelindaba (Africa NWFZ), the Treaty of Raratonga (South Pacific NWFZ), and the Treaty of Tlatelolco (Latin American NWFZ). During the ASEAN Regional Forum ministers' meeting, China stated it also would sign the Southeast Asian NWFZ Treaty.

However, it is still too early to judge China as a nuclear-free lover. First, the PRC is not yet a member of Australia Group, the Wassenaar Arrangement and Nuclear Supplier Group. Most of all, China is continually reluctant to fully acceding to Missile Technology Control Regime (MTCR), which is viewed as a virtual step toward real non-proliferation. For many times, Chinese officials have criticized the MTCR as a discriminatory regime that relies on double standards and that focuses too heavily on the supply side, and the MTCR does not control exports of strike aircraft, which arguably are better delivery vehicles for WMD than missiles and which the US sells all over the world. Moreover, China's original and subsequent missile non-proliferation commitments are bilateral and political promises made in the context of US-PRC bargaining. Chinese officials probably interpret them from that perspective. As such, China has linked its missile technology exports to changes in US policy, such as reductions in US arms sales to Taiwan (Liu Jieyi, 2002).[28] PRC's Foreign Ministry officials also argued that only when the US respect China's security concerns about US weapons exports to Taiwan will China seriously consider US security concerns about China's missile technology cooperation with Iran and Pakistan (Medeiros, 1999).[29]

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[27] Ministry of Foreign Affairs, PRC, *Zhongguo de Fangkuosan Zhengce (China's Policy on Non-Proliferation)*, (Beijing: Ministry of Foreign Affairs, PRC, 2003), electric version http://www.fmprc.gov.cn/chn/34389.html

[28] Liu Jieyi (Director of Arms Control, Ministry of Foreign Affairs, PRC), Press Conference on missile technology export control regulation, (Beijing: Ministry of Foreign Affairs, 27 August 2002), electric version: http://www.fmprc.gov.cn/chn/34243.html

[29] Evan S. Medeiros, *The Changing Character of China's WMD Proliferation Activities*, conference paper for "China and Weapons of Mass Destruction: implications for the United States", 5 November 1999, National Intelligence Council and Federal Research Division.

Second, although the Chinese Government has committed itself to several non-proliferation agreements, its officials seemed to be incapable of prohibiting numerous private companies and individuals, who were induced by business profits, from exporting nuclear-specific materials, equipments, and technologies to unsafeguarded facilities in countries with suspected nuclear weapons programmes. This was the reason why three prominent American Congressmen even called China "the Wal-Mart of international nuclear commerce" during a Congress debate in 1997 (Markey, Gilman and Cox, 1997).[30] Unless the PRC Government could effectively regulate its own companies and individuals, commitments on non-proliferation of any kind would never be meaningful.

By contrast, the British policy for nuclear disarmament has been consistent and systematic. During the early 1960s, Macmillan and his Government had worked hard not only to ensure that Britain was equipped with a wide range of nuclear weapons, tactical as well as strategic, but also to persuade the US and the Soviet Union to halt the arms race. The UK took the initiative in pressing for a test ban agreement and played a very active role in the negotiation with two Superpowers, which resulted in the 1963 Partial Test Ban Treaty (PTBT), which banned nuclear weapon tests in the atmosphere, outer space and under water.

Since the end of the Cold War, the UK has made more significant reductions in its holding of nuclear weapons of its own volition. All nuclear artillery shells and those nuclear weapons that were routinely carried on Royal Navy ships prior to 1992 have been withdrawn. Plans to procure a nuclear-armed stand-off missile for Tornado were cancelled in 1993 and stocks of the sub-strategic WE177 free-fall bombs have been halved. With the withdrawal of the last RAF WE 177 bombs in March 1998, Trident is now Britain's only nuclear force. The 1998 SDR also stated that Britain would reduce its nuclear readiness: Less than 200 operationally available warheads are needed. The number of Trident warheads deployed is reduced from 60 to 48 per submarine. The number of Trident II missiles procured is reduced from 65 to 58. Only one out of four current Trident submarines would be on deterrent patrol at any time, with "notice to fire" being measured in days rather than minutes (Ministry of Defence,

[30] Edward J. Markey, Benjamin A. Gilman, and Christopher Cox, *China and Nuclear Trafficking*, (USA: Washington Post, 29 October 1997), p. A23.

UK, 1998).[31]

Conclusion

The objective of this "Analysis of Nuclear Policies: British and Chinese case study" is the hope that a meaningful analysis of the two cases could be introduced by focusing on several selected topics. Britain and China are such different countries with distinctive features on the evolution of their nuclear development. Individually, each section represents a study of a particular issue with the author's own evaluation and interpretation. Collectively, it attempts to undertake an integral and systematic investigation on nuclear policies of London and Beijing. By the help of re-examining nuclear policies of both countries from past till now, especially in the post cold war era, the author also wishes to achieve a better understanding of the various elements of this subject matter.

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[31] Ministry of Defence, UK, *Strategic Defence Review*, (London: Ministry of Defence, 1998), chapter 4.