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## Government Leadership Change and International Negotiations

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International negotiations rarely occur under conditions of perfect or completely symmetric information. In the course of pursuing foreign policy, states withhold certain information and intentionally communicate that which is false or misleading. A particularly common instance of incomplete information is that occurring after a change in leadership. When a new government takes office, the nation's policy positions inevitably undergo a major transition. A change of leadership while a state is conducting prolonged negotiations over long-term issues is likely to change both their trajectory and outcome. The other party concerned in such negotiations is unfamiliar with the new government and its ways, yet historical interaction has made its own circumstances and preferences commonly known to both sides. This is a situation of asymmetric information. The leadership transition of one state frequently arouses suspicions and feelings of insecurity in others, because they have no way of comprehending the actual policy preferences and positions of the new government.

Changes in government leadership have engendered several asymmetric information scenarios in the course of contemporary Chinese foreign policy. Around the time the People's Republic of China (PRC) was established, neither the Soviet Union (USSR) nor the major Western powers had any understanding of the Chinese Communist Party (CCP) leadership. They were suspicious and hesitant, often adopting a wait-and-see stance in their dealings with the new government. Following the Kuomintang (KMT) retreat to Guangzhou, for example, the USSR accordingly moved its Chinese embassy to the Guangdong capital, despite the ostensible bond of communism between the USSR and the Chinese communists. American ambassador to China, John Leighton Stuart is another example. Mao Zedong's 'leaning to one side' concept notwithstanding, Stuart remained in Nanjing, and in August 1949 was prepared to visit the Chinese Communists in Beijing. The US knew too little about the Chinese communist leadership to be sure whether or not to broach a relationship with the new regime. It was in January, 1979, shortly after the Cultural Revolution and at the start of the open door policy, when the western world still knew little about the new generation of CCP leaders, that the Vice Premier of the State Council, Deng Xiaoping, and his wife Zhuo Lin accepted an invitation to a formal

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8-day visit to the United States. US negotiations throughout the visit would be keyed to ascertaining whether or not the new government was friendlier than the last. Most recently, China's leadership change after the CCP 16th National Congress captured the interest of politicians, the media and academic circles around the world. Speculative articles, one in particular entitled 'Who is Hu?' appeared in newspapers and magazines everywhere.

Although changes on the Chinese side have held certain implications for Sino-US relations, the most dramatic example of asymmetric information in international politics is undoubtedly that created by the four-yearly US presidential elections. As America is one of the most influential powers, the rest of the world awaits the outcome of its elections in uneasy suspense. Inconsistent policy signals sent out by Republican and Democratic candidates throughout their electoral campaigns makes distinguishing between attempts at favorable posturing for the benefit of voters and bona fide policy positions difficult to the point of impossibility. The entry into office of each new US president over the past several decades has had definable impact on US-Sino relations. In order to gain a deeper and broader understanding of international negotiations between the United States and China, and between other states, it is necessary to consider the strategies and types of state behavior that are engendered by the asymmetric information stemming from a change in government.

This essay discusses the impact of government change on US-Sino relations. It begins with constructing a game theoretical model of the impact of governmental change on international negotiates. As data is limited, the model is based on individual case studies. The essay ultimately aims to address US-Sino relations, but initially bases its analyses on the effect of government change on international negotiations between the US and the USSR during the Cold War period. The reasons for this are primarily methodological. The long history of complex and extremely influential relations between the two superpowers has produced a wealth of available resources and data that is otherwise rare in studies of the history of international relations. The US-Soviet relations constitute a model demonstration of the effect of governmental change on international negotiations. After reviewing this period of history, the essay goes on to construct a game of asymmetric information, using John C. Harsanyi's technique of converting a game of incomplete information into a game of imperfect information<sup>1</sup>, in order to seek out and express fully the logic and dynamics of state behavior under these circumstances. The model is based specifically on an analysis of the second phase of negotiations between the United States and the Soviets on strategic arms limitations that began immediately after Jimmy Carter's election. It is then extended to account for more general

<sup>1</sup> John C. Harsanyi, 'Games with Incomplete Information Played by Bayesian Players,' *Management Science*, Vol. 14, (1967-68), pp. 159-82, 320-34 and 486-502.

international negotiations under conditions of asymmetric information. Finally, the essay analyses individual cases of negotiations between the US and the USSR from the vantage point of the generalized game of asymmetric information, and concludes with an assessment of the implications for US–Sino relations as posed by the US–Sino relations model.

## History of US–USSR Negotiations over Strategic Weapons Limitation

Although official negotiations did not begin until years later, the concept of a bi-lateral treaty to limit stockpiles of strategic nuclear weapons can be traced back to the actions of the US and the USSR in the wake of the Cuban Missile Crisis. The first phase of the Strategic Arms Limitation Talks (SALT I) lasted for two and a half years. From the beginning of the talks on 17 November 1969, until 26 May 1972, when the US–USSR Interim Agreement on Measures with Respect to the Limitation of Strategic Arms was signed in Moscow, the US and the USSR met seven times in Helsinki and Vienna. In November 1972, representatives of the US and the USSR opened a second round of SALT, whose goal was the comprehensive limitation of strategic offensive arms. At a summit meeting in Vladivostok two years later, US President Gerald R. Ford and Secretary General of the Soviet Communist Party Central Committee, Leonid I. Brezhnev affirmed that they had ‘... intentions of concluding an agreement with respect to limitations on strategic offensive arms that would remain effective until 1985’. The joint statement signed by the US and the USSR included the following provision: ‘Based on the principles of equality and equal security, the new agreement will include the following limitations: a. Both sides will be entitled to have a certain agreed aggregate number of strategic delivery vehicles...’.

The joint understanding agreed to at Vladivostok set an upper limit of 2400 on strategic delivery vehicles; in a press conference held in Vladivostok, US Secretary of State Henry Kissinger stated that this limit would include bombers.<sup>2</sup> To all appearances, the US and the USSR were not far from concluding a SALT II agreement. Around this time, however, a revolution in military technology occurred that brought two extremely controversial issues—the USSR backfire bombers and the US cruise missiles—to the forefront. This had the effect of gradually stalling and eventually halting negotiations by early 1976. The debate, to put it simply, centered upon US efforts to include the USSR backfire bombers—potentially strategic middle range bombers—in the quota. The Soviets unequivocally opposed this move. The Soviets, meanwhile, made efforts to place a strict limit on cruise

<sup>2</sup> Office of the Historian, Bureau of Public Affairs, Department of State, USA, *American Foreign Policy Basic Documents 1977–1980* (Washington, DC: Department of State, 1983), p. 898.

missiles—‘pilot-less aircraft’ which could be launched from a variety of platforms, and which the US was still in the process of developing at the time of the talks—by including them in the quota.

The behavior of American Secretary of State, Henry Kissinger, created further difficulties as regards resolving the two issues, according to Raymond L. Garthoff. In 1973, Kissinger encouraged testing and deployment of cruise missiles, although the military was not terribly interested in the cruise missile system. Kissinger promised the Soviets that the quota discussed at Vladivostok would not include backfire bombers, but at the same time informed the US top military brass and Congress that the bombers *would* be included in the quota, making it an even thornier issue.<sup>3</sup>

Despite these looming difficulties, in a final attempt at the beginning of 1976 Kissinger helped to bring about ‘significant progress’. The Soviet leaders seemed interested in the latest American proposal; it upheld the Vladivostok quota of 2400 and did not include backfire bombers but did include cruise missiles. However, after the American Joint Chiefs of Staff announced in no uncertain terms that they would oppose any agreement that contained such a provision President Ford, under domestic political pressure, concluded that ‘... there was no way to conclude a SALT agreement in 1976’.

Nonetheless, at this time the SALT agreement was ‘90 percent complete’. Throughout 1976, SALT negotiation teams from the respective nations continued to meet in Geneva to conduct negotiations regarding several small but controversial parts of the draft agreement. In his final state of the address to the nation on 12 January 1977, President Ford expressed belief that a SALT agreement would be concluded before the end of the year on the basis of the Vladivostok accord. One week later, Jimmy Carter was sworn into office as the next president of the United States.

## Asymmetric Information

At the time President Carter was sworn into office, the Soviet Union was unsure of the preferences of the new American government with respect to SALT II. Both sides, however, sincerely believed that the talks could reopen under the new leadership. For the preceding eight years, the Republican presidents Richard M. Nixon, Gerald Ford, and Secretary of State Henry Kissinger had consistently implemented a policy of détente. As Carter’s presidency represented the first real change in leadership since 1969, from the Soviet perspective it was impossible to ascertain the preferences of the new government with respect to SALT II. The Soviets had no way of knowing whether Carter would maintain the policy of détente followed by Nixon, Ford, and Kissinger, or adopt the hard-line approach that had begun

<sup>3</sup> Raymond L. Garthoff, *Détente and Confrontation: American-Soviet Relations from Nixon to Reagan*, revised edition (Washington, DC: The Brookings Institution, 1994), p. 600.

to emerge in American policy circles several years earlier. In official statements before taking office, Carter sent mixed, often confusing signals. At times it seemed as though he would take an aggressive, hard-line position that would limit the nuclear stockpiles of both states, requiring the USSR to make even more substantial cutbacks on its strategic capabilities. In one interview in the midst of his 1976 electoral campaign, Carter criticized President Ford, saying that ‘...the policy of détente makes too many concessions to the Russians, and we obtain too little in return’. In another interview, Carter remarked that America should take ‘a little more of a hard-line’ in pursuing its policy of détente.<sup>4</sup> In his 20 January 1977 inaugural speech, Carter proclaimed to the world his ambitious ‘ultimate goal’: ‘[to] eradicate nuclear weapons from the face of the earth’. Carter’s Secretary of State, Cyrus R. Vance, observed: ‘The Soviets, always edgy when confronted with a new American administration, were uneasy about Carter’s well-publicized desire for sharp reductions in nuclear weapons and uncertain about his intentions regarding détente’.<sup>5</sup>

On the other hand, there were occasions when Carter’s remarks indicated that his policies would remain consistent with détente, and that he would engage in SALT II on the basis of the Vladivostok accord, thereby maintaining continuity with the outgoing government. Zbigniew K. Brzezinski commented that Carter ‘came to the White House... firmly support[ing] the concept of détente’.<sup>6</sup> One week after the Carter Administration entered office, a private letter was sent to the Soviet leader Leonid Brezhnev. In it, Carter emphasized, ‘It is my goal to improve relations with the Soviet Union’, and that of the three potential paths towards achieving this goal, the first was that of quickly bringing the SALT to a close.<sup>7</sup> At his first press conference in Washington on 8 February 1977, President Carter announced: ‘If the Soviets think that it is feasible, I am willing to swiftly conclude an agreement with them, and in this first phase of talks, [I am willing] to temporarily shelve backfire bombers and cruise missiles’.<sup>8</sup> Later he clearly expressed: ‘I now approve of pursuing détente with the Soviets. As far as I am concerned, it represents progress towards peace’.<sup>9</sup> According to Carter’s memoirs, when he took office he felt that he ‘would follow the path that had been established by [his] predecessors in the White House’.<sup>10</sup> When the new American administration made its first proposal to the

<sup>4</sup> *Ibid.*, p. 624.

<sup>5</sup> Cyrus Roberts Vance, *Hard Choices* (New York: Simon and Schuster, 1983), p. 46.

<sup>6</sup> Zbigniew K. Brzezinski, *Power and Principle: Memoirs of the National Security Advisor 1977–1981* (New York: Farrar Straus Giroux, 1983), p. 147.

<sup>7</sup> *Ibid.*, p. 152.

<sup>8</sup> Office of the Historian, Bureau of Public Affairs, Department of State, USA, *American Foreign Policy Basic Documents 1977–1980* (Washington, DC: Department of State, 1983), p. 154.

<sup>9</sup> Garthoff, *Détente and Confrontation*, p. 624.

<sup>10</sup> Jimmy Carter, *Keeping Faith* (New York: Bantam Books, 1982), p. 215.

Soviets with respect to SALT, therefore, the Soviet leadership was unsure as to the precise structure of American preferences.

The Americans, on the other hand, had little doubt as to the preferences of the Soviets. Since Nikita S. Khrushchev stepped down in the mid-1960s, the Soviet government had consistently been under the control of a leadership with Brezhnev at its core. Even more importantly, as Presidents Nixon and Ford, as well as Secretary of State Kissinger, had been conducting negotiations with the Brezhnev government over the intervening years, the Americans had a very clear understanding of Soviet preferences with respect to SALT. America had made various types of proposal to the USSR, and the Soviet responses essentially revealed their general policy direction. Carter wrote in his memoirs: 'It is much easier to negotiate a SALT treaty in a totalitarian society with a relatively consistent policy, where the voices of news media and opposition political forces are either stilled or heard only in a closed room. The Politburo... can make a decision, and the nation's propaganda apparatus can then proclaim the 'unanimously agreed upon' new policy essential to self-defence'.<sup>11</sup> This being the case, when US-USSR negotiations began in early 1977, the Soviet's position with respect to SALT II was common knowledge shared by the US and the USSR.

## Preference Orderings of the US and the USSR

The game-theoretic model introduced in this essay explains the context of asymmetric information that is characteristic of initial negotiations between states following one state's formation of a new government. As such, it concludes after one round. In subsequent negotiations, the context of asymmetric information is different from that of the first round, and although infinitely complex mathematic models could be used to capture these differences, this essay focuses on illuminating the more general logic behind them, using a relatively simple model. The essay goes on to discuss the preferences of the two players (the US and the USSR).

### Possible American Preferences from the Soviet Vantage Point

From the Soviet perspective, before the preferences of the new American government become clear through repeated interaction, it could potentially be one of the two types; either a 'hard-line' or a 'soft-line' government.<sup>12</sup> The 'hard-line' government would advocate dramatic and comprehensive

<sup>11</sup> Jimmy Carter, *Keeping Faith*, p. 213.

<sup>12</sup> It is important to bear in mind that these two types are simplifications specifically for the game-theoretical model, and that they represent two different orderings of the utility obtained by the Americans from different types of actions. These expressions do not represent the general direction of American foreign policy, and as such should not be construed as having the meaning commonly attributed to them by the media or by foreign policy experts.

reductions of the Soviet nuclear weapons stockpile as a lead-up to the long-term goal of eradicating all nuclear weapons. Brzezinski recalls, on 3 February 1977 during the first meeting of the Special Coordinating Committee of the SALT talks, 'The president underlined his commitment to deep cuts, a position with which all principals were now familiar'.<sup>13</sup> Vance also subtly noted: 'Others in the administration, calculating that our long-term arms control and security objectives justified the risks of pressing at once for deep reductions and qualitative restraints on weapons modernization, argued for the comprehensive deep-cut approach'.<sup>14</sup> Beyond large-scale reductions, the hard-line American government also prefers to maintain the status quo rather than opt for a quick conclusion to a SALT agreement. In contrast to a possible soft-line government action, a hard-line government would not consider signing a nuclear disarmament treaty as a move to improve US–Soviet relations. As Garthoff notes, Carter did not consider improving US–Soviet ties as a priority of his foreign policy.<sup>15</sup> From the Soviet perspective, therefore, the hard-line type of US government would prefer to maintain the stalemate rather than accept any SALT agreement based on the framework of the Vladivostok accord.

Conversely, if the new government happened to be the soft-line type, it would be most interested in a rapid conclusion to the SALT agreement. In this respect, a soft-line government would have preference orderings similar to those of Nixon, Ford, and Kissinger. The government preceding Carter's believed that 'The more we try to cram into a single agreement, the longer it will take to negotiate; and the more drawn out the negotiations, the greater the risks of exacerbating the very competition we seek to avoid'.<sup>16</sup> During the SALT talks at the beginning of 1977 such a preference would imply a SALT agreement that did not include the controversial backfire bombers or cruise missiles. This is precisely what Carter told Soviet Ambassador Anatoly Dobrynin before the talks commenced in February 1977.

The strongest preference of a soft-line government is to conclude the SALT agreement as quickly as possible, and in an effort to break out of the deadlock experienced by the outgoing government, would be willing to conclude an agreement whose comprehensive quota included both backfire missiles *and* cruise missiles. This type of government would be more inclined toward complete elimination of nuclear weapons than not signing an agreement. Vance explains: 'I disagreed with the decision [to go beyond SALT II] but I was determined to give it my best... it might be that the Soviets... would be willing to take a bold step... we could not know unless

<sup>13</sup> Brzezinski, *Power and Principle*, p. 157.

<sup>14</sup> Vance, *Hard Choices*, p. 49.

<sup>15</sup> Garthoff, *Détente and Confrontation*, p. 625.

<sup>16</sup> Fred C. Ikle, 'Hearing on the Vladivostok Accord, 8 July 1975', in Roger P. Labrie, ed., *SALT Handbook: Key Documents and Issues 1972–1979* (Washington, DC: American Enterprise Institute for Public Policy Research, 1979), p. 325.

we tried. And success would mean a dramatic breakthrough in turning around the arms race'.<sup>17</sup> As should now be apparent, a soft-line American government prefers to conclude a broad-based, large-scale disarmament treaty rather than maintain the status quo. Even Kissinger believed that '... the deep cut proposal we had put together on SALT had a good chance to be accepted by the Soviets if they are sincere and want to make progress on disarmament'.<sup>18</sup> Failing this, the soft-line type of government, in contrast to the hard-line type, will readily sign an agreement with the Soviets.

### Soviet Preference Orderings and the Impact of 'Double-Talk'

When reviewing the history of SALT from 1972 onwards, it is apparent that the Soviets most wanted an agreement that reflected their own understanding of the Vladivostok accord. Its prominent points from the Soviet point of view were implementation of the comprehensive quota of 2400 strategic offensive vehicles that did not include Soviet backfire bombers, and limitations on testing and deployment of American cruise missiles. The outcome the Soviets least relished was that of their nuclear weapons stockpile being subjected to comprehensive large-scale reductions.

Soviet preferences as to the two outcomes are quite obvious. There is, however, a third possible type of SALT agreement, but its implications are ambiguous. Whether or not it could be beneficial to the Soviets depends on the 'type' of new American government in question, because its quota includes neither backfire bombers nor cruise missiles. The crucial element of such an agreement is that of knowing which 'type' of American government they would be dealing with in the future. As they do not, the Soviets are consequently unsure of their own preferences. On the one hand, the new American government following the soft-line path and not including backfire bombers and cruise missiles in the SALT quota would improve the general political atmosphere of the US–Soviet détente. Under these circumstances, such an outcome would be preferable to maintaining the status quo or no agreement at all. On the other hand, if the new American government were to be the hard-line type, a SALT agreement that did not restrict American cruise missiles would, from a Soviet perspective, be problematic, because a hard-line American government would be more prone to competing than cooperating with the Soviets. In an effort to avoid the deterioration in relations between the two states that such a scenario would imply, the Soviets would prefer not to conclude a SALT agreement with a hard-line US government.

<sup>17</sup> Vance, *Hard Choices*, p. 49.

<sup>18</sup> Carter, *Keeping Faith*, p. 219.

Brzezinski said that with such a SALT agreement, he could see ‘...an opportunity to halt or reduce the momentum of the Soviet military buildup’.<sup>19</sup> If the Soviets were to be faced with a hard-line type of American government they would opt to maintain the deadlocked status quo rather than allow their hands be tied into competing with the new government’s superior strategic capabilities for the next four-to-eight years. *Asymmetric and incomplete information, therefore, creates for the Soviets different utilities from the same outcome, depending on the type of American government they face.*

## Structure of the Game-Theoretic Model

In this section, a game-theoretic model with incomplete information of the first round of SALT in March 1977 is constructed, starting with the specific order of moves in the game for the USSR and the US and the available actions at each node.

### Sequence of Moves and Available Actions

In the first round of the game, the US makes one of three possible proposals to the USSR with respect to the SALT agreement. The first proposal,  $V$ , is based on the framework of the Vladivostok accord, and includes three main points: strategic offensive vehicles are limited to the 2400 quota agreed to at Vladivostok; backfire bombers are mentioned, but not actually included in the quota; American cruise missiles are included in the quota. From the vantage point of the USSR, this is the most accommodating and favorable proposal as well as one supported by the State Department and the Arms Control and Disarmament Agency, according to Brzezinski.<sup>20</sup>

The second proposal,  $V_p$  is that of a comprehensive, large-scale reduction that includes a three main points: the Vladivostok accord comprehensive quota decreases to 2000 or even less; backfire bombers are not included, but in exchange the Soviet Union guarantees not to enhance its strategic abilities; partial limitations are imposed on American cruise missiles. The Defense Department and the Joint Chiefs of Staff give their most support to this proposal, according to Brzezinski.<sup>21</sup>

The third proposal,  $V_m$ , recommends that the two sides quickly conclude a second SALT agreement and postpone discussion of the controversial backfire bombers and cruise missiles until a third round of SALT talks. If this proposal is accepted, its implications from the point of view of the USSR are ambiguous.

<sup>19</sup> Brzezinski, *Power and Principle*, p. 146.

<sup>20</sup> Brzezinski, *Power and Principle*, p. 158.

<sup>21</sup> *Ibid.*, p. 158.

After the Americans make their proposal, the USSR observes their actions and decides whether or not to accept. If the USSR rejects the proposal, the game ends with both sides accepting the status quo.

### Incomplete Information

During this round of talks, as already established, the Soviets are uncertain as to what type—hard-line or soft-line—the new American government is. They are consequently unsure what kind of impact excluding backfire bombers and cruise missiles from the agreement would have. If the new American government is of the hard-line type, the game will resemble the following from (Table 1):

If the new American government is the soft-line type and continues the policy of *détente*, the game will take the following form (Table 2):

According to Harsanyi, by choosing nature as the first move in a game of incomplete information it can be transformed into a game of imperfect information. Following this line of logic, nature first determines whether the new American government is hard- or soft-line. The Americans can see the move of nature, but the Soviets are unable to observe nature's choice. The letter  $p$  represents the initial probability that the Soviets believe nature selects the hard-line type of American government. In the second move of the game, the Americans select one of the three proposals discussed earlier:  $V_m$ ,  $V$ , or  $V_p$ . The USSR observes the move, but still does not know which type of American government it faces. In the extended game form model depicted in Figure 1 subsequently, broken lines indicate the three information sets.

**Table 1** Game with Hard-line Type American Government

		USSR	
		Accept	Do not Accept
Hard-line type American government	$V_m$	$U_2 (V_m), U_1 (V_m)$	$U_2 (SQ), U_1 (SQ)$
	$V$	$U_2 (V), U_1 (V)$	$U_2 (SQ), U_1 (SQ)$
	$V_p$	$U_2 (V_p), U_1 (V_p)$	$U_2 (SQ), U_1 (SQ)$

**Table 2** Game with Soft-line Type American Government

		USSR	
		Accept	Do not Accept
Soft-line type American government	$V_m$	$U'_2 (V_m), U'_1 (V_m)$	$U_2 (SQ), U_1 (SQ)$
	$V$	$U_2 (V), U'_1 (V)$	$U_2 (SQ), U_1 (SQ)$
	$V_p$	$U_2 (V_p), U'_1 (V_p)$	$U_2 (SQ), U_1 (SQ)$

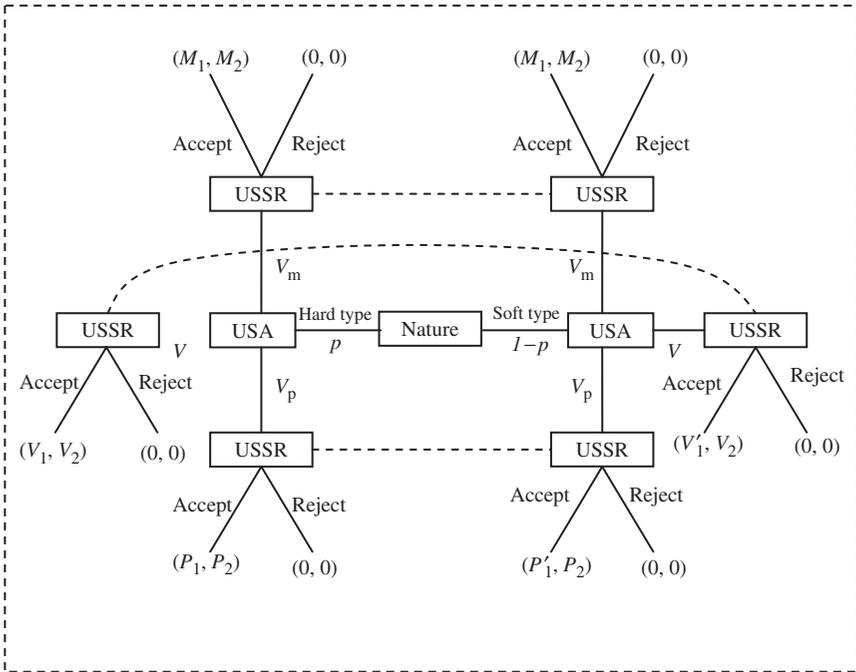


Fig. 1 Extensive form model of SALT II in early 1977.

In the extended form game (Figure 1), the USSR decides whether or not to accept the American proposal at each of the three sets of information. If the USSR does not accept, the outcome is maintaining the status quo, which is assumed to yield 0 utility to both parties. If the USSR accepts proposal  $V_m$ , the outcome is that agreement  $V_m$  made between the parties yields the utility  $M_1$  and  $M'_1$  to the hard-line and soft-line types of American government, respectively. If the Soviet Union faces the soft-line type of American government, the utility it derives from  $V_m$  is  $M_2$ , while if it faces the hard-line type of US government, it receives  $M'_2$  utility from it. According to the preference orderings discussed earlier,  $M_1 < 0 < M'_1$  and  $M_2 < 0 < M'_2$ .

If the USSR accepts proposal  $V$ , it will become the agreement between the two states. The utility obtained from it by the hard-line and soft-line types of American government and the USSR is  $V_1$ ,  $V'_1$ , and  $V_2$ , respectively. According to the preference rankings discussed earlier,  $V_1 < 0 < V'_1$  and  $V_2 > M'_2 > 0 > M_2$ . In the event of the Soviets accepting proposal  $V_p$ , it becomes the agreement. The preferences of the hard-line and soft-line US governments and the USSR are  $P_1$ ,  $P'_1$ , and  $P_2$ , respectively. The preference rankings are:  $P_1$  and  $P'_1$  are  $> 0$ , while  $P_2$  is  $< 0$ . Table 3 shows the preference orderings of possible game outcomes for the US and USSR.

**Table 3** Preference Orderings of Possible Game Outcomes for the US and the USSR

	<b>Hard-line Type of US Government</b>	<b>Soft-line Type of US Government</b>
<b>American utility preferences</b>	$P_1 > 0 > M_1 > V_1$	$M'_1 > V'_1 > P'_1 > 0$
<b>Soviet utility preferences</b>	$V_2 > 0 > M_2 > P_2$	$V_2 > M'_2 > 0 > P_2$

## Perfect Bayesian Equilibrium

The features of this game are similar to that of a signaling game, in that both simultaneously include updating and the simplest form of refinement.<sup>22</sup> In signaling games, a perfect Bayesian equilibrium is a combination of responses and beliefs that is most optimal at all phases of the game. These beliefs are generated using Bayes' Rule. In this section, the perfect Bayesian equilibria of the game are obtained.

In this game, several strictly dominated responses can be easily eliminated. Regardless of which type of American government they face, the Soviets will neither reject a  $V$  proposal nor accept a  $V_p$  proposal. Knowing this, a 'hard-line' type of American government will not propose  $V$ , and a soft-line type will not propose  $V_p$ . Beliefs are expressed as follows. The symbol  $\mu_m$  is used to express the probability that the Soviets observe the American government's proposal  $V_m$  as being raised by a hard-line government. Upon the American government making the proposal  $V$ , the probability that the USSR believes it observes a hard-line government is  $\mu$ . Finally,  $\mu_p$  represents the probability that upon observing the proposal  $V_p$ , the USSR would believe the US government to be of the hard-line type.

Among the preferences and combinations of responses and beliefs that remain, three perfect Bayesian equilibria can be identified. All are mixed strategy equilibria, in which different types of American governments each select from two types of action. First, consider the following strategic scenario. A hard-line type US government selects  $V_m$ , while a soft-line type selects  $V$ . The USSR will accept  $V$  and reject  $V_p$ . If the Soviet Union observes  $V_m$ , the Bayesian probability that the American government is of the hard-line type is 1, so the USSR's equilibrium strategy is 'If  $V_m$  is proposed, do not accept'. This is the first perfect Bayesian equilibrium strategy.

Second, consider the following strategic scenario. A hard-line type of US government proposes  $V_p$ , while a soft-line type proposes  $V_m$ . The USSR is certain to accept  $V$  and to reject  $V_p$ . If the USSR observes  $V_m$ , using

<sup>22</sup> Drew Fudenberg and Jean Tirole, *Game Theory* (Cambridge, MA: The MIT Press, 1991), p. 324.

Bayesian updating the probability that the American government is of the soft-line type is 1, thereby creating the second perfect Bayesian equilibrium strategy: under these circumstances, when the USSR observes a proposal  $V_m$  it accepts the proposal.

The third scenario is that of a hard-line type of US government proposing  $V_p$ , while the soft-line type proposes  $V$ . The Soviets are certain to accept  $V$  and to reject  $V_p$ . If, on the other hand, the Soviets observe  $V_m$ , its belief  $\mu_m$  is off the equilibrium path, and Bayes' Rule no longer applies in this case. Under such circumstances, accepting  $V_m$  is not an equilibrium strategy for the USSR, as if it were to follow such a strategy, the soft-line type of US government would propose  $V_m$  rather than  $V$ . Thus, the only equilibrium strategy remaining for the Soviets is to reject a proposal of  $V_m$ . When  $\mu_m > M_2/M_2 - M_2$  the third perfect Bayesian equilibrium is for the hard-line type of American government to propose  $V_p$ , the soft-line type of American government to propose  $V$ , and for the USSR to accept  $V$ , and to reject  $V_p$  or  $V_m$ .<sup>23</sup>

In the first two perfect Bayesian equilibria, the American government has a fixed preference for proposing  $V_m$ . If  $V_m$  is accepted, the outcome is ambiguous from the perspective of the Soviets. Observing proposal  $V_m$ , therefore, enables the Soviets to determine the type of American government with which they are interacting. The third perfect Bayesian equilibrium is more interesting as the ambiguous outcome places  $V_m$  off the equilibrium path. In this equilibrium, the prospect of the Soviets rejecting  $V_m$  prevents the soft-line type of American government from making its most preferred proposal of  $V_m$ . This gains the hard-line type American government 0 utility, as  $V_p$  most certainly will not be accepted by the Soviets. In this case, therefore, the Soviet's action does not affect the optimal response of the hard-line type of US government. Only when the Soviet belief ( $\mu_m$ ) that the American government is of the hard-line type exceeds a critical value do the Soviets reject  $V_m$ . Beliefs about  $\mu_m$  cannot be determined using Bayes' Rule, coming as they do from some exogenous source. A reasonable guess would be that the value of  $\mu_m$  is related to the Soviets' initial  $p$ -value (the probability that nature chooses a hard-line type of US government).

## The SALT Game in Historical Perspective

In order to obtain an improved understanding of the perfect Bayesian equilibrium strategies and beliefs, the essay next considers how the game theoretical model with asymmetric information was actually played in

<sup>23</sup> If the following conditions are satisfied, the Soviets rejecting proposal  $V_m$  is a more optimal response than accepting such a proposal:  $EU_2$  (accept  $V_m$ ) <  $EU_2$  (reject  $V_m$ )  
 $M_2 * \mu_m + M_2 * (1 - \mu_m) < 0 * \mu_m + 0 * (1 - \mu_m)$ . Thus,  $\mu_m > (M_2)/(M_2 - M_2)$ .

the second round of SALT talks between the USSR and the USA in March 1977.

The American proposal was formulated between February and March of 1977 at a meeting of the SALT Special Coordinating Committee. In late March, prior to Secretary of State Vance's leaving for Moscow, President Carter gave him instructions that the preferred proposal was for a large-scale reduction. The National Security Council warned Secretary of State Vance that '...the Soviets are likely to reject and ridicule our proposals'.<sup>24</sup> On March 28, when negotiations commenced at the Kremlin, the US made two proposals, explaining that the preferred proposal was for a complete, large-scale reduction (or, in the terms of the game introduced earlier,  $V_p$ ), while the other was a 'deferred' proposal ( $V_m$  in the earlier game).<sup>25</sup> The Soviets dramatically rejected proposal  $V_p$ . The Foreign Minister, Andrei Gromyko pounded on the podium, asserting that the American proposal was a 'cheap and dirty manoeuvre'.<sup>26</sup> The equilibrium that actually emerged here was evidently the third equilibrium discussed earlier: the hard-line type of American government proposes  $V_p$ , and the USSR rejects the offer.  $V_m$  was not on the equilibrium path, so the Soviets automatically rejected that proposal. It can hence be inferred that the Soviets had sufficiently strong belief that they were dealing with an American government of the hard-line type ( $\mu_m$ ). The historical record would indicate that this Soviet predisposition stemmed from one of two likely sources: Carter's private letter to Brezhnev<sup>27</sup> or Carter's speech to the UN regarding the possibility of complete disarmament.<sup>28</sup> As discussed earlier, however, at the point the talks began, the Soviets were still not certain what type the new American government was.

## Extension of the Model

Although this model of asymmetric, incomplete information is context specific, it can nevertheless be extended to other cases of government leadership. The definitive characteristic of the model is that at the start of the game the government of one state (player B) is unable to determine the utility preferences of another state that has just undergone a change of government (player A). When player B's government considers its future

<sup>24</sup> Brzezinski, *Power and Principle*, p. 160.

<sup>25</sup> In the model shown earlier, I treated each proposal as a separate action by the Americans, and did not put the two proposals together. This was done for several reasons: (i) before negotiations began, it was not common knowledge that the Americans would make two proposals; (ii) although the two proposals were made together, the two sides were to consider their proposals separately, as if they had been made independently of each other, and (iii) it is obvious that offering proposal  $V_m$  was just for show.

<sup>26</sup> Brzezinski, *Power and Principle*, p. 164.

<sup>27</sup> *Ibid.*, p. 161.

<sup>28</sup> Vance, *Hard Choices*, p. 53.

interactions with player A, the same outcome brings different amounts of utility depending on the type of new government that it faces. A few simple modifications to the model introduced earlier can extend it to similar cases of asymmetric and incomplete information between dyads wherein one state has recently undergone a change in government.

In the new general model, at the first node, nature determines whether the new government (player A) is of the 'friendly' or 'non-friendly' type. The initial probability that nature selects one type or the other is common knowledge shared by the two parties. At the next node, the two types of player A, each select one of the three possible actions. Borrowing two terms from a two-period reputation game developed by Kreps, Wilson, Milgrom, and Roberts, the first two actions are referred to as 'coordinate' and 'predate',<sup>29</sup> while the third is 'be ambiguous'. Player B next observes the action of player A, but does not know which type player A is, hence an information set follows each of the three actions. Player B can accept or reject A's proposal. If the proposal is rejected, the status quo prevails; if the proposal is accepted, coordinate, predate, or ambiguity will be the outcome. If player B faces a friendly type of player A, it will prefer ambiguity to maintain the status quo. If, however, player B faces a non-friendly type of player A, the status quo is preferable to ambiguity. This generalized model can be applied much more broadly, as demonstrated further.

### 1954 Talks between the US and the USSR Regarding German Unification

On 5 March 1953, the Soviet leader Joseph Stalin died. After an intense power struggle in the Kremlin, Khrushchev became the premier Soviet leader. At this time, the US was unable to determine the type of the new Soviet leadership. They sincerely hoped (and actually signaled this hope) that the new leadership would depart from Stalin's old mode of behavior, and adopt a more reconciliatory stance towards the West. In June 1953, however, the Soviets swiftly repressed an East German uprising, signaling that the new leadership could be little different from that under Stalin. When the meeting between the four major powers regarding German unification opened in early 1954, therefore, the US and the USSR each found themselves in a situation of incomplete, asymmetric information.

As to the available courses of action, according to John Lewis Gaddis, the Soviets could choose from one of the three proposals with respect to German unification: Stalin's proposal of March of 1952, Lavrenti Beria's May 1953 plan, or a proposal reflecting even more closely the Soviet ideal.<sup>30</sup>

<sup>29</sup> This model was used by Fudenberg and Tirole as a simple example of a signaling game. See Fudenberg and Tirole, *Game Theory*, p. 326.

<sup>30</sup> John L. Gaddis, *We Now Know: Rethinking Cold War History* (New York: Oxford University Press Inc, 1997), p. 133.

Of these, the Beria plan was obviously the most conciliatory while the third option of a proposal even more favorable to the Soviets was the most predatory, and repeating Stalin's proposal was the most ambiguous. The Beria plan called for a unified and neutral Germany, and was indifferent as to whether or not it was Socialist. This plan also required West Germany to pay large reparations to the USSR, and placed East Germany in a somewhat politically subordinate position within the new unified Germany. Should this plan have been implemented, it would undoubtedly have been the most favorable outcome from the vantage point of the US, and as such, a non-friendly type of Soviet government would never make such a proposal. A plan more favorable to the Soviets would be one that took a much firmer position with respect to German Unification, and that required the US military to withdraw from Germany. This would be the most favorable outcome from the perspective of the Soviets, but could never be realized because whether or not the Soviet government was of the friendly type, the US would never agree to such a proposal.

Stalin's proposal called for a meeting of the four powers in which it would be agreed that Germany should hold a free election and establish an independent, reunified, remilitarized, but neutral country. This proposal was ambiguous, as it would have allowed the Soviet Union to expand its influence to West Germany through its position in the East.<sup>31</sup> If the West knew that over the next 10–20 years it would be consistently dealing with the friendly type of Soviet leadership, this would be an outcome preferable to the status quo, as over the long term it would create a positive political atmosphere throughout all of Europe. If, on the other hand, the Soviets were of the non-friendly type, this outcome would not bode well, as a Soviet Union with an expansionist and imperialist leadership could turn a unified and remilitarized Germany into a source of instability in Europe. As should be apparent from the perfect Bayesian equilibria derived from above, when the West observes an ambiguous proposal, and holds strong enough belief that the USSR is of the non-friendly type, it will reject such a proposal.

Upon taking a look at how this game was actually played out historically, it transpires that the USSR opted for a predatory proposal. At the meeting between the four powers, the Soviet proposal very closely followed its own immediate interests. The American Secretary of State, John Foster Dulles noted: 'Molotov made [his] German proposal so extreme, calling in effect for complete Sovietisation [of] all Germany and withdrawal [of] US, UK and French forces, that we believe the Western position has been greatly strengthened by the exhibition of his uncompromising approach'.<sup>32</sup> Moreover, as Gaddis points out, if the Russians had repeated Stalin's March 1952

<sup>31</sup> John L. Gaddis, *We Now Know*, p. 134.

<sup>32</sup> *Ibid.*, p. 134.

proposal, the West would have been very likely to accept it. This case closely parallels the second perfect Bayesian equilibrium derived above. A non-friendly type of player A makes a predatory proposal, while a friendly type makes an ambiguous proposal. Player B observes these actions, rejects the predatory proposal, and accepts the ambiguous one.

## Games of Asymmetric Information in Interactions between the US and China

This essay first constructed a game-theoretic model of asymmetric information on the basis of the change of the US government that took place shortly before the second phase of strategic arms limitation talks with the Soviet Union. It went on to use the leadership change in the Soviet Union in 1954, after which the US and the USSR engaged in negotiations regarding German Unification, to demonstrate that the model may also be applied more generally to cases of strategic interaction involving new governments. These two examples prove that the outcomes obtained using simple game-theoretic analyses are largely compatible with the outcomes actually observed. This model has much potential for development. For example, the effects of the two players' time horizons on the equilibria are worth considering, as one key characteristic of this model is that of player B's expected value of interacting with a particular type of player A affecting its calculation of the utility received from an ambiguous outcome. Consideration of other historical cases of games of asymmetric information also facilitates an understanding of the model. Whether they are of theoretical or empirical concern, it is imperative that games of asymmetric information be given careful consideration in the course of conducting foreign policy research. In the final section of this essay, this is further demonstrated by means of a reflection on the implications of such asymmetric information for US-Sino relations.

As discussed in the introduction, asymmetric information stemming from American presidential elections and the new American governments that emerge every four years has dramatic implications for Chinese foreign policy. Since the establishment of the PRC in 1949 to the present, America has had 10 new governments (Table 4).

Of these 10 changes in leadership, those that occurred in 1963 and 1974 were respectively the results of one president's assassination and another's resignation, and both empowered the relevant vice presidents to assume the president's office without an election. In these two cases, foreign policy stayed relatively the same, and asymmetric information was not apparent. In 1989, when President Reagan's second term ended and President Bush was elected to office, because both were Republican presidents, and as Bush had formerly been Reagan's vice president, there was little mystery as to the new government under Bush. The remaining seven changes in government

**Table 4** Changes in American Government since 1949

Year	New President	Type of Change	Party of New President	Change in Governing Party
1953	Dwight Eisenhower	Election	Republican	Yes
1961	John Kennedy	Election	Democratic	Yes
1963	Lyndon Johnson	Vice President Assumes Presidency	Democratic	No
1969	Richard Nixon	Election	Republican	Yes
1974	Gerald Ford	Vice President Assumes Presidency	Republican	No
1977	Jimmy Carter	Election	Democratic	Yes
1981	Ronald Reagan	Election	Republican	Yes
1989	George Bush	Election	Republican	No
1993	William Clinton	Election	Democratic	Yes
2001	George W. Bush	Election	Republican	Yes

occurred when opposition party candidates won the election. As all seven presidents were from parties that had not governed for at least four years, they lacked foreign policy expertise and experience and also the cooperation of the outgoing government. As a result, foreign policy administration was difficult, and the uncertainty felt by the governments of the other states with which the new government would need to interact greatly increased. One example of discontinuity with the outgoing government is that of Democratic Party President Lyndon Johnson who, when he left office in 1969, took with him important foreign policy documents and tape recordings to lodge in his presidential library in Texas rather than leave them for the new Republican Party President Richard Nixon. An even more extreme example occurred when the Democratic Party President Jimmy Carter entered office and searched vainly for records of important foreign policy negotiations by Presidents Nixon and Ford. Carter was also left unaware of what commitments had been made concerning the normalization of US–Sino relations.<sup>33</sup> In Patrick Tyler’s words: ‘A change of administrations in Washington, especially where one party throws out the other, rises like a thunderstorm over a picnic. Panic is the dominant feature’.<sup>34</sup>

When facing problems of asymmetric information such as these, from the perspective of the Chinese government, the government under the new US president can be simplified into two types. In the simplified language of the general model discussed before, it is either ‘friendly’ or ‘non-friendly’. The friendly type of American government places more importance on

<sup>33</sup> Patrick Tyler, *A Great Wall: Six Presidents and China* (New York: Public Affairs, 1999), p. 237.

<sup>34</sup> *Ibid.*, p. 230.

long-term cooperation between the US and China and on strategic interests, while the non-friendly type places more value on ideology and matters pertaining to domestic politics, expecting China to make even more concessions. It is important to point out once more that these terms are used purely to construct the model, and do not necessarily imply the meaning normally implied when used in the context of foreign policy practice or by the media.

In the course of interactions between the US and China, the type of the American government has most often been decided by the prevailing political atmosphere in the US. As such, it has been stochastically determined. This being the case, the type of new American government is simplified to a decision of nature as it is bound to a certain probability distribution. Limitations of space and time preclude solving all seven cases of negotiations under conditions of asymmetric information owing to a change in president or governing party within the scope of this essay. Instead the essay examines the preferences, strategies and actions of parties concerned in the course of negotiations under asymmetric information. Two cases are discussed: the first set of negotiations regarding normalization of US–Sino relations held between the US and China after President Carter’s inauguration, and the first set of talks between the new Reagan administration and China over America’s sale of arms to Taiwan.

After Nixon’s visit to China in 1972, normalization of relations was foremost in both countries’ intentions. The controversy surrounding the relationship between the US and Taiwan, and problems on the domestic political front of both states, however, prolonged negotiations. During the period of the Ford Administration, the two sides faced confounding factors that made negotiations intractable, to the point that in 1976 Kissinger believed that ‘normalisation is impossible’.<sup>35</sup> Ford’s defeat by Jimmy Carter in the presidential elections at the end of 1976 presented the opportunity for a breakthrough in US–Sino relations. After taking office, however, Carter’s first major foreign policy act was to engage in the second round of SALT in the model discussed earlier. At that time, pushing the Panama Canal Treaty of 1977 through the Senate was also high on Carter’s agenda and as a result, less priority was given to the normalization of relations between the US and China.

Still more troublesome was the polarization that occurred among members of the new cabinet regarding US policy towards China. As evident in the memoirs of Carter and Vance, Members of the US Department of State, lead by Secretary of State Vance, were at odds with the National Security Council Advisor Zbigniew Brzezinski as regards the urgency of normalizing US–Sino relations. Brzezinski, who was the leading proponent of a hard-line

<sup>35</sup> Henry Kissinger, *Memorandum of Conversation with Senior Staff Members (Secret)*, 29 October 1976.

when dealing with the Soviets, sought a quick agreement with China in order to put pressure on the Soviet Union. Vance, on the other hand, gave higher priority to negotiations with the Soviets over strategic arms limitations. From the perspective of games of asymmetric information, these contending positions within the US government represent the two potential types in the model. What distinguishes them is that one seeks to effect a quick agreement to establish relations with China by offering concessions, and the other opts to maintain the deadlocked status quo.

To the Chinese government at that time, the struggle within the Carter administration over these foreign policy issues and its ultimate outcome made US preferences very difficult to ascertain. The preferences of the Chinese with respect to establishing relations, on the other hand, were common knowledge. The first negotiations between China and the US, therefore, had the basic characteristics of a game of asymmetric information. In June 1977, President Carter finally decided to accept the three principles which China had consistently pressed the Americans to uphold: that the US break ties with Taiwan, that it give up all treaties with Taiwan, and that it remove its military presence from the island. In the face of heavy domestic political pressure, Carter also hoped that negotiations with China could guarantee Taiwanese security, and that the US would be permitted to maintain some level of official relations with Taiwan.

On 22 August, Secretary of State Vance arrived in Beijing, and was granted audiences with both Foreign Minister Huang Hua and Vice Premier Deng Xiaoping. Vance made the proposal to Deng Xiaoping when they met on 25 August. Its key points, other than those of the three principles, were that China commit to not using force against Taiwan, that America upgrade its liaison office in Beijing to an Embassy, and that the American Embassy in Taiwan be downgraded to a liaison office. Deng Xiaoping rejected the American proposal on the spot. Taking into consideration that it had been made at the first meeting between China and the new US government, it was interpreted as a predatory action, as defined by the general model. This move allowed the Chinese to update their belief that the American government (or at least Vance) was of the 'non-friendly' type, and they accordingly adopted the equilibrium strategy of rejecting the proposal. When, however, in May 1978, the American National Security Advisor, Brzezinski visited Beijing and met with Deng Xiaoping, the situation was quite different. Limited space again excludes discussion of this meeting from the scope of this essay. Instead it considers another case.

In the 1980 elections, the Republican candidate, Ronald Reagan, defeated the incumbent president, Jimmy Carter to become the 39th president of the US. The uncertainty that accompanied this change of both the president and the governing party did not extend to US domestic politics. As Reagan was a long-time party leader who had run in many elections and served in

several local offices, his conservative policy initiatives were well known to all. The signals, however, that Reagan sent out prior to taking office, as regards foreign policy, particularly that relating to US–Sino relations and the Taiwan issue, were ambiguous. In 1976, for example, when Reagan was running for the Republican Party presidential candidature, he criticized then President Ford for not paying enough attention to Beijing, and for halting progress in US–Sino relations.<sup>36</sup> In stark contrast, when Carter announced in December 1978 that relations had been established with the PRC, Reagan criticized the president for ‘surrendering’ to China. A particular instance of ambiguity occurred during the 1980 elections, when Reagan made a point of sending his running mate, George Bush, to Beijing to reaffirm the one China principle, yet on several occasions argued that the US needed to upgrade its political relationship with Taiwan. Following his inauguration, Reagan did not actually make any substantial changes to the nature of US–Taiwanese relations, and cancelled invitations to his inaugural ceremony that had originally been extended to the leader of the Kuomintang and the Taiwanese representative. Yet on the whole, the Chinese government still harbored suspicions and a degree of uncertainty about Reagan. As Harry Harding put it, Reagan’s entry into office ‘represented a major challenge to the stability and continuity of US-Sino relations’.<sup>37</sup> The new American government, on the other hand, had no such uncertainty about Chinese policy initiatives with respect to the issue of Taiwan, as the long series of talks that began under Nixon had made it a familiar topic. In terms of the game-theoretical model, therefore, the preference orderings of the Chinese government can be taken as common knowledge between the two parties concerned.

After Reagan’s new government assumed office, the issue that dominated Sino–US relations was that of America’s sales of weapons to Taiwan, which had been left unresolved during the negotiations of late 1978 that established relations between America and China. According to Article 3 of the Taiwan Relations Act ratified by Congress in early 1979, the types and number of defensive arms to be sold to Taiwan would be decided by the president and congress in accordance with domestic law, and would not be subject to any other limitation. From the perspective of the Chinese, the Act was clearly ambiguous, as its effect would depend on the type of the new American government. If it were of the friendly type, weapons sales to Taiwan would be prevented as the US would consider and avoid the impact of such sales on US–Sino relations and on the international balance of power. If the American government were of the non-friendly type, however, it would

<sup>36</sup> Ronald Reagan, ‘Expanding Our Ties with China.’ *New York Times*, 28 July 1976, p. 31.

<sup>37</sup> Harry Harding, *A Fragile Relationship: The United States and China Since 1972* (Washington, DC: The Brookings Institute, 1992), p. 108.

rather maintain the current, unrestricted state of affairs, and would be unwilling to accept any form of agreement with respect to restricted arms sales to Taiwan. Confronted by a non-friendly type of American government, the status quo would not be an acceptable option, but confronted with a friendly type, maintaining the status quo would not necessarily be problematic for the Chinese.

When negotiations in 1978 resulted in the normalization of ties, the Chinese government did not make a major issue out of American arms sales to Taiwan, it merely expressed its opposition. That is to say, China had strong belief that the American government was of the friendly type, and Brzezinski's attitude towards the Chinese leaders at that time indicated that this belief was not unfounded. As to dealing with the new US government, if Reagan's Administration were not of the friendly type, it could utilize the issue of unrestricted American arms sales to Taiwan to test the resolve of the Chinese, which would have far-reaching consequences. From the perspective of the Chinese, therefore, the *best outcome* would be to conclude an agreement with the new US government that ensured the Americans would maintain a certain level of commitment.

Taking into account the historical context, for example, the November 1980 decision by the Dutch to sell two submarines to Taiwan, and Reagan's statements both before and after his election to the effect that the US needed to continue to develop its relationship with Taiwan, there was certainly cause for alarm on the part of the Chinese. These events demonstrated to them that maintaining the status quo on this issue when faced with a non-friendly type of US government might not be an optimal strategy. As Deng Xiaoping pointed out quite clearly on 11 November 1981:

The most important issue in our struggle with the Americans is that of Taiwan. The decision by the Dutch in November of last year to sell two submarines to Taiwan was certainly in imitation of the US, and this trend is going to continue to develop. With respect to this issue, America is the ringleader, and we cannot but struggle with it. Further, the problem is not limited to sales of arms to Taiwan. From Reagan's speeches it can be seen that he might pursue all out development of relations between the US and Taiwan. The invitation extended to Jiang Yanshi by Reagan is one sign of this . . . we can use diplomatic moves to struggle with the Dutch; dealing with the Americans though also means that we must not hesitate to let relations move backward. If we do not take a hard-line policy, it is certain that in the future there will be many problems, and that we will never be able to finish pressing all of our grievances. Now we must have the resolve to move relations back to the way they were when the US had only a liaison office in 1973, or move back to even 1972, before Nixon visited China. By going through such a tortuous struggle, we can maintain US-Sino relations as they were before this issue emerged.<sup>38</sup>

<sup>38</sup> <http://www.china.org.cn/chinese/HIAW/109139.htm>, accessed 20 February 2005.

At the beginning of the Reagan presidency, the Americans had three possible proposals they could make to the Chinese. The first was that they stop sales of arms to Taiwan, or at least lay out a timeframe for ceasing such sales. This proposal represents the outcome of the game most appealing to the Chinese, and one of far higher value than the status quo. As far as the non-friendly type of American government is concerned, however, this is the worst possible outcome. The second possible proposal was one requiring China to commit to a peaceful resolution of the Taiwan issue in return for the US cessation of arms sales to Taiwan. Every US government since Nixon has tried to extract such a commitment from China. On 5 January 1979, however, Deng Xiaoping expressed to American reporters that; ‘On this issue, we cannot make a commitment not to use non-peaceful means to realise the desire to unify our motherland. We cannot tie our hands. If we tie our hands, it will present an obstacle to the virtuous desire for peaceful resolution of the Taiwan issue’. The third proposal was that the two sides shelve the previous two controversial points and sign a statement of guiding principles. In the Joint Communiqué signed by the two parties on 17 August 1982, China did not commit to giving up the use of force, and America did not relinquish the right to sell arms to Taiwan. But China did prevent a status quo outcome with a non-friendly type of new US government.

## Conclusion

Negotiations in international relations often draw out over a long period of time, during which the preference orderings of the relevant parties become common knowledge, and game-theoretical models often assume perfect information. This symmetry of information obviously does not apply to the first time the new government of a state takes its place amid long-ongoing negotiations and engages the opposing bargaining team. As such negotiations are routine in international relations, they should be a focus of international relations research. The game of asymmetric information constructed in this essay that models the effect of one state’s change of government on specific international negotiations constitutes an important move towards developing this line of research.

The structure of the information sets under asymmetric information implies that the equilibrium strategies of the game are fundamentally different from those of routine negotiations. A striking example discussed in this essay is that of the relative payoff that one government receives from an ambiguous outcome, depending upon the type of its interlocutor, i.e. the new government. To take the example of US–Sino relations, when a new administration takes office in the US, and especially when this administration unseats an incumbent party, the resultant uncertainty is exacerbated by the frequently different approaches to foreign policy on the part of the

new president, secretary of state, and national security advisor. An analysis of the outcomes of the games constructed above indicates that uncertainty actually becomes the deciding factor. Cognizance of the special characteristics of asymmetric information of this type could help the United States and China, as well as other countries, to reach a deeper level of common understanding when engaging in negotiations that occur after a change in government.