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# The Transformation of China

A historical analysis of the influence of Sino-American relations on Chinese science and technology reforms (1970-1990)



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## Abstract

In the 1970s, Deng Xiaoping started to transform China by opening up to the West. Deng knew he needed help from the United States (hereafter US) to improve China's science and technology (hereafter S&T), in order to expand its economy and political power. The scholarly debate on Sino-American relations can be divided into two schools of thought: those who emphasize China as an economic and political threat to the US, and those who argue that the US will remain a hegemonic power despite China's rapid economic and political growth. Therefore, the Sino-American cooperation on China's economic growth and increased stature in the world presents a paradox: supporting China could threaten the US as the pre-eminent economic and political world power. Thus, this study analyzes why the US government played such an active role in supporting Chinese S&T reforms from the 1970s until the 1990s. To answer this question, this study analyzes Sino-American relations in three periods and from the perspective of the theory of realism. This research has led to the following conclusions:

- The US was aware that China needed the US in order to modernize which is why the US positioned itself as an indispensable partner in China's S&T modernizations.
- The US became involved with China's S&T reforms so it could profit from China's economic developments while maintaining influence on China through improved Sino-American economic relations.
- Although China has grown tremendously and has become a world power, the United States has been able to control China's reforms. Consequently, China has not surpassed the United States as a world power.

Throughout this thesis, primary sources such as briefing memoranda, progress reports, defense estimative briefs, background papers and agreements have been used. These sources can be found in American archives such as the nongovernmental Digital National Security Archive and the Wilson Center's Digital Archive. In addition, scholarly literature about the theory of realism and Sino-American relations was used to analyze these primary sources (Waltz, 2000; Snyder, 2004; Mearsheimer, 2013; Frieden et al. 2013).

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## Introduction

In 1978, Deng Xiaoping became the paramount leader of the People's Republic of China. Although Deng was a committed member of the Communist Party like his predecessors, he concluded that in order to compete with the world's hegemonic power, the US, China had to reform its own economy and open up to the global economy.<sup>1</sup> To modernize China's economy, Deng implemented several reforms in the years 1970 to 1990. As a result, these reforms enhanced the economic and political position of China on the world stage.<sup>2</sup>

Deng foresaw that an improved relationship with the US could lead to opportunities for China's modernization, having observed that since the 1960s US technology, science, and education had been instrumental in the modernization of other Asian countries such as Japan and Korea.<sup>3</sup> Beginning in the 1970s, Deng implemented market-based reforms and, at the same time, opened China's economy up to the West. In particular, these reforms were heavily influenced by improved Sino-American relations and, in turn, reinforced those relations. From the 1970s until 1990s the US had an impact on China's S&T reforms both positively and negatively.

US support for China's S&T reforms can be perceived as a paradox: China's economic growth and increased stature in the world might well upset the balance of power where the US was the pre-eminent economic and political world power.<sup>4</sup> Therefore, the research question of this study is: *Why did the US government play such an active role in supporting Chinese S&T reforms from the 1970s until the 1990s?*

The many scholars who study Sino-American relations can be divided into two schools of thought: those who emphasize China as an economic and political threat to the US (Lieberthal, 1995; Aggarwal & Newland, 2015; Kugler, 2006); and

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<sup>1</sup> Ezra F. Vogel, *Deng Xiaoping and the transformation of China* (Cambridge 2011) 13.

<sup>2</sup> G. John Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World*

<sup>2</sup> G. John Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order* (Princeton 2011) 343.

<sup>3</sup> Vogel, *Deng Xiaoping and the transformation of China*, 311-312; Martin Jacques, *When China Rules the World: The Rise of the Middle Kingdom and the End of the Western World* (London 2009) 156.

<sup>4</sup> Jack Donnelly, *Realism and International Relations* (Cambridge 2000) 18.

those who argue that the US will remain a hegemonic power despite China's rapid economic and political growth (Deng, 2001; Zhang, 2010; Pape, 2005; Van Ness, 2002).

The first school of thought focuses on whether China's rapid economic and political growth has led to a bipolar world. The American political scientist, Kenneth Lieberthal, argues that, paradoxically, US investment in China for its own economic and strategic considerations, leads to a more powerful China, which in turn challenges the US position in international politics. The US would thus not only potentially lose large sums of investment, but it might also lose an ally.<sup>5</sup>

While Lieberthal stresses the political consequences of China's growth, political scientists Vinod K. Aggarwal and Sara A. Newland stress the economic consequences of China's rise. In particular, they examine the influence China will have on the global division of labor. In addition, Professor of International Relations, Jacek Kugler, emphasizes the downside of China's economic growth by claiming that political, demographic and economic research suggests that China will constitute a threat to the US over time as its productivity rises substantially. He notes that China's large population will enhance China's national strengths vis-à-vis those of the US.<sup>6</sup> Finally, Aggarwal and Newland emphasize that China's rapid growth could also influence the global debate on democracy, environmental issues, and human rights.<sup>7</sup>

Proponents of the view that China's rise poses no significant threat to the US argue China would not be strong enough to lead a bipolar world. According to political scientist Yong Deng, the world turned into a US-dominated unipolar system after the Cold War.<sup>8</sup> Zhang Yunling, a Professor of International Economics, argues that the general strategy of the US is aimed at maintaining and strengthening its military, economic, and political hegemony in spite of China's rise.<sup>9</sup> In addition, Robert A. Pape, another political scientist, claims the US 'commands such a huge margin of superiority that second-class powers cannot balance against its power,

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<sup>5</sup> Kenneth Lieberthal, 'A new China strategy', *Foreign Affairs* 74 (1995) 6, 35-49, 36-38.

<sup>6</sup> Jacek Kugler, 'The Asian Ascent: Opportunity for Peace or Precondition for War?', *International Studies Perspectives* 7 (2006) 1, 36-41, 36.

<sup>7</sup> Vinod K. Aggarwal and Sara A. Newland (eds.), *Responding to China's Rise* (Cambridge 2015) 3.

<sup>8</sup> Yong Deng, 'Hegemon on the offensive: Chinese perspectives on US global strategy' *Political Science Quarterly* 116 (2001) 3, 343-365, 344.

<sup>9</sup> Yunling Zhang, *Rising China and World Order* (Singapore 2010) 21.

either individually or collectively'<sup>10</sup>. Furthermore, political scientist Peter Van Ness argues that China is embedded in a 'hierarchical world environment, structured in terms of a combination of US military-strategic hegemony and a globalized economic interdependence'<sup>11</sup>, because it is virtually impossible for China to opt out of the global capitalist market and return to its previous Maoist economy.

Generally, the debate centers on whether or not China is surpassing the US as a political and economic power. Moreover, the debate tends to focus on China and the US as two disengaged rivals. In fact, the two countries have cooperated and interacted with each other over time. The interconnectedness of Sino-US interests presents a point of contention in the debate.

This study will, therefore, examine Sino-American relations and interactions more closely; by focusing on the S&T reforms implemented in China during the years 1970 to 1990. Specifically, this study will examine whether the US government encouraged Chinese S&T reforms and that China was open to such influence, because each country recognized the mutual benefit to its international standing by such interaction or because each was trying to gain a competitive advantage over the other.

To study this question briefing memoranda, progress reports, defense estimative briefs, background papers, trade agreements and treaties between China and the US were used. These primary sources can be found in two US archives. Firstly, sources were obtained from the Digital National Security Archive (hereafter DNSA)<sup>12</sup>, a nongovernmental archive that contains declassified government documents from 1945 onwards. These documents cover aspects of US policy relation to important world events from the perspective of diplomacy, intelligence, the military, and human rights. Secondly, primary sources were obtained from the Wilson Center's Digital Archive (hereafter WCDA), which contains formerly secret documents from governments all over the world. The WCDA provides new insights

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<sup>10</sup> Robert A. Pape, 'Soft balancing against the United States', *International security* 30 (2005) 1, 7-45, 9.

<sup>11</sup> Peter van Ness, 'Hegemony, not anarchy: why China and Japan are not balancing US unipolar power', *International Relations of the Asia-Pacific* 2 (2002) 1, 131-150, 134.

<sup>12</sup> The Digital National Security Archive, <http://search.proquest.com.proxy.library.uu.nl/dnsa/index>.

on diplomacy and international relations from a historical perspective.<sup>13</sup> Due to a lack of knowledge of the Chinese language, Chinese primary sources could not be used for this study. Furthermore, the Chinese government has not published many primary sources on Sino-American relations in the past. Therefore, the primary sources used in this study reflect an American point of view on the subject.

This study analyzes primary sources on China's economic and political power expansion by using one of the major theories in international relations: realism. Using the lens of realism, assumptions on Sino-American foreign policy can be clarified. Moreover, realists, such as Professor of International Relations Jack Snyder, believe that anarchy influences the interests and interactions that shape world politics. Consequently, realism emphasizes an appreciation of the role of power, but it warns that overreaching will lead to suffering for states.<sup>14</sup>

The theory of realism offers a useful analysis of Sino-American relations as both countries exhibit realist behavior. Firstly, China's foreign policy is driven by realism. Due to its economic modernizations and its participation in international institutions, China has started to behave in a way that realists understand. China has developed its military power in concert with its economic growth, while at the same time avoiding confrontation with more powerful US military forces. Yet, China's growth has initiated regional tensions with smaller Asian countries that feel threatened by a rising regional power.<sup>15</sup>

Secondly, realism offers insight into the paradox that the US would risk its world hegemony by supporting Chinese modernization and resulting power. Specialist in the politics of international monetary and financial relations, Jeffrey A. Frieden, and political scientists, David A. Lake and Kenneth A. Schultz, examine the influence of realism on US politics through their theory on the "security dilemma", which argues that the power of one country comparatively downsizes when another countries' power expands.<sup>16</sup>

Using primary sources and the theory of realism advanced in scholarly

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<sup>13</sup> The Wilson Center Digital Archive, <http://digitalarchive.wilsoncenter.org>.

<sup>14</sup> Jack Snyder, 'One World, Rival Theories', *Foreign Policy*, 145 (2004) 52, 52-62, 54.

<sup>15</sup> Snyder, 'One World, Rival Theories', 55- 56.

<sup>16</sup> Jeffrey A. Frieden, David A. Lake, Kenneth A. Schultz, *World Politics: Interests, Interactions, Institutions* (New York 2013) xxviii.

literature, this study offers an in-depth analysis of the interconnectedness of China and the US with regard to China's S&T reforms. Specifically, this study analyzes three time frames throughout 1970 to 1990 in chronological order. Each chapter discusses which reforms the Chinese government implemented. Furthermore, each chapter contains an analysis of the extent of Sino-American cooperation on these reforms and the impact of such cooperation results on these reforms.

The first chapter analyzes the period 1970 to 1979, in which China began to open up to the world by reaching out to the US, initiating, for example, educational reforms, such as student exchanges.<sup>17</sup> The second chapter examines the economic reforms implemented by the Chinese government between 1980 and 1985, as well as the influence of the Sino-American cooperation on China's economic growth during that period. The third chapter analyzes the period 1986 to 1990, focusing on China's rise as a regional power.<sup>18</sup> In addition, chapter three examines the impact of the June 4<sup>th</sup>, 1989 Tiananmen Square incident, a student-led protest that turned into a government-led massacre, on Sino-American cooperation on S&T reforms.<sup>19</sup> These three chapters will provide the basis for the concluding analysis of why the US government played such an active role in supporting Chinese S&T reforms from the 1970s until the 1990s.

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<sup>17</sup> Digital National Security Archive, 'China-U.S. Student Exchanges', October 11, 1978, confidential, letter, accessed on December 27, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040360/fulltextPDF/DEEBE6DFD61F4045PQ/1?accountid=14772>, 1.

<sup>18</sup> Xiwei Zhong and Yang Xiangdong, 'Science and technology policy reform and its impact on China's national innovation system', *Technology in Society* 29 (2007) 3, 317-325, 319.

<sup>19</sup> Jean-Philippe Béja (ed.) *The impact of China's 1989 Tiananmen massacre* (New York 2010) 49.



## 1. The Normalization of Sino-American Relations and Educational Exchanges, 1970-1979

From 1970 until 1979, China and the US cooperated to normalize Sino-American diplomatic relations and to initiate educational exchanges between the two countries.<sup>20</sup> This chapter will argue that the US was aware that China needed the US in order to modernize, which is why the US positioned itself as an indispensable partner in China's S&T modernizations in this period. Underlying the argument that the US positioned itself as an indispensable partner in China's S&T reforms is the theory of realism, which argues that international relations are a realm of interest and power and that human nature refers to the egoistic passion and self-interest in politics.

### 1.1 The Shanghai Communiqué

In 1972, President Nixon visited China in order to improve ties between China and the US. President Nixon's visit led to an increase in trust between China and other Western countries. The visit initiated the set up of the 1972 Shanghai Communiqué, also known as the 'Joint Communiqué'<sup>21</sup>. This important diplomatic document stated that the visit entailed many honest and lengthy discussions between President Nixon and China's Premier Zhou Enlai on the possible normalization of diplomatic relations. By normalizing Sino-American relations, both countries acknowledged each other's position in the world's power structure. The creation of such a political structure is underpinned by realist theory that higher authority does not establish order, but order is created by the interactions of political actors that are formally seen as equal.<sup>22</sup> After President Nixon and Premier Zhou Enlai's talks, both countries concluded that each would maintain its own unique social system and foreign policy,

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<sup>20</sup> Kathlin Smith, 'The Role of Scientists in Normalizing US-China Relations: 1965–1979', *Annals of the New York Academy of Sciences* 866 (1998) 1, 114-136, 129.

<sup>21</sup> History and Public Policy Program Digital Archive, Box 73, 'Joint Communiqué between the United States and China', author unknown, February 27, 1972, accessed on December 3, 2016, <http://digitalarchive.wilsoncenter.org/document/121325>.

<sup>22</sup> Donnelly, *Realism and International Relations*, 17.

but that both countries would not let these differences get in the way of their relations, as stated in the document.

[...] countries should conduct their relations on the principles of respect for the sovereignty and territorial integrity of all states, non-aggression against other states, non interference in the internal affairs of other states, equality and mutual benefit, and peaceful coexistence.<sup>23</sup>

This statement reflects the realist approach that order was being brought to anarchy because China and the US now formally saw each other as equals despite their differences. The communiqué also stated that the US would make an effort to ensure global peace by reducing immediate tensions created through miscalculations, accidents, and misunderstandings in the region. China claimed it shunned any kind of power politics and was not seeking to become a superpower.<sup>24</sup> China's claim that it believed it would never become a superpower was an attempt to reassure the US that it was not trying to overtake its position as a world leader. China's claim to shun any kind of power politics contradicts the realist theory that international affairs are dictated by the struggle for power as stated by political scientist John J. Mearsheimer.<sup>25</sup> Thus, China's attempt at humility about its world political aspirations may have masked its real interest in gaining power in the world political order.

The 1972 Shanghai Communiqué was thus the beginning of the normalization of Sino-American relations.<sup>26</sup> Later, the 1978 briefing memorandum 'Events in China: Implications for Stability and for Sino-US Relations'<sup>27</sup> from the US Department of

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<sup>23</sup> History and Public Policy Program Digital Archive, Box 73, 'Joint Communiqué between the United States and China', author unknown, February 27, 1972, accessed on December 3, 2016, <http://digitalarchive.wilsoncenter.org/document/121325>, 2.

<sup>24</sup> *Idem*, 1-4.

<sup>25</sup> John J. Mearsheimer, 'Structural Realism', in Tim Dunne, Milja Kurki, Steve Smith (eds.), *International Relations Theory: Discipline and Diversity* (Oxford 2013), 71-88, 84.

<sup>26</sup> Parris H. Chang, 'US-China Relations: From Hostility to Euphoria to Realism', *The Annals of the American Academy of Political and Social Science* 476 (1984) 1, 156-170, 159, accessed on October 26, 2016, <http://www.jstor.org/stable/1043941>.

<sup>27</sup> Digital National Security Archive, CIA-RDP83B00100R000100060005-5, 'Events in china: Implications for Stability and for Sino-U.S. Relations', David E. Mark, December 1, 1978, secret, briefing memorandum, accessed on December 13, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679039720/fulltextPDF/6ED0A623EC>

State stated the US government's expectations of China. Firstly, the US assumed that Deng would try to normalize Sino-American relations rapidly. Secondly, the US expected to develop economic relations with China, such as technological exchanges, joint development projects and loans. Lastly, the US expected that China would only later improve its legal system and respect for human rights.<sup>28</sup> In essence, these expectations reflect the realism theory that economic and political interests, such as the normalization of Sino-American diplomatic relations and the development of China's economic relations, are more important than ethical considerations, such as the improvement of human rights.<sup>29</sup> Yet, China's expected preference for economic and political interests would create business opportunities for the US and the possibility to economically and politically influence China.

## 1.2 Sino-American Educational Exchanges

As the US expected, normalization of Sino-American diplomatic relations was Deng's first priority. Yet, a few months before the expected normalization in 1979, Deng had already started to focus on another top priority for China's modernization. To Deng, modernization would not be achieved solely through investment or trade, but through S&T. Without scientific and technological knowledge, China would not be able to independently renew industries and implement new systems. Thus, it would not be possible to boost China's economy or its political power.<sup>30</sup> Furthermore, Deng knew that the US was far more developed than China, an incentive for Deng to speed up China's modernization.

Fortunately for China, Deng was not only responsible for China's foreign relations, but he was also responsible for China's developments in technology, education, and science. Deng thus had the authority to prioritize these aspects of China's economy. Consequently, in 1978 Deng emphasized the importance of China's

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<sup>28</sup> Digital National Security Archive, CIA-RDP83B00100R000100060005-5, 'Events in china: Implications for Stability and for Sino-U.S. Relations', David E. Mark, December 1, 1978, secret, briefing memorandum, accessed on December 13, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679039720/fulltextPDF/6ED0A623EC8B40A6PQ/1?accountid=14772.2>.

<sup>29</sup> Donnelly, *Realism and International Relations*, 10-11.

<sup>30</sup> Vogel, *Deng Xiaoping and the transformation of China*, 335.

S&T reforms before the Third Plenum, a conference where China's new leader normally introduces policy reforms. While one of Deng's priorities was sending students and young scientists to the US, this was not possible before the normalization of Sino-American diplomatic relations.<sup>31</sup>

As Deng still wanted to promote science, China's first National Science Conference took place in March 1978. The main goal of the conference was to encourage Chinese scientists to engage with American scientists in order to create better ties with the US and gain knowledge. Although it was Deng who encouraged Chinese scientists to take the initiative, US scientists who believed in the universality of scientific research were delighted to visit China.<sup>32</sup>

As a result of China's first National Science Conference, then US president Jimmy Carter responded by sending over the highest-level delegation of scientists to ever visit any country.<sup>33</sup> The delegation was led by President Carter's personal science adviser Frank Press and had several goals for its meeting in China:

[...] establishing contacts between senior S&T officials of both governments, [...] initiate cooperative projects of mutual benefit [...] offer to help China in developing its civil sector technology through commercial, university, and governmental cooperation [...] achieve at an appropriate future time a broad S&T agreement.<sup>34</sup>

The scientific outreach, while being actively promoted by the US, also presented concerns for President Carter. In the memorandum 'Science and Technology Delegation to China', President Carter outlined his concerns, warning science adviser Press: 'I do not want you to go as Santa Claus. Be sure exchanges are equitable & mutually beneficial'<sup>35</sup>. This warning reflects US caution towards Sino-American

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<sup>31</sup> Vogel, *Deng Xiaoping and the transformation of China*, 321.

<sup>32</sup> Vogel, *Deng Xiaoping and the transformation of China*, 321.

<sup>33</sup> Digital National Security Archive, 'Science and Technology Delegation to China', Frank Press, June 26, 1978, confidential, memorandum, accessed on December 13, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040844/fulltextPDF/A12128EF4A7F488BPQ/1?accountid=14772>, 3.

<sup>34</sup> Digital National Security Archive, 'Science and Technology Delegation to China', Frank Press, June 26, 1978, confidential, memorandum, accessed on December 13, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040844/fulltextPDF/A12128EF4A7F488BPQ/1?accountid=14772>, 3.

<sup>35</sup> *Ibidem*.

relations. President Carter's argument that the exchanges needed to be equitable and mutually beneficial are examples of the strength of Mearsheimer's argument, and of the theory of realism: in order to remain dominant in the international community, countries have no choice but to prioritize their own interests over the interests of other countries.<sup>36</sup> And thus, the US could not take part in educational exchanges that did not benefit the US.

### **1.3 Sending the US Scientific Delegation to China**

President Carter's statement portrays the realist theory that international relations are a realm of interest and power in which self-interest plays a vital role.<sup>37</sup> In contrast, this realist argument could be critiqued as President Carter's comment also implies the US had a healthy view of international relations based on the argument that no country would help another country without something in return.

With US interests in mind, the Frank-Press scientific delegation took off to China. Upon their arrival, Deng spoke to the US delegation about the history of China's own S&T advances. He also proposed that the US would accept 700 Chinese students and scientists to study in the US. Notable about this proposal was that China would pay for its own costs. This was in sharp contrast to the usual protocol for US exchange programs in which the receiving country funded in-country costs.<sup>38</sup> Yet, paying for its own costs was a small investment for China, since it expected to significantly increase its S&T knowledge base, and to improve political ties with the US.

The proposed exchange programs would not only have a positive outcome for China but also for the US. In the 1978 letter 'China-U.S. Student Exchanges' from science adviser, Frank Press, to the Director of the National Science Foundation, Dr. Richard Atkinson, Press emphasized that a strong and stable China would be in the interest of the US. The letter argued successful educational exchanges would benefit both parties by positively influencing future Sino-American relations. Press further

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<sup>36</sup> Mearsheimer, 'Structural Realism', in Dunne, Kurki, Smith (eds.), *International Relations Theory: Discipline and Diversity*, 74.

<sup>37</sup> Donnelly, *Realism and International Relations*, 9-11.

<sup>38</sup> Smith, 'The Role of Scientists in Normalizing US-China Relations: 1965-1979', 128.

suggested that Atkinson 'should act in a manner that indicates that the good offices and support of the US government is essential if the exchanges in both directions are to succeed'<sup>39</sup>. Although the document suggested the exchanges would be beneficial for both parties, the tone in which Press emphasized the importance of the US reflects the realist assumption that egoistic passions and self-interest play a primary role in international politics.<sup>40</sup>

Since China needed the support of the US in order to modernize, it had to accept the hierarchical position of the US. According to van Ness, countries tend to "bandwagon", meaning a country often has to accept the will of a hegemon in order to become a part of a political system and over time to gain benefit from the relationship. According to realism, countries only "bandwagon" when they feel threatened by other countries.<sup>41</sup> China's lack of modernization reflects the idea that it felt threatened by other, more modern, countries and thus, acceptance of the terms and conditions the US proposed for the educational exchanges was China's only option to modernize too.

#### **1.4 The Official Agreement for Educational Exchanges**

The official agreement for educational exchanges between the US and China was part of a larger agreement on general S&T cooperation. The 1979 'Agreement between the Government of the United States of America and the Government of the People's Republic of China on Cooperation in Science and Technology'<sup>42</sup> covered students, visiting scholars, and scientists. 500 to 700 students would be sent to the US from China from 1978 to 1979. In addition, the US would send 60 students and

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<sup>39</sup> Digital National Security Archive, 'China-U.S. Student Exchanges', October 11, 1978, confidential, letter, accessed on December 27, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040360/fulltextPDF/DEEBE6DFD61F4045PQ/1?accountid=14772>, 2.

<sup>40</sup> Donnelly, *Realism and International Relations*, 9.

<sup>41</sup> Van Ness, 'Hegemony, not anarchy: why China and Japan are not balancing US unipolar power', 3.

<sup>42</sup> Digital National Security Archive, 'Agreement between the Government of the United States of America and the Government of the People's Republic of China on Cooperation in Science and Technology', Executive Office of the President, January 31, 1979, non-classified, agreement, accessed on January 3, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679041350/fulltextPDF/BD6EDF88010488EPQ/1?accountid=14772>.

scholars in return during the same period.<sup>43</sup>

The document also recognized ‘that cooperation in the fields of S&T can promote the well-being and prosperity of both countries [...] affirming that such cooperation can strengthen friendly relations between both countries’<sup>44</sup>. Although China reached out to the US initially, it was clear that the US was eager to learn about and from China as well. As a result of this agreement, approximately 19.000 Chinese students went to the US to study in the first five years of exchanges.<sup>45</sup>

### 1.5 Summary

From 1970 until 1979, Sino-American relations improved greatly. In order to open up to the world, China reached out to the US. In the Shanghai Communiqué, both countries agreed that they would maintain their own unique social systems as well as foreign policies, without this getting in the way of a positive relationship. Additionally, China and the US set up educational exchanges in order to gain knowledge from one another.

Sino-American relations have portrayed several aspects of realism between 1970 and 1979, which offer an explanation for the US emphasis on being an indispensable partner in China’s S&T reforms. By normalizing diplomatic ties, both countries acknowledged each other, which brought structure to the hierarchical political system. The US knew that improving Sino-American ties would be positive for the US, yet it still emphasized its own interests in order to maintain its position as hegemon. To secure US assistance, China played humble by offering to pay for extra costs during student exchanges and reassuring the US that it was not interested in overtaking the US as a world power. Furthermore, to obtain support from the US for S&T exchanges China had to “bandwagon”, which would lead to benefits for China over time, such as sending 19.000 exchange students to the US in a short period of

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<sup>43</sup> Smith, ‘The Role of Scientists in Normalizing US-China Relations: 1965–1979’, 129.

<sup>44</sup> Digital National Security Archive, ‘Agreement between the Government of the United States of America and the Government of the People’s Republic of China on Cooperation in Science and Technology’, Executive Office of the President, January 31, 1979, non-classified, agreement, accessed on January 3, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679041350/fulltextPDF/BD6EDF88010488EPO/1?accountid=14772>, 1.

<sup>45</sup> Vogel, *Deng Xiaoping and the transformation of China*, 323.

time. In essence, the US was aware that China needed the US in order to modernize which created the opportunity for the US to emphasize its position as hegemony through cooperating with China.



## 2. Nuclear Technology & China's Admission to the World Bank, 1980-1985

From 1980 until 1985 China started to transform its economy and become more important to international politics.<sup>46</sup> As a result, the US and China cooperated on several further aspects of S&T development. This chapter argues that from 1980 until 1985, the US became involved with China's S&T reforms so it could profit from China's economic developments while maintaining influence on China through improved Sino-American economic relations. This chapter analyzes the consequences of China's growth: its admission to the World Bank (hereafter WB); its nuclear agreement with the US; and its increase in exports.<sup>47</sup> These reforms will be analyzed through the realist theory that when one country becomes more powerful in world politics, another one loses power comparatively and the view that countries can influence one another through cooperation.

### 2.1 China's Economic System

Since the Third Plenum in 1978, China aspired to create a socialist market economy. Until the end of the 1970s, China had maintained a centrally planned economy. Yet, central planning required large amounts of information on production techniques, individual preferences, and available resources. Collecting and processing this information was beyond the capacities of the Chinese government. By contrast, in a socialist market economy, the price system would gather all necessary information efficiently. Furthermore, a socialist market economy would create competition and motivate workers and companies to pursue technological progress and innovation.<sup>48</sup>

Since a socialist market economy was, therefore, seen as superior, from 1980 onwards China started to change its centrally planned economy into a socialist market economy. Economist Chiara Piovani addresses this transformation through the neoclassical Arrow-Debreu model.

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<sup>46</sup> Joseph E. Stiglitz, *Whither socialism?* (Cambridge 1996) 198.

<sup>47</sup> Erik Baark and Liu Suying, 'Science and Technology Policy Reforms in China: A Critical Assessment', *The Copenhagen Journal of Asian Studies*, 5 (2008) 1, 7-26, 12.

<sup>48</sup> Chiara Piovani, 'Class Power and China's Productivity Miracle', *Review of Radical Political Economics* 46 (2013) 3, 331-354, 332.

According to the neoclassical Arrow-Debreu model, a competitive market economy in which profit-maximizing firms interact with utility-maximizing individuals - assuming markets exist for all goods at all times – is associated with maximum social welfare. Consistently, a centrally planned economy would inevitably fail because it cannot solve the information problem as efficiently as a competitive market economy.<sup>49</sup>

Incorporating aspects of a competitive market economy boosted China's economic growth by 10% annually and increased its economic power rapidly. Although China was employing aspects of a market economy, it worked to create a balance between a market economy and the political aspects of an authoritarian state.<sup>50</sup> To keep control of China's economic growth, new criteria were set for the management of research at the Third Plenum of 1978. These criteria were based on enterprises of the basic, non-high tech, side of the S&T system and emphasized the economic position China was taking on. As a result, market-oriented reforms started to form the new support base for Chinese S&T.<sup>51</sup>

Mearsheimer's theory of realism argues that power is based on the material capabilities controlled by states.<sup>52</sup> As China tried to enhance its material capabilities by developing its economic capabilities through a market economy it can be argued that China was portraying realist behavior as an expanding international power.

## **2.2 China and the World Bank**

At the National Conference on S&T in 1980, a program was developed for China's new market economy. The program contained five aspects, which had to portray the future direction for a new S&T policy. Firstly, China's highest priority would be enhancing economic development through the development of S&T in relation to the economy and society. Secondly, the balance would shift towards a more effective structure for technological development. Thirdly, production enterprises

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<sup>49</sup> Piovani, 'Class Power and China's Productivity Miracle', 332.

<sup>50</sup> Suisheng Zhao, 'The China Model: can it replace the Western model of modernization?', *Journal of Contemporary China* 19 (2010) 65, 419-436, 419.

<sup>51</sup> Stiglitz, *Whither socialism?*, 198.

<sup>52</sup> Mearsheimer, 'Structural Realism', in Dunne, Kurki, Smith (eds.), *International Relations Theory: Discipline and Diversity*, 72.

needed to increase efforts in applied research on products and production technology. Furthermore, the party committee felt basic research should be expanded and guaranteed a position. Lastly, China's economic requirements were to form the basis of foreign technology imports.<sup>53</sup>

These new rules for China's economic expansion influenced its position in world politics, and international institutions started to show interest in China. The president of the WB at the time, Robert McNamara, felt that the WB would not properly represent the world without China. China believed the WB would help it grow more rapidly as an economic and political power. As a result, China replaced Taiwan as the Chinese member of the WB in 1980.<sup>54</sup>

However, the US was concerned China would gain too much economic and political power through the WB and thus tried to slow China's admission. From a realist point of view, the US had little to worry about. Frieden et al. argue that international institutions merely reflect the interests of powerful countries, which thus shape these institutions. Furthermore, realists believe that rules set by international institutions are unlikely to be followed when a country's interests and power are on the line.<sup>55</sup> In essence, the US would not likely take the WB seriously if its policies formed a threat to the US.

US efforts to delay China's admission to the WB did not have any effect. Several months after China's admission, the WB assembled a team to dispatch for a study-tour through China. The team consisted of thirty experts such as engineers, agronomists, and specialists on health, education, and the Chinese economy.<sup>56</sup> As a result of the study-tour, China and the WB negotiated their first grant. The grant would be for support in higher education and emphasized the importance of S&T to China. In addition to the grant for higher education, the WB set up certain programs in order to educate Chinese specialists on how to resolve economic issues. China chose to cooperate with the WB's Economic Development Institute that sponsored yearly courses to train Chinese personnel. As a result, China acquired significant knowledge, which helped expand its economic and political power.

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<sup>53</sup> Baark and Suying, 'Science and Technology Policy Reforms in China: A Critical Assessment', 12.

<sup>54</sup> Vogel, *Deng Xiaoping and the transformation of China*, 457-458.

<sup>55</sup> Frieden, Lake and Schultz, *World Politics: Interests, Interactions, Institutions*, xxviii.

<sup>56</sup> Vogel, *Deng Xiaoping and the transformation of China*, 457-458.

The WB may only have been able to influence the US to a certain extent, but China would still possibly form a threat to the US once it gained economic and political power through the programs set up by the WB. Realist theory argues that the quest for power always leads to a conflict of interests between states and a security dilemma.<sup>57</sup> Frieden et al. explain the security dilemma by arguing that the power of the US comparatively downsizes when China's power expands. This explains why China's increase in knowledge, gained from its admission to the WB, could form a threat to the US.

### **2.3 Changes in China's Foreign Policy**

China was slowly gaining economic and political power and the US acknowledged China as a nascent world power. To show its status, China changed its foreign policy significantly in 1981, to downplay its dependence on the US. The 1984 US Defense Intelligence Agency's document 'China's Perception of External Threat' argued that China wanted to be seen as an independent country with an equal amount of power to the US. The paper argued that it was trying to distance itself from the US because it felt uncertain that the US would respect Chinese sovereignty. Furthermore, the document noted that China did not trust the US with respect to China's security because the US was still working closely with Taiwan, which China did not acknowledge as a sovereign state. Thus, China did not believe the US would be reliable in the long-term.<sup>58</sup>

The US Defense Intelligence Agency's document discusses the impact of China's actions on US interests. China viewed the US as the best source for technology and equipment for its long-term military modernization. As a result, sales of military equipment and technology were potentially positive. However, the US understood China would insist on agreements that provided technological knowledge that would be useful in improving its industrial infrastructure. The US

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<sup>57</sup> Frieden, Lake and Schultz, *World Politics: Interests, Interactions, Institutions*, xxviii.

<sup>58</sup> Digital National Security Archive, case nr. 0572-73, 'China's Perception of External Threat', United States Defense Intelligence Agency, November 1984, classification excised, Defense Intelligence Report, accessed on December 9, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040726/fulltextPDF/52E6896E99064558PQ/20?accountid=14772>, 1.

realized that providing China with military equipment and technology transfers would not provide many short-term advantages for itself. However, the US also knew that providing China with military equipment and technology transfers could lead to increased trust between the countries in the long-term.<sup>59</sup>

Guided with realism in its interaction with China, the US concluded that helping China modernize its military was an investment, which would hopefully return as an increase in influence with China. This pragmatic course of action was in keeping with realist theory because an increase in influence would create a possibility for the US to maintain its position as hegemony.<sup>60</sup> The US could thus use the gained trust between itself and China as an advantage in the future.

## **2.4 China's Nuclear Weapons**

China knew US technology transfers would be useful in expanding its political, economic, and military power. During the Twelfth Party Congress in 1982, where new strategies, principles, and policies to modernize China were discussed, the importance of S&T was emphasized. While western countries, such as the US, often focused solely on "high-tech" investments in S&T policies, China's S&T policies contained a very wide range of aspects, including what the West would call "low-tech" developments such as agriculture. Furthermore, China's policy referred to technology for nuclear weapons.<sup>61</sup>

In 1981, China presented its sixth Five-Year Plan, a document in which social and economic development initiatives were presented. The plan argued that the development of nuclear technology had become a necessity for China to modernize. Although China's government tried to emphasize its self-reliance, it understood it had to import foreign engineering services and equipment for most of its nuclear projects. Consequently, it solicited bids from foreign companies in order

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<sup>59</sup> Digital National Security Archive, case nr. 0572-73, 'China's Perception of External Threat', United States Defense Intelligence Agency, November 1984, classification excised, Defense Intelligence Report, accessed on December 9, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040726/fulltextPDF/52E6896E99064558PQ/20?accountid=14772>, 11.

<sup>60</sup> Frieden, Lake and Schultz, *World Politics: Interests, Interactions, Institutions*, xxviii.

<sup>61</sup> Roger Handberg and Liu Xinming, 'Science and Technology Policy in China: National Strategies for Innovation and Change', *Technology in Society* 14 (1992) 3, 271-282, 272.

to help build three nuclear power plants during the 1980s.<sup>62</sup> The three nuclear plants obviously provided alluring prospects for foreign companies.

Investing in China's three power plants was a good opportunity for the US, as it was the only country able to sell China a complete reactor system and transfer complete technology rather than just equipment. As a result, the Chinese chose to do business with US companies directly when possible.<sup>63</sup> According to the US Defense Intelligence Agency's document 'China's Perception of External Threat'<sup>64</sup>, a change in America's technology transfer policy resulted in an increase of military and general trade between China and the US. Consequently, Sino-American relations improved.

As China was becoming a larger nuclear power, the US hoped to negotiate an agreement on peaceful nuclear cooperation. The agreement would have many advantages for the US such as advancing US nonproliferation interests and securing a portion of China's nuclear market.<sup>65</sup> Yet, the main motive for the US to set up such an agreement was enhancing its own economic interests. According to the 1985 briefing report to the US Senate, the agreement would lead to an estimate of three to seven billion US dollars in sales for the US. Furthermore, a second benefit for the US would be the time span in which China would build its nuclear power reactors. It would take China six to seven years to make its nuclear power reactor operational, which would give the US a chance to observe China carefully.<sup>66</sup>

Mearsheimer's realist theory argues that as states are rational actors, they are capable of setting up sound strategies, which will maximize their likelihood of survival. Concluding the nuclear agreement with the understanding that it would be

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<sup>62</sup> Qingshan Tan, 'U.S.-China Nuclear Cooperation Agreement: China's Nonproliferation Policy', *Asian Survey* 29 (1989) 9, 870-882, 870-872.

<sup>63</sup> Tan, 'U.S.-China Nuclear Cooperation Agreement: China's Nonproliferation Policy', 870-872.

<sup>64</sup> Digital National Security Archive, case nr. 0572-73, 'China's Perception of External Threat', United States Defense Intelligence Agency, November 1984, classification excised, Defense Intelligence Report, accessed on December 9, 2016, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040726/fulltextPDF/52E6896E99064558PQ/20?accountid=14772>, 27.

<sup>65</sup> Tan, 'U.S.-China Nuclear Cooperation Agreement: China's Nonproliferation Policy', 877-878.

<sup>66</sup> Digital National Security Archive, Dossier nr. GAO/NSIAD-86-21BR, 'Nuclear Agreement: Cooperation between the United States and the People's Republic of China', United States General Accounting Office, November 1985, unclassified, Report, accessed on January 4, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679139944/fulltextPDF/4DCC644679B44569PQ/6?accountid=14772>, 1.

six to seven years before China's nuclear power reactor was operational highlights the realist premise that states, such as the US, are rational actors.<sup>67</sup> By observing China over the years the US would be able to set up a strategy according to China's growth as an international power.

## 2.5 China's Economic Expansion

Throughout the early 1980s, the value to China of the US as an economic and political ally increased. From an economic point of view, the US became the most important country for Chinese exports. Due to China's growth as an economic power, it began to exhibit capitalistic traits such as embracing entrepreneurship, worshipping wealth, and accepting growing inequality throughout the country. Furthermore, China embraced other aspects of capitalism as it lowered tariff barriers at a fast pace and opened up to trade.<sup>68</sup> While economic reforms were happening, China continued to emphasize the primacy of the state at the heart of the reform process.<sup>69</sup>

As China grew economically and the US became the most important country for Chinese exports, both countries benefited from China's liberalized economy. Since both countries seemed content with the situation, it could be assumed that they were also content with the balance of power. Yet, realism holds that it is impossible for states to be sure about the intentions of another state, specifically another state's' future intentions.<sup>70</sup> As a result, the US still emphasized the possible threat China posed as it grew as a power even though the US was also benefitting from China's growth.

Chinese scientists residing overseas were also influencing China's economic growth. As constant innovation had influenced the American market positively, China believed that sending scientists overseas to be educated would eventually

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<sup>67</sup> Mearsheimer, 'Structural Realism', in Dunne, Kurki and Smith (eds.), *International Relations Theory: Discipline and Diversity*, 74.

<sup>68</sup> Hui Wang, *China's New Order* (Cambridge 2003), 96-124.

<sup>69</sup> Jacques, *When China Rules the World: The Rise of the Middle Kingdom and the End of the Western World*, 156.

<sup>70</sup> Mearsheimer, 'Structural Realism', in Dunne, Kurki and Smith (eds.), *International Relations Theory: Discipline and Diversity*, 75.

help improve China's market.<sup>71</sup> To help Chinese scientists with innovation, the Ford Foundation opened up in 1985. This program funded Chinese economists to study at Oxford University for a year as well as in the US.<sup>72</sup> As a result of the Chinese scientists' overseas study, China's economy continued to liberalize and grow. Liberalizing China's economy and sending scientists overseas helped China develop itself and grow as an economic power in the region, which formed a threat to other Asian countries. Realist theory argues that second-tier powers do not worry about a global hegemony as much as their direct neighbor.<sup>73</sup> China's growth as a regional power was thus worrying for other Asian countries.

## 2.6 Summary

From 1980 until 1985, China mainly focused on developing its economy through technology, in order to gain political power. The central government tried to find a balance between a market economy, and a centrally planned economy, as it wanted to improve its economy while maintaining a one-party state. By opening up its economy China gained power based on its material capabilities, in line with the precepts of realism. Furthermore, China's development influenced its position as a world power, which resulted in the country being welcomed in international institutions. From a realist point of view, institutions tend to be shaped by powerful countries, yet the US still seemed worried about China gaining political and economic leverage through its membership of the WB, as an increase in power for China meant a decrease in power for the US according to the realist security dilemma. But China's developments in S&T also benefited the US. Transferring technology to China increased trust between China and the US and would be an investment for the US in order to gain political influence on China as Sino-American relations improved.

Furthermore, by entering into a nuclear agreement with China the US was trying to augment its own interests. As the US knew it would take China several

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<sup>71</sup> Baark and Suying, 'Science and Technology Policy Reforms in China: A Critical Assessment', 14.

<sup>72</sup> Vogel, *Deng Xiaoping and the transformation of China*, 458.

<sup>73</sup> Snyder, 'One World, Rival Theories', 56.; Mearsheimer, 'Structural Realism', in Dunne, Kurki and Smith (eds.), *International Relations Theory: Discipline and Diversity*, 84.



years to make its nuclear power reactors fully operational, realists argue that the US was able to come up with a strategy in order to maximize its survival as hegemony. Yet, even though both parties were benefitting from China's growth as an economic power, the US still feared China due to the realist argument that there is no guarantee of the intentions of a state. Lastly, China's growth as an economic power was also worrying within Asia, which can be explained as realism argues that second-tier states tend to feel threatened by their neighbors out of fear for a regional hegemony. Thus from 1980 to 1985, the US became involved with China's S&T reforms so it could profit off China's economic developments while maintaining influence through improved Sino-American economic relations.

### **3. China's Rise as a Regional Power and the Influence of the Tiananmen Incident, 1986-1990**

From 1986 until 1990 China introduced specific S&T reform measures to enhance its economy. This chapter examines the influence of the US on China's rise as an economic and political power and the way the US tried to profit from China's power expansion. Furthermore, this chapter examines the influence of the Tiananmen incident in 1989 on Sino-American relations and the way that President Bush maintained an influence on China through economic and political ties contrary to the will of the US government.

#### **3.1 China's Growth as a Regional Power**

From 1986 until 1990 China's reforms focused on both economic and military aspects. The 'Defense Estimative Brief'<sup>74</sup> of the US Defense Intelligence Agency stated that it believed China's defense expenses would stay comparable to previous years. Although China focused on its military, the US believed military modernization remained a lower priority to the country than economic reforms and would not be achieved before the 1990s due to limited funding. As a result of limited funding, China was expected to work with less expensive non-US sources for military technology. The US expected China would gain enough information on technology from non-US sources to eventually produce its own military equipment and weapons, but this development would likely take years.<sup>75</sup>

While its pace of military modernization and lack of technical personnel in areas of high priority would not suffice to challenge the US in its hegemonic position,

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<sup>74</sup> Digital National Security Archive, dossier nr. 6062-43, 'Defense Implications of China's Five Year Plan for 1986-1990', United States Defense Intelligence Agency, February 1986, Classification Excised, Defense Estimative Brief, accessed on January 5, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040423/fulltextPDF/D43A8157EC9F4D4APQ/1?accountid=14772>.

<sup>75</sup> Digital National Security Archive, dossier nr. 6062-43, 'Defense Implications of China's Five Year Plan for 1986-1990', United States Defense Intelligence Agency, February 1986, Classification Excised, Defense Estimative Brief, accessed on January 5, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679040423/fulltextPDF/D43A8157EC9F4D4APQ/1?accountid=14772>, 1-6.

China's modernization could lead to the country becoming a regional hegemon.<sup>76</sup> China's power expansion was thus not yet a direct threat to the United States, but the regional power shift could undermine its predominant position in the region. This situation reflects the realist security dilemma in which one country expands its power, and thus another country loses power comparatively.<sup>77</sup> Thus, indirectly China's expansion formed a threat to the power of the US in Asia.

### **3.2 The Science and Technology Management System**

In 1986 China introduced specific S&T reform measures in its S&T management system, which enabled it to produce goods domestically. From the 1980s onwards, the overall administrative system of technology development and transfer had gone through several changes and as a result, it had become of great importance to the Chinese government that scientific research met the needs of economic development. This reform covered several areas: the S&T funding system had to be adjusted, the technology market had to be opened up and S&T had to be more integrated with production. Furthermore, the Chinese government wanted to promote enterprises to use new technology.<sup>78</sup>

China adjusted its funding system in several ways in 1987 to influence its technology development and transfer system. Firstly, small research institutions, which had been under the formal administration of the government, had to become a part of medium and large-sized firms. As a result, these firms had to take responsibility for their own losses and profits, which saved money for the government's funding system. Secondly, large-sized firms were supposed to pay for the research done by the small institutions, which meant government expenses would be reduced. Lastly, certain institutions remained under government control to

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<sup>76</sup> Snyder, 'One World, Rival Theories', 56; Digital National Security Archive, dossier nr. EA 88-10004, 'China's Technology Modernization Program: A Progress Report', United States Central Intelligence Agency Directorate of Intelligence, January 1988, Secret, Intelligence Appraisal, accessed on January 3, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679050025/fulltextPDF/491950A87961416CPQ/2?accountid=14772>, 4.

<sup>77</sup> Mearsheimer, 'Structural Realism', in Dunne, Kurki and Smith (eds.), *International Relations Theory: Discipline and Diversity*, 72.

<sup>78</sup> Hong Liu and Yunzhong Jiang, 'Technology transfer from higher education institutions to industry in China: nature and implications', *Technovation* 21 (2001) 3, 175-188, 178.

finish projects commissioned before the reforms. Yet, these institutions were permitted to make profits off non-governmental research projects.<sup>79</sup> The Chinese government was thus trying to integrate its research institutions into enterprises in order to integrate S&T into production systems and reduce costs.

Aside from reducing costs, adjusting the funding system also impacted China's production capabilities. In the research paper 'China's Technology Modernization Program: A Progress Report' by the Directorate of Intelligence, the US argues that the expansion of China's domestic technology market resulted in the local production of goods based on domestically available technologies. By producing goods based on domestically available technologies, 88 import projects were canceled in 1986.<sup>80</sup>

The cancellation of imports emphasized China's growing economic independence. Realist Kenneth Waltz believes that after the Second World War the US started to use its economic capabilities to improve its political interests.<sup>81</sup> As China had the economic power to cancel imports, it could be argued that the country was becoming a more important political power too. The document 'China's Technology Modernization Program: A Progress Report' also reflects the realist security dilemma through the US expectation that China's economic expansion would lead to the production of military equipment such as lasers and space launch vehicles, which enhanced China's military power.<sup>82</sup> Furthermore, the US was worried that the competitiveness between western countries for Chinese technological assistance would lead to difficulties of selling US equipment to China.<sup>83</sup> Thus, the realist thought that an expanding economy contributes to political interests is

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<sup>79</sup> Liu and Jiang, 'Technology transfer from higher education institutions to industry in China: nature and implications', 178.

<sup>80</sup> Digital National Security Archive, dossier nr. EA 88-10004, 'China's Technology Modernization Program: A Progress Report', United States Central Intelligence Agency Directorate of Intelligence, January 1988, Secret, Intelligence Appraisal, accessed on January 3, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679050025/fulltextPDF/491950A87961416CPQ/2?accountid=14772>, 11.

<sup>81</sup> Kenneth Waltz, 'Structural Realism After the Cold War', *International Security* 25 (2000) 1, 5-41, 16.

<sup>82</sup> Frieden, Lake and Schultz, *World Politics: Interests, Interactions, Institutions*, xxviii.

<sup>83</sup> Digital National Security Archive, dossier nr. EA 88-10004, 'China's Technology Modernization Program: A Progress Report', United States Central Intelligence Agency Directorate of Intelligence, January 1988, Secret, Intelligence Appraisal, accessed on January 3, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679050025/fulltextPDF/491950A87961416CPQ/2?accountid=14772>, v.

emphasized, as China created an opportunity to develop domestically or work with other western countries instead of prioritizing Sino-American cooperation.

### 3.3 The Tiananmen Incident

In the last decades of the twentieth century, Sino-American relations were influenced by the Tiananmen protests, which took place in Beijing in 1989. The protests were initiated after the death of a high-ranking member of the Communist Party. Tens of thousands of people gathered in the center of Beijing at the Tiananmen Square to protest corruption, the capricious exercise of state power, and inflation. The protests were a demand for democracy, accountability, political and intellectual freedom led by students, which were supported by thousands of others. The protests resulted in an impressive restraint by the Chinese government. On June 4th, 1989 the People's Liberation Army attacked the protesters with the use of military tanks. The army crushed and shot those in its way, killing more than a thousand men and women. Thousands more were wounded, arrested, and even beaten or executed.<sup>84</sup>

Foreign cameramen had been able to record some of the protests, and within the same day, the whole world was able to see what was happening in Beijing. During the start of the protests, the Bush administration knew to stay out of China's business in order to maintain good Sino-American relations. But as China's People's Liberation Army was killing thousands of people, the Bush administration felt pressured by the international community to introduce several sanctions against China.<sup>85</sup> These sanctions were stated in the unclassified background paper 'US Sanctions Against China'<sup>86</sup> by the United States Department of State. The ban on military sales influenced exports of defense-related items to China. Further liberalization of high technology exports from the US to China had been stopped and an agreement between China and the US on nuclear co-operation that was

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<sup>84</sup> Warren I. Cohen, *America's Response to China: a History of Sino-American Relations* (New York 2010) 182-183.

<sup>85</sup> Cohen, *America's Response to China: a History of Sino-American Relations*, 184.

<sup>86</sup> Digital National Security Archive, 'U.S. Sanctions Against China', United States Department of State, October 1993, Secret, Background Paper, accessed on January 4, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679078279/fulltextPDF/1376CC7EA4B146ABPQ/3?accountid=14772>, 1.

scheduled for 1989 got suspended indefinitely.<sup>87</sup>

The Bush administration was under a lot of pressure from other international powers to sanction China. But sanctioning China also created an opportunity for the US to influence China's expansion as a political and economic power.<sup>88</sup> The ban reflects the realist theory that it is important for a country to maintain a certain amount of power but more importantly, to ensure that no other country shifts the balance of power. Especially, since a shift in the balance of power would possibly create a security dilemma for the US. Mearsheimer believes that a state's material capabilities, such as a strong army, ensure its power.<sup>89</sup> Thus, to make sure China's People's Liberation Army wasn't expanding its economic and military power, sanctions were imposed on weapon and technology transfers to China.

Sanctioning China emphasized the hegemonic power of the US in international relations. Yet, the US was also blamed for not being able to make China more accessible, so the international community indirectly held the US responsible for the Tiananmen incident. Furthermore, Chinese leaders who were responsible for domestic and foreign policies, and supporters of improved Sino-American relations were now hostile towards the US.<sup>90</sup>

### 3.4 Keeping China Content

Sino-American relations were shaky in 1989, but the sanctions laid on China by the Bush administration were mostly a result of pressure from other international actors. Although President Bush felt genuinely troubled by the Tiananmen incident, he was also strongly motivated to preserve some of the gains made in the 1970s and 1980s. In addition, strategic considerations, such as security interests, made

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<sup>87</sup> Digital National Security Archive, 'U.S. Sanctions Against China', United States Department of State, October 1993, Secret, Background Paper, accessed on January 4, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679078279/fulltextPDF/1376CC7EA4B146ABPQ/3?accountid=14772>, 1.

<sup>88</sup> Jing-Dong Yuan, 'United States Technology Transfer Policy toward China: Post-Cold War Objectives and Strategies', *International Journal* 51 (1996) 2, 314-338, 314-317.

<sup>89</sup> Mearsheimer, 'Structural Realism', in Dunne, Kurki and Smith (eds.), *International Relations Theory: Discipline and Diversity*, 72; Frieden. Lake and Schultz, *World Politics: Interests, Interactions, Institutions*, xxviii.

<sup>90</sup> Robert L. Suettinger, *Beyond Tiananmen : The Politics of U.S.-China Relations 1989-2000*. (New York 2004) 93.

restoring ties with China important as well, as the US feared China would turn to the Soviet Union for help.<sup>91</sup> President Bush was so motivated to keep communication lines with China open that he secretly dispatched National Security Adviser Brent Scowcroft and Deputy Undersecretary of State Lawrence Eagleberger to China for a meeting with the Chinese government.<sup>92</sup>

Furthermore, the number of foreign students that were refusing to go home after their studies overseas was increasing and students were looking into staying in the US after the expiration date of their student visas.<sup>93</sup> Yet, President Bush would not allow the student visa's to be renewed in order to keep the Chinese government content.<sup>94</sup> President Bush' approach to Sino-American relations coincides with the realist thought that national interests are more important than humanitarian, ethical and ideological considerations.<sup>95</sup> In essence, President Bush' strategy favored restoring Sino-American ties over justice for Chinese protesters.

Due to the Tiananmen incident and the US restraint on weapon and technology transfers, China's S&T community was unable to expand. As a result, technology transfer projects became delayed and Chinese S&T personnel were unable to gain knowledge on foreign technical know-how. The US government believed that China was underestimating the impact of the Tiananmen incident on its S&T community.<sup>96</sup> Regardless, the Chinese government would not give up on reassuring the scientific community. Therefore, it continuously claimed the open-

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<sup>91</sup> Cohen, *America's Response to China: a History of Sino-American Relations*, 184; David Skidmore and William Gates, 'After Tiananmen: The Struggle over U.S. Policy toward China in the Bush Administration', *Presidential Studies Quarterly* 27 (1997) 3, 514-539, 517.

<sup>92</sup> Skidmore and Gates, 'After Tiananmen: The Struggle over U.S. Policy toward China in the Bush Administration', 523.

<sup>93</sup> Digital National Security Archive, dossier nr. EA M 89-20125, 'The Tiananmen Incident: A Preliminary Look at its Impact on S&T Modernization in China', United States Intelligence Agency Directorate of Intelligence, October 20, 1989, Secret, Intelligence Appraisal, accessed on January 6, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679039666/fulltextPDF/2AD40B0B63F642F2PQ/8?accountid=14772>, 2-5.

<sup>94</sup> Ibidem.

<sup>95</sup> Skidmore and Gates, 'After Tiananmen: The Struggle over U.S. Policy toward China in the Bush Administration', 517.

<sup>96</sup> Digital National Security Archive, dossier nr. EA M 89-20125, 'The Tiananmen Incident: A Preliminary Look at its Impact on S&T Modernization in China', United States Intelligence Agency Directorate of Intelligence, October 20, 1989, Secret, Intelligence Appraisal, accessed on January 6, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679039666/fulltextPDF/2AD40B0B63F642F2PQ/8?accountid=14772>, 2-5.

door policy was still in effect.<sup>97</sup>

### 3.5 Summary

In 1986 China introduced specific S&T reform measures in its management system, which enabled it to produce goods domestically and rise as a regional power. China's rise as a regional power enhanced the idea that the US was losing power comparatively, like the realist idea of a security dilemma suggests. China's expansion as an economic power was halted in 1989 due to the Tiananmen incident, which resulted in several sanctions for China.

Although President Bush sanctioned China under pressure from the international community, he still tried to keep communication lines between China and the US open. This resulted in refusing Chinese students to extend their visas and secret meetings between both countries. The actions of President Bush reflect the realist idea that national interests are more important than humanitarian, ethical and ideological considerations. In conclusion, maintaining an influence on China through economic and political ties was a top priority for the US from 1986 until 1990.

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<sup>97</sup> Digital National Security Archive, dossier nr. EA M 89-20125, 'The Tiananmen Incident: A Preliminary Look at its Impact on S&T Modernization in China', United States Intelligence Agency Directorate of Intelligence, October 20, 1989, Secret, Intelligence Appraisal, accessed on January 6, 2017, <http://search.proquest.com.proxy.library.uu.nl/dnsa/docview/1679039666/fulltextPDF/2AD40B0B63F642F2PQ/8?accountid=14772>, 2-5.



## Conclusion

China's S&T reforms have played a major role in Sino-American relations from 1970 until 1990. The realist school of thought has created a lens through which China's S&T reforms can be understood. From the 1970s onwards, Sino-American relations improved. In order to open up to the world, China reached out to the US. As a result, the Shanghai Communiqué was set up, Sino-American diplomatic relations were normalized, and both countries engaged in educational exchanges in order to gain knowledge from one another. The US was aware that to achieve these goals, China needed help from the US. Thus from 1970 until 1979, the US emphasized its position as an indispensable partner in China's S&T reforms.

From 1980 until 1985, China's government tried to find a balance between a market economy and a centrally planned economy, as it wanted to improve its economy while maintaining a one-party state. In order to do this China focused on enhancing its economy through technology developments and international institutions. China gained power as a regional hegemon through its economic expansion thus threatening the US. As China was expanding from 1980 until 1985, the US became involved with China's S&T reforms so it could profit from China's economic developments while maintaining influence through improved Sino-American economic relations.

Maintaining an influence on China through economic and political ties was the top priority for the US government from 1986 until 1990. While China became able to produce goods domestically and rise as a regional power, the US feared that, comparatively, its own power would decline. Moreover, President Bush was afraid to lose China as an ally after the Tiananmen incident in 1989 because the international community pressured him to sanction China. As a result, President Bush secretly kept communication lines open between China and the US and kept China content by declining Chinese students in the US an extension for their visa.

From 1970 until 1990 Sino-American relations evolved through China's S&T reforms. These evolving relations offer an answer to the question: *Why did the US government play such an active role in supporting Chinese S&T reforms from the 1970s until the 1990s?* Based on the results found in this study it can be argued that

the US government became involved with Chinese S&T reforms from 1970 to 1990 in order to advance its national interests and strategic considerations. In order to advance its national interests and strategic considerations the US positioned itself as an indispensable partner in China's S&T modernizations; it became involved with China's S&T reforms so it could profit from China's economic developments while maintaining influence through improved Sino-American economic relations; and it emphasized the importance of China as an ally by keeping it content after the Tiananmen incident.

The theory of realism has offered insight into this from several aspects. Firstly, the thought that international relations are a realm of interest and power, in which self-interest plays a vital role, reflects the US cooperation on China's S&T reforms. Secondly, realism clarifies the vital role of a security dilemma in Sino-American relations. Though supporting China's S&T reforms created the possibility for the US to influence China, it let China expand as a political power and thus possibly form a threat to the US as hegemony. Thirdly, the theory of realism helps understand that national interests were more important than humanitarian, ethical and ideological considerations for President Bush and thus he put the national interests of the US before justice for Tiananmen protestors.

This in-depth analysis has helped understand the paradox that support of the US in China's S&T reforms could influence its position in international politics negatively. This study has offered new insight into the historiographical debate between scholars who emphasize China is an economic and political threat to the US and scholars who argue that the US will stay a hegemonic power despite China's rapid economic and political growth. This study positions itself in the school of thought that believes the US will remain a hegemonic power despite China's rapid economic and political rise, as the US was still able to restrict China's growth to a certain extent.

Future research on this subject could use this thesis as a basis for an expansive analysis on China's general reforms or for a comparison of Sino-American relations before and after the 1990s. In light of improving research on this subject, future analyses should consider including primary sources from a Chinese perspective. There are several reasons why this thesis did not include primary

sources from a Chinese perspective. Firstly, due to a lack of knowledge of the Chinese language, it was not possible to analyze the Chinese perspective. Secondly, the Chinese government has not published many policy papers from the period 1970 to 1990. Thus, there is a lack of background information from a Chinese perspective. Furthermore, other US archives could be consulted such as the US Declassified Documents Online, which contains a broad range of formerly classified federal records dating from the twentieth to the twenty-first century.<sup>98</sup> In addition, European archives could be consulted in order to create a different perspective on the subject.

The research done for this thesis has led to new questions that could be researched in the future. For example, how did China experience the influence of the US with respect to its S&T reforms? Or, to what extent have Chinese students and scientists that went abroad returned to China? As formerly classified documents are constantly being released, new insights on many aspects of Sino-American relations will arise in the future.

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<sup>98</sup> U.S. Declassified Documents Online Database,  
<http://gdc.galegroup.com.proxy.library.uu.nl/gdc/artemis/?p=USDD&u=utrecht>.

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