

CONTRIBUTOR BIO



AMY HOLMES is a fourth year Political Science major graduating in June 2019. She will graduate with a Pre-Law concentration and French and Global Politics minors. At Cal Poly, Amy is the Executive Editor of Paideia, Political Science Club President, a member of the Pi Sigma Alpha honors society, and a member of the Phi Alpha Delta pre-law fraternity. Originally from England, Amy grew up in Yucaipa, California. Her academic interests in international affairs stem from her international upbringing. She studies intellectual property law and international affairs, and this fall she will move on to law school. Amy's personal interests include baking, reading, and traveling.
By Ethan Gunnlaugsson

Intellectual Property Theft and its Impact on the US-China Relationship

Amy Holmes

Abstract

Growing in frequency in recent years, theft of United States intellectual property by China has become a serious concern for the US government. This theft impacts many areas of US life including increased cost of goods, difficulty participating in international trade, and increased national security concerns. This paper looks at three areas of intellectual property theft: patent theft, copyright theft, and trade secret theft, using specific examples of each. In examining each of these examples, we discuss the implications of this theft for US citizens as well as the relationship between the United States and Chinese governments. This paper concludes that Chinese intellectual property theft has a significant negative impact on the relationship between China and the United States and should be curtailed appropriately by both governments.

Introduction

In the fall of 2018, the United States announced that it was launching a campaign against China's continued economic attacks through intellectual property theft.¹ The new initiative, called the China Initiative, by the US Government combines ongoing efforts by the FBI and Justice Department into one cohesive unit, with a goal of combating trade secret theft.² By heavily analyzing foreign investments into 'sensitive technologies' such as those within the telecommunications sector, the US government believes that they can locate the sources of the most dangerous intellectual property theft

1 Ellen Nakashima, "With new indictment, U.S. launches aggressive campaign to thwart China's economic attacks," *The Washington Post* (November 1, 2018).

2 "Attorney General Jeff Sessions Announces New Initiative to Combat Chinese Economic Espionage," speech, Office of the Attorney General, Washington D.C., November 1, 2018).

threatening the US today. This initiative “sends a clear message to Beijing that Chinese economic espionage — whether by cyber or human means — will not be tolerated.”³The China Initiative will focus on US trade secret protection overseas, by ensuring that there are adequate protections both domestically and internationally. Domestic protection is reasonably secure, but international security, especially in nations such as China, is weak and leaves other countries at risk of theft.⁴

The formation of this initiative represents continuity over time. Intellectual property disputes have been a significant issue between the United States and China.⁵ For instance, the Trade-Related Aspects of Intellectual Property Rights agreement (TRIPS) of the World Trade Organization, formed in 1995, introduced countries to many issue areas of intellectual property.⁶ The TRIPS agreement requires all member nations of the World Trade Organization to adhere to minimum standards of intellectual property rights within their home nations in order to better protect global rights and laws.⁷ Since the formation of TRIPS in 1995, the United States has filed twenty three dispute cases against China alone.⁸ One of the purposes of the TRIPS agreement is dispute settlement, however, this settlement option is geared more toward country-based disputes rather than individual disputes. In more recent years United States citizens have been increasingly filing intellectual property claims against Chinese citizens and companies within US courts in an attempt to assert their dominance over Chinese companies. While intellectual property theft has been prevalent for years, it has increased significantly in more recent times, with China being one of the biggest perpetrators.⁹

The implications of the China Initiative on US technology and public policy will likely be substantial. As technological innovation continues to progress, intellectual property rights and their protection will also become more prevalent. Intellectual property theft hurts many aspects of US life including consumer health & safety, economic stability, and national

3 op. cit., fn. 1.

4 Ibid.

5 World Trade Organization, “Disputes by Member,” World Trade Organization.

6 World Trade Organization, “TRIPS: An Overview,” World Trade Organization.

7 Ibid.

8 op. cit., fn. 4.

9 Office of the United States Trade Representative. 2017. 2017 Special 301 Report.

security.¹⁰ When countries like China illegally replicate US goods, they may do so using unsafe or hazardous materials, and they may also fail to ensure that the consumer will be able to safely use these products. When DVDs, CDs, and other multimedia are pirated and re-distributed, the consequences for those involved in the original production are incredible. Nearly every person involved in the creation of that media is harmed economically, through what could be prevented with proper enforcement of intellectual property laws. It was estimated in 2007 that music theft alone amounts to losses of over \$15 billion annually.¹¹ With the popularization of streaming services, such as Spotify and Pandora, the economic losses to the music industry alone are staggering. While music theft is a large issue, it is minuscule in scale to the issues of patent, copyright, and trade secret theft. One of the most concerning aspects of intellectual property theft is the threat it poses to national security. Many of the technologies developed for national security purposes are protected by trade secret laws.¹² Trade secrets are extremely vulnerable to theft through hacking, international investment, and intra-industry job changes.¹³ The China Initiative plans to focus on these issue areas to protect US intellectual property on a global scale.¹⁴ This initiative will likely result in litigation between China and the US over intellectual property and more in-depth procedures for global protection of intellectual property. The growing battle between China and the United States over technological and economic power leads me to ask this research question: How does intellectual property theft impact US – China relations?

To illustrate the impact of intellectual property theft on US – China relations, this paper will use qualitative methodology in the form of case study research. These case studies will examine different instances of Chinese theft of US intellectual property through patents, copyrights, and trade secrets.

10 Ibid.

11 Stephen E. Siwek, “The True Cost of Sound Recording Piracy to the U.S. Economy,” Institute for Policy Innovation: Center for Technology Freedom (August 2007).

12 “International Trade and Finance: Overview and Issues for the 115th Congress,” Congressional Research Service (March 5, 2018).

13 Ibid.

14 Op. cit., fn. 2.

Case Study: Patent Theft

According to claims by the Office of the United States Trade Representative (USTR), China has been repeatedly denying U.S. patent holders the intellectual property rights that they are entitled to, as declared by the TRIPS agreement.¹⁵¹⁶ The statement by the USTR alleges that China has enacted policies that accord less favorable treatment to foreign intellectual property rights holders than Chinese citizens.¹⁷ China has repeatedly promised the United States that it will work toward curbing the intellectual property theft that occurs within its borders and has repeatedly failed to keep those promises. Chinese domestic intellectual property rights declarations include provisions that prohibit imported technologies from “restricting a Chinese party from improving the technology or from using the improved technology.”¹⁸ These provisions are one of many that promotes Chinese intellectual property theft. When expanding into international markets, business owners and their innovation teams have expectations that their technologies and intellectual property will be safe and remain protected regardless of where the information is taken to.¹⁹ However, China has proven that this is not the case within its borders.

In 2014 Segway Inc. creator of the self-balancing transportation system also known as Segway, filed a complaint through the United States International Trade Commission alleging patent infringement by China-based Ninebot Inc.²⁰ Segway claims that Ninebot and their associated companies infringed upon four of Segway’s US patents, including the patent for their then unrivaled “yaw control” which allowed for the balancing of the device while the passenger was onboard.²¹ There were three Chinese manufacturers of these self-balancing scooters mentioned in the complaint, all of which were believed to have infringed upon at least one of the patents, and most

15 Glenn Hess, “U.S. Files Complaint Over China’s Patent Policies,” American Chemical Society (April 2, 2018).

16 *op. cit.*, fn. 5.

17 “USTR requests consultations with the government of the People’s Republic of China,” (press release, Office of the United States Trade Representative, 2018).

18 *Ibid.*

19 Brian T. Yeh, “Intellectual Property Rights Violations: Federal Civil Remedies and Criminal Penalties Related to Copyrights, Trademarks, Patents, and Trade Secrets,” Congressional Research Service (May 27, 2016).

20 Segway Inc. v. Ninebot Inc, et al., United States International Trade Commission, (2014).

21 *Ibid.*

of which were believed to have infringed upon all four mentioned patents. These devices were manufactured in China and then imported into the United States where they were sold for profit.²² Instead of pursuing legal channels, this dispute was settled by Ninebot Inc. purchasing Segway Inc. in order to gain access to the original patents, and therefore no longer be liable for infringement.²³

Events like the Segway case are more common than one would think, however enforcement of these infringements is not always feasible. A United States-based company may have patent protection domestically, and in some other countries, but receiving a patent in China is a more difficult process. The application for a patent must be submitted in Chinese, which can often lead to incorrect translations, resulting in vital aspects of the patent being excluded from the application.²⁴ Often times there are technical terms used in English that do not translate to Chinese, and instead of finding an alternate means of communicating the idea, the translator will leave the section out entirely. The enforcement mechanisms in China are also problematic. As mentioned earlier, international patents are given significantly less protection than those filed with the Chinese government.²⁵ China has also been known to restrict access to the Chinese market unless a company agrees to turn over their intellectual property to the Chinese government for their unrestricted use.²⁶ China produces approximately 62% of the world's counterfeit goods, and when China is set to include Hong Kong, that number jumps to over 80%.²⁷ The lack of enforcement and continued manufacturing of counterfeit goods severely harms the relationship between the United States and China. United States-based companies are less likely to look toward China as a production center, as these companies do not want to risk losing intellectual property protection or face the issue of unenforceable infringement within China. The United States also faces significant battles in allowing Chinese goods into the US market when they may be patent infringing or counterfeit goods.

22 Ibid.

23 Jack Linshi, "Why This Chinese Startup Just Bought a Company Americans Love to Ridicule," *Time Magazine* (April 15, 2015).

24 EU China IPR Helpdesk, "Guide to Patent Protection in China," China IPR SME Helpdesk (2018).

25 European Commission, "Report on the protection and enforcement of intellectual property rights in third countries," European Commission (February 2, 2018).

26 Ibid.

27 Ibid.

Case Study: Copyright Theft

Copyright protects expressions fixed in a tangible medium. Many literary works, including scholarly articles, are protected by copyright.²⁸ Registration is not required for copyright protection both domestically and internationally, though it is recommended. Despite there being no full and complete registry of copyrighted works, there are still alleys for litigating infringement. China is one of the biggest perpetrators of copyright infringement and piracy in the world, despite its alleged commitment to preventing and prosecuting these crimes.²⁹ China has been placed on the Priority Watch List by the United States for its “widespread infringing activity, including trade secret theft, rampant online piracy and counterfeiting, and high levels of physical piracy and counterfeit exports to markets around the globe.”³⁰

Computer software is one example of a copyrightable material that is extremely vulnerable to theft. Many companies choose not to register their software for copyright protection due to the secretive nature of their source code. Source code is the proprietary code behind a computer software, and often includes comments on how the software works.³¹ While registration of the copyright is not required, it increases the likelihood of succeeding in litigation. In China, this process is made significantly easier if the owner of the copyright has previously registered it. However, the registration system in China requires that owners provide extremely detailed information regarding the material to be copyrighted.³² Once the information is submitted, it is entered into a database which the Chinese government alleges is used only in the event of litigation.³³ However, it is suspected that the Chinese government looks at the registrations and choosing to pursue infringement on those that look to provide the most economic incentive.³⁴

The theft of United State intellectual property becomes increasingly

28“What Does Copyright Protect?” US Copyright Office.

29 Grant Clark, “What’s Intellectual Property and Does China Steal It?” Bloomberg (March 22, 2018).

30 *op. cit.*, fn. 9.

31 Merriam-Webster, “Source Code,” Merriam-Webster Dictionary (1965).

32 EU China IPR Helpdesk, “How to File a Copyright Registration in China,” China IPR SME Helpdesk (2018).

33 *Ibid.*

34 Paul Goldstein, “Intellectual Property and China: Is China Stealing US IP?” Stanford Law (April 10, 2018).

concerning when defense technologies are involved. Many of these technologies may not be registered due to the protection of sensitive materials but are still vulnerable to theft through other measures. Copyright theft has become increasingly perpetrated through digital hacking.³⁵ Chinese citizens hack into computers and networks located in the United States and take valuable information off of them without the owner of the material or computer ever knowing.³⁶ Effective countermeasures to this theft have proven difficult to implement due to the advanced hacking capabilities of the Chinese citizens, as well as the lack of consequences within China to deter citizens from committing these crimes. After negotiations with the United States in 2018, China has once again, committed to strengthening their intellectual property protections. It has also ensured the United States that it will increase the consequences of intellectual property theft, however, it will be at least a year before the results of these measures are seen.³⁷

Copyright theft, piracy, and counterfeiting impact many areas of the United States life, however, the national security aspects of these incidents are some of the most dangerous. Counterfeiting, which is a form of copyright infringement, can have extremely dangerous results. Pharmaceutical counterfeiting is one of the most dangerous forms of copyright infringement for American citizens. Counterfeit drugs may be created using hazardous or toxic materials that do not serve the purpose of the original drug and may cause life-threatening results. Counterfeit medications make their way into the hands of United States citizens through online pharmacies which are becoming increasingly difficult to regulate.³⁸ Chinese servers often host these pharmacies and post drug prices that are extremely appealing to US consumers. Mechanisms to detect these counterfeit pharmaceuticals are not foolproof, as the Food and Drug Administration cannot have access to every pill that enters into the United States.³⁹

Copyright infringement has a significant impact on the relationship between China and the United States. Theft of source code could have serious implications for the national security of the United States and

35 *op. cit.*, fn. 9.

36 *Ibid.*

37 Wayne M. Morrison, "Enforcing US Trade Laws: Section 301 and China," Congressional Research Service, (December 3, 2018).

38 Temple University, "Combating Counterfeit Pharmaceuticals from China," *Science Daily* (July 17, 2017).

39 *Ibid.*

the power battle between China and the US. The counterfeiting of pharmaceuticals could have major ramifications if these drugs lead to the death of an American citizen. Basic piracy leads to significant economic losses for the United States and has the potential to alter the entertainment industry immensely. While China continues to promise that they will improve the protections for intellectual property rights within its borders, they have repeatedly fallen short of their targets, and it will be years before the newest round of promises begins to have an effect. The relationship between China and the United States depends on China improving its protections and preventing or discouraging these thefts in the first place.

Case Study: Trade Secret Theft

In 2013, Micron Technology, an American company that produces semiconductor devices, including dynamic random-access memory (DRAM), bought a Taiwanese chip maker and created Micron Memory Taiwan, an Asia-based offshoot of their main corporation focused on building DRAM.⁴⁰ DRAM is considered an old technology in the US, but prior to the formation of MMT, it had never been produced in China.⁴¹ According to an indictment by the US Department of Justice, the President of MMT left soon after the purchase and moved to another technology company. The new company then set up an over \$700 million deal with Jinhua, a Chinese government-owned company, and began producing DRAM around 2016, a first for China.⁴² It was fairly clear to Micron, as well as the Department of Justice, that the President of MMT had taken valuable trade secrets learned during his time at MMT and used them in his new position.⁴³

Events such as these are caused by weak laws and enforcement in other countries. According to a CRS report on the Protection of Trade Secrets, a company's ability to protect its trade secrets is diminished, sometimes completely, by weak rule of law and ineffective or non-existent enforcement of intellectual property rights.⁴⁴ Theoretically, this is where a global system, such as TRIPS, should come into play for the protection of IP rights in

40 Adam Rogers, "US Accuses Chinese Company of Stealing Micron Trade Secrets," *Wired Magazine* (November 1, 2018).

41 *Ibid.*

42 *United States of America v. United Microelectronics Corporation, et al.*, CR 18 465, (2018).

43 *Ibid.*

44 Brian T. Yeh, "Protection of Trade Secrets: Overview of Current Law and Legislation," *Congressional Research Service* (April 22, 2016).

foreign nations. However, China has continually violated its promises to the US to curb IP theft occurring from within its borders.⁴⁵ This lack of enforcement then leaves it the US to seek out and attempt to prosecute theft occurring overseas. When the theft is perpetrated by a general company with no government ties, the US refers to it as trade secret theft. However, when the theft involves another government, such as the Micron case, it becomes economic espionage.⁴⁶

Trade secret theft is one of the most dangerous aspects of IP theft, due to its prevalence in national security. The Trump administration has recently banned certain government agencies from using devices produced by Chinese manufacturers amid fears that they may contain backdoors that provide access to US government networks.⁴⁷ Many of the technologies developed with national security in mind are protected by US trade secret laws. They are extremely vulnerable to theft through hacking, international investment, and as seen in the Micron case, persons switching jobs within the same field. This is likely why the Trump Administration is focusing so heavily on trade secret theft and economic espionage. While the Micron case gives us a great example of employment risks, one of the largest risks to national security comes from foreign investment.⁴⁸ When technology companies begin their marketing process, they are eager to break into the Chinese market. However, China selectively grants market access to foreign investors in exchange for the transfer of technology, often protected by US trade secret laws. This results in what some may think is trade secret theft, but is actually a legal mechanism for gaining access to US intellectual property.⁴⁹ According to a study by PriceWaterhouseCoopers and the Center for Responsible Enterprise and Trade, the economic losses stemming from trade secret theft alone amount to between one and three percent of US GDP annually, or roughly 350 billion dollars a year.⁵⁰ The difficulties in finding and prosecuting those involved in this theft are what result in the losses being so significant.

45 *op. cit.*, fn. 8.

46 Charles Doyle, "Stealing Trade Secrets and Economic Espionage: An Overview of the Economic Espionage Act," Congressional Research Service (August 19, 2016).

47 Catalin Cimpanu, "US Bans Exports to Chinese DRAM Maker Citing National Security Risk," ZDNet (October 28, 2018).

48 *op. cit.*, fn. 10.

49 *op. cit.*, fn. 8.

50 PwC & CREATE.org, Economic Impact of Trade Secret Theft: A Framework for Companies to Safeguard Trade Secrets and Mitigate Potential Threats (February 2014).

One of the reasons that China is so prevalent in the theft of US intellectual property is that they have no incentive to crack down on it. The theft benefits its economy, and likely directly benefits the Chinese government. This is why it is vital that the US takes steps to prevent the theft in the first place. Once it is in Chinese hands, the only remedies are punitive and cannot compensate for the losses caused to US companies. While US companies can sue in the United States, and the government as a whole can choose to pursue dispute settlement through TRIPS, neither of these methods have proven successful in deterring Chinese trade secret theft.

So, what? Implications of Research Findings

Intellectual property theft has a profoundly negative impact on the relationship between China and the United States. It causes the United States to look more closely and more suspiciously at foreign investment, potentially limiting funding options for US-based companies. Intellectual property theft also amounts to significant economic losses for the United States each year. These impacts go beyond just the penalties and losses of the theft. In order to combat theft, the US must put forward more than just the threat of the company being sued. In recent months, the US government has threatened sanctions against China due to its rampant theft.⁵¹ While sanctions may offer some temporary relief, they will not be a lasting solution, as retaliatory sanctions that further harm the US economy are often placed in response.

China and the US have a deep trade relationship. China is the United States' largest trade partner, exchanging over \$636 billion in goods in 2017 alone.⁵² China's intellectual property theft could severely damage this trade relationship, leaving both countries struggling to find the goods they need to continue life as usual. My research findings show that there is a desperate need for increased intellectual property protection within China, as well as better global mechanisms for protection. There should be more of a focus on preventing and prosecuting Chinese intellectual property theft while also focusing on maintaining a positive and workable relationship with China. China needs to own up to its thefts and work to ensure it is providing adequate protections for international and domestic intellectual property,

51 Jenny Leonard & Shawn Donnan, "Trump Administration Weighs Hacking Sanctions on Chinese Entities," Bloomberg (September 7, 2018).

52 Sarah Gray, "These are the Biggest US Trading Partners," Fortune Magazine (March 8, 2018).

while also ensuring that the theft that occurs in its nation is neutralized and effectively reprimanded.