

**On Shinzō Abe's Educational Reforms:
Remolding Ideal Human Beings in the Age of Empire**

by

Joseph L. Clark
B.A., University of Victoria, 2013

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ABSTRACT

This study examines educational reform in Japan since 2006, when the first Abe administration added objectives to increase “love for the country” and “respect for tradition and culture” into Japan’s central edict on education. The Japanese education system has since been internationally criticized by academics and journalists as furthering a neonationalist revisionist history movement, but the initiative to remove ‘masochistic views’ of history from education is only one aspect of the reforms. This thesis argues that Prime Minister Abe’s educational reforms attempt to meet related demands coming from both the global and domestic environments. In fact, a close examination of Japanese educational reforms since the 2006 Basic Act reveals a strategic response to the new technologies and changing security environment of the Information Age, as well as an effort to make students think of themselves as members of a national community. This research contributes to understanding how Japanese educational policies are being affected by the changing global environment, and the ways in which efforts to meet different global and domestic demands can be negotiated with each other.

Keywords: Education, information-communications technology, history, soft power, Japan

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Introduction

The Engineers of Japan's Educational Reforms

On December 22nd, 2006, the first Abe administration changed the Japanese government's central edict on education for the first time since March 31st, 1947, when the Fundamental Law of Education was put into place by the Supreme Commander for the Allied Powers.¹ The purpose of this thesis is to analyze educational reform in Japan since 2006 in order to reveal the reasons and strategies behind Shinzō Abe's initiative to reform national education policies through his three terms as Prime Minister of Japan. To achieve this goal, the following chapters will analyze education policy documents affiliated with or otherwise relevant to Abe's first three terms as Prime Minister of Japan (September 26th, 2006 - September 23rd, 2007, December 26th, 2012 - December 24th, 2014, and December 24th, 2014 – November 1st, 2017), paying special attention to how they attempt to adapt policies to the changing global environment.

The central question addressed in this thesis is: *what prompted the Japanese government initiative for educational reform beginning with the 2006 Basic Act on Education?* The main argument is that the educational reforms are a response to two different types of demands; one which comes from the global system, and one which comes from within the domestic

¹ Maurice E. Jenkins, trans., "The Modernization and Development of Education in Japan," in *The History of Japan's Educational Development: What implications can be drawn for developing countries today* (Tokyo: Institute for International Cooperation and Japan International Cooperation Agency, 2004), 23. Ministry of Education, Sports, Science and Technology (MEXT), *Basic Act on Education: Provisional Translation (Act. No. 120 of December 22, 2006)*, (Tokyo, 2006) <http://www.mext.go.jp/en/policy/education/lawandplan/title01/detail01/1373798.htm> (accessed January 9, 2017).

environment. On one hand, the global system requires innovative labor power that can contribute to security and industrial growth in the Information Age. On the other hand, the reforms respond to a different type of demand for labor power with a “love for the country” (*aikokushin*)² that motivates it to work for the prosperity and security of Japan. In order to adapt educational policy to the changes of the information revolution, the reforms emphasize giving students the abilities to use and innovate information-communications technologies (ICT) as the skills that make it possible to contribute to the growth of emerging industries.

To meet domestic demands, the reforms seek to construct a “normative consciousness”³ characterized by a mythological view of history that imagines the national community as a holy family unified under an unbroken line of divine emperors. By teaching students that they are members of this national community, Japanese education attempts to nurture citizens with the desire to contribute to national “peace and prosperity.”⁴ Educational reform to meet these domestic demands have been made possible by the 2006 *Basic Act on Education*’s new objectives to increase students’ “love for the country” and “respect for tradition and culture.”⁵ This thesis will show that Japanese educational reforms since 2006 are a response to domestic demands for a population that is self-motivated to work for the prosperity and security of Japan, as well as global demands to respond to the new technologies and changing security environment of the Information Age.

² MEXT, “Aims and Principles of Education,” in *Basic Act on Education*.

³ MEXT, “Fostering Sociality and Normative Consciousness,” in *Basic Plan for the Promotion of Education*, (Tokyo, 2008).

⁴ *Chūgakkō gakushū shidō yōryō* [Middle School Teaching Guidelines], (Tokyo: MEXT, 2008), 42. [In Japanese] Hereafter *Middle School Teaching Guidelines*.

⁵ MEXT, “Aims and Principles of Education,” in *Basic Act on Education*.

CONTEXT

The geopolitical context of Prime Minister Abe's educational reforms mainly rests on the changing U.S.-Japan security alliance, which indicates a more active role for Japan within the global system. The three Armitage-Nye reports on the U.S.-Japan alliance for the Center for Strategic and International Studies (CSIS) urge policy-makers on both sides to strengthen cooperation for an enhanced security system in the Asia-Pacific to Middle East regions. In the third report published in August 2012, Armitage and Nye write that the U.S.-Japan alliance "should expand the scope of Japan's responsibilities to include the defense of Japan and defense with the United States in regional contingencies."⁶ These recommendations were clearly reflected in Abe's July 1st, 2014 reinterpretation of the war-renouncing Article 9 of the Japanese Constitution and the September 19th, 2015 security bill package allowing the Japanese Self-Defence Forces (SDF) to engage in military action overseas for 'collective self-defense.'⁷ Since CSIS is a think tank that regularly offers the U.S. Congress and executive branch "bipartisan recommendations to improve U.S. strategy," the security bill package follows a blueprint of the global system that is aligned with U.S. interests.⁸

⁶ Richard Armitage. Joseph Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia* (Washington: Center for Strategic and International Studies, August 2012), 11.

⁷ Reiji Yoshida. Mizuho Aoki. "Diet enacts security laws, marking Japan's departure from pacifism," *The Japan Times*, September 19, 2015, <http://www.japantimes.co.jp/news/2015/09/19/national/politics-diplomacy/diet-enacts-security-laws-marking-japans-departure-from-pacifism-2/#.WHacypLr1mA> (accessed January 10, 2017).

⁸ Center for Strategic & International Studies, "About Us," webpage. <https://www.csis.org/about-us> (accessed March 15, 2017).

Armitage and Nye refer to constraints on the SDF as ‘anachronistic’ because of security threats in “in Japan’s own neighborhood.”⁹ They write, “China’s assertive claims to most of the East China Sea and virtually all of the South China Sea and the dramatic increase in the operational tempo of the PLA [People’s Liberation Army] and other maritime services, including repeated circumnavigation of Japan, reveal Beijing’s intention to assert greater strategic influence throughout the ‘First Island Chain’ (Japan-Taiwan-Philippines).”¹⁰ According to Armitage and Nye, the rise of China, along with nuclear provocations coming from North Korea,¹¹ are geopolitical factors which demand for Japan and the U.S. to form a closer security alliance.

China’s PLA has been building its presence in areas of the East and South China Seas also claimed by Japan, Taiwan, the Philippines, Vietnam, Malaysia, and Indonesia.¹² As a result of China’s investment in its maritime presence, China Coast Guard now has the largest active fleet in the world at 205 ships.¹³ The PLA Navy plans to have 351 ships by 2020, while the U.S. Navy has 280 total ships as of February 13th, 2018 and plans to have 326 ships in 2023.¹⁴ A

⁹ Richard Armitage. Joseph Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia* (Washington: Center for Strategic and International Studies, August 2012), 2, 11.

¹⁰ Richard Armitage. Joseph Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia* (Washington: Center for Strategic and International Studies, August 2012), 11.

¹¹ Richard Armitage. Joseph Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia* (Washington: Center for Strategic and International Studies, August 2012), 1.

¹² “A timeline of what happened in the South China Sea dispute,” *Business Insider*, July 12, 2016, webpage. <http://www.businessinsider.com/ap-timeline-the-china-philippines-south-china-sea-dispute-2016-7> (accessed January 9, 2017).

¹³ “Are Maritime Law Enforcement Forces Destabilizing Asia?” *Center for Strategic and International Studies: ChinaPower*, updated June 18, 2017. <http://chinapower.csis.org/maritime-forces-destabilizing-asia/> (accessed January 9, 2017).

¹⁴ Kris Osborn. “Why the U.S. Navy Could Be in Really Big Trouble: China Plans 351 Ships by 2020,” *The National Interest*, May 9, 2016, online. <http://nationalinterest.org/blog/the-buzz/why-the-us-navy-could-be-big-trouble-china-plans-351-ships-16101> (accessed January 9, 2017).

David B. Larer. “US Navy to add 46 ships in five years, but 355 ships won’t come for a long time,” *DefenseNews*, February 13, 2018. <https://www.defensenews.com/smr/federal-budget/2018/02/13/us-navy-to-add-46-ships-in-five-years-but-355-ships-is-well-over-the-horizon/> (accessed February 16, 2018).

report released by the United States Office of Naval Intelligence on April 9th, 2015 reads, “in 2013 and 2014, China launched more naval ships than any other country and is expected to continue this trend through 2015-16.”¹⁵ This prediction was accurate, as the PLA Navy commissioned 18 ships in 2016.¹⁶ The PLA Navy has been using its growing strength to build presence in the South and East China Seas with what many journalists and analysts describe as ‘salami-slicing’ tactics; taking a resource in small increments as to not provoke protest, until the entire resource has been taken.¹⁷ A December 14th, 2016 report from CSIS has found that “China appears to have built up significant anti-aircraft and anti-missile systems on all seven of its man-made islands in the South China Sea’s Spratly chain.”¹⁸

This oceanic expansion by the PLA strengthens Chinese control over an area that sees “roughly two thirds of South Korea’s energy supplies, nearly 60 percent of Japan’s and Taiwan’s energy supplies, and 80 percent of China’s crude oil imports come through.”¹⁹ Military control over such an important region for international trade could increase China’s global power projection. In addition, China and Russia have been conducting joint naval exercises every year since 2012. A September 16th, 2016 article from *The National Interest* reads, “Russia and China are growing closer in the nautical realm, much to the chagrin of Indian, American and Southeast

¹⁵ Office of Naval Intelligence, *The PLA Navy: New Capabilities and Missions for the 21st Century*, (Washington, 2015), 15.

¹⁶ “China launches new electronic intelligence naval ship,” *CNBC; Reuters*, January 12, 2017. <https://www.cnbc.com/2017/01/12/china-launches-new-electronic-intelligence-naval-ship.html> (accessed September 27, 2017).

¹⁷ Erik Voeten. “‘Salami Tactics’ in the East China Sea,” *The Washington Post*, December 3, 2013, online. <https://www.washingtonpost.com/news/monkey-cage/wp/2013/12/03/salami-tactics-in-the-east-china-sea/> (accessed January 9, 2017).

¹⁸ David Brunnstrom. “China installs weapons systems on artificial islands: U.S. think tank,” *Reuters*, December 14, 2016, online. <http://www.reuters.com/article/southchinasea-china-arms-idUKL1N1E901G> (accessed January 9, 2017).

¹⁹ Robert D. Kaplan. “The South China Sea will be the Battleground of the Future,” *Business Insider*, January 7, 2016, edited February 6, 2016, online. <http://www.businessinsider.com/why-the-south-china-sea-is-so-crucial-2015-2> (accessed January 9, 2017).

Asian analysts who feel that their growing bilateral synergy could impact the balance of power in Asia.”²⁰

China has shown its growing economic influence with the Asian Infrastructure Investment Bank (AIIB), which was established in Beijing on October 24th, 2014 with 100 billion U.S. dollars of initial authorized capital and 57 ‘Prospective Founding Members’ including the U.K., Germany, and France.²¹ The AIIB is thus on a scale capable of competing with the Japan-led Asian Development Bank and U.S.-dominated World Bank for influence in Asian infrastructure development. This bank will likely be an important financial contributor to the One Belt One Road Initiative, which President Xi Jinping first announced on September 7th, 2013 as a vision of a rejuvenated Silk Road trade network.²² Political leaders in countries such as the U.S., Japan, India, and Russia “are concerned about the geopolitical impact of the Belt and Road” because the trade network could result in the reinforcement and expansion of a Chinese “sphere of influence” that undermines other powers, especially in Asia.²³

It is this growing Chinese ‘sphere of influence’ that has led Armitage and Nye to recommend for Japan to get rid of its constraints on the SDF. However, the Abe administration’s move to strengthen the capabilities of the SDF has met with strong public opposition, as the

²⁰ Abhijit Singh. “Why Russia and China’s Combat Drills in the South China Sea Matter,” *The National Interest*, September 16, 2016, online. <http://nationalinterest.org/blog/the-buzz/why-russia-chinas-combat-drills-the-south-china-sea-matter-17729> (accessed January 9, 2017).

²¹ “What is the Asian Infrastructure Investment Bank?” *Asian Infrastructure Investment Bank*, <http://www.aiib.org/html/aboutus/AIIB/> (accessed January 9, 2017). Ankit Panda, “The Asian Infrastructure Investment Bank is Open: What Now?” *The Diplomat*, January 19, 2016, China Power online. <http://thediplomat.com/2016/01/the-asian-infrastructure-investment-bank-is-open-for-business-what-now/> (accessed January 9, 2017).

²² Ministry of Foreign Affairs of the People’s Republic of China, *President Xi Jinping Delivers Important Speech and Proposes to Build a Silk Road Economic Belt with Central Asian Countries*, (Beijing, 2013) http://www.fmprc.gov.cn/mfa_eng/topics_665678/xjpfwzsysiesqjtfhshzzfh_665686/t1076334.shtml (accessed January 9, 2017).

²³ Scott Kennedy. David A. Parker. “Building China’s ‘One Belt, One Road,’” *Center of Strategic and International Studies*, April 3, 2015, webpage. <https://www.csis.org/analysis/building-china’s-“one-belt-one-road”> (accessed January 10, 2017).

Students Emergency Action for Liberal Democracy (SEALDs) group organized mass protests in front of the Diet leading up to the passage of the security bills. This makes it important to examine national educational policy as a possible means to gain the consent of younger generations as citizens of a nation with renewed military capabilities. The new educational objectives to increase students' "love for the country" and "respect for tradition and culture," for example, express a shift in political and ideological thinking which could be used by the Abe administration to pursue its goal of constitutional revision. It is important to note, then, that increasing students' "love for the country" can help to meet global demands for Japan to take a more active role in security, as well as domestic demands for a population that sees itself as a national community.

Because of the ideological aspect of the 2006 *Basic Act on Education*, some journalists and commentators have compared it to the *Imperial Rescript on Education* proclaimed by Emperor Meiji on October 30th, 1890. The *Imperial Rescript* took form from a combination of Confucian values of filial piety, adapted Shintoist conceptions of the emperor as the head of a 'national body' (*kokutai*), as well as German educational philosophy which emphasized "the development of strong moral character and of a spirit of nationalism."²⁴ Reasserting the "spirit of nationalism" through the new objective to nurture "love for the country" has proven to be complicated; a number of new history textbooks contain narratives of the Second Sino-Japanese War that have stirred up considerable controversy in the global arena.²⁵

²⁴ Kevin A. Collins. "The Development of Teacher Education in Japan 1868-1980s," *Teaching and Teacher Education* 5, No. 3 (1989): 220.

²⁵ Mina Pollmann. "Why Japan's Textbook Controversy Is Getting Worse," *The Diplomat*, April 8, 2015, Tokyo Report online. <https://thediplomat.com/2015/04/why-japans-textbook-controversy-is-getting-worse/> (accessed December 2, 2017).

As previously mentioned, this thesis examines educational reform documents affiliated with or otherwise pertinent to Abe's three terms as Prime Minister. Between Prime Minister Abe's first and second terms, the Democratic Party of Japan (DPJ) took control of the government from September 16th, 2009 to December 26th, 2012 with Yukio Hatoyama, Naoto Kan, and Yoshihiko Noda each briefly taking office as Prime Minister. The DPJ's efforts for educational reform during their three years in control of the Japanese government are noted here as context, but their educational goals were based on financial and administrative adjustments that did not interfere with the content-based changes initiated by the 2006 *Basic Act*. In their 2009 manifesto pledge, the DPJ had six goals related to child-rearing and education. They were: 1) "pay lump-sum childbirth benefit of 550,000 yen," 2) "pay 26,000 yen/month 'child allowance' for all children through junior high school," 3) "free high school education," 4) "greater number of university scholarships," 5) "revive supplement for unemployed single mothers and fathers," and 6) "eliminate daycare waiting lists."²⁶

Of these, the DPJ successfully implemented free high school education and revived the supplement for unemployed single parents. Prime Minister Abe revised the measure for free high school education so that a household's annual income must be under 9.1 million yen to qualify for free high school education starting from April 2014,²⁷ but then announced on May 3rd, 2017 his plans to "incorporate free public education into the Constitution" in 2020.²⁸ This is also the

²⁶ Kenji E. Kushida. Phillip Y. Lipsky. "The Rise and Fall of the Democratic Party of Japan," in *Japan Under the DPJ: The Politics of Transition and Governance* (Stanford: Walter H. Shorenstein Asia-Pacific Research Center, July 2013), 22.

²⁷ MEXT, "Kōkōseito e no shūgaku shien [Study support for high school students]," webpage. http://www.mext.go.jp/a_menu/shotou/mushouka/index.htm [In Japanese].

²⁸ Philip Brasor. "Will there be a price to free education?" *The Japan Times*, May 20, 2017. <https://www.japantimes.co.jp/news/2017/05/20/national/media-national/will-price-free-education/#.WafQlpLeqA> (accessed September 6th, 2017).

year in which Abe hopes to revise Article 9 of the Constitution in order to expand the SDF's capabilities. The DPJ made progress in increasing university tuition waivers and the number of students eligible for scholarships, but were largely unsuccessful in the remaining three objectives.²⁹

LITERATURE REVIEW

There is an abundance of academic work written in English on Japanese educational reform from the Meiji era up until reforms made by Prime Minister Nakasone throughout his term from 1982 to 1987. Of these, Marie Roesgaard's 1998 book *Moving Mountains: Japanese Educational Reform* identifies the pattern of educational policy having to respond to both global and domestic demands. She writes, "the vocabulary of NCER [National Council on Educational Reform] was adapted to international trends and served to ward off criticism both domestically and internationally, but the proposals for actualization clearly demonstrated that the main concerns of educational reform were centered on national and economic needs."³⁰ This description of the educational reforms undertaken by Prime Minister Nakasone in the 1980's suggests that they were superficial as a response to 'international trends.' In comparison, Japanese educational reforms since 2006 respond to both national and global demands with actual policies.

Roesgaard's work on Prime Minister Nakasone's educational reforms was in dialogue with a number of other authors writing on the subject, such as Leonard Schoppa and Christopher

Philip Brasor. Masako Tsubuku. "No relief in sight for Japanese poor single-parent families," *The Japan Times*, November 7, 2015. <https://www.japantimes.co.jp/news/2015/11/07/business/no-relief-sight-japans-poor-single-parent-families/#.Wa-MfopLeqA> (accessed September 6th, 2017).

²⁹ Kushida and Lipsy. *The Rise and Fall of the Democratic Party of Japan*, 22-23.

³⁰ Marie Roesgaard. *Moving Mountains: Japanese Educational Reform* (Aarhus: Aarhus University Press, 1998), 15-16.

Hood. There was, however, a decline in English work on Japanese educational reform after the turn of the century. In his 2009 review of Keith Nitta's *The Politics of Structural Education Reform*, Mark Lincicome writes, "this lively debate over education reform in late twentieth-century Japan has had no counterpart in the twenty-first century among scholars writing in English."³¹ Still, this is not to say that no work has been done on Japanese educational reform in the 21st century.

Marie Roesgaard came out with a new book in 2017 entitled, *Moral Education in Japan; values in a global context*, which argues that Japanese moral education is "a reaction to the challenges of globalization and cosmopolitanism."³² Roesgaard analyzes similar source material to this thesis's discussion of moral education, but her theoretical approach leading her to look for a "world consciousness" within moral education causes her to analyze these materials in different, though not contradictory, ways.³³ While Roesgaard looks at how Japanese moral education reinforces the shared values of 'world consciousness,' this thesis looks at how Japanese moral education seeks to increase students' "love for the country" and "respect for tradition and culture" within the context of the global environment.

Scholars such as Heinz-Dieter Meyer, Aaron Benavot, and Keita Takayama have written about the "increasing influence of PISA on a global scale," referring to the Programme for International Student Assessment developed by the Organization for Economic Cooperation and

³¹ Mark Lincicome. "The Politics of Structural Education Reform (review)" review of *The Politics of Structural Education Reform*, by Keith A. Nitta. *The Journal of Japanese Studies* 35, no. 2 (2009): 476.

³² Marie Roesgaard. *Moral Education in Japan; values in a global context*, (Abingdon: Routledge, 2017), 3.

³³ Marie Roesgaard. "Globalization in Japan; The Case of Moral Education," *International Research Center for Japanese Studies*, 2014. 179.

Development (OECD).³⁴ In books such as *PISA, Power, and Policy*, these authors show how national education policies are now being created according to the global market for optimal economic development, with the OECD acting as an emerging body of “global education governance.”³⁵ These types of global demands on national education systems are relevant to this thesis’s discussion of how Japan has attempted to adapt its educational policies to the changing global environment, in which the OECD plays a large role. Another important book for this thesis is Marie Thorsten’s *Superhuman Japan*, which provides information about how ‘Cool Japan’ government policies influenced the U.S. government by providing a model for encouraging students to specialize in the STEM subjects (Sciences, Technology, Engineering, and Mathematics).

Academic work on Japanese educational reform since 2006 has been largely limited to Japanese academia. Some of the more relevant work in this category are Manabu Satō and Masaaki Katsuno’s 2013 book *Abe seiken de kyōiku wa dō kawaru ka* (How will Education Change Under the Abe Administration) and Hidenori Fujita’s 2014 book *Abe ‘kyōiku kaikaku’ wa naze mondai ka* (Why Abe’s ‘Educational Reform’ is a Problem), which provide good overviews of Japanese educational reform since the 2006 *Basic Act on Education*. Both books criticize the educational reforms as part of a government initiative to increase ideological and administrative control over the education system. For example, they argue that the reforms have increased control over teaching staff and materials and implemented new textbook requirements

³⁴ Keita Takayama. *Has PISA Helped Or Hindered?: Reflections On The Ongoing PISA Debate* (University of New England: The Heart Foundation, 2015), 1.

³⁵ Heinz-Dieter Meyer. Aaron Benavot. “PISA and the Globalization of Education Governance: some puzzles and problems,” in *PISA, Power, and Policy: The emergence of global education governance* (Oxford: Symposium Books, 2013), 9.

to instill a nationalistic ideology.³⁶ However, both of these books were written to criticize the reforms rather than to fully understand the forces that led to them and what they are meant to accomplish (beyond the implementation of standardized testing and a result-oriented approach). This thesis will reveal how the global environment has motivated the Abe administration to carry out educational reforms in the way it has, instead of setting out to show the problems of the reforms.

THEORY

Joseph Nye's work on soft power in international relations is a crucial theoretical component of this thesis. In his 2003 article *U.S. Power and Strategy after Iraq*, Nye writes that soft power is "the ability to attract and persuade rather than coerce," which "arises from the attractiveness of a country's culture, political ideals, and policies."³⁷ Nye's soft power contrasts hard power, which uses military or economic force. He writes, "soft power uses a different type of currency (not force, not money) to engender cooperation – an attraction to shared values and the justice and duty of contributing to the achievement of those values."³⁸ Rather than relying on force and the tangible resources of hard power, soft power instead consists of a wide variety of ways to attract others to converging perspectives. These include linguistic persuasion and visual appeal, as well as cultural and political appeal. Nye writes, "a country derives its soft power primarily from three resources: its culture (in places that find it appealing), its political values (when it lives up to them at home and abroad), and its foreign policies (when they are seen as

³⁶ Manabu Satō. Masaaki Katsuno. *Abe seiken de kyōiku wa dō kawaru ka* [How will Education Change Under the Abe Administration], (Tokyo: Iwanami Shoten, 2013), 24, 34-40. [In Japanese]

³⁷ Joseph Nye. *U.S. Power and Strategy after Iraq* (New York: Council on Foreign Relations, 2003), 66.

³⁸ Joseph Nye. *Soft Power; The Means to Success in World Politics* (New York: Public Affairs, 2004), 7.

legitimate and having moral authority).³⁹ Soft power is also used by the state to draw its citizens to certain perspectives through national policies such as the use of “attractive teaching materials that will emotionally move the students” in the case of Japan’s education system.⁴⁰

The three Armitage-Nye reports emphasize the importance of how American and Japanese foreign policies affect the soft power of both nations. In a practical example of how shared values are used to unify the global system, the second report from February 2007 advises both Japan and the U.S. that “a shared belief in democracy and human freedom can be the political foundation for strengthening ties” with India.⁴¹ The most recent August 2012 report positively assesses Japan’s soft power as “first in the world in terms of ‘national brand,’”⁴² and Armitage and Nye provide recommendations on how to utilize this soft power. They write, “strategically setting its soft power – such as development assistance – to counter growing extremism and provide alternatives is a worthy global mission for Japan.”⁴³

As previously discussed, Armitage and Nye write about the easing of constraints on the SDF as a necessary step for Japan because of China’s growing power and North Korea’s development of nuclear technology. They write, “the new environment requires significantly greater jointness and interoperability across services in both countries and bilaterally between the United States and Japan.”⁴⁴ Interoperability, which Armitage and Nye define as “the fundamental

³⁹ Joseph Nye. “The Limits of Chinese Soft Power,” *Project Syndicate*, July 10, 2015. <https://www.project-syndicate.org/commentary/china-civil-society-nationalism-soft-power-by-joseph-s--nye-2015-07> (accessed September 20, 2017).

⁴⁰ *Middle School Teaching Guidelines*, (Tokyo: MEXT, 2008), 114. [In Japanese]

⁴¹ Richard Armitage. Joseph Nye. *The U.S.-Japan Alliance; Getting Asia Right through 2020* (Washington: Center for Strategic and International Studies, 2007), 23.

⁴² Armitage and Nye. *The U.S.-Japan Alliance; Anchoring Stability in Asia*, 1.

⁴³ Armitage and Nye. *The U.S.-Japan Alliance; Getting Asia Right through 2020*, 25.

⁴⁴ Richard Armitage. Joseph Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia* (Washington: Center for Strategic and International Studies, August 2012), 11.

ability to work together,” is a key component of security in the newly interconnected global system.⁴⁵ Interoperable security means not only coordinated military operations between different nations, but also the coordinated operations of all branches within a national military. It involves the production of advanced 3D mapping and tracking systems through the coordinated operations of Intelligence, Surveillance, and Reconnaissance (ISR) services with the rest of the military on satellite, airspace, land, and sea levels. These mapping and tracking systems are then used to carry out coordinated offensive and defensive security strategies and operations which also demand the same seamless communications between space, air, land, and sea.

Interoperability is essential to the global security system which characterizes the Information Age, where virtually the entire world is interconnected through instantaneous communications and access to vast information networks. The new reliance on ICT for global security and economic growth has increased demands for the work skills needed to utilize these technologies. Nye describes the world of the Information Age as follows:

Power over information is much more widely distributed today than even a few decades ago. Information can often provide a key power resource, and more people have access to more information than ever before. As I describe in *The Future of Power*, this has led to a diffusion of power away from governments to non-state actors ranging from large corporations to non-profits to informal ad hoc groups. This does not mean the end of the nation-state. Governments will remain the most powerful actors on the global stage, but the stage will become more crowded. And many of those other actors will compete effectively in the realm of soft power. The increasingly important cyber domain provides

⁴⁵ Armitage and Nye. *The U.S.-Japan Alliance; Anchoring Stability in Asia*, 12.

a good example. A powerful navy is important in controlling sea lanes; it does not provide much help on the internet. The historian A.J.P. Taylor wrote that in 19th century Europe, the mark of a great power was the ability to prevail in war, but as John Arquilla notes, in today's global information age, victory may sometimes depend not on whose army wins, but on whose story wins.⁴⁶

The notion that “in today's global information age, victory may sometimes depend not on whose army wins, but on whose story wins” is one of the central ideas in Nye's work; he has written extensively on the value of soft power being, in many cases, as important as hard power. Nye writes that “information can often provide a key power resource” because knowledge can be commercialized or militarized, as well as be used to persuade and attract others towards specific perspectives. He emphasizes the significance of the cyber domain because it has increased public accessibility to information. For this reason, Armitage and Nye write about the importance of cyber security as a field of R&D in which the U.S. and Japan should enhance cooperation. They write, “the United States and Japan should establish a Joint Cyber Security Center for research and implementation of common information assurance standards” because “all defense operations, cooperation, and joint engagement are acutely contingent upon the credibility and capability of information assurance measures. Japanese educational reforms respond to these changes by attempting to nurture a population suited to the ubiquitous presence of ICT and by promoting R&D on cyber security technologies.

⁴⁶ Joseph Nye. “The Information Revolution and Soft Power,” *Current History* 113, No. 759 (2014): 2.

Armitage and Nye's recommendation for Japan and the U.S. to cooperate on cyber security R&D is part of an overall message that "it is time for burden-sharing to evolve into power-sharing" in a global security environment that requires Japan to take a more active role.⁴⁷ In addition to the recommendation to lift 'anachronistic constraints' on the SDF, Armitage and Nye also recommend for Japan to ease restrictions on defense-related R&D.⁴⁸ They write, "the easing of restrictions facilitates opportunities for joint development of sophisticated future weaponry and other security systems," such as "next generation fighters, warships, radars, strategic lift, communications, and overall ISR capabilities."⁴⁹

Japan's Ministry of Defense has responded to this need for defense-related R&D by increasing university research subsidies for the development of dual-use technologies from 600 million yen a year in 2016 to 11 billion yen from April 2017.⁵⁰ Armitage and Nye recommend for some of this money to be put towards R&D in the field of nuclear energy. They write, "Tokyo and Washington should revitalize nuclear energy research and development cooperation and promote safe nuclear reactor designs and sound regulatory practices globally."⁵¹ According to the report, "nuclear power is and will remain the only substantial source of emissions-free, base load electricity generation."⁵² Japanese universities have prioritized the development of nuclear energy technologies, cyber security technologies, as well as other dual-use technologies which will be covered in this thesis.

⁴⁷ Richard Armitage. Joseph Nye. *The United States and Japan: Advancing Towards a Mature Partnership* (Washington: Center for Strategic and International Studies, 2000), 4.

⁴⁸ Armitage and Nye. *The U.S.-Japan Alliance; Getting Asia Right through 2020*, 27.

⁴⁹ Armitage and Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia*, 13.

⁵⁰ Ryoko Takeishi, Kenichi Mizusawa, Satomi Sugihara. "Defense research subsidies in 2017 set to snowball to 11 billion yen," *The Asahi Shimbun*, December 29, 2016. <http://www.asahi.com/ajw/articles/AJ201612290057.html> (accessed September 21, 2017)

⁵¹ Armitage and Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia*, 2.

⁵² Armitage and Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia*, 17.

All of these factors contribute to the complexity of a newly interconnected world, where the internet is increasing the number of actors on the global stage. These changes are due to the internet providing information as a 'key power resource,' as well as a global platform for more voices to reach wider audiences. Nye describes this global system as follows:

The agenda of world politics has become like a three-dimensional chess game in which one can win only by playing vertically as well as horizontally. On the top board of classical interstate military issues, the United States is likely to remain the only superpower for years to come, and it makes sense to speak in traditional terms of unipolarity or hegemony. However, on the middle board of interstate economic issues, the distribution of power is already multipolar. The United States cannot obtain the outcomes it wants on trade, antitrust, or financial regulation issues without the agreement of the European Union (EU), Japan, and others. It makes little sense to call this distribution "American hegemony." And on the bottom board of transnational issues, power is widely distributed and chaotically organized among state and nonstate actors. It makes no sense at all to call this a "unipolar world" or an "American empire".⁵³

Nye sees the global system as a "three-dimensional chess game" in which the top level consists of 'military issues,' the middle level consists of 'economic issues,' and the lower level consists of 'transnational issues' where "power is widely distributed," helped in large part by the internet. He writes that the bottom level "includes non-state actors as diverse as bankers

⁵³ Joseph Nye. "U.S. Power and Strategy after Iraq," *Foreign Affairs* 81, No. 4 (2003): 65.

electronically transferring funds, terrorists transferring weapons, hackers threatening cyber security, and threats such as pandemics and climate change.”⁵⁴

Michael Hardt and Antonio Negri also include Nye’s above quote in their 2009 book *Commonwealth*, in order to say that this conception of the global system as a “three-dimensional chess game” and their theorization of the global system as ‘Empire’ are one and the same.⁵⁵ Hardt and Negri describe this ‘Empire’ as emerging with a paradigmatic change in economic primacy from industrial production to information and services.⁵⁶ It is a global system in which “the production of knowledge is itself value creation.”⁵⁷ Japan’s educational reforms reflect this environment in their emphasis on ICT and attempt to nurture “human resources who are capable of contributing to the creation of ‘intelligence.’”⁵⁸ This thesis discusses how Japanese educational reforms approach the need to produce knowledge as value.

One essential characteristic of Hardt and Negri’s ‘Empire’ is that it is a global system where “large transnational corporations have effectively surpassed the jurisdiction and authority of nation-states.”⁵⁹ Hardt and Negri thus argue that the economic powers in the middle level of Nye’s chess board are becoming more powerful. One of the best illustrations of this is the

⁵⁴ Joseph Nye. *Is the American Century Over?* (Cambridge: Polity Press, 2015), 96.

⁵⁵ Micheal Hardt. Antonio Negri. *Commonwealth* (Cambridge: The Belknap Press of Harvard University Press, 2009), 275-76.

Michael Hardt. Antonio Negri. *Empire*. (Cambridge: Harvard University Press, 2000). On pages 309-311, Hardt and Negri describe the world as a “pyramid of global constitution” with three levels which correspond to Nye’s chess board. In the top tier are the U.S., the G7 nations, and a “heterogeneous set of associations” including international financial institutions such as the World Bank. In the middle tier are networks of transnational corporations and nation-states not in the G7. The lowest tier consists of mechanisms that represent the popular interests of groups of people such as NGOs.

⁵⁶ Hardt and Negri. *Empire*, 280.

⁵⁷ Hardt and Negri. *Commonwealth*, 267.

⁵⁸ MEXT, “Chapter 2: Educational vision which should be pursued over the next ten years,” in *Basic Plan for the Promotion of Education (Provisional Translation)*, (Tokyo, 2008). <http://www.mext.go.jp/en/policy/education/lawandplan/title01/detail01/1373797.htm> (accessed January 11, 2017).

⁵⁹ Hardt and Negri. *Empire*, 306.

investor-state dispute settlement (ISDS) clause established under NAFTA, which allows multinational private corporations to sue national governments for failing to protect their investments.⁶⁰ This thesis examines in detail how the growing powers of transnational corporations are reflected in Japanese reforms. After discussing the penetration of corporate interests into the national education system, this thesis examines how the reforms promote a “love for the country” that values the security and prosperity of Japan.

Chapter Two – Japanese Educational Reform for the Information Age: Building a ‘Knowledge-Based Society’

The key question addressed in Chapter Two is: *how do Japanese educational reforms attempt to adapt educational policies to the technological, economic, and military changes brought on by the information revolution?* Chapter Two argues that the reforms are meant to nurture a population that forms a ‘knowledge-based society’; a national workforce that has the abilities to use ICT to meet the global security requirement of interoperability and produce new knowledge for commercialization. The reforms prioritize the production of knowledge in the technological fields which are highlighted in the Armitage-Nye reports, such as nuclear energy, cyber security, and advanced weaponry systems.

Chapter Two opens with a section entitled, “The Revival of Japanese War Industries,” in order to historically and politically contextualize policy changes by the Abe administration which allow Japanese corporations to sell defense-related and weapons technologies overseas. This sets up the background information for discussion of how war industries influence the

⁶⁰ Sean Higgins. “Big business urges Trump to keep NAFTA’s investment protection,” *Washington Examiner*, September 22, 2017. <http://www.washingtonexaminer.com/big-business-urges-trump-to-keep-naftas-investment-protection/article/2635287> (accessed September 22, 2017).

Japanese education system in the second section, “Japanese Academia in the Military-Industrial Complex.” The discussion of dual-use technologies being developed at Japanese universities in this section leads into the third section, “Blue Sky Visions; Corporatization of the University,” which focuses on corporate influence on Japanese education. This section discusses educational reforms that promote industry-academia R&D collaboration to develop new industries. The final section, “‘Knowledge Workers’ for a ‘Knowledge-Based Society,’” includes two subsections, entitled, “Expert Thinking and Complex Communication Skills,” and “STEM and Standardized Testing.” It covers the characteristics of the labor force that Japan’s Ministry of Education, Culture, Sports, Science and Technology (MEXT) desires in the context of the global demands being placed on Japan’s national education system.

Chapter Three – Japanese Educational Reform for the National Community:

Ideological Education

Following up on Chapter Two’s analysis of how the reforms reflect demands coming from the global environment, Chapter Three looks at the ways in which Japanese educational reforms reflect demands coming from the domestic environment. The central question addressed in this chapter is: *how do the educational reforms attempt to meet domestic demands for a population that is emotionally and politically invested in national security and prosperity?* Chapter Three argues that the educational reforms attempt to construct what MEXT calls ‘normative consciousness’ in a way that makes students think of themselves as members of a national community. This chapter shows how Japanese education attempts to recirculate the emperor-based ideology contained in the 1890 *Imperial Rescript on Education* without violating constitutional law against religious education.

Chapter Three opens with a section entitled, “Mythology,” which examines what the Japanese ideology is, and how it is incorporated into MEXT’s construction of ‘normative consciousness.’ This section is followed by “National History,” which looks at how the ideology examined in the first section is reflected within history lessons. These history lessons frame Japan’s role in WWII in a way that attempts to eliminate “masochistic views of history” from education and instead foster “love for the country.” This discussion of how Japanese education approaches Japan’s wartime history then leads into the third section, “National Security,” which shows how Japanese students are taught about national security threats. The final section then examines the response to these threats which Japanese education encourages students to have. Entitled “Morality and Culture,” this section covers what behaviors and attitudes are deemed appropriate for people who identify as members of the national community.

Chapter Four – Japanese Educational Reform for ‘Glocal’ Citizens: Cool Japan and the Aesthetics of Power

Chapter Four discusses how Japanese educational reforms attempt to nurture citizens who have both ‘normative consciousness’ and the ability to form a ‘knowledge-based society.’ The central question addressed in this chapter is: *how do the educational reforms attempt to meet both global demands and domestic demands at once?* Chapter Four finds that Japanese educational reforms attempt to use “love for the country” in order to motivate efforts for regional development and the establishment of a ‘Japan-brand’ in innovative technologies which are infused with cultural appeal. This chapter examines how Japanese educational reforms encourage students to spread their feelings of “love for the country” throughout the world.

Chapter Four is divided into two halves; the first of which is entitled, “Education for ‘Glocal’ Citizens.”⁶¹ This section discusses the concept of glocal citizens as people who are suited to the global environment and yet attached to the local region in which they grew up. It opens Chapter Four because Chapter Three closes by drawing attention to certain tensions between efforts to meet global demands and efforts to meet domestic demands in the educational reforms. The concept of ‘glocalization’ is the solution to these tensions put forth by the Education Rebuilding Implementation Council initiated by Abe in 2006. This section begins by detailing the concept itself and how it is presented by educational reform documents and organizations. In its subsection, entitled, “‘Love for the Country’ in a Global Context,” it goes on to discuss the specific R&D projects being carried out in the name of ‘glocal’ education.

The second half of Chapter Four entitled, “Cool Japan,” discusses how Japan’s ‘Cool Japan’ policies are incorporated into the education system in order to increase Japanese cultural appeal around the world and use this appeal to promote Japanese dual-use technologies. “Cool Japan” follows the section on glocalization because ‘Cool Japan’ policies put the concept of glocalization into practice in a way that attempts to take advantage of and enhance Japan’s soft power on the global stage. The ‘Cool Japan’ section contains a subsection entitled, “‘Techno-Culture and the SDF.’” This subsection looks at specific technologies being promoted by ‘Cool Japan’ and how these policies relate to the SDF as the main hard power resource that the Abe administration wishes to consolidate.

In summary, this thesis will examine how the educational reforms enacted by the Abe administration since the 2006 *Basic Act on Education* attempt to meet demands coming from

⁶¹ ERIC, ‘*Manabitsuzukeru shakai, zen’in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite* [On education that realizes a society which facilitates ‘continuous learning,’ the participation of all, and rejuvenation of local communities], (Tokyo 2015), 12. [In Japanese]

both the global and domestic environments. On one hand, the reforms seek to nurture citizens capable of contributing to the interoperable security and industrial growth of the global system. On the other hand, they seek to nurture citizens who see themselves as members of a national community obligated to contribute to Japan's security and prosperity. Lastly, this thesis will analyze how Japanese educational reforms attempt to meet both types of demands at once, by nurturing 'glocal' citizens who have all the abilities required to contribute to the global system while also having a strong sense of "love for the country."

Chapter Two

Japanese Educational Reform for the Information Age: Building a ‘Knowledge-Based Society’

As part of the central argument that Japanese educational reform since the 2006 *Basic Act on Education* is an attempt to simultaneously meet both global and domestic demands, the following pages will examine in detail the global side of these demands and how they reflected in the reforms. The question addressed in this chapter is: *how do recent reforms in Japan attempt to adapt educational policies to the technological, economic, and military changes of the 21st Century?* This chapter will demonstrate that the reforms are meant to enhance the Japanese economy by nurturing citizens suited to a world that is increasingly interconnected through ICT. MEXT seeks to accomplish this goal by turning students into workers capable of meeting global demands for both interoperable security and technological innovation that can be commodified in the Information Age.

Educational reform documents describe the need to nurture this kind of population as the need to transition to a ‘knowledge-based society’; a society where citizens have the knowledge of ICT necessary for interoperability, as well as the ability to produce new knowledge that is useful for emerging industries. Accordingly, there are two types of knowledge that need to be distinguished from one another for this chapter’s analysis. One is ‘required knowledge’ for proficiency in ICT (on top of areas such as basic Science and Mathematics), and the other is ‘newly produced knowledge’ for emerging industries. The former type of knowledge is required not only for the ability to contribute to interoperable security, but also for the ability to produce the latter type of knowledge. The reforms work towards this social transformation by increasing

corporate influence over the national education system, and thus aligning Japanese education with the demands of global market forces.

1. THE REVIVAL OF JAPANESE WAR INDUSTRIES

In his book *University in Chains*, Henry Giroux provides an account of how war has flooded the social field of education. He details the transformation of American universities into pawns of an evolving, multi-faceted conglomeration of war industries and government; the increasingly powerful “military-industrial complex” that President Eisenhower warned U.S. citizens of on January 17th, 1961.¹ Giroux writes:

One approach centers on the collusion among the Pentagon, war industries, and academia in the fields of research and development. War industries not only provide large grants to universities but also offer job opportunities to their graduates while simultaneously exercising a subtle, though influential, pressure in shaping the priorities of the programs and departments crucial to their corporate interests.²

Giroux argues that this situation constitutes a direct threat to the democratic foundations of the American university, as the influence of war industries has “weakened, if not utterly

¹ Dwight D. Eisenhower. “Farewell Address,” January 17, 1961, *Our Documents*.
<https://www.ourdocuments.gov/doc.php?flash=true&doc=90&page=transcript>

² Henry Giroux. *University in Chains: Confronting the Military-Industrial-Academic Complex* (New York: Routledge, 2007), 52.

compromised” the role of the university as a critical counterinstitution to government policies.³

But to what extent is this same pattern manifested in the Japanese university?

A historical contextualization is necessary here to understand the current situation of Japanese war industries. Between the Meiji Restoration and WWII, technology was transferred from Japanese universities to the military industry for the production of advanced weapons.⁴ Following WWII, university-industry collaboration decreased because of the role it played in Japan’s ‘total mobilization’ for war. On April 21st, 1967, Prime Minister Eisaku Sato established the *Three Principles on Arms Exports and Their Related Policy Guidelines*, which prohibited arms exports to Communist states, countries under U.N. Security arms embargoes, and “countries involved in armed conflict or in the process of entering armed conflict.”⁵ On February 27th, 1976, the Miki Cabinet’s *Collective View of the Government* created “an effective blanket ban on arms exports.”⁶

However, the legitimacy of this collective ban was undermined in 1983 by an exemption for collaboration with the U.S. missile-defense program. On May 11th, 1983, a “system of joint research involving universities and the private sector was launched,” marking “the beginning [or resumption] of official joint research activities.”⁷ Official allowance to make exceptions for the

³ Giroux. *University in Chains*, 2.

⁴ Jake Adelstein. “New evidence of Japan’s effort to build atom bomb at the end of WWII,” *Los Angeles Times*, August 5, 2015, online. <http://www.latimes.com/world/asia/la-fg-japan-bomb-20150805-story.html> (accessed July 4, 2017).

⁵ Corey Wallace. “Japan’s ‘Three Principles of Arms Exports’ about to enter a new phase,” *Japan Security Watch*, December 26, 2011, <http://jsw.newpacificinstitute.org/?p=9568> (accessed February 15, 2017).

⁶ Crystal Pryor. “Japan: Revising arms export regulation,” *World ECR* (2016): 26.

⁷ Pryor. “Japan: Revising arms export regulation,” 26.

export of defense-related technology was created with the March 11th, 1993 *Government Collective View on the Export of General Dual Purpose Equipment*, which “was a declaration that dual use technologies and equipment would not be subjected to the restrictions of the Three Principles.”⁸ This meant that military-grade technology with civilian applications could now legally be exported anywhere in the world from Japan. Most recently, the 1967 *Three Principles on Arms Exports and Their Related Policy Guidelines* was renamed the *Three Principles on Defense Equipment Transfers* in an update on April 1st, 2014.

The 2014 update sanctioned the export of technology “in cases that will contribute to global peace and serve Japan’s security interests,” allowing for greater collaboration in the U.S.-Japan missile defense program and export of Japanese weapons technology under a wider range of circumstances.⁹ The change effectively amounted to a lift on the Japanese ban on military exports. Although Japan has suffered some initial setbacks entering the international arms market, such as Mitsubishi and Kawasaki’s failed bids to produce a fleet of submarines for Australia in April 26th, 2016,¹⁰ Japanese companies are generally increasing their commitment to the weapons industry.

At the June 12th-14th, 2017 Maritime Air Systems and Technologies (MAST) exhibition in Chiba, Japanese defense official Hideaki Watanabe emphasized that “Japan is seeking to increase its sales of military equipment to Southeast Asian nations amid growing tensions with

⁸ Wallace. “Japan’s ‘Three Principles of Arms Exports’ about to enter a new phase.”

⁹ Pryor. “Japan: Revising arms export regulation,” 26.

¹⁰ Franz-Stefan Gady. “Why Japan Lost the Bid to Build Australia’s New Subs,” *The Diplomat*, April 27, 2016, online. <http://thediplomat.com/2016/04/why-japan-lost-the-bid-to-build-australias-new-subs/> (accessed March 15, 2017).

China and North Korea.”¹¹ As a result of this security strategy, Japanese corporations were more involved in the 2017 MAST exhibition. *The Diplomat*’s article covering the event reads, “while in MAST Asia 2015, only NEC Corp exhibited alone and other firms clustered together in one display, this year, 16 Japanese firms are exhibited alone – including Mitsubishi Heavy Industries, Kawasaki Heavy Industries, and ShinMaywa Industries.”¹² These corporations showcased new products such as a guided missile destroyer, an amphibious vehicle model, mine-hunting technology, and a laser radar surveillance system in the hopes of making international deals.¹³

The participation of Japanese corporations in the international arms market is aligned with recommendations made by Richard Armitage and Joseph Nye in the 2007 report from CSIS entitled *The U.S.-Japan Alliance; Getting Asia Right through 2020*. They write, “Japan recently amended its so-called *Three Principles on Arms Exports* to allow for greater participation in U.S.-Japan missile defense programs. As a next step Japan should lift the remaining prohibitions.”¹⁴ The April 1st, 2014 *Three Principles on Defense Equipment Transfers* followed this recommendation by removing most of the remaining Japanese prohibitions on arms exports.

The CSIS report goes on to state, “the Japanese government should also actively encourage greater involvement of its civilian industrial base in the development of homeland security and national defense technologies and allow funds from its large national science and

¹¹ Associated Press. “Defense Ministry woos ASEAN with military tech seminar,” *The Asahi Shimbun*, June 12, 2017, online. <http://www.asahi.com/ajw/articles/AJ201706120047.html> (accessed June 13, 2017).

¹² Mina Pollman. “Japan Shops Maritime Arms to Southeast Asia,” *The Diplomat*, June 13, 2017, online. <http://thediplomat.com/2017/06/japan-shops-maritime-arms-to-southeast-asia/> (accessed June 13, 2017).

¹³ Pollman. “Japan Shops Maritime Arms to Southeast Asia.”

¹⁴ Armitage and Nye. *The U.S.-Japan Alliance; Getting Asia Right through 2020*, 27.

technology budget to be dedicated to defense-related technology research programs.”¹⁵ The Japanese government increased the annual defense budget by 1.4% to 43.5 billion USD on April 1st, 2017.¹⁶ It used this increase as incentive for the Science Council of Japan to start discussing “lifting its decades-old ban on defense-related research as the government seeks more collaboration with civilians in the development of weapons technology.”¹⁷ Although lifting this ban would follow CSIS’s recommendation for Japan to increase civilian involvement in defense technologies, the Science Council of Japan instead voted to “uphold its basic policy, first announced in 1950, of discouraging university research on so-called dual use technologies” on March 7th, 2017.¹⁸ This opposition to opening Japanese universities up to defense-related R&D shows that demands for Japanese participation in an interoperable system of global security are sometimes met with resistance from the very groups of individuals that the global system requires participation from. Despite such resistance, however, the mobilization of Japanese universities for defense-related R&D has proceeded, as the next section shows.

¹⁵ Armitage and Nye. *The U.S.-Japan Alliance; Getting Asia Right through 2020*, 27.

¹⁶ Franz-Stefan Gady. “Japan Approves Modest Defense Budget Hike,” *The Diplomat*, December 23, 2016. <http://thediplomat.com/2016/12/japan-approves-modest-defense-budget-hike/> (accessed January 10, 2018).

¹⁷ Tomoko Otake. “Science Council of Japan considers overturning long-held opposition to military research,” *The Japan Times*, May 30, 2016. <http://www.japantimes.co.jp/news/2016/05/30/national/science-council-japan-considers-overturning-long-held-opposition-military-research/#.WKQUvBAdwdU> (accessed February 15, 2017).

¹⁸ Eric Johnston. Magdalena Osumi. “Influential science group votes no to increased military research at academic institutions,” *The Japan Times*, March 7, 2017. <http://www.japantimes.co.jp/news/2017/03/07/national/influential-science-group-votes-no-increased-military-research-academic-institutions/#.WL8TFhDr1mA> (accessed March 7, 2017).

2. JAPANESE ACADEMIA IN THE MILITARY-INDUSTRIAL COMPLEX

In addition to recommendations for Japan to allow civilian involvement in defense-related R&D to help develop the Japanese weapons industry, Armitage and Nye also recommend for the U.S. and Japan to work together in defense-related R&D for “closer defense collaboration.” They write:

The United States and Japan are the two largest and most capable research and development entities on the globe. As allies we should meld these capabilities and achieve efficiencies in a sector with rapidly increasing costs and complexity. An alliance framework for arms cooperation will require better organization. In the past, cooperation has been relegated to the Sciences and Technology Forum (S&TF).¹⁹

Armitage and Nye recommend that the U.S. and Japan upgrade and update their ‘alliance framework for arms cooperation’ by melding the R&D capabilities of each nation. The “increasing costs and complexity” of the military sector leads Armitage and Nye to find that the existing framework for U.S.-Japan defense-related R&D collaboration is now insufficient for the requirements of the U.S.-Japan alliance.

The existing framework of the Science and Technology Forum was established in 1980, and it paved the way for the June 20th, 1988 *U.S.-Japan Science and Technology Cooperation*

¹⁹ Armitage and Nye. *The U.S.-Japan Alliance; Anchoring Stability in Asia*, 13.

Agreement. This agreement developed the policy framework for U.S.-Japan R&D collaboration in numerous fields such as space exploration and information sciences. It also established the U.S.-Japan Joint High-Level Commission on Science and Technology (JHLC) as an official forum for the U.S. and Japan to coordinate and cooperate on national policies regarding higher education. The JHLC is “co-chaired by the appropriate high-level representatives of both Parties”; usually the U.S. Assistant to the President on Science and Technology Policy, the Japanese Minister of Science and Technology Policy, and the Japanese Minister of Education, Culture, Sports, Science, and Technology.²⁰ It has overseen most issues relating to U.S.-Japan collaborative R&D, such as “research and development activities performed at universities and national research institutions” and “each Party's efforts to establish and enhance world-class research and development facilities at universities and national research institutions in its country to generate new knowledge and generic technologies.”²¹

JHLC meetings are held once every several years, and detailed reports or transcripts of these meetings are unavailable to the public. MEXT officials did not respond to emails inquiring about the meetings and denied access to personnel or archives with relevant information at their headquarters. U.S. government personnel did respond to inquiries, stating in an email that “your message to ‘Inquire’ of May 18 [2016] concerning the Joint High Level Committee on Technology was referred to our unit for a reply because science and technology related records are in our custody,” but that “the records of the Office of Science and Technology Policy

²⁰ USA.gov, “Article V,” in *1988 US-Japan Science and Technology Cooperation Agreement*, (Toronto, 1988) https://energy.gov/sites/prod/files/pi_iec_local/098b7ef980047a2e.pdf (accessed February 21, 2017).

²¹ USA.gov, “Annex III,” in *1988 US-Japan Science and Technology Cooperation Agreement*.

(Record Group 359) do not include any separate files on or reports of this committee.”²² The email does note that some information is “dispersed among larger series of records,” but apparently detailed records of the meetings do not exist in U.S. government archives.²³ However, some JHLC meetings had press releases which summarize their discussions. These generally show mutual agreement between committee members of both sides of JHLC meetings concerning the direction of national education policies.

Available information about the JHLC includes a press release describing the contents of the 11th JHLC meeting convened on June 12th, 2010. At this meeting, the JHLC confirmed cooperation in “human resources development in the field of nuclear Non-Proliferation and nuclear security.”²⁴ The importance of collaborative R&D in the field of nuclear energy is also emphasized by Armitage and Nye in their 2012 CSIS report. They write, “safe, clean, responsibly developed and utilized nuclear power constitutes an essential element in Japan’s comprehensive security. In this regard, U.S.-Japan cooperation on nuclear research and development is essential.”²⁵ An example of research of this nature being conducted at a Japanese university is the Heliotron J plasma containment device developed at Kyoto University, which was designed to “promote basic nuclear fusion research through the integration of nuclear fusion

²² Tab Lewis, e-mail correspondence. May 27, 2016.

²³ *Ibid.*

²⁴ Ministry of Foreign Affairs of Japan, “Japan-U.S. High Level Committee on Science and Technology; Press Statement,” (Tokyo, 2010) <http://www.mofa.go.jp/region/n-america/us/press1006.html> (accessed February 21, 2017).

²⁵ Armitage and Nye, *The U.S.-Japan Alliance*, 3.

science and furnace engineering” and fulfill “the need for more basic research on the behavior of high-temperature plasmas for application to nuclear fusion.”²⁶

At the latest meeting on October 6th, 2015, the JHLC “covered issues such as reform of researcher career systems, facilitation of open innovation, cooperation between industry and academia, next generation cyber technology, the role of national institutes and universities in research and development, human resources development for effective project management, and women in science, technology, engineering, and mathematics.”²⁷ Strengthening education in the STEM subjects of Science, Technology, Engineering, and Mathematics is emphasized for the “facilitation of open innovation” and cooperation with industry. This academic-industrial cooperation can be seen as contribution to the military-industrial complex, as the JHLC agreed to work together on technologies essential to military interoperability such as the Internet of Things, artificial intelligence, and cyber security.²⁸

The JHLC’s commitment to working together to develop “next generation cyber technology” and cyber security is particularly significant in the context of U.S. claims of cyber attacks coming from the Chinese government, first made official in the Pentagon’s annual report to Congress on May 6th, 2013.²⁹ On July 13th, 2016, a Chinese national named Su Bin was

²⁶ “Complex Plasma System (High-temperature Plasma Physics),” *Kyoto University; Undergraduate School of Electrical and Electronic Engineering*, <https://www.s-ee.t.kyoto-u.ac.jp/en/information/laboratory/http> (accessed August 4, 2017).

²⁷ U.S. Embassy and Consulates in Japan, *U.S.-Japan Joint High-Level Committee Meeting on Science and Technology Cooperation*, (Tokyo, 2015) <https://jp.usembassy.gov/u-s-japan-joint-high-level-committee-meeting-science-technology-cooperation/> (accessed February 6, 2017).

²⁸ *Ibid.*

²⁹ Office of the Secretary of Defense, *Annual Report to Congress; Military and Security Developments Involving the People’s Republic of China 2013* (Washington 2013), 36.

sentenced by the U.S. Department of Justice for stealing information about U.S. military aircrafts.³⁰ Since then, U.S. Senator Joe Manchin has said, “we know the J-20 is pretty much mirroring our F-22. We know that their J-31 is pretty much mirroring our F-35,” referring to China’s Chengdu J-20 twin-engine stealth fighter and Shenyang J-31 twin-engine multi-role fighter.³¹ Japanese universities have been developing technology to help deal with this technological threat. The University of Tokyo transfers technology and human resources to a corporation called Zenmu, which “provides next-generation security infrastructure and contributes to high security society with ‘secret distribution technology’” and “aims to realize a society where ‘information security’ is unconscious and ubiquitous.”³²

The University of Tokyo provides Zenmu with cyber security technology through a venture capital firm called The University of Tokyo Edge Capital (UTEC), which “was founded in 2004 as a technology transfer entity of the University of Tokyo.”³³ UTEC provides technologies to a variety of corporations specializing in ICT, manufacturing, and healthcare. Many of these technologies are dual-use and highly valued by the U.S. Department of Defense as fields of R&D investment. For example, UTEC provides technology to a Boston-based

³⁰ The United States Department of Justice, *Chinese National Who Conspired to Hack into U.S. Defense Contractors’ Systems Sentenced to 46 Months in Federal Prison*, July 13, 2016. <https://www.justice.gov/opa/pr/chinese-national-who-conspired-hack-us-defense-contractors-systems-sentenced-46-months> (accessed August 4th, 2017).

³¹ Brendan McGarry. “Lawmaker: Chinese J-31, J-20 ‘Mirror’ American F-35, F-22,” *Defensetech*, September 29, 2015. <https://www.defensetech.org/2015/09/29/lawmaker-chinese-j-31-j-20-mirror-american-f-35-f-22/> (accessed August 4th, 2017).

³² UTEC; Co-Founders for Innovation, “Portfolio Companies; ZenmuTech, Inc,” webpage. <https://www.utec.co.jp/english/portfolio/zenmutech-inc> (accessed August 4, 2017).

³³ UTEC; Co-Founder for Innovation, “About UTEC,” webpage. https://www.utec.co.jp/english/about_utec/firm_profile (accessed August 4, 2017).

corporation called 908 Devices, which describes their signature product as follows: “M908 provides civilian, federal and military responders with unique analysis capabilities for a broad range of chemical warfare agents (CWAs), toxic industrial chemicals (TICs), toxic industrial materials (TIMs), and precursors.”³⁴

Another example of dual-use technologies being transferred from the University of Tokyo to industry by UTEC are next-generation power devices using solid oxide or gallium oxide. According to Armitage and Nye, these fuel cell technologies are critical for Japan to invest in.³⁵ UTEC transfers solid oxide fuel cell technology to a Nagoya-based corporation called FCO Power.³⁶ This technology is described by the U.S. Airforce Research Laboratory as a potential replacement for military auxiliary power units.³⁷ Gallium oxide technology, on the other hand, is transferred to a company called Flosfia, headquartered in Kyoto University.³⁸ The U.S. Department of Defense put out a federal research fund for the development of this technology on January 11th, 2016; its objective was to “develop gallium oxide epitaxial growth

³⁴ 908 Devices, “Safety and Security,” webpage. <http://908devices.com/markets/safety-security/> (accessed August 4, 2017).

³⁵ Armitage and Nye. *The U.S.-Japan Alliance; Getting Asia Right through 2020*, 16.

³⁶ UTEC; Co-Founders for Innovation, “Portfolio Companies; FCO Power, Inc,” webpage. https://www.utec.co.jp/english/portfolio/fco_power (accessed August 4, 2017).

³⁷ Thomas L. Reitz. “Solid Oxide Fuel Cells (SOFC) as Military APU Replacements,” *The Air Force Research Laboratory*. (Wright-Patterson 2010)
https://energy.gov/sites/prod/files/2014/03/f12/aircraft_7_reitz.pdf

³⁸ UTEC; Co-Founders for Innovation, “Portfolio Companies; Flosfia Inc,” webpage. <https://www.utec.co.jp/english/portfolio/flosfia> (accessed August 4, 2017).

Flosfia, “Company Profile,” 2. http://flosfia.com/struct/wp-content/uploads/Microsoft-PowerPoint-Company-Profile_20170728.pdf

system to enable the realization of novel high voltage (greater than 20kV) power electronic switching and pulse power devices.”³⁹

Outside of the UTEC technology transfer program, Japanese universities are developing other dual-use technologies that were also discussed in the most recent JHLC meeting. In addition to cyber security, the JHLC agreed to focus on “collaboration on research and development projects in high energy physics.”⁴⁰ High energy physics has tremendous potential for military application as the science behind directed-energy weapons that can be used for missile-defense. The U.S. has already deployed laser weaponry aboard the *USS Ponce* amphibious transport ship, and “lasers are still the most attractive option” in the Missile Defense Agency’s research into “new methods for stopping an ICBM before it hits the air.”⁴¹ When Armitage and Nye write that the missile-defense program has provided the best “opportunities for joint development of sophisticated future weaponry and other security systems,” they refer to directed-energy weapons such as those utilizing lasers.⁴²

As a result of this interest in the development of laser technologies for security purposes, the U.S. has given over “¥200 million to a dozen [Japanese] universities and institutes” between

³⁹ SBIR STTR America’s Seed Fund, “Epitaxial Technologies for Gallium Oxide Ultra High Voltage Power Electronics,” webpage. <https://www.sbir.gov/sbirsearch/detail/871715> (accessed August 4, 2017).

⁴⁰ U.S. Embassy & Consulates in Japan, *U.S.-Japan Joint High-Level Committee Meeting on Science and Technology Cooperation*, (Tokyo 2015) <https://jp.usembassy.gov/u-s-japan-joint-high-level-committee-meeting-science-technology-cooperation/> (accessed August 4, 2017).

⁴¹ Patrick Tucker. “How to stop a nuclear missile,” *The Atlantic*, January 5, 2017, <https://www.theatlantic.com/technology/archive/2017/01/north-korea-nuclear-missiles/512240/> (accessed August 4, 2017).

⁴² Armitage and Nye. *The U.S.-Japan Alliance*, 13.

2000 and 2015 for the development of dual-use technologies, with a heavy focus on lasers.⁴³ It is not surprising, then, that Osaka University has developed the world's most powerful laser, which was reported in July 2015 to have released two petawatts, or two billion megawatts of energy.⁴⁴ This is more than enough to make application as weaponry feasible. In Bahman Zohuri's book *Directed Energy Weapons*, he writes, "if the desired effect of the weapon is to neutralize aircraft, helicopters, or missiles by burning holes through them or tanks by putting many miniature cracks (crazing) in the glass vision blocks to make them appear to be frosted, a very high-energy laser has to be used with a power output on the order of several megawatts."⁴⁵

The power output of a laser is directly related to its wavelength and brightness. Zohuri writes, "to be effective, the wavelength of a laser weapon must be short."⁴⁶ He cites the laser used on the YAL-1A, a 'first-of-a-kind' prototype laser-mounted unmanned aerial vehicle developed by Boeing, Lockheed Martin, and Northrop Grumman Space Technologies, as an example of an effective weaponized laser. It uses a laser with a short wavelength of 1.315 micrometers, which "travels easily through the atmosphere and has greater brightness – or destructive potential – on the target."⁴⁷ The destructive potential of a laser then rests partly on the shortness of its wavelength and its brightness. One type of laser that shows promise in regards to

⁴³ Johnston and Osumi. "Influential science group votes no to increased military research at academic institutions".

⁴⁴ David Gershgorn. "Japan Fires the World's Most Powerful Laser," *Popular Science*. July 28, 2015, online. <https://www.popsci.com/researchers-japan-fired-worlds-most-powerful-laser> (accessed February 8, 2018).

⁴⁵ Bahman Zohuri. *Directed Energy Weapons; Physics of High Energy Lasers* (Albuquerque: Springer International Publishing, 2016), 47.

⁴⁶ Zohuri. *Directed Energy Weapons*, 54.

⁴⁷ Zohuri. *Directed Energy Weapons; Physics of High Energy Lasers*, 59.

these requirements for weaponization is the free-electron laser. In his article on free-electron lasers, Charles Brau writes, “the ability of lasers to transport energy over long distances in almost no time makes them attractive for strategic defense against missiles. The unique ability of free-electron lasers to operate at high power and short wavelength has made them a leading candidate for this application.”⁴⁸

Kyoto University conducts R&D on this technology at the Advanced Particle Beam Laboratory, which works on “high-brightness electron beam production by a microwave gun.”⁴⁹ Since greater brightness equals greater destructive potential, the high-brightness of the electron beam developed at Kyoto University’s Advanced Particle Beam Laboratory means that it also has high destructive potential. The fact that a microwave gun can be used to produce such an electron beam is corroborated by articles such as “Russia's Next Military Game Changer: Microwave Weapons?” published by *The National Interest* on July 12th, 2016.⁵⁰ R&D on high-brightness electron beams at Kyoto University “led to the KU-FEL accelerator”; the Kyoto University free-electron laser.

Kyoto University’s description of future applications of KU-FEL research reads, “this intense and tunable laser will be used for development of ‘next generation solar cell’ and

⁴⁸ Charles A. Brau. “Free-Electron Lasers,” *Science* 239, No. 4844 (1988): 1120.

⁴⁹ “Advanced Particle Beam Energy (Highly Qualified Energy Conversion),” *Kyoto University; Undergraduate School of Electrical and Electronic Engineering*, <https://www.s-ee.t.kyoto-u.ac.jp/en/information/laboratory/hqec> (accessed August 4, 2017).

⁵⁰ Michael Peck. “Russia’s Next Military Game Changer: Microwave Weapons?” *The National Interest*, July 12, 2016, online. <http://nationalinterest.org/feature/russias-next-military-game-changer-microwave-weapons-16946> (accessed August 4, 2017).

‘artificial photosynthesis materials.’⁵¹ This technology, with its applications in the fields of energy and medical sciences, is highly valued for military purposes. One of the pitfalls of the laser weapon system equipped on the *USS Ponce* is that it is powerful enough to destroy a surveillance drone but not an anti-ship missile or any larger vehicle, as opposed to the “vastly more powerful Free Electron Laser.”⁵² In July 2012, the U.S. Office of Naval Research published a fact sheet on free-electron lasers which stated, “the Free Electron Laser (FEL) provides naval platforms with a highly effective and affordable defense capability against surface and air threats, future antiship cruise missiles and swarms of small boats.”⁵³ The U.S. Navy has yet to implement free-electron lasers in its fleet, as this technology is “a relative newcomer to this laser weapon scene.”⁵⁴ However, the technology “is being developed at the several national laboratories and universities,” and Kyoto University is one such institution outside of the U.S.⁵⁵

3. BLUE-SKY VISIONS; CORPORATIZATION OF THE UNIVERSITY

The growing influence of war industries on the Japanese education system has meant an increased role for private corporations in collaboration with Japanese academia. In the public

⁵¹ “Quantum Radiation Energy,” *Institute of Advanced Energy, Kyoto University; Advanced Energy Generation Division*, webpage. <http://www.iae.kyoto-u.ac.jp/en/organization/generation/quantum.html> (accessed August 4, 2017).

⁵² Spencer Ackerman. “Watch the Navy’s New Ship-Mounted Laser Cannon Kill a Drone,” *Wired*, April 8, 2013, online. <https://www.wired.com/2013/04/laser-warfare-system/> (accessed August 4, 2017).

⁵³ Office of Naval Research Science & Technology, *Free Electron Laser*, (Arlington 2012) <https://www.onr.navy.mil/en/Media-Center/Fact-Sheets/Free-Electron-Laser> (accessed August 4, 2017).

⁵⁴ Zohuri. *Directed Energy Weapons*, 54.

⁵⁵ *Ibid.*

museum at the headquarters of the Ministry of Education (MEXT) in Tokyo, there is a sign that addresses the initiative to increase collaborative research between universities and corporations. The sign reads, “it [industry-academia collaboration] has achieved significant success in developing ‘intellect’ originating from academia into ‘value’ in industry and creating various opportunities for cultivation of a new market base.”⁵⁶ The ‘new market base’ which MEXT seeks to cultivate is primarily that which results from the development of ICT and military interoperability. This section will show how the Abe administration has proceeded in order to convert ‘intellect’ into ‘value’ within an interoperable system of global security.

In the second chapter of *University in Chains*, Giroux examines the growing power of transnational corporations over American universities as having essentially become profit-seeking brands. Giroux writes, “the traditional academic imperative to ‘publish or perish’ is now supplemented with the neoliberal mantra ‘privatize or perish’ as everyone in the university is transformed into an entrepreneur, customer, or client, and every relationship is ultimately judged in bottom-line, cost-effective terms.”⁵⁷ This privatization of the university is also seen within Japan:

National universities, which had been part of MEXT, were corporatized as independent organizations in April of 2004. The corporatization of public universities was also

⁵⁶ exhibition signboard: “Promotion of Government-Industry-Academia Collaboration”, Education, *Exhibition Room 2*, Museum of MEXT, Tokyo.

⁵⁷ Giroux. *University in Chains*, 104.

enabled, at the discretion of each municipality. As a result, universities were freed from budgetary/personnel restrictions imposed by national/municipal governments.⁵⁸

Reducing its own regulatory role, MEXT has followed the neoliberal mantra to ‘privatize or perish’ by corporatizing national universities. Giroux goes on to write that universities have become “mere adjuncts to big businesses, or corporate entities.”⁵⁹ We will now examine how this statement stands in relation to Japanese universities.

One of the themes which stands out when looking at Japanese educational policy since 2006 is ‘industry-government-academia collaboration’ in research and industrial usage of intellectual property resulting from these projects. This theme continues a trend which became clear in the 1990s, when numerous acts modeled on the U.S. system of university-industry collaboration went into effect. The most important of these were the May 6th, 1998 *Act on the Promotion of Technology Transfer from Universities to Private Industries* and the October 1st, 1999 *Act on Special Measures of Industrial Revitalization*. The latter was modeled on the December 12th, 1980 U.S. *Bayh-Dole Act* and “allowed universities to retain title to inventions resulting from state-funded research.”⁶⁰ However, largely because national universities in Japan were state organizations that were still subject to many restrictions regarding patent application,

⁵⁸ exhibition signboard, Education, *Exhibition Room 2*, Museum of MEXT, Tokyo.

⁵⁹ Giroux. *University in Chains*, 106.

⁶⁰ Kazuyuki Motohashi. Shingo Muramatsu. *Examining the University Industry Collaboration Policy in Japan: Patent analysis* (Tokyo: The Research Institute of Economy, Trade, and Industry, 2011), 150.

universities were corporatized in 2004.⁶¹ This change significantly affected the number of university-industry joint research projects undertaken in Japan: 9,225 in fiscal year 2003 to 17,638 in fiscal year 2009.⁶²

Japanese educational reform since 2006 continues the trend to increase joint research between universities and corporations. The 2008 *Basic Plan for the Promotion of Education* states, “the government is promoting joint research activities between universities and companies, the use of university-owned research achievements by businesses, and human resources development designed to satisfy industrial or regional needs.”⁶³ This document also states that the transfer of new technologies to corporations should be facilitated by “tax privileges to allow research institutes to resort to financial contributions or funds from companies for contract research projects jointly implemented between universities and companies.”⁶⁴ As the achievements of academic R&D are increasingly commercialized, so too is the educational system as a whole. The Education Rebuilding Implementation Council (ERIC) initiated by the first Abe administration in 2006 published a recommendation on March 4th, 2015, which reads, “the country will promote efforts to strategically market assets in educational knowhow towards overseas countries and regions where there are needs for better school

⁶¹ Motohashi and Muramatsu. *Examining the University Industry Collaboration Policy in Japan: Patent analysis*, 6.

⁶² Motohashi and Muramatsu. *Examining the University Industry Collaboration Policy in Japan: Patent analysis*, 2.

⁶³ MEXT, “Chapter 3: Measures to be implemented comprehensively and systematically for the next five years,” in *Basic Plan for the Promotion of Education*. Basic Direction 1.

⁶⁴ MEXT, “Chapter 2: Educational Vision which should be pursued over the next Ten Years,” in *Basic Plan for the Promotion of Education*. Desirable Direction of Investments in Education.

education and human resources development system (selling monetization of educational assets and system).”⁶⁵

On October 30th, 2013, a national framework for an organized approach to university-industry collaboration was established. The 2013 *Second Basic Plan for the Promotion of Education* introduces it as follows:

With the aim of generating continuous innovation through the establishment of a ‘platform’ for Research and Development (R&D) under university-industry collaboration, the government will promote the establishment of the Center of Innovation (COI) framework, a large-scale and university-industry collaborated R&D platform in which universities concentrate all their powers on innovative research issues and corporations lead the commercialization of their achievements.⁶⁶

The Center of Innovation (COI) program, designed to establish an official nation-wide platform for university-industry collaboration, was launched a few months after the document quoted above was released. Jointly operated by MEXT and the Japan Science and Technology Agency, the COI program has a governing committee of “five members of industry and two

⁶⁵ ERIC, ‘*Manabitsuzukeru’ shakai, zen’in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite* [On education that realizes a society which facilitates ‘continuous learning,’ the participation of all, and rejuvenation of local communities], (Tokyo, 2015), 16; [In Japanese].

⁶⁶ MEXT, “Measures based on the Four Basic Policy Directions,” in *The Second Basic Plan for the Promotion of Education*. Basic Measure 15.

academics.”⁶⁷ This governing committee established three fields of pursuit for the COI program, which they named ‘Blue-Sky Visions.’ These are: “1: Health in Aging Society; 2: Quality of Life; and 3: Sustainable Society.”⁶⁸

One of the central policies of the COI program is to “establish an innovative platform (COI Site) where universities and companies can work on R&D together under one roof.”⁶⁹ On October 30th, 2013, twelve Japanese universities were selected as the COI Sites and fourteen universities were selected as trial sites for this program. Each COI Site has a research leader from the university and a project leader from industry. This has essentially created partnerships between specific universities and specific companies, although a number of companies are involved in each COI Site. Table 1 shows partnerships formed between universities and corporations through the COI program.⁷⁰

Table 1. Center of Innovation Partnerships

Tohoku University	Toshiba
Kyoto University	Panasonic

⁶⁷ “Center of Innovation (COI): Japan’s Industry-University-Government Collaborative Program” *National Science Foundation; Tokyo Regional Office*. Report Memorandum 13-04. November 27, 2013, 1.

⁶⁸ “Center of Innovation (COI): Japan’s Industry-University-Government Collaborative Program” *National Science Foundation*, 1.

⁶⁹ MEXT, *The Center of Innovation (COI) Program brochure* (Tokyo: Japan Technology Agency, 2014), 2.

⁷⁰ MEXT, *The Center of Innovation (COI) Program brochure*, 3.

University of Tokyo (2)	Mitsubishi Chemical, NEL America
Hirosaki University	Maruman Computer Service Corporation
Hiroshima University	Mazda Motor Corporation
Osaka University	Panasonic
Kanazawa Institute of Technology	Daiwa House
Nagoya University	Tokyo Motor Corporation
Shinshu University	Hitachi
Kyushu University	various minor partnerships
Kawasaki Institute of Industry Promotion	various minor partnerships

Each of these COI sites are managed by a Project Leader (generally from the industrial side of the partnership) and a Research/Vice Project Leader (generally from the academic side of the partnership). The University of Tokyo, Kyushu University, and the Kawasaki Institute of Industry Promotion are the only academic institutions with Project Leaders who are not directly

from the industrial side.⁷¹ The two COI sites at the University of Tokyo partnered with Mitsubishi Chemical and NEL America have former CEOs or advisors for these companies as project leaders, and Kyushu University has a former Managing Director of Panasonic as its project leader.

Since Project Leaders “supervise the overall management of COI sites and their R&D activities” while Research Leaders “are responsible for the day-to-day operation of the headquarters of COI sites and support of R&D strategy planning, etc,” it is evident that the authority of Project Leaders is greater than that of Research Leaders.⁷² On top of the fact that the Project Leaders all have elite backgrounds in the corporate world, the Chairman of the COI Governing Committee is Hiroshi Komiyama, Chairman of Mitsubishi Research Institute. The COI Program therefore puts into place a national framework where business leaders are in charge of R&D at universities. Table 2 shows what projects and technologies are being developed at each COI site.⁷³

Table 2. Center of Innovation Projects

Tohoku University	Health; Unobtrusive Sensing and Daily Health Screening
Kyoto University	Health; Wireless Power Transmission and Advanced ICT for Healthcare Support

⁷¹ Japan Science and Technology Agency, “Industry-Academia Collaborative R&D Programs,” webpage. <https://www.jst.go.jp/tt/EN/platform/coi.html> (accessed March 22, 2017).

MEXT, *The Center of Innovation (COI) Program brochure*, 3.

⁷² Japan Science and Technology Agency, “Industry-Academia Collaborative R&D Programs,” webpage. <https://www.jst.go.jp/tt/EN/platform/coi.html> (accessed March 22, 2017).

⁷³ MEXT, *The Center of Innovation (COI) Program brochure*, 3.

University of Tokyo	Health; All-Japan Health/Medical ICT Network for Self-Managing Healthy Society
Hirosaki University	Health; Big Health Data Analysis for Disease Prediction and Prevention
Kawasaki Institute of Industry Promotion	Health; Smart Nanomachines for “In-Body Hospitals” with Immediate Treatment and Information Transmission
Hiroshima University	Quality of Life; Brain Emotion Interfaces for Human-Object Harmony
Osaka University	Quality of Life; Medicine-Brain-Science-Engineering Collaboration to Reduce Stress
University of Tokyo	Sustainability; Coherent Photon Technology for Laser Fabrication Manufacturing
Kanazawa Institute of Technology	Sustainability; Innovative Materials and Manufacturing Processes for Next-Generation Infrastructure
Nagoya University	Sustainability; Artificial Driver-Assist Intelligence for Mobile Elderly Population
Shinshu University	Sustainability; Reverse Osmosis for Waster Desalination and Reclamation Systems
Kyushu University	Sustainability; Urban Operating System for Co-Evolutional Smart Traffic and Energy

Table 2 shows that most, if not all of the COI projects rely on ICT as an essential component. New manufacturing processes such as laser fabrication, for example, generally depend on ICT to send three-dimensional mapping information on solid objects for production. ICT is also clearly integral to the medical technology being developed at the COI sites, as well as technology involving ‘human-object harmony,’ driver-assist technology, or urban operating systems. This essential role played by new ICTs in the COI program is an outcome of the information revolution. The fundamental importance of ICT in all facets of industrial

development means that education must foster human resources adept in using and developing these technologies, as we will see in the next section.

4. “KNOWLEDGE WORKERS” FOR A “KNOWLEDGE-BASED SOCIETY”

An April 2016 report by the Japanese Business Federation (*Keidanren*), entitled, *Basic Ways of Thinking about Educational Reform*, stresses the importance of teaching students how to use ICT. It states, “in a society where ICT is utilized in all fields in order to improve productivity and human creativity, the ability to master ICT is essential in order to reach full potential.”⁷⁴ The report also recommends that “basic education on computer science should be strengthened at elementary and secondary levels, including programming education to understand the principle of computer.”⁷⁵ *Keidanren* does not only recommend the implementation of educational policy to enhance proficiency in the use of ICT, but it recommends to strengthen the ability to use ICT creatively through ‘programming education.’

Japanese educational reforms attempt to meet these demands by approaching the use of ICT as a basic skill within ‘knowledge-based society,’ like reading or basic mathematics. MEXT’s 2008 *Basic Plan for the Promotion of Education* advocates “the introduction of ICTs (information communication technologies) to classrooms,”⁷⁶ while the 2013 *Second Basic Plan*

⁷⁴ *Keidanren*, *Kongo no kyōikukaikaku ni kansuru kihon-teki kangaekata* [Basic Ways of Thinking about Educational Reform]. Tokyo, April 2016. 7. [In Japanese]

⁷⁵ *Ibid.*

⁷⁶ MEXT, “Basic Direction 2: Development of people’s basic strengths to lead the lives of independent citizens and members of society, through ability building on the basis of respect for individuality” in *The*

for the Promotion of Education states, “measures for upgrading teaching abilities should be taken, so that all teachers are able to incorporate ICT into their teaching as soon as possible.”⁷⁷ A December 2015 MEXT report entitled, *Educational Reform for the Future; Elementary and Secondary*, praises specific examples of efforts to incorporate ICT into classrooms in regions all over Japan. These examples include the use of interactive digital or smart whiteboards, providing a tablet device to each student (which can connect to the smart boards for cooperative work), and the use of digital textbooks.⁷⁸ Proficiency in ICT is a fundamental skill within the new global system because it binds the world together for the integrated performance of military operations, economic exchange, and the surveillance technologies needed to enforce policies such as Japan’s conspiracy bill passed on June 15th, 2017.⁷⁹ It is thus a foundation of industrial development that has become considered by MEXT as part of general studies for everyone.

The Organization for Economic Cooperation and Development (OECD) has shown itself to be a key component in the effort to nurture labor power that can contribute to security and industrial growth in a world that is interconnected through ICT. It is “a unique forum where the governments of 34 democracies with market economies work with each other, as well as with more than 70 non-member economies to promote economic growth, prosperity, and sustainable

Basic Plan for the Promotion of Education. Chapter 3: Measures to be implemented comprehensively and systematically for the next five years.

⁷⁷ MEXT, “Basic Measure 1: Improvement of educational content and methods to cultivate solid academic abilities,” in *The Second Basic Plan for the Promotion of Education*. Measures Based on the Four Basic Policy Directions.

⁷⁸ MEXT, “Mirai o misueta shotō chūtō kyōiku kaikaku [Educational Reform for the Future; Elementary and Secondary],” December 9, 2015. 7. [In Japanese]

⁷⁹ Emiko Jozuka. Ben Westcott. “Japan accused of stifling freedom with new terror law,” *CNN*, June 15, 2017. <http://www.cnn.com/2017/06/15/asia/japan-abe-anti-conspiracy-bill/index.html> (accessed September 27, 2017).

development.”⁸⁰ The OECD is funded by its member countries; the U.S. leads financial contributions at 20.93% of the budget, and it is followed by Japan, which contributed 10.79% in 2016.⁸¹ Because of the widespread influence over national educational policies wielded by the OECD, Heinz-Dieter Meyer and Aaron Benavot write the following in *PISA, Power, and Policy*: “through PISA [Program for International Student Assessment], the OECD is poised to assume a new institutional role as arbiter of global education governance.”⁸² If this is true, the OECD is a central component of an emerging global system of education. Accordingly, Meyer and Benavot argue that “state sovereignty over education is being replaced by the influence of large-scale international organizations” such as the OECD.⁸³

Like MEXT, the OECD has also pushed for the further incorporation of the use of ICT as a basic skill in Japanese education. In 2009, the OECD conducted an international assessment of “digital reading skills among 15-year-olds” in order to investigate “students’ proficiency at tasks that require them to access, understand, evaluate and integrate digital texts.”⁸⁴ The OECD then used this data in a report that it published on February 29th, 2012, entitled *Lessons from PISA for Japan*. The report’s stated objective is to show how Japanese policy-makers can “ensure that

⁸⁰ United States Mission to the OECD, “What is the OECD?” webpage. <https://usoecd.usmission.gov/mission/overview.html> (accessed February 21, 2017).

⁸¹ “Member Countries’ Budget Contributions for 2016,” *OECD; Better Policies for Better Lives*, webpage. <http://www.oecd.org/about/budget/member-countries-budget-contributions.htm> (accessed February 21, 2017).

⁸² Heinz-Dieter Meyer. Aaron Benavot. “PISA and the Globalization of Education Governance: some puzzles and problems,” in *PISA, Power, and Policy: The emergence of global education governance* (Oxford: Symposium Books, 2013), 9.

⁸³ Meyer and Benavot. *PISA, Power, and Policy*, 15.

⁸⁴ Angel Gurría. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*, (Paris: OECD Publishing, 2012), 16. <http://dx.doi.org/10.1787/9789264118539-en>

their students acquire the skills needed for the unpredictable labour market of the future” when “the largest technological force currently influencing the world of work is the computer.”⁸⁵ This means that education systems all over the world must continue to respond to the technological development of computers. The response outlined by the OECD reads, “the aim is no longer just to provide a basic education for all, but to provide an education that will make it possible for everyone to become ‘knowledge workers.’”⁸⁶ The language of the OECD and MEXT differs slightly in that the OECD emphasizes ‘knowledge workers’ while MEXT emphasizes a ‘knowledge-based society,’ but as the following sections show, the essence of their messages are the same.

4.1 EXPERT THINKING AND COMPLEX COMMUNICATION SKILLS

The *Lessons from PISA for Japan* report introduces the ‘knowledge worker’ as a person who has “not only foundational skills like numeracy and literacy, but also advanced problem-solving skills characterised as expert thinking and complex communication.”⁸⁷ ‘Expert thinking’ is defined as the ability to come up with creative solutions outside of prescriptive rules; it is the ability to ‘think outside the box,’ so to speak. ‘Complex communication,’ on the other hand, is defined not only as the ability to communicate complex ideas and information, but also to contextualize and interpret information in its subtlety and ambiguity. These traits are also singled out in MEXT’s 2013 *Second Basic Plan for the Promotion of Education*. It states, “individuals

⁸⁵ Gurría. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*, 16.

⁸⁶ Angel Gurría. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*, (Paris: OECD Publishing, 2012) 16. <http://dx.doi.org/10.1787/9789264118539-en>

⁸⁷ *Ibid*

will also need more important abilities such as the following: creativity and willingness to take on challenges in a brighter future; leadership to govern organizations with quick decisions and strong determination; language (e.g. English) and communication skills for transnational collaborations.”⁸⁸ Both MEXT and the OECD then seek to cultivate creative problem-solving skills and communication skills because these are important requirements of a productive workforce in the Information Age.

To understand why both MEXT and the OECD prioritize teaching ‘expert thinking’ skills, it is necessary to return to the distinction made in the introduction to this chapter between ‘required knowledge’ and ‘newly produced knowledge.’ While ‘required knowledge’ is the knowledge necessary for a person to participate in and contribute to the integrated functioning of the global system, ‘newly produced knowledge’ is necessary for technological innovation and industrial growth. The PISA report touches on this distinction when it states that ‘knowledge workers’ require “not only foundational skills like numeracy and literacy, but also advanced problem-solving skills characterised as expert thinking and complex communication.”⁸⁹ The foundational skills of numeracy and literacy are ‘required knowledge’ to participate in economic exchange and industrial production, but the more ‘advanced problem-solving skills’ are also needed for the production of new knowledge that can be transferred to industry.

The PISA report also discusses national education systems around the world for MEXT to learn from, such as the education systems in Finland, Singapore, and Canada. The report notes that Singapore’s success in education owes not just to efficiently transmitting ‘required

⁸⁸ MEXT, “Four Basic Policy Directions: Particular Abilities for a Globalizing Society,” in *The Second Basic Plan for the Promotion of Education*.

⁸⁹ Gurría. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*, 16.

knowledge,’ but also because Singapore “piloted interventions to demonstrate how to move classrooms from a predominantly knowledge transmission model to a 21st century model where students engage in complex knowledge construction.”⁹⁰ The report also uses the educational system in Shanghai as a success story, because “it has empowered students in the process of learning and in the creation of knowledge.”⁹¹

Lessons from PISA for Japan cite Singapore and Shanghai’s models of educational reform based on the construction of new knowledge as examples for Japan to follow, but Japanese reformers seem to have been aware of the importance of ‘newly produced knowledge’ even before the above recommendations came from outside. As previously mentioned, MEXT’s 2008 *Basic Plan for the Promotion of Education* states that the Japanese education system must “develop human resources who are capable of contributing to the creation of ‘intelligence.’”⁹² The creation of intelligence is a crucial step in carrying out the directive laid out by the sign at the public museum of MEXT, to develop “‘intellect’ originating from academia into ‘value’ in industry” for the “cultivation of a new market base.”

Besides ‘expert thinking,’ *Lessons from PISA for Japan* emphasizes ‘complex communication’ as a high value skill that will be increasingly important with the development of ICTs. In a roundabout way, the report states that the advent of ICT increased demand for jobs involving the communication of information because of a “basic cognitive principle: information is inherently ambiguous, and we give information meaning by imposing a context.”⁹³ ICT, in

⁹⁰ Gurría. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*, 123.

⁹¹ Gurría. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*, 159.

⁹² MEXT, “Educational Vision which should be pursued over the next Ten Years,” in *The Basic Plan for the Promotion of Education*.

⁹³ Gurría. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*, 159.

other words, provides vast information networks but not the ability to process this information and give it meaning. The historically unparalleled amount of information that ICT provides has increased demand for complex communication skills because of an increase of information to be contextualized and interpreted.

Japanese educational reforms place importance on complex communication in both Japanese and English. The 2008 *Basic Plan for the Promotion of Education* states, “the revised Courses of Study for elementary and junior high schools focus on the development of linguistic abilities that constitute the basic strength for intellectual activities, communication and sensitivity and sensibility building, education of science and mathematics, improvement of foreign language education including foreign language activities.”⁹⁴ Of note here is the emphasis on sensitivity and sensibility categorized with communication skills. This supports the PISA report’s assertion that the ability to interpret ambiguity and subtle contextual cues is a complex communication skill that is increasingly in demand with the proliferation of ICT.

The ‘improvement of foreign language education,’ with a special focus on English, is a consistent theme in Japanese reform documents since 2006. A few initiatives in this line of thinking include teaching English from an earlier stage in childhood development, increasing the number of language exchange programs, and bringing in more native English teachers.⁹⁵ The 2008 *Basic Plan for the Promotion of Education* states that these educational initiatives for internationalization will “contribute to the improvement of Japan’s competitive strengths in the

⁹⁴ MEXT, “Chapter 3: Measures to be implemented comprehensively and systematically for the next five years; Basic Direction 2,” in *Basic Plan for the Promotion of Education*.

⁹⁵ ERIC, *University Education and Global Human Resource Development for the Future*, (Tokyo, 2013) 5-7.

world.”⁹⁶ Nurturing human resources with improved English-speaking abilities is seen by MEXT as a way to enhance ‘Japan’s competitive strengths’ because it is part of an effort to foster “global human resources” capable of international collaboration in R&D and conducting business worldwide.⁹⁷ To this end, the *Cool Japan Proposal* published in August 2014 goes as far as to propose creating in Tokyo “an English-speaking district where English is the official language” and “conversations in public places within the special district should be restricted to English only.”⁹⁸

The quote above about ‘sensitivity and sensibility building’ and ‘foreign language education’ also includes ‘education of science and mathematics’ as a point of emphasis. Science and mathematics seems slightly out of place here because the rest of the list has to do with aspects of ‘complex communication,’ which is an advanced skill that sets apart the ‘knowledge worker.’ However, science and mathematics are indispensable components of ‘required knowledge’ to make the production of new knowledge possible, as the next section shows.

4.2 STEM AND STANDARDIZED TESTING

‘Science Education’ was singled out as an important theme in the ninth U.S.-Japan Joint High-Level Committee on Science and Technology (JHLC) meeting held on April 21st, 2003 (the first JHLC meeting for which information is available). During it, representatives from the U.S. and Japan “agreed on the importance of brain research and understanding of the process of

⁹⁶ MEXT, “Chapter 2: Educational Vision which should be pursued over the the next Ten Years,” in *Basic Plan for the Promotion of Education*.

⁹⁷ ERIC, *University Education and Global Human Resources Development for the Future*, (Tokyo, 2013) 6.

⁹⁸ Cool Japan Movement Council, *Cool Japan Proposal*, 10.

learning as a key to improved development of human resources in science and technology.”⁹⁹

The JHLC also agreed on the importance of “Japan-U.S. comparative research on science and mathematics at the elementary and secondary school level . . . and expressed the importance of coping with such comparative research on science and mathematics education.”¹⁰⁰

This agreement between the U.S. and Japan to develop the skills needed for scientific innovation from a young age highlights a global trend towards these kinds of educational practices. Science and mathematics education for ‘development of human resources in science and technology’ is a unifying rule of a global system that is increasingly reliant on interoperability. It can be seen in actual educational reforms that have recently been put into place in both the U.S. and Japan. President Obama’s ‘Educate to Innovate’ program, launched on November 23rd, 2009, aimed to provide American students with “the skills they need to excel in the high-paid, highly-rewarding fields of science, technology, engineering, and math (STEM).”¹⁰¹ MEXT echoes this logic, as the 2013 *Second Basic Plan for the Promotion of Education* states, “the government needs to improve education, especially science and mathematics education” in order to “to develop social competencies for survival” and “the spirit of challenge and creativity.”¹⁰²

⁹⁹ Ministry of Foreign Affairs of Japan, *Japan-U.S. High Level Committee on Science and Technology*, (Tokyo, 2003) <http://www.mofa.go.jp/region/n-america/us/science/joint0304.html> (accessed February 21, 2017).

¹⁰⁰ *Ibid.*

¹⁰¹ The White House; President Barack Obama Archives, *Educate to Innovate*, (Washington, 2013) <https://obamawhitehouse.archives.gov/issues/education/k-12/educate-innovate> (accessed February 21, 2017).

¹⁰² MEXT, “Measures based on the Four Basic Policy Directions,” in *The Second Basic Plan for the Promotion of Education*.

A crucial mechanism in this increasing prioritization of science and mathematics education on a global scale has been the OECD through its Program for International Student Assessment (PISA). The first international round of PISA tests were carried out by the OECD in 2000, and consisted of standardized testing in subjects such as Mathematics, Problem Solving, and Financial Literacy in a multiple choice format. PISA testing encourages international competition as part of the OECD's program for economic development by rating and ranking national education systems according to student performance. Shortly after the first round of PISA testing, President Bush announced his plans for the No Child Left Behind Act on January 23rd, 2001. The act "grew out of concern that the American education system was no longer internationally competitive"¹⁰³ and dramatically increased the role of standardized testing in American public schools by mandating "annual testing in math and reading for kids in grades three through eight as well as high school."¹⁰⁴ As such, it enforces "stringent requirements for participation in state assessments and the public reporting of disaggregated data and school performance."¹⁰⁵

Japan, on its part, followed suit in 2007 with "the implementation of national standardized testing at the end of the 6th and 9th grades (National Survey on Educational

¹⁰³ Alyson Klein. "No Child Left Behind: An Overview," *Education Week*, April 10, 2015, editorial project. <http://www.edweek.org/ew/section/multimedia/no-child-left-behind-overview-definition-summary.html> (accessed June 29, 2016).

¹⁰⁴ Alia Wong. "Life After No Child Left Behind," *The Atlantic*, July 8, 2015, online. <https://www.theatlantic.com/education/archive/2015/07/life-after-no-child-left-behind/397937/> (accessed June 29, 2016).

¹⁰⁵ Margaret E. Goertz. "Implementing the No Child Left Behind Act: Challenges for the States," *Peabody Journal of Education* 80, No. 2 (2005): 87.

Performance) in mathematics and Japanese for the first time.”¹⁰⁶ Then in 2012, MEXT released prefectural results of the national achievement test, and municipalities in Osaka and Saga made a controversial decision to release results of individual schools.¹⁰⁷ By December 2014, five prefectures proceeded to publish school-by-school results and fourteen prefectures proceeded to publish municipality-by-municipality results.¹⁰⁸ This chain of events appears to show the spread of PISA-style standardized testing and ranking systems to the national education policies of both the U.S. and Japan.

The work of Foucault in *Discipline and Punish* provides useful insight regarding the global spread of PISA-style standardized testing and ranking systems. In this book, Foucault discusses disciplinary power as a type of influence which the state holds over individual behaviors by regulating the social system as a whole and maintaining complex surveillance systems. He writes, “the success of disciplinary power derives no doubt from the use of simple instruments; hierarchical observation, normalizing judgement and their combination in a procedure that is specific to it, the examination.”¹⁰⁹ Foucault posits that the examination is a process of individual hierarchical classification which allows authorities to objectify and arrange those individuals. In Foucault’s words, the examination makes each individual a ‘case’ that “may

¹⁰⁶ Robert Fish. “Japan: Recent Trends In Education Reform,” *Asia Society: Center for Global Education*. <http://asiasociety.org/global-cities-education-network/japan-recent-trends-education-reform> (accessed February 21, 2017).

¹⁰⁷ Sato and Katsuno. *Abe seiken de kyōiku wa dō kawaru ka* [How will Education Change under the Abe Administration], 42. [In Japanese]

¹⁰⁸ Jiji. “Prefectures begin to release school performance rankings,” *The Japan Times*, December 9, 2014, online. <http://www.japantimes.co.jp/news/2014/12/09/national/prefectures-begin-to-release-school-performance-rankings/#.WKvDshAdxmC> (accessed February 21, 2017).

¹⁰⁹ Michel Foucault. trans. Alan Sheridan. *Discipline and Punish: The Birth of the Prison* (New York: Vintage Books, 1995), 170.

be described, judged, measured, compared with others, in his very individuality; and it is also the individual who has to be trained or corrected, classified, normalized, excluded, etc.”¹¹⁰ This corresponds to Meyer and Benavot’s assertion that the OECD is poised to become the body of “global education governance” by “simultaneously acting as diagnostician, judge and policy advisor to the world’s school systems.”¹¹¹

As an organization focused on promoting economic development, the OECD approaches education “first and foremost from an efficiency standpoint” “for the purpose of economic productivity.”¹¹² The authors of *PISA, Power, and Policy* argue that education for the sake of efficient economic production is a relatively new development as “the very meaning of public education is being recast from a project aimed at forming national citizens and nurturing social solidarity to a project driven by economic demands and labor market orientations.”¹¹³ As the next chapter shows, however, this shift away from education to nurture national citizens and social solidarity is not as clear-cut as it may seem.

This chapter has shown how the need to “transition to a knowledge-based society” emphasized in Japanese educational reform is the Abe administration’s response to changes in the global environment. The ‘knowledge-based society’ requires citizens who are, in the discourse of the OECD, ‘knowledge workers.’ These workers have the scientific and technological knowledge necessary to participate in and contribute to interoperable global

¹¹⁰ Foucault. *Discipline and Punish*, 191.

¹¹¹ Meyer and Benavot. *PISA, Power, and Policy*, 9.

¹¹² Meyer and Benavot. *PISA, Power, and Policy*, 13.

¹¹³ Meyer and Benavot. *PISA, Power, and Policy*, 10.

security, as well as produce new knowledge that can be converted to economic value in a variety of industries all transformed by the information revolution. The reforms take this approach because, according to MEXT, “knowledge drives social and economic dynamics” in today’s Information Age.¹¹⁴ Knowledge that can be used for economic growth and/or military security has become a most valuable currency, and the reforms attempt to meet global demands by recognizing this notion and its implications.

¹¹⁴ MEXT, “Directions in Society; Social environment and challenges surrounding education,” in *The Second Basic Plan for the Promotion of Education*.

Chapter Three

Japanese Educational Reform for National Community: Ideological Education

Having shown how Japanese educational reform since 2006 attempts to meet global demands in the previous chapter, this chapter will show how the reforms attempt to meet demands coming from the domestic environment. The central question addressed in this chapter is: *how do the educational reforms attempt to meet domestic demands for national citizens who are emotionally invested with the desire to contribute to the economic strength and security of Japan?* The following pages will demonstrate that the reforms seek to construct a ‘normative consciousness’ that makes students think of themselves as members of a national community. MEXT’s construction of ‘normative consciousness’ is characterized by a mythological view of history as an unbroken line of divine emperors ruling over a family-state called the *kokutai* (national body). This history which imagines national community as a holy family is the Japanese ideology.

The push for an ideological education may have been reflected in the Moritomo Gakuen land deal which the Finance Ministry was forced to disclose on February 10th, 2017, when it was revealed that state-owned land valued at ¥956 million was purchased for ¥134 million for the construction of a school advertising itself as the “first and only Shinto elementary school.”¹ As a

¹ Anna Fifield. “In Japan, a scandal over a school threatens to entangle Abe,” *The Washington Post*, February 27, 2017, online. https://www.washingtonpost.com/world/asia_pacific/in-japan-a-scandal-over-a-school-threatens-to-entangle-abe/2017/02/27/29486b94-fa1a-11e6-aa1e-5f735ee31334_story.html?utm_term=.47a87f2e6fda (accessed September 11th, 2017).

result of this disclosure, Prime Minister Abe found himself in the midst of a scandal where his wife Akie Abe and Defense Minister Tomomi Inada were alleged to have had ties to a “kindergarten known for an ultranationalist education style based on Shintoism” and making children recite the 1890 *Imperial Rescript on Education*.² The Abe cabinet then responded to the scandal by approving the use of the *Imperial Rescript on Education* as teaching material on March 31st, 2017.³

Hidetsugu Yagi, head of *Nippon Kyōiku Saisei Kikō* (Organization to Resuscitate Japan’s Education), has defended use of the rescript in schools by saying, “the ideology of the Imperial Rescript on Education has been incorporated into Article 2 [of the 2006 *Basic Act on Education*].”⁴ This chapter confirms that the 2006 *Basic Act on Education*’s objectives to increase students’ “love for the country” and “respect for tradition and culture” have prompted educational reforms that subtextually promote the Japanese ideology in such a way as to not explicitly violate constitutional law against religious education.

More obvious tactics to increase students’ “love for the country” include new policies such as making it mandatory for schools to “display the national flag and make students sing the national anthem.”⁵ At the same time, educational reform documents often refer to a need to

² Yoko Wakatsuki. Joshua Berlinger. “Japan PM Shinzo Abe embroiled in land-sale scandal,” *CNN*, March 24, 2017, online. <http://www.cnn.com/2017/03/22/asia/japan-school-scandal/index.html> (accessed September 11th, 2017).

³ Tomohiro Osaki. “Imperial Rescript on Education making slow, contentious comeback,” *The Japan Times*, April 11, 2017, online. <https://www.japantimes.co.jp/news/2017/04/11/national/imperial-rescript-education-making-slow-contentious-comeback/#.WheBVktrxmA> (accessed November 23, 2017).

⁴ Akira Fujiu. “Media spotlight on Kagoike hurts and helps Nippon Kaigi,” *The Asahi Shimbun*, April 19th, 2017, online. <http://www.asahi.com/ajw/articles/AJ201704190008.html> (accessed September 11th, 2017).

⁵ *Middle School Teaching Guidelines*, (Tokyo: MEXT, 2008), 121. [In Japanese]

foster a ‘normative consciousness’ that is characterized by emotional attachment, social obligation, and desire to contribute to the nation and its development.⁶ MEXT’s ‘normative consciousness’ includes “love for the country” and “respect for tradition and culture” as part of its view of history. In fact, “respect for tradition and culture” is an indispensable component of the Japanese ideology because this history acts as the source of culture which allows people to think of themselves as members of a national community. In order to describe the characteristics of ‘normative consciousness,’ this chapter will first show how Japanese education approaches imperial mythology as national history. The following sections will detail how this view of history manifests itself in the rest of Japanese educational content.

1. MYTHOLOGY

The previous chapter examined how Japanese educational reforms prepare for the formation of a ‘knowledge-based society.’ In this sense, the reforms look into and predict the future in order to prepare for it. On the other hand, the effort to meet demands coming from the domestic environment requires educational reforms that look to national history as the source of inspiration to imagine national community. According to Katsuhiko Endo’s *A Secret History*, Jun Tosaka wrote about the Japanese ideology as national history in his 1935 introduction to *The Japanese Ideology*. It reads, “Japanism in the proper sense takes its stand on the Japanist ‘understanding’ of ‘national history,’” and “what remains as Japanism among Japanisms is only

⁶ MEXT, “3. Four Basic Policy Directions; Part 1 Overview of the Future of Education in Japan,” in *Second Basic Plan for the Promotion of Education*.

the Japanist national history and, in conclusion, it is no longer anything philosophical.”⁷ In his May 1935 piece entitled, *The Fate of Japanism*, Tosaka writes that Japanism “is the summation of Japanese fascism.”⁸ The question then becomes, is there a ‘Japanist national history’ being taught under the Abe administration’s educational reforms?

To answer this question, it is necessary to understand what exactly ‘Japanist national history’ is. In *A Secret History*, Endo writes, “for both Harootunian and Tosaka, the *kokushi* (national history) that, as a myth, takes the form of the doctrine of Imperial Way is the apotheosis of the Japanese ideology.”⁹ The doctrine of Imperial Way is the view of history as an unbroken line of divine emperors; during Japan’s wartime years, it led to a specific interpretation of the phrase *hakkō ichiu* (eight directions under one roof). Attributed to the mythological first Japanese emperor Jinmu, the phrase came to be used as a military slogan to mean that history is a continuous process of the expansion of imperial power. As Walter Edwards writes in *Forging Tradition for a Holy War*, this specific interpretation of *hakkō ichiu* “took imperial rule of the entire world as both the preordained outcome of this process and the mission to which the Japanese must dedicate their total effort.”¹⁰ The “apotheosis of the Japanese ideology” then sees

⁷ Jun Tosaka, quoted by Katsuhiko Endo. “A Secret History; Tosaka Jun and the Kyoto Schools,” in *Confronting Capital and Empire; Rethinking Kyoto School Philosophy*, (Boston: Brill, 2017), 348.

⁸ Jun Tosaka. “The Fate of Japanism; From Fascism to Emperorism,” in *Tosaka Jun: A Critical Reader*, trans. John Person, 61.

⁹ Katsuhiko Endo. “A Secret History; Tosaka Jun and the Kyoto Schools,” in *Confronting Capital and Empire; Rethinking Kyoto School Philosophy*, (Boston: Brill, 2017), 370.

¹⁰ Walter Edwards. “Forging Tradition for a Holy War: The “Hakkō Ichiu” Tower in Miyazaki and Japanese Wartime Ideology,” *Journal of Japan Studies* 29, No. 2 (2003): 300.

the entire world as destined to eventually be united under the Japanese emperor. On a more practical and immediate level, these views were often voiced in terms of the need to build the Greater East Asian Co-Prosperity Sphere. In theory, this economic system promised to stop European and American exploitation of East Asia with an autarkic policy of self-sufficiency, as well as establish Japan as the overseer of this system.¹¹

The Japanese ideology can also be seen in the 1890 Meiji Constitution as an imperial doctrine. According to Harry Harootunian, the Meiji Constitution emphasized “the emperor’s authority, as the successor of an unbroken lineage derived from the sun goddess prior to the origin of the race, presenting the figure of the monarch as sacred and inviolate on all things, ‘head of the empire,’ supreme commander of the armed forces, and source of all sovereignty.”¹² Tosaka discusses this ‘Japanist national history’ as “the summation of Japanese fascism” because it positions the emperor “beyond good and evil, right and wrong,” creating the perception of his will as the “great, correct Way of the imperial deities (*ōmasa michi*).”¹³

Of course, a mythological view of history which takes “imperial rule of the entire world” as the “preordained outcome’ is not taught because of the reforms, but mythology has come to play a larger role in Japan’s education system. For example, the 2008 elementary level teaching guidelines say that students should “look into mythology and lore to develop interest in ways of

¹¹ Janis Mimura. “Japan’s New Order and Greater East Asia Co-Prosperity Sphere: Planning for Empire,” *The Asia Pacific Journal; Japan Focus* 9. Issue 49, No. 3. December 6, 2011, online. <http://apjif.org/2011/9/49/Janis-Mimura/3657/article.html> (accessed December 18, 2017).

¹² Harry Harootunian, “Hirohito Redux,” *Critical Asian Studies* 33, No. 4 (2001): 617.

¹³ Harootunian. *Hirohito Redux*, 617.

Yoshinaga Miyauchi, quoted by Harry Harootunian. *Things Seen and Unseen; Discourse and Ideology in Tokugawa Nativism*, (Chicago: University of Chicago Press, 1988), 247.

thinking about the formation of the nation.”¹⁴ In order to do this, teachers are to choose from the documents *Kojiki*, *Nihon Shoki*, and *Fudōki*, which are ancient Shinto texts, the first two of which chronicle the Japanese national origin myth.¹⁵ In other words, students are to be interested in ‘ways of thinking’ that attribute divine qualities to the nation’s formation and imperial lineage. While students are not necessarily taught specific interpretations of Japanese mythology, they are given this mythology as reading material to inform them about “ways of thinking about the formation of the nation.” These teaching guidelines allow for the interpretation that Emperor Jinmu did, in fact, descend from a sun goddess to found Japan.

In order to show how teaching guidelines such as the ones above are reflected in textbooks, this chapter will use *New Japanese History* published by Ikuhōsha as a main source. This textbook is used because Abe said that “Ikuhōsha’s textbooks best reflect the core essence of the revised Basic Law on Education” at a May 10th, 2011 launch party for the 2011 edition of the *New Japanese History* textbook.¹⁶ Although Ikuhōsha textbooks are not widely used in comparison with textbooks by publishing companies such as Tokyo Shoseki, the Abe administration has given Ikuhōsha the political support to make it one of the fastest growing textbook publishing companies in Japan. This political support is shown by Abe’s above statement, as well as by the fact that Seiichi Etō, one of Abe’s closest political advisors, gave a

¹⁴ *Shyōgakkō gakushū shidō yōryō* [Elementary school teaching guidelines] in *Middle School Teaching Guidelines*, (Tokyo: MEXT, 2008), 182. [In Japanese] Hereafter *Elementary School Teaching Guidelines*.

¹⁵ MEXT, *Elementary school teaching guidelines* (2008), 183.

¹⁶ Yamato Press, “Abe moto sōri tokubetsu aisatsu [Ex Prime Minister Abe’s Special Address],” <https://www.youtube.com/watch?v=3f7ygXxHcVo> youtube video, 4:00 in, May 10, 2011 (accessed September 10, 2017).

speech at Ikuhōsha's launch party for the 2015 edition of *New Japanese History*.¹⁷ This textbook went on to gain market share by a factor of 1.6 from the previous cycle concluded in 2012.¹⁸ The Abe administration's political support for Ikuhōsha prompted *Shūkan Kinyobi News* [Weekly Friday News] to run a story headlined, "The Prime Minister's group in the shadows of Ikuhōsha; Shinzo Abe's abnormal obsession," and an article by *The New York Times* to call Ikuhōsha's textbook "the leading conservative one, which nationalists in the governing party hope will become the new standard."¹⁹

The 2015 *New Japanese History* textbook contains a section about mythology that summarizes Emperor Jinmu's descent from a sun goddess to found Japan and the creation of the Japanese islands by gods called Izanagi and Izanami. At the end of the section, it states, "we cannot say that what is written in mythology is factual history itself, but it is a valuable clue in getting to know the people who lived in those times, their interpretations about how the nation of

¹⁷ Noriaki Ikezoe. "Ikuhōsha kyōkasho no kage ni shushyō gurūpu – Abe shinzō-shi no ijōna shūchaku [The Prime Minister's group in the shadows of Ikuhōsha; Shinzo Abe's abnormal obsession]," *Shūkan kinyōbi niyūzu* [Weekly Friday News], August 9, 2015, online.

<http://www.kinyobi.co.jp/kinyobinews/2015/08/09> 育鵬社教科書の影に首相グループ—安倍晋三氏 (accessed September 17, 2017).

¹⁸ "28-nendo chūgaku kyōkasho ikuhōsha, shea nobasu kōmin 1.4-bai, rekishi 1.6-bai [2016 Ikuhōsha textbooks extend market share; citizen 1.4 times, history 1.6 times]," *Sankei* October 31, 2015.

<http://www.sankei.com/life/news/151031/lif1510310017-n1.html> (accessed September 26, 2017). [In Japanese]

¹⁹ Noriaki Ikezoe. "Ikuhōsha kyōkasho no kage ni shushyō gurūpu – Abe shinzō-shi no ijōna shūchaku [The Prime Minister's group in the shadows of Ikuhōsha; Shinzo Abe's abnormal obsession]," *Shūkan kinyōbi niyūzu* [Weekly Friday News], August 9, 2015, online.

<http://www.kinyobi.co.jp/kinyobinews/2015/08/09> 育鵬社教科書の影に首相グループ—安倍晋三氏 (accessed September 17, 2017).

[“Related Article” by Martin Fackler] “A Shifting View of Japanese History,” *The New York Times*, December 28, 2013, online. <http://www.nytimes.com/interactive/2013/12/27/world/asia/A-Shifting-View-of-Japanese-History.html> (accessed September 5, 2017).

Japan was created, their lifestyles, their ways of thinking, and their ways of feeling.”²⁰ The textbook’s ambiguous statement that it ‘cannot say’ Japanese mythology is factual history shows Ikuhōsha’s avoidance of outrightly saying that the mythology is not factual history. The most commonly used history textbook by Tokyo Shoseki also contains the national origin myth, but it emphasizes its similarity to mythology from areas of North East Asia.²¹ In contrast, the wording used in *New Japanese History* seems to suggest that it is up for debate whether or not Japanese mythology can be considered as an accurate account of history.

New Japanese History states that the concrete value of the myth is what it reveals about the thoughts and beliefs of “people who lived in those times.” This point is reiterated by middle school teaching guidelines to “enlighten students on ancient beliefs and perspectives through studies of mythology and lore.”²² The high school level guidelines further explain that “ancient beliefs and perspectives” are valuable because students should “develop their own views of life and the world by studying ancient Japanese thinkers’ ideas.”²³ This suggests that Japanese education seeks not only to impart knowledge about ancient beliefs concerning national origins, but to have ancient belief systems influence students as they “develop their own views of life.”

The personal relevance that the national origin myth is supposed to have for students owes to the role of the emperor established in the postwar Japanese Constitution. It states, “the

²⁰ Atarashī nihon no rekishi [New Japanese History], (Tokyo: Ikuhōsha, 2015) 50. [In Japanese] Hereafter *New Japanese History*.

²¹ Atarashī shakai rekishi [New Social History], (Tokyo: Tokyo Shoseki, 2016), 58. [In Japanese] Hereafter *New Social History*.

²² *Middle School Teaching Guidelines*, (Tokyo: MEXT, 2008), 39. [In Japanese]

²³ Kōtōgakkō gakushū shidō yōryō [High School Teaching Guidelines], (Tokyo: MEXT, 2009), 50. [In Japanese] Hereafter *High School Teaching Guidelines*.

Emperor shall be the symbol of the State and of the unity of the People, deriving his position from the will of the people with whom resides sovereign power.”²⁴ The middle school teaching guidelines reiterate the role of the emperor as a symbol of Japanese people's unity: “students should learn about the Emperor’s status as a symbol of the Japanese nation and the unity of Japanese people.”²⁵ The emperor is thought to symbolize the existence of some inherent quality of Japanese people which unifies them as a national community. Elementary level teaching guidelines to “deepen understanding and respectful love for the Emperor” therefore also aim to make students imagine in themselves the inherent quality shared by Japanese people.²⁶ In turn, this helps to meet other guidelines to increase “feelings of solidarity and affiliation with the masses.”²⁷ *New Japanese History* endeavors to generate “feelings of solidarity” through its depiction of Emperor Hirohito; it describes how he lived on the common rationed diet during and after the war by choice, and how he impressed General Douglas MacArthur after Japan’s surrender with his willingness to sacrifice his own life for the Japanese people.²⁸ This depiction of a selfless Emperor Hirohito contrasts with “the fact that Hirohito was more concerned with the fate of the imperial institution than with the devastation of the country.”²⁹

²⁴ Prime Minister of Japan and His Cabinet, *The Constitution of Japan* (Tokyo, 1946) online. http://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html

²⁵ MEXT, *Middle School Teaching Guidelines* (2008), 43.

²⁶ MEXT, *Elementary School Teaching Guidelines* (2008), 183.

²⁷ MEXT, *Middle School Teaching Guidelines* (2008), 119.

²⁸ *New Japanese History* (2015), 257.

²⁹ Yoshikuni Igarashi. *Bodies of Memory; Narratives of War in Postwar Japanese Culture, 1945-1970* (New Jersey: Princeton University Press, 2000), 22.

The Japanese ideology as national history is closely tied to a belief system that some call State Shinto. As Susumu Shimazono writes in *State Shinto in the Lives of the People*, “Shinto, then, is the belief in gods that are tied to the land of Japan; State Shinto is the Shinto that had at its core the idea of the nation and reverence for the emperor.”³⁰ Shimazono identifies State Shinto as the version of Shinto which was adopted as the official national religion over the years between the 1868 Meiji Restoration and the 1945 Japanese surrender. Shimazono writes, “although terms such as ‘Great Teaching’ (*taikyō*) and ‘Imperial Way’ (*kōdō*) were used, they refer to a system that had largely the same content as State Shinto.”³¹ Just as the doctrine of Imperial Way took the Japanese emperor’s rule over the entire world as the ‘preordained outcome,’ the doctrine of State Shinto “supported the foreign military ventures through the concept of world as a single family.”³²

The proclamation of Article 20 in the Japanese Constitution that “the State and its organs shall refrain from religious education or any other religious activity” means that no public education in Japan should teach students to adopt any Shinto beliefs.³³ However, *New Japanese History* does teach about Shinto as “the traditional religion unique to this nation.”³⁴ It describes

³⁰ Susumu Shimazono. “State Shinto in the Lives of the People: The Establishment of Emperor Worship, Modern Nationalism, and Shrine Shinto in Late Meiji,” *Japanese Journal of Religious Studies* 36, No. 1, (2009), 100.

³¹ Shimazono. *State Shinto in the Lives of the People*, 100.

³² Shimazono. *State Shinto in the Lives of the People*, 95.

³³ Prime Minister of Japan and His Cabinet, “The Constitution of Japan,” November 3, 1946. http://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html

³⁴ *New Japanese History* (2015), 38.

archeological studies of Shinto sites revealing that “Japanese people have long placed importance on ancestor worship,” and adds that “many Japanese still believe that our ancestors watch over us and protect us.”³⁵ The meaning here seems to be that members of the national community can still be distinguished from outsiders by the Shinto practice of ancestor worship. Although Article 20 outlaws teaching any kind of worship, the middle school teaching guidelines state that students should “deepen respect and appreciation for ancestors and seniors who contributed towards the betterment of our society,” and deepen “respectful love for the Emperor.”³⁶

The high school teaching guidelines also emphasize the importance of teaching students to respect their ancestors. They state that students should “respect our ancestors’ contributions to the creation and development of our culture, as well as to the betterment of regional society.”³⁷ The elementary level moral education textbook picks out several historical figures which it deems as worthy of respect for improving Japanese culture and society. These include Sakamoto Ryoma for “his fervent wishes for Japan to develop into a strong prosperous nation,” and Nitobe Inazō for having been “not only a bridge over the Pacific Ocean but a bridge across the world.”³⁸ Although teaching guidelines which call for students to “deepen respect and appreciation for ancestors” do not enforce the worship of these ancestors, they do still put ancestors in a position

³⁵ *Ibid.*

³⁶ MEXT, *Middle School Teaching Guidelines* (2008), 113.

³⁷ MEXT, *High School Teaching Guidelines* (2009), 42.

³⁸ *Watashitachi no dōtoku; Shōgakkō 5 / 6-nen*. [Our Morality; elementary school years 5 and 6] (Tokyo: Kousaido Akatsuki Company Ltd, 2014). [In Japanese] Hereafter *Our Morality; elementary school years 5 and 6*.

to be admired and glorified. This does not negate, and even encourages the practice of ancestor worship. The following section shows how Japanese history education reflects new teaching guidelines to “deepen love for our nation’s history and nurture awareness as national citizens.”³⁹ Japanese educational reforms also incorporate the Japanese ideology into MEXT’s construction of ‘normative consciousness’ through history education.

2. NATIONAL HISTORY

In order to understand how Japanese history education seeks to help construct the ‘normative consciousness’ which can contain the Japanese ideology, some more details about the relationship between national community and ideology should first be discussed. In *A Unique Tradition of Materialism in Japan*, Endo discusses the formation of ‘cultural community’ through his analysis of Shūzō Kuki’s *The Structure of Iki*. He writes:

To overcome such problems as ‘a melancholy climate and military conflicts’ that ‘society’ in the present is burdened with, one is, first, expected to discover the culture (e.g., *iki*) in the past as the “essential similitude” along with the ‘autonomous’ ‘south(s)’ as the ‘community of the Same,’ acquire it, and by controlling desire through it, reconstruct in the future the ‘south(s)’ by ‘remixing’ it (e.g., Third Reich or Greater East Asian Co-prosperity Sphere) in a way that fits the ongoing turbulent circumstances.⁴⁰

³⁹ MEXT, *Middle School Teaching Guidelines* (2008), 36.

⁴⁰ Katsuhiko Endo. “A Unique Tradition of Materialism in Japan; Osugi Sakae, Tosaka Jun, and Uno Kozo,” *Positions: east asia cultures critique* 20, No. 4. (2004): 1020.

Here, Endo combines William Haver's concept of the 'community of the Same' with Kuki's explanation of the German word *sehnsucht* in order to shed light on how 'cultural community' is formed. The word *sehnsucht* signifies feelings of longing for southern lands that represent mythological paradises unburdened by "a melancholy climate and military conflicts." These feelings then push people to discover 'essential similitude' in past culture in order to overcome the present problems of society. By discovering 'essential similitude' in past culture and then "controlling desire through it," people help to build the future of the 'community of the Same.' In the case of Japan, the history of this community is the unbroken lineage of divine emperors ruling over the nation as a family-state. The drive to superimpose this altered version of the past onto the future leads Endo to write, "this history, which historiography produces, or 'fabricates,' must include a future that is nothing but a 'remix' of the 'past.'"⁴¹ Now consider Ikuhōsha's description of the *New Japanese History* textbook on their website, in relation to the quotes above:

History is handed down from ancient times into the future. That is 'the baton of life' carried by people living in the past, current times, and the future. Our ancestors built a rich culture while overcoming various difficulties, and are connected with us through 'the baton of life.' The history handed down in this way is a 'treasure trove of culture and experience.' We, ever thankful to the ancestors who helped build today's Japan, will

⁴¹ Katsuhiko Endo. *A Unique Tradition of Materialism in Japan*, 1020.

learn the wisdom to live by through history, improve the society we live together in, and take the role as a bridge to a bright future for the next generation.⁴²

Ikushōsha presents its history as a never-ending handing down of “the baton of life” from past ancestors to people living in the present day, and from people living in the present day to future generations. The statement that students should “learn the wisdom to live by” from Ikushōsha textbooks as a “treasure trove of culture and experience” corresponds to the need for people to discover ‘essential similitude’ in past culture. In fact, the discovery of Ikushōsha’s “treasure trove of culture” allowing people to “take the role as a bridge to a bright future” is precisely the discovery of ‘essential similitude’ allowing for the reconstruction of ‘south(s)’ in the future. The expectation for students to take “the baton of life” by learning from ancestors “who built a rich culture while overcoming various difficulties” also corresponds to the need to overcome the “melancholy climate and military conflicts” through the discovery of past culture.

Ikushōsha incorporates “the baton of life” into its actual *New Japanese History* textbook, in a section entitled, “The Three-Generation Father-Son Baton Relay that Created the Shinkansen.” This section discusses the development of the Japanese high-speed bullet train (*shinkansen*) by Yasujiro Shima, Hideo Shima, and Takashi Shima. In describing the eldest patriarch’s contribution, the textbook reads, “Yasujiro was the central figure in promoting the ‘plan for a bullet train’ as a Director of the Manchurian Railway and was deeply involved in the

⁴² Ikushōsha Publishing Inc, “Ikushōsha no Kyōkasho (heisei 24 nendo yori saiyō) [Ikushōsha’s Textbook (used since 2012),” webpage. <http://www.ikuhosha.co.jp/textbook/rekishi.html> (accessed September 7, 2017).

development of the Manchurian express train ‘Asian-Gō.’”⁴³ His son Hideo then “carved his name into history as ‘the man who made the bullet train’” by implementing his father’s ‘bullet train plan.’⁴⁴ Finally, Takashi was the vehicle designer of the Tōhoku and Jōetsu bullet trains, which opened on June 23rd, 1982 and November 15th, 1982 respectively. The ‘baton relay’ of the Shima family is then part of history as a continual handing down of “the baton of life.” The construction of what was known as “Japan’s economic life-line” out of Manchuria during the late 1920s and 1930s is also incorporated into this history.⁴⁵

Since Ikuhōsha’s history is a never-ending handing down of “the baton of life,” the baton itself is not history. Instead, it is the culture which unifies the ‘community of the Same,’ allowing it to construct the future according to the model of a fabricated past. The idea that history is the continual transfer of cultural ‘sameness’ seems to be affirmed by the elementary level *Our Morality* textbook. It states, “through traditional arts and crafts preserved in various regions, regional characteristics and ‘Japaneseness’ that have been kept alive through a long history are conveyed to even us living in the present time.”⁴⁶ The word translated as ‘Japaneseness’ is *nihonrashisa*, which can also be translated as ‘distinctly Japanese characteristics,’ or ‘the essence

⁴³ *New Japanese History* (2015), 253.

⁴⁴ *Ibid.*

⁴⁵ Samuel Pao-San Ho. “Colonialism and Development: Korea, Taiwan, and Kwantung,” in *The Japanese Colonial Empire, 1895-1945*. (New Jersey: Princeton University Press, 1984), 350.

John R. Stewart. “Manchuria As Japan’s Economic Life-Line,” *Far Eastern Survey* 4, No. 23. (1935): 182.

Arthur Alexander. *The Arc of Japan’s Economic Development*. (Abingdon: Routledge, 2007) 45.

⁴⁶ *Our Morality; elementary school years 5 and 6* (2014), 167.

of Japan.’ This ‘Japaneseness’ is the ‘essential similitude’ which must be discovered in past culture, and Ikuhōsha’s history is the generational transfer of ‘Japaneseness’ as “the baton of life.”

Japanese history as the handing down of “the baton of life” is nothing more than a reiteration of the imperial history promoted in wartime Japan. The most widely promulgated piece of ideological propaganda in Japan during this time was the 1937 *Cardinal Principles of the National Polity* (Kokutai no Hongi), discussed by Endo “as the essence of Japanism.”⁴⁷ In his 1949 introduction to the translated version of this document, Robert King Hall wrote that one’s “mere existence as Japanese inexorably binds him to an infinite chain of interlocking events all stemming from the divine origin of the Imperial Ancestors.”⁴⁸ This was echoed by Alan Tansman in 2014 when he summarized the document as saying, “the Japanese people are bound together in an eternal and unbroken line through their emperors.”⁴⁹ It is due to this unbroken line of emperors that “the baton of life” has successfully been handed down through ‘Japanist national history.’ *New Japanese History* reflects this ideology as a fabricated history when it states, “unlike other countries which had large influxes of immigrants, people from the Jōmon, Nara, and Heian eras are connected to us in blood and are thus our direct ancestors.”⁵⁰

⁴⁷ Katsuhiko Endo. “The Multitude and the Holy Family; Empire, Fascism, and the War Machine,” in *Tosaka Jun: A Critical Reader* (Honolulu, University of Hawaii Press: 2013), 289.

⁴⁸ Robert King Hall, quoted by Douglas G. Haring. “Kokutai no Hongi: Cardinal Principles of the National Entity of Japan, Book Review,” *Far Eastern Survey* 18, No. 25 (1949): 298.

⁴⁹ Alan Tansman. “The Pedagogy of the Japanese Novel,” *A Forum on Fiction* 47, Issue 1 (2014: Duke University Press) 60.

⁵⁰ *New Japanese History* (2015), 281.

One key aspect of the infinite ancestral chain in the *Cardinal Principles of the National Polity* is that one's "mere existence as Japanese inexorably binds him" to it. This may appear to differ from Ikuhōsha's 'baton relay' since since a link in a chain has no choice but to be just that, while a runner in a relay race has the choice not to participate. However, because the previous quote from Ikuhōsha's website describes ancestors as already "connected with us through 'the baton of life,'" the choice not to participate in the relay race is seemingly taken away from students. The introduction in the *New Japanese History* textbook also mentions "the baton of life," albeit in a slightly different wording. It urges students to "take the baton of history that our ancestors constructed, and become a strong runner to create history from today and beyond."⁵¹ This relay race creates an inherent connection between Japanese individuals and the national community. Each member of the national community has an individual responsibility to become 'a strong runner' and contribute to the performance of the team.

In the example of the Shima family's 'baton relay,' the three men were able to become 'strong runners' by carrying the baton as 'Japaneseness' in order to develop Japanese trains and railway systems. Like the construction of the Manchurian Railway in this 'baton relay,' the construction of the Japanese battleship *Yamato* is also presented in a way that is meant to inspire students to pass on "the baton of life." The 2011 version of *New Japanese History* describes it as "a magnificent project that led to Japan's post-war establishment as a technological nation."⁵² These portrayals of the Manchurian Railway and the *Yamato* Battleship attempt to avoid giving

⁵¹ *New Japanese History* (2015), 6.

⁵² *New Japanese History* (2011), 189

students any kind of negative impression of Japan’s prewar and wartime history. In doing so, they reflect the Abe administration’s “campaign to reject what nationalists call a masochistic view of history.”⁵³

The main facet of this “masochistic view of history” that the Abe administration wishes to eliminate from education is any notion that war crimes were committed by the Imperial Japanese Army. Perhaps the most well-cited example of this is the way in which new Japanese textbooks cover the Nanjing Massacre. Indeed, *New Japanese History* contains only a side note on the event, which reads, “there are numerous views on the number of victims killed or wounded by the Japanese army and the controversy continues to this day.”⁵⁴ Tokyo Shoseki’s textbook also uses a similar line to describe the event, but it draws attention to the fact that many people call it the Nanjing Massacre, while Ikuhōsha’s version simply refers to it as the Nanjing Incident.⁵⁵ These descriptions adhere to new textbook criteria not to describe “unconfirmed events” and “numbers with no commonly accepted views” in ways that may “confuse the students.”⁵⁶ In such circumstances involving competing views and opinions, guidelines say that students are to “develop an understanding for the correlation between theory and reality by

⁵³ Norimitsu Onishi. “Japan’s Textbooks Reflect Revised History,” *The New York Times*, April 1, 2007, online. <http://www.nytimes.com/2007/04/01/world/asia/01japan.html?mcubz=0> (accessed September 8, 2017).

⁵⁴ *New Japanese History* (2015), 209.

⁵⁵ *New Social History* (2016), 220.

⁵⁶ MEXT, “Kōtō gakkō kyōkayō tosho kentei kijun [Textbook criteria for high school subjects],” Tokyo, 2009. Revised 2014.

looking into facts from diverse perspectives based on the foundation of basic political and economic concepts and theories.”⁵⁷

The way in which *New Japanese History* covers the post-war Tokyo Tribunal (May 3rd, 1946 - November 4th, 1948) raises questions about what constitutes “basic political and economic concepts and theories” when “looking into facts from diverse perspectives.” The textbook describes details pertaining only to Judge Radhabinod Pal, who was the only judge out of eleven who “disagreed comprehensively with the majority judgment, finding all the defendants ‘not guilty’ on all counts.”⁵⁸ It describes his statement that the tribunals were a “sham employment of legal process for the satisfaction of a thirst for revenge,” and then summarizes Judge Pal’s dissenting position by saying, “there was an opinion criticizing the possible injustice of retroactively adopting the concept of ‘crime against peace’ in the Tokyo Tribunal.”⁵⁹ *New Japanese History* goes on to state, “at the same time, there were also more positive views of the tribunal, that consider the Tokyo Tribunal as an event in which international law was applied with a new approach towards world peace, and to this day that evaluation is not fixed.”⁶⁰

The textbook provides another example of an opinion opposing “positive views of the tribunal” in a section entitled, “Shōwa 20, Various Thoughts on the Worsening and Ending of War,” as a perspective for students to consider. The opinion is that of Sohō Tokutomi, who was

⁵⁷ MEXT, *High School Teaching Guidelines* (2009), 52.

⁵⁸ Latha Varadarajan. “The trials of imperialism: Radhabinod Pal’s dissent at the Tokyo tribunal,” *European Journal of International Relations* 21, No. 4. (2015): 794.

⁵⁹ *New Japanese History* (2015), 256.

⁶⁰ *Ibid.*

the Chairman of the Great Japan Patriotic Discourse Association (*Dainippon Genron Hōkoku-Kai*) during WWII. It reads:

I am rather skeptical with regard to the fact that today everybody assumes that ideas such as war crimes and war responsibility have legitimacy. We might call a person who treats prisoners of war badly, or who sinks a hospital ship, or who drops an atomic bomb a war criminal. However, I am skeptical about victors handing out convenient justice to losers and one-sidedly calling them criminals.⁶¹

This perspective calls into question the legitimacy of the Tokyo Tribunal as a case of biased, ‘convenient justice’ handed out by those who emerged victorious to those who were defeated in WWII without principles of judgement being applied evenly for all actors involved in the conflict. The inclusion of the perspective that the Tokyo Tribunal’s “evaluation is not fixed” as a legitimate opinion in an officially-approved school textbook makes that perspective part of the ‘normative consciousness’ being constructed through education. The Tokyo Tribunal plays a much smaller part in Tokyo Shoseki’s textbook, which only notes that people who had important roles during the war were exiled from public office.⁶²

⁶¹ *New Japanese History* (2015), 243.

⁶² *New Social History* (2016), 243.

Prime Minister Abe's views on the guilt or venerability of Japanese war criminals are perhaps most clearly revealed in his insistence to send annual offerings to the Yasukuni Shrine, despite political backlash from China and South Korea each and every time he does so.⁶³ The newest monument at the Yasukuni Shrine was erected in 2005 to honor Judge Radhbinod Pal, who was included in *New Japanese History* as discussed. The Yasukuni Shrine is also neighboured by the Yūshūkan Museum, outside of which is a statue of a kamikaze pilot in honor of Japanese pilots who died in suicide attacks. Interestingly, *New Japanese History* contains a quote from a kamikaze pilot in the same section as the above quote from Tokutomi; the words of First Lieutenant Takamitsu Nishida, taken from an interview conducted a few days before his final mission. The quote reads:

The Air Force Academy lot is intelligentsia of a sort. As such, we do not think that we can win easily. But even if we are to lose, what happens afterwards is what is important. You do understand don't you? Our lives, or the fact that we were alive, are bound to affect the conditions for the subsequent peace treaty negotiations, and ultimately the fate of the Japanese people. Yes, for our people's pride...⁶⁴

⁶³ Chehui Peh. Teppei Kasai. "Asian neighbors protest as Japan PM sends offering to war dead shrine," *Reuters*, August 15, 2017, online. <https://www.reuters.com/article/us-ww2-anniversary-japan/asian-neighbors-protest-as-japan-pm-sends-offering-to-war-dead-shrine-idUSKCN1AV009> (accessed December 16, 2017).

⁶⁴ *New Japanese History* (2015), 243.

According to the commemorative plaque placed with the statue of the kamikaze pilot at the Yūshūkan Museum, First Lieutenant Nishida successfully fulfilled his desire to favorably affect “the fate of the Japanese people” because the lost lives of kamikaze pilots “became the cornerstone of today's prosperity.”⁶⁵ The self-sacrifice of this pilot for ‘the fate of Japanese people’ is of particular interest when considered in relation to Hardt and Negri’s statement that the militarist face of nationalism “sees the sacrifice of bodies in battle as revealing the national spirit.”⁶⁶ According to their statement, the militarist face of nationalism would see the kamikaze pilot’s self-sacrifice and complete subservience to “the fate of the Japanese people” as a perfect example of national spirit.

The promotion of this kind of ‘national spirit’ in Japanese education can be seen as an attempt to make students concerned with national security. The previous chapter discussed how Japanese educational reforms seek to further integrate Japan into the global security system by nurturing citizens who can contribute to Japan’s interoperable capabilities and the development of war industries. In addition, the educational reforms seek to enhance national security by nurturing citizens who have the desire to protect Japan’s security as willing armed forces. The next section shows how Japanese education seeks to foster such a population by establishing the perception of threats to the national community. While this section has shown how the Japanese ideology manifests itself in Japanese history education, the following two sections show how this ideology is reflected in the rest of Japanese educational content.

⁶⁵ “Commemorative plaque at the entrance to the Yasukuni Shrine Museum [translated],” photograph courtesy of <http://kamikazeimages.net/monuments/yushukan/index.htm>

⁶⁶ Hardt and Negri. *Commonwealth*, 34.

3. NATIONAL SECURITY

In order to make students willing to ‘fight for their country,’ Japanese education must establish the perception of national threats. These threats can fulfill the role of the “melancholy climate and military conflicts” which must be overcome through the formation of ‘cultural community’ detailed by Endo. The 2011 version of *New Japanese History* attempts to conjure this kind of national climate when it states, “in foreign relations, it is necessary to have a spirit of international cooperation and an attitude to protect national sovereignty. There are urgent issues that need to be addressed such as Russia’s unlawful occupation of Japan’s Northern Territories, North Korea’s abductions of Japanese citizens, and China’s military expansion.”⁶⁷ The 2015 version updated this part of the textbook significantly:

In diplomacy, it is necessary to maintain an attitude of protecting our position as a nation and national interests, as well as a spirit of cooperation with other countries. The Northern Territories (Hokkaido) and Takeshima (Shimane Prefecture), which are territories inherent to our country, both remain illegally occupied, respectively by Russia and South Korea. In addition, our territorial integrity is under threat. For instance, Chinese patrol vessels make incursions into sea zones surrounding Senkaku Islands (Okinawa Prefecture) under administrative control of our country. The increasing military build up by China poses a threat to Asian countries. The incidents (abductions)

⁶⁷ *New Japanese History* (2011), 246.

of numerous Japanese nationals kidnapped by North Korean spies have not been resolved.⁶⁸

The 2015 version goes into more detail about Japan's territorial disputes with neighbouring countries. While the earlier version only mentions the 'Northern Territories' (Kuril Islands) dispute with Russia as a concern for national sovereignty, the updated description also includes disputes with South Korea over the Takeshima / Dokdo islands and with China over the Senkaku / Diaoyudao Islands. The updated description also takes a more assertive tone as it specifies which Japanese prefecture each disputed territory is a part of, and calls China's military build-up 'a threat to Asian countries.'

The textbook's description of Russia's occupation of these islands as unlawful follows the July 3rd, 2009 revision of the *Act on Special Measures Concerning Advancement of Resolution of the Northern Territories Issue, etc*, which states, "the Northern Territories are inherently Japanese territories."⁶⁹ Competing Russian and Japanese claims over the islands make up "one of the longest standing territorial disputes in East Asia," left unresolved because of ambiguities in the February 1945 Yalta Conference agreements and the September 8th, 1951 San Francisco Peace Treaty.⁷⁰ *New Japanese History's* description of the Yalta Conference sides

⁶⁸ *New Japanese History* (2015), 273.

⁶⁹ Cabinet Office, Government of Japan, Hoppōryōdo mondai-tō no kaiketsu no sokushin no tame no tokubetsu sochi ni kansuru hōritsu [Act on Special Measures Concerning Advancement of Resolution of the Northern Territories Issue, etc]. (Tokyo, 2009) http://www8.cao.go.jp/hoppo/shiryou/pdf/hokutokuhou_gaiyou.pdf (accessed December 16, 2017). [In Japanese]

⁷⁰ Dmitry Gorenburg. "The Southern Kuril Islands Dispute," *PONARS Eurasia Policy Memo No. 226* (2012), 1.

with the 2009 revision to Japan's official stance concerning the dispute. It states, "Stalin requested for the southern half of Sakhalin and the Kuril Islands, which are Japanese territories."⁷¹

The 'Northern Territories' dispute with Russia is also an important point in the new middle school teaching guidelines. They state, "concerning territorial features and change, teach about our nation's features as a maritime country, and that the Northern Territories are territories inherent to our nation, and about questions involving our nation's territory."⁷² "Russia's unlawful occupation" of the Sakhalin and Kuril Islands, in other words, is a national problem which raises "questions involving our nation's territory." For this reason, the 2009 high school teaching guidelines state that teachers should "touch on Japanese territorial problems" so that students can "learn the features of Japanese land in the contemporary world from a broad and multi-faceted perspective, inquire into issues in Japanese geography, and develop an outlook towards solving these problems and how Japanese land should be in the future."⁷³ The 2008/09 revised teaching guidelines seek to make students concerned with "Russia's unlawful occupation" of the Sakhalin and Kuril Islands as a problem that should be solved so that Japan can take back its territorial integrity.

North Korea and China are also listed in the quote from *New Japanese History* as threats that make it necessary for Japanese people to have "an attitude to protect national sovereignty." The textbook lists abductions by North Korea as a reason for their being a national threat, but the more prominent North Korean issue in current Japanese politics and media is their ongoing

⁷¹ *New Japanese History* (2015), 220.

⁷² MEXT, *Middle School Teaching Guidelines* (2008), 35.

⁷³ MEXT, *High School Teaching Guidelines* (2009), 45, 43.

development and testing of nuclear weapons and ballistic missiles. With North Korea having launched a second missile over Hokkaido and into the Pacific Ocean within a month on September 15th, 2017 and Kim Jung-Un having entered a nuclear standoff with President Trump on August 8th, 2017,⁷⁴ the North Korean nuclear threat can be used by the Abe administration as justification to revise Article 9 of the Japanese Constitution. Concerning nuclear threats, the middle school guidelines instruct teachers to “make students think about Japan’s security, defense, and international contribution, make them aware of the threat of nuclear weapons, and nurture a spirit of cooperation as well as enthusiasm for preventing war and establishing world peace.”⁷⁵ Here, the guidelines state that “the threat of nuclear weapons” should be presented as a challenge in establishing world peace and an issue that is connected to Japan’s security. This frames North Korea’s unsanctioned development of nuclear capabilities as both a national and global threat.

Students are taught to value the idea of world peace as part of moral education for the “ethics to co-exist with others,”⁷⁶ but the guidelines also present the achievement of world peace as something closely connected to Japan’s national sovereignty. The middle school guidelines state, “the teacher must keep in mind that ‘achieving world peace’ should be understood while

⁷⁴ Jesse Johnson. Reiji Yoshida. “North Korea launches missile over Hokkaido for second time in less than a month,” *The Japan Times*, September 15, 2017. <https://www.japantimes.co.jp/news/2017/09/15/national/north-korea-launches-missile-hokkaido/#.WbsUUYprxmA> (accessed September 15, 2017).

Jim Sciutto. Barbara Starr. Zachary Cohen. “Trump promises North Korea ‘fire and fury’ over nuke threat,” *CNN*, August 9, 2017. <http://edition.cnn.com/2017/08/08/politics/north-korea-missile-ready-nuclear-weapons/index.html> (accessed September 6, 2017).

⁷⁵ MEXT, *Middle School Teaching Guidelines* (2008), 43.

⁷⁶ MEXT, *High School Teaching Guidelines* (2009), 47.

fully cognizant of fundamental factors such as national territory (including waters and airspace), national sovereignty, and the functions of the UN.”⁷⁷ Guidelines to teach territorial ‘waters and airspace’ in relation to national sovereignty are followed in *New Japanese History*’s description of China’s “increasing military build up” as a “threat to Asian countries.” Chinese infrastructural build-up in the South China Sea has caused the locations of maritime borders to be a recurrent point of dispute between China and its neighbouring nations, which the quote from *New Japanese History* specifically mentions as territorial incursions by ‘Chinese patrol vessels.’

Territorial rights to airspace have also been a point of conflict in foreign relations between China and other powers such as Japan and the U.S., as airspace is a crucial component of national security systems that rely on interoperability. Some of these conflicts have prompted the Pentagon to publish reports that U.S. reconnaissance planes have been “intercepted by Chinese fighter jets in an ‘unsafe’ and ‘unprofessional’ manner.”⁷⁸ In addition, the Japanese Air Self-Defences Forces scrambled a “record number of fighter jets to intercept Chinese planes” in the first three months of 2017, and Japan’s Foreign Ministry lodged a formal complaint on May 18th, 2017, after a Chinese drone flew over disputed waters at the Senkaku / Daiyoyudao Islands.⁷⁹

⁷⁷ MEXT, *Middle School Teaching Guidelines* (2008), 45.

⁷⁸ Jesse Johnson. “Chinese jets involved in another ‘unsafe’ intercept of U.S. reconnaissance plane, Pentagon says,” *The Japan Times*, May 27, 2017. <http://www.japantimes.co.jp/news/2017/05/27/asia-pacific/chinese-jets-involved-another-unsafe-intercept-u-s-reconnaissance-plane-pentagon-says/#.WWRTDlpLfq1> (accessed September 6, 2017).

⁷⁹Jon Sharman. “Japan scrambles record number of fighter jets to intercept Chinese planes,” *Independent*, April 13, 2017. <http://www.independent.co.uk/news/world/asia/japan-fighter-jets-intercept-chinese-planes-record-number-military-activity-communism-east-china-sea-a7682066.html> (accessed September 6, 2017).

Japanese students are not merely encouraged to value Japan's sovereignty as part of a goal to work towards 'achieving world peace'; they are led to believe that 'Japaneseness' gives them a special ability to help achieve world peace. These ideas play a particularly large role in *Watashi no Dōtoku* (Our Morality), the moral education textbook which was supplied to all elementary and middle schools nationwide in 2014.⁸⁰ This textbook asks students, "what can we do as Japanese people for world peace and human wellbeing?"⁸¹ As we have seen, part of the answer to this question is to "love your home country, and be aware of the importance of trying to achieve its peace and prosperity."⁸² The following section shows how moral and cultural education teaches students to embrace 'Japaneseness' in order to ensure national sovereignty and achieve world peace.

4. MORALITY AND CULTURE

Embracing 'Japaneseness' as "the baton of life" means participation in the making of national history through the generational transfer of culture in which 'essential similitude' can be discovered. The elementary level *Our Morality* textbook reflects the need to increase students' "respect for tradition and culture" so that they may be inclined to contribute to what they

Jon Rogers. "South China Sea tensions at boiling point after Beijing 'drone' flies over disputed waters," *Express*, May 18, 2017. <http://www.express.co.uk/news/world/806379/South-China-Sea-Japan-China-drone-Senkaku-Diaoyu> (accessed September 26, 2017).

⁸⁰ MEXT, "Dōtoku kyōiku-yō kyōzai 'watashitachi no dōtoku' ni tsuite [On moral education teaching material, "Our Morality"]," webpage. http://www.mext.go.jp/b_menu/houdou/26/02/1344132.htm (accessed September 9, 2017).

⁸¹ *Watashitachi no dōtoku; Chūgakkō* [Our Morality; middle school], (Tokyo: Kousaido Akatsuki Company Ltd, 2014), 217. Hereafter *Our Morality; middle school*.

⁸² MEXT, *Middle School Teaching Guidelines* (2008), 42.

perceive as the cultural continuity of the national community. It states, “when we are moved by tradition or culture that has been carried down from one generation to another, we are in internal dialogue with our forebears.”⁸³ Moral education then puts forth the idea that tradition and culture is what connects students to their ancestors. As previously discussed, students are told that they are already connected to ancestors through “the baton of life” as ‘Japaneseness,’ but it is up to them to be ‘a strong runner’ to pass the baton onto future generations. *New Japanese History* reflects the need for students to take initiative as ‘a strong runner.’ It states that Japan has a long history of art because “Japanese people have rich hearts that sense beauty,” and tells students that they should “have a heart that loves Japanese beauty and carry these arts onto the next generation.”⁸⁴ Here, ‘Japaneseness’ seems to be contained in the ‘rich hearts that sense beauty’ of Japanese people, which then allows it to act as the source of inspiration for the production of Japanese culture. On the other hand, the quote also seems to suggest that a person can embrace ‘Japaneseness’ by choosing to “carry these arts onto the next generation.”

The way in which the *Our Morality* textbook encourages students to converse with ancestors through tradition is therefore part of an ideological education. In fact, moral education in Japan served similar purposes in the prewar and wartime eras; it was banned by the GHQ following Japan’s 1945 surrender because of the role it had played to “preserve the moral character of ‘bushido’” and impose a “strongly nationalistic form of education.”⁸⁵ In 1958, moral

⁸³ *Our Morality; elementary school years 5 and 6* (2014), 169.

⁸⁴ *New Japanese History* (2015), 6.

⁸⁵ David McCullough. “Moral and Social Education in Japanese Schools: Conflicting Conceptions of Citizenship,” *Citizenship Teaching and Learning* 4, No. 1 (2008): 23.

education was re-introduced into Japanese education as an informal subject with one hour of designated teaching time per week and no system to officially approve textbooks.⁸⁶ As mentioned above, MEXT then distributed the *Our Morality* textbooks to all elementary and middle schools nationwide in 2014. In March 2015, MEXT “revised the course of study to [re]introduce moral education as an official subject at primary school level in 2018 and at the lower secondary school level in 2019.”⁸⁷

The March 2015 revised Course of Study prioritized moral education reform because, according to the 2008 *Basic Plan for the Promotion of Education*, “it is necessary for us and our social systems to not only pursue socioeconomic sustainability but to also turn to inner values, such as the pleasure of living in harmony with other people and the importance of morals for such harmonization.”⁸⁸ The 2014 *Second Basic Plan for the Promotion of Education* elaborates on the importance of morals when it states, “regarding moral education, there remain some problems in the development of normative consciousness and sociality because of the atmosphere of extreme individualism, loosening social ties, and the decrease of interchanges and experience with people of different cultures and values.”⁸⁹

⁸⁶ Mayumi Nishino. “The challenge of developing meaningful curriculum initiatives for moral education in Japan,” *Journal of moral education* 46, No. 1 (2017): 46.

⁸⁷ Mariko Akuzawa. “Human Right Education in Japan: Overview,” *Asia-Pacific Human Rights Information Center: FOCUS* 82 (2015) online. <https://www.hurights.or.jp/archives/focus/section3/2015/12/human-rights-education-in-japan-overview-1.html> (accessed December 18, 2017).

⁸⁸ MEXT, “Chapter 1: Current Status of Education in Japan and the Challenges We Face,” in *Basic Plan for the Promotion of Education* (2008).

⁸⁹ MEXT, “2. Current status and issues of education in Japan,” in *Second Basic Plan for the Promotion of Education* (2014).

Japanese moral education thus emphasizes the value of “living in harmony with other people,” much like the 1937 *Cardinal Principles of the National Polity*.⁹⁰ This is clearly seen in the thematic structure of moral education in Lower Secondary School, which is divided into four sections: 1. “Self,” 2. “Others,” 3. “Group and Society,” and 4. “Life and Nature.”⁹¹ The third section, “Group and Society,” contains lessons on “Respect and Love for the Land and its Traditions,” and “Respect and Love for the Nation and its Traditions.”⁹² Evidently, moral educational reform is closely tied to the 2006 introduction of “love for the country” and “respect for tradition and culture” as educational objectives. The 2008 *Basic Plan for the Promotion of Education* goes into some detail on how to nurture this “respect for traditions and culture.” It reads:

Since it is important to foster an attitude of respect [for] tradition and culture and love for one’s own home country and home town, which have nurtured tradition and culture, while highly regarding foreign countries and contributing to peace and growth of the international society, education on tradition and culture will be promoted to ensure people’s understanding, succession and development of tradition and culture of their home country and town. To this end, the government provides assistance for programs that provide children with opportunities, at school or local cultural facilities, to appreciate

⁹⁰ *Sources of Japanese Tradition*, edited by Wm. Theodore de Bary, Carol Gluck, and Arthur L. Tiedemann, 2nd ed., vol. 2 (New York: Columbia University Press, 2005), 968-969, 975.
<http://afe.easia.columbia.edu/ps/japan/kokutai.pdf>

⁹¹ Nishino. *The challenge of developing meaningful curriculum initiatives for moral education in Japan*, 52.

⁹² *Ibid.*

fine performing arts, participate in cultural or art activities, or learn traditional culture through hands-on experience or programmed study courses, including classes in folk performing arts, traditional Japanese music, tea ceremony, traditional floral art, etc. In addition, assistance for the promotion of Japanese traditional martial arts will be provided.⁹³

The *Basic Plan for the Promotion of Education* prioritizes giving Japanese children ‘hands-on experience’ with cultural activities such as “folk performing arts, traditional Japanese music, tea ceremony, traditional floral art, etc.” This is because these activities are thought to put students into “internal dialogue with our forebears,” and in turn create the connection between individuals and national community. The ‘Japaneseness’ which is conveyed through this dialogue is a central concern in Japanese moral education. Teaching guidelines state that a section entitled, “What is Japaneseness?” is included in the middle school *Our Morality* textbook in order to make students think about this question.⁹⁴

A key aspect of ‘Japaneseness’ as cultural ‘sameness’ is that it must inspire pride as national community. According to the middle school *Our Morality* textbook, “we who live in current times would like to learn the admirable aspects of Japanese tradition and culture, absorb their goodness, create a new culture, and spread it to people all over the world with pride”

⁹³ MEXT, “Chapter 3 : Measures to be implemented comprehensively and systematically for the next five years,” in *Basic Plan for the Promotion of Education* (2008), Basic Direction 2.

⁹⁴ MEXT, *Watashitachi no dōtoku: Katsuyō no tame no shidō shiryō (chūgakkō)* [Our Morality: Teaching Materials for Use (middle school)], (Tokyo 2014), 96.

because “Japanese tradition and culture transcend historical eras and national borders, and are highly rated overseas as well.”⁹⁵ This effort to give students a sense of pride in Japanese culture follows MEXT’s teaching guidelines to use “attractive teaching materials that will emotionally move the students, themed on ancestral biographies, nature, tradition and culture, sports, and so forth.”⁹⁶ The initiative to ‘emotionally move’ students by making them proud of Japanese culture is meant to give these students the desire to spread Japanese culture throughout the world. For example, *Our Morality* encourages this kind of behavior by asking students, “what aspects of Japanese culture would you like to share with people who live overseas?”⁹⁷

Moral education also attempts to influence the behaviors and attitudes of students by establishing social obligations which they feel beholden to. The elementary level *Our Morality* textbook teaches students that they have social rights and obligations as Japanese citizens, and that these must be balanced appropriately. It states, “everyone has the right to live in a good society, and the obligation to make society better.”⁹⁸ *Our Morality* states that there is a social obligation to “take responsibility for your role in the group” because “Japan should be a society where we serve the group collectively instead of for individual advantage.”⁹⁹ This aspect of moral education reflects the 2008 *Basic Plan for the Promotion of Education*, which says that a

⁹⁵ *Our Morality; middle school* (2014), 206.

⁹⁶ MEXT, *Middle school teaching guidelines* (2008), 114.

⁹⁷ *Our Morality; middle school* (2014), 208.

⁹⁸ *Our Morality; elementary school years 5 and 6* (2014), 124.

⁹⁹ *Our Morality; elementary school years 5 and 6* (2014), 142, 178.

“spread of undesirable ‘individualism’ or ‘me-ism’” is taking place in Japan.¹⁰⁰ Other social obligations that are listed in the textbook include the obligations to receive an education, to work, and to pay taxes.¹⁰¹

Another social obligation that is taught in moral education is the need for students to contribute to the economic development of local regions which they associate as their hometown. The middle school *Our Morality* textbook tells students, “while loving our place of birth, and holding it dear to us, we would now like to help our regional society develop into an even better one.”¹⁰² Moral education about the virtue of developing regional society results from teaching guidelines for students to “have self-awareness as part of regional community, love the local region, deepen respect and appreciation for ancestors and seniors who served society, and put effort into developing the local area.”¹⁰³ This line is directly followed by a line which says that students should “have self-awareness as Japanese and love the country, and put effort towards further national growth.”¹⁰⁴ The placement of these two quotes together suggests that love for one’s hometown and the desire to develop regional society are related to love for the country and desire for national development. *Our Morality* attempts to reaffirm this idea: “as we expand

¹⁰⁰ MEXT, “Chapter 1 : Current Status of Education in Japan and the Challenges We Face,” in *Basic Plan for the Promotion of Education*.

¹⁰¹ *Our Morality; elementary school years 5 and 6* (2014), 124-25.

¹⁰² *Our Morality; middle school* (2014), 200.

¹⁰³ MEXT, *Middle School Teaching Guidelines* (2008), 113.

¹⁰⁴ *Ibid.*

feelings of love for our hometown, they lead to love for the country in which we live and good wishes for its continuing growth.”¹⁰⁵

This chapter has shown that Japanese educational reforms attempt to incorporate the Japanese ideology into education as part of ‘normative consciousness’ in order to give students the desire to contribute to national growth and security. The *Our Morality* textbook includes a quote which says, “the secrets of our future are hidden in our history.”¹⁰⁶ This quote is included in the textbook because the Japanese ideology as history contains the culture in which ‘essential similitude’ can be discovered, giving people a vision of a future that is modelled on a fabricated past. Perceptions of some distinctly Japanese quality hidden in a mythological history are perpetuated through the education system, and this quality comes to be what Japanese people are expected to strive towards. This is what *New Japanese History* refers to when it says, “we should continue to demonstrate excellent national character to solve domestic issues and make international contributions so that people throughout the world can live peacefully and happily.”¹⁰⁷

In this way, ‘excellent national character’ is thought to make one capable of fulfilling demands on both a domestic and global scale. It includes the motivation to ensure the continuation of traditions and culture, protect national sovereignty, and make “Japan trusted and appreciated by the world.”¹⁰⁸ However, the way in which Japanese education attempts to meet

¹⁰⁵ *Our Morality; middle school* (2014), 209.

¹⁰⁶ *Our Morality; middle school* (2014), 211.

¹⁰⁷ *New Japanese History* (2015), 273.

¹⁰⁸ *New Japanese History* (2011), 246.

both global and domestic demands at once raises some questions. For example, how do the reforms compromise differences between the need to establish the boundaries of ‘normative consciousness’ and the need to encourage ‘expert thinking’ which requires a sort of ‘thinking outside the box’? Or navigate needs to eliminate ‘undesired individualism’ but also respect peoples’ individuality? The next chapter examines how Japanese educational reforms approach these kinds of questions by examining points where initiatives to meet both global demands and domestic demands appear to intersect, and how Japanese education attempts to meet both types of demands at once.

Chapter Four

Japanese Educational Reform for ‘Glocal’ Citizens: Cool Japan and the Aesthetics of Power

As noted at the end of the last chapter, certain tensions arise in the educational reforms from the way in which they attempt to construct a ‘normative consciousness’ in a ‘knowledge-based society.’ The main question addressed in this chapter is: *how do Japanese educational reforms attempt to devise an integrated approach that meets both global and domestic demands at once?* The findings are that the reforms use “love for the country” to motivate efforts to bring local regions into the global economic system and embrace a ‘Japaneseness’ that makes people suitable world leaders. The reforms discussed in this chapter seek to promote a world-leading ‘Japan brand’ in innovative dual-use technologies as part of the culture which Japanese people are expected to produce by using the ‘excellent national character’ discussed at the end of the previous chapter.

This brand, promoted through the Cool Japan government initiative, could help strengthen the national economy by giving national industries positive recognition in the international market, as well as help enhance national military strength by increasing the level of popular support for the Japanese Self-Defense Forces (SDF). Prime Minister Abe’s education council, the Education Rebuilding Implementation Council (ERIC), suggests that the type of human resources needed to develop and promote a globally competitive ‘Japan brand’ in dual-use technologies are ‘glocal’; people with characteristics that allow them to meet demands coming from both the global and local environments. ‘Glocal human resources’ are thus equipped with both “love for the country” and the ‘required knowledge’ to produce new knowledge that contributes to the global system.

MEXT's effort to convert "love for the country" and a globally recognized 'Japan brand' into economic and military power is what Armitage and Nye call a *smart power strategy*; foreign policy which effectively combines use of soft power and use of hard power.¹ The broad range of smart power strategies that may be employed on the global stage is highlighted by Armitage and Nye's 2007 *CSIS Commission on Smart Power*, which identifies five critical areas for the U.S. to focus on for smart power. These are: "[1] Alliances, partnerships, and institutions: Rebuilding the foundation to deal with global challenges; [2] Global development: Developing a unified approach, starting with public health; [3] Public diplomacy: Improving access to international knowledge and learning; [4] Economic integration: Increasing the benefits of trade for all people; [and 5] Technology and innovation: Addressing climate change and energy insecurity."² While Chapter Two of this thesis discussed educational reforms which are related to [4] and [5] in the list above, this chapter focuses more on Japanese educational reforms which are related to 'alliances, partnerships, and institutions,' and 'public diplomacy.' The student exchange programs and collaborative R&D programs discussed in this chapter are related to the strengthening of international alliances, and the 'Cool Japan' initiative is related to public diplomacy as a national branding effort.

1. EDUCATION FOR 'GLOCAL' CITIZENS

As the previous chapter showed, MEXT distinguishes its construction of 'normative consciousness' as uniquely Japanese by giving it the capacity to contain the Japanese ideology through the new objectives to increase students' "love for the country" and "respect for tradition

¹ Joseph Nye. "Get Smart; Combining Hard and Soft Power," *Foreign Affairs* 88, No. 4 (2009): 162.

² Richard Armitage. Joseph Nye. *CSIS Commission on Smart Power; A smarter, more secure America*. (Washington: Center for Strategic and International Studies, 2007), 5.

and culture.” In addition, MEXT suggests that this ‘normative consciousness’ allows people to integrate into the global system, and even be leaders within this system. ERIC displays this kind of thinking in a number of its recommendations such as its May 28th, 2013 recommendation entitled, *University Education and Global Human Resource Development for the Future*. It states, “the country has a responsibility to guarantee opportunities for students to acquire the academic ability and normative consciousness to be members of the world.”³ The reforms discussed in this section encourage students to channel their “love for the country” into careers that contribute to the integration of local regions and rural communities into the global system.

People who have the “normative consciousness to be members of the world” therefore channel their “love for the country” into work that helps integrate Japanese regions into the global system. ERIC proposes that these people must have the ability to “think global, act local” as “glocal human resources.”⁴ Roland Robertson, the sociologist credited with popularizing the term ‘glocalization,’ writes that the word signifies a cultural hybridization arising from “the complex globalization dynamic involving the interaction of the global and local,” which is too complex for the dualistic terminologies of ‘sameness’ and ‘difference,’ or ‘homogenization’ and ‘heterogenization’ to fully encapsulate.⁵ According to Robertson, the word was originally coined by “Japanese economists to explain Japanese global marketing strategies” in the 1980s.⁶

³ Education Rebuilding Implementation Council (ERIC), *University Education and Global Human Resource Development for the Future (Third Proposal) [Provisional Translation]*, (Tokyo, 2013), 1. http://www.kantei.go.jp/jp/singi/kyouikusaisei/pdf/dai3_en.pdf (accessed November 13, 2017).

⁴ Glocal Human Resources Development Center, “Greeting,” webpage. <http://glocalcenter.jp/about/greeting.html> (accessed November 13, 2017).

⁵ Manfred B. Steger *Globalization: A Very Short Introduction* (Oxford: Oxford University Press, 2017), 86.

⁶ Joachim Blatter. “Glocalization,” *Britannica*, online. <https://www.britannica.com/topic/glocalization> (accessed December 28, 2017).

Roland Robertson. “Chapter 2: Glocalization: Time-Space and Homogeneity-Heterogeneity,” in *Global Modernities*. (London: Sage Publications: 1995), 28.

MEXT's initiative for education to nurture these 'glocal human resources' reflect the "new public management" described by Manfred Steger in his 2010 book, *Neoliberalism: A Very Short Introduction*. According to Steger, this public management used "the neoliberal mode of governance for public servants, [and] it redefined citizens as 'customers' or 'clients' and encouraged administrators to cultivate an 'entrepreneurial spirit'" and "embrace neoliberal ideals."⁷ The initiative to nurture 'glocal human resources' who can help integrate rural regions and communities into the global system complements the neoliberal "set of ideological and political principles dedicated to the worldwide spread of an economic model emphasizing free markets and free trade."⁸

ERIC recommends for education to nurture 'glocal man power' in its March 4th, 2015 recommendation on 'continuous learning.' It states, "the country, local governments, universities etc. should nurture global leaders rooted in the region (widely referred to as glocal man power) through the promotion of the study abroad program (*Tobitate!* study abroad Japan program) which was formed through the cooperation of government and people."⁹ The *Tobitate* program, which MEXT translates as the 'Leap for Tomorrow' program, aims to develop 'glocal man power' through overseas student exchange programs that create "global leaders rooted in the region."

MEXT's *Tobitate* program aims to nurture "global leaders rooted in the region"; workers who will use their overseas exchange experience in order to carry out local development projects

⁷ Manfred B. Steger. *Neoliberalism: A Very Short Introduction* (Oxford, Oxford University Press: 2010), 13.

⁸ Manfred B. Steger. *Neoliberalism: A Very Short Introduction* (Oxford, Oxford University Press: 2010), 10.

⁹ ERIC, 'Manabitsuzukeru' shakai, zen'in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite [On education that realizes a society which facilitates 'continuous learning,' the participation of all, and rejuvenation of local communities], (Tokyo 2015), 12. [In Japanese]

that take into account the demands of the global system. This conceptualization of ‘glocal human resources’ is also clearly reflected in the mission statement of a Kyoto-based NPO called Glocal Human Resources Development Center. It describes ‘glocal human resources’ as “individuals who possess both a ‘public-mind’ to support their own communities and a ‘business-mind’ to respond to the global economy in a professional manner.”¹⁰ This NPO is a brainchild of the government-industry-academic collaboration discussed in Chapter Two, as it was “formed through the cooperative efforts of government, industry, academia, and the community” on February 15th, 2013.¹¹

The *Tobitate* student exchange program launched in October 2013 is an initiative led by MEXT, in which 19 prefectures and cities participated in 2017 to form their own programs based on the needs of industrial-academic collaborations in each region. The *Tobitate* program’s official website has a set of quotes from the types of students that the program is looking for. The first of these is, “I am hoping that through studies abroad I will acquire a global perspective and bring it back to the region so that I can contribute to the development of local industry.”¹² The *Tobitate* programs offered in each of the 19 prefectures aim to nurture this kind of student in various ways. The program in Kagawa Prefecture, for example, sets out to train “students who wish to contribute towards the growth and internationalization of regional economy by working as global specialists” in the fields of “food / bio-industry, health industry, manufacturing industry, ecology-related industry, agricultural industry, [and] tourist industry.”¹³ Again, this

¹⁰ Glocal Human Resources Development Center, “About,” webpage. <http://glocalcenter.jp/about.html> (accessed November 13, 2017).

¹¹ *Ibid.*

¹² Tobitate Japan exchange program, “chiiki jinzai kōsu [Regional human resources course],” webpage. <http://www.tobitate.mext.go.jp/program/region/index.html> (accessed November 13, 2017) [In Japanese]

¹³ Tobitate Japan exchange program, “chiiki jinzai kōsu [Regional human resources course],” webpage. <http://www.tobitate.mext.go.jp/program/region/index.html> (accessed November 13, 2017) [In Japanese]

program was designed in order to meet goals “set forth jointly by industry, academia, and government in Kagawa Prefecture.”¹⁴

The second quote on the *Tobitate*'s website from the type of student that the program is looking for reads, “I want to let people overseas know the attractive features of my region, and act as a bridge between the region and overseas.” The *Tobitate* programs for cities such as Nara and Iwate seek to establish this kind of connection between local region and global environment by supporting “students capable of ‘opening’ Nara to the world” and “fostering human resources that can connect the ‘world’ with ‘Iwate.’”¹⁵ Nara's *Tobitate* program emphasizes that connecting the local region to the world requires “investing passion and love towards the future of Nara City” as well as “abilities to think and act from global perspectives.”¹⁶ In connecting these local regions to the world at large, these programs seek to integrate these regions as functional parts of the global system. At the same time, the programs seek to promote local cultures by allowing them to enter into and influence the wider global system in a consumer-friendly form.

The aforementioned Kyoto-based NPO called Glocal Human Resources Development Center also emphasizes that ‘glocal human resources’ are characterized by the ability to “think global, act local” when it states, “our goal is to develop ‘Glocal’ individuals with a passion for the sustainable development of the local economy and local society, as well as an ability to think globally.”¹⁷ The NPO's official mission statement, however, takes a slightly different approach

¹⁴ Tobitate Japan exchange program, “chiiki jinzai kōsu [Regional human resources course],” webpage. <http://www.tobitate.mext.go.jp/program/region/index.html> (accessed November 13, 2017) [In Japanese]

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ Glocal Human Resources Development Center, “Greeting,” webpage. <http://glocalcenter.jp/about/greeting.html> (accessed November 13, 2017).

to explaining the concept of ‘glocal human resources’ by describing a society characterized by such resources. It reads:

We aspire for our city, Kyoto, to be an open forum where the industrial, academic, and private sectors all have receptive ears for voices from the next generation, and are inspired to nurture younger generations. It should be a place that is supported with pride and love by youth with global perspectives. We hope these efforts made in Kyoto will spread through Japan and the world to create the glocal society we all aspire to.¹⁸

The NPO envisions a ‘glocal society’ in Kyoto, where people use their ‘global perspectives’ in order to support local economic growth “with pride and love.” It describes the realization of this ‘glocal society’ as occurring after “these efforts made in Kyoto” spread throughout the world. The NPO’s wording here is misleading because it sounds as though a ‘glocal society’ that encompasses the entire global system will emerge when similar efforts are made all over the world, when this is most likely not what is meant. Instead, the NPO likely means that a ‘glocal society’ will emerge in Kyoto after efforts for local development give the city a larger presence on the global stage. Glocalization can give Kyoto a larger global presence by turning the city into an indispensable cog within the global economic system, and by spreading feelings of ‘pride and love’ for Kyoto throughout the world.

The Glocal Human Resources Development Center aims to nurture the ability to use global knowledge and perspectives “with a passion for the sustainable development of the local

¹⁸ Glocal Human Resources Development Center, “About,” webpage. <http://glocalcenter.jp/about.html> (accessed November 13, 2017).

economy and local society” by creating “a framework for diverse, experiential ‘active-learning.’”¹⁹ The importance of ‘active learning’ for developing ‘glocal human resources’ is elucidated by *Keidanren*’s April 2016 report entitled *Basic Ways of Thinking about Educational Reform*. The report reads, “active learning is effective for development of the ability to independently reach a solution to problems that have no correct answers, the ability to learn by deepening one’s own thoughts while working with others, and the ability to effectively communicate one’s own thoughts, which are all essential requirements in the future era.”²⁰

These creative and communicative abilities are closely related to the skills that characterize the ‘knowledge worker’ which were discussed in Chapter Two. The Glocal Human Resources Development Center thus sees ‘glocal human resources’ as having the skills that characterize the ‘knowledge worker.’ This is because the ‘knowledge worker’ is capable of contributing to the economic growth and interoperable security of the global system, and the globalization of Kyoto requires integrating it into this system. The *Keidanren* report also emphasizes that ‘active learning’ should be directed at reaching high proficiency in ICT because these skills are crucial for contributing to the newly interconnected global system.²¹

1.1 “LOVE FOR THE COUNTRY” IN A GLOBAL CONTEXT

‘Glocal human resources’ thus have all of the global skills of the ‘knowledge worker,’ as well as a local ‘pride and love’ that gives them the desire to develop regional communities. Combined, these characteristics allow ‘glocal human resources’ to act as leaders in the expansion

¹⁹ Glocal Human Resources Development Center, “Greeting,” webpage. <http://glocalcenter.jp/about/greeting.html> (accessed November 13, 2017).

²⁰ Keidanren, *Kongo no kyōikukaikaku ni kansuru kihon-teki kangaekata* [Basic Ways of Thinking about Educational Reform]. (Tokyo, 2016) 8. [In Japanese]

²¹ *Ibid.*

of the global system by helping it to absorb local regions. ERIC's third recommendation provides insight as to how the Abe administration plans to develop these 'glocal human resources.' It reads:

In order to strengthen the functions of universities, it is crucial to formulate a national strategy based on mid- and long-term perspectives, which will enable the development of human resources that retain their identity as Japanese, have broad knowledge, and are capable of interacting with people from other countries with ease. Towards this end, we need to look at primary through high school education with a coherent and integrated approach, focus on providing a comprehensive liberal arts programs relevant to both the sciences and the humanities, and enable deeper understanding of Japanese culture.²²

The recommendation combines the element of an “identity as Japanese” as being necessary along with international communication abilities because it seeks to strengthen efforts to “disseminate academic and cultural content originating in Japan to the world.”²³ An example of one such effort is the Japan-ASEAN Global Philosophical Research Exchange Laboratory research project running from April 1st, 2017 to March 31st, 2024 at Osaka University as part of its International Joint Research Promotion Program. This project aims to “enhance research exchange in philosophy between Japan and the ASEAN for further mutual understanding,” including the translation of “texts in basic modern Japanese philosophy” into Thai.

²² ERIC, *Korekara no daigaku kyōikutō no arikata ni tsuite* [University Education and Global Human Resource Development for the Future], (Tokyo, 2013) 2. [In Japanese]

²³ ERIC, *Korekara no daigaku kyōikutō no arikata ni tsuite* [University Education and Global Human Resource Development for the Future], (Tokyo, 2013) 3. [In Japanese]

Translation of ‘modern Japanese philosophy’ into foreign languages can help promote Japanese culture and teach national history in other countries, but in terms of spreading the history of national culture, it would be even more effective to teach the philosophy along with its original language. In *A Secret History*, Endo writes, “we know that education in the national language, culture, and history as an ideology unique to the middle class (or those who would like to become so) plays a central role in social policy and hence in biopolitics,” and that the prewar Japanese education called *kominka kyōiku* on national language, culture, and history “was indoctrination in the Japanese ideology.”²⁴ The third ERIC recommendation quoted above emphasizes educational initiatives for overseas education in Japanese language and culture. It reads:

In order to deal with globalization with a conscious awareness of needs to cultivate identity as Japanese and spread Japanese culture to the world, strong Japanese language programs should be provided and deeper understanding of Japanese tradition and culture should be promoted from elementary to high school education. The state should strategically encourage foreign universities to provide Japanese language and culture programs overseas. Moreover, the national government should proactively drive efforts to develop human resources capable of introducing and teaching Japanese culture.²⁵

Historical parallels to the prewar *kominka kyōiku* enforced in Japanese colonies such as Taiwan and Manchuria can be drawn from the education council’s 2013 recommendation for

²⁴ Endo. *A Secret History*, 367.

²⁵ ERIC, *Korekara no daigaku kyōikutō no arikata ni tsuite* [University Education and Global Human Resource Development for the Future], (Tokyo, 2013) 6. [In Japanese]

Japanese language and cultural education to be enhanced throughout the world. The recommendation to provide this education through specialized courses in university, however, means that it would not function as “indoctrination in the Japanese ideology” in the same way as a mandatory education on Japanese language and culture starting from elementary school. Of course, elementary level education in these subjects is mandatory within Japan, so that children can cultivate an “identity as a Japanese.”

Japanese educational reforms seek not only to instil a sense of “identity as Japanese” in students, but they also try to encourage students to somehow apply this sense of identity as ‘local roots’ to their career paths. ‘Glocal human resources’ thus show their ‘Japanese identity’ by working to promote local culture overseas or develop local regions. ERIC’s sixth recommendation touches on this aspect of ‘glocal human resources’ development when it states, “needs for universities and the like to offer programs for developing specialized professionals capable of carrying regional industries to success, provide attractive courses, and contribute to creating new employment opportunities and innovations are higher than ever, particularly from the viewpoint of ensuring that students are persuaded to remain in the region as stalwart community members.”²⁶ In other words, ERIC proposes for Japanese education to attract students towards viewpoints that value local development and innovation.

In order to nurture “stalwart community members” with the desire to contribute to local development, one of the main objectives set out by ERIC is to “foster pride and attachment to the

²⁶ ERIC, ‘Manabitsuzukeru’ shakai, zen’in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite [On education that realizes a society which facilitates ‘continuous learning,’ the participation of all, and rejuvenation of local communities], (Tokyo 2015), 11. [In Japanese]

hometown.”²⁷ This objective is also shared by Japan’s National Governor’s Association, which recommended for Japanese schools to increase the number of lessons about the “attractive features” of local regions at a meeting on November 8th, 2013.²⁸ During this meeting, the association also recommended “expanding the ‘hometown tax payment’ program [*furusato nōzei*],” which was first introduced in 2008.²⁹ This tax payment program “allows people to donate to their hometowns or any other municipality of their choice” and “hit a record ¥284.4 billion” in fiscal year 2016.³⁰ Ultimately, the emphasis placed on local development is meant to contribute to the growth of the Japanese economy as a whole. ERIC’s sixth recommendation states, “what is required is the kind of nation-building for a country that attempts development/integration of new industries and human resources in diverse systems and ultimately achieve growth of the whole of Japan through synergetic effects based on diversity among regions.”³¹

The *Tobitate* program serves as the educational platform on which to carry out these recommendations to develop ‘glocal human resources’ capable of contributing to regional development and the national economy. As mentioned previously, the *Tobitate* program for Kagawa Prefecture focuses on “food / bio-industry, health industry, manufacturing industry,

²⁷ ERIC, ‘Manabitsuzukeru’ shakai, zen’in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite [On education that realizes a society which facilitates ‘continuous learning,’ the participation of all, and rejuvenation of local communities], (Tokyo 2015), 11. [In Japanese]

²⁸ National Governor’s Association, “Nihon no gurando dezain kōsō kaigi [Japan Grand Design Conception Meeting],” (Tokyo 2013), 11.
http://www.kantei.go.jp/jp/singi/keizaisaisei/ss_ikenkoukan/chiji_siryō.pdf [In Japanese]

²⁹ *Ibid.*

³⁰ Kyodo. “Donations under hometown tax payment program hit record ¥284 billion in 2016,” *The Japan Times*, July 4, 2017, online. <https://www.japantimes.co.jp/news/2017/07/04/business/donations-hometown-tax-payment-program-hit-record-%C2%A5284-billion-2016/#.Wj9hDUuYPq0> (accessed December 24, 2017).

³¹ ERIC, ‘Manabitsuzukeru’ shakai, zen’in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite [On education that realizes a society which facilitates ‘continuous learning,’ the participation of all, and rejuvenation of local communities], (Tokyo 2015), 19. [In Japanese]

ecology-related industry, agricultural industry, [and] tourist industry,” but programs offered by other regions focus on different industries. The *Tobitate* program for Iwaki city, for example, seeks to nurture ‘glocal human resources’ in the “nuclear power field, environmental issues field, and in the renewable energy field.”³² In order to nurture researchers capable of developing nuclear energy technologies, Iwaki’s program sends its students to research institutes in the U.S. and Sweden.³³ This exchange program follows not only recommendations from ERIC, but also CSIS recommendations by Armitage and Nye to enhance U.S.-Japan cooperative R&D in nuclear energy. Iwaki’s *Tobitate* program states on its website that its goal is “long term development of global human resources (glocal human resources) inspired to contribute towards revitalization of the region and to settle in the region and build a network of human resources that, armed with diverse experiences and perspectives, show their love for the region through such endeavors.”³⁴

Iwaki’s *Tobitate* program is associated with disaster relief education, which has come to play a larger role in Japanese education since the 3/11 disaster. A sign in the MEXT public museum states that Japanese universities and research laboratories have been working together in disaster relief education “to nurture human resources who will work for regional reconstruction and promote technological development for reconstruction, manufacturing, reconstruction of forestry and fisheries, restoration of medical services, and town-building.”³⁵ According to the

³² Tobitate Japan exchange program, “Chiiki jinzai kōsu [Regional human resources course],” webpage. <http://www.tobitate.mext.go.jp/program/region/index.html> (accessed November 13, 2017) [In Japanese]

³³ Tobitate Japan exchange program, “Chiiki jinzai kōsu gaiyō / boshū yōkō [Regional human resources course outline / application guidelines],” webpage. <http://tobitateiwaki.com/entry> (accessed November 14, 2017). [In Japanese]

³⁴ Tobitate Japan exchange program, “Jigyō gaiyō [Business summary],” webpage. <http://tobitateiwaki.com/gaiyou> (accessed November 14, 2017). [In Japanese]

³⁵ exhibition signboard: “Recovery and Reconstruction Efforts of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) Following the Great East Japan Earthquake – Promotion of

sign, “MEXT has been taking measures in order to respond to the [Fukushima] nuclear power plant accidents in the form of R&D aimed at decontamination and decommissioning.”³⁶ Iwaki’s *Tobitate* program for ‘glocal human resources’ in the field of nuclear energy is based on a similar objective within Japanese disaster relief education. It seeks to nurture “young leaders to lead regional revitalization with the aim of fostering glocal human resources that contribute to the reconstruction and development of the Hama-dōri area in Fukushima Prefecture,” where the power plants are located.³⁷

The *Tobitate* program also seeks to nurture ‘glocal human resources’ in other specialized fields, such as the aerospace industry. Mie Prefecture’s program, for example, states on its program description that it is looking for students who are “interested in the aerospace industry and are considering working in Mie Prefecture after graduation.”³⁸ The aerospace industry is based on a range of dual-use technologies, especially now that “Japan’s latest space policy is designed to support a more proactive US-Japan alliance role in containing China, and robustly defend Japan against North Korean ballistic missile threats.”³⁹ In this context, Mie Prefecture’s *Tobitate* program offers “support to students inspired to contribute to the growth of the aerospace industry through programs that combine overseas study with internships at manufacturers in the prefecture for students who are considering careers in Mie Prefecture.”⁴⁰ This program may

creative reconstruction efforts starting with ‘people-building,’ Education, *Exhibition Room 1*, Museum of MEXT, Tokyo. [In Japanese]

³⁶ *Ibid.*

³⁷ Tobitate Japan exchange program, “Chiiki jinzai kōsu; Iwaki [Regional human resources course; Iwaki],” webpage. <http://tobitateiwaki.com/> (accessed November 14, 2017). [In Japanese]

³⁸ Tobitate Japan exchange program, “Chiiki jinzai kōsu [Regional human resources course],” webpage. <http://www.tobitate.mext.go.jp/program/region/index.html> (accessed November 13, 2017). [In Japanese]

³⁹ Paul Kallender, “Japan’s New Dual-Use Space Policy. The Long Road to the 21st Century,” *Asie. Visions*, No. 88, (2016), 3.

⁴⁰ Tobitate Japan exchange program, “Chiiki jinzai kōsu [Regional human resources course],” webpage. <http://www.tobitate.mext.go.jp/program/region/index.html> (accessed November 13, 2017). [In Japanese]

reflect the fact that “Japan has clearly set space development as a major plank not only of national but regional security policy” with its latest space policy.⁴¹

The *Tobitate* programs for Iwaki and Mie seek to use feelings of local ‘pride and attachment’ in order to facilitate dual-use innovation for the purposes of infrastructural reconstruction and security. The elementary level *Our Morality* textbook attempts to build students’ pride of Japanese dual-use technologies when it states, “Japan has many advanced technologies to be proud of, such as aerospace technology, next-generation computing technology, and anime production.”⁴² According to ERIC’s sixth recommendation, other Japanese products should also directly reflect the nation itself; it argues that Japanese education should help to “establish a ‘Japan brand’ featuring competitive agricultural, forestry and fishery products for international markets.”⁴³ If strategically set within international markets, this ‘Japan brand’ has the potential to give Japanese industries positive international recognition and appeal. The next section discusses how Japanese education attempts to “establish a ‘Japan brand’” in cutting-edge dual-use technologies through the Cool Japan initiative.

2. COOL JAPAN

Although the *Tobitate* program does not bring foreign students to study in Japan, other student exchange programs endeavour to contribute to the ‘national branding’ effort of the Cool

⁴¹ Paul Kallender, “Japan’s New Dual-Use Space Policy. The Long Road to the 21st Century,” *Asie. Visions*, No. 88, (2016): 3.

⁴² *Our Morality; elementary school years 5 and 6*, 168.

⁴³ ERIC, ‘Manabitsuzukeru’ shakai, zen’in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite [On education that realizes a society which facilitates ‘continuous learning,’ the participation of all, and rejuvenation of local communities], (Tokyo 2015), 9. [In Japanese]

Japan initiative by bringing foreign students to Japan and turning them into “Cool Japan Ambassadors.”⁴⁴ In her essay entitled, *Made in cool Japan*, Sally McLaren writes, “the presence of international students also validates the success of the government’s ‘soft power’ strategy – ‘Cool Japan.’”⁴⁵ One such program aiming to bring foreign students into Japan is Meiji University’s Cool Japan program, which the university’s website describes as “a series of lectures, field trips and workshops on a wide variety of subjects relating to Japan’s contemporary images – from manga, anime and music, to fashion, the latest technology and cuisine.”⁴⁶ This study of “diverse aspects of Japanese society” is meant to “uncover their underlying traditional elements.”⁴⁷ The suggestion that ‘cool’ aspects of Japanese culture have “underlying traditional elements” seems to correspond to the idea that there is a ‘Japaneseness’ that can be found in national history and acts as the source of inspiration out of which Japanese culture arises.

In her 2012 book *Superhuman Japan*, Marie Thorsten traces Cool Japan to the 1990s: “the decline of Japan’s economic threat was replaced by the phenomenon of ‘Cool Japan,’ a wave of Japanese popular culture that gained steam desultorily in the 1990s to become an official part of Japanese diplomacy in the 2000s.”⁴⁸ According to Thorsten, “the new culture of J-Cool grew into a pillar of statecraft, adopted by Japan’s Foreign Ministry in 2003, amounting to an assertive national proprietary reflex – ‘damming, channeling, regulating’ creative powers, as

⁴⁴ Cabinet Office; Government of Japan, “Cool Japan Strategy Public-Private Collaboration Initiative,” (Tokyo 2015), 1. http://www.cao.go.jp/cool_japan/english/pdf/published_document1.pdf

⁴⁵ Sally McLaren. “Made in cool Japan,” *Griffith Review* 2, No. 49 (2015). <https://griffithreview.com/articles/made-in-cool-japan/>

⁴⁶ Meiji University, “Cool Japan Summer Program 2017,” webpage. <https://www.meiji.ac.jp/cip/english/programs/cooljapan/index.html> (accessed November 14, 2017).

⁴⁷ *Ibid.*

⁴⁸ Marie Thorsten. “Chapter 5: Super cool from Sputnik to Japan,” *Superhuman Japan: Knowledge, Nation and Culture in US-Japan Relations* (New York: Routledge, 2012), 3 pages in, location 3356 on Kindle version.

Deleuze and Guattari might express it.”⁴⁹ The Cool Japan initiative attempts to take ownership of “the new culture of J-Cool” in order to both control and encourage the ‘creative powers’ behind its production. Cool Japan entered Japanese educational policy with the 2013 *Second Basic Plan for the Promotion of Education*, which promotes it as a “rich and diversified culture and art” and a national strength,⁵⁰ as well as the August 2014 *Cool Japan Proposal*, which recommends putting into practice “Cool Japan classes that are enjoyable to children.”⁵¹

The Cool Japan government initiative acts in coordination with the educational reforms to increase industry-academia collaboration discussed in Chapter Two. The *Cool Japan Proposal* published on August 26th, 2014 by the Cool Japan Movement Promotion Council states that it has sought to “create an environment for the commercialization of ideas that will contribute to the world.”⁵² In order to do this, the Cool Japan Public-Private Partnership Platform was formed in December 2015 “to strengthen collaborations between the public and private sectors and among different industries in the Cool Japan fields and effectively promote Cool Japan initiatives as a nation.”⁵³ Out of the “12 ministries, 5 public institutions, [and] 45 private entities” that are part of the collaborative platform, academic members are the Tokyo University of the Arts, Kyoto Seika University, Professor Ichiya Nakamura of Keio University (specializing in Media Policy, Children’s Creativity, Pop Culture) and Professor Tsuyoshi Natsuno of Keio University

⁴⁹ Marie Thorsten. *Superhuman Japan: Knowledge, Nation and Culture in US-Japan Relations* (New York: Routledge, 2012), 121.

⁵⁰ MEXT, “Social environment and challenges surrounding education; Directions in Society,” in *The Second Basic Plan for the Promotion of Education (Provisional Translation)*, (Tokyo, 2013) <http://www.mext.go.jp/en/policy/education/lawandplan/title01/detail01/1373796.htm> (accessed February 15, 2017).

⁵¹ Cool Japan Movement Promotion Council, *Cool Japan Proposal*, (Tokyo, 2014) 7.

⁵² Cool Japan Movement Promotion Council, *Cool Japan Proposal*, (Tokyo, 2014) 31.

⁵³ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, (Tokyo 2015) i-1. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf

(specializing in Strategic Management).⁵⁴ The major activities of this platform are meetings to organize overseas events to promote Japanese culture or industry, and acting as a ‘match-making forum’ for corporations specializing in different fields to collaborate and share “cutting-edge practices (such as knowledge on merchandising content).”⁵⁵ For example, the platform has matched manufacturing industries with creative content industries in order to “develop products incorporating the world-view and cartoon characters of the creative content industry” (adding manga and anime-style designs to products).⁵⁶

The June 17th, 2015 *Cool Japan Strategy Public-Private Partnership Initiative* states that “private-sector businesses are the prime actors in moving Cool Japan forward,” and proposes “the establishment of the world’s foremost *design lab / school*” in order to commercialize ideas arising from the Cool Japan initiative.⁵⁷ The document calls for this design lab to “pursue joint projects with many universities and private corporations with a focus on fields where Japan holds an advantage (such as materials, biotech, and robotics).”⁵⁸ This design lab was established on December 20th, 2016 at the University of Tokyo’s Institute of Industrial Sciences in

⁵⁴ Cabinet Office; Government of Japan, “Kūru Japan senryaku [Cool Japan Strategy],” webpage. http://www.cao.go.jp/cool_japan/platform/platform_member.html [In Japanese] Keio University Graduate School of Media Design, “Ichiya Nakamura,” webpage. <http://www.kmd.keio.ac.jp/faculty/ichiya-nakamura> (accessed November 14, 2017). Keio University, “Takeshi Natsuno,” webpage. https://vu.sfc.keio.ac.jp/faculty_profile/cgi/f_profile_e.cgi?id=d1e21177a1219384 (accessed November 14, 2017).

⁵⁵ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, (Tokyo 2015) 9. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf

⁵⁶ Cabinet Office; Intellectual Property Headquarters, *Cool Japan Initiative*, (Tokyo 2016) 4. http://www.cao.go.jp/cool_japan/english/pdf/cooljapan_initiative.pdf

⁵⁷ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, (Tokyo 2015) i-1. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf

⁵⁸ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, (Tokyo 2015) i-2. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf

collaboration with the Royal College of Art in London, England.⁵⁹ The official message from the Director of the Institute of Industrial Sciences on the design lab's website reads:

The University of Tokyo has embarked on the creation of a new design lab so as to assure a future in which we continue to bring wealth to the world through Japanese manufacturing expertise. We aim to provide a platform where researchers and creators, from overseas and Japan, gather under a banner of superb 'manufacturing expertise' characterizing the Tokyo University Institute of Industrial Sciences to form an open industry-academic collaboration base, promote design projects as efforts to help concretize a bright future, and offer high level design engineering education.⁶⁰

The advanced engineering education offered at the design lab emphasizes the global promotion of "Japanese manufacturing expertise" under a program that collaborates with private industry for the commercialization of new technologies. A variety of state-of-the-art technologies are being developed at the RCA-IIS Tokyo Design Lab, such as a "biological wearable device which, when worn on the neck, enables you to sense other people's emotions" through the detection of chemicals in human sweat. According to the project description, this 'chemical synchronization' technology detects emotions which "can be filtered and amplified, and eventually transferred to other humans through a microneedle patch."⁶¹ Technologies allowing

⁵⁹ Jesse Bond. "RCA Launches Design Lab in Collaboration with University of Tokyo," *Royal College of Art*, December 21, 2016, online. <https://www.rca.ac.uk/news-and-events/news/rca-launches-design-lab-collaboration-university-tokyo/> (accessed November 15, 2017).

⁶⁰ RCA x IIS Tokyo Design Lab, "Using Design to turn Science into Deployable Innovations," webpage. <https://www.designlab.tokyo/> (accessed November 15, 2017). [In Japanese]

⁶¹ RCA x IIS Tokyo Design Lab, "Chemical Synchronization," webpage. <https://www.designlab.tokyo/bio-sensors> (accessed November 15, 2017).

for the detection of emotions such as fear could be put to use for security purposes in the future. Another project at the design lab involving analysis of the human chemical signature is the ‘bio-intelligent machine,’ which “provides personalized lifestyle advice, and is continuously diagnosing and checking for signs of illness.”⁶²

Yet another example of technology being developed at the design lab is ‘transparent intent’ technology which allows smart objects to be indirectly manipulated through gaze and gesture. This project attempts to develop a new person-to-object interface system in which various smart objects can be used without physical manipulation. According to the project description, ‘transparent intent’ technology “starts to explore the scenario where objects are capable of intuiting human intentions, controlling themselves based on human behavior.”⁶³ The design lab is also developing what biomimicry designer Jun Kamei has named the ‘Worn Influencer of Movement’; “a garment which delivers intuitive sensation to the joints and the skin, communicating instructions for sequences of movements to be performed by the wearer.”⁶⁴ All of these research and development projects for innovative and potentially dual-use technologies are funded by the Japanese government.⁶⁵

Most of the money funding the Cool Japan Initiative comes from the Cool Japan Fund, established on November 25th, 2013, “with 37.5 billion yen (\$371 million) – 30 billion yen from

⁶² RCA-IIS Tokyo Design Lab, “Bio-Intelligent Machines,” video, 00:24, September 22, 2017. <https://vimeo.com/234985606>

⁶³ RCA x IIS Design Lab, “Transparent Intent,” webpage. <https://www.designlab.tokyo/computer-vision> (accessed November 15, 2017).

⁶⁴ RCA x IIS Design Lab, “Worn Influencer of Movement,” webpage. <https://www.designlab.tokyo/fullscreen-page/comp-izh0bv4/0840497e-3c75-403e-a25f-8fa6de20db65/10/> (accessed November 15, 2017).

⁶⁵ Royal College of Art, “RCA-IIS Design Lab: Treasure-hunting in Tokyo,” webpage. <https://www.rca.ac.uk/schools/school-of-design/funded-research/rca-iis-design-lab-treasure-hunting-tokyo/> (accessed November 15, 2017).

the government and 7.5 billion yen from 15 companies.”⁶⁶ The number of corporate shareholders increased to 23 by December 2015 and the fund grew to 69.3 billion yen by April 2017.⁶⁷

Among the 23 companies are Mitsui, Mizuho, and other banking corporations, Fuji Media Holdings, Bandai Namco Holdings, Dentsu Inc., Daiwa Securities Group Inc. (also involved in the Center of Innovation platform discussed in Chapter Two), JTB Corp., and ANA Holdings Inc.⁶⁸ The Cool Japan Fund has invested in a variety of projects, such as establishing the Kadokawa Contents Academy in Taiwan as the fund’s “first investment in the field of education” to help drive “the globalization and the development of Japan’s [anime and manga] content industry.”⁶⁹

Another project invested in by the Cool Japan Fund is the WakuWaku Japan Channel, an “11 billion yen joint venture to launch a new television channel to broadcast Japanese content in local languages” that is available in Indonesia, Mongolia, Myanmar, Singapore, Sri Lanka, Taiwan, Thailand, and Vietnam as of November 2017.⁷⁰ Concerning the WakuWaku Japan Channel, a CNBC article published on May 14th, 2015 notes, “Cool Japan Fund's chairman Kazunobu Iijima is a board member of the private sector partner, cable channel operator Sky

⁶⁶ Junko Fujita. “Bureaucrats seek to pick winners with \$1 billion ‘Cool Japan’ Fund,” *Reuters*, November 24, 2013, online. <http://www.reuters.com/article/us-japan-cool/bureaucrats-seek-to-pick-winners-with-1-billion-cool-japan-fund-idUSBRE9AN0JB20131124> (accessed November 15, 2017).

⁶⁷ Cool Japan Fund, “Shareholders,” webpage. <https://www.cj-fund.co.jp/en/about/stockholder.html> (accessed November 15, 2017).

Cool Japan Fund, “Company Overview,” webpage. <https://www.cj-fund.co.jp/en/about/company.html> (accessed November 15, 2017).

⁶⁸ Cool Japan Fund, “Shareholders,” webpage. <https://www.cj-fund.co.jp/en/about/stockholder.html> (accessed November 15, 2017).

⁶⁹ Cool Japan Fund, “The Japanese education system embodies Cool Japan,” March 30, 2015. <https://www.cj-fund.co.jp/en/investment/project/vol5/> (accessed November 15, 2017).

⁷⁰ Mia Tahara-Stubbs. “Is Japan about to lose its cool?” *CNBC*, May 14, 2015, online. <https://www.cnbc.com/2015/05/14/who-gets-to-decide-japan-is-cool.html> (accessed November 15, 2017). WakuWaku Japan, webpage. <http://sgp.wakuwaku-japan.tv/en/> (accessed November 15, 2017).

Perfect JSAT, which in turn is a subsidiary of Fuji Media Holdings, another Cool Japan Fund shareholder and one of Japan's biggest media conglomerates.”⁷¹

The goal of the Cool Japan Fund is closely tied to the educational objective to develop ‘glocal human resources’ in their efforts to boost regional industry and economy. The Cool Japan Fund CEO Nobuyuki Ota’s message on the fund’s official website reads, “we believe that one of our roles is to promote the “Made Locally, Sold Worldwide” ideal, and to do so we aim to unearth some of the amazing products being made around the country. By encouraging companies selling those products to expand their businesses overseas, we can contribute to the revitalization of local communities nationwide.”⁷² Here, we see a parallel to the ‘glocal human resources’ ability to ‘think global, act local.’ In order to ‘revitalize’ regional industries, the 2015 *Cool Japan Strategy* report states that “it is necessary to unearth Cool Japan resources lying dormant in regional areas and, by compiling and curate [*sic*] them in a way that adds value, package them as *products* that appeal to overseas customers [*italics in original*].”⁷³

These Cool Japan initiatives to promote local Japanese products overseas reflect the goals laid out by the *Cool Japan Strategy Public-Private Collaboration Initiative* to “disseminate Japan’s attractiveness and allure to the world and to incorporate and harness global growth for domestic economic growth.”⁷⁴ In order for Cool Japan initiatives to contribute to “domestic economic growth,” it is crucial for these program to “disseminate Japan’s attractiveness and allure” as effectively as possible. The report states, “we must be careful of situations in which

⁷¹ Mia Tahara-Stubbs. “Is Japan about to lose its cool?” *CNBC*, May 14, 2015, online. <https://www.cnbc.com/2015/05/14/who-gets-to-decide-japan-is-cool.html> (accessed November 15, 2017).

⁷² Cool Japan Fund, “Messages,” webpage. <https://www.cj-fund.co.jp/en/about/message.html> (accessed November 15, 2017).

⁷³ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, (Tokyo 2015) 6. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf

⁷⁴ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, 1.

Japanese people ship products and services overseas, believing them to have the ‘allure of Japan,’ without accounting for the views of non-Japanese, who may reject the products and services because they feel a value system is being imposed on them.”⁷⁵ The Cool Japan Strategy Council seeks to avoid making people feel that a Japanese value system is being forced on them, and instead aims to persuade people to buy Japanese ‘products and services’ on their own volition.

The Cool Japan initiative hopes to convey the desirability of Japanese ‘products and services’ and establish the ‘Japan brand’ through the implementation of new policies such as certification systems for Japanese food and fashion products.⁷⁶ These certification systems relate to what Thorsten wrote about Cool Japan policies being a “national proprietary reflex” to take ownership of the creative powers responsible for the global popularity of Japanese culture during the 1990s.⁷⁷ It is therefore not surprising that the Intellectual Property Headquarters of Japan plays a role in the Cool Japan initiative. The *Intellectual Property Strategy Program* published in June 2015 promotes Cool Japan when it states, “intellectual property such as manga, anime, and dramas, which are examples of Cool Japan content, are considered a dormant but promising growth sector, and it is crucial from a viewpoint of intellectual property strategy to promote such content overseas for business expansion.”⁷⁸ In an effort to develop human resources capable of ensuring the protection of Cool Japan-related intellectual property, the strategy program states that “the Government of Japan will promote intellectual property education in elementary

⁷⁵ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, 5.

⁷⁶ *Ibid.* ii7-ii8.

⁷⁷ Marie Thorsten. “Chapter 5: Super cool from Sputnik to Japan,” *Superhuman Japan: Knowledge, Nation and Culture in US-Japan Relations* (New York: Routledge, 2012), 3 pages in, location 3356 on Kindle version.

⁷⁸ Intellectual Property Strategy Headquarters, *Intellectual Property Strategy Program 2015*, (Tokyo 2015) 4. http://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku2015_e.pdf

schools, junior high schools and high schools” to “increase young people’s awareness and knowledge on intellectual property and broaden the base of human resources for intellectual property.”⁷⁹

2.1 ‘TECHNO-CULTURE’ AND THE SDF

The *Cool Japan Proposal* reveals how policy-makers plan to use the Cool Japan initiative as a national branding effort when it states, “demonstrating the value of Japan for the world will be an essential public image that Japan delivers to the world” because “the idea of ‘Japan as a country that provides creative solutions to the world’s challenges’ came up as the mission of Cool Japan.”⁸⁰ The Cool Japan Council proposes to make the creative problem-solver part of the ‘public image’ of Japan; a national ideal which encourages people to become adept at “devising various helpful innovations for the world.”⁸¹ The 2013 *Second Basic Plan for the Promotion of Education* states that Cool Japan will “help us overcome adversities” such as Japan’s aging population problem because of its intended result of producing citizens who are creative problem-solvers.⁸² Various new academic programs reflect the effort to nurture creative problem-solvers, such as Akita University’s ‘Manufacturing Program’ based on rocket

⁷⁹ Intellectual Property Strategy Headquarters, *Intellectual Property Strategy Program 2015*, (Tokyo 2015) 75. http://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku2015_e.pdf

⁸⁰ Cool Japan Movement Promotion Council. *Cool Japan Proposal*, 5.

⁸¹ *Ibid.*

⁸² MEXT, “Social environment and challenges surrounding education,” in *The Second Basic Plan for the Promotion of Education (Provisional Translation)*.

engineering to “produce creative engineers and move towards society advanced in science and technology.”⁸³

As previously mentioned, the Cool Japan initiative hopes to turn non-Japanese people into ‘Cool Japan Ambassadors’ who will help to promote Japanese technology, culture, and media throughout the world. The 2015 *Cool Japan Strategy Public-Private Collaboration Initiative* states, “conveying the attraction of Japan under the Cool Japan banner to other countries goes beyond just expanding by ... pushing products and services into overseas markets,” but it also requires “delivering our message not just to non-Japanese people who are already fans of Japan but also to people who have never been interest [*sic*] in Japan before.”⁸⁴ The report calls for the “creation of networks of Japan ambassadors composed of non-Japanese people” in order to “disseminate Cool Japan messages more effectively.”⁸⁵ This network, which is to culminate in the creation of ‘Cool Japan hubs’ in designated cities all over the world,⁸⁶ reflects a drive to spread “love for the country” to people outside of Japan.

One of the projects set up by the Cool Japan Strategy to help create ‘Cool Japan Ambassadors’ is the Japanese International Contents Festival known as CoFesta. The *Cool Japan Strategy Public-Private Initiative* hopes CoFesta will create a network of “CoFesta Ambassadors primarily from international students who are fans of Japanese content to introduce

⁸³ Japan Association of National Universities, *Kokuritsudaigaku kokudaikyōkōhō-shi* [National University Quarterly Report], Vol. 32 (2014): 3. [In Japanese]

⁸⁴ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, (Tokyo 2015) ii-1. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf

⁸⁵ *Ibid.* 9.

⁸⁶ Cabinet Office; Intellectual Property Headquarters, *Cool Japan Initiative*, (Tokyo 2016) 2. http://www.cao.go.jp/cool_japan/english/pdf/cooljapan_initiative.pdf

the attraction of Japanese content to their own countries and other countries.”⁸⁷ CoFesta is a lead organizer for a number of annual events both overseas and in Japan, promoting “Japan’s distinctive gaming, anime, manga, characters, broadcasting, music, movies, and other content industries, as well as events in content-related industries such as fashion and design.”⁸⁸

CoFesta helps to organize the Combined Exhibition of Advanced Technologies (CEATEC), one of Japan’s largest electronics shows for promoting Japanese consumer electronics.⁸⁹ Prime Minister Abe gave a speech at CEATEC on October 3rd, 2016, during which he said the following:

We have the technologies that are essential to the Fourth Industrial Revolution, such as high-precision sensors and advanced robotic control. Just as important is the formidable expertise of the engineers who are steadily improving these technologies in the field. “The customer is king,” as we say, and the commitment to continuously advance our technologies, products and services under the uncompromising gaze of the discerning customer is Japan’s great asset.⁹⁰

⁸⁷ Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*, (Tokyo 2015) ii-1. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf

⁸⁸ CoFesta; Japan International Contents Festival, “About CoFesta,” webpage. <https://www.cofesta.go.jp/pc/> (accessed November 15, 2017).

⁸⁹ CoFesta; Japan International Contents Festival, “Kontentsuibentosāchi [Contents Event Search],” webpage. <https://event.cofesta.go.jp/jp/cofesta-event/cofesta-event-search.html?m=5&form.eventName=Combined+Exhibition+of+Advanced+Technologies&x=0&y=0> (accessed December 26, 2017).

Sam Byford. “A day at Japan’s biggest tech show; Swimming in Japanese electronics at CEATEC 2013,” *The Verge*, October 1, 2013, online. <https://www.theverge.com/2013/10/1/4790078/ceatec-2013-photo-essay> (accessed December 26, 2017).

⁹⁰ CEATEC JAPAN Management Office, *Connecting Society, Creating the Future; CPS/IoT Exhibition, Exhibition Report*. (Tokyo 2016) 6.

Abe emphasizes how Japanese advanced sensory and robotics technologies are “essential to the Fourth Industrial Revolution,” i.e. the Information Revolution, and notes that “Japan’s great asset” in developing these industries is a consumer-friendly business approach. CEATEC events contain a section called the Venture & University Area, where fifteen Japanese academic institutions had exhibitions at the 2017 event.⁹¹ The CEATEC 2016 event report states that the “most striking increase in exhibits was in the Venture & University Area,” and cites examples such as that of Katsura Lab at Keio University, which “presented its Instantaneous Power Machine – technology that achieves previously difficult dynamic motion on robots.”⁹² Robotics technologies such as Katsura Lab’s ‘power machine’ could be used in the development of “autonomous weapons systems,” defined by the U.S. Department of Defence as a device which “once activated, can select and engage targets without further intervention by a human operator.”⁹³ An academic institution that is highlighted by the report is the Kanagawa Institute of Technology’s Department of Information and Computer Sciences, which “presented a number of exhibits, among which its ‘machine lip reading model’ was one that gained attention.”⁹⁴

⁹¹ CEATEC JAPAN CPS / IoT Exhibition, “Venture & University Area,” webpage.

https://www.ceatec.com/en/exhibition/exhibition04_07.html (accessed November 15, 2017).

Chubu University Tsunekawa Laboratory, Kanagawa Institute of Technology Department of Information and Computer Sciences, Kanazawa University, Katsura Laboratory Keio University, Keio University Haptics Research Center, Kobe University Kimura research group, Kyushu Institute of Technology, Information Science College, Meijo University, Network Engineering Laboratory Kansai University, Saitama University, The Yokohama Medical Information College, Tokyo University of Technology, University of Fukui.

⁹² CEATEC JAPAN Management Office, *Connecting Society, Creating the Future; CPS/IoT Exhibition, Exhibition Report*. (Tokyo 2016) 27.

⁹³ David Emery. “Robots with Guns: The Rise of Autonomous Weapons Systems; An August 2017 letter to the U.S. signed by Elon Musk and other tech luminaries called autonomous weaponry a ‘Pandora’s Box.’ Are killer robots already here?” *Snopes*, August 21, 2017, online.

<https://www.snopes.com/2017/04/21/robots-with-guns/> (accessed December 26, 2017).

⁹⁴ CEATEC JAPAN Management Office, *Connecting Society, Creating the Future; CPS/IoT Exhibition, Exhibition Report*. (Tokyo 2016) 27.

CEATEC events include awards ceremonies, in which one academic institution was honored in 2016. The report reads, “the Review Panel’s Special Award was presented to Keio University (Haptics Research Center Nozaki Laboratory) for its World’s First, Development of High Performance Haptic Prosthetic Hand – Artificial Realization of Human Motions by Using Haptic Transplant Technology [as given in original report].”⁹⁵ At the 2017 CEATEC event, this haptics laboratory presented a dual-armed “‘real avatar (another self)’ enabling one’s existence and behavior to be utilized in a way that transcends time and space.”⁹⁶ This real-time human-to-robot motion transfer technology could allow for humanoid robots like Russia’s handgun-wielding FEDOR android to be controlled by a human instead of by AI, following U.S. policy to keep a “human in the loop” of weapons systems.⁹⁷ Through the development of these robotic and cybernetic technologies, the Japanese academic institutions at CEATEC contribute to the Cool Japan initiative to establish the ‘Japan brand’ in innovative dual-use technologies.

In the context of this chapter’s discussion of educational policies aimed at promoting a ‘Japan brand’ specializing in dual-use technologies, Thorsten’s 2012 book *Superhuman Japan* provides relevant work on how Cool Japan policies have influenced the U.S. government. She argues that the Cool Japan initiative gained the attention of U.S. policymakers because of its

⁹⁵ CEATEC JAPAN Management Office, *Connecting Society, Creating the Future; CPS/IoT Exhibition, Exhibition Report*. (Tokyo 2016) 27.

⁹⁶ CEATEC JAPAN CPS / IoT Exhibition, “Keiōgijuku daigaku haputikkusu kenkyū sentā (benchā & yunibāshiti eria) [Keio University Haptics Research Center (Venture & University Area),” webpage. <http://www.ceatec.com/ja/exhibitors/detail.html?id=9718> (accessed November 15, 2017). [In Japanese]

⁹⁷ Stephen Jones. “We are not creating a Terminator’: Russia denies risk as Putin’s ‘robot army’ is trained to shoot guns,” *Mirror Online*, April 16, 2017. Updated November 13, 2017, online. <http://www.mirror.co.uk/news/world-news/we-not-creating-terminator-russia-10237755> (accessed December 27, 2017).

Michael N. Schmitt. Jeffrey S. Thurnher. “Out of the Loop’: Autonomous Weapon Systems and the Law of Armed Conflict,” *Harvard National Security Journal* 4, No. 231 (2013): 237. On page 235, the authors also note that the U.S. already has two “human supervised” autonomous weapon systems, “the Aegis at sea and the Patriot on land.”

capacity to nurture ‘dual-use human resources’ who can contribute to both the national economy and national security. Thorsten writes:

The Revolution in Military Affairs has also provided a context to bring Japan back into the scenario of America’s futuristic imagining, not just because Japan is the global leader of robotic and video technologies, but because the nation offers aesthetic allure: Japan is famously friendly with robots and had hoisted otaku personalities – the technogeek vanguards of ‘cool’ – to global prominence. Americans have become increasingly interested in the model of Japan’s coolness at the same time that Japan has become more ambitious about parading such a role.⁹⁸

Thorsten argues that “Americans have become increasingly interested in the model of Japan’s coolness” because its “technogeek vanguards of ‘cool’” could encourage public interest on the kinds of technologies involved in the Revolution in Military Affairs. Thorsten writes that U.S. policymakers “began to express interest that joystick-proficient, introspective, pop-culture obsessed ‘gearhead’-types could model not just future math and science entrepreneurs and engineers, but also the future defense needs of the nation.”⁹⁹ This perspective takes into account

⁹⁸ Thorsten. *Superhuman Japan*, 126.

⁹⁹ Thorsten. *Superhuman Japan*, 127.

rapidly growing military needs for drone pilots, who use “a games console-style joystick” to operate unmanned aerial vehicles.¹⁰⁰

Thorsten also argues that U.S. officials applied what they had learned from the Cool Japan initiative in educational reform. She writes, “in crafting mainstream educational discourses, the Obama administration’s strategy has been following Japan’s emphasis on the cuteness and everyday accessibility of robot technologies. On November 23rd, 2009, Obama announced his ‘Educate to Innovate’ campaign with an appeal to ‘show young people how cool science can be.’”¹⁰¹ Both Japan and the U.S. have thus moved to enhance the ‘aesthetic allure’ of science for their students. Although Thorsten writes that “the cool factor is obviously more militarized” in the U.S. than in Japan, this does not mean that Cool Japan is not being militarized.¹⁰²

In her July 2015 article *Made in cool Japan*, McLaren writes that “the JSDF have utilised pop culture aesthetics to attract the attention of Japanese youth,” as the forces put anime-style characters on their helicopters and posters.¹⁰³ McLaren writes, “in 2013, I saw recruitment posters featuring an androgynous looking manga character in military fatigues and helmet on the platforms of the Kyoto city subway line with the slogan written in English letters ‘JJJ – jieitai

¹⁰⁰ Rob Blackhurst. “The air force men who fly drones in Afghanistan by remote control,” *The Telegraph*, September 24, 2012, online. <http://www.telegraph.co.uk/news/uknews/defence/9552547/The-air-force-men-who-fly-drones-in-Afghanistan-by-remote-control.html> (accessed July 11, 2016).

¹⁰¹ Thorsten. *Superhuman Japan*, 136.

¹⁰² Thorsten. *Superhuman Japan*, 127.

¹⁰³ Sally McLaren. “Made in cool Japan,” *Griffith Review* 2, No. 49 (2015). <https://griffithreview.com/articles/made-in-cool-japan/>
Jonathan Gad. “The Japanese Military Is Getting Offensively Cute,” *Vice News*, April 13, 2015, online. <https://news.vice.com/article/the-japanese-military-is-getting-offensively-cute> (accessed November 15, 2017).

joyful job’, and in Japanese Yatte minai? (Won’t you give it a try?) That year, JSDF recruitment was reported to have increased by a fifth.”¹⁰⁴ McLaren also notes how the SDF co-opted AKB48 member Haruka Shimazaki as a brand ambassador in 2014, appearing in a recruitment commercial for the forces. These recruitment strategies show that media content associated with Cool Japan can be used not only to enhance the ‘aesthetic allure’ of science, but also that of the SDF.

On March 31st, 2015, Japan’s Ministry of Defense released an educational anime-style cartoon entitled, *Bo-Emon’s Defense Lecture - ABC of Self-Defense Forces*, in which a magical character named Bo-Emon who cannot be seen or heard by adults teaches three children about the SDF. Although MEXT did not have an official hand in the creation or distribution of this approximately 18.5 minute-long cartoon, it is an educational video created by the Ministry of Defense under the Abe administration with a clear target audience of Japanese children. First and foremost, the cartoon focuses on imparting a positive impression of the SDF to its viewers. Bo-Emon says, “in case of contingency such as foreign invasion, the SDF will protect lives and property of the Japanese nationals,” and elicits responses from the children such as “cool!” (*kakkoii*), “awesome” (*sugoi*), or “that’s what we call braveness.”¹⁰⁵ The youngest child implicitly accepts a constant presence of national threats that demands a strong SDF when he exclaims, “they protect us even when we’re studying, having a meal, or sleeping.”¹⁰⁶ Bo-Emon teaches the children that the SDF must be strong in order to deter foreign invasions, and to

¹⁰⁴ Sally McLaren. “Made in cool Japan,” *Griffith Review* 2, No. 49 (2015).
<https://griffithreview.com/articles/made-in-cool-japan/>

¹⁰⁵ modchannel. “Bo-Emons’s Defense Lecture – ABC of Self Defense Forces,” March 31, 2015, Youtube video, 13:24, 14:09, 13:47. <https://www.youtube.com/watch?v=YP6mMCyXFsk&feature=youtu.be> (accessed November 15, 2017).

¹⁰⁶ *Ibid.* 7:28.

illustrate this point, he asks the children, “you wouldn’t get into a fight with someone who looks stronger than you, would you?”¹⁰⁷

The cartoon also teaches about how the SDF’s air forces, ground forces, and marine forces work together as “the SDF is designed to operate effectively for a given purpose by combining the capabilities of each service.”¹⁰⁸ The oldest child relates this lesson to his interest in Japanese history by comparing the need for the SDF to have strong interoperable capabilities to a Sengoku-period feudal lord’s words that “union is strength” because “it’s easy to snap one single arrow, but with a bundle of three arrows it’s tough to do so.”¹⁰⁹ The historical figure who is recorded to have said these words is Mōri Motonari, who told the “tale of three arrows” to his three sons to teach them that they must be unified like the arrows. The cartoon reflects this aspect of the parable when the youngest brother hears his older brother’s history lesson and says, “sounds like you’re talking about us.”¹¹⁰ The cartoon not only seems to suggest that there is a Japanese intellectual tradition that validates the value of unity needed for interoperable security, but it also hints that the children are like the three arrows, and thus like the three arms of the SDF.

This chapter has shown how Japanese educational reforms can meet both global and domestic demands at the same time through the Cool Japan initiative and effort to nurture ‘glocal human resources.’ By using the “love for the country” and “respect for tradition and culture” which was built into MEXT’s ‘normative consciousness’ in order to create the desire to develop

¹⁰⁷ modchannel. “Bo-Emons’s Defense Lecture – ABC of Self Defense Forces,” March 31, 2015, Youtube video 6:45. <https://www.youtube.com/watch?v=YP6mMCyXFsk&feature=youtu.be> (accessed November 15, 2017).

¹⁰⁸ *Ibid.* 14:54.

¹⁰⁹ *Ibid.* 15:00.

¹¹⁰ *Ibid.* 15:13.

local regions by integrating them into the global system, the educational reforms for ‘glocal human resources’ attempt to meet both global and local demands at once. On the other hand, the educational reforms as part of the Cool Japan initiative attempt to spread “love for the country” by establishing a ‘Japan brand’ that can contribute cutting-edge dual-use technologies to the military-industrial complex. Both the education for ‘glocal human resources’ and the Cool Japan initiative thus attempt to contribute to the growth of the global system in a way that complements the enhancement of “love for the country” and “respect for tradition and culture.”

Conclusion

Finding Common Ground

This thesis has argued that Japanese educational reforms since 2006 are a response to demands coming from both the global environment and the domestic environment, with the last chapter finding that educational initiatives to nurture ‘glocal human resources’ and promote Cool Japan attempt to meet both types of demands at once. These findings suggest that global and domestic demands need not to interfere with one another, and can perhaps complement one another. The ideological push to make students think of themselves as members of a unified national community, in other words, may be navigated in a way that does not conflict with demands for the growth of the global military-industrial complex. While ‘glocal human resources’ are meant to contribute to the expansion of resources accessible to markets and trade, the Cool Japan initiative seeks to establish Japan’s image as a world-leader in advanced and innovative dual-use technologies which the global system requires for economic growth. The reforms thus attempt to use “love for the country” to help meet global demands. By creating an attractive ‘Japan brand’ and attaching it to Japanese dual-use technologies, the reforms seek to help position Japanese corporations to better contribute to the global arms industry.

Chapter Two focused on how the reforms attempt to meet demands coming from the global system to create a ‘knowledge-based society’ suited to the Information Age. According to Hardt and Negri, the information revolution has created a world in which “the production of knowledge is itself value creation.”¹ In order to respond to these socioeconomic changes, Japanese education seeks to nurture ‘knowledge workers’ capable of producing knowledge as

¹ Hardt and Negri. *Commonwealth*, 267.

value. The reforms also put into place programs and institutions to facilitate the transfer of new knowledge to private corporations for commercialization. This reflects Steger's 'new public management' mentioned in Chapter Four, where public servants adopt 'neoliberal principles' and an 'entrepreneurial spirit.'

Chapter Two began by discussing the April 1st, 2014 entry of Japanese war industries into the international arms market and the progress of Japanese companies in this market up until and during 2017. It went on to cover the U.S.-Japan Joint High-Level Commission on Science and Technology's decisions to make joint research in fields such as nuclear energy a point of emphasis in the alliance, and how these decisions are reflected in projects like the Heliotron J plasma containment device at Kyoto University. The chapter further illustrated the entry of Japanese academia into the military-industrial complex through the University of Tokyo Edge Capital, which transfers dual-use technologies to corporations. This section closed by looking at lasers that show potential for weaponization, such as the Kyoto University free-electron laser.

Chapter Two moved on to focus on how the reforms reflect a neoliberal takeover of the Japanese education system, as Japan's national universities adopted the 'neoliberal mantra' to 'privatize or perish' in 2004,² and corporations are given increasing levels of control over the direction of university R&D. The Center of Innovation program, for example, has handed the reigns over R&D projects at Japan's foremost universities to a select group of Japanese corporations for the realization of their 'blue-sky visions.' Chapter Two then covered the Organization for Economic Cooperation and Development as an emerging body of 'global

² Giroux. *University in Chains*, 104.
exhibition signboard, Education, *Exhibition Room 2*, Museum of MEXT, Tokyo.

education governance,³ and its recommendations for Japanese educational reforms to nurture ‘knowledge workers’.

Chapter Three examined how the reforms reflect demands coming from the domestic environment, through MEXT’s construction of a ‘normative consciousness’ that can contain the national history of a holy family. The existence of this ideology is veiled in that it is usually implied, excepting cases such as the Moritomo Gakuen where children were made to recite the 1890 *Imperial Rescript on Education*. Rather, the reforms subtextually promote the Japanese ideology through reforms to increase students’ “love for the country” and “respect for tradition and culture.” New teaching guidelines for students to “develop their own views of life” by studying mythology, for example, seem to be designed to make them consider the Japanese ideology as a legitimate view of history. The first section of this chapter also discussed the *New Japanese History* textbook’s lessons about Shinto as the “religion unique to this nation” and the tradition of ancestor worship. The textbook’s insinuation that members of the national community can be distinguished from others by the tradition of ancestor worship comes from Japanism as family history.

Chapter Three went on to show how the Japanese ideology is reflected in Japanese history education. It analyzed Ikuhōsha’s representation of history as a continual handing down of a ‘baton of life’ which connects each student to the national community. Japanism as family history is also reflected in the effort to eliminate “masochistic views of history” from education, as seen in *New Japanese History*’s coverage of the Tokyo Tribunal. The chapter then looked at the textbook’s emphasis on national security threats and the possibility of war in the future. The final section of Chapter Three discussed the moral values that define ‘excellent national

³ Meyer and Benavot. *PISA, Power, and Policy*, 9.

character,' such as entering into 'internal dialogue' with ancestors through traditions. The reforms encourage students to think of themselves as members of the national community, obligated to follow the rules and customs of a society characterized by Japanese culture. This connects to the reforms discussed in Chapter Four, as Japanese people face social obligations not only to contribute to Japan's economy and security, but also to the reproduction and spread of Japanese culture throughout the world.

Finally, Chapter Four showed how the reforms attempt to meet both global and domestic demands at the same time, through 'glocal human resources' development and Cool Japan. It found that MEXT's *Tobitate* program aims to nurture 'glocal' people with the qualities of the global 'knowledge worker,' as well as "love for the country." This program brings together the traits needed for workers suited to the global environment and the traits needed for members of the national community. These 'glocal' people channel their "love for the country" into work that integrates local communities into the global system, or work that enhances Japan's position within the global system. The *Tobitate* program aims to nurture 'glocal' workers by offering exchange programs that strengthen U.S.-Japan joint R&D on nuclear and aerospace technologies which can be used for reconstruction efforts and military security.

Chapter Four also showed how the Cool Japan initiative attempts to take ownership of popular culture in a national branding effort to enhance Japan's soft power. The Cool Japan section looked at the production of advanced dual-use technologies at the Tokyo Institute of Industrial Sciences design lab established by the Cool Japan Public-Private Partnership Platform. These included technologies that analyze the human chemical signature and allow for the manipulation of devices through gaze and gesture. The chapter also showed how Cool Japan is

closely related to ‘glocal human resources’ development, as both seek to promote local Japanese culture by commercializing it into products that will sell worldwide.

Chapter Four then covered the Cool Japan-affiliated Combined Exhibition of Advanced Technologies, at which several Japanese academic institutions exhibited new technologies. These included robotics technology, lip-reading technology, and cybernetic technology creating a mechanical avatar. The chapter also discussed how Cool Japan influenced U.S. policy-makers who saw that techno-culture can encourage students to pursue the STEM subjects and benefit the U.S. in its Revolution in Military Affairs. Finally, Chapter Four closed by looking at how Cool Japan-related content is used to promote the Self-Defence Forces to increase recruitment and popular support. In line with the recommendations from Joseph Nye, Cool Japan represents a soft power strategy that can be used to pursue the consolidation of hard power through constitutional reform of the Self-Defense Force’s official capabilities.

As concluded, this thesis has found that Japanese educational reforms attempt to meet both global and domestic demands; in fact, the initiatives discussed in Chapter Four attempt to form integrated strategies to meet both types of demands simultaneously. ‘Glocal human resources’ development and Cool Japan look for ways to make “love for the country” help meet the demands of the global system, as well as ways to make global needs for advanced technologies enhance “love for the country.” This can perhaps best be explained by Endo’s statement that the liberal engineers of the global economy seek to use “the family as an ideological apparatus” to make one “produce one’s own labor power as a commodity.”⁴ On top of that fact that “familialism is the essence of Japanism,”⁵ the “family edition of liberalism”⁶ is

⁴ Katsuhiko Endo. “The Multitude and the Holy Family; Empire, Fascism, and the War Machine,” in *Tosaka Jun: A Critical Reader* (Honolulu, University of Hawaii Press: 2013), 285.

⁵ Endo. *The Multitude and the Holy Family*, 277.

⁶ *Ibid.*

essential to the production of labor power. The powerful ideological apparatus of family is therefore central to both Japanism as national history and economic liberalism. This shows that the different global and domestic demands discussed in this thesis may not be as different as they appear.

“Love for the country” is also a common ideological ground between the two different types of demands. As discussed, it is an essential part of the ‘normative consciousness’ which contains the Japanese ideology. However, a heightened sense of “love for the country” in Japan’s younger generations can also help further the constitutional revision recommended by Armitage and Nye to get rid of ‘anachronistic constraints’ on the SDF. In other words, efforts to meet the different global and domestic demands discussed in this thesis make use of the same ideological tools to accomplish their goals. Familialism and “love for the country” are common grounds which connect efforts to meet the two different types of demands and limit conflict between them. The lessons discussed in Chapter Three about the crucial importance of national sovereignty for the future achievement of world peace are an important illustration of how ideological common grounds can be used to meet both types of demands at once. “Love for the country” can provide the motivation to work not only to ensure national security, but also the interoperable security of the global system.

Bibliography

908 Devices. "Safety and Security." Accessed August 4, 2017.
<http://908devices.com/markets/safety-security/>.

Ackerman, Spencer. "Watch the Navy's New Ship-Mounted Laser Cannon Kill a Drone." *Wired*, April 8, 2013. <https://www.wired.com/2013/04/laser-warfare-system/>.

Adelstein, Jake. "New evidence of Japan's effort to build atom bomb at the end of WWII." *Los Angeles Times*, August 5, 2015. <http://www.latimes.com/world/asia/la-fg-japan-bomb-20150805-story.html>.

Akuzawa, Mariko. "Human Right Education in Japan: Overview." *Asia-Pacific Human Rights Information Center: FOCUS* 82 (2015): 13-14.
<https://www.hurights.or.jp/archives/focus/section3/2015/12/human-rights-education-in-japan-overview-1.html>.

Alexander, Arthur. *The Arc of Japan's Economic Development*. Abingdon: Routledge, 2007.

America's Navy. "Status of the Navy." Accessed September 27, 2017.
http://www.navy.mil/navydata/nav_legacy.asp?id=146.

Asian Infrastructure Investment Bank. "What is the Asian Infrastructure Investment Bank?" Accessed January 9, 2017. <http://www.aiib.org/html/aboutus/AIIB>.

Armitage, Richard and Joseph Nye. *CSIS Commission on Smart Power; A smarter, more secure America*. Washington: Center for Strategic and International Studies, 2007.

Armitage, Richard and Joseph Nye. *The United States and Japan: Advancing Towards a Mature Partnership*. Washington: Center for Strategic and International Studies, October 2000.

Armitage, Richard and Joseph Nye. *The U.S.-Japan Alliance: Anchoring Stability in Asia*. Washington: Center for Strategic and International Studies, August 2012.

Armitage, Richard and Joseph Nye. *The U.S.-Japan Alliance; Getting Asia Right through 2020*. Washington: Center for Strategic and International Studies, February 2007.

Atarashī nihon no rekishi. [New Japanese History]. Tokyo: Ikuhōsha, 2015.

Atarashī nihon no rekishi. [New Japanese History]. Tokyo: Ikuhōsha, 2011.

Atarashī shakai rekishi. [New Social History]. Tokyo: Tokyo Shoseki, 2016.

Blackhurst, Rob. "The air force men who fly drones in Afghanistan by remote control." *The Telegraph*, September 24, 2012.
<http://www.telegraph.co.uk/news/uknews/defence/9552547/The-air-force-men-who-fly-drones-in-Afghanistan-by-remote-control.html>.

Blatter, Joachim. "Glocalization." *Britannica*. Accessed December 28, 2017. <https://www.britannica.com/topic/glocalization>.

Bond, Jesse. "RCA Launches Design Lab in Collaboration with University of Tokyo," *Royal College of Art*, December 21, 2016. <https://www.rca.ac.uk/news-and-events/news/rca-launches-design-lab-collaboration-university-tokyo/>.

Brasor, Philip. "Will there be a price to free education?" *The Japan Times*, May 20, 2017. <https://www.japantimes.co.jp/news/2017/05/20/national/media-national/will-price-free-education/#.Wa-FqIpLeqA>.

Brasor, Philip and Masako Tsubuku. "No relief in sight for Japanese poor single-parent families," *The Japan Times*, November 7, 2015. <https://www.japantimes.co.jp/news/2015/11/07/business/no-relief-sight-japans-poor-single-parent-families/#.Wa-MfopLeqA>.

Brau, Charles A. "Free-Electron Lasers." *Science* 239, no. 4844 (1988): 1115-1121. JSTOR.

Brunnstrom, David. "China installs weapons systems on artificial islands: U.S. think tank." *Reuters*, December 14, 2016. <http://www.reuters.com/article/southchinasea-china-arms-idUKL1N1E901G>.

Business Insider. "A timeline of what happened in the South China Sea dispute." July 12, 2016. <http://www.businessinsider.com/ap-timeline-the-china-philippines-south-china-sea-dispute-2016-7>.

Byford, Sam. "A day at Japan's biggest tech show; Swimming in Japanese electronics at CEATEC 2013." *The Verge*, October 1, 2013. <https://www.theverge.com/2013/10/1/4790078/ceatec-2013-photo-essay>.

Cabinet Office; Government of Japan. *Kūru japan senryaku*. [Cool Japan Strategy]. Accessed January 10, 2018. http://www.cao.go.jp/cool_japan/platform/platform_member.html.

Cabinet Office, Government of Japan. *Hoppōryōdo mondai-tō no kaiketsu no sokushin no tame no tokubetsu sochi ni kansuru hōritsu*. [Act on Special Measures Concerning Advancement of Resolution of the Northern Territories Issue, etc]. Tokyo, 2009. http://www8.cao.go.jp/hoppo/shiryō/pdf/hokutokuhou_gaiyou.pdf.

Cabinet Office; Intellectual Property Headquarters. *Cool Japan Initiative*. Tokyo, 2016. http://www.cao.go.jp/cool_japan/english/pdf/cooljapan_initiative.pdf.

CEATEC JAPAN CPS / IoT Exhibition. "Venture & University Area." Accessed November 15, 2017. https://www.ceatec.com/en/exhibition/exhibition04_07.html.

CEATEC JAPAN CPS / IoT Exhibition. "Keiōgijuku daigaku haputikkusu kenkyū sentā (benchā & yunibāshiti eria)." [Keio University Haptics Research Center (Venture & University Area)]. Accessed November 15, 2017. <http://www.ceatec.com/ja/exhibitors/detail.html?id=9718>.

CEATEC JAPAN Management Office. *Connecting Society, Creating the Future; CPS/IoT Exhibition, Exhibition Report*. Tokyo, 2016.

Center for Strategic and International Studies. "About Us." Accessed March 15, 2017. <https://www.csis.org/about-us>.

Center for Strategic and International Studies: ChinaPower. "Are Maritime Law Enforcement Forces Destabilizing Asia?" Accessed January 10, 2018, updated September 22, 2017. <http://chinapower.csis.org/maritime-forces-destabilizing-asia/>.

CNBC; Reuters. "China launches new electronic intelligence naval ship." January 12, 2017. <https://www.cnbcm.com/2017/01/12/china-launches-new-electronic-intelligence-naval-ship.html>.

CoFesta; Japan International Contents Festival. "About CoFesta." Accessed November 15, 2017. <https://www.cofesta.go.jp/pc/>.

CoFesta; Japan International Contents Festival. "*Kontentsu ibento sa-chi*." [Contents Event Search]. Accessed December 26, 2017. <https://event.cofesta.go.jp/jp/cofesta-event/cofesta-event-search.html?m=5&form.eventName=Combined+Exhibition+of+Advanced+Technologies&x=0&y=0>.

Collins, Kevin A. "The Development of Teacher Education in Japan 1868-1980s." *Teaching and Teacher Education* 5, no. 3 (1989). 217-228. ScienceDirect.

Cool Japan Fund. "Company Overview." Accessed November 15, 2017. <https://www.cj-fund.co.jp/en/about/company.html>.

Cool Japan Fund. "Messages." Accessed November 15, 2017. <https://www.cj-fund.co.jp/en/about/message.html>.

Cool Japan Fund. "Shareholders." Accessed November 15, 2017. <https://www.cj-fund.co.jp/en/about/stockholder.html>.

Cool Japan Fund. "The Japanese education system embodies Cool Japan." March 30, 2015. Accessed November 15, 2017. <https://www.cj-fund.co.jp/en/investment/project/vol5/>.

Cool Japan Movement Promotion Council. *Cool Japan Proposal*. Tokyo, 2014. http://www.cao.go.jp/cool_japan/english/pdf/published_document3.pdf.

Cool Japan Strategy Promotion Council, *Cool Japan Strategy Public-Private Collaboration Initiative*. Tokyo, June 17, 2015. http://www.cao.go.jp/cool_japan/english/pdf/published_document2.pdf.

de Bary, Theodore, Carol Gluck and Arthur L. Tiedemann. *Sources of Japanese Tradition*. New York: Columbia University Press, 2005.

Eisenhower, Dwight D. "Farewell Address." January 17, 1961, *Our Documents*.
<https://www.ourdocuments.gov/doc.php?flash=true&doc=90&page=transcript>.

Education Rebuilding Implementation Council. *University Education and Global Human Resource Development for the Future (Third Proposal) [Provisional Translation]*. Tokyo, 2013.
http://www.kantei.go.jp/jp/singi/kyouikusaisei/pdf/dai3_en.pdf.

Education Rebuilding Implementation Council. *Korekara no daigaku kyōikutō no arikata ni tsuite*. [University Education and Global Human Resource Development for the Future]. Tokyo, 2013. http://www.kantei.go.jp/jp/singi/kyouikusaisei/pdf/dai3_1.pdf.

Education Rebuilding Implementation Council. 'Manabitsuzukeru' shakai, zen'in sankagatashakai, chihōsōsei o jitsugen suru kyōiku no arikata ni tsuite. [On education that realizes a society which facilitates 'continuous learning,' the participation of all, and rejuvenation of local communities]. Tokyo, 2015.
http://www.kantei.go.jp/jp/singi/kyouikusaisei/pdf/dai6_1.pdf.

Education Rebuilding Implementation Council. *Jikokōteikan o takame, mizukara no te de mirai o kirihiraku kodomo o hagukumu kyōiku no jitsugen ni muketa, gakkō, katei, chiiki no kyōikuryoku no kōjō*. [Improving the Educational Powers of Schools, Families, and Regional Communities for Education that Nurtures Children with Heightened Self-Affirmation who can Cultivate the Future with their Own Hands]. Tokyo, 2017.
http://www.kantei.go.jp/jp/singi/kyouikusaisei/pdf/dai10_1.pdf.

Edwards, Walter. "Forging Tradition for a Holy War: The "Hakkō Ichiu" Tower in Miyazaki and Japanese Wartime Ideology," *Journal of Japan Studies* 29, no. 2 (2003): 289-324. JSTOR.

Emery, David. "Robots with Guns: The Rise of Autonomous Weapons Systems; An August 2017 letter to the U.S. signed by Elon Musk and other tech luminaries called autonomous weaponry a 'Pandora's Box.' Are killer robots already here?" *Snopes*, August 21, 2017.
<https://www.snopes.com/2017/04/21/robots-with-guns/>.

Endo, Katsuhiko. "A Secret History; Tosaka Jun and the Kyoto Schools." In *Confronting Capital and Empire; Rethinking Kyoto School Philosophy*, edited by Viren Murthy. 346-385. Boston: Brill, 2017.

Endo, Katsuhiko. "A Unique Tradition of Materialism in Japan; Osugi Sakae, Tosaka Jun, and Uno Kozo." *Positions: east asia cultures critique* 20, no. 4. (2004): 1009-1039. Project Muse.

Endo, Katsuhiko. "The Multitude and the Holy Family; Empire, Fascism, and the War Machine." In *Tosaka Jun: A Critical Reader*, edited by Ken Kawashima. 274-295. New York: East Asia Program, Cornell University, 2013.

Fifield, Anna. "In Japan, a scandal over a school threatens to entangle Abe." *The Washington Post*, February 27, 2017. https://www.washingtonpost.com/world/asia_pacific/in-japan-a-scandal-over-a-school-threatens-to-entangle-abe/2017/02/27/29486b94-fa1a-11e6-aa1e-5f735ee31334_story.html?utm_term=.47a87f2e6fda.

- Fish, Robert. "Japan: Recent Trends In Education Reform," *Asia Society: Center for Global Education*. Accessed February 21, 2017. <http://asiasociety.org/global-cities-education-network/japan-recent-trends-education-reform>.
- Flosfia. "Company Profile." Accessed January 10, 2018. http://flosfia.com/struct/wp-content/uploads/Microsoft-PowerPoint-Company-Profile_20170728.pdf.
- Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. Trans. Alan Sheridan. New York: Vintage Books, 1995.
- Fujita, Hideonori. *Abe 'kyōiku kaikaku' wa naze mondai ka*. [Why Abe's 'Educational Reform' is a Problem], Tokyo: Iwanami Shoten, 2014.
- Fujita, Junko. "Bureaucrats seek to pick winners with \$1 billion 'Cool Japan' Fund." *Reuters*, November 24, 2013. <http://www.reuters.com/article/us-japan-cool/bureaucrats-seek-to-pick-winners-with-1-billion-cool-japan-fund-idUSBRE9AN0JB20131124>.
- Fujiu, Akira. "Media spotlight on Kagoike hurts and helps Nippon Kaigi." *The Asahi Shimbun*, April 19th, 2017. <http://www.asahi.com/ajw/articles/AJ201704190008.html>.
- Gad, Jonathan. "The Japanese Military Is Getting Offensively Cute." *Vice News*, April 13, 2015. <https://news.vice.com/article/the-japanese-military-is-getting-offensively-cute>.
- Gady, Franz-Stefan. "Japan Approves Modest Defense Budget Hike." *The Diplomat*, December 23, 2016. <http://thediplomat.com/2016/12/japan-approves-modest-defense-budget-hike/>.
- Gady, Franz-Stefan. "Why Japan Lost the Bid to Build Australia's New Subs." *The Diplomat*, April 27, 2016. <http://thediplomat.com/2016/04/why-japan-lost-the-bid-to-build-australias-new-subs/>.
- Giroux, Henry. *University in Chains: Confronting the Military-Industrial-Academic Complex*. New York: Routledge, 2007.
- Glocal Human Resources Development Center. "About." Accessed November 13, 2017. <http://glocalcenter.jp/about.html>.
- Glocal Human Resources Development Center. "Greeting." Accessed November 13, 2017. <http://glocalcenter.jp/about/greeting.html>.
- Goertz, Margaret E. "Implementing the No Child Left Behind Act: Challenges for the States." *Peabody Journal of Education* 80, no. 2 (2005): 73-89. JSTOR.
- Gorenburg, Dmitry. "The Southern Kuril Islands Dispute." *PONARS Eurasia Policy Memo* no. 226 (2012): 1-7. PONARS Eurasia.
- Gurría, Angel. *Strong Performers and Successful Reformers in Education: Lessons from PISA for Japan*. Paris: OECD Publishing, 2012.
- Hall, Robert K. "Kokutai no Hongi: Cardinal Principles of the National Entity of Japan." Trans. John O. Gauntlett. Cambridge: Harvard University Press, 1949.

Hardt, Micheal and Antonio Negri. *Commonwealth*. Cambridge: The Belknap Press of Harvard University Press, 2009.

Hardt, Michael and Antonio Negri. *Empire*. Cambridge: Harvard University Press, 2000.

Haring, Douglas G. "Kokutai no Hongi: Cardinal Principles of the National Entity of Japan, Book Review." *Far Eastern Survey* 18, no. 25 (1949): 298-9. JSTOR.

Harootunian, Harry. *Things Seen and Unseen; Discourse and Ideology in Tokugawa Nativism*. Chicago: University of Chicago Press, 1988.

Harootunian, Harry. "Review Article: Hirohito Redux." *Critical Asian Studies* 33, no. 4, (2001): 609-636. Taylor & Francis Online.

Higgins, Sean. "Big business urges Trump to keep NAFTA's investment protection." *Washington Examiner*, September 22, 2017. <http://www.washingtonexaminer.com/big-business-urges-trump-to-keep-naftas-investment-protection/article/2635287>.

Ho, Samuel P.S. "Colonialism and Development: Korea, Taiwan, and Kwantung." In *The Japanese Colonial Empire, 1895-1945*. New Jersey: Princeton University Press, 1984.

Hood, Christopher P. *Japanese Education Reform; Nakasone's legacy*. London: Routledge, 2001.

Igarashi, Yoshikuni. *Bodies of Memory; Narratives of War in Postwar Japanese Culture, 1945-1970*. New Jersey: Princeton University Press, 2000.

Ikezoe, Noriaki. "Ikuhōsha kyōkasho no kage ni shyushyō gurūpu – Abe shinzō-shi no ijōna shūchaku." [The Prime Minister's group in the shadows of Ikuhōsha; Shinzo Abe's abnormal obsession]. *Shūkan kinyōbi niyūzu* [Weekly Friday News], August 9, 2015. <http://www.kinyobi.co.jp/kinyobinews/2015/08/09> 育鵬社教科書の影に首相グループ—安倍晋三氏.

Ikuhōsha Publishing Inc. "Ikuhōsha no Kyōkashyo (heisei 24 nendo yori saiyō)." [Ikuhōsha's Textbook (used since 2012)] Accessed September 7, 2017. <http://www.ikuhosha.co.jp/textbook/rekishi.html>.

Intellectual Property Strategy Headquarters. *Intellectual Property Strategy Program 2015*. Tokyo, 2015. https://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku2015_e.pdf.

Japan Association of National Universities. *Kokuritsu Daigaku Quarterly Report Vol. 32*. [National University Quarterly Report]. March 2014.

Japan Science and Technology Agency. "Industry-Academia Collaborative R&D Programs." Accessed March 22, 2017. <https://www.jst.go.jp/tt/EN/platform/coi.html>.

Japan's Policies and Approaches in the field of Education study group. "The Modernization and Development of Education in Japan." Trans. Maurice E. Jenkins. In *The History of Japan's Educational Development: What implications can be drawn for developing countries today*. 14-

41. Tokyo: Institute for International Cooperation and Japan International Cooperation Agency, 2004.

Jiji. "Prefectures begin to release school performance rankings." *The Japan Times*, December 9, 2014. <http://www.japantimes.co.jp/news/2014/12/09/national/prefectures-begin-to-release-school-performance-rankings/#.WKvDshAdxmC>.

Jones, Stephen. "'We are not creating a Terminator': Russia denies risk as Putin's 'robot army' is trained to shoot guns." *Mirror Online*, April 16, 2017. Updated November 13, 2017. <http://www.mirror.co.uk/news/world-news/we-not-creating-terminator-russia-10237755>.

Johnson, Jesse. "Chinese jets involved in another 'unsafe' intercept of U.S. reconnaissance plane, Pentagon says." *The Japan Times*, May 27, 2017. <http://www.japantimes.co.jp/news/2017/05/27/asia-pacific/chinese-jets-involved-another-unsafe-intercept-u-s-reconnaissance-plane-pentagon-says/#.WWRTDIpLfq1>.

Johnson, Jesse and Reiji Yoshida. "North Korea launches missile over Hokkaido for second time in less than a month." *The Japan Times*, September 15, 2017. <https://www.japantimes.co.jp/news/2017/09/15/national/north-korea-launches-missile-hokkaido/#.WbsUUYprxA>.

Johnston, Eric and Magdalena Osumi. "Influential science group votes no to increased military research at academic institutions." *The Japan Times*, March 7, 2017. <http://www.japantimes.co.jp/news/2017/03/07/national/influential-science-group-votes-no-increased-military-research-academic-institutions/#.WL8TFhDr1mA>.

Jozuka, Emiko and Ben Westcott. "Japan accused of stifling freedom with new terror law." *CNN*, June 15, 2017. <http://www.cnn.com/2017/06/15/asia/japan-abe-anti-conspiracy-bill/index.html>.

Kallender, Paul. "Japan's New Dual-Use Space Policy. The Long Road to the 21st Century." *Asie. Visions*, no. 88, (2016). Institut français des relations internationales.

Kamikaze Images. "Commemorative plaque at the entrance to the Yūshūkan Museum." Accessed January 10, 2018. <http://kamikazeimages.net/monuments/yushukan/index.htm>.

Kaplan, Robert D. "The South China Sea will be the Battleground of the Future." *Business Insider*, January 7, 2016. Edited February 6, 2016. <http://www.businessinsider.com/why-the-south-china-sea-is-so-crucial-2015-2>.

Kawashima, Ken, Fabian Schaefer and Robert Stolz. *Tosaka Jun: A Critical Reader*. Ithaca: East Asia Program, Cornell University, 2013. Project MUSE.

Keidanren [Japanese Business Federation]. *Kongo no kyōikukaikaku ni kansuru kihon-teki kangaekata*. [Basic Ways of Thinking about Educational Reform]. Tokyo, 2016. http://www.keidanren.or.jp/policy/2016/030_honbun.pdf.

Keio University. "Takeshi Natsuno." Accessed November 14, 2017. https://vu.sfc.keio.ac.jp/faculty_profile/cgi/f_profile_e.cgi?id=d1e21177a1219384.

Keio University Graduate School of Media Design. "Ichiya Nakamura." Accessed November 14, 2017. <http://www.kmd.keio.ac.jp/faculty/ichiya-nakamura>.

Kennedy, Scott and David A. Parker. "Building China's 'One Belt, One Road.'" *Center of Strategic and International Studies*, April 3, 2015. Accessed January 10, 2018. <https://www.csis.org/analysis/building-china%E2%80%99s-%E2%80%9Cone-belt-one-road%E2%80%9D>.

Klein, Alyson. "No Child Left Behind: An Overview." *Education Week*, April 10, 2015. <http://www.edweek.org/ew/section/multimedia/no-child-left-behind-overview-definition-summary.html>.

Kushida, Kenji E and Phillip Y. Lipsky. "The Rise and Fall of the Democratic Party of Japan." In *Japan Under the DPJ: The Politics of Transition and Governance*. Stanford: Walter H. Shorenstein Asia-Pacific Research Center, 2013.

Kyodo. "Donations under hometown tax payment program hit record ¥284 billion in 2016." *The Japan Times*, July 4, 2017. <https://www.japantimes.co.jp/news/2017/07/04/business/donations-hometown-tax-payment-program-hit-record-%C2%A5284-billion-2016/#.Wj9hDUuYPq0>.

Kyoto University Institute of Advanced Energy; Advanced Energy Generation Division. "Quantum Radiation Energy." Accessed August 4, 2017. <http://www.iae.kyoto-u.ac.jp/en/organization/generation/quantum.html>.

Kyoto University; Undergraduate School of Electrical and Electronic Engineering. "Advanced Particle Beam Energy (Highly Qualified Energy Conversion)." Accessed August 4, 2017. <https://www.s-ee.t.kyoto-u.ac.jp/en/information/laboratory/hqec>.

Kyoto University; Undergraduate School of Electrical and Electronic Engineering. "Complex Plasma System (High-temperature Plasma Physics)." Accessed August 4, 2017. <https://www.s-ee.t.kyoto-u.ac.jp/en/information/laboratory/http>.

Lincicome, Mark. "The Politics of Structural Education Reform (review)." Review of *The Politics of Structural Education Reform*, by Keith A. Nitta. *The Journal of Japanese Studies* 35, no. 2 (2009): 475-479. Project MUSE.

McCullough, David. "Moral and Social Education in Japanese Schools: Conflicting Conceptions of Citizenship." *Citizenship Teaching and Learning* 4, no. 1 (2008): 21-34. Cite Seer X.

McGarry, Brendan. "Lawmaker: Chinese J-31, J-20 'Mirror' American F-35, F-22." *Defensetech*, September 29, 2015. Accessed August 4th, 2017. <https://www.defensetech.org/2015/09/29/lawmaker-chinese-j-31-j-20-mirror-american-f-35-f-22/>.

McLaren, Sally. "Made in cool Japan." *Griffith Review* 2, no. 49 (2015). <https://griffithreview.com/articles/made-in-cool-japan/>.

Meiji University. “Cool Japan Summer Program 2017.” Accessed November 14, 2017.
<https://www.meiji.ac.jp/cip/english/programs/cooljapan/index.html>.

Meyer, Heinz-Dieter and Aaron Benavot. *PISA, Power, and Policy: The emergence of global education governance*. Oxford: Symposium Books, 2013.

Mimura, Janis. “Japan’s New Order and Greater East Asia Co-Prosperity Sphere: Planning for Empire.” *The Asia Pacific Journal; Japan Focus* 9. issue 49, no. 3. December 6, 2011.
<http://apjif.org/2011/9/49/Janis-Mimura/3657/article.html>.

Ministry of Education, Sports, Science and Technology. *Basic Act on Education: Provisional Translation (Act. No. 120 of December 22, 2006)*. Tokyo, 2006.
<http://www.mext.go.jp/en/policy/education/lawandplan/title01/detail01/1373798.htm>.

Ministry of Education, Sports, Science and Technology. *Basic Plan for the Promotion of Education (Provisional Translation)*. Tokyo, 2008.
<http://www.mext.go.jp/en/policy/education/lawandplan/title01/detail01/1373797.htm>.

Ministry of Education, Sports, Science and Technology. *The Center of Innovation (COI) Program brochure*. Tokyo: Japan Technology Agency, 2014. <https://www.jst.go.jp/coi/etc/COI-brochure2017.07EN.pdf>.

Ministry of Education, Sports, Science and Technology. *The Second Basic Plan for the Promotion of Education (Provisional Translation)*. Tokyo, 2013.
<http://www.mext.go.jp/en/policy/education/lawandplan/title01/detail01/1373796.htm>.

Ministry of Education, Sports, Science and Technology. *Kōtōgakkō gakushū shidō yōryō*. [High School Teaching Guidelines]. Tokyo: MEXT, 2009.

Ministry of Education, Sports, Science and Technology. *Chūgakkō gakushū shidō yōryō*. [Middle School Teaching Guidelines]. Tokyo: MEXT, 2008.

Ministry of Education, Sports, Science and Technology. *Shyōgakkō gakushū shidō yōryō*. [Elementary school teaching guidelines]. Tokyo: MEXT, 2008.

Ministry of Education, Sports, Science and Technology. “Kōkōseitei e no shūgaku shien.” [Study support for high school students]. Accessed January 10, 2018.
http://www.mext.go.jp/a_menu/shotou/mushouka/index.htm.

Ministry of Education, Sports, Science and Technology. “Mirai o misueta shotō chūtō kyōiku kaikaku.” [Educational Reform for the Future; Elementary and Secondary]. Tokyo, 2015.
<http://www.kantei.go.jp/jp/singi/keizaisaisei/jjkaigou/dai26/siryou4.pdf>.

Ministry of Education, Sports, Science and Technology. *Kōtō gakkō kyōkayō tosho kentei kijun*. [Textbook criteria for high school subjects]. Tokyo: MEXT, 2014.
http://www.mext.go.jp/a_menu/shotou/kyoukasho/kentei/1343961.htm.

Ministry of Education, Sports, Science and Technology. “Dōtoku kyōiku-yō kyōzai ‘watashitachi no dōtoku’ ni tsuite.” [On moral education teaching material, “Our Morality”]. Accessed September 9, 2017. http://www.mext.go.jp/b_menu/houdou/26/02/1344132.htm.

Ministry of Education, Sports, Science and Technology. “Watashitachi no dōtoku: Katsuyō no tame no shidō shiryō (chūgakkō).” [Our Morality: Teaching Materials for Use (middle school)]. Tokyo, 2014. http://www.mext.go.jp/a_menu/shotou/doutoku/detail/1353662.htm.

Ministry of Foreign Affairs of Japan. “Japan-U.S. High Level Committee on Science and Technology; Press Statement.” Tokyo, 2010. Accessed February 21, 2017. <http://www.mofa.go.jp/region/n-america/us/press1006.html>.

Ministry of Foreign Affairs of Japan. *Japan-U.S. High Level Committee on Science and Technology*. Tokyo, 2003. Accessed February 21, 2017. <http://www.mofa.go.jp/region/n-america/us/science/joint0304.html>.

Ministry of Foreign Affairs of the People’s Republic of China. *President Xi Jinping Delivers Important Speech and Proposes to Build a Silk Road Economic Belt with Central Asian Countries*. Beijing, 2013. Accessed January 9, 2017. http://www.fmprc.gov.cn/mfa_eng/topics_665678/xjpfwzysiesgjtfhshzzfh_665686/t1076334.shtml.

Miyauchi, Yoshinaga. *Tooyamabiko* (1834). Trans. William R. LaFleur. In LaFleur, *Liquid Life: Abortion and Buddhism in Japan*. New Jersey: Princeton University Press, 1992.

modchannel. “Bo-Emons’s Defense Lecture – ABC of Self Defense Forces.” *Youtube*, March 31, 2015. Accessed November 15, 2017. <https://www.youtube.com/watch?v=YP6mMCyXFsk&feature=youtu.be>.

Motohashi, Kazuyuki and Shingo Muramatsu. *Examining the University Industry Collaboration Policy in Japan: Patent analysis*. Tokyo: The Research Institute of Economy, Trade, and Industry, 2011.

Museum of MEXT. Exhibition signboard: “Corporatization of National / Public Universities.” Education, *Exhibition Room 2*, Tokyo. Visited August 17, 2016.

Museum of MEXT. Exhibition signboard: “Promotion of Government-Industry-Academia Collaboration.” Education, *Exhibition Room 2*, Tokyo. Visited August 17, 2016.

Museum of MEXT. Exhibition signboard: “Recovery and Reconstruction Efforts of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) Following the Great East Japan Earthquake – Promotion of creative reconstruction efforts starting with ‘people-building.’” Education, *Exhibition Room 1*, Tokyo. Visited August 17, 2016.

National Governor’s Association. *Nihon no gurando dezain kōsō kaigi*. [Japan Grand Design Conception Meeting]. Tokyo 2013. http://www.kantei.go.jp/jp/singi/keizaisaisei/ss_ikenkoukan/chiji_siryou.pdf.

National Science Foundation; Tokyo Regional Office. "Center of Innovation (COI): Japan's Industry-University-Government Collaborative Program." November 27, 2013. <https://www.nsf.gov/od/oise/tokyo/reports/trm/rm13-04.pdf>.

Nishino, Mayumi. "The challenge of developing meaningful curriculum initiatives for moral education in Japan." *Journal of moral education* 46, no. 1 (2017): 46-57. Taylor & Francis Online.

Nye, Joseph. "Get Smart; Combining Hard and Soft Power." *Foreign Affairs* 88, no. 4 (2009): 160-63. JSTOR.

Nye, Joseph. *Is the American Century Over?* Cambridge: Polity Press, 2015.

Nye, Joseph. *Soft Power; The Means to Success in World Politics*. New York: Public Affairs, 2004.

Nye, Joseph. "The Information Revolution and Soft Power." *Current History* 113, no. 759 (2014): 19-22. Harvard.

Nye, Joseph. "The Limits of Chinese Soft Power." *Project Syndicate*, July 10, 2015. <https://www.project-syndicate.org/commentary/china-civil-society-nationalism-soft-power-by-joseph-s--nye-2015-07>.

Nye, Joseph. *U.S. Power and Strategy after Iraq*. New York: Council on Foreign Relations, 2003.

OECD; Better Policies for Better Lives. "Member Countries' Budget Contributions for 2016." Accessed February 21, 2017. <http://www.oecd.org/about/budget/member-countries-budget-contributions.htm>.

Office of Naval Intelligence. *The PLA Navy: New Capabilities and Missions for the 21st Century*. Washington, 2015.

Office of Naval Research Science & Technology. "Free Electron Laser." Arlington, 2012. Accessed August 4, 2017. <https://www.onr.navy.mil/en/Media-Center/Fact-Sheets/Free-Electron-Laser>.

Office of the Secretary of Defense. *Annual Report to Congress; Military and Security Developments Involving the People's Republic of China 2013*. Washington, 2013.

Onishi, Norimitsu. "Japan's Textbooks Reflect Revised History." *The New York Times*, April 1, 2007. <http://www.nytimes.com/2007/04/01/world/asia/01japan.html?mcubz=0>.

Osaki, Tomohiro. "Imperial Rescript on Education making slow, contentious comeback." *The Japan Times*, April 11, 2017. <https://www.japantimes.co.jp/news/2017/04/11/national/imperial-rescript-education-making-slow-contentious-comeback/#.WheBVktrxmA>.

Osborn, Kris. "Why the U.S. Navy Could Be in Really Big Trouble: China Plans 351 Ships by 2020." *The National Interest*, May 9, 2016. <http://nationalinterest.org/blog/the-buzz/why-the-us-navy-could-be-big-trouble-china-plans-351-ships-16101>.

Otake, Tomoko. "Science Council of Japan considers overturning long-held opposition to military research." *The Japan Times*, May 30, 2016. <http://www.japantimes.co.jp/news/2016/05/30/national/science-council-japan-considers-overturning-long-held-opposition-military-research/#.WKQUvBAwdU>.

Panda, Ankit. "The Asian Infrastructure Investment Bank is Open: What Now?" *The Diplomat*, January 19, 2016. <http://thediplomat.com/2016/01/the-asian-infrastructure-investment-bank-is-open-for-business-what-now/>.

Peck, Michael. "Russia's Next Military Game Changer: Microwave Weapons?" *The National Interest*, July 12, 2016. <http://nationalinterest.org/feature/russias-next-military-game-changer-microwave-weapons-16946>.

Peh, Chehui and Teppei Kasai. "Asian neighbors protest as Japan PM sends offering to war dead shrine." *Reuters*, August 15, 2017. <https://www.reuters.com/article/us-ww2-anniversary-japan/asian-neighbors-protest-as-japan-pm-sends-offering-to-war-dead-shrine-idUSKCN1AV009>.

Pollman, Mina. "Japan Shops Maritime Arms to Southeast Asia." *The Diplomat*, June 13, 2017. <http://thediplomat.com/2017/06/japan-shops-maritime-arms-to-southeast-asia/>.

Pollmann, Mina. "Why Japan's Textbook Controversy Is Getting Worse." *The Diplomat*, April 8, 2015. <https://thediplomat.com/2015/04/why-japans-textbook-controversy-is-getting-worse/>.

Prime Minister of Japan and His Cabinet. *The Constitution of Japan*. Tokyo, 1946. http://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html.

Pryor, Crystal. "Japan: Revising arms export regulation." *World ECR* no. 49. (2016): 26-29. Center for Information on Security Trade Control.

RCA-IIS Tokyo Design Lab. "Bio-Intelligent Machines." *Vimeo*, September 22, 2017. <https://vimeo.com/234985606>.

RCA x IIS Tokyo Design Lab. "Chemical Synchronization." Accessed November 15, 2017. <https://www.designlab.tokyo/bio-sensors>.

RCA x IIS Design Lab. "Transparent Intent." Accessed November 15, 2017. <https://www.designlab.tokyo/computer-vision>.

RCA x IIS Tokyo Design Lab. "Using Design to turn Science into Deployable Innovations." Accessed November 15, 2017. <https://www.designlab.tokyo/>.

RCA x IIS Design Lab. "Worn Influencer of Movement." Accessed November 15, 2017. <https://www.designlab.tokyo/fullscreen-page/comp-izh0bvh4/0840497e-3c75-403e-a25f-8fa6de20db65/10/>.

Reitz, Thomas L. "Solid Oxide Fuel Cells (SOFC) as Military APU Replacements." Wright-Patterson: The Air Force Research Laboratory, 2010. https://energy.gov/sites/prod/files/2014/03/f12/aircraft_7_reitz.pdf.

Robertson, Roland. *Global Modernities*. London: Sage Publications, 1995.

Roesgaard, Marie. "Globalization in Japan; The Case of Moral Education." In *Rethinking "Japanese Studies" from Practices in the Nordic Region: Overseas symposium in Copenhagen 2012*. Ed. Jianhui Liu and Mayuko Sano. 175-192. International Research Center for Japanese Studies, 2014.

Roesgaard, Marie. *Moral Education in Japan; values in a global context*. Abingdon: Routledge, 2017.

Roesgaard, Marie. *Moving Mountains: Japanese Educational Reform*. Aarhus: Aarhus University Press, 1998.

Rogers, Jon. "South China Sea tensions at boiling point after Beijing 'drone' flies over disputed waters." *Express*, May 18, 2017. <http://www.express.co.uk/news/world/806379/South-China-Sea-Japan-China-drone-Senkaku-Diaoyu>.

Royal College of Art. "RCA-IIS Design Lab: Treasure-hunting in Tokyo." Accessed November 15, 2017. <https://www.rca.ac.uk/schools/school-of-design/funded-research/rca-iis-design-lab-treasure-hunting-tokyo/>.

Sankei News. "28-nendo chūgaku kyōkasho ikuhōsha, shea nobasu kōmin 1.4-bai, rekishi 1.6-bai." [2016 Ikuhōsha textbooks extend market share; citizen 1.4 times, history 1.6 times]. October 31, 2015. <http://www.sankei.com/life/news/151031/lif1510310017-n1.html>.

Satō, Manabu and Masaaki Katsuno. *Abe seiken de kyōiku wa dō kawaru ka*. [How will Education Change Under the Abe Administration], Tokyo: Iwanami Shoten, 2013.

SBIR STTR America's Seed Fund. "Epitaxial Technologies for Gallium Oxide Ultra High Voltage Power Electronics." Accessed August 4, 2017. <https://www.sbir.gov/sbirsearch/detail/871715>.

Schmitt, Michael N. and Jeffrey S. Thurnher. "'Out of the Loop': Autonomous Weapon Systems and the Law of Armed Conflict." *Harvard National Security Journal* 4, no. 231 (2013): 231-281. Harvard.

Schoppa, Leonard J. *Education Reform in Japan; A Case of Immobilist Politics*. London: Routledge, 1991.

Sciutto, Jim, Barbara Starr and Zachary Cohen. "Trump promises North Korea 'fire and fury' over nuke threat." *CNN*, August 9, 2017. <http://edition.cnn.com/2017/08/08/politics/north-korea-missile-ready-nuclear-weapons/index.html>.

Sharman, Jon. "Japan scrambles record number of fighter jets to intercept Chinese planes." *Independent*, April 13, 2017. <http://www.independent.co.uk/news/world/asia/japan-fighter-jets-intercept-chinese-planes-record-number-military-activity-communism-east-china-sea-a7682066.html>.

Shimazono, Susumu. "State Shinto in the Lives of the People: The Establishment of Emperor Worship, Modern Nationalism, and Shrine Shinto in Late Meiji." *Japanese Journal of Religious Studies* 36, no. 1, (2009): 93-124. JSTOR.

Singh, Abhijit. "Why Russia and China's Combat Drills in the South China Sea Matter." *The National Interest*, September 16, 2016. <http://nationalinterest.org/blog/the-buzz/why-russia-chinas-combat-drills-the-south-china-sea-matter-17729>.

Steger, Manfred B. *Globalization: A Very Short Introduction*. Oxford: Oxford University Press, 2017.

Steger, Manfred B. *Neoliberalism: A Very Short Introduction*. Oxford, Oxford University Press: 2010.

Stewart, John R. "Manchuria As Japan's Economic Life-Line." *Far Eastern Survey* 4, no. 23,(1935): 182-186. JSTOR.

Tahara-Stubbs, Mia. "Is Japan about to lose its cool?" *CNBC*, May 14, 2015. <https://www.cnn.com/2015/05/14/who-gets-to-decide-japan-is-cool.html>.

Takayama, Keita. *Has PISA Helped Or Hindered?: Reflections On The Ongoing PISA Debate*. Biddeford: University of New England, 2015.

Tansman, Alan. "The Pedagogy of the Japanese Novel." *A Forum on Fiction* 47, no. 1 (2014): 57-66. Duke University Press.

Takeishi, Ryoko, Kenichi Mizusawa and Satomi Sugihara. "Defense research subsidies in 2017 set to snowball to 11 billion yen." *The Asahi Shimbun*, December 29, 2016. <http://www.asahi.com/ajw/articles/AJ201612290057.html>.

The Asahi Shimbun, Associated Press. "Defense Ministry woos ASEAN with military tech seminar." June 12, 2017. <http://www.asahi.com/ajw/articles/AJ201706120047.html>.

The New York Times, "A Shifting View of Japanese History." December 28, 2013. <http://www.nytimes.com/interactive/2013/12/27/world/asia/A-Shifting-View-of-Japanese-History.html>.

The United States Department of Justice. "Chinese National Who Conspired to Hack into U.S. Defense Contractors' Systems Sentenced to 46 Months in Federal Prison." July 13, 2016.

Accessed August 4th, 2017. <https://www.justice.gov/opa/pr/chinese-national-who-conspired-hack-us-defense-contractors-systems-sentenced-46-months>.

The White House; President Barack Obama Archives. *Educate to Innovate*. Washington, 2013. <https://obamawhitehouse.archives.gov/issues/education/k-12/educate-innovate>.

Thorsten, Marie. *Superhuman Japan: Knowledge, Nation and Culture in US-Japan Relations*. New York: Routledge, 2012.

Tobitate Japan exchange program. “Chiiki jinzai kōsu.” [Regional human resources course]. Accessed November 13, 2017. <http://www.tobitate.mext.go.jp/program/region/index.html>.

Tobitate Japan exchange program. “Chiiki jinzai kōsu gaiyō / boshū yōkō.” [Regional human resources course outline / application guidelines]. Accessed November 14, 2017. <http://tobitateiwaki.com/entry>.

Tobitate Japan exchange program. “Jigyō gaiyō.” [Business summary]. Accessed November 14, 2017. <http://tobitateiwaki.com/gaiyou>.

Tobitate Japan exchange program. “Chiiki jinzai kōsu; Iwaki.” [Regional human resources course; Iwaki]. Accessed November 14, 2017. <http://tobitateiwaki.com/>.

Tosaka, Jun. *The Fate of Japanism; From Fascism to Emperorism*. Trans. John Person. In *Tosaka Jun: A Critical Reader*. Ed. Ken Kawashima, Fabian Schaefer and Robert Stolz. Ithaca: East Asia Program, Cornell University, 2013. 59-68. Project MUSE.

Tucker, Patrick. “How to stop a nuclear missile.” *The Atlantic*, January 5, 2017. <https://www.theatlantic.com/technology/archive/2017/01/north-korea-nuclear-missiles/512240/>.

United States Mission to the OECD. “What is the OECD?” Accessed February 21, 2017. <https://usoecd.usmission.gov/mission/overview.html>.

USA.gov. *1988 US-Japan Science and Technology Cooperation Agreement*. Toronto, 1988. https://energy.gov/sites/prod/files/pi_iec_local/098b7ef980047a2e.pdf.

U.S. Embassy and Consulates in Japan. *U.S.-Japan Joint High-Level Committee Meeting on Science and Technology Cooperation*. Tokyo, 2015. <https://jp.usembassy.gov/u-s-japan-joint-high-level-committee-meeting-science-technology-cooperation/>.

U.S. Office of Science and Technology Policy. tab.lewis@nara.gov, e-mail message to author, “U.S.-Japan Joint High Level Committee.” May 27, 2016.

UTECH; Co-Founder for Innovation. “About UTECH.” Accessed August 4, 2017. https://www.ut-ec.co.jp/english/about_utec/firm_profile.

UTECH; Co-Founders for Innovation. “Portfolio Companies; FCO Power, Inc.” Accessed August 4, 2017. https://www.ut-ec.co.jp/english/portfolio/fco_power.

UTECH; Co-Founders for Innovation. "Portfolio Companies; Flosfia Inc." Accessed August 4, 2017. <https://www.ut-ec.co.jp/english/portfolio/flosfia>.

UTECH; Co-Founders for Innovation. "Portfolio Companies; ZenmuTech, Inc." Accessed August 4, 2017. <https://www.ut-ec.co.jp/english/portfolio/zenmutech-inc>.

Varadarajan, Latha. "The trials of imperialism: Radhabinod Pal's dissent at the Tokyo tribunal." *European Journal of International Relations* 21, no. 4. (2015): 793-815. Sage Journals.

Voeten, Erik. "'Salami Tactics' in the East China Sea." *The Washington Post*, December 3, 2013. <https://www.washingtonpost.com/news/monkey-cage/wp/2013/12/03/salami-tactics-in-the-east-china-sea/>.

Wakatsuki, Yoko and Joshua Berlinger. "Japan PM Shinzo Abe embroiled in land-sale scandal." *CNN*, March 24, 2017. <http://www.cnn.com/2017/03/22/asia/japan-school-scandal/index.html>.

WakuWaku Japan. "Homepage." Accessed November 15, 2017. <http://sgp.wakuwaku-japan.tv/en/>.

Wallace, Corey. "Japan's 'Three Principles of Arms Exports' about to enter a new phase." *Japan Security Watch*, December 26, 2011. <http://jsw.newspacificinstitute.org/?p=9568>.

Watashitachi no dōtoku; Shōgakkō 5 / 6-nen. [Our Morality; elementary school years 5 and 6]. Tokyo: Kousaido Akatsuki Company Ltd, 2014.

Watashitachi no dōtoku; Chūgakkō. [Our Morality; middle school]. Tokyo: Kousaido Akatsuki Company Ltd, 2014.

Wong, Alia. "Life After No Child Left Behind." *The Atlantic*, July 8, 2015. <https://www.theatlantic.com/education/archive/2015/07/life-after-no-child-left-behind/397937/>.

Yamato Press. "Abe moto sōri tokubetsu aisatsu." [Ex Prime Minister Abe's Special Address]. *Youtube*, May 10, 2011. Accessed September 10, 2017. <https://www.youtube.com/watch?v=3f7ygXxHcVo>.

Yoshida, Reiji and Mizuho Aoki. "Diet enacts security laws, marking Japan's departure from pacifism." *The Japan Times*, September 19, 2015. <http://www.japantimes.co.jp/news/2015/09/19/national/politics-diplomacy/diet-enacts-security-laws-marking-japans-departure-from-pacifism-2/#.WHacyLr1mA>.

Zohuri, Bahman. *Directed Energy Weapons; Physics of High Energy Lasers*. Albuquerque: Springer International Publishing, 2016.