University of Oxford

In Pursuit of (Soft) Power:

Chinese Artificial Intelligence Governance in an Age of Great Power Competition

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Abstract

The 2017 New Generation Artificial Intelligence Development Plan outlined the People's Republic of China's aims to become the world leader in Artificial Intelligence (AI) by 2030 and create a global example of an AI-powered & governed society. Much analysis of PRC AI strategy since has focused on how these goals build domestic and international influence to enhance China's hard power capabilities. This work asks instead: **How does China's approach to soft power manifest in its efforts to become an AI superpower?** Through studying Chinese national-level AI policies and subsequent overseas state messaging via directed content analysis, I found that U.S. understandings of PRC AI strategy are flawed due to their overpowering focus on its hard power implications. The Chinese model of AI governance may have more draw through soft power than previously recognized.

I further argue that a full understanding of the PRC's AI strategy requires more study of how soft power considerations influence that policy. Strong parallels exist between China's conception of soft power and its broader AI strategy, both of which emphasize the construction of a strong domestic foundation upon which global influence can be built. China's emphasis not just on the governance *of* AI (the act of regulating AI or dictating its use), but also the governance *through* AI (the deployment of AI in society to aid in the act of governing) allows for the construction of a potentially comprehensive and example-setting model. This study can inform future studies of Chinese soft power and global AI governance norms. It also calls for U.S. policy actors to place more emphasis on revitalizing the domestic U.S. democratic model through AI, rather than framing key AI policies as direct competitive responses to the "China threat."

Acknowledgements

I would like to dedicate this thesis to my late grandmother, Elizabeth "Betti" Igel. Her sense of self, inner fire, and commitment to both education and adventure continue to serve as guiding lights on an often dimly lit but ever-rewarding path.

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Finally, this thesis —and this year— would not have been possible without the generous support and mentorship from Robert Fusfeld and Carolyn Catlett. Professor Fusfeld's belief in me from day one at the University of Denver (as well as the taught appreciation of policy "implementation, implementation, implementation") has been and continues to be utterly transformative.

Contents

1. Introduction

The PRC is using vast resources to become the world leader in artificial intelligence[1] and harness its power to further the "rejuvenation of the great Chinese civilization." Through the PRC's New Generation Artificial Intelligence Development Plan (AIDP) the PRC aims to: become the world leader in AI by 2030; develop the world's most technologically advanced military by 2025 and define ethical norms and standards worldwide for AI (Kania & Laskai, 2021). It is participating in Standards Development Organizations (SDOs), drafting regulations in nearly all areas of AI to accomplish these goals, and is expanding its reach by exporting its technologies globally through the Belt and Road Initiative (BRI)(Roberts et al., 2021; Standardising the Splinternet, 2020).

Amidst tense U.S.-China relations, Western analysis —particularly in the United States— has two critical problems for understanding how China may generate and sustain global power from AI. First, it often applies a one-dimensional competitive lens focused on hard power considerations in the U.S.- China great power competition. U.S. actors have explicitly labeled China's AI development as a "grave national concern" for the United States (Allison & Schmidt, 2020). Second, in response to the widespread deployment of Chinese surveillance, Western sources frequently focus on China's model of digital authoritarianism. These typically feature a dramatized vision of an Orwellian panopticon with total surveillance and an all-encompassing Social Credit System.[2] Such considerations are important to call attention to the encroachment upon widely held notions of human rights, but often blind analysts to important nuances between the perceived and real threats at hand.

I argue that China's AI governance model reflects not simply a strategy to maximize its hard power capabilities and authoritarian control, but also applies a robust soft power strategy designed to portray China as a benevolent actor fit for global leadership in AI governance. This model is not one that exclusively prioritizes leaps in technical capabilities and the projection of this power overseas

[1] Artificial Intelligence (AI) refers to both a scientific field and a broad suite of technologies that accomplish tasks generally believed to require human intelligence, such as making decisions through the collection, processing and interpretation of data (Arcesati, 2021). I intentionally adopt a broad definition of AI, as I am studying the projected image of China's AI strategy, rather than any specific application.

[2] While China's Social Credit System referenced in this policy has received extensive international attention, it is less technologically advanced than it is made out to be and has only been implemented in spotty, typically ineffective approaches (Brussee, 2022).

but seeks to build an attractive domestic example of economic and social governance through the deployment of AI. Therefore it is important for both U.S. foreign policy actors and those considering AI's potential to reshape society to step outside of traditional competitive or counter-authoritarian lenses to gain a full picture of China's suggested model of a "good AI society" and its potential draws (Cath et al., 2018; Roberts, Cowls, Hine, et al., 2021).

Current analyses tend to ignore three important considerations about the Chinese model. First, they tend to focus on forms of coercive power (for example, the threat of military force) at the expense of co-optive power to change what countries and people want. Second, they dismiss the possibility of soft power gains resulting from promises like improved public safety via high-tech surveillance systems (1058974, 2022c; Kynge, 2021). Finally, they fail to consider the potential draw of the broader model of governance *of* and *through* AI[3] that China is attempting to construct, particularly in the absence of parallel U.S. leadership.

AI and related technologies have proved disruptive to societies and economies around the world. The United States and China are not exempt from challenges posed by divisive speech, disinformation online, or rapid accumulation of power by technology. The Chinese government has produced extensive regulation of AI technologies in hopes of maintaining social control and stability as well as authority over large technology firms (Klyman, 2022). This contrasts with the United States, which has not comprehensively attempted to regulate technology or AI and has therefore not determined whether regulation can be reconciled with the continued success of its social model's emphasis on a market economy and individual freedoms.

Because international norms surrounding AI development, deployment, and governance are largely unformed, China's actions in AI could profoundly shape the relationship between technology and governance globally. Whether or not China succeeds in developing an AI governance model that is admired by the outside world, the global export of Chinese technology (See Cave et al., 2021; Kynge, 2021) will likely facilitate the diffusion of its model. As Joseph Nye, original author of soft power theory pointed out in his 2012 speech at Peking University, **"It is implicit in Lao-tsu's comment**

[3] Governance of AI is the act of regulating AI or dictating its use, and governance through AI is the deployment of AI in society to aid in the act of governing. See figures 3 and 4 for more detail.

that a leader is best not when people obey his commands, but when they barely know he exists."

Thus, it is critical to deeply understand what the Chinese approach to AI governance is, particularly in relation to more subtle forms of power. This paper therefore focuses on the Chinese model of AI governance in the context of soft power theory.

To demonstrate the presence of soft power strategy in China's AI governance strategy, I conducted a qualitative content analysis on national-level Chinese AI policies and tweets from accounts linked to the Chinese government. My results support the hypothesis that soft power language and initiatives deeply influence the PRC's AI strategy, both domestically and overseas. This, in theory, is to advance the country's comprehensive national power.[4] I examine additional hypotheses focused on components of soft power strategy to further explain what China's approach is. I do not argue that soft power trumps hard power in importance when evaluating Chinese AI policy. I do show that soft power is an important dimension of power to consider.

This paper makes an important contribution to our understanding of the relationship between AI governance and foreign policy, as well as more thoroughly understanding how China's AI soft power could shift the global balance of power. I show that China's AI development and governance strategy is not simply a race to accumulate hard power but reflects a careful consideration for how its domestic model of governance can aide in the country's rise to power. Internal discourse surrounding China's AI policy attempts to portray China as an innovative country with a strong domestic example of both good governance of AI and good governance of society through its application which qualifies it to be a global leader.

While China's model of accelerated manufacturing capabilities, improved public safety, quality of life, and stability maintained by social governance has been vigorously dismissed as hyper-authoritarian by commentators in the United States, it is in fact this very model that is being

[4] To evaluate and rate China's "comprehensive national power" (CNP) in comparison to other major powers, several academic institutions and Chinese researchers have established the idea of CNP. Material capacities, such as military might, financial prosperity, and natural resources, continue to be the key criteria utilized in the evaluation of the CNP (Chuwattananurak, 2016).

promoted overseas. Failure to strongly consider China's soft power efforts surrounding AI may cause U.S. foreign policy actors to overlook the appeal of the Chinese model. The United States may also miss opportunities to apply elements of China's model to address similar problems at home.

The rest of the paper proceeds as follows. I first situate my research in the literature on China's AI development model, showing how current explanations fail to account for the way China promotes its technology to the world. I then create a framework to evaluate different dimensions of China's soft power strategy and generate hypotheses about which specific features I expect to find in China's discourse on AI. Finally, I discuss and analyze my results before concluding.

2. Chinese AI Governance and Soft Power— An Under-Explored Nexus

In this section, I explain how the literature currently understands China's AI strategy, document how Chinese practitioners have previously incorporated soft power into their foreign policy, and argue for the need to explore this intersection to fully understand China's AI strategy.

2.1 The Evolution of Chinese AI Governance

Core literature on Chinese AI policy is largely descriptive of the policy process and its outcomes. Extensive literature has explored the development of specific application areas of AI in China including the health sector (T. Q. Sun & Medaglia, 2019) and education (Knox, 2020). Other researchers have focused on analysis of individual AI policies (Roberts, Cowls, Hine, et al., 2021; Wu et al., 2020). Others have explored the relationship between Chinese academic research and policymaking. Gao et al. (2019) conducted a comparative analysis between international research hotspots and national-level policy keywords on AI in China to demonstrate the close relationship between Chinese academic findings in AI and national-level policy making. They identified four stages of development in China's AI policies: 1) the emergent period through 2011, when there were few policy documents and AI was not a national development priority; 2) the early development period from 2012 to 2014, when society gradually began attaching great importance to AI technology but did not develop specific guidance for AI-related technology and industries; 3) the macro-level policy period from 2015 to 2017, when a large number of specific policy documents were issued, making AI policy development a national strategy; and 4) the policy implementation period from 2018 to 2019, when policy became more focused on AI-related industries.

Existing Western literature often focuses on the military and economic policy implications of Chinese AI policy, and for good reason; global influence by technologically-advanced powers is possible through their use of international digital systems, including commercial platforms, to both obtain superior information and gain an advantage over rival countries in the military, commercial, and political spheres, as well as to limit, deny, or slant the access of other countries to information (Scobell et al., 2020). Increasingly advanced forms of AI simply add to these capacities. Military applications of AI have the potential to provide a significant strategic advantage in conflict scenarios

and international security more broadly. China has publicly stated its intent to use AI to develop its military into the world's most technologically advanced by 2025 (Ding, 2018; Kania & Laskai, 2021). Policy actions such as the listing of Chinese companies on the U.S. Entity List or the U.S. Government commitment of USD 1.5 billion to AI development in 2021, have been either explicitly or implicitly been responses to China's developments in AI (Kania & Laskai, 2021).[5] Additionally, the drive for economic benefits is the most immediate driving force behind China's development of AI; it could vastly improve China's productivity levels and help it continue to meet GDP targets (Ding, 2018; PwC, 2017). In his opening speech to the 19th Party Congress, Chinese President Xi Jinping mentioned AI as a way to increase economic productivity in his opening speech of the 19th Party Congress (dwnews [中国-多维新闻网]., 2017).[6] Given the military and national security focus of this literature,[7] China's AI governance has been understood as a manifestation of various forms of hard power. The frequently claimed idea that the United States and China are in an AI arms race relies on the notion that China's AI development comes from AI's capabilities directly.

2.2 Soft Power

2.2.1 Joseph Nye and The Conceptualization of "Soft Power"

In the late 1980s, Joseph Nye argued that the United States, contrary to popular belief, was not declining in relative power as a result of a series of foreign policy and military missteps (Nye, 1990). Nye proposed that American power was resilient and potentially stronger than ever, due not to its economic and military hard strength, but rather its cultural influence and attractiveness overseas. This work was quickly noticed by Chinese leadership. It seemed to offer a solution to its dilemma of the rising suspicion of its goals because of its growing economic and military power (H. Wang & Lu, 2008).

Nye defined "soft power" or "co-optive power" as the ability to shape what others *want* by being attractive and framed it as a descriptive rather than normative concept. This contrasts with hard

[5] Secretary of Defense Lloyd Austin said, "Beijing already talks about using AI for a range of missions, from surveillance to cyberattacks to autonomous weapons. And in the AI realm, as in many others, we understand that China is our pacing challenge. And we're going to compete to win, but we're going to do it the right way" (Nakamura, 2021).
[6] See "Works Referenced."
[7] Ibid.

power, which can be understood as the ability to change what others *do*. Later Nye proposed three key dimensions of soft power: 1) culture; 2) domestic institutions and values; and 3) the substance and style of diplomacy (Nye, 2008). He argued that economic and military resources and actions are not enough to fully explain behavior in the international system. Rather, "[t]hey helped explain coercion and payment but not the ability to obtain preferred outcomes through attraction and persuasion" (Nye, 2008). Further, Nye argued that soft power can help legitimize a state's (hard) power and policy.

2.2.2 Soft Power Considerations Have Strongly Influenced Chinese Policy

As a new concept, soft power entered the official Chinese discourse shortly after Nye's original publication, with its first appearance in 1994 (H. Wang & Lu, 2008). Nye's approach was viewed by Chinese leaders as crucially important. He was invited to speak and to advise Chinese leaders on how to cultivate soft power as a government strategy (Nye, 2008). The term slowly but steadily gained in prominence in academic journals before rapidly increasing in 2007 (see Figure 1 below), when President Hu Jintao emphasized its importance in his keynote speech to the 17th National Congress of the Communist Party of China (Nye, 2012). He said, "When a country's hard power increases as fast as China's has, it can frighten its neighbors, but if it also increases its soft power, it is less likely to frighten them into coalitions against it" (Nye, 2012; H. Wang & Lu, 2008). While its popularity in academic journals peaked in 2012-2014, but soft power remains commonly referenced in official discourse (See chart below).

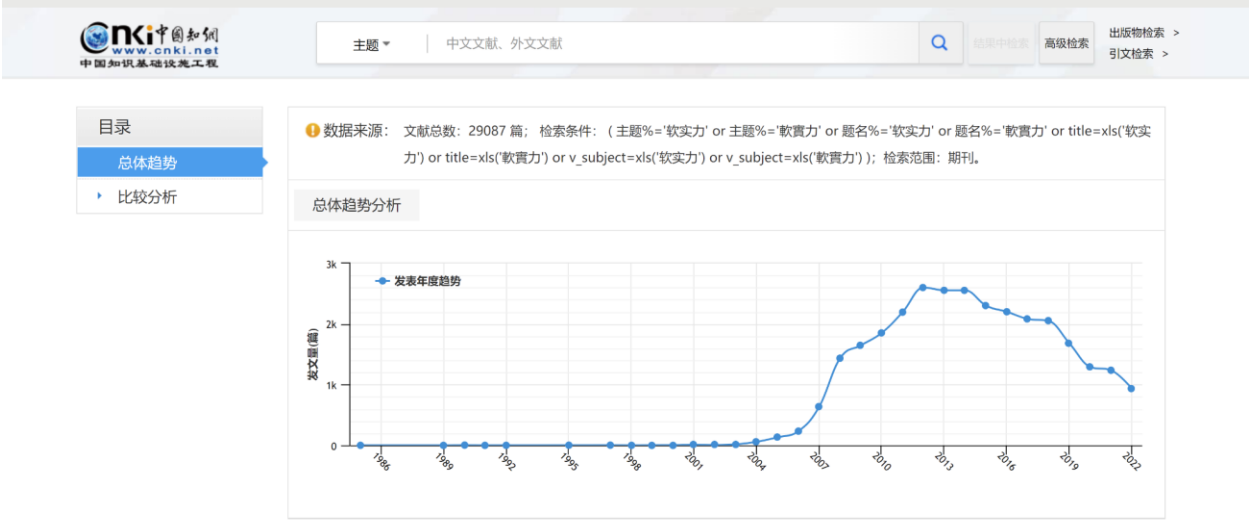


Figure 1: This chart is from the results within the China National Knowledge Infrastructure (CNKI) database. CNKI is the largest continuously updated database of Chinese journals in the world.

2.3 Soft Power Framework Construction

The following review of literature on Chinese soft power will serve as the basis for the framework that I will use to conduct directed content analysis (Hsieh & Shannon, 2005),[8] on official Chinese documents. This is a conceptual framework that synthesizes existing models of soft power. The purpose of this section is to provide categories that, if soft power in the Chinese sense were to be directly replicated in the context of Chinese AI policy and discourse, we would expect to see consistently throughout examined documents and actions.

I began with three core English texts on Chinese soft power (Nye, 2021; Repnikova, 2022; H. Wang & Lu, 2008), latter two of which provide extensive review of Chinese literature on conceptions of soft power. I also hand searched and back-referenced papers identified within these works and searched CNKI using the keywords "soft power" (软实力 or 软力量) and "comprehensive national power" (综合国力) to ensure inclusion of all prominent works.

[8] This is a type of qualitative content analysis, explained in more depth in Methods Chapter.

Soft power is a fluid concept, especially in the Chinese context, and there is much overlap and interplay between its dimensions. Thus, the below framework, derived from previous literature is intended to be more illustrative than definitive.

The Chinese conception of soft power focuses on the ability of any social unit to generate compliance in society by moral example and persuasion. This leads to a heavy emphasis on a strong domestic foundation as a prerequisite for a country generating soft power (Repnikova, 2022; H. Wang & Lu, 2008). Wang and Lu provided a highly useful analysis of how the Chinese conception of soft power (most commonly translated to 软实力, also 软力量 or 软权力) differs from Nye's original U.S.-focused definition. They demonstrate that the Chinese conception of soft power is far more encompassing than Nye's and can apply to the ability to generate internal compliance in a society by moral example and persuasion (H. Wang & Lu, 2008; Zhai, 2004). Many Chinese scholars think of soft power as the ability to subdue the enemy without a fight (following the saying, 不战而胜, as famously said by Sun Zi of *The Art of War*) (X. Sun, 2004). Similarly, they also equate soft power to what ancient Chinese philosopher, Mencius, called the kingly way or governing by moral example, as opposed to the bully's way— by brute force (H. Wang & Lu, 2008).

2.3.1 Culture

Chinese policy analysts reviewed in Wang and Lu's works as well as those who have published more recently (Repnikova, 2022), tend to agree with Nye that culture is an important dimension of soft power. However, Nye claimed the soft power of the United States (Nye, 1990, 2012, 2021), was based on the export of American popular culture products from movies, music, literature, books, software, and products like Coca-Cola and clothing. In contrast, Chinese analysts identify China's traditional culture from ancient Chinese civilization as its strongest source of soft power, including its philosophy (rooted in Confucianism, Buddhism, Daoism), medicine, art, architecture, and martial arts (H. Wang & Lu, 2008). These articles assert that the concept of soft power itself has existed in Chinese culture for thousands of years (H. Wang & Lu, 2008). Some go as far as to claim that the secret to China's long civilization is its early grasp and practice of soft power (冯天瑜, 2016).

Nye pointed out in a 2019 speech at Peking University, that China always had an attractive traditional culture. Confucian values (such as social harmony, ritual, filial piety, and compassionate

rule) influenced much of East Asia. Chinese analysts commonly contrast the framing of Chinese cultural soft power as morally grounded with the United States' "morally vacuous" soft power which, they say, proclaims messages of "American exceptionalism" (Repnikova, 2022; Y. Wang, 2016). According to this this view, China's primary task is then to explain China's moral values to the world as a respectable and attractive alternative to the United States (Repnikova, 2022). Also in contrast to the perceived American model of soft power, Henry Kissinger once observed, "China did not export its values but let others come to seek them" (Nye, 2012).

Recognizing and utilizing this contrast, Chinese leaders and diplomats incorporated references to Confucianism as a strategic foreign policy tool. They used terms like 'peaceful rise' and 'harmonious rise' to signal that China is a harmless, benevolent actor, thus hoping to mitigate suspicion surrounding its rapid increase in hard power (Repnikova, 2022; Y. Wang, 2016).

Traditional culture is the primary focus of the reviewed literature. Contemporary culture is referred to very little outside of studies on China's hosting of the Olympic Games (Giulianotti, 2015; Repnikova, 2022). However, the 2008 and 2022 Games each represent critical attempts to showcase Chinese culture to the world. For example, the opening ceremony of the 2008 Summer Games presented "Chinese culture as harmonious with and equal to that of the West, with cultural ceremonies highlighting the historic achievements and inventions of the Chinese civilization that contributed to the development of the West" (Reference Collins, Price and Dayan Collins 2008). The opening ceremonies of each Games also showed off China's technological progress as they prominently featured the display of major Chinese tech companies as contributors to the event.

I will use the following points in my soft power framework for content analysis:[9]

- **Contemporary Culture**: References to modern Chinese culture or modern culture in China generally, or a modern way of life.
- **Traditional Culture**: References to Traditional Chinese culture including Chinese holidays, historical poems and pieces of art, landmarks, belief systems. Additionally, references to traditional Confucian or Daoist values, such as filial piety, harmony, or benevolence.[10]

[9] Full, detailed framework located in *Appendix A*.
[10] The distinction between modern and traditional Chinese culture can be a difficult line to draw. However, after close review of the content, I determined a more strict distinction was unnecessary in this instance.

2.3.2 Institutions and values

In Nye's analysis of the United States. he argued that its soft power also comes from its democratic institutions. These include a market economy and values of human rights and individual freedom. Wang and Lu's analysis of Chinese soft power literature argued that Chinese analysts agreed that China must first develop an attractive model based on its own domestic reality, rather than promote an artificial image overseas. Numerous sources argued the PRC's successful model of economic development was the primary source of soft power for China, particularly for developing nations. Other dimensions often discussed in Chinese soft power literature include national cohesion, regime legitimacy, social governance, and ethics and values. These are not typically referenced in the American context (H. Wang & Lu, 2008).

National coherence refers to the orientation of the population toward unity and cooperation to achieve national goals (H. Wang & Lu, 2008). Analysts often describe a strong national identity as the necessary glue for national coherence, which can take the form of shared language, national sentiment, and other cultural values. Some have emphasized the importance of ideological purification, or the correct political attitude based on Marxist or socialist education.

Chinese analysts do not typically directly analyze **ethics and values** outside of the lens of traditional cultural values, as discussed in the Culture section above. In contrast, the American conception of soft power places strong emphasis placed on values like individualism, human rights, democracy, and free markets. This dimension is often referred to in other areas, like regime legitimacy. For example, Chinese analysts believe political legitimacy requires government officials to live up to high ethical standards and corruption (H. Wang & Lu, 2008).

Since Wang and Lu's analysis, President Xi has launched initiatives to "restore the great Chinese nation" (Economy, 2018). This included the "Chinese Dream" and "Core Socialist Values" (CSVs) campaigns (Gow, 2017; Miao, 2021), which were a broad range of efforts towards consensus-building in the Chinese public discourse. The Core Socialist Values campaign lays out the CCP's vision through four goals at each of the national, societal, and citizenship levels (See *Appendix B* for more detail and supporting photos). Gow (2017) argues that these campaigns represented a shift in focus under the Xi Jinping administration to create citizens loyal to the Chinese model. These

include extensive propaganda campaigns (Photos in Appendix B), but as Gow points out, authoritarianism is not always solely characterized by coercion, and alongside such strategies there is clear evidence that the CCP is through its propaganda infrastructure, pushing a range of consensus-building activities under the umbrella of the Chinese Dream discourse (Creemiers, 2015; Gow, 2017). The Chinese Dream and CSVs are referenced throughout Chinese policy and Chinese officials' speeches and are intertwined with each of the foundational concepts of institutions and values, particularly national cohesion and ethics and values.

Regime legitimacy refers to popular support of the government, which depends on the government's willingness and ability to satisfy the needs and demands of the people. This can include social justice, equality, quality of life, and the feeling that their concerns are actively addressed by those in government (Xu, 2005). Many Chinese analysts agree that only when a government enjoys the backing of the population can the country gain international status and influence (H. Wang & Lu, 2008).

The notion of a Chinese **economic development model** has gradually emerged as a result of China's sustained economic growth and the growing international recognition of China's economic success. Chinese commentators and government officials have long identified China's successful model of economic development as a source of soft power towards other developing nations (H. Wang & Lu, 2008). However, scholars have not come to a consensus on the definition of the "China model" of economic development (Repnikova, 2022). Some developing countries have already adopted some of China's practices of industrialization, infrastructure development, and manufacturing (Cheng, 2018). Others scholars have suggested that instead of direct imitation of China's development practices, developing countries will instead "practice self-determination" away from the U.S.-led free-market model (Luo, 2022; Repnikova, 2022).

Social governance, while not covered by Nye or Wang and Lu, appears to be an increasingly emphasized aspect of the domestic foundation for soft power. Given challenging social conflicts amidst the information revolution, the Chinese government increasingly recognizes the need for a holistic approach to solving them, requiring resources beyond just those provided through the state (Liu, 2014). However, scholars identify the transformation and improvement of public services as a top priority for the state, thus empowering civil society to mobilize social forces to mitigate social

conflict, though in a state-sanctioned fashion (Liu, 2014). Thus, social governance is typically defined as efforts to maintain social stability, and provide public services including judicial services, medical care, and public security (Ding, 2018; State Council, 2017).

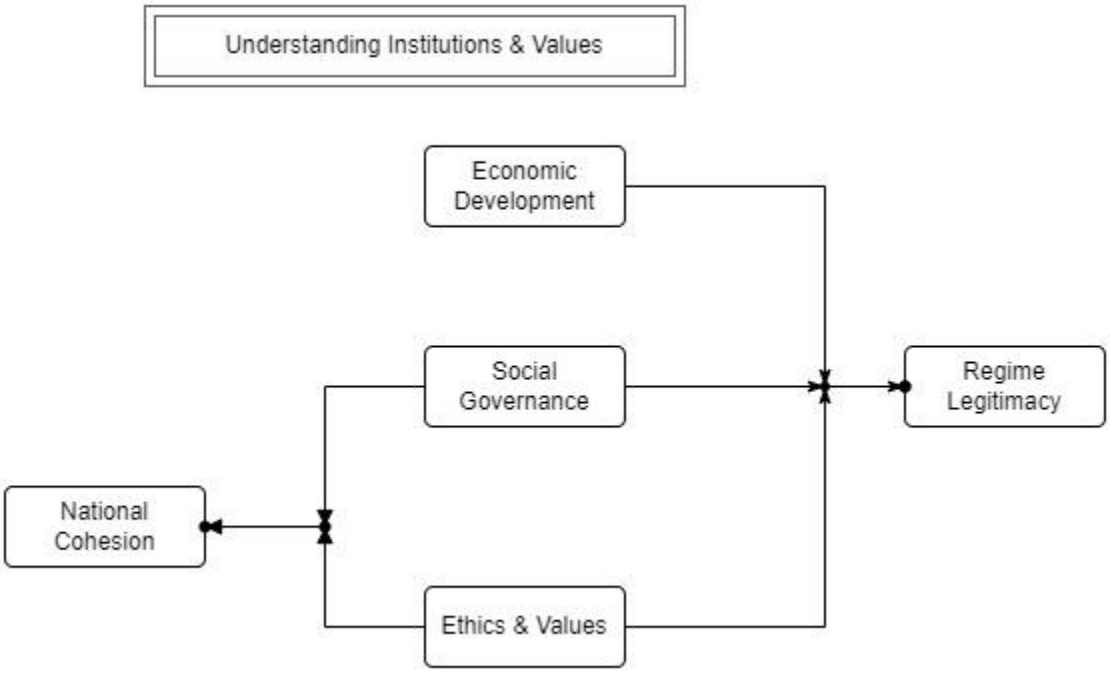


Figure 2: This chart is a basic depiction of how the concepts within this section fit together. In theory, economic development, social governance, and the perception of strong ethics and values all contribute to regime legitimacy. Meanwhile, national cohesion is largely constructed through social governance and a common set of ethics and values.

Resulting Framework points:

- **National cohesion:** References to fostering a shared identity amongst Chinese citizens, whether through ideology, language, or opinion.
- **Ethics and Values**: References to a Chinese value system or guiding set of ethics.
- **Regime legitimacy**: References to CPC leadership or policies in a positive light or other direct attempts to boost regime popularity.
- **Economic Development:** References to economic development as a goal of AI advancement or references to a specific form of economic development related to AI advancement.
- **Social governance**: Social governance is typically defined as efforts to maintain social stability and provide public services including judicial services, medical care, and public security.

2.3.3 Overseas Image

In contrast to Nye's model which heavily emphasizes the role that the "substance and style of foreign policy" plays in a country's soft power, early Chinese discussion of soft power suggested a more passive approach. Chinese analysts examined by Wang and Lu often labeled Zhou Enlai's graceful diplomatic style as the ideal approach which they claim helped improve China's status in the world from the 1950's to the 1970's (H. Wang & Lu, 2008). Wang and Lu further found that domestic experts believed that China's non-aligned posture, resistance to outside pressure, non-ideological and non-confrontational foreign policy and its orientation toward a "peaceful rise" increased China's soft power. They showed that Chinese experts viewed an arrogant diplomatic style and lack of respect for international law as undermining soft power. They often cited the unilateral diplomacy and corresponding decline in American prestige in the world in the George W. Bush and Donald Trump eras of U.S. foreign policy. In this view, an ideal form of diplomacy and public relations is characterized by subtle presentation of an overseas image– not forcing it on others, as China often accuses the United States of doing.

In more recent years, China has maintained and even increased its rhetoric of promoting sovereignty, non-interference, and respecting international law. But its diplomatic actions have departed from the subtle, inward-facing style of Zhou En Lai, taking a more aggressive tone, according to some scholars (H. Wang & Lu, 2008). This appears to directly contradict earlier prescriptions for soft power approaches by many Chinese analysts. However, some scholars (A. Friedberg, 2014) suggest that this shift in approach is not an unintended contradiction or a spontaneous response triggered by domestic factors but rather a well-planned strategy executed as China's leaders perceived relative power gains. Within this strategic soft power framework, Friedberg argued that China seeks to strengthen its position while simultaneously attempting to erode that of the United States. This debate is far from settled because modern Chinese diplomacy, like that of all prominent countries, often features paradoxes and contradictions (A. Friedberg, 2014; A. L. Friedberg, 2018).

International discourse power

In a 2013 speech, President Xi Jinping called on state media to "tell China's story well" to bolster the country's image internationally and build what its propaganda officials refer to as "international

discourse power" (IDP) (1058974, 2022a; Shumba, 2021). IDP is commonly defined as China's ability to shape the global conversation and is an important component of comprehensive national power. IDP allegedly strengthens soft power while consolidating the foundation of hard power. Key actions toward strengthening it include:

1) Strengthening the influence of Chinese culture, foreign cultural exchanges, and expanding the Confucius Institutes;
2) Building robust mass media, and improve global coverage of Chinese arts and cultural displays; and
3) Participating in global governance and in the increasing "Belt and Road" international cooperation (吴, 2020).

In analyzing American soft power, Chinese analysts also labeled American dominance of the global media as a major driver of the spread of American culture, and thus a legitimizing force for the United States' dominance in the world (H. Wang & Lu, 2008). Since this 2008 analysis, China has developed a number of foreign-language media outlets to facilitate telling China's story well. These outlets are active on Twitter and other social media platforms like Instagram and YouTube. They are largely state-owned or controlled enterprises.

Chinese experts argued China should use its new technologies to spread Chinese culture and values around the world (Nye, 2021; H. Wang & Lu, 2008). Perhaps the most notable development of PRC public diplomacy in recent years is "Wolf Warrior diplomacy," in which prominent PRC diplomats and spokespeople took to social media platforms – prominently, Twitter– to first reframe global perceptions surrounding China's role in the COVID-19 pandemic. Outlasting this effort was the broader aim to challenge Western narratives about China's role in the world, especially in comparison to the United States (1058974, 2022a; Shumba, 2021). China has further attempted to amplify these tweets by deploying "bots" on platforms like Twitter. An investigation by the Programme on Democracy and Technology at the Oxford Internet Institute found that the rise of Chinese outlets and actors on Twitter was largely fueled by fake, often automated, accounts that retweet Chinese diplomats and state media. This quietly amplifies Chinese state messaging to hundreds of millions of Twitter users, often without the reader's knowledge that the content was state-sponsored (Schliebs et al., 2021).

Other works highlight the centrality of China's Belt and Road Initiative to its quest for soft power.[11] One Chinese academic argues that: "The "Belt and Road" initiative is an important effort and decision made by the Party and country to seek domestic development and comprehensively consider regional development and global development. It plays an important role in enhancing the country's cultural soft power." BRI is intended to: a) enhance China's "hard power," thus enhancing the country's foundation for cultural soft power through economic, scientific, and technological strength; b) spread the values of contemporary China; c) "reproduce(s) the attractiveness of China's excellent culture and d) improve(s) the country's international discourse power" (赖雄麟 & 于彦宾, 2019).

Resulting framework points:

- **International discourse power**: Examples of actions within the broader goal of the Chinese Communist Party to achieve greater influence globally in the setting of economic and political agendas, and in the shaping of global public opinion (Chen, 2022).
- **Belt and Road Initiative**: References to China's Belt and Road Initiative or connected projects and investments, either implicitly or explicitly.
- **Comparison to US**: Comparisons between China's position or behavior and that of the United States, regardless of tone.

2.3.4 Other notes

Existing literature on Chinese soft power consistently recognize science and technology as important sources of soft power, just as they are important sources of hard power. However, this idea is most often articulated in reference to the US's dominance in information and communication technologies as a foundation for its worldwide cultural dominance, as well as its comparative advantage in international trade (Xu, 2005). In response to this comparison, according to Yecies et al. (2019), many Chinese "harbored an inferiority complex in relation to the West, a sense that China's economic success was based on imitation." This view has been exacerbated over the years by continuing international reports of large-scale copyright infringement. Chinese analysts identified this area as a weakness in China's desirability that needed to be overcome (Yecies et al., 2019).

Therefore, within the framework, I will also track:

[11] See "Works Referenced" for further readings.

- **Reputation as an innovative nation**: Reference to China or Chinese society in a highly innovative light, either implicitly or explicitly.

2.4 Conclusion

The Relationship Between Soft Power And Chinese AI Governance Has Not Been Comprehensively Evaluated.

China's AI policy is vastly under-considered despite its growing importance. Yet, no studies specifically consider Chinese soft power in the context of AI.[12] While Chinese AI policy and soft power have been extensively studied separately, the literature does not consider how soft power considerations affect the development of AI policy. Current works focus on military and economic consequences but avoid consideration of Chinese AI policy as a model with soft power influence. Thus, understandings of PRC AI governance are incomplete. I attempt to bridge these gaps through a mixed-methods process analyzing how soft power initiatives manifest in both Chinese domestic AI policy and PRC messaging towards overseas audiences via Twitter.

[12] Searches for "AI and soft power" ("人工智能和软实力") or "AI and comprehensive national power" ("人工智能和综合国力") returned no relevant results in the CNKI database.

3. Empirical approach

This paper focuses on the research question: How does China's approach to soft power manifest in its efforts to become an AI superpower?

Guiding Hypothesis: China's efforts to build soft power manifest in its approach to AI governance.

I will test whether soft power theory can help explain Chinese official discourse on AI in the domestic and international arenas. I will also test whether the three categories (culture, institutions and values, and overseas image) originally set out by Nye are consistent with the development of Chinese AI policy. If this is true, we would: a) see the presence of soft power building rhetoric and actions consistently throughout the dataset; and b) be able to quantify the instances of soft power building across the three broad categories of soft power.

Hypothesis 1: China's AI strategy (including its domestic policy and overseas messaging) will emphasize contemporary Chinese culture over traditional culture.

Existing literature consistently emphasizes traditional culture as the source of China's soft power and largely ignores its modern culture. I predict China's AI discourse will have shifted to reflect modern Chinese culture over traditional culture. Much has changed in Chinese society since the publication of Nye's original theory and of Wang and Lu's consolidated analysis of Chinese literature on soft power. China has since hosted two Olympic Games, promoted AI development, and produced numerous high-profile technology firms. It is likely to draw increasingly from these cultural developments in its soft power strategy. If true, we would expect to see coding counts for contemporary culture to be higher than counts for traditional culture across both domestic AI policies and Chinese overseas messaging.

Hypothesis 2: China's official AI discourse and strategy will present China as having a superior governance model more than it will discuss ethics and values, regime legitimacy, or national cohesion.

> **Hypothesis 2a: China's AI discourse and strategy will present China as having a superior economic model more than it will discuss ethics and values, regime legitimacy, or national cohesion.**

Hypothesis 2b: China's AI discourse and strategy will present China as having a superior social governance model more than it will discuss ethics and values, regime legitimacy, or national cohesion.

Second, I predict that within China's AI rhetoric, economic development and social governance will be the two most frequently referenced elements of soft power theory's institutions and values category. Economic development has been the primary focus of this category within existing literature and is likely to remain dominant, presenting AI as a driver of China's current and future economic growth. Emphasis on the importance of its social governance has been absent in previous soft power literature, but due to Xi-era initiatives like the China Dream and Core Socialist Values and the development of new AI-enabled technologies that increase the government's capacity for automating and digitizing public services, social governance will be a second dominant dimension. Because ethics and values have not been heavily emphasized in previous Chinese soft power literature it is unlikely to be featured. Regime legitimacy and national cohesion are dependent on the above three dimensions and are therefore unlikely to be addressed directly. While all of these concepts are interconnected, economic development and social governance will be the most emphasized dimensions. If this hypothesis is supported, we would expect to see the coding counts for economic development and social governance to be consistently higher than the other dimensions of institutions and values: regime legitimacy, cohesive national identity, and ethics and values.

Hypothesis 3: China's official AI discourse in pursuit of improving its overseas image will reflect language concerning AI that emphasizes an international rather than domestic focus.

Previous literature framed the substance and style of China's foreign policy as relatively unimportant in comparison to culture and the domestic foundation of institutions and values. Because of recent changes in China's approach to foreign policy, I predict China's AI rhetoric will have a strong international, rather than domestic focus. An international focus would likely take the form of actions and statements that increase China's international discourse power and the Belt and Road Initiative. We would expect coding counts for the overseas image category to be consistent with those of culture and domestic institutions and values, as well as a consistent outward-facing orientation.

4. Methods

To test these hypotheses, I first collected two types of documents and applied the framework developed in Chapter 2.3 using directed content analysis as described by Hsieh & Shannon (2005). I then tested the hypotheses described in the Empirical Approach chapter using the findings from this analysis.[13]

4.1 Document Collection

I collected both national-level domestic AI policies and posts from Twitter accounts associated with the Chinese government. These data sets accomplish two goals. Domestic policies on AI provide insight into the government's intentions. Tweets are a good measure of Chinese public diplomacy efforts. Because internet users in Mainland China do not generally have access to Twitter, we can assume that the target audience of diplomats' and state-affiliated media accounts are overseas Twitter users. Covering both of these categories is important because of the emphasis placed in the Chinese model of soft power on the existence of a strong domestic foundation before a country is able to appear attractive to overseas audiences.

Date range

For both policies and tweets, I used the date range of January 1, 2015 through June 15, 2022. This timeline follows eras three and four of Chinese AI policy identified by Gao et al. (2019): the era of macro policies and the era of detailed guidance, respectively.

Policy search methods

To identify the most relevant Chinese Government policies for review, I compared two databases: the OECD Dashboard on AI Policy[14] and the Central Government's online policy library[15] for official national-level policies referencing "artificial intelligence." I searched the online policy index for "人工智能" (Artificial intelligence) to ensure coverage of relevant policies. I included policies based on the presence of each of these criteria: direct mention of "artificial intelligence" in the title

[13] I received University of Oxford ethics approval for the following methods (Reference number: SSH_OII_CIA_22_098). Further description of the ethical implications of this research can be found in Appendix C.
[14] Found at: https://oecd.ai/en/dashboards/countries/China
[15] Found at: http://www.gov.cn/zhengce/zhengcewenjianku/index.htm

or body; national application or significance; and publication between January 1, 2015 and the final search on June 11, 2022. In total, I analyzed ten national-level policies which do not constitute all AI-related policies in existence, but do provide insight into the general nature and approach of the broader body of policies. *Appendix D* details this process.

While a larger number of national policies are related to AI and would be searchable through related terms, such as 5G, smart cities, or other applications of AI, I chose to keep the search term narrow for two reasons. Using AI as a search term reduces the unintended inclusion of specific policies of only technical interest to specialists. Therefore, including policies that directly reference AI are likely to be representative of the broader set of policies. This dataset does not include policies set forth by recently created AI-focused entities, such as the New Generation Artificial Intelligence Governance Specialist Committee. Future studies could more closely examine outputs from more specialized regulatory bodies in AI.

Twitter data collection methods

Based on the literature review, I identified two key groups of Chinese government-affiliated Twitter accounts: state-run media; and prominent diplomats and spokespeople. I did not include Chinese Embassy accounts in my dataset, because a preliminary analysis showed minimal coverage of AI by these accounts. Future studies might examine this more closely.

To select the relevant PRC-affiliated accounts, I reviewed the comprehensive list published by the Oxford Programme on Democracy and Technology and selected all verified English-language accounts.[16] For individual diplomat accounts, I selected only verified individuals with the title of "Ambassador" or "Spokesperson" that were still active at the time of selection (01 June 2022). I

[16] DemTech's list of diplomatic Twitter accounts was created by triangulating three independently compiled lists of PRC diplomats on Twitter. The list was supplemented by going through a list of every country in the United Nations and searching Twitter with a number of keywords including "Chinese Ambassador <Country>", as well as in other languages where appropriate. The authors also relied on a network approach by manually examining the followee-lists of many core diplomats. As such, this is a comprehensive list, as of the date of publication (Schliebs et al., 2021).

identified eight media accounts and 17 individual diplomat accounts that fit my requirements and have tweeted at least once on AI.

I then constructed a query through Twitter's "Essential" API that searched all posts tied to the selected accounts between 01 January 2015 and 13 June 2022 and included the keyword Artificial intelligence or AI (人工智能, and 超级智能).[17]

The search for diplomats' tweets produced 267 tweets over the seven-year time span, which was then reduced to 204 after irrelevant tweets were removed. The query of eight prominent state-affiliated media accounts on Twitter returned 4,136 tweets, which was then reduced to 4,022 after an initial cleaning process based on issues found in the previous round of cleaning.[18]

Qualitative analysis of all 4,000 tweets was unrealistic because of time constraints so I selected a small but representative portion of the dataset to conduct directed content analysis on based on the following process through R software. See *Appendix E: Robustness Check* for statistical analysis as supporting evidence that these subsets are representative of the dataset as a whole.

4.2 Translating Policy Documents From Chinese to English

All policy documents were originally available only in Mandarin Chinese. I translated these documents with the help of online translation tools (I am professionally fluent in Mandarin Chinese but given the volume and length of documents, chose to use online translation tools for efficiency). I compared the automatically translated versions to the original versions side-by-side and corrected as needed to ensure accuracy. In some cases, translated versions provided by think tanks such as New America Foundation, The Center for Security and Emerging Technology (CSET), or Stanford DigiChina were available. In these cases, I compared the existing translation to available original

[17] Python code used to access Twitter API available upon request.

[18] "Ai" is the phonetic (pinyin) spelling of a number of Chinese characters or words, which is then picked up within the search criteria. For example, "wo *ai* zhongguo" means "I love China." Several tweets included this non-character-based phrase and thus needed to be removed from the initial dataset.

documents to ensure accuracy. Two policies were not available online in their original form. I relied on the existing translations for these.

All tweets in the third category of the dataset were originally in English. This sample of English tweets by Chinese officials is useful because they are intended to reach an overseas audience, thus representing the PRC's public diplomacy efforts.

4.3 Directed Content Analysis

As noted above, I developed my conceptual framework based on Nye, Wang and Lu's, and Repnikova's work on soft power (Nye, 2021; Repnikova, 2022; H. Wang & Lu, 2008). I used MAXQDA Software to store the code (framework) and documents, organize the tracking of coded elements. I used a directed qualitative text analysis approach, as described in Hsieh & Shannon (2005) which allows for existing theory to be tested and extended. In this study, a primary goal is to understand whether existing soft power frameworks need to be updated in the context of new technological developments in AI and China's evolving role in the international system. Therefore, this is a suitable approach. The detailed framework is located in *Appendix A*.

Text was coded in multiple categories, as this analysis is intended to be more descriptive and exploratory, rather than quantitatively rigorous. For example, there is much overlap between IDP and reputation as an innovative nation. Some text elements matched as many as six different coding categories. However, most matched between one and three.

To ensure consistency in coding, I employed three forms of review after the initial coding analysis: 1) reviewed each document after the initial reading; 2) reviewed coded content within each category while comparing across documents through the MAXQDA comparison tool; and 3) reviewed based on a keyword search within documents of common keywords or phrases to ensure none were missed. Any new sub-codes identified during the coding process were added early on, and all documents were reviewed to ensure no relevant elements were missed prior to the addition of the new code.

5. Results

Guiding Hypothesis: The PRC's efforts to build soft power manifest in its approach to AI governance.

My results support this hypothesis because: 1) the presence of instances of soft power building techniques consistently throughout the dataset (Table A); and 2) instances of soft power building are present across the three broad categories of soft power (Table B). Note: Full results table included in *Appendix G.*

Table A: Coding results across documents.

Code	Media Tweets	Diplomat Tweets	All Policies
Total coded sections per document	928	518	223
Total tweets or documents	531	204	10

Table B: Coding results across categories.

Code	Media Tweets	Diplomat Tweets	Policies
Total coded sections for culture	80	13	6
Total coded sections for institutions & values	244	80	113
Total coded sections for overseas image	256	136	17
Total tweets or documents	531	204	11

Overall, soft power theory still has explanatory power. There is strong evidence of an effort to build soft power in both domestic policies and overseas rhetoric. The three-part structure still largely applies. However, the distinction between some subsets is complex and the category of reputation as an innovative nation may apply across the three categories.

In the following pages, I present evidence testing each hypothesis and examples of the PRC's soft power model in each dimension. I have selected a small number of illustrative examples. A larger set of examples can be found in *Appendix F: Illustrative Content*.

5.1 Culture

Hypothesis 1: China's official AI discourse will emphasize contemporary Chinese culture over traditional culture.

This hypothesis is partially supported. In both sets of tweets, counts for contemporary culture outnumber counts for traditional culture. However, no references to contemporary Chinese culture were detected in policies, while six of eleven policy documents referenced traditional Chinese culture.

Table C: Coding results for Culture.

Code	Subcode	Media Tweets	Diplomat Tweets	All Policies
Culture	Contemporary Chinese culture	68	9	0
Culture	Traditional Chinese culture	12	4	6
Total coded sections per document		928	518	223
Total tweets/documents		531	204	10

In comparison to the texts reviewed in the *Framework Construction* chapter which almost exclusively referenced traditional Chinese culture as a focus of Chinese soft power initiatives, overseas messaging surrounding AI emphasized contemporary Chinese culture. This is a relative but only partial shift of focus to modern culture.

5.1.1 Traditional Culture

Policy references to traditional Chinese values concerning AI refer to Confucian values such as harmony and filial piety. The MIIT 3-Year AI Action Plan and the Algorithmic Recommendation Regulations cite this as an important goal. Harmony is referenced throughout policy documents. A stated goal of the Ethical Norms for AI is to "promote harmony and friendship" (two of the Core Socialist Values. See *Appendix B*). The MOST Guidelines on the New Generation AI Specialist Committee reference "harmony" both in the context of harmony between AI and the economy or society and in the context of AI improving harmony in society.

In contrast, references to traditional Chinese culture took a different form in analyzed tweets. These tweets typically referred to AI used to enhance tangible or digital products of traditional culture. For example:

5.1.2 Contemporary Culture

Contemporary Chinese culture is referenced more frequently than traditional culture in overseas messaging surrounding AI and is not referenced in a detectable way in China's domestic AI policy documents. These categories are not mutually exclusive, but the change from absence to the presence of references of contemporary culture between the literature review and Chinese overseas discourse surrounding AI is noteworthy. Tweets on contemporary culture primarily focus on two aspects: entertainment and a modern way of life. For example:

5.2 Institutions And Values

Hypothesis 2: China's official AI discourse and strategy will present China as having a superior economic (Hypothesis 2a) and social (Hypothesis 2b) governance model more than it will discuss ethics and values, regime legitimacy, or national cohesion.

These hypotheses are largely supported. Economic development and social governance were among the most referenced across both sets of tweets and across policies. Media tweets referenced economic development and social governance a total of 148 and 52 times, respectively, and diplomat tweets referenced them 62 and 12 times, respectively. Economic development and social governance were referenced 37 and 26 times in AI policies, respectively, falling just behind Ethics and Values.

Table D: Coding results for Institutions & Values.

Code	Subcode	Media Tweets	Diplomat Tweets	All Policies
Institutions & Values	General internal legitimacy	15	3	2
Institutions & Values	Economic Development	148	62	37
Institutions & Values	Social Governance	52	12	26
Institutions & Values	Ethics and Values	29	3	40
Institutions & Values	Cohesive National Identity	0	0	8
Total coded sections per document		928	518	223
Total tweets or documents		531	204	10

5.2.1 National Cohesion

I did not detect national cohesion promotion in analyzed tweets, and only found 8 references within policies. This does not necessarily mean that it is not an important component of the PRC's efforts; national AI policies do have a domestic audience and will impact citizens and companies in the country. Three examples demonstrate this. Within them, there are clear steps toward harnessing AI to improve national cohesion.

1) Made in China 2025 and the Guiding Opinions on the Ethical Governance of AI call for AI to "lay a solid foundation for the realization of the Chinese Dream of the great rejuvenation of the Chinese nation" (中国制造 2025, 2015).
2) The New Generation AI Development Plan proposes ways to promote social interaction and mutual trust, including developing next-generation, AI-powered social networks and promoting the integration of virtual and physical environments through virtual reality technologies. It also suggests the integration of blockchain technology and AI to "establish a new social credit system, and minimize the cost and risk of interpersonal communication" (State Council, 2017). Finally, it recommends mobilizing traditional and emerging forms of media to publicize new developments in AI in order to develop "whole of society consensus" and mobilize the enthusiasm of the whole society to participate in and support the development of artificial intelligence." The policy explicitly states that "public opinion guidance" will aid in social, ethical, and legal challenges that AI may bring (State Council, 2017).
3) The Algorithmic Recommendation Regulations suggest they are a primary mechanism through which AI and the state can guide public opinion. The policy gives the government direct authority to intervene and discipline companies deploying algorithms on online social media and service platforms that the government deems disruptive to national cohesion. This extends the government's already strong ability to censor and direct online speech and interaction (1058974, 2022b).

5.2.2 Regime Legitimacy

Few direct references to regime legitimacy appear in policies and tweets. This low count likely does not mean that regime legitimacy is an unimportant component; explicit references to regime legitimacy are unlikely to appear in public-facing text.

Explicit references to boosting regime legitimacy appeared in policies primarily in the form of self-reference in a positive light to internal government entities, other policies, or Xi Jinping himself. For example, the MIIT 3-Year AI Action Plan calls for relevant governing bodies to "comprehensively carry out and implement the spirit of the 19th Party Congress, taking Xi Jinping's ideology of socialism with Chinese characteristics for a new era as guidance" (Ministry of Industry and Information Technology (MIIT), 2017). Also, a small number of tweets directly refer to the Chinese Communist Party or its leaders, thus representing direct attempts to boost regime legitimacy. For example:

This content, however, likely does not fully capture the way that AI is perceived to be able to help boost regime legitimacy. The potential impact of a successful AI strategy on CCP regime legitimacy instead rests heavily on its role in economic development and social stability.

5.2.3 Economic Development

As predicted, economic development was the most-referenced code within the "institutions and values" category with 212 tweets referencing it overall (28.8% of all tweets) and 37 direct references within policies. Thus, economic development remains the most referenced pillar of regime legitimacy and of the country's projected image.

Policies referencing economic development take on several key themes aside from purely focusing on scientific advancements in AI including: 1) AI improves manufacturing and industrial capacity; 2) AI causes spillover effects for other technological breakthroughs that; 3) allow for "high quality" and "high-end" economic development that improves people's daily lives.

The use of AI to develop manufacturing and industrial capacity is the most frequently referenced aspect of the economic development plans in the MIIT 3-Year AI Action Plan, MIC 2025, and AIDP. AI and hardware production capacity and software are a central focus of MIC 2025. This is designed to build China "into a manufacturing power that leads the development of the world's

manufacturing industry and lay a solid foundation for the realization of the Chinese dream of the great rejuvenation of the Chinese nation" (中国制造 2025, 2015).

Spillover effects for other technological breakthroughs through AI are cited in the MIIT 3-Year AI Action Plan, which reasons that "AI has a significant spillover effect, which will further promote the progress of other technologies and promote the overall breakthrough of strategic emerging industries" (Ministry of Industry and Information Technology (MIIT), 2017).

Further, AI development allows for "high quality and high-end economic development," thus improving people's livelihoods according to the MOST Guidelines on the New Generation AI Specialist Committee.

Tweets tended to use similar language, frequently using phrases like "high-end" or "efficient intelligent economy." They focused heavily on improving telecommunications and other infrastructures. This form of public messaging often referenced poverty reduction and continued "high-quality" economic growth. Some tweets also tied AI integration in the economy to sustainable development aims. Others tweets alluded to the ability of AI and the prospect of automating jobs to help the country overcome or potentially mitigate impending economic slowdown caused by its rapidly aging population.

My results clearly demonstrate that an economic development model greatly enhanced by AI plays a major role in the image China is projecting both domestically and overseas. It promises to improve manufacturing capabilities, improve domestic infrastructures resulting in increased efficiency and comfort in people's daily lives, enable high-tech sustainable development, increase the ability to produce high-quality, rather than cheap goods, and potentially overcome or mitigate the demographic challenge the country faces with its rapidly aging population.

5.2.4 Social Governance

As predicted, social governance was among the most-referenced code within the institutions and values category with 64 of 735 (8.7%) tweets referencing it and 26 direct references within policies. Notably, every single policy referenced social governance at least once.

The AIDP suggests that AI brings new opportunities for social construction. Aside from vague references like "social interaction will be safer and more efficient," (State Council, 2017) it proposed more specific examples of social governance that would benefit from the integration of AI applications. These included administrative management, judicial management, urban management, and environmental protection. The AIDP also promotes AI to boost social interaction and mutual trust via new social network platforms and the integration of physical and virtual spaces through the development of virtual reality technologies. The Algorithmic Recommendation Regulations are also referenced as a way to take a proactive social governance approach in moderating online discourse within China (1058974, 2022b).

Several policies (the AIDP and the AIDP National Pilot Zone Development) suggest that AI can help improve the rule of law by helping to "crack down on illegal activities." Beyond these applications, smart cities take on a central role in both China's intended economic development and the ability to implement new forms of governance.

Tweets from my dataset provide numerous examples of applications of AI in what China calls "social governance," from traffic violation response to riot prevention[19] or suicide prevention. These applications most often take the form of smart or safe cities. Several notable tweets claim new forms of governance are enabled by mass data collection on society. Some point out that China is best positioned than other countries to capture large amounts of data and put it to good use.

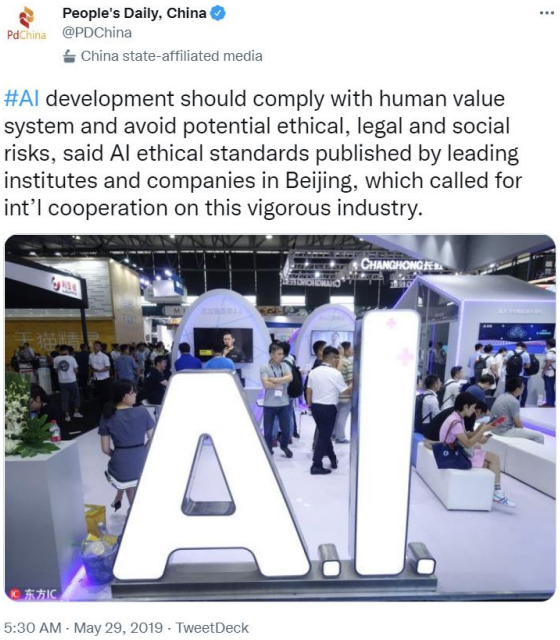
[19] Xinjiang Province is home to millions of Muslims of the Uighur minority group. Extensive state oppression of this group, largely enabled by surveillance technologies, has led to numerous international reactions, including a widespread diplomatic boycott of the Beijing Olympics. In January 2021, the United States declared that the mass surveillance, arbitrary detention, and extrajudicial killings of Uighurs in Xinjiang constitutes a genocide (Ramzy, 2021).

5.2.5 Ethics and Values

As predicted, direct references to ethics and values received fewer coding counts overall than social governance or economic development. Only four of ten policies sampled directly referenced ethics and values, but two of ten were fully oriented towards developing ethical guidance or norms for AI (Ethical Norms for AI and Guiding Opinions on the Ethical Governance of Algorithms). Just thirty-two of 735 tweets reference it overall (4.4% of all tweets).

Policies called for, inter alia, instilling "ethics into the whole life cycle" of AI and for efforts to prevent "major ethical risks brought about by technological innovation." The Guiding Opinions on the Ethical Governance of Algorithms further list values for algorithms and entities developing them including, fairness, justice, respecting difference, and preventing prejudice. Other policies, such as the Guidance on Internet Information Algorithms and the Algorithmic Recommendation Regulations take paternalistic, approaches, calling for specific "value orientation" in the application of algorithms often in direct reference to the Core Socialist Values (1058974, 2022b). MIC 2025 stated the need to "promote the construction of a theoretical system of science and technology ethics with Chinese characteristics" (中国制造 2025, 2015).

Tweets from both media outlets and Chinese diplomats referred to ethics and values in relation to building ethical AI.



A prominent feature of public use of AI in China is facial recognition in widely-deployed surveillance systems. These promise improved public safety. As a result, China has the most advanced surveillance systems in the world. Whether this technology is accepted into Chinese society without any boundaries is not clear. There have been objections to the use of facial recognition use in schools and other instances where people felt their privacy was infringed upon. Typically, these assertions of the right to privacy arise concerning private companies' ability to abuse user data as opposed to government surveillance (1058974, 2022b). The government has positioned itself as a responsive governing actor, willing to address citizens' privacy concerns concerning technology companies. These tweets only appeared in the media accounts dataset and not in the diplomat accounts dataset.

5.3 Overseas Image

Hypothesis 3: China's official AI discourse in pursuit of improving its overseas image will reflect language concerning AI that emphasizes an international rather than domestic focus.
This hypothesis is partially supported as overall coding counts for "Overseas Image" surpassed "Institutions and Values" in counts within diplomats' tweets and nearly matched it within media tweets.

These findings are valuable because they demonstrate that China acknowledges the value in promoting its overseas image surrounding AI development, deployment, and leadership. This is a change as in earlier literature on Chinese soft power, scholars tended to de-emphasize the importance of overseas image promotion.

Table E: Coding results for Overseas Image.

Code	Subcode	Media Tweets	Diplomat Tweets	All Policies
Overseas Image	Comparison to US	67	20	4
Overseas Image	Belt & Road Initiative	5	28	4
Overseas Image	Global Cooperation	14	16	5
Overseas Image	International Discourse Power	170	72	4
Total coded sections per document		928	518	223
Total tweets or documents		531	204	10

5.3.1 International Discourse Power

Coding counts within this category revealed frequent attempts to boost international discourse power within 32% of media tweets and 35% of diplomat tweets. Four of ten policies made direct reference to the actions that are expected to boost international discourse power using AI.[20] The presence of these media outlets and diplomats on Twitter could be seen as an effort to enhance China's international discourse power.

Common themes within policies are the encouragement of participation in standard setting and hosting academic and industry AI-related conferences. Made in China 2025 referenced the need to build innovative design clusters with world influence. Additionally, the AI for Higher Education Action Plan calls for "support of the organization of high-level artificial intelligence international Academic conferences, [in order] to promote Chinese scholars to hold important positions in relevant international academic organizations and enhance their international influence; to support Chinese scholars to actively participate in the formulation of international rules related to artificial

[20] One reason IDP is a high-scoring code category is that it is a broader definition than most other sections of the code. However, my intent in this section is to survey trends, rather than to make definitive rankings between codes.

intelligence, and to propose "China Initiatives" and "China Standards" in a timely manner" (高等学校人工智能创新行动计划, n.d.)

Tweets from diplomats and media outlets often featured the promotion of AI conferences. Finally, the posing of rhetorical questions and publishing of thought pieces was a frequent approach in tweets on AI related to international discourse power.

Global cooperation (Sub-tag of International Discourse Power)

During the coding process, I found a sub-trend of references to international cooperation that appears to fit within the umbrella of developing international discourse power. This code, "global cooperation" is then defined as: Suggestions of or references to global cooperation on AI or related issues. It is not meant to be a code of its own in competition with the pre-existing categories, rather a sub-trend worth tracking.

Few policies reference global cooperation, except in the effort to establish international standards and international mutual recognition of China's and other countries' systems (MIC 2025 and the Ethical Norms for AI). Thirty tweets, on the other hand, promoted the message that China should play a critical role in global AI development and that other countries should collaborate with it.

5.3.2 Belt and Road Initiative (BRI)

The Belt and Road Initiative represents a key component of both China's foreign policy efforts to build relationships with the rest of the world and expanding industrial and AI policy to enter markets around the world. Nearly half of the policies examined referenced BRI directly.

Four of ten policies examined directly referenced BRI. The MIIT 3-year Action Plan stated: "Take full advantage of the bilateral and multilateral cooperation mechanisms, and seize the opportunity of the Belt and Road Initiative to encourage scientific research institutes, enterprises, and trade organizations at home and abroad to broaden the channels of communication and conduct extensive cooperation to achieve mutual benefits and win-win cooperation" (Ministry of Industry and Information Technology (MIIT), 2017). Both the AI for Higher Education Action Plan and the AIDP called for the joint cultivation of talent in academia and industry and joint establishment of AI

scientific and technological research centers with BRI countries, as well as for the increase in awareness of AI and China's efforts in it in BRI countries. Similarly, the AIDP called for accelerated promotion and application of AI technology in BRI countries and the joint establishment of international organizations and standards with partner countries (State Council, 2017).

Tweets about BRI primarily highlighted the successes of BRI initiatives in various countries. For example:

5.3.3 Comparison to the United States

A commonly cited motivation for Chinese officials' activity on Twitter and other social media platforms is to "counter Western narratives" (Shumba, 2021). Based on the content analysis results table, 67 of 531 (12.6%) media tweets and 20 of 204 (9.8%) diplomat tweets made a comparison to the United States in some way. Policy statements did not explicitly reference competition with the United States. However, there were many references that implicitly referred to major powers like the United States. For example, the MIIT 3-Year AI Action Plan outlined plans to gain an international competitive advantage in key areas of AI development (Ministry of Industry and Information Technology (MIIT), 2017).

On the other hand, 11.8% of all tweets either made direct comparisons to the United States by name or clearly implicated the United States using more general language. These fell into four broad categories: 1) Competitive - Political, 2) Competitive - Business, 3) Neutral, and 4) Welcoming China to the world stage

Competitive - Political tweets tended to suggest that: a) the U.S. domestic model —currently characterized by severely partisan politics and a lack of effective planning— was flawed; b) China's overall governance model is stable and makes China worthy of a global leadership position; and c) the United States has unfairly targeted Chinese companies for economic motives, rather than claimed concerns about human rights or values.

Competitive - Business tweets tend to report on the status of China's leading tech or AI companies in comparison to U.S. competitors. For example, multiple diplomats retweeted posts comparing funding awarded to U.S. versus Chinese AI startups or the suggestion that Chinese businesses will soon beat the United States in AI because of the much greater volume of data available to them.

Few tweets in this set were purely *neutral*, but those that were tended to present both the United States and China as leaders in the field of AI. For example, a Chinese diplomat retweeted a media post, saying: "By 2030, 70% of the global #economic impact from #ArtificialIntelligence will come from #China + #NorthAmerica."

A fourth subset of tweets on U.S.-China comparisons called for mutual respect or *welcoming China to the world stage* and updating global views to reflect not just the U.S.-led international order. One diplomat tweeted: "Mutual respect, dialogue and setting a course together have to be the way forward for the #China and the U.S., says @LHSummers."

5.4 Other: Reputation As An Innovative Nation

Over half of the analyzed tweets (52.2%) and over 30 sections of policies demonstrated clear attempts to portray China as an innovative nation. This code had a high number of matches partially due to its broad definition and its overlap with other high-scoring categories like international discourse power.

Policies that clearly enhance the country's reputation as an innovative nation sometimes stated this goal directly. The AIDP has a goal to "Promote opportunities for accelerating the construction of an innovative country." The AI for Higher Education Action Plan emphasized the need to build colleges and universities that are important sources of global AI innovation and produce scholars who are internationally renowned. The AIDP promotes a goal of China becoming the leader in patent production in AI. Numerous tweets painted China in an innovative light, while some referred directly to the country's potential to become a leader in innovation.

These results support findings from Yecies et al. (2019) that a major goal of Chinese soft power initiatives is to change the country's reputation as a low-quality "copycat" nation and instead one of the world's premier sources of innovation, especially in AI.

6. Analysis

The guiding hypothesis, "The PRC's efforts to build soft power manifest in its approach to AI governance" is strongly supported by my results. Every level of code within the soft power framework corresponded with rhetoric or action throughout Chinese AI policies and overseas messaging. China's argument for this model is explicitly stated in tweets from PRC diplomats: "Western countries dominate reputed governance indices. China should form its own index to improve soft power with #BigData and #AI." and "Many of Western theories & views on global order are outdated, based on the world more 50 years ago. Chinas (sic) scholars should put forth views & theories on global governance of the 21st century, a new era of IoT, AI, Internet, HSR (high speed rail) & most important of all, the resurgence of China."

Hypothesis 1 is partially supported. China's AI strategy (including its domestic policy and overseas messaging) emphasized contemporary Chinese culture and modern way of life nearly as strongly as traditional culture. This is a change from reviewed literature on China's soft power, which almost exclusively referenced traditional Chinese culture.

My results support hypothesis 2; China's official AI discourse and strategy actively presents China as having a superior governance model, specifically economic and social governance, more than it emphasizes ethics and values, regime legitimacy, or national cohesion. However, due to the interdependent nature of these concepts and subsequent measurement issues, this study cannot conclude that the latter three concepts are unimportant to the Chinese soft power approach.

Hypothesis 3 is partially supported. China's official AI discourse includes a much heavier emphasis on cultivating China's overseas image than seen in previous studies of Chinese soft power. Naturally, domestic AI policies reflected an internal focus while tweets directed at overseas audiences reflected an international focus. The active promotion of China's image overseas has clearly taken a much more prominent role than is noted in previous literature on Chinese soft power and is a departure from more traditional prescriptions of a subdued presentation overseas. This is due to a heavy focus on cultivating China's international discourse power in AI, appearing in both policies and tweets.

6.1 Understanding Domestic AI Policy As Foreign Policy

AI governance in the case of China can be understood in two key categories: Governance *of* AI; and governance *through* AI. The former is the act of regulating or dictating the development and use of AI. The latter is the deployment of AI in society to aid in the act of governing. The following diagrams are simplified depictions of what this looks like in the Chinese context:[21]

Governance Of AI	
Increase Technical Capabilities	Achieve breakthroughs in developing AI models, improve the quality of and production capacity for AI hardware, encourage investment in AI R&D across sectors, and encourage collaboration between sectors, increase education in AI and develop talent in field
Develop Ethics Guidelines	Publish strategies on ethical norms and governance for AI; develop AI with "Chinese characteristics" that uphold central tenants like the Core Socialist Values
Maintain strong state role	Assert authority over technology giants through crackdowns and create regulations that create and empower regulatory bodies
Active role in international AI scene	Participate in Standard Setting, designate forms of data as a "Critical National Resource," actively export Chinese technologies overseas
Become an AI superpower	

Figure 3: Examples of Governance of AI

[21] In creating these diagrams, I primarily referred to results from my content analysis. I supplemented these findings by referring to additional papers. (Ding, 2018; Roberts, Cowls, Morley, et al., 2021).

Governance Through AI	
Improve public services & infrastucture	Smart cities enable convenient, high-tech lifestyle and improve quality of local governance. AI applications improve quality of education, healthcare, etc.
Improve public safety	"Safe cities" (surveillance systems including facial recognition) reduce crime, improve public trust, increased state control over social unrest
Automate low-skill jobs	Improve manufacturing capabilities, mitigate impact of aging population on economy (but manage labor market disruptions), transition to high-end manufacturing and service-based economy
Mitigate climate change	"Green" applications of AI reduce waste or otherwise preserve the environment
Manage online discourse	Increase state control of online speech through control of algorithms on internet platforms, address issue of disinformation
Develop a model AI society and solidify the domestic foundation for soft power	

Figure 4: Examples of Governance through AI

Governance both ***of*** and ***through*** AI play a central role in each element of China's domestic foundation on which it intends to build its soft power. These are examples of how that could manifest:[22]

1) The state attempts to improve national cohesion through mandating that algorithms "disseminate positive energy" (互联网信息服务算法推荐管理规定, 2021);
2) The Core Socialist Values serve as guiding principles for constructing algorithms in a time where there is an international push for ethical AI;
3) Regime legitimacy may be maintained through regulations that prevent technology companies from accumulating more power than the state, or simply by the improvements to citizens' lives and livelihoods;
4) China's economic development model now features improved manufacturing efficiency, promises of improved sustainability, and a transition to "high-quality" and "high-end" production which have been enhanced through its AI policy; and
5) AI is key in enabling thorough social governance in "safe" and "smart cities" that promise greater efficiency and connectivity in public services and improved public safety.

[22] These efforts are not guaranteed to be effective. How exactly a value set can be ingrained in an algorithm is far from straightforward, and research in this area is only nascent. Rapid automation of low-skilled labor may, rather than simply easing the country's looming demographic challenge, displace low-skilled workers and result in decreased economic prosperity and regime legitimacy. It is too soon to declare success in any of these areas.

Beyond contributing to the domestic foundation, governance **of** and **through** AI also play a major role in China's development of its image overseas:[23]

1) Calls for global collaboration on AI governance and development frame China as a benevolent and cooperative actor, while also increasing its international discourse power;
2) The Belt and Road Initiative assists with the widespread export of Chinese technologies to nearly every country in the world; and
3) Developing its voice and role in the world through the above activities, China presents itself as a worthy competitor against the United States for global dominance in AI and its many applications.

Neither the success nor the failure of this model is guaranteed. A definitive "win" or "loss" is unlikely. But these considerations will be crucial for the U.S. foreign policy actors operating in the framework of great power competition to assess whether they are to effectively counter China's grand strategy.

6.2 Limitations

6.2.1 Data collection

"Artificial intelligence," is a broad umbrella term and is unlikely to match to all relevant tweets or policies, and thus may return an incomplete sample. In future studies, this can be improved on by using a more comprehensive list of search terms that cover related technologies or terms, such as the one as used in Gao et al. (2019). This would be a very large dataset, requiring a more quantitative approach. I only analyzed tweets written in English. Given the importance of understanding how China's model is portrayed throughout the world, this study could also be conducted in other languages in the respective local language of the given Embassy. For a more direct comparison of messaging on AI and AI policy domestically versus overseas, a future study might collect government posts on Chinese social media platforms, which are directed at the domestic audience, rather than examining the content of policies.

[23] Despite these efforts, China is likely to struggle with its international image, particularly due to the use of many of these technologies in Xinjiang Province (M. Wang, 2019). Rejection of the incorporation of these technologies into society by the public is also possible, as noted by much existing literature on possible totalitarian/authoritarian scenarios enabled by technology (Ceci & Rubin, 2022).

6.2.2 Methods

I used a directed content analysis approach (Hsieh & Shannon, 2005), which uses a pre-existing theory or framework to guide content analysis in pre-specified categories. According to Hsieh and Shannon, using theory to guide analysis has inherent limitations, such as that researchers may approach the data with an informed but, nonetheless, strong bias. Hence, I might have been more likely to find evidence that is supportive rather than non-supportive of my theory. Hsieh and Shannon further point out that overemphasis on the theory can blind researchers to contextual aspects of the phenomenon. To mitigate this, I invested great effort (both before conducting this research, by living in China for four years as a diplomat and in the analysis of my results) in contextualizing the findings of my content analysis within the structure of the theory.

In some cases, policies were difficult to classify when entire policies were dedicated directly to the coding subject itself, for example in the instance of two of ten policies specifically dedicated to developing ethical guidance or norms for AI (Ethical Norms for AI and Guiding Opinions on the Ethical Governance of Algorithms). Thus, deciding how many times within each document to flag references was somewhat arbitrary. As a result, pure coding counts are not always the most valuable form of analysis. I mitigated this limitation by providing discussion and analysis to supplement coding counts.

6.2.3 Overall Limitations Of This Analysis

This paper cannot claim to describe the success of the Chinese model either domestically or internationally. The goal of this research is to help understand the "model" and illuminate fully activities and approaches within Chinese AI governance. It is not to assess the effectiveness of Chinese soft power. As Nye aptly pointed out in his 2019 speech at Peking University, incorporating soft power strategy into government strategy is difficult, if not impossible to do effectively (Nye, 2021). First, achieving the desired effect of improved perceptions of the country depends entirely on the reaction of the subject of the attempted influence. Second, some of the most effective instruments of soft power such as influential products or culture are not fully under the control of the government. Attempts to artificially create or control them are likely to render them ineffective. As Nye states, "Soft power may appear less risky than economic or military power, but it is often hard to use, easy to lose and costly to re-establish. Soft power depends upon credibility, and when

governments are perceived as manipulative and information is seen as propaganda, credibility is destroyed. Governments often underestimate the importance of pull rather than push in soft power interactions. *The best propaganda is not propaganda*" (Nye, 2012).

This analysis of AI-centered soft power strategy cannot claim to have insight into the true intentions of the Chinese government which is a complex bureaucracy with often contradictory aims. It also does not seek to assess the country's technical capabilities or successes of any of the initiatives discussed. It instead seeks to illustrate a useful picture of how China's comprehensive model of governance of and through AI appears in both AI policies and overseas promotions of those policies.

7. Conclusion

7.1 Soft Power Analysis of Chinese AI Policy is Important

AI's integration into society poses staggering challenges to the viability of both the U.S. and Chinese models of governance. It also has the potential to shift competitive dynamics between the two powers. My findings demonstrate that China is taking a wide range of actions to increase the likelihood that it is seen as an innovative, legitimate, and rightful leader in the global system, particularly in AI governance. Western analysis does not thoroughly consider how China is striving to build a top-to-bottom model of what an AI society can be, and the potential soft power that could stem from this. This leads to an incomplete and potentially flawed understanding of China's core strategy.

China could gain additional influence in the developing world as a result of its AI governance model. If China demonstrates to the rest of the world that it has developed a viable social model with AI, that model of society could become highly appealing to developing countries that are now facing many of the challenges that China claims to have overcome. Even if this model is met with resistance, the widespread adoption of Chinese technology into societies around the world is bound to shift implicit values and norms surrounding AI's role in society.

Chinese AI policy could also have a profound influence on the United States and other liberal democracies. The U.S. model focuses on limited government regulation, market economies, and personal freedoms. Successful Chinese development of AI could pose a challenge to the viability of those values. The United States and much of the Western world are struggling with reconciling free speech and market economies with the size of technology firms and the influence of social media on many social and political norms. Unless the United States demonstrates that it can successfully develop and govern AI while preserving its democratic model, China may develop a significant international competitive advantage greatly strengthened by its AI-powered model's soft power. A more nuanced and complete understanding of Chinese AI policy that fully addresses the development of Chinese AI policy beyond the narrow lens of China as an aggressor or competitor is needed in order to develop U.S.-based AI policy that integrates well with its values and democratic model and meets the potential Chinese challenge.

Instead of AI policies in the United States being presented as a bid to outcompete China, U.S. policymakers should borrow from the Chinese book in rebuilding its domestic foundation. While

the US's reputation as an innovative nation remains secure, other aspects of the domestic foundation have slipped. It must now strive to improve domestic transportation infrastructure, promote inclusive economic development, public safety, efficiency of public services, and address issues of divisive online discourse patterns in a way that revitalizes the widely marketed U.S. image of prosperity and inclusion.

7.2 Contribution & Suggested Next Steps

My paper contributes to our understanding of China's strategy and prospects for developing soft power as the information age and the incorporation of AI into society progresses. I demonstrate that China's AI development and governance strategy is comprehensive in comparison to other countries' models of governance and has the potential to increase China's influence through soft power, not just hard power. I document the extent of China's efforts to be perceived as an innovative and legitimate leader in AI globally.

Numerous possible lines of inquiry emerge from this analysis. Given the clear and growing role that AI plays in shaping China's soft power, I suggest further research that seeks to measure the effect of soft power and AI strategies. My analysis might provide structure for surveys or other future studies seeking to measure Chinese soft power or perceptions of China as an innovative, legitimate leader in AI. These surveys would be particularly informative if conducted in key BRI countries, or countries with significant Chinese investment in AI-related industries or infrastructures.

Finally, I recommend that U.S. policy actors deeply consider the implications of this research for its public diplomacy efforts overseas, as well as for the creation and framing of domestic efforts to create a model AI society.

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Appendices

Appendix A: Framework for Content Analysis

Culture

- **Contemporary Culture**: References to modern Chinese culture or modern culture in China generally, or a modern way of life. For example, portraying a modern, high-tech way of life (potentially highlighting e-payment systems like Alipay or WeChat Pay, etc.)
- **Traditional Culture**: References to Traditional Chinese culture including Chinese holidays, historical poems and pieces of art, landmarks, belief systems. This could take the form of using AI to augment traditional forms of art. Alternatively, it could reference traditional Confucian or Daoist values, such as filial piety, harmony, or benevolence

Institutions & Values

- **National cohesion:** References (most often within policies) to the need to foster shared identity amongst Chinese citizens, whether through ideology, language, opinion, etc. This may, for example, take the form of a policy directly stating its purpose.[24]
- **Ethics and Values**: References to a Chinese value system or guiding set of ethics. This may, for example, take the form of a tweet framing China as a leader in ethical AI development.
- **Regime legitimacy**: References to CPC leadership/policies in a positive light or other direct attempts to boost regime popularity. This may, for example, take the form of a tweet praising Xi Jinping's efforts to improve the country through AI.
- **Economic Development:** References to economic development as a goal of AI advancement or references to a specific form of economic development related to AI advancement. This may, for example, take the form of a tweet or policy referring to AI or its applications as greatly enhancing domestic infrastructures, allowing for rapid or sustained economic growth.
- **Social governance**: Social governance is typically defined as efforts to maintain social stability, and provide public services including judicial services, medical care, and public security. This may take the form of incorporating AI into public services, judicial systems, or safety management.

Overseas Image

- **International discourse power**: The broader goal of the Chinese Communist Party to achieve greater influence globally in the setting of economic and political agendas, and in the

[24] "Guiding ideology" or "Guiding purpose" is a common introductory section of many published PRC policies where these references tended to appear.

shaping of global public opinion (Chen, 2022). This may take the form of online efforts to initiative or lead conversation surrounding AI, that can but don't necessarily explicitly reference China's leadership by discussions with foreign leaders and hosting conferences. Alternatively, it may take the form of tweets by official accounts posing rhetorical questions surrounding AI to facilitate online discourse.

- **Belt and Road Initiative**: References to China's Belt and Road Initiative or connected projects and investments, either implicitly or explicitly. This may take the form of a tweet promoting Chinese infrastructure building in a country like Pakistan.
- **Comparison to US**: Comparisons between China's position or behavior and that of the United States, regardless of whether in positive, negative, or neutral light.

Other

- **Reputation as an innovative nation**: Reference to China or Chinese society in a highly innovative light, either implicitly or explicitly.

Appendix B: The Chinese Dream and the Core Socialist Values

China's propaganda apparatus adopted President Xi Jinping's "China Dream" (中国梦, zhongguo meng) as a new catchphrase and overarching paradigm starting in 2013. The "core socialist values" (社会主义核心价值观; hereafter "CSVs") are one of the most fundamental and pervasive propaganda campaigns within the China Dream discourse (1058974, 2022b; Gow, 2017; Miao, 2021).

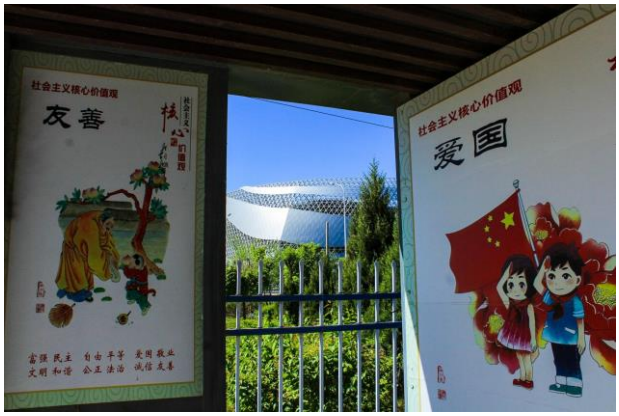
The expression "Chinese Dream" (中国梦) has its roots in Chinese literary and intellectual history, and it is associated with the idea of a hope for the recovery of earlier dynasties' lost national greatness (Gow, 2017; Miao, 2021). As one scholar differentiated it from the parallel American concept, the "The China Dream is the dream of a nation; the American dream is the dream of an individual" (Kai, 2014). (Pictured below: A China Dream propaganda poster on the outside of a construction site in Yinchuan, Ningxia Province. Photo taken by author in Yinchuan, Ningxia Province in 2021.)

The Core Socialist Values is a set of official interpretations of Chinese socialism first promoted at the 18th National Congress of the Chinese Communist Party in 2012. They have since become the cornerstone of national propaganda campaigns. CSV posters are displayed throughout the country, notably in at construction sites, in train stations, and even at places of worship.

Nation	Prosperity	Democracy	Civility	Harmony
Society	Freedom	Equality	Justice	Rule of Law
Citizen	Patriotism	Dedication	Integrity	Friendship

Figure 5: The Twelve Core Socialist Values

Pictured below (clockwise): 1) Girl walking in front of CSV posters at construction site in Guangzhou, Guangdong Province (2018). Values pictured are rule of law, patriotism, and dedication; 2) Bus stop posters in Yinchuan, Ningxia Province (2021). Values pictured are friendship and patriotism. 3) All CSVs listed in both Standard Mandarin and Tibetan language in village in Northern Yunnan Province (2020). 4) All CSVs listed at Buddhist monastery in Shangri-la, Yunnan Province (2020). All photos taken by author.



Under the Chinese Dream and CSV discourse, the CCP emphasizes its role in providing moral authority and direction for the general population in its ongoing legitimization plan. The resulting narratives romanticize and homogenize both the imperial and the socialist pasts, while also projecting a strong sense of optimism for the future based on similar expectations of continuity and homogeneity (Gow, 2017; Miao, 2021). Propaganda campaigns surrounding the China Dream and CSV narratives are disseminated at the ground level of society and permeate Chinese citizens' everyday life. Given that the China Dream language conjures not just the idealized nation but also the good life, a "composite ideology" that unites aspirations of national resurrection with personal fulfilment and happiness, it is crucial to pay attention to such pervasive and topical efforts (Callahan, 2017). Regardless of the veracity of these stories, they show how the ruling class envisions the future of a country and the ideal society and populace (one that is most supportive of the maintenance of the current regime).

Scholarly research has deeply explored the meaning of the China Dream, what it implies, and its consequences for China's internal and international development (Callahan, 2017; Feng, 2015). This is literature closely tied to the core literature of this paper, but due to space constraints was not included in the literature review.

Appendix C: Ethics

This research was conducted according to University of Oxford guidelines. The first two subsets of my dataset involved no human subjects/data, only official government documents available in the public domain.

Collection of Twitter data was conducted with Department approval through an "Essential" Twitter API. To minimize privacy concerns surrounding individual users, I focused my analysis on the content of official or semi-official PRC tweets. Therefore, private citizens' posts, retweets, and comments were not included in my dataset. Further, I reviewed my dataset to ensure there was no accidental inclusion of any individuals who are not designated as public Chinese government officials or media outlets. PRC officials are the primary individuals impacted by concerns surrounding consent, privacy, and anonymity. However, the tweets collected were each posted within their capacity as a representative of the Chinese government, rather than in their capacity as private citizens.

Appendix D: National-level AI Policies

Policy Name (English)	Policy Name (Chinese)	Year(s)
MIIT Three Year action plan to promote the development of the new generation AI Industry 2018-2020 (MIIT 3-Year AI Action Plan)	促进新一代人工智能产业发展三年行动规则 2018-2020 年	2018-2020
Ministry of Science and Technology Guidance on National New Generation Artificial Intelligence Governance Specialist Committee (MOST New Generation AI Specialist Committee)	国家新一代人工智能开放创新平台建设工作指引	2019
Made in China 2025 (MIC 2025)	中国制造 2025	2015-2025
Guiding Opinions on Strengthening the Ethical Governance of Science and Technology	关于加强科技伦理治理的指导意见	2021
Guiding Opinions on Strengthening Overall Governance of Internet Information Service Algorithms (Guidance on Internet Information Algorithms)	关于加强互联网信息服务算法综合治理的指导意见	2021
Provisions on the Administration of Algorithm Recommendations for Internet Information Services (Algorithmic Recommendation Regulations)	互联网信息服务算法推荐管理规定	2022
Ethical Norms for New Generation AI (Ethical Norms for AI)	新一代人工智能伦理规范	2021

AI Innovation Action Plan for Institutions of Higher Education (AI for Higher Education Action Plan)	高等学校人工智能创新行动计划	2018
National New Generation AI Innovation and Development - National Pilot Zones (AIDP Pilot Zone Development)	国家新一代人工智能创新发展试验区建设工作指引	2018
National New Generation AI Development Plan (AIDP)	新一代人工智能发展规划	2017

Results from OECD Dashboard:

Policy Name (English)	Start date	Included (Y/N)	Notes
CHINESE ASSOCIATION FOR AI	1981	N	Out of date range
NATIONAL ENGINEERING LABORATORY FOR DEEP LEARNING	2017	N	Inspected. Establishes a laboratory; is not a core policy.
NATIONAL NEW GENERATION AI PLAN	2017	Y	Inspected. Not a core national policy.
NATIONAL NEW GENERATION AI GOVERNANCE SPECIALIST COMMITTEE	2019	Y	
GOVERNANCE PRINCIPLES FOR NEW GENERATION AI - DEVELOPING RESPONSIBLE AI	2019	Y	
NATIONAL NEW GENERATION AI INNOVATION AND DEVELOPMENT PILOT ZONE	2019	Y	
THREE-YEAR GUIDANCE FOR INTERNET PLUS AI PLAN	2016	N	Unable to locate policy document. Government link no longer active.
NATIONAL STANDARDS FOR AUTONOMOUS VEHICLE TESTING	2018	N	Inspected for content analysis but all content highly technical, largely irrelevant to code.

AI INNOVATION ACTION PLAN FOR INSTITUTIONS OF HIGHER EDUCATION	2018	Y	
14TH FIVE-YEAR PLAN FOR NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT OF THE PEOPLE'S REPUBLIC OF CHINA (PRC)	2021	N	Incorporate within results section, but is not directly an AI policy. Therefore
GUIDELINES FOR BUILDING NEW GENERATION AI STANDARD SYSTEM	2020	N	Unable to locate policy. Government link no longer active.
ETHICAL NORMS FOR NEW GENERATION AI	2021	Y	
NATIONAL GOVERNANCE COMMITTEE FOR NEW GENERATION AI	2019	N	Establishes bureaucratic entity; not a core policy.
NATIONAL NEW GENERATION AI PROMOTION OFFICE	2017	N	Unable to locate original policy. Government link no longer active.
AUTONOMOUS DRIVING STANDARDS	2021	N	Inspected for content analysis but all content highly technical, largely irrelevant to code.
THREE YEAR ACTION PLAN TO PROMOTE THE DEVELOPMENT OF THE NEW GENERATION AI INDUSTRY (2018-2020)	2018	Y	
BEIJING CONSENSUS ON AI AND EDUCATION	2019	N	Output of a forum; Not a policy.

TAXONOMY OF DRIVING AUTOMATION FOR VEHICLES	2021	N	Inspected for content analysis but all content highly technical, largely irrelevant to code.
GUIDING OPINIONS ON STRENGTHENING ETHICAL GOVERNANCE OF SCIENCE AND TECHNOLOGY	2021	Y	
WHITE PAPER ON TRUSTWORTHY AI	2021	N	Not a national policy.
TRUSTWORTHY FACIAL RECOGNITION APPLICATIONS AND PROTECTIONS PLAN	2021	N	Final policy not published yet. Could not locate draft policy.
INTERNET INFORMATION SERVICE ALGORITHMIC RECOMMENDATION MANAGEMENT PROVISIONS	2022	Y	
GUIDING OPINIONS ON STRENGTHENING OVERALL GOVERNANCE OF INTERNET INFORMATION SERVICE ALGORITHMS	2022	Y	

To verify that the most relevant policies were included in my dataset, I cross-referenced the OECD AI policy database with the Central Government's online policy library (http://www.gov.cn/zhengce/zhengcewenjianku/index.htm) for official national-level policies referencing "artificial intelligence.

Appendix E: Robustness Check Steps

1) Created subsets based on account (6 with results from query in total) and era (pre- and post-2018 based on lit review findings) which resulted in twelve groups;
2) Randomly assigned tweets within each of the twelve groups to 15 different subset groups so that each subset contained roughly seven percent of each of the twelve groups;
3) Selected subsets 1 and 2 from the 15 subsets within each group, and combined them vertically to create two documents for QTA. Document 1 had tweets 278 after cleaning and document 2 had 253 tweets after cleaning);
    a. I coded 531 tweets across the two documents. A sample size of 531 tweets for a population of 4,022 produces a margin of error of 4% at a 95% confidence interval. This is within the generally accepted range of margin of error (3-5%);
4) Conducted directed content analysis;
5) Compared directed content analysis results across groups and performed statistical significance test to demonstrate that the groups were similar enough to represent the whole of the original dataset.

Appendix F: Illustrative Content

This Appendix includes a sampling of the results from this study's content analysis, from both the examined policies and tweets. The most relevant content was selected as illustrative examples and does not represent all coding results from the study. Quotes from policies are rough translations.

Culture

Traditional Culture

Policies

1) The MIIT 3-Year AI Action Plan states that: "intelligent home service robots and intelligent public service robots should achieve mass production and application in medical rehabilitation, assistance to elderly and the disabled" within three years of the document's publishing.
2) The Algorithmic Recommendation Regulations carve out specific protections for the elderly.
3) Many policies, including the MOST New Generation AI Specialist Committee include references to "harmony" between AI and the economy or society or references to AI improving harmony in society.
4) The Ethical Norms for AI lists a primary goal to: "promote harmony and friendship."

Tweets

5) (Diplomat): "AI restores the true face of Qin Terracotta Warrior"
6) (Media): "Imagine a qipao that changed its pattern according to seasons? Such ideas are a reality at 2nd #CIIE, where #AI adds allure to Chinese intangible cultural heritages and invites visitors to experience China's artistic and cultural innovations in a new way."
7) (Diplomat): "A newly developed educational #robot was incarnated as Li Qingzhao, an ancient #Chinese #poetess &essayist, at the 4th Digital China Summit held in Fuzhou of China's Fujian Province. The #AI robot is able to blink, nod &raise her hands according to instructions."
8) (Diplomat): "The #SpringFestival Gala will use advanced technologies this time around such as #5G, VR, AR and #AI, to provide a more immersive and interactive experience for audiences across the globe."
9) (Media) Check to see how #AI displays traditional Chinese "shadow art." #TensorFlow #WAIC2019 #Shanghai

Contemporary Culture

No detected policy references

Tweets

10) (Diplomat) “Artificial intelligence-themed park opens in #Beijing”
11) (Media) “Facial recognition, unmanned delivery, AR #TaiChi... #AI-driven technologies are reshaping city life in Beijing”
12) (Diplomat) “A spectacular light show was staged by drones during the world AI conference hosted in Shanghai.”
13) (Media): “At a muskmelon store in Haikou in Hainan Province, customers can use artificial intelligence technology to measure the sweetness of the melons on offer. #AI”
14) (Media) How could #AI be used in #tabletennis? Chinese coaches are using AI to free themselves from serve practice (sip) as the first AI serve-practice robots has been put into use in the China Table Tennis College in #Shanghai
15) (Media) “Can AI help China’s web novels find more English readers?”
16) (Media) “Chinese internet giant Alibaba opens AI "future hotel." Customers can check into the hotel by scanning faces and control the lights, TV and curtains via voice-activated digital assistant”
17) (Diplomat) Beautiful. “Is #AI applied? #BeijingWinterOlympics2022”
18) (Diplomat) “Every time I go back to China, I can feel big changes in the Chinese economy & society and enjoy great convenience in daily life. These are brought by #AI/#mobilepayment/#5G, etc. Data protection concern is understandable & solvable. We shouldn't throw the baby out with the bathwater”

Institutions & Values

National Cohesion

Policies

19) MIC 2025 seeks to: “lay a solid foundation for the realization of the Chinese dream of the great rejuvenation of the Chinese nation.”
20) The Guiding Opinions on Strengthening the Ethical Governance of Science and Technology state: “Based on the historical stage and social and cultural characteristics of China's scientific and technological development, follow the laws of scientific and technological innovation, and establish and improve a scientific and technological ethics system that conforms to China's national conditions.”

No detected references within tweets

Regime Legitimacy

Policies

21) Guiding Opinions on Strengthening the Ethical Governance of Science and Technology: “Guiding ideology: Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implement the spirit of the 19th National Congress of the Communist Party of China and the Second, Third, Fourth, and Fifth Plenary Sessions of the 19th Central Committee, earnestly implement the decisions and arrangements of the Party Central Committee and the State Council, and accelerate the construction of Chinese characteristics.”

Tweets

22) (Media) CGTN AI Panda Xiaomo is coming! How much do you know about the Two Sessions? Test yourself and find out fun facts about one of the most important events on China's political calendar! #2021TwoSessions #CGTNAIPANDA Panda Xiaomo knows ALL!
23) (Media) AI. Big data. Cloud computing. The internet of things, high-speed rail and #5G" find out how the two sessions will guide China's sci-tech development. #TwoSessions2019
24) (Diplomat) "#XiJinping: #COVID19 has fueled the boom of new technologies, new business forms and new platforms such as #5G, artificial intelligence (#AI) and #smartcities, and accelerated the development of a contact-free economy like online shopping, online education and telemedicine."

Economic Development

Policies

25) MIIT 3-Year Action Plan:
    a) "Intelligence has become an important direction for the development of technology and industry. AI has a significant spillover effect, which will further promote the progress of other technologies and promote the overall breakthrough of strategic emerging industries. It will become a new impetus for advancing supply-side structural reforms, a new opportunity for rejuvenating the real economy, and a new engine for building China into both a manufacturing and cyber superpower."
    b) "Advance the building of China into a science and technology superpower and a cyber superpower, and help the real economy to transform and upgrade."
26) MOST New Generation AI Specialist Committee Guidelines state that a core goal of the policy is to "promote profound harmonization of AI with the real economy" and to "Promote high-quality economic and social development and the improvement of the people's livelihoods."
27) Made in China 2025 is an "action plan for the first ten years of my [the] country's implementation of the manufacturing power strategy." MIC 2025 state that one of its core aims is to: "build my [the] country into a manufacturing power that leads the development of the world's manufacturing industry, and lay a solid foundation for the realization of the Chinese dream of the great rejuvenation of the Chinese nation."
28) AI for Higher Education: "The people's needs for a better life and the requirements for high-quality economic development have brought broad prospects for the development and application of artificial intelligence in my [this] country."
29) AIDP:
    a) "Based on the overall situation of national development, accurately grasp the development trend of global artificial intelligence, identify breakthroughs and main directions, comprehensively enhance the basic capabilities of scientific and technological innovation, comprehensively expand the depth and breadth of applications in key areas, and comprehensively improve the level of economic and social development and national defense applications"
    b) "Cultivate a high-end and efficient intelligent economy. Accelerate the cultivation of the artificial intelligence industry with a major leading and driving role, promote the deep

integration of artificial intelligence and various industrial fields, and form an intelligent economic form that is data-driven, human-machine collaboration, cross-border integration, and co-creation and sharing."

Tweets

30) (Diplomat) "Cultivate a high-end and efficient intelligent economy"
31) (Diplomat) "#CHINA THE NEW GLOBAL POWER: Artificial Intelligence, Infrastructure Investment, Higher productivity levels, Reduce Poverty and Efficient Government, the key areas on which President #XiJinping has worked. China has reduced poverty level of 67M ppl in 5yrs.#BeltandRoad"
32) (Diplomat) "China expects economic growth of over 6% in 2021. There're many positive factors for its realization: 1. Solid foundation accumulated over the years. n2. Huge domestic market& consumer demand 3. Vitality & dynamic from digital economy, AI, 5G, etc.; 4. Hard work for a better life"
33) (Diplomat) #Shenzhen catched (sic) by global eyes of its Self-driving buses hit the road. It is integration of #AI #IoT #Robots #driverless #greenenergy #creative #innovation #MOBILE #PAY #CBSF it is more safe than be4 but reduce #jobs #demographic dividend challenge
34) (Diplomat) "The market scale of artificial intelligence (#AI) in China is expected to reach 71 billion yuan ($10.3 billion) in 2020. By the end of 2018, China had 3,341 AI enterprises, accounting for more than one-fifth of the world's total, according to the Internet Society of China on Thu."
35) (Media) "This year's World #Tourism Day (WTD) will help to put the opportunities provided to tourism, by #technological advances including big data, artificial intelligence and digital platforms, on the map of sustainable development"
36) (Diplomat) "In its cooperation, Pakistan should not seek technologies of the past or present but those of the future which China is now introducing & applying: high speed rail (not old systems), AI, electric vehicles, environment-friendly energy, e-commerce."
37) (Media) "Technologies like big data, artificial intelligence and robotics are transforming China's job market. #career #employment #tech #AI"

Social governance

Policies

38) The following statement is included in the opening paragraphs of numerous policies, including the MIIT 3-Year Action Plan: "Comprehensively carry out and implement the spirit of the 19th Party Congress, taking Xi Jinping's ideology of socialism with Chinese characteristics for a new era as guidance"
39) MOST New Generation AI Specialist Committee: "We will make AI into a new engine driving the construction of the real economy and the development of social endeavors."
40) AIDP:
    a) "Artificial intelligence brings new opportunities for social construction."

b) "Intelligent level of social governance has been greatly improved, and the social operation will be safer and more efficient."
c) "Promote intelligent social governance. Focusing on hot and difficult issues of social governance such as administrative management, judicial management, urban management, and environmental protection, promote the application of artificial intelligence technology and promote the modernization of social governance."
d) "Promote social interaction and mutual trust. Give full play to the role of artificial intelligence technology in enhancing social interaction and promoting trusted communication. Strengthen the research and development of next-generation social networks, accelerate the promotion and application of technologies such as augmented reality and virtual reality, and promote the collaborative integration of virtual and physical environments to meet real-time information needs such as personal perception, and analysis, judgment, and decision-making. In response to the needs of improving interpersonal communication barriers, develop intelligent assistant products with emotional interaction functions that can accurately understand people's needs, and realize a virtuous circle of emotional communication and demand satisfaction. Promote the integration of blockchain technology and artificial intelligence, establish a new social credit system, and minimize the cost and risk of interpersonal communication."

Tweets

41) (Media) "A company in NW China's #Xinjiang is developing an anti-riot #robot and watchman robot for use in the air and on the ground to help protect neighborhoods, which will be used in 2021. #AI"
42) (Media) "The Supreme People's Court issued a regulation on Wednesday on the application of the law in civil cases involving the use of facial recognition technology to handle personal information. #AI"
43) (Media) "Shanghai police use #AI to reduce traffic violations, monitor accidents"
44) (Media) "Xi Jinping, general secretary of the Communist Party of China Central Committee, said major cities can become "smarter" by using big data, cloud computing and artificial intelligence technologies to modernize urban governance"
45) (Diplomat) "The face-scanning era is coming. Facial recognition, which is based on human facial feature recognition - and is the most mature technology in the era of artificial intelligence, or AI - is changing lives in China."

Ethics and Values

Policies

46) Guiding Opinions on Ethical Governance Science and Technology: whole of document, specifically:

a) "Adhere to fairness and justice. Scientific and technological activities should respect differences in religious beliefs, cultural traditions, etc., treat different social groups in a fair, equitable and inclusive manner, and prevent discrimination and prejudice."
b) "strive to prevent major ethical risks brought about by technological innovation"

47) Guidance on Internet Information Algorithms:
a) "value orientation in the application of algorithms."
b) Multiple mentions of "disseminating positive energy"

48) Algorithmic Recommendation Regulations: "follow the principles of fairness, openness, transparency, scientific rationality, and good faith"

49) Ethical Norms for AI: Whole of document and specifically: Instill "ethics into the whole life cycle of artificial intelligence"

Tweets

50) (Diplomat) "AI should follow the principles of fairness, openness, transparency, scientific rationality, and good faith"
51) (Media) "Reports of artificial intelligence (#AI) products being used to "monitor" students on campus in China have shifted public discourse on technology regarding privacy and child development."
52) (Media) "The firm, which insists on the correct use of AI technologies, hopes to gain fair & equitable treatment from the US govt."
53) (Media) "Chinas top #AI scientist pushes for development of ethical guidelines"
54) (Media) "China addresses building ethical AI."
55) (Media) "The increasing use of artificial intelligence is stoking privacy concerns in #China"
56) (Diplomat) "#XiJinping stresses boosting healthy development of China's new-generation AI"

Overseas image

International discourse power

Policies

57) Made in China 2025:
a) "Build a number of innovative design clusters with world influence"
b) "Do a good job in the publicity and implementation of the standard, and vigorously promote the implementation of the standard."

58) AI for Higher Education Action Plan:
a) "Support the organization of high-level artificial intelligence international Academic conferences, to promote Chinese scholars to hold important positions in relevant international academic organizations and enhance their international influence; to support Chinese scholars to actively participate in the formulation of international rules related to

artificial intelligence, and to propose "China Initiatives" and "China Standards" in a timely manner."

Tweets

59) Example: "Impact of #AI and #automation will vary significantly by industry sector. How might your job be affected?"
60) "Let us create a future where having access to affordable quality WiFi is considered a human right. My call during an eminent panel discussion on Artificial Intelligence at the China International Import Expo in Shanghai"

Global cooperation (added tag)

No detected policy references

Tweets

61) (Diplomat) "Today marks the 40th anniversary of the signing of China-Japan Treaty of Peace and Friendship. Both sides need to carry forward the spirit of the treaty and explore opportunities for cooperation in such areas as AI, energy-saving, environmental protection, medical services,etc."
62) (Media) "China's AI involvement needed for better global collaboration: experts"
63) (Media) "The world would certainly be a better place if we work hard together, to innovate together," said Qi Ye, professor and director of Institute for Public Policy of Hong Kong University of Science and Technology speaks at the 7th #VisionChina. #AI"
64) (Media) "China is willing to work with other countries around the world in discussing frontier issues about AI, writes President Xi Jinping in a congratulatory letter to the International Conference on Artificial Intelligence and Education in Beijing"

Belt and Road Initiative (added tag)

Policies

65) MIIT 3-Year AI Action Plan: "Take full advantage of the bilateral and multilateral cooperation mechanisms, and seize the opportunity of the Belt and Road Initiative to encourage scientific research institutes, enterprises, and trade organizations at home and abroad to broaden the channels of communication and conduct extensive cooperation to achieve mutual benefits and win-win cooperation."
66) Made in China 2025
    a) "Encourage advantageous enterprises to accelerate the development of international general contracting and general integration. Guide enterprises to integrate into local culture, enhance their awareness of social responsibility, strengthen investment and business risk management, and improve their overseas localization capabilities."
    b) "Deepen industrial international cooperation and accelerate enterprises to go global. Strengthen top-level design, formulate an overall strategy for the manufacturing industry to

go global, and establish and improve overall coordination mechanisms. Actively participate in and promote international industrial cooperation, implement major strategic deployments such as the Silk Road Economic Belt and the 21st Century Maritime Silk Road, accelerate the construction of interconnection infrastructure with neighboring countries, and deepen industrial cooperation. Give full play to the advantages of opening up along the border, and build a number of overseas manufacturing cooperation parks in countries and regions where conditions permit. Adhere to government promotion and enterprise leadership, innovate business models, and encourage the transfer of high-end equipment, advanced technology, and advantageous production capacity overseas."

67) MIIT 3-Year AI Action Plan: "The "Silk Road" Chinese Government Scholarship, support the cultivation of talents studying in China in the field of artificial intelligence, and cultivate industry leaders and outstanding skilled talents for the countries along the route; encourage and support domestic students to study in countries with advantages in the field of artificial intelligence, and increase the awareness of artificial intelligence"
68) AIDP: "Relying on the "Belt and Road" strategy, promote the construction of artificial intelligence international scientific and technological cooperation bases and joint research centers, etc., and accelerate the promotion and application of artificial intelligence technology in countries along the "Belt and Road". Promote the establishment of artificial intelligence international organizations to jointly formulate relevant international standards. Support relevant industry associations, alliances and service agencies to build a global service platform for AI enterprises"

Tweets

69) (Diplomat) "Relying on the "Belt and Road" strategy, promote the construction of artificial intelligence international scientific and technological cooperation bases and joint research centers"
70) (Diplomat) "Glad to see the 1st African Center for Research in Artificial Intelligence inaugurated in Republic of Congo! It's believed that, the center, set up by #UNECA & the government of #Congo, will tap the potential of #AI research, so as to promote economic development in the country"
71) (Diplomat) "Nowadays, #digital economy is aiding #Africa to leapfrog in development. Chinese companies have been actively sharing with Africa their experience in fighting COVID-19 with the help of clou'd computing, artificial intelligence and developing cloud economy"
72) (Diplomat) "China is willing to work with Africa to expand cooperation in new infrastructure building such as #5G, #bigdata centers, #AI and in new business forms such as digital economy, smart cities, clean energy, and e-commerce. @SAIIA_info"
73) (Diplomat) "#BRICS countries should jointly contribute more building blocks and bricks to create a bright future. The cooperation in new industries among BRICS, especially in 5G, AI, the digital economy and others, will inject new impetus into their economic and social development."
74) (Diplomat) "China has become a pioneer in digital economy, sharing economy, 5G, AI and space science. As one of the leading countries in the #4IR, we are ready to share the development fruits with Africa and the whole world."

75) (Diplomat) "Day 1 @ China Brand Products Expo in #Nanjing! Over 2000 students from have partnered with companies/universities to launch 200 new products. #AI, #agrotech, & much more of what's emerging under #BRI. Kudos to #CCPIT for organising- thank you for inviting me as a judge.
76) (Diplomat) "Expert: In its cooperation, Pakistan should not seek technologies of the past or present but those of the future which China is now introducing & applying: high speed rail (not old systems), AI, electric vehicles, environment-friendly energy, e-commerce"

Comparison to US (added tag)

No detected policy references

Tweets

Competitive - Political

77) (Diplomat) "As US embroiled in partisan politics and become increasingly isolationist, a stable, focused and open China is poised to lead the world with 5 Is , ie, Belt and Road Initiative, Beijing Initiative, Internet, Innovation and Artificial Intelligence. @UN @WorldBank @wef"
78) (Diplomat) "@zlj517 Due to proper planning & governance, China has attained an edge in military, economic, technological & geostrategic domains. China is leading in the AI & space tech, they even defended national security from US tech spying thru google/FB by launching domestic platform. Bravo"
79) (Diplomat) "The motivation behind the newest blacklisting was primarily to deprive Chinese Artificial Intelligence companies of core components which are only manufactured by organisations such as Intel. Remember, US invokes "human rights" as a justification for its policy, never as a root."
80) (Media) "With #AI at the center of US-China tech rivalry, whether common ethical norms and standards can be adopted, or whether US-China zero-sum competition will lead to a race to the bottom, is a loaded question. @Rmanning4"

Competitive - Business

81) (Diplomat) "This is the first time China's AI startups surpassed those in the US in terms of funding."
82) (Diplomat) "China is now home to 1,040 artificial intelligence (#AI) enterprises, ranking second in the world, only beaten by the U.S. with 2,039 such companies"
83) (Diplomat) "China has more data than the US way more. Data is what makes AI go. A very good scientist with a ton of data will beat a super scientist with a modest amount of data. China has the most mobile phones and internet users in the world 3X the US. People there carry no cash"
84) (Media) "China in race to catch up with US in #AI revolution #Huawei"
85) (Diplomat) "Chinese people are destroing (sip) their iPhones. Fight of Huawei Vs Apple started worldwide but is actually a War to launch 5G first and to become a King of Future AI Technology!"

86) (Media) "Huawei unveils an ARM-powered cloud database on Wednesday in Beijing, a move to accelerate its #AI strategy and to challenge US rivals"

Neutral:

87) (Diplomat) "By 2030, 70% of the global #economic impact from #ArtificialIntelligence will come from #China + #NorthAmerica."

Western Theories on China

88) (Diplomat) "Many of Western theories & views on global order are outdated, based on the world more 50 years ago. China's scholars should put forth views & theories on global governance of the 21st century, a new era of IoT, AI, Internet, HSR & most important of all, the resurgence of China."

Reputation as an innovative nation

Policies

89) Guidance on Internet Information Algorithms: "14) Encourage algorithm innovation and development. Increase algorithm innovation capabilities, vigorously launch algorithm research and development work, support the profound integration of algorithms with all areas of society and the economy. Raise independent and controllable algorithm capabilities, strengthen the protection of intellectual property rights, popularize the use of self-learning algorithm products, and strengthen core competitiveness in algorithms."
90) Guidance on Internet Information Algorithms:
    a) "Put innovation leadership at the core of the development of artificial intelligence in colleges and universities, accurately grasp the development trend of global artificial intelligence, further optimize the scientific and technological innovation system in the field of artificial intelligence in colleges and universities, and build colleges and universities into an important source of global artificial intelligence technological innovation"
    b) "By 2025, colleges and universities will have significantly improved their scientific and technological innovation capabilities and the quality of talent training in the field of new-generation artificial intelligence, and have achieved a number of original achievements of international importance."
    c) "Strengthen international academic exchanges and cooperation. Support colleges and universities to build a number of "111 intelligence bases" and international cooperation joint laboratories in the field of artificial intelligence, cultivate international major scientific plans and major scientific projects, and accelerate the introduction of internationally renowned scholars to participate in discipline construction and scientific research"
91) AIDP:
    a) "The number of international scientific and technological papers published and the number of invention patents authorized have ranked second in the world, and important breakthroughs have been made in core key technologies in some fields."
    b) "Promote opportunities for accelerating the construction of an innovative country," including collaborating with the world's top AI research institutions

92) MIIT 3-Year AI Action Plan: "Take full advantage of the bilateral and multilateral cooperation mechanisms, and seize the opportunity of the Belt and Road Initiative to encourage scientific research institutes, enterprises, and trade organizations at home and abroad to broaden the channels of communication and conduct extensive cooperation to achieve mutual benefits and win-win cooperation."

Tweets

93) (Diplomat) "Automated driving, AI tech, electric vehicles: Check out the fascinating cars of the future, at Shanghai" or "My friend tries a driverless taxi in Wuhan. The taxis were tested in Wuhan this year, using 5G and artificial intelligence."
94) (Diplomat) "China Sets out Road Map to Lead the World in Artificial Intelligence by 2030"
95) (Diplomat) "China is leading way with global artificial intelligence revolution in full swing"
96) (Diplomat) "I have tweeted that China will lead the world with 5 Is: BRI, Beijing Intistive, (sip) Internet, Innovation & AI. China has the data, talent, money, regulatory environment & govt vision to become an AI superpower."
97) (Diplomat) "This Chinese AI start-up is now the world's most valuable"

Appendix G: Overall Content Analysis Results

Code	Subcode	Media Tweets	Diplomat Tweets	All Policies	1	2	3	4	5	6	7	8	9	10
Culture	Contemporary Chinese culture	68	9	0	0	0	0	0	0	0	0	0	0	0
Culture	Traditional Chinese culture	12	4	6	1	1	2	0	0	1	1	0	0	0
Institutions & Values	General internal legitimacy	15	3	2	1	0	1	1	0	0	0	0	0	0
Institutions & Values	Economic Development	148	62	37	5	4	16	1	0	0	1	3	3	9
Institutions & Values	Social Governance	52	12	26	1	2	2	2	3	2	1	2	2	10
Institutions & Values	Ethics and Values	29	3	40	0	0	0	7	8	13	12	0	0	0
Institutions & Values	Cohesive National Identity	0	0	8	0	0	1	3	2	0	0	0	0	2
Overseas Image	Comparison to US	67	20	4	2	0	2	0	0	0	0	0	0	0
Overseas Image	Belt & Road Initiative	5	28	4	1	0	2	0	0	0	0	0	0	1
Overseas Image	Global Cooperation	14	16	5	2	0	2	0	0	0	1	0	0	0
Overseas Image	International Discourse Power	170	72	4	1	0	2	0	0	0	0	1	0	0
Other	Improve greater good	32	114	8	0	0	0	3	1	1	2	0	0	1
Other	AI safety	3	0	5	0	0	0	2	1	0	2	0	0	0
Other	Reputation as an innovative nation	260	124	30	2	0	11	2	1	0	0	7	0	7
Other	Hard Power	6	0	12	0	0	1	0	0	1	0	1	0	9
Other	Leadership/Global Power Language	47	51	32	5	1	9	0	1	0	0	5	0	11
Total coded sections per document		928	518	223	21	8	51	21	17	18	20	19	5	50
Total tweets or documents		531	204	10										

Policies in order, numbered 1 through 10:

1. MIIT Three Year action plan to promote the development of the new generation AI Industry 2018-2020 (MIIT 3-Year AI Action Plan)

2. Ministry of Science and Technology Guidance on National New Generation Artificial Intelligence Governance Specialist Committee (MOST New Generation AI Specialist Committee)
3. Made in China 2025 (MIC 2025)
4. Guiding Opinions on Strengthening the Ethical Governance of Science and Technology
5. Guiding Opinions on Strengthening Overall Governance of Internet Information Service Algorithms (Guidance on Internet Information Algorithms)
6. Provisions on the Administration of Algorithm Recommendations for Internet Information Services (Algorithmic Recommendation Regulations)
7. Ethical Norms for New Generation AI (Ethical Norms for AI)
8. AI Innovation Action Plan for Institutions of Higher Education (AI for Higher Education Action Plan)
9. National New Generation AI Innovation and Development - National Pilot Zones (AIDP Pilot Zone Development)
10. National New Generation AI Development Plan (AIDP)