



UWS Academic Portal

On the use of pride, hope and fear in China's international artificial intelligence narratives on CGTN

van Noort, Carolijn

Published in:
AI & Society

DOI:
[10.1007/s00146-022-01393-3](https://doi.org/10.1007/s00146-022-01393-3)

Published: 16/02/2022

Document Version
Publisher's PDF, also known as Version of record

[Link to publication on the UWS Academic Portal](#)

Citation for published version (APA):
van Noort, C. (2022). On the use of pride, hope and fear in China's international artificial intelligence narratives on CGTN. *AI & Society*. <https://doi.org/10.1007/s00146-022-01393-3>

General rights

Copyright and moral rights for the publications made accessible in the UWS Academic Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact pure@uws.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



On the use of pride, hope and fear in China's international artificial intelligence narratives on CGTN

Carolijn van Noort¹

Received: 27 July 2021 / Accepted: 25 January 2022
© The Author(s) 2022

Abstract

China communicates strategic narratives about artificial intelligence (AI) in digital media productions to create a shared meaning about its actions and its image in the global race to develop AI. Building upon the literature in emotions and strategic narratives, this study seeks to clarify which emotions are discursively used in China's international AI narratives, and their function and significance. Specifically, the study investigates emotion discourses in AI-focused videos disseminated on China's international broadcasting (CGTN YouTube channel). The analysis reveals that pride, hope and fear discourses have multiple functions in China's international AI narratives on CGTN. Hope is used to represent China as a key competitor in the global AI race, who is catching up to the US. China uses pride to showcase its advances in AI applications, to highlight its transformation of traditional industries, and to identify itself as equal to the US. Fear is used to frame US's perception of China's AI developments, to suggest their crisis of confidence, but also to refute the "China threat". Additionally, the fear discourse is used to deliberate anticipated risks, particularly on job loss and data privacy. These emotion discourses forge China's identity as a future global AI power. The paper then discusses how these findings contribute to key debates about Chinese discourse and media strategy.

Keywords Artificial intelligence · China · Emotions · State media · Strategic narratives

1 Introduction

Several governments around the world seek to lead the Artificial Intelligence (AI) innovation wave, including China, the UK, and the US (Executive Office of the President National Science and Technology Council 2016; House of Lords 2018; Savage 2020). AI originally refers to the "ability of machines to understand, think, and learn in a similar way to human beings, indicating the possibility of using computers to simulate human intelligence" (Pan 2016, 410). AI competition has heightened due to the many anticipated gains, including in social and economic development, as well as in national security. This study examines China's AI agenda. China's AI development plan from 2017 notes that AI "is thought to be the strategic technology leading the future, [and] the world's major developed countries regard the

development of artificial intelligence as the major strategy to increase national competitiveness and enhance national security" (The State Council of China 2017, 2). Cave and ÓhÉigearthaigh identify an emerging frame synthesized as the "race for technological superiority" in AI" which has potential dangers for inclusive deliberation and maximizing benefits for society (Cave and ÓhÉigearthaigh 2018, 36). Therefore, this international competition in AI causes the perception of opportunities and threats. With AI being a key technology in future human development, we need to know how nation-states are communicating about it.

In general, we see how with each stage of AI, society identifies opportunities and threats because of underuse, overuse, or misuse of AI (COWLS and Floridi 2018). Perceived threats are associated with government control over AI systems, companies' privileged position to develop AI, and when AI technologies become autonomous and conscious. Too much government control over AI systems creates concerns about data management and privacy issues. Internationally, there are concerns about states' use of AI for military purposes which offers new ways of conducting wars but also new risks (Jensen et al. 2020). At the same

✉ Carolijn van Noort
carolijn.vannoort@uws.ac.uk

¹ Politics and Public Policy, School of Education and Social Sciences, University of the West of Scotland, Import Building, 2 Clove Cres, London E14 2BE, UK

time, there are also quite reasonable beliefs that AI can help build peace (Masood and Waehlich 2019). The profit-focus of a few dominant companies possibly jeopardize a long-term humane approach of AI (Montes and Goertzel 2019). Alternatively, a concentration of AI development in a small number of groups could facilitate global collective action (de Neufville and Baum 2021). Autonomous and conscious AI systems are associated with dystopian futures, including robot uprisings. On the other hand, AI is also considered an opportunity to deal with twenty-first century social problems, including in areas of work, environment, and building homes. There are global discussions on how AI can help advance the Sustainable Development Goals and how it can improve the livelihood of people (SDG Knowledge Hug 2018; International Telecommunication Union 2018; Johnson and Verdicchio 2017).

Therefore, there are both utopian and dystopian futures of AI that circulate among societies (Cave et al. 2018). These ideas can hold back an AI agenda of a nation-state both in their internal and external affairs. To overcome concerns and misunderstandings, and gain support for AI-specific policies, states communicate “strategic narratives” to inform and persuade target audiences about AI (Miskimmon et al. 2013). For instance, states can communicate AI narratives to mobilize popular support for public policy that aids the research and development of AI technologies and enterprise. Internationally, state media is employed to help forge an identity as a responsible and or powerful AI leader. AI narratives can also be used to construct power hierarchies by highlighting technological innovators and followers.

Two core emotions that are associated with AI are hope and fear (Cave and Dihal 2019; Fast and Horvitz 2016; Adams 2020). Hope is related to a sense of agency, for instance when AI is associated with immortality, ease of work, and free time (Cave and Dihal 2019). Fear has to do with a loss of control, specifically in areas such as work and in relation to privacy (personal data) (Lobera et al. 2020). These competing emotions are a result of the many uncertainties, confusion, and misunderstandings about the uses and consequences as well as the autonomy of AI (Johnson and Verdicchio 2017; Cave et al. 2019). Public perceptions of AI differ among cultures and societies (Cave et al. 2018). Whether publics are hopeful or fearful of AI, depends, in part, on the narratives that are circulated in political communication.

Building upon the literature in emotions and strategic narratives, this study seeks to clarify which emotions are discursively used in China’s international AI narratives on China Global Television Network (CGTN), and their function and significance. Following a hermeneutic process, this paper investigates emotion discourses in AI-specific videos disseminated in China’s international broadcasting. This study shows that in addition to the core emotions of hope and fear,

pride also plays a role in China’s international AI narratives on CGTN. Hope is used to represent China as a key competitor in the global AI race, who is catching up to the US. China uses pride to showcase its advances in AI applications, to highlight its transformation of traditional industries, and to identify itself as equal to the US. Fear is used to frame US’s perception of AI developments in China, to suggest their crisis of confidence, but also to refute “the China threat”. Additionally, the fear discourse is used to deliberate anticipated risks, particularly on job loss and data privacy. Together, the three emotions, pride, hope and fear, forge China’s identity as a future global AI power.

This paper first contextualizes China’s AI development plans. The second part introduces the theoretical framework, by setting out the literature on emotions and strategic narratives. The third part explains the methodology used to assess which emotion discourses are mediated in China’s AI narratives, as well as their function and significance. The fourth part presents the findings of the research. The last part summarizes the key arguments, discusses the findings, and suggests further avenues of research.

2 Context: China’s AI development plans

In 2017, the State Council of China issued an initiative to become the global AI power in 2030. This plan elevated existing developments in AI (science and technology) and public support/funding to a new level (Ding 2018). The AI sector became a national priority with estimations that the “total output value of artificial intelligence industries should surpass 1 trillion yuan (\$147.80 billion)” (The State Council of China 2017a). In a press release, the State Council explains that “AI in China should be used to promote the country’s technology, economy, social welfare, maintain national security, and contribute to the world” (The State Council of China 2017a). Thus, engagement in the international competition of AI serves multiple purposes, including economic development, addressing social issues, such as population aging and resource environment restraints, as well as national security (The State Council of China 2017b, 2). The guideline indicates various challenges that could potentially affect the development of AI, but notes that the “organic combination between the accelerating accumulation of technical capacity, massive data resources, huge application requirements and open market environment forms China’s unique advantages of artificial intelligence development” (The State Council of China 2017b, 3). Other important strategy papers include the “Three-year Action Plan for Promoting Development of a New Generation Artificial Intelligence Industry” (2018–2020) and the “White Paper on Artificial Intelligence Standardization”.

As per the guideline, the government will invest in AI, set up a development fund for AI, and encourage private capital investment. The allocation of public funding in AI is aimed to make China more competitive overall. AI development is market oriented, but the guideline acknowledges that China will “make the best of governments’ role in planning guidance, policy support, security, market regulation, environmental construction, ethical regulations and other aspects” (The State Council of China 2017b, 4). Since the release of this AI policy, China has continued its coordination and implementation of AI plans. In 2019, China’s Ministry of Science and Technology released a document stating governance principles for responsible AI, using familiar Chinese rhetoric: “Harmony and friendliness,” “Fairness and justice,” and “Inclusivity and sharing” (translated in New America 2019).

China devotes considerable resources to circulate its own narratives in international broadcasting. In terms of the organization and implementation of the AI strategy, the 2017 plan noted the following *vis-à-vis* the guiding of public opinion: “Make full use of the variety of traditional media and new media, timely publicity of new progress in AI, new results, to inform the public of healthy developments in AI” (The State Council of China 2017b, 28). As a result, Zeng observed how: “Chinese state media have often highlighted positive AI stories, such as how advanced AI technology has helped thousands of families to find lost children or helped the police to catch criminals with unprecedented speed,” (Zeng 2020, 1452) and that China’s communications have been met with positive evaluations in China (Zeng et al. 2020).

Next, the paper reviews the literature on emotions and strategic narratives before it introduces the methodology.

3 Theoretical framework

3.1 Emotions

The study of emotions in the discipline of International Relations is steadily growing—some call it the “emotional turn” (Clément and Sangar 2018). According to Crawford, emotions are “first of all subjective experiences that also have physiological, intersubjective, and cultural components” (Crawford 2000, 125). Following a constructivist view, emotions are experienced individually, in relation with others (intersubjectivity), they are embedded in specific social, cultural and political contexts, and they can be institutionalized (Crawford 2014; Fattah and Fierke 2009; Ahmed 2004). Emotions ranging from pride, empathy, love, and compassion, to fear, shame, humiliation, resentment, pessimism, suffering, and hatred play a role in world politics (Stevens and Michelsen 2019; Hutchison 2019; Saurette

2006; Löwenheim and Heimann 2008). Of particular importance to this study is the sharing of feelings on the collective level. Hutchison and Bleiker suggest that “Even though we experience emotion emerging from our bodies, feelings are formed and structured within particular social and cultural environments” (Hutchison and Bleiker 2014, 504). This then emphasizes the role of institutions to project collective social emotions (Fattah and Fierke 2009). Following the recognition of emotions in international relations, researchers have theorized how emotions are influenced by history and culture, how they can be studied, and what their effects are.

History and context shape the perception of emotion discourse. In reference to other studies, Bleiker and Hutchison explain that “emotions have a history and that this history is essential to how collective identities—including those of states—are constituted” (Bleiker and Hutchison 2008, 122; Crawford 2000). In addition, emotions are cultural products because culture dictates emotional norms and attitudes (Fierke 2014). Emotions are subject to intercultural contestation, which is made visible through intercultural ‘clashes’ (Fierke 2014, 566; Fattah and Fierke 2009). Overall, historicizing and contextualizing emotion discourse would highlight why certain emotions have more traction among audiences than others (see also Ty in Koschut et al. 2017). It also explains why certain emotions are used over others.

It is through representations that we can observe emotions, and that we can explore the processes in which emotions become collective and political (Hutchison and Bleiker 2014, 506). Emotions are either directly or indirectly invoked in such representations. These representations are disseminated in formal settings, such as press releases and news media, as well as in popular culture and esthetic sources (Åhäll 2009). This study assesses representations of AI in China’s digital media productions. The production of power is at the heart of this dynamics because actors with power have more leverage to express emotions, determine which emotions are more legitimate, and circulate these emotions. Specifically, China’s state media circulate narratives and emotions as desired by the state.

Having explained what emotions are, that emotion discourse is shaped by history and culture, and that it is through representations that we can observe emotions, the next section explores the international political communication of emotion discourse using the theoretical concept of strategic narratives.

3.2 Strategic narratives

The international political communication of emotion discourse is explained by drawing on “strategic narrative” literature because it explains well the communication cycle (formation, projection, reception), and the communication’s instrumental value (Miskimmon et al. 2013).

Strategic narratives are defined as a “means for political actors to construct a shared meaning of the past, present, and future of international politics to shape the behavior of domestic and international actors” (Miskimmon et al. 2013, 2). The communication of strategic narratives plays an ever-greater role in the dynamic forces of international relations because of the potential power of communication to influence behaviors and perception of others. Scholarship has particularly dedicated attention to the communication of strategic narratives in areas such as war and security to bolster domestic and international support (Dimitriu and De Graaf 2016; Swimelar 2018; Coticchia and De Simone 2016; Roselle 2017). Strategic narratives are also deployed to give meaning to more peaceful objectives such as infrastructure cooperation (van Noort 2020). There is ample strategic narrative research on China, with reference to its communication on the Belt and Road Initiative, BRICS, and global governance (Lams 2018; Yang 2020; van Noort 2017, 2020; van Noort 2019a, b; Zeng 2019). Strategic narratives are communicated by a range of actors in the international system, from traditional nation–states, international organizations, to civil society (Miskimmon et al. 2013; Bevan et al. 2020; Barthwal-Datta 2015). In this case study, we examine the strategic narratives projected by China’s media organization CGTN (China Global Television Network).

The significance of a state’s strategic narratives depends on the existence of competing (counter) narratives, narratives’ reception, as well as the general context in which the narrative struggle unfolds. Hagström and Gustafsson explain that “Whether advances in narrative battles are understood as ‘public diplomacy’, ‘soft power’, ‘propaganda’ or ‘information warfare’ largely depends on how well different narratives resonate with the hearts and minds of audiences around the world” (Hagström and Gustafsson 2019, 390). When governments create strategic narratives, they communicate emotion discourses that they seem fit for their political objectives. As Crawford noted early on:

Political leaders, policymakers, and activists are aware, at least naively, of the effects of emotion on information processing, risk assessment, and receptivity to arguments, and they use emotion in their discourse to influence those processes and motivate their audiences (Crawford 2000, 149).

These emotion discourses interact with existing collective emotions in a social and cultural context through intertextuality. It is due to productive power (Barnett and Duvall 2005) that these emotions become more dominantly associated with strategic narratives about the state (that is in this study China) and the issue at hand (AI). Despite a state’s careful formation of strategic narratives, the representations of emotions herein are subject to criticism, subversion, and resistance (Beattie et al. 2019). Also, emotional content is

only one of the aspects why strategic narratives are contested (Miskimmon et al. 2013, 111–112). While states may wish to convey certain emotions—or to provoke certain emotions, that does not mean the audience will feel them on reception, or that they will be consequential.

Taken together, nation–states such as China communicate strategic narratives to influence the behavior and perceptions of others and emotion discourse is deployed to further this cause.

4 Methodology

Stories about AI matter because they shape our perceptions and expectations (Cave et al. 2020; Leverhulme Centre for the Future of Intelligence 2020). Public understandings and misunderstandings are in part exacerbated by fictional AI narratives (such as science fiction), as well as fairytales, myths, and religion (Hermann 2020; Giuliano 2020). This study examines non-fictional AI narratives communicated in Chinese international broadcasting. Governments such as China do not only respond to narratives (that convey emotions) that are circulating domestically and internationally, but they are also engaged in their social construction (Bareis and Katzenbach 2021).

Various studies have examined the role of the media in developing AI discourse. Here are some general observations from these studies. Public perceptions of AI are shaped by the perspectives and topics that journalists choose to report (Vergeer 2020), and the depth of information provided on AI (for instance, on the ethical issues of AI) (Ouchchy et al. 2020). The type of newspaper affects AI reporting. Research shows that in the Netherlands, popular newspapers are more negative about AI, while national newspapers publish more on AI than regional or religious newspapers do (Vergeer 2020). News coverage on AI is in some countries affected by right-leaning (focus on economics and geopolitics) or left-leaning political agendas of newspapers (ethics and discrimination) (Brennen et al. 2018). The choice of voices (industrial representatives, state officials, experts, etc.) affects AI news coverage, with the UK showing most sources from the industry (Brennen et al. 2018). The type of media consumption (e.g., newspaper, television or social media) can also affect public perceptions of AI, with social media and television creating more positive perceptions than newspapers do in China (Cui and Wu 2021). In this case study, we witness how China’s ownership and control of mass media aids the social construction of international AI narratives. While China’s state apparatuses cannot control the perception of international AI narratives, it does have complete control on the projection of desirable emotions and strategic narratives (see positive framing of AI in Chinese media in Cui and Wu 2021).

An interpretive approach is used to study emotions in AI narratives (Bleiker and Hutchison 2008). Bleiker and Hutchison suggest that “visual depictions of emotions and the manner in which they shape political perceptions and dynamics” matter (Bleiker and Hutchison 2008, 118; see also Adler-Nissen et al. 2020; Schlag 2018). Similarly, textual and verbal utterances are suitable places to observe the representation of emotions because it changes the focus from their “internal phenomenological perception” to “their representational and intersubjective articulation and communication within social spheres” (Koschut et al. 2017, 485). Moreover, a study of emotion discourse should analyze how they constitute dominant norms and values, and how the dynamic of emotions plays a role in global politics (Saurette 2006).

By adopting a micro-level approach, this study reveals which emotions are embedded in China’s AI narratives and the emotion’s function and significance. Hutchison and Bleiker explain how “Micro approaches focus less on establishing generalizable principles and more on analyzing the unique ways and mechanisms through which emotions exist and, in turn, become socially and politically significant” (Hutchison and Bleiker 2014, 498). A macro approach would mean the identification of “commonalities about how people and political phenomenon are linked to emotions across time and space” without taking notice of how emotions are affected by cultural contexts. Thus, while hope and fear are two core emotions linked to AI discussions in the public sphere, it does not explain how these and other emotions function in specific circumstances. In comparison, a micro-approach would explore the unique ways that China communicates about AI, for instance in its speeches, press releases, public relations videos, social media engagement. This study specifically focuses on videos disseminated online on the CGTN YouTube channel in the English language.

CGTN (China Global Television Network) is an international media organization that is supported by significant resources from the Chinese authorities (Shambaugh 2015). To reach more international audiences, CGTN has a dedicated web-based presence that includes channel accounts on YouTube, Facebook, and Twitter (Hu et al. 2017). Content on CGTN’s YouTube channel is similar to the other accounts.

To understand which emotions are used in China’s AI narratives and their function and significance, a data sample of 50 YouTube videos was selected on March 11, 2021 from a public computer and a new email account. Criteria for selecting the videos were as follows: (1) videos that are disseminated on official CGTN YouTube channel; (2) videos that were listed under the keyword ‘Artificial Intelligence’; and the (3) first 50 entries. The top 50 videos listed were chosen based on their relevance to the search key words. It is a sample of how China wants audiences to perceive

AI developments in its country. The selected videos were posted between 2016 and March 2021. The data sample presents sufficient range of media productions to assess the significance of emotion discourse, with videos ranging from short clips to lengthy talk shows. Moreover, a clear pattern of emotions was deducible after the first 30 videos; the subsequent 20 videos confirmed the identification and function of three important emotions.

For the purpose of analysis, each video was assessed for the representation of emotions (visual, textual, and or verbal) (Rose 2016), and the emotion’s “nature, function, and significance” (Hutchison and Bleiker 2014, 498). The analysis thus identified the emotions’ essential characteristics (how they are constituted by “particular cultural and political environments”) (Hutchison and Bleiker 2014, 498), their function—meaning how the emotions are associated with the Chinese state (identity narratives) and with AI (issue narratives), and how these emotions become socially and politically significant.

5 Projection of emotions in China’s international AI narratives

Following this broad overview of China’s AI agenda, the theoretical framework comprising emotions and strategic narratives literatures, and the methodology, this section presents the results of the study. The research showed that pride, hope, and fear are important emotion discourses employed in China’s international AI narratives on CGTN. Pride is conceptualized as a “feeling of deep pleasure or satisfaction derived from one’s own achievements, the achievements of those with whom one is closely associated, or from qualities or possessions that are widely admired” (Lexico 2021c). Hope is a “feeling of expectation and desire for a particular thing to happen” (Lexico 2021b). Pride is different from hope in that it is based on achievements in the past, while hope is future-oriented. Fear means a “unpleasant emotion caused by the threat of danger, pain, or harm” (Lexico 2021a).

5.1 Hope

Hope is used to represent China as a key competitor in the global AI race, who is catching up to the US.

It is with hope that China communicates about its AI plans and progress. One video explains that “In 2017, China State Council issued the Next Generation AI development plan setting a goal for China to become a global AI innovation center by 2030” (CGTN 2018g). The AI agenda is part of China’s plan to become a world power house in scientific and technological innovation in 2050 (CGTN 2018h). Chinese leader Xi Jinping stresses the importance of AI for the

country's technological and industrial development (CGTN 2018j). The goal of China is "for the value of core AI companies to surpass 24 billion U.S. dollars by 2020" (CGTN 2018c). According to one scientist from Tencent Youtu Lab, "After we get the industry very established then I believe the economy will have a new fuel to move on and to boost" (CGTN 2018g; for the entire episode, see CGTN 2018h). As of 2018, according to one video, China's AI market is 1.76 billion US Dollar, and its forecast for 2023 is 11.90 billion US Dollar (CGTN 2019j). Therefore, the hope discourse is used to create China's identity narrative as a future global AI power.

With hope, China presents itself as a key competitor in the global race to develop AI. A presenter in a video comments that "In the coming years AI is set to transform our lives in a big way and China is eager to join the race to become the world's leading AI power. But does it have what it takes to win that competition?" (CGTN 2018i). Noticeably, China frames itself as a key competitor and not the leading competitor, and that it is 'joining the race', implying late arrival. Chinese media productions do not suggest win-lose scenarios in terms of this race. Instead, as one Chinese academic in a video explains: "No country can ever monopolize AI development, and no country can cover all technologies needed for different sets of scenarios" (CGTN 2018g). Thus, the race for technological superiority still has a common prosperity in sight, according to China's AI narratives.

With the US being China's main competitor, AI developments in China are often compared with the US. This comparison is in part to familiarize audiences with local developments. For instance, Chinese company JD.com is described as "China's Amazon equivalent" (CGTN 2017d). But more often, the US functions as a reference point to track progress in areas of research and enterprise. The way that questions are framed in the talk shows prompt US-China comparisons. In one video the presenter asks: "How do you compare the ecosystems in the two different countries and the competitiveness of different countries?" (CGTN 2020e). The hostess in another CGTN video asks: "Does China have the potential to surpass the US and become the world leader in AI?" (CGTN 2018h) and "Does it mean that China has already assumed the leadership in this particular field?" (CGTN 2018e). With hope, the videos convey the message that China is "catching up" to the US, demonstrated with its many startups and mega companies, AI applications and favorable policies (CGTN 2018h).

5.2 Pride

China uses pride to showcase achievements in AI, and to highlight how some traditional industries have transformed (and continue to do so). Additionally, pride is also used in a nationalistic sense to compare China with the US.

Videos on CGTN tie the emotion discourse of pride to China's leadership in applied AI technologies in a wide variety of areas. While the emotions used in these videos could be described as 'pleased' or 'excited', the listing of the many successful AI companies and AI applications suggests a sense of pride on China's part. According to these videos, AI has entered in all areas of human life, including in business, digitalization of cities, and entertainment (CGTN 2018f, 2020b, 2021a). Videos celebrate AI applications in the medicine, storage, car manufacturing (CGTN 2016c), services (smart trash cans) (CGTN 2018h, 2020i), bullet trains (CGTN 2019j), riderless bikes, speech recognition and transcription (CGTN 2018h, 2020d, i), smart airports (CGTN 2021a), and pandemic control (CGTN 2020l). Humanoid robots for all ages, from babies to the elderly are introduced in the videos (CGTN 2019d). AI is applied in the creative sector, including video editing (CGTN 2019i), music and arts (CGTN 2018d). AI technology is also rolled out to improve customer experiences in hotels (CGTN 2018b). Other applications are in urban wastewater treatment (UN's Sustainable Development Goals, goal 6: clean water and sanitation, see CGTN 2019k). Aside of these uses of AI, AI technologies also help the preservation of local languages that are disappearing (CGTN 2020c). The media productions represent AI as the next best thing that will further boost China's economy.

It is also with pride that China communicates about the encouraging environment to develop AI technologies. According to one CEO: "China has abundant capital and the government released favorable policies. The current situation of industries is also favorable. Many of our traditional industries are relatively backward. [...] There are great market demands here. The third dimension is human resources. China actually has its own advantages in talents" (CGTN 2017d; see also CGTN 2017a). Various videos praise the favorable policies in China, including the drafting of a national AI strategy and available funds for startups in the AI field (CGTN 2020a). Moreover, the encouraging political climate in China benefits frog leap progress. A Chinese researcher explains how "There are interest groups in the US that influence politics. So, they may be more cautious about new technologies. China is much less constrained in adopting technologies. What concerns China is whether the technology can boost development. If it does, China will take it on board" (CGTN 2018i, 2020e). Last but certainly not least, in China there is the large available data sets that Chinese citizens have provided (CGTN 2020e). Noticeably, China seems perfectly welcoming to the international AI community, as the many videos covering AI expo's, fairs, conferences (e.g., World Artificial Intelligence Conference), and non-Chinese companies demonstrate (CGTN 2017b, 2018a, 2019a, 2020j, 2021a, g, k, k).

Pride is used to narrate that industrial development in China is driven by AI technologies. This emotion is visually communicated through the representation of modern workspaces, and young men and women at work in these high-tech environments. In addition to the successful Chinese giants Huawei, Alibaba, Baidu, and Tencent, the videos celebrate the many startups in China. Many of the voices that are used in the videos to verify these promising developments are CEOs of Chinese AI companies, as well as AI developers and engineers (CGTN 2017d, 2018i, 2020g). These voices indirectly legitimize China's AI narratives—that China is an important AI power.

With pride, China presents itself as an equal to the US and as an AI leader (in addition to China framing itself as catching up to the US, as the section on hope indicated). For instance, a CEO of a Chinese company noted: “I think our research is at the same level of US research, but I think the focus is a bit different” (CGTN 2018f). Co-founder of a Chinese robots company stated that “I think that the business environment is different in the US and China, and I think in China there is a lot of opportunities for AI” (CGTN 2016d). Pride is also used to represent China as the number one AI power. One video titled “China is leading the AI technology in the world” explains that according to a US think tank report: “In terms of data and commercial application, AI is applied in 32 percent of Chinese businesses, whereas, in the U.S. and EU it's 22 percent and 18 percent, respectively” (CGTN 2020f; see also CGTN 2019j). Another video emphasizes the competitiveness of China, by having 37% of the distribution of patent applications for global AI technology in 2018 (CGTN 2020a). In comparison, the US has a 25% share according to this video. All these examples boost China's identity as an AI power.

5.3 Fear

CGTN videos suggest that the US is fearful of China's emerging AI agenda and that the US is experiencing a crisis of confidence. At the same down, they refute the “China threat”. Additionally, the fear discourse is used to deliberate anticipated risks, particularly on job loss and data privacy.

The US is fearful of China's emerging AI agenda according to the videos. The US executive order to ensure the country's leadership in AI is fueled by fears of China according to the CGTN video: “The US with its technological superiority is still considered a leader in the AI field, but the US government fears that China is catching up fast and that propelled Trump's announcement” (CGTN 2019h). In a video titled “The Point: Why is U.S. anxious about China's rise in AI?” (CGTN 2019g), the host's line of questioning indicates how emotion discourses are used to position China in relation to the US. For instance:

It sounds on the part of the United States that the US is really scared. Feeling insecure about the possible catchup of China. As I said, China only started to develop you know 10, 20 years ago. So, Mr. Smith, is the US suddenly losing confidence in itself? So, scared of what China can do in terms of AI? (CGTN 2019g)

The videos represent the US as fearful of China's competitiveness in AI.

CGTN videos seek to debunk the idea that China is a threat to the US. This sentiment is especially tied to accusations of IP theft. Some videos emphasize that the Chinese companies own the intellectual property rights that they use: “We would not copy or steal from others” (CGTN 2021a). Presenters' line of questioning is used to discredit this fear. For instance: “Is the kind of ‘China threat’ [quotations made by presenter by hands] in the field of AI being blown up, out of proportion in the mind of some people? Is this kind of artificial threat preventing China and the United States to cooperate potentially?” (CGTN 2019g) This example demonstrates how fear is discursively used to downplay the China threat.

Aside of the US framing, fear is linked to anticipated risks including job loss and data privacy. There are also ethical concerns in future of AI and robotics (CGTN 2018i; see also CGTN 2019f). Suggested risks result from the dual use that AI technologies can have (military and civilian) (CGTN 2018i, 2019b). There is fear of the future of AI due to its many unknowns (CGTN 2018c). In talk shows, guests are asked to comment on the opportunities and challenges of AI. For instance, one video elicits responses from the guests by referring to Stephen Hawking's prediction that the rise of powerful AI will be either the best or the worst thing ever to happen to humanity (CGTN 2018e; see also Hern 2016). A guest on one of the recorded shows predicts the polarization of society, those that benefit from AI and those that do not (CGTN 2017e). A presenter wonders whether the 4th industrial revolution will cause harm to low-income families, by asking “Who will be the winners and who will be the losers?” (CGTN 2018e). All these discussions are mediated with the fear discourse.

Various videos engage with the fear that AI will replace humans in the workplace (CGTN 2017e, 2020i). They are both optimistic and pessimistic assessments about the future of AI and its impact on job security. This is exemplified with a remark by an AI entrepreneur that:

There are some people that think it will usher in a whole new era of everything being wonderful. And there are others who believe that AI will get out of control. Because every time when a new technology has come along the belief is that it would destroy all the jobs. And what ended up happening is that people just moved on to new types of jobs. (CGTN 2019j)

The same arguments are mediated in a debate between Alibaba founder Jack Ma and Tesla Inc. co-founder Elon Musk. Jack Ma noted: “About jobs, don’t worry about it. We will have jobs.” Elon Musk subsequently replied: “Over time, AI will make jobs pointless. Probably the last job that will remain will be writing AI software—and then eventually AI will write its own software” (CGTN 2019c). These views are supported by hope and fear discourses, which are the core emotions associated with AI.

When we look more closely, the fear of job loss is debated from various angles. A CGTN video titled “The Big Picture: Will Artificial Intelligence replace humans?” reassures that Chinese company JD “still relies heavily on human workers” visualized with workers who are loading the trucks with goods (CGTN 2017h). But at the same time, in this and other videos, China communicates how various industries are reformed for the better. For instance, an AI developer explained that a barista’s job will be redefined with robots taking over the repetitive tasks, thus allowing for more time and creativity for information-sharing and creating better flavors (CGTN 2020h). Other videos present a more pessimistic image that certain jobs will be lost, including in sectors such as accountancy and legal services (CGTN 2019f). At the same time, the videos explain that there is a labor shortage of top talents for high-end industries (about a million talents missing), which China is seeking to narrow in the next decade (CGTN 2019j; see also CGTN 2018h).

AI is also linked to fear about data privacy. CGTN’s videos recognize these concerns but highlight the benefits of AI for national stability and security. Videos explain how face recognition can be used to find missing persons (CGTN 2018h), and to help catch criminals in public spaces (CGTN 2018f). Other videos address the issue of balancing data privacy and national security. An academic argues that AI is making society safer, but that negative impacts of the AI technology in application should be addressed (CGTN 2018h). For instance, fear of deep fakes is an example when AI is misused (CGTN 2020i). In various videos it is suggested that both companies and governments should guarantee the safe development of AI. Business entrepreneurs are asked in interviews how they intend to solve parts of the problem (CGTN 2020g, 2021a). An AI entrepreneur mentions that: “AI application will cause some data risks. [...] It will bring problems as well as opportunities. Such as new companies to guarantee the safety. Governments should also issue related policies and regulations” (CGTN 2017d). Another CEO explains how its technology abides by international standards (CGTN 2021a). Thus, as China’s international AI narratives suggest, both governments and business should address fears that result from data privacy concerns.

Taking the analysis of pride, hope and fear together, it is found that hope is used to present China as becoming a technological leader and that it is only a matter of time that they

are catching up to the US. Pride is used to normalize China’s identity as an AI power, by listing achievements in their AI sector. Pride is also used to represent China as an equal to the US. Fear is used to frame US’s perception of China’s AI agenda, but also to refute this perceived threat. Additionally, fear is used to deliberate the social–economic disruptions that these new technologies will generate. Noticeably, the emotion discourses are not entirely separable, they relate to each other. China’s hope to become a global AI power builds on a successful AI sector that they are visually proud of. At the same time, the country’s catch-up to the US brings hope and pride to China, but causes, according to some of the videos, US’s fear.

6 Discussion

The present study was designed to determine which emotion discourses are employed in China’s strategic narratives on AI, and their function and significance. The results of this study indicate that in addition to hope and fear, pride is also an important emotion used in China’s international AI narratives on CGTN. These emotions are either directly or indirectly invoked in the representations. This section discusses how these findings contribute to key debates about Chinese discourse and media strategy.

All three emotions discursively contribute to forging China’s identity narrative as a future global AI power. Hope is used to represent China as a key competitor in the global AI race, that has a specific aim to catch up to the US. This corresponds with the 2017 strategy that stated that by 2030 China hopes “to be the major artificial intelligence innovation center of the world” (The State Council of China 2017b, 6). Self-inflation which shapes the experience of pride (van Osch et al. 2018), also contributes to China’s identity formation as a global AI power (Sullivan 2014). China is eager to show off their achievements, but at the same time, try to routinize these technological developments to normalize their image as a technological power. China discursively highlights US’s fear of China and suggests that there is no China threat. In addition, fear is used to frame China as a responsible AI power, committed to a balanced discussion about AI opportunities and challenges, and focused on developing suitable public policy.

While hope and fear are more common emotions associated with AI, pride is less obvious. However, considering the cutting-edge technology that AI represents and China’s unprecedented advances in this field, pride is a probable emotion in this situation. This is both true for the AI sector being a top–down approach or a bottom–up development, as Zeng noted (Zeng 2021). Nevertheless, using pride in communication can also come across as arrogance or superiority. While technical superiority is a clear goal of China

as shown in their strategy plans (“Made in China 2025”), Beijing professes at the same time a message that it aims to build a “human community of shared destiny” which is based on win–win relations (Office of the Leading Group 2017, 5). Clearly, a narrative tied to superiority might complicate China’s intentions. Nevertheless, omitting the pride discourse for only hope might be difficult due to international prejudices held against China. Not all countries will feel “hopeful” for China’s advances in the AI field due to the technology’s potential military applications and subsequent consequences of other countries’ national security. Therefore, China is caught between wanting to lead, but without wanting to looking superior or antagonistic.

There are some narrative inconsistencies with regards to who China is within the AI story. Depending on the video, China is presented as catching up to the US in terms of AI research and enterprise, as an equal to the US, and as the leading AI power. All three emotions, hope, pride, and fear are used to situate China vis-à-vis the US. Hope is used to express China’s desire to catch up to the US. Pride functions by referring to the self, the relationship with the other, and the other (van Osch et al. 2018). This means that using the US as a reference point helps inflate the image of China’s progress and leadership in AI applications. The mediation of fear is to suggest US’ crisis of confidence. China’s media productions do not specify why the US is supposedly fearful of China’s AI plans and bustling enterprise. This is not unsurprising, given that vagueness and ambiguity surrounding threats is a common feature of fear discourse (Ventsel and Madisson 2022; Ventsel et al. 2021). The China–US comparisons suggest that there are some uncertainties as to how China wants to present itself in respect to its key competitor. Considering that the choice of emotions are influenced by history and culture, China’s communications about the US are shaped by ongoing antagonisms between the two countries.

While the projection of emotions matters, it is the perception thereof that will indicate the communication’s success. How China’s communications are understood depends on how the AI narratives resonate with target audiences. The AI narratives can be perceived as part of China’s soft power strategy corresponding with Xi Jinping declaration in 2014 that “We should increase China’s soft power, give a good Chinese narrative, and better communicate China’s message to the world” (Xi 2014). Alternatively, audiences can understand China’s communication process as “positive propaganda” (Brady 2015, 57) or misinformation. Regardless, China’s international AI narratives on CGTN are examples of mediated public diplomacy, which “involves shorter term and more targeted efforts using mass communication (including the Internet) to increase support of a country’s specific foreign policies among audiences beyond that country’s borders” (Entman 2008, 88). That means that the sum

of videos disseminated by CGTN reveals China’s discourse and media strategy. Each one of them contributes to China’s long-term goal to being recognized as a global AI power and by extension a global technological power.

As observed, the fear discourse is used to deliberate anticipated risks, particularly on job loss and data privacy. To some extent, China presents a balanced account on AI considering their communication about AI developments, predictions, and uncertainties. Various CGTN videos discuss whether AI is either a positive or negative development and historicize AI progress (CGTN 2016a, b; CGTN 2018m). For instance, one video titled “Rise of Artificial Intelligence: friend or foe?” draws attention to public concerns over AI (CGTN 2016d). Other examples include whether AI is a blessing or a curse (CGTN 2018e), and whether AI makes life better or more stressful (CGTN 2021b). While most of these questions are not explicitly answered, the videos present the existence and spread of AI technologies and applications as inevitable. By communicating this debate on AI so openly on CGTN, China recognizes the prevailing misunderstandings and concerns in society. Also, AI applications in other countries are mediated by CGTN (CGTN 2017c, 2019e, f). This communication process suggests reflection on China’s part to develop the technology responsibly.

At the same time, the videos celebrate “frog leap” development in AI in China. The persuasiveness of this communication is tentative two-fold. First, while the availability of large data sets allows for frog leap development in AI to take place in China, the socio-political conditions that generate these data sets are not discussed in China’s communication. Whereas the videos communicate about an active role by both business and government to regulate AI development, government’s access to citizens’ data is not scrutinized as in other liberal democracies (Zeng 2020). Second, while international views are welcomed in the talk shows, the interviewees either self-censor or the video clips are edited to provide a sanctioned message. This is not surprising taken into consideration China’s restricted media environment and censorship practices, but it fails to live up to journalism practices expected by audiences in liberal democracies.

Noticeably, talk shows do not shy away from talking about public policy. For instance, a presenter asks: “Do you think the government has the power to regulate this technology?” (CGTN 2020l). However, discussions about AI regulation remain generic in a sense that they mention that policies fail to keep up with new technology developments, and that businesses aspire policies that provide an even playing field so that all Chinese companies can prosper (CGTN 2017a). There are suggestions about improving access to funds for small and medium-sized businesses, and a change of allocation funding from project-based to research institutions with clear mission statements (CGTN 2021a). Differences in terms of policies between nation-states are not discussed

despite the inclusion of international guests on CGTN's talk shows. There is therefore not the critical reflection on the role of the government and the CCP to advance or curb AI development.

Question remains whether liberal democracies are the key audiences of these videos. Certainly, both language and media channel suggest that citizens in Europe and the US belong to the target audiences. At the same time, the CGTN videos might also be directed to overseas Chinese in the US. Several videos emphasize how CEOs of technology and AI-specific companies have returned to China for a promising career after being educated in the US and having had significant work experience there (CGTN 2021a). This suggests that highly educated overseas Chinese are also an important target audience of these media productions considering that China is missing sufficient talents to develop AI.

Overall, the present study suggests that pride, hope, and fear emotions are communicated in China's international AI narratives on CGTN. In forging a coherent identity narrative as a leading AI power, China seeks to shape the views of international audiences. Despite this careful projection of emotion discourses, the representations of emotions herein are nevertheless subject to criticism, subversion, and resistance.

7 Conclusion

Closer attention to the content projected in the digital sphere reveals how China tries to create strategic narratives about AI using pride, hope, and fear emotions. These emotions help forge China's identity as a future global AI power. No longer is Deng Xiaoping's slogan "bide your time" of relevance to China's media communications. Instead, under the leadership of Xi Jinping, China's AI agenda is broadcasted to the world with assertiveness. The media productions suggest that China is hopeful to be catching up with the US and making frog leap development in new generation technologies. Audience analysis is needed to examine the persuasiveness of China's communications. A natural progression of this work is to analyze how these international AI narratives on CGTN and choice of emotion discourses compare to the communications of China's main competitor, the US.

Acknowledgements The author would like to thank Dr Thomas Colley for his feedback on an earlier draft of this manuscript.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated

otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Adams R (2020) Helen A'Loy and other tales of female automata: a gendered reading of the narratives of hopes and fears of intelligent machines and artificial intelligence. *AI Soc* 35(3):569–579
- Adler-Nissen R, Andersen KE, Hansen L (2020) Images, emotions, and international politics: the death of Alan Kurdi. *Rev Int Stud* 46(1):75–95
- Åhäll L (2009) Images, popular culture, aesthetics, emotions: the future of international politics? *Polit Perspect* 3(1):1–44
- Ahmed S (2004) *The cultural politics of emotion*. Routledge, Abingdon
- Bareis J, Katzenbach C (2021) Talking AI into being: the narratives and imaginaries of national AI strategies and their performative politics. *Sci Technol Human Values*. <https://doi.org/10.1177/01622439211030007>
- Barnett M, Duvall R (2005) Power in international politics. *Int Organ* 59(1):39–75
- Barthwal-Datta M (2015) Strategic narratives and non-state actors. *Crit Stud Secur* 3(3):328–330
- Beattie AR, Eroukhmanoff C, Head N (2019) Introduction: interrogating the 'everyday' politics of emotions in international relations. *J Int Polit Theory* 15(2):136–147
- Bevan LD, Colley T, Workman M (2020) Climate change strategic narratives in the United Kingdom: emergency, extinction. *Effect Energy Res Soc Sci*. <https://doi.org/10.1016/j.erss.2020.101580>
- Bleiker R, Hutchison E (2008) Fear no more: emotions and world politics. *Rev Int Stud* 34(S1):115–135
- Brady A (2015) Authoritarianism goes global (II): China's foreign propaganda machine. *J Democr* 26(4):57
- Brennen JS, Howard PN, Nielsen RK (2018) An industry-led debate: how UK media cover artificial intelligence. <https://reutersinstitute.politics.ox.ac.uk/our-research/industry-led-debate-how-uk-media-cover-artificial-intelligence>. Accessed 10 June 2021
- Cave S, Dihal K (2019) Hopes and fears for intelligent machines in fiction and reality. *Nat Mach Intell* 1(2):74–78
- Cave S, ÓhÉigeartaigh SS (2018) An AI race for strategic advantage: rhetoric and risks. In: *Proceedings of the 2018 AAAI/ACM conference on AI, ethics, and society*, p 36
- Cave S, Craig C, Dihal K, Dillon S, Montgomery J, Singler B, Taylor L (2018) Portrayals and perceptions of AI and why they matter. <https://www.repository.cam.ac.uk/bitstream/handle/1810/287193/EMBARGO%20-%20web%20version.pdf?sequence=1>. Accessed 10 Aug 2021
- Cave S, Coughlan K, Dihal K (2019) 'Scary Robots' examining public responses to AI. In: *Proceedings of the 2019 AAAI/ACM conference on AI, ethics, and society*. https://dl.acm.org/doi/pdf/https://doi.org/10.1145/3306618.3314232?casa_token=cNiT9jxLIwsAAAAA%3AGtKyv8PAOG-I6oyrQx4L67nPW1q4_IdbnsOjOJ7NC5LeG7ImZIQ4-ueotmNU9yh4G3SSg_aAHKo. Accessed 20 June 2021
- Cave S, Dihal K, Dillon S (eds) (2020) *AI narratives: a history of imaginative thinking about intelligent machines*. Oxford University Press, Oxford
- CGTN (2016a) AlphaGo: strides made in artificial intelligence development. https://www.youtube.com/watch?v=AmqXHzpGYQ4&ab_channel=CGTN. Accessed 11 Mar 2021

- CGTN (2016b) Artificial Intelligence has promising future. https://www.youtube.com/watch?v=Uo7BD1D3MpU&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2016c) Artificial intelligence, self-driving cars shine in TechCrunch Disrupt Conference. https://www.youtube.com/watch?v=_Kih9DsL-_8&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2016d) Rise of artificial intelligence: friend or foe? https://www.youtube.com/watch?v=g9i24DEM5Qk&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017a) 2017a0628: technology innovation & artificial intelligence. https://www.youtube.com/watch?v=zIO3waDKFVI&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017b) Artificial intelligence at world internet conference. https://www.youtube.com/watch?v=FpiothkFjpk&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017c) Artificial intelligence finds solar system with eight planets like ours. https://www.youtube.com/watch?v=TaIldUu0tU&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017d) Artificial intelligence powers China's tech future. https://www.youtube.com/watch?v=Fkqtz2uqEPo&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017e) Discussion: rise of artificial intelligence. https://www.youtube.com/watch?v=lcru8eRLYSk&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017f) Hitachi reveals AI security software. https://www.youtube.com/watch?v=JVFTm5R8LLM&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017g) Interview with Turing award winner & artificial intelligence at world internet conference. https://www.youtube.com/watch?v=3LrfcNBHmpo&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2017h) The big picture: will artificial intelligence replace humans? https://www.youtube.com/watch?v=IwaFeu3FoGs&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018a) 2018m world artificial intelligence conference kicks off in Shanghai. https://www.youtube.com/watch?v=Vsstd7VK40&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018b) Alibaba opens AI 'future hotel'. https://www.youtube.com/watch?v=fU7gcrJWCFo&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018c) Artificial intelligence in spotlight at GMIC 2018o. https://www.youtube.com/watch?v=s8triP4KSSE&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018d) Artificial intelligence ushers in a new era for creative pursuits for music and art. https://www.youtube.com/watch?v=XgA2LYqrkWc&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018e) Boosting artificial intelligence a blessing or curse? https://www.youtube.com/watch?v=9peITbqv1x8&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018f) China Innovation: the eye of AI. https://www.youtube.com/watch?v=S9rthM9Av2o&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018g) How is artificial intelligence changing China? https://www.youtube.com/watch?v=uBy66wX7vSY&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018h) How is artificial intelligence changing China? https://www.youtube.com/watch?v=cu731-8Bj60&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018i) Mission AI series 1: China's riderless bike on a journey into the unknown. https://www.youtube.com/watch?v=7d2tMw5o0e4&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018j) President Xi stresses the importance of AI development. https://www.youtube.com/watch?v=XKqDDyKOFAM&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018k) Robots and artificial intelligence are highlights of the China Information Technology Expo. https://www.youtube.com/watch?v=KQ00W0tMnCo&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018l) The future of artificial intelligence and robotics raise ethical concerns. https://www.youtube.com/watch?v=hgMZA mx4qRQ&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2018m) The point: can AI make us smarter? <https://www.youtube.com/watch?v=qZnqJ9bYpSg>. Accessed 11 Mar 2021
- CGTN (2019a) 500 drones create stunning light show on AI-driven future. https://www.youtube.com/watch?v=LvYNHSf7Fbl&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019b) Artificial intelligence means big business. https://www.youtube.com/watch?v=mzqfyHp-a0M&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019c) Jack Ma vs. Elon Musk at World AI Conference. https://www.youtube.com/watch?v=SZL8B9iLZIU&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019d) Live: how will artificial intelligence affect our lives? https://www.youtube.com/watch?v=XIZI0lfb7ow&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019e) Restaurant sector turns to artificial intelligence. https://www.youtube.com/watch?v=Cs4DISOFebE&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019f) The impact of artificial intelligence on jobs and ethics. https://www.youtube.com/watch?v=W8zroTXBQ2s&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019g) The point: why is U.S. anxious about China's rise in AI? https://www.youtube.com/watch?v=3O4VZqG-CgE&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019h) Trump signs AI initiative to ensure American leadership. https://www.youtube.com/watch?v=x72LxpK-S0Q&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019i) Where can artificial intelligence be applied? https://www.youtube.com/watch?v=nIVpY3nh5dY&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019j) Why China can take a lead in 5G and AI technology application. https://www.youtube.com/watch?v=InPzIUe5Qck&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2019k) World Cities Day: AI empowers urban wastewater treatment in China. https://www.youtube.com/watch?v=1ykR7n76-yI&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020a) 5G drives a new generation of artificial intelligence. https://www.youtube.com/watch?v=69PS3txZAoc&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020b) Animation expert exclusive: will AI replace human animators one day? https://www.youtube.com/watch?v=dOPNuLNfSjE&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020c) Artificial intelligence helps preserve dying language. https://www.youtube.com/watch?v=3uX5RcD1NSM&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020d) Artificial intelligence on the rise. https://www.youtube.com/watch?v=vtq-Fq80mdU&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020e) Artificial intelligence on the rise. https://www.youtube.com/watch?v=sna80UGR2NI&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020f) China is leading the AI technology in the world. https://www.youtube.com/watch?v=kkSiQINE2vI&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020g) CIIE: artificial intelligence a rising star. https://www.youtube.com/watch?v=4s72AwqN1wk&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020h) Highlight from CIFTIS 2020h: AI coffee making robots. https://www.youtube.com/watch?v=XGblRz0jX5Y&ab_channel=CGTN. Accessed 11 Mar 2021

- CGTN (2020i) How is AI driving the transformation of traditional industries in Shanghai? https://www.youtube.com/watch?v=piyws1rue4&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020j) Live: virtual world artificial intelligence conference 2020a features technological frontiers in AI. https://www.youtube.com/watch?v=b1iB83scY6o&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020k) Mixed reality in 2020b world artificial intelligence conference. https://www.youtube.com/watch?v=YYPI3FFY-kg&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2020l) What's the current state of AI? https://www.youtube.com/watch?v=hGsZaZ5-46k&ab_channel=CGTN. Accessed 11 Mar 2021
- CGTN (2021a) Technology and innovation in China's Path to 2035. https://www.youtube.com/watch?v=Gyc1OHJq_Lg&ab_channel=CGTN. Accessed 11 Mar 2021a
- CGTN (2021b) Watch: does artificial intelligence make life better or more distressing? https://www.youtube.com/watch?v=49pnaNhQ1_I&ab_channel=CGTN. Accessed 11 Mar 2021b
- Clément M, Sangar E (eds) (2018) Researching emotions in international relations: methodological perspectives on the emotional turn. Palgrave
- Coticchia F, De Simone C (2016) The war that wasn't there? Italy's "peace mission" in Afghanistan, strategic narratives and public opinion. *Foreign Policy Anal* 12(1):24–46
- Cowls J, Floridi L (2018) Prolegomena to a white paper on an ethical framework for a good AI society. *SSRN Electron J*. <https://doi.org/10.2139/ssrn.3198732>
- Crawford NC (2000) The passion of world politics: propositions on emotion and emotional relationships. *Int Secur* 24(4):116–156
- Crawford NC (2014) Institutionalizing passion in world politics: fear and empathy. *Int Theory* 6(3):535–557
- Cui D, Wu F (2021) The influence of media use on public perceptions of artificial intelligence in China: evidence from an online survey. *Inf Dev* 37(1):45–57
- de Neufville R, Baum SD (2021) Collective action on artificial intelligence: a primer and review. *Technol Soc* 66:101649
- Dimitriu G, De Graaf B (2016) Fighting the war at home: strategic narratives, elite responsiveness, and the Dutch Mission in Afghanistan, 2006–2010. *Foreign Policy Anal* 12(1):2–23
- Ding J (2018) Deciphering China's AI Dream: the context, components, capabilities, and consequences of China's strategy to lead the world in AI. https://www.fhi.ox.ac.uk/wp-content/uploads/Deciphering_Chinas_AI-Dream.pdf. Accessed 11 June 2021
- Entman RM (2008) Theorizing mediated public diplomacy: the U.S. case. *Int J Press Polit* 13(2):87–102
- Executive Office of the President National Science and Technology Council (2016) Preparing for the Future of Artificial Intelligence. https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/preparing_for_the_future_of_ai.pdf. Accessed 21 Dec 2020
- Fast E, Horvitz E (2016) Long-term trends in the public perception of artificial intelligence. <http://arxiv.org/abs/1609.04904>
- Fattah K, Fierke KM (2009) A clash of emotions: the politics of humiliation and political violence in the Middle East. *Eur J Int Rel* 15(1):67–93
- Fierke KM (2014) Emotion and intentionality. *Int Theory* 6(3):563–567
- Giuliano RM (2020) Echoes of myth and magic in the language of artificial intelligence. *AI Soc* 35(4):1009–1024
- Hagström L, Gustafsson K (2019) narrative power: how storytelling shapes East Asian international politics. *Camb Rev Int Aff* 32(4):390
- Hermann I (2020) Beware of fictional AI narratives. *Nat Mach Intell* 2:654
- Hern A (2016) Stephen Hawking: AI will be 'either best or worst thing' for humanity. *The Guardian*. <https://www.theguardian.com/science/2016/oct/19/stephen-hawking-ai-best-or-worst-thing-for-humanity-cambridge>. Accessed 5 Aug 2021
- House of Lords (2018) Select committee on artificial intelligence AI in the UK: ready, willing and able? <https://publications.parliament.uk/pa/ld201719/ldselect/ldai/100/10014.htm>. Savage, Accessed 16 Dec 2020. Complete report: <https://publications.parliament.uk/pa/ld201719/ldselect/ldai/100/10002.htm>. Accessed 14 July 2021
- Hu Z, Ji D, Gong Y (2017) From the outside. In: Thussu DK, De Burgh H, Shi A (eds) *CCTV going global in a new world communication order. China's media go global*. Routledge, London, pp 67–78
- Hutchison E (2019) Emotions, bodies, and the un/making of international relations. *Millennium* 47(2):284–298
- Hutchison E, Bleiker R (2014) Theorizing emotions in world politics. *Int Theory* 6(3):504
- International Telecommunication Union (2018) Global Summit generates 35 pioneering proposals using power of artificial intelligence 'for good'. <https://www.itu.int/en/mediacentre/Pages/2018-PR16.aspx>. Accessed 14 Dec 2020
- Jensen BM, Whyte C, Cuomo S (2020) Algorithms at war: the promise, peril, and limits of artificial intelligence. *Int Stud Rev* 22(3):526–550
- Johnson DG, Verdicchio M (2017) Reframing AI discourse. *Mind Mach* 27(4):575–590
- Koschut S, Hall TH, Wolf R, Solomon T, Hutchison E, Bleiker R (2017) Discourse and emotions in international relations. *Int Stud Rev* 19(3):485
- Lams L (2018) Examining strategic narratives in Chinese official discourse under Xi Jinping. *J Chin Polit Sci* 23(3):387–411
- Leverhulme Centre for the Future of Intelligence (2020) How stories will shape the future of AI. <http://lcfi.ac.uk/news/2020/mar/5/how-stories-will-shape-future-ai/>. Accessed 16 Dec 2020
- Lexico (2021a) Fear. <https://www.lexico.com/definition/fear>. Accessed 22 Dec 2021a
- Lexico (2021b) Hope. <https://www.lexico.com/definition/hope>. Accessed 22 Dec 2021b
- Lexico (2021c) Pride. <https://www.lexico.com/definition/pride>. Accessed 22 Dec 2021c
- Lobera J, Fernández Rodríguez CJ, Torres-Albero C (2020) Privacy, values and machines: predicting opposition to artificial intelligence. *Commun Stud* 71(3):448–465
- Löwenheim O, Heimann G (2008) Revenge in international politics. *Secur Stud* 17(4):685–724
- Masood D, Waehlich M (2019) AI & global governance: robots will not only wage future wars but also future peace. United Nations University Centre for Policy Research. <https://cpr.unu.edu/publications/articles/robots-will-not-only-wage-future-wars-but-also-future-peace.html>. Accessed 24 Jan 2022
- Miskimmon A, O'Loughlin B, Roselle L (2013) *Strategic narratives: communication power and the new world order*. Routledge, New York
- Montes GA, Goertzel B (2019) Distributed, decentralized, and democratized artificial intelligence. *Technol Forecast Soc Chang* 141:354–358
- New America (2019) Translation: Chinese Expert Group Offers 'Governance Principles' for 'Responsible AI'. <https://www.newamerica.org/cybersecurity-initiative/digichina/blog/translation-chinese-expert-group-offers-governance-principles-responsible-ai/>. Accessed 16 Mar 2021
- Office of the Leading Group (2017) *Building the belt and road: concept, practice and China's contribution*. Office of the Leading Group for the Belt and Road Initiative. Foreign Language Press

- Ouchchy L, Coin A, Dubljević V (2020) AI in the headlines: the portrayal of the ethical issues of artificial intelligence in the media. *AI Soc* 35(4):927–936
- Pan Y (2016) Heading toward artificial intelligence 2.0. *Engineering* 2(4):409–413
- Rose G (2016) *Visual methodologies: an introduction to researching with visual materials*. Sage, London
- Roselle L (2017) Strategic narratives and alliances: the cases of intervention in Libya (2011) and economic sanctions against Russia (2014). *Politics and Governance* 5(3):99–110
- Saurette P (2006) You dissin me? Humiliation and post 9/11 global politics. *Rev Int Stud* 32(4):495–522
- Savage N (2020) The race to the top among the world's leaders in artificial intelligence. *Nature Index*. <https://www.nature.com/articles/d41586-020-03409-8>. Accessed 22 July 2021
- Schlag G (2018) Moving images and the politics of pity: a multilevel approach to the interpretation of images and emotions. In: Clément M, Sangar E (eds) *Researching emotions in international relations: methodological perspectives on the emotional turn*. Palgrave, pp 209–230
- SDG Knowledge Hug (2018) Global summit focuses on the role of artificial intelligence in advancing SDGs. <https://sdg.iisd.org/news/global-summit-focuses-on-the-role-of-artificial-intelligence-in-advancing-sdgs/>. Accessed 14 Dec 2020
- Shambaugh D (2015) China's soft power push: the search for respect. *Foreign Aff* 94(4):99–107
- Stevens T, Michelsen N (eds) (2019) *Pessimism in international relations: provocations, possibilities, politics*. Palgrave Macmillan, Cham
- Sullivan GB (ed) (2014) *Understanding collective pride and group identity: new directions in emotion theory, research and practice*. Routledge, East Sussex
- Swimelar S (2018) deploying images of enemy bodies: US image warfare and strategic narratives. *Media War Confl* 11(2):179–203
- The State Council of China (2017a) China issues Guideline on Artificial Intelligence Development. http://english.www.gov.cn/policies/latest_releases/2017a/07/20/content_281475742458322.htm. Accessed 15 Mar 2021
- The State Council of China (2017b) New Generation Artificial Intelligence Development Plan. Translation to English available: <https://flia.org/wp-content/uploads/2017b/07/A-New-Generation-of-Artificial-Intelligence-Development-Plan-1.pdf>. Translated by Flora Sapio, Weiming Chen, and Adrian Lo. Accessed 5 Aug 2021
- van Noort C (2017) Study of strategic narratives: the case of BRICS. *Polit Gov* 5(3):121–129
- van Noort C (2019a) The construction of power in the strategic narratives of the BRICS. *Glob Soc* 33(4):462–478
- van Noort C (2019b) Strategic narratives of the past: an analysis of China's new silk road communication. *Glob Soc* 34(2):186–205
- van Noort C (2020) Strategic narratives, visibility and infrastructure in the digital age: the case of China's maritime silk road initiative. *Camb Rev Int Aff*. <https://doi.org/10.1080/09557571.2020.1741513>
- van Osch Y, Zeelenberg M, Breugelmans SM (2018) The self and others in the experience of pride. *Cogn Emot* 32(2):404–413
- Ventsel A, Hansson S, Madisson M, Sazonov V (2021) Discourse of fear in strategic narratives: the case of Russia's Zapad war games. *Media War Confl* 14(1):21–39
- Ventsel A, Madisson M (2022) Semiotics of threats: discourse on the vulnerability of the estonian identity card. *Sign Syst Stud* 47(1/2):126–151
- Vergeer M (2020) Artificial intelligence in the Dutch press: an analysis of topics and trends. *Commun Stud* 71(3):373–392
- Xi J (2014) The central conference on work relating to foreign affairs was held in Beijing: Xi Jinping delivered an Important Address at the Conference. *Xinhua*. http://www.fmprc.gov.cn/mfa_eng/zxxx_662805/t1215680.shtml. Accessed 30 Apr 2020
- Yang YE (2020) China's strategic narratives in global governance reform under Xi Jinping. *J Contemp China*. <https://doi.org/10.1080/10670564.2020.1790904>
- Zeng J (2019) Narrating China's belt and road initiative. *Glob Policy* 10(2):207–216
- Zeng J (2020) Artificial intelligence and China's authoritarian governance. *Int Aff* 96(6):1441–1459
- Zeng J (2021) China's artificial intelligence innovation: a top-down national command approach? *Global Pol* 12(3):399–408
- Zeng J, Chan C, Schäfer MS (2020) Contested Chinese dreams of AI? Public discourse about artificial intelligence on WeChat and people's daily online. *Inf Commun Soc*. <https://doi.org/10.1080/1369118X.2020.1776372>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.