http://dx.doi.org/10.21544/2359-3075.29205

TRACING THE CHINESE WARGAMING KNOWLEDGE AND APPLICATION WITHIN STRATEGIC THINKING FRAMEWORKS

Sabrina Medeiros[1]
Luis Campani[2]

ABSTRACT

The study to be presented is about observing the war and crisis games research domain regarding the Chinese BRI (Belt and Road Initiative). In this respect, it will be necessary to detect the trends and uses of wargaming as a tool to train and predict, considering the state of the art of discipline. Given the transitions and developments of Chinese projection in the international system, it is intended to qualify how the arrangements under development collaborate with the project to expand the influence of the Belt and Road Initiative. Likewise, there is the need to segment the principles and models in progress for a possible exploratory typification derived from the study. For this purpose, we use primary and secondary sources related to the government structure and the intelligentsia system, primarily from think tanks and universities. As such, the understanding is that observing the characteristics in progress can allow for estimating the synergies or gaps between the model of influence and expansion in progress and the domain of wargaming developments. Then, we highlight that the wargaming knowledge is part of building upon the national security agenda to uphold Chinese international participation from the constitution of the Chinese national identity. Furthermore, we identify ways wargaming could help with the challenges and opportunities in the literature on BRI. We note that alongside the wargaming national security perspective, the technical training apparatus marks an influential trend for Chinese defense development by the West.

Keywords: Belt & Road; China; Wargaming.

[1] Lusófona University, Lisboa, Portugal. E-mail: sabrina.medeiros@ulusofona.pt — ORCID https://orcid.org/0000-0003-4954-3623.

[2] InterAgency Institute, Lisboa, Portugal. E-mail: luiscampani@pm.me — ORCID https://orcid.org/0000-000 3-1712-9938.

INTRODUCTION

The Belt and Road Initiative (BRI) is a worldwide infrastructure project proposed by Xi Jinping in 2013 that seeks to create means to facilitate the transportation of goods made in China. A decade after the public announcement of the strategy, it has already brought infrastructure to more than 100 different States (China, n.d.) and is spread into numerous infrastructure projects. On the one hand, the BRI is an essential part of China's foreign policy. It legitimizes its emerging role in the world by helping develop other nations in the Global South, benefiting its economy, and portraying the idea of a "shared destiny" among nations. On the other hand, the execution of this project requires significant policy coordination and interoperability between China and the different States where projects will be implemented (Parepa, 2020).

With a wide array of challenges and opportunities arising for implementing the Belt and Road Initiative (BRI, within China, called yídàiyílù, which translates into One Belt, One Road), wargaming may facilitate overcoming some challenges and seizing the opportunities identified in the literature. Within the BRI framework, the challenges associated with the maritime and land influential expansion are related to the limits of the trade agreements in place, which are not spread in terms of the deepening of collaboration out of the commercial taxes' exemption (Guo et al., 2019). The BRI components and routes mark new ways to foster international economic integration through mutual learning and mutual benefit as drivers of shared development (Xi, 2017). This comprises efforts that touch on ongoing trust-building and power relations disputes.

Western literature on war games characterizes their incorporation into the military and strategic planning system from the Prussian experience (Zhen-Jiang et al., 2017); it is also recognized that training and predicting behavior before and during the war was in place for centuries (Harvey, Fielder & Gibb, 2022). Several elements can characterize war game strategies and scenarios' types, uses, and methodological choices. Considering the Chinese expansion in the context of the BRI, the characterization of long-term planning is an important constraint that implies a proportional increase in challenges and possible threats to the initiative, whose vision of the future has been underway since 2015 (Xi, 2017).

The Belt and Road Initiative's possible uses of wargaming methods include simulating different scenarios, identifying potential

risks and challenges that could arise while implementing BRI projects, or testing different strategies for implementing BRI projects. Avoiding potential pitfalls may also be helpful in sewing ties in regions marked by complex antagonisms. The method can bring together stakeholders from different countries and sectors to build consensus and develop a shared understanding of the challenges and opportunities associated with the BRI. Understanding each other's perspectives and working together more effectively is a threshold to consider for effectively creating ties and trust within the Initiative's maritime or land branch.

The scope of this article is to analyze/probe into China's wargames as found in secondary open sources (articles) and primary sources (doctrine or policy), considering that rare studies have typified the issue in relevant academic databases. Therefore, the proposed study is part of an attempt to cover the works involving the theme, especially after the COVID-19 pandemic that, having begun in China, has led to the combination of a large-scale civil crisis. In contrast, China's economic and strategic expansion still has great repercussions.

We analyze the current state of Wargaming in China and how it relates to identified challenges and opportunities around the BRI. We intend to detect the ongoing patterns and their relationship with the Initiative, characterizing the ongoing trend and possible combinations between BRI's political or strategic environment and planning environment through games.

WARGAMING IN CHINA AND WHAT FOR?

A predominant feature of wargames is naturally associated with measuring capabilities related to military power and its effectiveness in armed conflicts. As such, military power and deployment are central to any wargame and the nature of human behavior under those conditioning factors (Morgan, 1991; Perla & McGrady, 2011; Harvey, Fielder & Gibb, 2022). The factors to be considered include these forces' deployment and operational capabilities in different environments and considering the effects of eventual confrontation with other troops. However, using games pragmatically and historically linked to war is not a unique way to do it.

War games, because they increase the visibility of options in decision-making processes and associated risks, are also considered methods of having the complexity of human actions together or in sequence for the best possible, more immediate, or distant future visibility (Perla & McGrady,

2011). In addition to the evolution of war games, interaction methods are developed to benefit prediction happening at scale for other sectors, such as complex emergencies or the business environment. Perla coined the concept of the Cycle of Research, which describes how wargaming, exercises, and analysis, coupled with real-world operations and history, have worked together in concert to help the national security community understand the present political-military reality and its past and future evolutions (Perla, 2022). The Cycle of Research is closely related to wargaming as it is one of the tools used in the cycle to better understand political-military reality.

It should be noted that what has been called war-deducing games comprises a set of systemic and technological tools that allow us to undertake actual knowledge of experts and deduce possible results. But even if not focused on the deduction properly, prediction methods focused on combining behaviors and choices more intuitively, endowed with emotions and rationalities, can also lead to the constitution of partial and subjective conclusions. In this case, in an environment of great complexity, it is necessary to provide any simulation of compatible data and information, may it be with the contribution of systems or not.

While war games are made to predict possible scenarios, they are also characterized by the contribution they guarantee to related practices. Thus, the defense field's profile and training are precious in testing, training, and increasing doctrine. This can happen in the strategic environment or in the operational and tactical field, where the factors to be considered include the perspective of terrain transition, climate, transport network, etc. (Zhen-Jiang et al., 2017). These factors can affect combat forces' deployment, movement, and combat effectiveness. They can be estimated with greater game-planning capability, especially concerning critical decisions for war or resource allocation over time.

A crucial element of war games is brought by game theory, in which the behavior of one is measured by the estimate he has about the behavior of the other, in this case, the opponent (Whittaker, 2000). This includes enemy forces' deployment, actions, objectives, and possible countermeasures, where speculation about the enemy's intentions and actions is required. On the other hand, war games have attracted the attention of experts in the Chinese academic scene, such as those dedicated to studying the political and economic environment, observing how much decision-making can generate other chain decisions that mark the cadence of results (Zhen-Jiang et al., 2017). Among the factors to be considered in

the international political environment are economic development status, foreign policy, or public policies that are more relevant for observing variables that may intervene in the process. Factors like these can affect the support and logistics of the combat force (Zhen-Jiang et al., 2017).

The issue of compatibility deals with the perception that the complexity of actors in a given scenario may require a great degree of civil-military interaction. This issue requires planning and conducting war games with attention to the accuracy and reliability of data sources and analysis methods to ensure a comprehensive analysis and evaluation of the game's results to ensure its rationality and feasibility.

MODELS OF WARGAMING IN CHINA

China has one of the world's largest and most advanced military forces, but national security became part of the official documents recently[3]. Military training plays a critical role in the development and readiness of its armed forces, and the training of the Chinese military is carried out under the framework of the People's Liberation Army (PLA), which is responsible for defending China's sovereignty and territorial integrity. The training of the Chinese military is a comprehensive and rigorous process that covers a wide range of areas, including combat skills, physical, tactical, strategic planning, and political education. The War Games in China have more than 2,000 years of records, so Ancient China was already using gamified tacit knowledge to draw up plans for training (Zhou et al., 2015).

The training in the military ambiance is conducted at various levels, including basic training for recruits, specialized training for officers and non-commissioned officers, and joint training exercises for different branches of the armed forces. In parallel to the BRI's commitment to Chinese internationalization, the Chinese military has been modernizing and transforming its training methods, focusing more on advanced technologies such as simulation, virtual reality, and artificial intelligence (Kania & McCaslin, 2021). This has allowed the People's Liberation Army (PLA) to work on its improvement, train efficiency, and better prepare for contemporary warfare scenarios with a high level of technology involved. In addition to traditional military training, the Chinese military strongly emphasizes ideological and political education, designed to instill in

[3] https://www.thepaper.cn/newsDetail_forward_7243215.

soldiers a sense of loyalty to the Chinese Communist Party (CCP) and the country's leadership. The training program includes education on the principles of socialism with history, culture, and traditions.

Overall, the training of the Chinese military is a rigorous process that reflects the country's strategic goals and aspirations and is tied to how government structures serve the Chinese Communist Party. While the hierarchical and power-concentrated governance structure is under test, adaptability is requested from the various levels of the military strategic planning scope. On its side, the PLA looks to evolve and adapt to new challenges and threats, and its training methods are essential to this process.

The developed wargaming systems have also gone through studies that have qualified to detect how foreign systems and wargaming models are made outside of China (Zhanguang, 2021). It is worth noting that the cited study observes that the United States experience has been directly connected to deduction both on the operational analysis and the events estimation through different scenarios inputs. According to Zhanguang et al. (2021), the US military institutions abord and develop wargaming based on the multilevel structure, with sequential rounds to respond to specific questions and supporting different layers to promote interoperability.

Still, on the US influence, computer-assisted exercises are of utmost importance to enhancing the interoperability of assets within military logistic systems. Swift Wargame Tool is a software application developed by the United States Department of Defense (DoD) for military training exercises and wargames. The tool is designed to help military personnel plan and execute complex military scenarios in a virtual environment, allowing them to simulate various tactical situations and assess their readiness for real-world operations.

One of the primary feeds for the Chinese wargaming scene development is the US DoD platform called SWIFT, the Standard Wargame Integration Facilitation Toolkit, which provides a range of capabilities to support military training and wargaming, including scenario creation and editing, terrain generation, unit and force management, and real-time monitoring and control of the simulated environment. It also includes a range of analytical tools for assessing the effectiveness of military tactics and strategies and for identifying gaps where additional doctrine or preparedness is needed. As a flexible system, SWIFT can help meet the specific needs of different military goals and scenarios, preparing for operations in a safe and controlled virtual environment.

This tool, which has been part of the Chinese observation of the good practices in place in the US, has the simulations component alongside the operations and the analysis components (Turnitsa et al., 2022). The wargaming platform called "Mozi·Future Commander," launched by the Chinese in 2019 (Kania & McCaslin, 2021), seems to drive the project similarly.

But a computer-based effort is underway as China poses itself as a tech-step-forward actor. A study made by Huang et al. (2020) on Human-Computer Gaming (HCG) has concluded that machine learning and brain-like computers have created a new threat regarding adversarial machine learning, that is, counterintelligence-focused on exploiting vulnerabilities in machine learning algorithms and databases. The paper suggests that Artificial Intelligence (AI) development has brought opportunities for adversarial machine learning and autonomous evolution. It also warned about the urgency to deepen the understanding and analysis of the nature of adversarial machine learning. It identified the need to establish an efficient scientific and rational collaboration mechanism between machine intelligence and human intelligence. Last, AI is determinant to achieving breakthroughs in adversarial machine learning theory, technology, and applications, as well as promoting the process of intelligence in many fields of human society, such as economy, politics, finance, and life. (Huang et al., 2020)

This converges with the idea portrayed by Zhanguang et al. (2021) of the necessity of future Warfare communication technology dialogue both with humans and machines simultaneously. The authors analyze the evolution of wargaming from an information technology perspective. With a heavy focus on Battle Language Management (BLM), it explains how the recent developments in artificial intelligence and data science have helped with the use of information communications and that communication with the recent developments and trends in military technology is not focused anymore only on human-human communication, but also human-machine.

This work led to two main conclusions. First, wargaming "absorbs the latest theories and methods of military operations research and weapon and equipment simulation in the development process" (Zhanguang et al., 2021: 2068). Second, it "combines the latest development results of big data and artificial intelligence technology, and adopt technologies such as online simulation based on big data, intelligent AI pairers and cloud-edge=end by continuously integrating modern combat simulation technology and communication means or methods, promoting the deep integration of computerized military wargaming systems with real-world exercises and

training, and providing strong support for combat decision making, real-world training, and military education" (Zhanguang et al., 2021: 2068).

THE INTERSECTION BETWEEN CURRENT MODELS AND BRI

As China developed during the second half of the twentieth century, it created something unprecedented in human history in terms of scale. As the first Nation-State to cross the mark of one billion citizens, on the one hand, it has a significant necessity of commodities import; on the other hand, this phenomenon gives China a comparative advantage in the export of the goods it produces since the production is capable of reducing unitary costs of production, making in many cases the production of the imported goods from China cheaper than local production.

In 2013, Xi Jinping announced the One Belt, One Road (OBOR) with the "Belt" referred to as the New Silk Road Belt and the "Road" to the Maritime Silk Road[4]. The OBOR or BRI is Chinese strategy-based financing and executing a wide array of infrastructure-building projects to develop transportation infrastructure to promote the deepening of the interconnectivity between different regions of the world, facilitating trade or even considered by the OECD the demand to work together (OECD, 2021). There have been massive infrastructure investments by China worldwide to execute this project, and a lot more is to come till the end of the first previewed cycle (2027). For the time being, the official website of the BRI states that 153 different countries have either signed a deal with China on the BRI or are along the Belt and Road (China, n.d.).

Panibratov et al. (2020) did a systematic literature review on challenges regarding the implementation of the BRI, in which they identified the main challenges and opportunities for China and affected countries. There are several challenges that the authors identified for the implementation of BRI that Wargaming could be used as a crucial tool to overcome, such as territorial disputes in the Middle East and lack of political stability (Kulaksız 2019); geopolitical risks in culturally complex border spaces under the overwhelming influence of the "central state" (Dean, 2020); a lack of accountability toward local contexts, intimate knowledge, and long-term relations (Rippa, 2020); different ethnic backgrounds creating tensions under collaboration (Li et al., 2019). Simultaneously,

[4] https://www.chathamhouse.org/2021/09/what-chinas-belt-and-road-initiative-bri https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative Accessed 23 Mar 23.

wargaming capabilities could help seize identified opportunities, such as the enhancement of logistics security (Xu & Chung, 2018).

Kulaksız (2019) argues that there are many political tensions in countries along the BRI, thus creating an insecurity scenario as to the compliance of economic obligations from these countries. Furthermore, the author argues that policy continuity is affected due to frequent regime change. The author concludes that "For the continuity of the BRI, it is important to take necessary measures to minimize the risk by taking into account internal problems of the involved countries and the possible risks arising from regional issues in the countries" (Kulaksız, 2019: 14). Wargaming is a remarkably fit method to overcome such challenges because it leads to a better understanding of the military capabilities and interests of such groups.

Dean (2020) analyzed the complex dynamics of the border between China and Myanmar with the presence of the Kachin Independence Organisation (KIO). The author has made a case for a deeper understanding of how projects developed under the umbrella of the BRI can, in complex border spaces, make way for a wider array of interests and dynamics, in this case, for the KIO. Rippa (2020) analyzed the construction of the China-Pakistan Economic Corridor (CPEC) and the Bangladesh-China-India-Myanmar (BCIM) economic corridor. He argues that even though some countries in the BRI have deep historical ties with China (what the author calls 'proximity'), this proximity is caused by a historical intimate knowledge between those local communities, and according to the author, even though the rhetoric behind BRI paints a picture of this proximity, the actual project "it is not made up of local contexts, intimate knowledge, and long-term relations" (Rippa, 2020: 18).

On the one hand, these authors argue about the possible externalities arising from existing tensions between China and its neighboring countries. On the other hand, Li et al. (2019) studied the impact of the BRI on the exports of small and medium enterprises in the Xinjiang region to other 'Belt' countries. They have chosen the region to observe if the BRI enhances export performance under cultural and ethnic frictions. They conclude that despite sub-national cultural friction in the region, due to closer cultural proximity to neighboring countries, small and medium enterprises from minority groups in China that have a cultural similarity with neighboring countries have benefited from BRI projects by seeing an augmentation of their exports. We argue that wargaming as a tool could increase the visibility of options in decision-making processes and associated risks in an environment of cultural

friction or proximity, allowing for identifying possible externalities that could hamper BRI's scope to deepen interconnectivity.

Xu & Chang (2018) argue that the BRI could enhance China's logistics security by reducing the country's reliance on the Strait of Malacca, thus allowing the country to secure its commodities supply better. The authors also conclude that China can support bigger risks in investment if it means that other logistical security risks will be mitigated. Furthermore, it is argued that the inclusive scope of BRI involvement inherently leads the Initiative into territories with territorial disputes and a lack of political stability (Xu & Chang, 2018) (Kulaksız, 2019). In these cases, wargaming could be used to identify interests, stakeholders, and externalities to Chinese interest in the region through wargaming in a way that the current state of Wargaming in China is already capable of, that is, by using the method to predict possible scenarios. Moreover, the enhancement of logistics security can be made possible in both military and civilian environments by developing tools that facilitate communication between different languages.

In the civilian environment, academic institutions' participation in developing knowledge attached to Chinese national security interests has been critical[5]. The Beijing Normal University is building the first-ever curriculum in China based on National Security[6] in their Zhuhai Campus. Multistakeholder operations must deal with various organizational cultures and the openness to interface various mindsets and resources, which is a valuable contribution from the university scene[7]. Guaranteed by law, the national defense education (guó fáng jiàoyù) project covers national security knowledge and awareness from the early years of citizen development, promoting and identifying talents that could help the state in the future to foster its project (Kania, E. B.; McCaslin, 2021).

Kania & McCaslin (2021) identify that since the 2000s, there have been significant developments regarding the use of professional wargaming by the Chinese PLA. The National War Game Simulation Competition in 2019 was the 3rd edition of the broader national defense effort[8]. Still, there has been little news in the recent editions since the COVID-19 pandemic, affected by how the Chinese currently poses its national defense strategy. The National War Game Simulation Competition is promoted within

[5] https://brgg.fudan.edu.cn/articleinfo_3810.html Accessed 21 MAR 23.

[6] https://www.sohu.com/a/460889031_100134198 Accessed 23 Mar 23.

[7] https://www.thepaper.cn/newsDetail_forward_7243215 Accessed 23 Mar 23.

[8] http://eng.mod.gov.cn/xb/News_213114/TopStories/4856659.html Accessed 21 MAR 23.

multiple institutions, from military academies to civilian universities[9]. The competition has as criteria to be a Chinese national, prohibiting participation to those with other nationalities, even those with more than one nationality despite one of them being Chinese[10].

Through the Ministry of Defense news site, it is possible to notice the National War Game Simulation dimension, as it is the coverage of the civilian scope of the military presence in the national straightening through maritime medical aid and rescue simulations, which are also part of the renewed training systems investments[11].

The Chinese national security vision has been built since 1992 and is gradually being built into official documents[12]. This understanding is considered from a practical point of view of national security. Such an approach defines the involvement of the civil-military youth as a crucial element of the ongoing project of Chinese national identity. When it comes to the BRI, again, "building consensus from the deduction"[13] reveals how gamification is also approached to possibly help stabilize the Initiative through the peaceful management of disputes and differences.

In this case, the developing paradigm of wargaming stands out for the catalyst element that it represents nationally, on the one hand, and the other, in a more sectorized way, in the expressive technological contribution in computerized predictive models, in the case of military training. In summary, the assets that relate the wargaming effort to the Chinese national project can be listed, but they seem to be part of a broader scope than the BRI.

[9] http://eng.mod.gov.cn/xb/News_213114/TopStories/4856659.html Accessed 23 Mar 23.

[10] https://www-ciccwargame-com Accessed 23 Mar 23.

[11] http://eng.mod.gov.cn/zjlm/ssjgy/index.html?searchfield=TITLE&indexsearch=1&keyword=wargame Accessed 24 Mar 23.

[12] https://brgg-fudan-edu-cn.translate.goog/articleinfo_3810.html?_x_tr_sl=zh-CN&_x_tr_tl=pt&_x_tr_hl=pt-PT&_x_tr_pto=sc Accessed 24 Mar 23.

[13] Idem.

Strategic Sector	Wargaming Observed Benefits
National Development	Identifying options and associated risks in an environment of cultural friction or proximity. Use of gamification for peaceful management of disputes and differences in the context of BRI
Logistics Security	BRI's potential to enhance China's logistics security. Reducing reliance on the Strait of Malacca. Allowing for better commodity supply security.
Academic Engagement	Curriculum on National Security. Contribution to multistakeholder operations through knowledge development. Promotion within military academies and civilian universities.
National Security Vision	Chinese PLA's use of professional wargaming since the 2000s. National War Game Simulation Competition as part of the national defense effort. Incorporating civil-military youth as a crucial element of national identity; Chinese nationality requirement for participation.
Technological Contribution	Wargaming is a catalyst element nationally and in technological predictive models, particularly in military training.

CONCLUSIONS

This study was part of a preliminary approach to the use of wargaming in the Chinese strategic scenario while also composed to observe its singularities applicable to the Belt and Road project. It is relevant to consider that Wu's (2020) conclusion about an economic perception of the BRI internally in China is not marked by the same external perception, much more affected by the geopolitical consequences, among them, the eventually unexpected ones. This connects to the wargaming development scene as part of the rivalry embedded in the BRI aftermath ambiance.

In partial conclusion, in the operational layer, the Chinese wargaming model is traditionally treated in the military planning environment while using tools of a broad technological spectrum to promote the prediction of adversary behavior and possible scenarios of interest and impact on the Chinese strategy in conflict or suggesting potential for conflict. This has been done by observing the good practices spread by the academic knowledge base that the US and their allies promote with open access. Thus, the Chinese operational defense wargaming model is focused on detecting current models in the West as part of its strategic visibility.

On the other side, and creating a different layer built upon the Chinese national security identity, the exercises point to a framing strategy in a national project that aligned the civilian perspective, including that of

the Academy, centered on the Chinese Communist Party. Even if there is no direct evidence that these models are tied to the Belt and Road's strategies, they merge with their expectations in a coordinated way once the expansion apparatus is conditioned to the national security conditioning factors. Moreover, wargaming could be an appropriate tool used in overcoming some of the challenges of the BRI pointed out by the literature.

It is worth noting, though, that the Belt and Road Initiative appears of interest in the development of wargaming in the United States, which was detected and publicized by the Chinese as part of the success of the BRI project. As tensions rise between the US and China about the Chinese influence expansion and the eventual support from China to Russia towards the war in Ukraine, it appears more interpretations of the BRI as a step towards consolidating a defense strategy, such as on arms sales[14]. As such, the more profound the commitments from and to partners of the BRI, the more criticisms derived from wargaming indicators are present[15].

[14] https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/September-October-2019/Daniel-One-Belt-One-Road/ Accessed 24 Mar 23.

[15] https://www-xinhuanet-com.translate.goog/mil/2021-03/29/c_1211087912.htm?_x_tr_sch=http&_x_tr_sl=zh-CN&_x_tr_tl=pt&_x_tr_hl=pt-PT&_x_tr_pto=sc Accessed 24 Mar 23. https://www-dunjiaodu-com.translate.goog/daguo/2018-11-12/3723.html?_x_tr_sch=http&_x_tr_sl=zh-CN&_x_tr_tl=pt&_x_tr_hl=pt-PT&_x_tr_pto=sc Accessed 24 Mar 23. https://zhuanlan.zhihu.com/p/54750836 Accessed 24 Mar 23. Translated from the CSIS and republished at a Chinese site. Original author at: https://www.csis.org/people/benjamin-jensen Accessed 24 Mar 23.

TRAÇANDO O CONHECIMENTO E A APLICAÇÃO DE JOGOS DE GUERRA CHINESES DENTRO DAS ESTRUTURAS DO PENSAMENTO ESTRATÉGICO

RESUMO

O estudo a ser apresentado trata da observação do domínio de pesquisa de jogos de guerra e crise em relação à BRI (Belt and Road Initiative) chinesa. Nesse sentido, é necessário detectar as tendências e usos do wargaming como ferramenta de treinamento e previsão, considerando o estado da arte da disciplina. Dadas as transições e desdobramentos da projeção chinesa no sistema internacional, pretende-se qualificar como os arranjos em desenvolvimento colaboram com o projeto de ampliação da influência da Iniciativa. Da mesma forma, há a necessidade de segmentar os princípios e modelos em andamento para uma possível tipificação exploratória derivada do estudo. Para isso, utilizamos materiais relacionados à estrutura governamental e ao sistema de intelligentsia, principalmente de think tanks e universidades. Assim, entende-se que observar as características em andamento pode permitir estimar as sinergias ou lacunas entre o modelo de influência e expansão em curso e o domínio dos desenvolvimentos de wargaming. Em seguida, destacamos que o conhecimento bélico faz parte da construção da agenda de segurança nacional para defender a participação internacional chinesa a partir da constituição da identidade nacional chinesa. Além disso, identificamos maneiras pelas quais o wargaming poderia ajudar com os desafios e oportunidades na literatura sobre BRI. Observamos que, ao lado da perspectiva de segurança nacional wargaming, o aparato de treinamento técnico no qual os sistemas de wargaming ocidentais marcam uma tendência influente para o desenvolvimento da defesa chinesa.

Palavras-chave: BRI, China; Jogos de guerra.

REFERENCES

BOYLAN, E. S. The Chinese cultural style of warfare. **Comparative strategy**, Reino Unido, v. 3, n .4, 1982, p. 341-364.

CAO, Z.; TAO, S.; HU, X.; HE, L. Abroad wargaming deduction and system research. **Journal of system simulation**, Pequim, v. 33, n. 9, 2021.

CHINA. International Cooperation: country profiles. Belt and Road Portal, [s. d]. Available at: https://eng.yidaiyilu.gov.cn/info/iList.jsp?cat_id=10076&cur_page=1. Accessed by: 04 Aug. 2023.

CHINA. Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road. Ministry of Foreign Affairs of the People's Republic of China, 2015. Available at: https://www.fmprc.gov.cn/eng/topics_665678/2015zt/xjpcxbayzlt2015nnh/201503/t20150328_705553.htm. Accessed by: 04 Aug. 2023.

DEAN, K. Assembling the Sino-Myanmar borderworld. **Eurasian geography and economics**, Reino Unido, v. 61, n. 1, 2020, p. 34-54. DOI: https://doi.org/10.1080/15387216.2020.1725587.

GUO, C.; LU, C.; ANDREEVICH, D. D.; JIELIN, Z. Implications of "One Belt, One Road" strategy for China and Eurasia. **Вестник Российского университета дружбы народов. Серия:** Международные отношения, Rússia, v. 19, n. 1, 2019, p. 77-88. https://cyberleninka.ru/article/n/implications-of-one-belt-one-road-strategy-for-china-and-eurasia.

HARVEY, M.; FIELDER, J.; GIBB, R. (org.). **Simulations in the political science classroom:** games without frontiers. Nova Iorque: Taylor & Francis, 2022.

HUANG, Kaiqi; XING, Junliang; ZHANG, Junge *et al*. Human-machine confrontation intelligence technology. **Chinese Science:** information science, China, v. 50, n. 4, 2020, p. 540-550.

LUO Pi; HU Xiaofeng. **A comprehensive simulation method based on**

artificial life in war systems. 25 Reports, 2007, p. 48-53.

LI, J.; B. LIU; G. Qian. The belt and road initiative, cultural friction and ethnicity: their effects on the export performance of SMEs in China. **Journal of world business,** Holanda, v. 54, n. 4, 2019, p. 350-359.

KANIA, E. B.; McCASLIN, I. B. Learning warfare from the laboratory: China's progression wargaming and opposing force training. Washington, DC: Institute for the study of war, 2021. Available at: https://www.understandingwar.org/sites/default/files/Learning%20Warfare%20from%20the%20Laboratory%20ISW%20September%202021%20Report.pdf. Accessed: 11 Oct. 2022

KULAKSIZ, s. Financial integration via belt and road initiative: China-Turkey cooperation. **Global Journal of Emerging Market Economies**, Beijing, v. 11, n. 1/2, 2019, p. 48-64. DOI: https://doi.org/10.1177/0974910119874632.

MORGAN, T. D. Wargames: training for war. Army history, Washington, DC, n. 19, 1991, p. 32-35. Available at: https://www.jstor.org/stable/26302874. Accessed by: 04 Aug. 2023.

MOURITZ, F. Implications of the COVID-19 pandemic on China's Belt and Road Initiative. **Connections**, [*S. l.*], v. 19, n. 2, 2020, p. 115-124.

NIE, H. A. Gaming, nationalism, and ideological work in contemporary China: online games based on the war of resistance against Japan. **Journal of Contemporary China**, Abingdon, v. 22, n. 81, 2013, p. 499-517.

BUSINESS and Finance Outlook. China's Belt and Road Initiative in the global trade, investment and finance landscape, 2018, Paris. OECD. Paris: OECD Publishing, 2018. Available at: https://www.oecd.org/finance/Chinas-Belt-and-Road-Initiative-in-the-global-trade-investment-and-finance-landscape.pdf. Accessed by: 04 Aug. 2023.

PAREPA, L. A. (2020). The Belt and Road Initiative as continuity in Chinese foreign policy. **Journal of contemporary east Asia Studies,** Reino Unido, v. 9, n. 2, 2020, p. 175-201.

PERLA, P. P.; McGrady, E. D. Why wargaming works. **Naval War College Review**, Estados Unidos, v. 64, n. 3, 2011, p. 111-130.

PANIBRATOV, A.; KALININ, A.; ZHANG, Y; ERMOLAEVA, L.; KOROVKIN, V.; NEFEDOV, K.; SELIVANOVSKIKH, L. The belt and road initiative: a systematic literature review and future research agenda, **Eurasian Geography and Economics,** Reino Unido, v. 63, n. 1, 2022, p. 82-115.

RIPPA, a. Mapping the margins of China's global ambitions: economic corridors, Silk Roads, and the end of proximity in the borderlands. **Eurasian geography and economics**, Reino Unido, v. 61, n. 1, 2020, p. 55-76. DOI: https://doi.org/10.1080/15387216.2020.1717363

SI, GUANGYA; WANG, YANZHENG. Challenges and reflection on next-generation large-scale computer wargame system. **Journal of system simulation**, China, v. 33, n. 9, 2021, p. 2010-2016.

TANG, Y.; SHEN, B.; SHI, L.; YI, X. Research on the issues of next generation wargame system model engine. **Journal of system simulation**, China, v. 33, n. 9, 2021, p. 2025-2036.

TURNITSA, C.; BLAIS, C.; TOLK, A. **Simulation and wargaming**. Nova Jersey: Wiley, 2022.

WHITTAKER, g. M. Asymmetric wargaming: toward a game theoretic perspective. Massachusetts: Mitre Corp Bedford Ma, 2000.

WU, X.; JI, Y. The military drivers of China's Belt and Road endeavor. **China Review**, China, v. 20, n. 4, 2020, p. 223-244.

XI, J. Work together to build the Silk Road Economic belt and the 21st century maritime Silk Road. Opening speech, 14 May 2017. [Full text of President Xi's speech at opening of Belt and Road forum]. Available at: http://2017.beltandroadforum.org/english/n100/2018/0306/c25-1038.html. Accessed by: 04 Aug. 2023.

XU, Q.; CHUNG, W. Risk assessment of China's Belt and Road

Initiative's sustainable investing: a data envelopment analysis approach. **Economic and political studies**, Reino Unido, v. 6, n. 3, 2018, p. 319-337. DOI: 10.1080/20954816.2018.1498991.

ZHANGUANG, C.; SHUAI, T.; XIAOFENG, H.; LULONG, H. (2021). Abroad wargaming deduction and system research. **Journal of System Simulation**, China, v. 33, n. 9, 2021, p. 2059-2065.

ZHEN-JIANG, G.; YONG, K.; XI-SHENG, S.; DE-FU, H.; BAI-XUE, Y.; WEI, D. The Application of Wargaming in the Field of Military Logistics. *In:* International Conference on Virtual Reality and Visualization, 2017, Zhengzhou, China. **Conferences**. Canadá: IEEE Xplore, p. 307-310.

ZHOU, Z.; ZHAO, H.; Shi, X. Research on wargaming for equipment support based on computer. *In:* International Conference on Intelligent Systems Research and Mechatronics Engineering, 2015, China. **Series** [...]. Amsterdam: Atlantis Press, 2015. p. 134-137.

*** Recebido em 20 de março de 2023, e aprovado para publicação em 18 de julho de 2023.**