Asymmetric Warfare: Exploratory Study on the Non-Conventional Military Developments of the People's Republic of China in the Period 2012 - 2018

Guerra asimétrica: estudio exploratorio sobre los desarrollos militares no convencionales de la República Popular China en el período 2012-2018

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According to multiple analysts, a new hegemonic war is now not only possible but also very likely. Faced with growing tensions, it is important to ask how China prepares for a hypothetical confrontation with the United States, given the notable asymmetry in their conventional military capabilities. This research advances on an exploratory study on China's development of non-conventional military capabilities between 2012 and 2017. Based on documentary sources, we investigate China's development of new strategies and weapons, their possible impact on a hypothetical conflict between the two superpowers and the Chinese and US academics' conception of them. It is concluded that these new developments could give China the possibility of equating the United States in an asymmetric war, breaking the asymmetry established by its conventional military capabilities.

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Introduction

According to a Harvard University study conducted by Graham Allison, 12 of 16 cases in which a rising power has confronted a hegemonic power in the last 500 years have ended in war. The hegemonic war between great powers is not only possible, but it has also been the norm throughout history (Allison, 2017). Faced with the current rise of China in economic and military terms, the process of stability, growth, rise, discontent and international reorganization may be close to reaching its stage of synthesis, a stage that has historically been resolved through war (Gilpin, 1981).

Given this, the following work is based on the premise that a large-scale war between the United States and the People's Republic of China in the future is not only possible, but also very likely. However, it is suggested that China does not yet have the conventional military capabilities to cope with the US power, so the confrontation would take the characteristics of an asymmetrical war. Given the potential for a large-scale conflict with the United States and the inferiority of China's conventional forces, this paper seeks to answer the following question: Which military capabilities is China developing to narrow the power gap with the US?

To answer this question, we develop an exploratory research on some of China's major military breakthroughs in 2012-2017 in terms of non-conventional developments. Based on documentary sources, we carry out an exploratory/descriptive study on the new weapons and strategies developed by China and their possible impact on a hypothetical conflict between the two superpowers, focusing on four main categories: A2/AD strategy, missiles, outer space and cyberspace. We also comment on the conception that mainstream Chinese and US academics have about these new capabilities, whose vision can significantly influence the political/military action of both countries.

The main limitation of this study was the difficult access to official military documents of the Armed Forces of the People's Republic of China. This limitation was partially overcome through access to international sources (e.g., reports from International Organizations and Non-Governmental Organizations, as well as news in the mass media, mainly from the Asian region and the US), in addition to the review of some academic work by Chinese authors and official reports from the Chinese state. However, since this is an exploratory study, it is certainly necessary to take into account the bias of the sources addressed, which respond mainly to the Western (and especially North American) view of China's new military developments. The line of the research proposed by this work may be greatly benefited in the future by the achievement of personal interviews with

political, military and academic actors in China. We hope to address this issue in future works.

We start with a brief introduction to the significant economic and military growth of the People's Republic of China in recent years, and the impact that it could have on the structure of the international system in terms of increased tensions with the US. At the same time, we highlight the still existing gap in terms of conventional military capabilities between the two superpowers. Next, the concept of Asymmetric Warfare is briefly developed, arguing that, given the existing military gap, a hypothetical conflict between the two countries would take on such characteristics. After that, we look at some mentions of these concepts on Chinese public and specialized press and publications. Based on this conceptual framework, then we describe some of the main Chinese military developments during the period under study. Finally, we make a general conclusion of the study, where future lines of research are proposed.

China´s rise and conventional power disparities

American unipolarity is over. The world today is characterized by a decline in relative terms of US economic supremacy, mainly in the face of the rise of China and other emerging powers. Although the US is nowadays the most powerful state on the planet, it shares the world with other emerging powers and with great assertiveness and activity of other actors (Mearsheimer, 2004:2; Zakaria, 2011:53).

Over the course of thirty years, during which it has maintained growth rates of between 8 and 10%, China has multiplied its GDP by ten, its exports by twenty and its reserves by more than one hundred. China's estimated growth rates in recent years and those projected for the future are still more than three times those of the United States. In addition, China has already surpassed the US as the world's largest trading partner, the largest holder of foreign reserves, destination for foreign direct investment, energy consumer and steel producer (Allison, 2017). At the military-political level, the United States remains the world's only superpower. But in all other dimensions the distribution of power is moving away from American domination (Zakaria, 2011: 4).

Regarding this growth, we have to highlight that there has always been a strong relation between the growth of a State's potential power, the geographic breadth of its interests, the intensity and variety of perceived threats to those interests and the desire to expand its military capabilities and exert greater international influence in order to protect them. As commented by

Friedberg, "growth tends to encourage expansion, leading to insecurity, which fuels the desire for greater power" (2011: 157). But at the same time, when a rising nation grows, especially while it tries to increase its security, it generates feelings of insecurity and concern in others, who want to preserve the *statu quo*.

Thus, following this historical pattern, it is to be expected that China will not only want to be rich, it will also want to be powerful. The Chinese have learned a bitter lesson from history: economic development alone cannot guarantee national security (Hui, 2014: 163). The 2015 White Paper of the Chinese military strategy is clear about this: "Without a strong army, a country can be neither safe nor strong" (STPRC, 2015).

In this regard, although the Chinese defense budget is today only a third of that of the US, investment is growing. It has the largest army in the world in quantity of soldiers and an expanding navy. Once a technologically unsophisticated force, focused on territorial defense against the Soviet Union, the National Liberation Army has now evolved into a modern force focused on US counter-intervention in the East Asia Region (Nye, 2015: 56).

However, an in-depth analysis reveals that, in terms of military power, American world supremacy remains undisputed. Its annual investment in defense is more than three times that of China. It maintains the world's second largest nuclear arsenal in terms of quantity of warheads and the first in terms of quality. Its navy remains the largest and most advanced in the world, the only one with effectively global reach and patrolling power across all major oceans. The US also has security partnerships with more than sixty countries, while China has only one (North Korea) (IISS, 2016; SIPRI, 2017a; SIPRI, 2017b; Leeds, 2017). Militarily, the international system remains unipolar. This reality may not last much longer, but it is still the undeniable fact of international life.

Although China's spending is the second largest in the world, decades of sustained growth are needed to approach the amounts that the US is spending on its military equipment and operations. A comparative analysis of both forces shows that, despite China's impressive growth in its military capabilities, these are still not even close to those of the US, taking into account the quantities of equipment, but mainly their technological complexity, firepower, and precision. Even the most modern systems in China have real difficulties in practice and are far from American systems in terms of combat effectiveness (Christensen, 2015: 84).

Even the most recently published Chinese White Paper on National Defense (STPRC, 2019) recognizes this fact, pointing that: "China's military security is confronted by risks from technology surprise and growing technological generation gap. Greater efforts have to be invested in military

modernization to meet national security demands. The PLA still lags far behind the world's leading militaries". Understanding that their military capabilities are still lagging behind those of the US for several decades to come, and that the future of their relations will be prone to conflict and tensions, it is worth asking how Chinese forces are preparing for a hypothetical confrontation in the medium-term future.

We propose that the study of some of China's latest military developments under the concept of unconventional capabilities in the face of Asymmetric Warfare helps to comprehend them within a global framework that makes such developments more understandable. In other words, we argue that the use of the concept of Asymmetric Warfare as a theoretical background helps to better understand China's objectives in developing the strategies and weapons described below and their possible consequences in the event of a hypothetical confrontation. So, in the next section, we develop these theoretical concepts.

The concept of Asymmetric Warfare

In face of its increasing importance, many theorists have tried to give a concrete definition of Asymmetric Warfare, a still controversial concept. The birth of the term dates back to Andrew J. R. Mack's 1975 article "Why Big Nations Lose Small Wars", in which "asymmetric" referred to a significant power disparity between opposing actors in a conflict. At the end of the Cold War, Mack's analysis aroused renewed interest among academics, and at the beginning of the new millennium the US military began to seriously consider the problems associated with asymmetric warfare. Since then, however, the discussion over the term was complicated by the tendency of academic and military communities to use it in different ways, and by its close association with guerrilla warfare, insurgency and terrorism.

Even though the many uses of the term, most authors agree that an asymmetrical warfare is a conflict in which the forces between the participants are broadly disparate qualitatively and/or quantitatively, that leads to the use of unconventional tactics by the less powerful part (Thornton, 2007; Bennett, 1998; Arreguin-Toft, 2001; Mack, 1975). Asymmetrical warfare then refers to unconventional strategies, tactics and arms systems adopted by a force when its military capabilities towards its enemy are not simply unequal but are so significantly different that it cannot appeal to the same sorts of attacks. This contrasts with symmetric warfare, where two powers have comparable military power and resources, and rely on tactics that are similar overall, differing only in details and execution.

The essential characteristic of asymmetric strategies is the attack of vulnerabilities not appreciated by the adversary, using different operational concepts, doctrines, tactics, and weapons from those used in symmetric conventional confrontations (Sullivan, 2007; Bennett, 1998; Herrera, 2013). As proposed by Marwan (2001), it is useful to distinguish the concept of asymmetry from that of dissymmetry: the latter indicates only a quantitative difference between the forces or between the power of the belligerents. The asymmetry, on the other hand, underlines the qualitative differences in the means used, in the style and in the values of the enemies.

Indeed, since asymmetry of forces is a common feature of conflict, the use of strategies to address these disparities is not new but dates to ancient times. Already the famous ancient Chinese text «The Art of War» by Sun Tzu stated: "You must attack where the enemy is not prepared; use your strongest forces against what is most vulnerable" (Tzu, 2002:28).

Recent history shows that conflicts characterized by large power asymmetries often play out very differently from the expectation of the dominant powers: weak actors sometimes win wars (Thornton, 2007). As Arreguin-Toft (2001) points out, in the last two hundred years this type of confrontation has been won by the strongest state in 70.8% of the cases. However, what is worth noting is the increasing number of victories by the weak state, which in the period 1800-1849 represented only 11.8% of the cases, while for the period 1950-1998 it represented 55%.

As for the case of the US, Wallerstein (2003: 24) points out that due to a variety of reasons, mainly lack of clear strategic objectives and internal political constraints, the US has "tied" or lost all the major asymmetric conflicts in which it has participated since the second half of the 20th century. Of the five major conflicts that the hegemonic power has fought since the end of the Second World War (Vietnam, Korea, Gulf War 1 and 2 and Syria), all of which were fought against clearly weaker actors, none of them culminated in a "glorious victory". These examples show that the conditions that were considered as indicators of victory during the development of symmetrical conflicts are no longer valid in asymmetrical war scenarios.

It is important to note that, although the concept of Asymmetric Warfare has been widely developed in academia in recent years, most authors understand that these conflicts can only take place between state actors and non-state actors such as guerrillas and terrorist groups (Bolivar Ocampo, 2002; Meigs, 2003; Ancker & Burke, 2004; Battaleme, 2005; Buffaloe 2006; Freedman, 2006; Sullivan, 2007; Stepanova, 2008; Caforio, 2012; Herrera, 2013; Lele, 2014; Sinai, 2017; Sandor, 2018; Long, n.d.; among others). On the other side, authors like Mack, (1975), Bennet (1998), Grange (2000),

Arreguín-Toft (2001), Metz & Johnson (2001), Geis (2008), Breen & Geltzer (2011), Lambakis (2005), Kunstler (2011), and Berman (2017) understand that asymmetric conflict can take place also between two or more states. We agree with the later, considering that the military hegemony of the US during the last decades has been so great that any other state actor that wants to confront it must resort to non-conventional strategies of asymmetric type.

Regarding the specific case of China, considerable work has been carried out in the last decades (specially by US military scholars) to identify, explain and contextualize China's non-conventional military capabilities (Berman, 2017: 4). In particular, the Pentagon's Office of Net Assessment (ONA) made Chinese asymmetric technologies and tactics a major topic of study during the tenure of its founding director, Andrew W. Marshall, between 1973 and 2014 (Berman, 2017: 8). However, most of these works consist of efforts aimed at advising US military high command, without public dissemination of the results. At the same time, the works that have been published for public access, such as Christensen (2001), Guo-Woei (2004), Stahel (2004), Fritz (2008), Geis (2008), Hagt & Durnin (2009), Breen & Geltzer (2011), Friedberg (2011), Solomon (2011), Fukuda (2014), Hansen (2014), Hui (2014), Mizokami (2014), Cordesman & Colley (2015), Rumbaugh & Horitski (2015), Heath, Gunness & Cooper (2016), Raska (2016), Rinehart (2016), Erickson (2017), Johnson (2017), Segal (2017) and Wortzel (2017) mainly address isolated parts of the Chinese strategy or particular weapons systems, without finding broader studies that integrate these various components under the concept of Asymmetric Warfare.

We propose here that studying China's new military developments in a comprehensive way under this theoretical framework helps to a deeper understanding of the phenomenon. Also, even while we focus on the western understanding of the concept of asymmetric warfare, on the next section we also comment on the Chinese perspective of it, in order to have a more holistic view of this phenomenon.

Asymmetric Warfare in Chinese literature

Mainstream Chinese literature on military affairs is almost unequivocal about the need to fight and defeat the US by any means necessary in case of a confrontation. Over the last twenty years a series of publications by PLA officers have explored possible new ways of warfighting for the Chinese military. Much of these works emerged from the PLA´s research and teaching institutions, and their common denominator was the recognition of the US

as a more advanced technologically adversary, with strong power projection capabilities. In response to this gap, the principal recommendation was the need to develop asymmetric weapons and strategies that would help a weaker power to counter a stronger one (Wortzel, 2017: 9-10).

To start with, in what is probably the best known Chinese work on asymmetric war, 1999's *Unrestricted Warfare*, two PLA political officers advocated the use of a combination of legal warfare, information warfare, and space warfare directed against an enemy and its populace, combined with the development of "new concept weapons" for the PLA (Liang & Xiangsui, 1999). Their work outlined the asymmetric means by which a weaker state could defeat a more advanced adversary without resorting to extensive and costly direct military confrontation. Liang and Xiangsui argued that China should feel free to fight wars by any mean that fits its objectives: the first rule must be that there are no rules, that nothing is forbidden. In line with this, the White Paper on China's Military Strategy (STPRC, 2015), states:

> «In response to security threats from different directions and in line with their current capabilities, the armed forces will adhere to the principles of flexibility, mobility, and self-reliance so that '**you fight your way and I fight mine'**».

Also in 1999, General Fu Quanyou, former Chief of Staff of Chinese Central Government, argued that «there is inferiority within superiority and weakness within strength» and that high-tech advances in weaponry have left «a wide margin for the weaker side, giving free rein to man's superior courage and intelligence» (Fu, 1999).

Several years after Liang and Xiangsui work, in 2006, a paper by a team of writers from the PLA Academy of Military Science analyzed the importance of the capacity to conduct long-distance air operations, especially the ones supported by satellite-based intelligence surveillance and reconnaissance, electronic warfare, space warfare and anti-satellite programs (Li, Cheng & Zhang, 2003). One year later, Jiang (2007), a department chief at the Academy of Military Science, in his book *Long-Distance Operations,* argued that China should improve its capacity to carryout diverse types of long-distance attacks on an adversary homeland, including cyberattacks. And in one of the more recent and well-known publication concerning asymmetric warfare, *The Science of Military Strategy 2013,* their authors drawn heavily on classical Sun Tzu military strategy, arguing that to achieve some victories, one must use asymmetric means with surprising military movements (Xiaosong, 2013: 127).

Also, as commented by Wortzel (2017: 12), there exists a rich discussion of the role of asymmetry in military operations in Chinese public literature.

The blog *Tie Xue Wang (Iron and Blood Network)* on Baidu.com, for example, has an index of about 30 articles about asymmetric military operations[1]. Most of these discussions mention the possibility for China to use cyberattacks, drones, space attacks and electromagnetic pulse weapons. This kind of recommendations also appear in some "official" publications for mass audiences. A 2012 article in the *PLA Daily* newspaper, for example, argues that, in case of war with the US, China should be able to conduct "full spectrum operations", cyber-attacks and outdoor space-attacks in order to close the gap in conventional capabilities between both military forces (CCPNN, 2012).

As can be seen in these publications, asymmetric warfare and non-conventional capabilities, in the eyes of many Chinese military planners and academic researchers are a natural response to perceived challenges from more advanced powers. As commented by an article published in Chinese military press, asymmetric warfare is the best option for the weak to defeat the strong (Sun, 2016).

Some non-conventional military developments of the People's Republic of China

Chinese experts Wang & Zhang (2000: 174) argued twenty years ago that to face more technologically and militarily advanced enemies, such as the US, China must develop several new capabilities and tactics. According to the authors, these included: special forces operations against enemy command and control, precision guided missiles, electromagnetic pulse weapons, lasers, electronic interference, computer viruses, and specialized hackers to attack information networks. China's political and military leadership seems to have responded well to these recommendations, as some of the major Chinese military innovations of the past two decades clearly align with them.

The term *unconventional development* is used here to refer to weapons, strategies and operational advantages that allow the attack of vulnerabilities of the enemy or that seek to deny the use of the enemy's power capabilities at a relatively lower cost (Sullivan, 2007; Bennett, 1998; Herrera, 2013). Special reference is made to strategies, high-tech weapons and systems whose primary objective is non-explosive or lethal damage.

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1 "Fei Duicheng Zuozhan (Asymmetric Operations)," *Tie Xue Wang (Iron and Blood Network)*, http://data.tiexue.net/view/1868 (accessed July 7, 2019). This is a blog maintained by an anonymous author, on Baidu.com.

A2/AD Strategy

Today, the access and control of the land, the sea, the air, the outer space, and the cyberspace represent the basis of the military, political and economic supremacy of States. In this sense, those who feel that their interests are threatened are developing strategies aimed at actively denying these spaces to prevent their use or penetration by others (Battaleme, 2015).

The counter-intervention strategy refers to a set of operationally defined tasks to prevent foreign military forces from intervening in a conflict or demarcated territory. It also includes anti-satellite weapons and energy lasers aimed at temporarily blinding or permanently damaging opposing satellites (limiting the support of guidance systems). China's approach to meeting this challenge is manifested in a sustained effort to develop the capability to attack, over long distances, military forces that might be deployed or operate in the Pacific region, a capability that the US Department of Defense calls "Area Denial and Anti-Access" (A2/AD). According to many American analysts, China is actively investing in these capabilities designed to defeat the adversary's projection of power and counter third-party intervention through a variety of air, sea, submarine and space systems (Cordesman & Colley, 2015: 10; Erickson & Heath, 2015).

A2/AD strategy does not only imply the negation of entry and freedom of action of enemy forces in a certain area, but also the achievement of deterrence, developing capacities that aim to increase the cost of entering the scenario of operations by the intervening power. In this regard, Sun Tzu's famous dictum in China's strategy seems more valid than ever: "Supreme excellence consists in defeating the enemy without fighting" (Tzu, 2002: 41).

What makes the actual A2/AD strategy different from the past is the rapid improvement of sensor, guide and communication technologies in recent decades. Together, these components have dramatically improved the lethality of guided long-range missiles and have made possible to threaten distant targets, even without deploying traditional naval or air forces. This could allow China to eventually deploy a surprise attack to destroy U.S. infrastructure in the Pacific region even without risking any of its sea or air-based forces. Among the most susceptible targets are US air and naval bases in allied countries, surface ships, aircraft carriers and outdoor space satellites (Heat, Gunness & Cooper, 2016). As a detailed analysis by the RAND Corporation points out, «China's improved capabilities, especially in terms of anti-access and denial of area, mean that the United States cannot count on gaining operational control, destroying China's defenses and achieving a decisive victory in the short term if a war breaks out» (Gompert, Ceballos & Garafola, 2016: IX).

Missiles

One of the objectives of China's A2/AD strategy is to defeat US airplanes carriers, the central axis of the US naval power, through ballistic and cruise missiles (Rumbaugh & Horitski, 2015; Rinehart, 2016). In this regard, China has deployed advanced missiles on a wide range of platforms, including highly hidden land mobile launchers and relatively quiet submarines. These anti-ship ballistic missiles count with controllable re-entry technology, specially designed to evade US missile defenses, challenging US maritime control (Johnson, 2017; Erickson, 2017). Chinese anti-access capabilities could also threaten critical U.S. air and naval facilities on the islands of Okinawa and Guam (McCarthy, 2010). Some of the missiles that could be used for these purposes are the DF-21D (nicknamed "Aircraft Carrier Killer"), the DF-26 (nicknamed "Guam Killer") and the YJ-18 (McCarthy, 2010; Solomon, 2011; Fukuda, 2014; Rumbaugh & Horitski, 2015; US Department of Defence, 2017).

Given China's overall inferiority in long-range air and naval power, ballistic missiles such as these provide powerful asymmetric capabilities that could deter US forces in the Pacific Region. In this sense, Friedberg describes these missiles as potential «game changers»: if China can generate a credible threat to aircraft carriers, it could force the US Navy to carry these costly symbols of power and other surface ships far from Chinese shores, drastically reducing their effectiveness and altering the balance of power in the Asia Pacific (2011: 221).

Outdoor space

Another important area of development of the Chinese military program is outdoor space activities, having deployed a wide range of space assets and counter-space capabilities in recent years. In China's strategic thinking, the ability to enter, control and exploit space serves not only to strengthen its conventional forces but also as a deterrent for US forces by itself (Pollpeter et al., 2009).

It is important to point out that US military assets in space have given its forces a considerable advantage on the battlefield over the last decades. Satellites are essential for the US way of making war, mainly in the Asia-Pacific due to the long continental distances. But satellites could also be a factor of weakness because of the high dependence of US military forces on them. This can be exploited by the Chinese military forces for defense and offensive purposes, for example affecting US missiles guiding systems (Rumbaugh & Horitski, 2015).

In Chinese Military Strategy, the space domain has a top place. In the 2015 edition of *The Science of Military Strategy* (authored by the PLA National Defense University), the editors argue that "building military aerospace power is critical for developing military strategy, intelligence, and defensive capabilities" (Xiao et al, 2015: 371). They strongly believe that "future informatized warfare may first break out in the aerospace domain", so outer-space superiority will be a fundamental factor in future war.

Regarding this, China has developed different types of anti-satellite weapons, from systems indistinguishable from benign satellites that could eliminate near satellites through various kinds of means, such as kinetic energy weapons, explosive charges, fragmentation devices, and even robotic arms (USCC, 2011: 214), to ground-based ballistic missiles that can attack outer space objectives, such as the SC-19 (Erwin, 2018). The PLA has also already fielded a ground-based laser that can "dazzle" satellites, blinding them temporarily. Some reports point to satellite jamming test conducted as early as 2005 and 2006 by China against US and French Satellites (USCC, 2011: 214-214). These weapons could target a wide variety of US satellites, making it difficult to conduct reconnaissance missions over China and interfering with air, land and sea navigation (Erwin, 2018).

In relation to the concept of asymmetric warfare, it is important to note the cost advantages of this type of weapon. The defense of satellites is not viable in the long term if an enemy is willing and capable of attacking them: the cost of destroying them is much lower than the cost of replacing them.

Other weapons in China's arsenal which could allow the Asian power to overcome the gap in conventional capabilities with the US include microwave and electromagnetic pulse weapons to disable all electronic devices within a certain range, mines propelled to destroy aircraft carriers and even off-duty fighter jets that could easily be turned into unmanned remote-controlled bombs filled with explosives (Pillsbury, 2015: 154).

Given their lower relative cost and the possibility of denying essential elements of power of US forces, these developments could be a fundamental part of China's strategy to confront the US. At the same time, this could give China a greater range of maneuverability to pursue regional hegemony and meet its geopolitical objectives, such as the incorporation of Taiwan or the effective and undisputed dominance of the Asia-Pacific seas and islands in dispute.

Furthermore, the developments analyzed have shown how technology has changed the conception of war. However, the most radical change in this regard has been brought about by progress in cyberwar, bringing about an unprecedented change in the way we understand, fight and succeed in war, a change on which China has already begun to act. We explore Chinese capabilities at the cyberspace in the following section.

China's Capabilities in Cybersecurity and Cyberwar

Humanity's high dependence on new technologies, especially the Internet, has created new challenges and vulnerabilities. Cyber-conflicts are evolving very rapidly from a theoretical possibility to very concrete and imminent threats. Within this framework, China has been developing new capabilities to operate at the cyberspace in different kinds of missions, from industrial espionage to psychological warfare. As Lewis (2014: 1) notes, since Xi Jinping assumed the presidency of his nation, the cybersphere has become an even more important strategic area. Xi has emphasized that cyberpower should be a national priority for China if it wants to reach its economic, social and military potential. In line with this, the White Paper on China's military strategy published in 2015 (STPRC, 2015) proposes an acceleration in the development of a cyber force able to meet the requirements of winning computerized wars and respond to both emergencies and wars.

These efforts are mainly run in China by a small leading group on cyber security and internet management that is headed by Xi Jinping himself. Additionally, according to Segal (2014), "at least six different agencies and ministries have input into cybersecurity policy". There is also some evidence to suggest that the Chinese government is diverting funds to finance different groups of hackers to attack foreign military companies (Vargas, 2014).

It is important to note that cyberwarfare is eminently asymmetric. Cyberwar represents a low-cost and effective option for attacking the US, given its high dependence on high-tech for the military (e.g. GPS or missiles guiding systems) and the importance of computer infrastructure for the civilian population. Thus, the process of computerization that has been strengthening the US forces for years, from an asymmetrical perspective, also makes them more vulnerable.

But, for the PLA, computer network attacks are far more than just a different kind of means for achieving physical damage. They are also aimed at gathering information, disrupting and blinding an adversary´s systems, and confusing an enemy (Wortzel, 2013). Cyberattacks may also allow to disrupt logistics, resupply, and personnel systems in the enemy´s homeland so that combat losses cannot be restored, and the deployed forces cannot sustain battle. In addition, the use of cyber-espionage operations allows China to make reverse engineer for the domestic production of high-tech military equipment, allowing it to reduce the gap in conventional military capabilities with its competitors. In recent years numerous reports points that China has stolen information from several U.S. Defense Department weapons programs, including the Patriot missile system, submarine propul-

sion systems, nuclear weapons designs, and the F-35 fighter jet (Fritz, 2008; Segal, 2017).

It is important to note that the main results of cyberattacks use to be non-physical effects, such as creating confusion, forming public opinion and disrupting information or services. Cyber-weapons may cause physical harm in certain circumstances, but these effects require very advanced skills and can sometimes produce very limited military benefits (Lewis, 2016). But in an asymmetric strategy, the military results are only part of a much larger picture, which considers the political and social impact of each maneuver.

Conclusions

Since the end of the Cold War, and even before, the US has been, by any measure, the richest and most powerful country, while on the last 30 years China has been the one who growths faster. History is full of examples of conflicting and commonly violent relations between fast-growing states and their once-dominant rivals (Friedberg, 2011: 39). There are many indications that this time the situation will not be different. We may be witnessing the decline of the strategic stability provided by nuclear weapons, and the return to the dominance of an offensive international structure over a defensive one (Battaleme, 2016).

Our analysis has pointed out that China does not need to fully catch up the United States to challenge its military capability. While at some point a clear victory for the US was virtually certain in case of a conflict between the two superpowers, most analyses today point to a conflict of extended attrition with unfinished battles and high costs (military and economic) for both sides. China's technological advances, although will not necessarily lead to a victory, will impose much higher costs on the United States (Gompert, Ceballos & Garafola, 2016: IX).

It will be important to continue the research on China's military modernization, which will have far-reaching consequences for the future of its relationship with the US and for international peace and security. Given the importance of these issues, it is hoped that further research will be developed in this direction in the future. Introducing the concepts of asymmetrical warfare and unconventional developments also leads to the opening of new research questions, such as: What countermeasures are the United States proposing in the face of new developments in China? How do these developments impact on the strategic perceptions of other actors in the region? What aspects of the US military still give it strategic advantages and have not been addressed by the Chinese forces? Research on these issues will be critical for the future.

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Keywords
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Resumen
Según múltiples analistas, una nueva guerra hegemónica una guerra hegemónica no sólo es posible actualmente, sino también probable. Frente a las crecientes tensiones, es relevante preguntarse cómo se prepara China frente a una hipotética confrontación con los Estados Unidos, dada la notable asimetría en sus capacidades militares convencionales. El presente trabajo avanza en un estudio exploratorio sobre el desarrollo de capacidades militares no convencionales por parte de China entre 2012 y 2017. Basándonos en fuentes documentales, indagamos el desarrollo de nuevas estrategias y armas por parte de China, su posible impacto en un posible conflicto entre ambas superpotencias y la concepción de los académicos chinos y estadounidenses sobre ellas. Concluimos que estos nuevos desarrollos podrían dar a China la posibilidad de equiparar a los Estados Unidos en una guerra asimétrica, rompiendo la asimetría establecida por sus capacidades militares convencionales.