УДК 327(510): 930.85

# СТАРЫЕ И НОВЫЕ ВЕЛИКИЕ ИЗОБРЕТЕНИЯ КИТАЯ И НОВЫЙ ШЕЛКОВЫЙ ПУТЬ

#### Г.Д. Костенко

Дается краткий обзор влияния великих китайских изобретений на процессы глобального развития путем анализа исторических последствий использования данных изобретений как самим Китаем, так и другими силами. Уделяется внимание четырем конкретным изобретениям Китая — бумага, книгопечатание, порох, морской компас, а также изобретению шелка как основному предмету торговли на пространстве Шелкового пути. Дается обоснование проекта Нового Шелкового пути, описываются исторические предпосылки к его созданию с точки зрения макроэкономики и геополитики в их тесной взаимосвязи, а также его возможное влияние на новый формат международных отношений в контексте перехода от биполярного к однополярному миру.

Ключевые слова: геополитика; Китай; Запад; великие китайские изобретения; инновации; китайская мечта; Си Цзиньпин; Экономический пояс Шелкового пути; Один пояс – один путь; Великий Шелковый путь; колониализм; неоколониализм; империи; миграция; Евросоюз; США; Африка; Ближний Восток; инвестиционная политика Китая; ВМС Китая; однополярный; биполярный; многополярный мир.

## КЫТАЙДЫН ЭСКИ ЖАНА ЖАҢЫ УЛУУ ОЙЛОП ТАБУУЛАРЫ ЖАНА ЖАҢЫ ЖИБЕК ЖОЛУ

Аталган статьяда Кытайдын улуу ойлоп табууларын Кытайдын өзүндө жана башка күчтөр тарабынан колдонулушунун тарыхый кесепеттерине талдоо жүргүзүү аркылуу бул ойлоп табуулардын глобалдык өнүгүү процесстерине тийгизген таасирине кыскача сереп салынат. Кытайдын төрт конкреттүү ойлоп табуусуна көңүл бурулган – кагаз, китеп басып чыгаруу, ок-дары, деңиз компасы, ошондой эле Жибек жолунун мейкиндигиндеги негизги соода предмети болгон жибекти ойлоп табуу. Ошондой эле Жаңы Жибек жолунун долбооруна негиздеме берилген, макроэкономикалык жана геосаясий көз караштан алып караганда анын түзүлүшүнүн тарыхый өбөлгөлөрү, алардын өз ара тыгыз байланышы, ошондой эле анын биуюлдук дүйнөдөн бир уюлдук дүйнөгө өтүү контекстинде эл аралык мамилелердин жаңы форматына таасир берүү мүмкүнчүлүгү баяндалат.

*Түйүндүү сөздөр:* геосаясат; Кытай; Батыш; улуу Кытай ойлоп табуулары; инновациялар; Кытай кыялы; Си Цзиньпин; Жибек жолунун экономикалык алкагы; бир алкак – бир жол; Улуу Жибек жолу; колониализм; неоколониализм; империялар; миграция; Евробиримдик; АКШ; Африка; Жакынкы Чыгыш; Кытайдын инвестициялык саясаты; Кытайдын АДК; бир уюлдук; биуюлдук; көп уюлдук дүйнө.

#### OLD AND NEW GREAT INVENTIONS OF CHINA AND THE NEW SILK ROAD

### G.D. Kostenko

The present article provides an overview of the influence of great Chinese inventions on the processes of global development through the analysis of historical consequences of applying of these inventions by China itself as well of other forces. Particular attention is paid to four inventions of China – paper, book printing, gunpowder, maritime compass – as well as to the invention of silk that was the main object of trade on the Silk Road. Moreover, the article provides a support of the Silk Road Economic Belt project, describes historical preconditions for its emergence from the point of view of macroeconomics and geopolitics that are closely interlinked as well as its possible influence in the new format of international relations in the context of transition from the bipolar world to the monopolar world.

Keywords: geopolitics; China; Western powers; great Chinese inventions; innovations; Chinese Dream; Ci Jinping; Silk Road Economic Belt; One Belt One Road; Great Silk Road; colonialism; neocolonialism; empires; migration; European Union; USA; Africa; Middle East; investment policy of China; Chinese Marine Forces; monopolar; bipolar; multipolar world.

Nowadays, some media speak of "New four great inventions" of China: high-speed railways, electronic payments, bike sharing and online shopping [1]. However, these are not actually Chinese inventions: for example, first high-speed railway line was opened in Japan between Tokyo and Osaka [2]. Nevertheless, Chinese government managed to successfully put them into practice, so that they already became symbols of Chinese innovative approach to various spheres of people's life. Still, it can be mentioned, that all of these inventions pursue one particular target: improving of the mobility of resources, including goods, finances and labor force. Since the beginning of the Reform Era, mobility was the key word of "Chinese Economic Wonder"; in the middle of 1980s, Chinese Central Government acquiesced in the right of rural citizens to make at least a temporary home in the cities [3]. This measure provided the urban enterprises with cheap labor force that became the engine for Chinese economy for the next decades. At present days, facing new challenges like world economic crisis 2009, resulted in economic slowdown from ~15 % of GPD growth in 2017 to ~6 % in 2009[4], Chinese Central Government is trying to find new ways to achieve the "Chinese Dream".

Some authors, speaking of classical "Four great inventions of Chinese Civilization", usually call the following ones: paper, printing, gunpowder and compass [5]. Nevertheless, some other inventions were even more important in terms of global economic and political development. Silk, being the lightweight and highgross margin product, became the bridge between two superpowers of the ancient world – Roman Empire and Chinese Empire – and the source of development for Middle East, Turkestan and India. After the West Roman Empire collapsed, silk trade was continued with Byzantium. If other "great inventions" were imported from China, than silk, as well as tea and porcelain, played the essential role in how exactly they made their way to Europe, along with the Great Mongol Conquest.

Paper was invented in China in A.D. 105 and spread over all territories under Chinese domination, including Turkestan. Arabs learned the technology of papermaking and brought it to Morocco and later to Spain [6]. The role of this technology in global development is hard to overestimate: it was far more cheap and light in use that any other material available. Printing, which is the second of "great inventions", would never be invented before paper. It's common point of view that Johannes Gutenberg invented the printing in Europe independently. However, nowadays some authors admit that highly likely the technology was imported from China, and Gutenberg's invention is limited to printing from movable type [7]. Still, some scientists believe that movable type was imported too [6].

Two more inventions – gunpowder and maritime compass - ironically, were used against China by colonialist empires – mostly, by the British Empire. It would be no exaggeration to state that these empires emerged primarily through the invention of maritime compass. Although the period of Ming dynasty is famous for their expeditions under the command of Zheng He, China Chinese shipbuilding technologies were still not developed enough to sail against the wind. Zheng He organized at least seven expeditions, reached Africa and probably America, but after his death, due to the new isolationist policy of the Empire, all expedition were cancelled[8]. Some scientists believe, that Arabs obtained the technology of maritime compass right during this period, and then Europeans captured it during the crusades and brought to Europe [9].

The importance of this event is hard to underestimate. Combined with advanced technology of sail rigging, magnetic compass allowed European countries, primarily England (due to its geographical position connected with maritime traditions), to reach every corner of the world connected with oceans. Colonialist empires used the last of "great Chinese inventions", the gunpowder, to dominate, exploit and dispossess the peoples of the world, including China itself. There are evidences that China used gunpowder for military purposes, too. For instance, Bodde cites the example of the siege of Kaifeng in 1232: "people within the city terrified the Mongols by means of a heaven quaking thunderer" [6]. Nevertheless, the construction of the weapon and its effectiveness remain unclear. Despite of the attempts to popularize the idea of advanced weapons based on technology of gunpowder with the help of popular pseudo-historical movies, there is no doubt that only colonialist empires fully discovered its potential[10].

Nowadays, the world is still shaped by falling of "great inventions of China" into the hands of colonialist empires. Nowadays, the classical colonialism based on "principle of big ships" (direct control through military supremacy) is partly replaced by the financial and technological domination, known as neocolonialist system. Defining the neocolonialist policy, dictionaries usually stress the financial aspect of the domination by giving the following definition: neocolonialism is "the policy or practice of a wealthy or powerful nation in extending its influence into a less developed one, especially in exploiting that nation's resources" [11]. However, to some extent, this definition is outdated. Obviously, any country, being a part of a global world market, can be influenced by the policy of the Federal Reserve; any country with high penetration of foreign direct investment can be influenced by foreign shareholders, including foreign governmental institutions. Nkrumah called it "the worst form of imperialism": "for those who practise it,

it means power without responsibility and for those who suffer from it, it means exploitation without redress" [12]. In this regard, neocolonialist practices are similar to so-called "hybrid wars" – internal conflict with direct or indirect foreign interference. It seems to be logical: if "war is a mere continuation of policy by other means" [13], than the hybrid war should be a continuation of neocolonialism.

About 50 years ago, when Nkrumah wrote about neocolonialism, natural resources appeared to be the most valuable object of exploitation. Now, the most highly valued resources are knowledge and innovation. Western countries use their image of success to attract people with innovative thinking and provide them with possibilities to create innovative products. If Nkrumah told about exploitation of natural resources, now what is happening should be called exploitation of brains. "Open policy" of European Union and United States, as well of almost every developed country, is based on this principle. Obviously, massive migration of uneducated labor force is also considered as effective method of supporting the economy by using the China's example: the only difference is that China has population big enough to achieve the goal by pure internal migration, while European countries need to use both ways. Migration within the European Union is the movement of labor force from less to more economically developed member countries: for example, from Hungary to Germany, Austria and UK [14]. Still, external injections are needed to support the growing economies of successful European countries: "migration is a gift for every economy" [15], especially if the economy is growing. In this regard, no power benefited from the migration "crisis" more than European Union.

However, financial, branding and technological supremacy is not enough to maintain control over the ex-"third world countries" as donors of natural resources, labor resources and individuals with innovative thinking. After the Soviet Union collapsed, the North Atlantic Treaty Organization was not dismantled and until now remains the supreme military power on the geopolitical stage, uniting the most developed countries to guarantee the status quo. Until now, in terms of non-nuclear conflict, there were no adequate threat to their domination.

Paradoxically, the key to national modernization for the underdeveloped economies lies in competitiveness – idea, actively promoted by the Western powers. It was not a coincidence that these countries obtained their independency (at least, formally) in the most active phase of the Cold War, in the era of so-called bipolar world. By mid-century, Belgium, Great Britain, France, Italy, Spain, Portugal still maintained the firm colonial control over many territories in Africa, Polynesia, South-East Asia[16]. Large-scale movements for national liberation,

supported by the Soviet Union, brought to the end the colonial rule in most of these countries.

During the last several years, President Xi Jinping, as well as other important officials of the Central Government, spoke of the "multilateral world", using such platforms as APEC [17], World Economic Forum [18] and platforms for bilateral cooperation. For instance, during the meeting with French President François Hollande in 2013, President Xi Jinping noted that China will "actively promote a multipolar world and the democratization of international relations" [19]. These messages can be interpreted in both geopolitical and economical way. First, China is going to strengthen bilateral ties in international trade as the greatest exporter country with total export volume of \$1,990,000,000,000 USD in the year 2016 [20]. Secondly, stressing the transition of power from one single hegemon country - United States - to several centers, China started the competition with United States for the position of the world leader.

2013, during his historic speech in Astana, Kazakhstan, President Xi Jinping proposed the "Belt and Road Initiative" [21]. President Xi Jinping especially pointed out that "China respects the development path as well as the domestic and foreign policies Central Asian people have independently chosen for themselves" [22]. However, it should not be interpreted as denying of the political targets. Examples of North Korea, Iran, and Russia provide us with examples of how economic measures become tools of geopolitical influence. Since the Falklands Conflict 1982, world's biggest military powers did not engage in conflict with each other directly if their capabilities were nearly equal. It makes economic leverages the most frequently used tool of geopolitics.

By this, Chinese project of infrastructure development even theoretically cannot be viewed outside of the geopolitical context. Although the renewal energy sources are developing, the global consumption of oil increases, mostly because of the Asia Pacific Region, where the oil consumption increased from 10 millions of barrels per day in early 1980s to nearly 28 millions of barrels per day in 2010 [23]. Despite of the economic slowdown, China still is experiencing rapid growth, which indicates the increasing demand in energy. In this regard, Middle East, especially Iran with its 157,200 millions of barrels of proven crude oil reserves [24], must become a matter of the great concern for Chinese Central Government. One of the economic corridors proposed by the initiative stretches from the Xinjiang Uighur autonomous region to Kyrgyzstan, Iran and Turkey. Moreover, Saudi Arabia, Emirates and Oman (but not Yemen) expressed their willingness to the part of the Belt and Road Initiative [25]. Thus, strengthening economic cooperation with

world's biggest energy exporters will not only enhance China's energy safety, but also inevitably increase its influence on political processes in these countries. Obviously, it causes critics and concerns from the Western powers[26].

Furthermore, developing of the transportation network that is going to connect China with countries of Central Asia, South Asia, Middle East and Europe indicates the desire to diversify the resource suppliers and market for export and to develop the land network between them. There is no secret than China is actively developing its marine forces, focusing primary on heavy ships. For example, in 2017 Chinese Marine forces operate at least 35 052D-class guided missile destroyers and 20 054A-class guided missile frigates [26]. Still, it is twice as few as US Navy capabilities. Developing of Chinese Marine Forces indicates the plans to protect Chinese interests in the oceans. Still, Chinese Navy does not possess required bases for its ships to guarantee the safety of trade routes leading to Europe. By this, "land bridge" is essential to enhance the safety of trade routes connecting China with all countries of Eurasia Continent.

African countries, except of Egypt, are not parts of One Belt One Road initiative. However, China is known for its infrastructure projects in Rwanda, Tanzania, Kenya, Somalia, Ethiopia, Kameron, Nigeria, Rwanda, Ghana and other countries, where China is actively participating in construction of seaports, railroads and pipelines [25]. Since the end of the Soviet Union, African countries were suggested an alternative to Western neocolonialism. Obviously, Chinese participation in African counties economies is based on principle of economic benefit that, as already mentioned, is directly connected to the political influence. The underdeveloped economies that are parts of New Silk Road program, as well as of other infrastructure and financial projects of China, now have the opportunity to choose between at least two competing powers and benefit from that competition.

Chinese inventions – both classical and new – influenced the global development at all times. The old Silk Road shaped the ancient world; the New Sill Road is going to shape the world of modern. This is a window of opportunity for all participants to benefit from the competition between at least two actors. Due to the development of mass media and involvement of masses into the global policy, sticks are mostly in the past, while carrots are actively used to win the competition. Only time will tell whose inventions are more welcomed by the "customer" that "is always right" [27].

#### Sources

1. Xinhua. "China's 'four great inventions' wow youths from B&R markets," 27 04 2018. URL :http://www.

- chinadaily.com.cn/business/tech/2017-07/31/content 30299167. htm
- A. Druzhinin. "World's Most Famous High-Speed Trains," 27 04 2018. URL: https://ria.ru/science/20091217/199800371.html
- D.J. Solinger. China's Floating Population: Implications for State and Society, Cambridge: Cambridge University Press, 1999
- 4. *E. Holodny.* "Xi Jinping is officially China's most powerful leader since Mao here's what that means for the economy," 27 04 2018. URL: http://www.businessinsider.com/china-xi-jinping-and-chinese-economy-2017-10
- Chinese Embassy. "Four Great Inventions," 27 04 2018. URL: http://www.fmprc.gov.cn/ce/ceza/eng/ zt/zgabc/t165406.htm
- 6. D. Bodde. "China's gifts to the West," Colombia University, Colombia, 2004
- H.E. Lehmann-Haupt. "Johannes Gutenberg," 27 04 2018. URL: https://www.britannica.com/biography/ Johannes-Gutenberg
- A. Chaikin. "Great Chinese explorer Zheng He," 29 04 2018. URL: http://www.rgo-sib.ru/terra/29.htm
- H.H. Ricker: "The discovery of the magnetic compass and its use in navigation," 27 04 2018. URL:http://gsjournal.net/old/science/ricker4.pdf
- 10. IMDB. "Great Wall," 29 04 2018. URL:https://www.imdb.com/title/tt2034800/fullcredits.
- 11. American Heritage and Dictionary of the English Language, "Neocolonialism," 30 04 2018. URL: https://www.thefreedictionary.com/ neocolonialism
- K. Nkrumah. "Neocolonialism: The last stage of imperialism," 30 04 2018. URL:https://politicalanthro.files.wordpress.com/2010/08/nkrumah.pdf.
- C.V. Clausewitz. On war, London: Kegan Paul, Trench, Trubner & C, 1918
- 14. *I. Moricz*. "An overview of the migration policies and trends Hungary," 30 04 2018. URL: http://migrationonline.cz/en/an-overview-of-the-migration-policies-and-trends-hungary
- E. Shulman. Interviewee, Status. [Interview]. 13 02 2018
- PLAM. "Year of independence of African countries," 30 04 2018. URL: http://www.plam.ru/hist/50\_velikih\_dat\_mirovoi\_istorii/p49.php
- R. Tyler. "With Obama MIA, China Touts Multipolar World," 27 04 2018. URL:https://thediplomat.com/2013/10/with-obama-mia-china-touts-multipolar-world/.
- 18. *A.B. Lockhart*. "Is China the new world power? The view from Davos," 27 04 2018. URL:https://www.weforum.org/agenda/2017/01/china-new-world-power-davos-2017/
- Assosiated Press. "Chinese, French leaders vow to seek 'multipolar' world as French president

- visits China," 27 04 2018. URL:http://www.foxnews.com/world/2013/04/25/chinese-french-leaders-vow-to-seek-multipolar-world-as-french-president-visits.html
- 20. *J. Dillinger*. "The World's 20 Largest Exporting Countries," 27 04 2018. URL:https://www.worldatlas.com/articles/exports-by-country-20-largest-exporting-countries.html
- China Daily. "Xi's statements on the Belt and Road Initiative," 27 04 2018. URL:http://www.chinadaily. com.cn/china/2017-04/15/content 28940829.htm.
- Ministry of Foreign Affairs. "President Xi Jinping Delivers Important Speech and Proposes to Build a Silk Road Economic Belt with Central Asian Countries," 27 04 2018. URL :http://www.fmprc. gov.cn/mfa\_eng/topics\_665678/ xjpfwzysiesgjtfh-shzzfh 665686/t1076334.shtml
- 23. *R. Rapier.* "World Energy Consumption Facts, Figures, and Shockers," 27 04 2018. URL :http://www.

- energytrendsinsider.com/2012/06/28/world-energy-consumption-facts-figures-and-shockers/.
- 24. OPEC. "Iran facts and figures," 27 04 2018. URL: http://www.opec.org/opec\_web/en/about\_us/163.htm
- 25. MERICS, "The Silk Road Initiative," 27 04 2018. URL: https://www.merics.org/index.php/en/chinamapping/silk-road-initiative
- 26. K.K. Atabekov and G.D. Kostenko. "International cooperation in Eurasia Region in the example of SCO, EUROASEC and One Belt One Road: From political to cultural cooperation. New directions of partnership and modern challenges," // KRSU Bulletin. 2017. Vol. 11. № 17. P 153–154,
- 27. *T.T. Zatikyan*. "Military capabilities of the People's Republic of China," Relevant issues of of contemporary international relations. 2017. P. 107–115.
- 28. *M. Field.* "Customer is always right," 30 04 2018. URL: https://quoteinvestigator.com/2015/10/06/customer/