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## **RUSSIAN CONQUEST OF CENTRAL ASIA: A CASE STUDY OF KHIVA**



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### **Abstract**

Mankind is witnessed to the fact that imperialism has been exhibiting in human history in many forms since long. Subjugation was the earliest form of it where in an empire overpowered an alien society, exploited its land, raw material and subjected it to the service of the superior authority. A similar formula of exploiting the land and people of Central Asia has been assumed by the Russian Imperial power during the nineteenth century. The imperial move of Russia towards this region was considered as the ultimate consequence of a continuous process of expansion of the Russian Empire. This expansionist drive of Russia into the region has been attributed to several factors such as political, military, strategic and above all the economic factor is believed to be the dominant one. The conquest provided the Russian Tsars a golden opportunity to hold their control over a vast area of striking geographic and human diversity. The motives behind this conquest were multidimensional, interrelated and complex. During this process of expansion, the state of Khiva was the first priority of the Russian Empire while materializing their future programme and policies. Though the Empire had already attempted to occupy the state, yet it could not get success prior to 1873. The importance of Khiva cannot be ignored while dealing with the question of Russian conquest of Central Asia in general and Khiva in particular.

**Keywords:** Russian; Conquest; Study; Khiva.

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### **1. Introduction**

#### **Theoretical Framework**

This academic exercise need to be based upon strong, authentic and scientific foundations of knowledge in order to properly perceive the problem and its various aspects. The word imperialism, its basic features and the application of this worldly known concept in any part of the land on the part of any imperial designer is the core philosophical question shuffling and reshuffling the political and economic picture of the world since time immemorial. The driving force behind any sort of imperialism is the lust for matter and means of achieving that matter as

well. The work of Lenin<sup>1</sup> in the present intellectual discourse provides a more relevant theoretical structure for the general understanding of imperialism and its correlation with the present study. It is indeed the material existence which determines the course of history and world politics. The best instance in this regard is the expansion of classical imperialism and colonization of other foreign people and territories. The material existence is the ultimate reality after which any imperial machinery comes on its head to get possession of all those material beings which can increase its surplus economy.

## 2. Literature Review

The present academic exercise depends upon scholarly works from different intellectual quarters. A review of those published works would firstly ascertain the significance of the study and secondly facilitate to accomplish this research task with authenticity. This scholarly existing literature would also provide intellectual grounds for the present academic discourse.

Becker's<sup>2</sup> work presents a very extensive account of Russian conquest of Central Asian khanates of Bukhara and Khiva in the 1860s and 1870s. The relationship of Russia with Central Asian territories until their extinction as political entities in 1924 has been thoroughly described. It points out the gradual Russian approach towards Central Asia during the nineteenth century and examines the motives and methods for the extension of Russian influence over the khanates of Central Asia. It describes the post-conquest policies of imperial Russia towards Bukharan and Khivan States and the reasons for introducing such policies. It goes on to discuss the role of Bukhara and Khiva in the First World War and the Russian revolution and how the region was fundamentally changed following the Bolshevik conquest in 1919-20. It is indeed an important contribution to the history of Central Asian khanates extending over a period of sixty year.

The second important piece of literature for the study in hand is the work of Anwar<sup>3</sup> which is an extra-ordinary work based on extensive research, deals with the diplomatic policies of two imperialist powers i.e. the Great Britain and Russia advancing their spheres of influence in Central Asia. The author has beautifully highlighted the policies of both powers. The Russian assumed the policy of 'Masterly Activity' in the region while Great Britain adopted the policy of 'Masterly Inactivity' so both the policies and their pros and cons are elaborately mentioned in this work. Although Britain was highly alarmed at the rise of Russian power and influence in the region yet she neither stopped nor opposed Russian advancement in the region. Central Asia, whether Afghanistan or beyond its northern borders, was not in Britain's scheme of annexation.

The article of Anwar<sup>4</sup> elaborately mentions the historical background of imperialism starting even from ancient times when *zar* (bullion), *zan* (woman) and *zameen* (land) formed the root of man's

<sup>1</sup> V.I. Lenin, *Imperialism, The Highest Stage of Capitalism: An Outline*. 1917, <https://www.marxists.org/archive/lenin/works/1916/imp-hsc/> accessed on 22 October, 2019.

<sup>2</sup> Seymour Becker, *Russia's Protectorate in Central Asia: Bukhara and Khiva, 1865-1924*. London: Routledge Curzon, 2004.

<sup>3</sup> Mohammad Anwar Khan, *England, Russia and Central Asia (A Study in Diplomacy) 1857-1878*. Peshawar: University Book Agency, 1963.

<sup>4</sup> Mohammad Anwar Khan, "Age of Imperialism" in *Central Asia*, Issue No. 52, Summer 2003, Area Study Centre for Russia, China & Central Asia.

struggle in recorded period of history. According to the author both *zar* and *zameen* played significant role in expansionist drive of the states. In Central Asia the three main states, Khokand, Khiva and Bokhara lay open to Russia. Hence this Empire moved in and successfully implemented their imperialist policies in these states. The next article is that of Aman<sup>5</sup> dealing with the political, strategic, military and economic factors behind the expansionist move of Tsarist Russia. It critically analyzes the motives of Russian colonization of Central Asia answering the question, was Russian advancement motivated by economic concerns of monopolistic expansion or by security, strategic and military considerations.

The workaholic research endeavour of Srafraz<sup>6</sup> discuss the main trends of Muslim reformist political thought in Bukhara and pay proper heed to the movement of *jadidism*. It examines the impact of the penetration of Russian investment into the Emirate of Bukhara and the construction of the railway line and the subsequent local socio-economic changes which contributed to the emergence of *jadid* political thought. Though this publication has its own rationale yet is one of the best sources for passing reference in the present assignment.

### 3. The Khanate of Khiva in Central Asia: A Brief Review

The khanate of Khiva unlike its neighbor states enjoyed compactness and geographical unity. It was consisted of a single oasis surrounded by deserts. By virtue of large population and cultivated land, the southern part of the oasis was considered the center of economic and political activities of the state. Khiva's population during the nineteenth century was recorded between 700,000 to 800,000 of which 72 percent was sedentary, 22 percent semi nomadic and 6 percent nomadic. Out of the total population of Khiva 60 percent lived in the southern part of the oasis while only 5 percent lived in different towns.<sup>7</sup> Khiva is located on the left bank of Oxus (Amoo Daria), thirty two kilometers from the river and two hundred and forty one kilometers from where the stream empties into the Aral sea. It is about six hundred and forty-three kilometers far away from the Caspian Sea in the east while four thousand one hundred and eighty three kilometers from St. Petersburg. The demographical condition of the state shows that its inhabitants are Uzluks, Sarts, Karakulpaks, Kirghese, Kipchaks and Trucoman.<sup>8</sup> Although the khanate of Khiva was geographically associated together yet ethnically it was not homogenous and the most dominant ethnic group was Uzbeks constituted a majority of close to 65 percent of the total population while the Turkomans formed a large minority of about 27 percent. The southern part of the oasis was dominated by the Uzbeks while its western and southern edges were occupied by semi nomadic Turkomans. Two other Turkic ethnic groups in the north, the semi nomadic Karakulpaks, constituting four percent of the population and a slightly small number of nomadic Kazakhs were concentrated respectively in the delta and on the northwestern fringe of the oasis. The religious composition of the khanate was made of mainly two elements i.e. Sunni and Shiites religious sects.<sup>9</sup>

<sup>5</sup> Shahida Aman, "Motives Behind the Russian Conquest of Central Asia" in *Central Asia*, Issue No. 59, Winter 2006, Area Study Centre for Russia, China & Central Asia.

<sup>6</sup> Sarfraz Khan, *Muslim Reformist Political Thought: Revivalists, Reformists and Free Will*. London: Routledge Curzon 2003.

<sup>7</sup> Becker, *Russia's Protectorate in Central Asia*, p. 10.

<sup>8</sup> J. A. MacGahan, "Oasis of Khiva" in *American Geographical Society*, Vol. 6, 1874, New York, p. 118.

<sup>9</sup> Becker, *Russia's Protectorate in Central Asia*, p. 10.

The administrative structure shows that the khan of Khiva exercised autocratic powers. The central government delegated limited authority to the provincial administration and held virtual monopoly of power in its own hands. *Divan-begi* in Khiva was almost equal to the *kush-begi* in Bukhara with the additional responsibility to be the commander of army and collector of *zakat*. The *mehter* administered the southern part of the country while the administration of northern part was given to *kush-begi*. Besides it, Khiva had a *kazi-kalan* and a clerical hierarchy with extremely minimum powers and influence. However, the powers and functions of any official were depended upon his personal relationship with the khan than the office he held. The khanate was divided into a capital district and twenty *begliks* governed by *hakims* with symbolic authority. The ethnic minorities enjoyed a system of autonomous local government such as Turkomans, Karakalpaks and Kazakhs within each *beglik* were ruled by their own tribal elders who were directly responsible to the khan rather than to the Uzbek *hakim*.<sup>10</sup>

#### 4. Russian Conquest of Khiva

The Russian Empire had already been paid proper heed to the state of Khiva or Khwarizm<sup>11</sup> to be conquered prior to other states of Central Asia but it could not succeed until 1873.<sup>12</sup> The relationship between the Russian Empire and Khiva remained troublesome since long by virtue of several factors. For instance, the issue of no mutually recognized border between the two, Khiva's strong natural defensive position on which Russia had focused her eyes to capture and above all the refusal of Khan Muhammad Rahim II (1864-1910) to different demands of Russian Empire had widened the gap between Khiva and Russia.<sup>13</sup>

According to a native report the sand of the Amu contained gold which motivated Czar Peter the Great who send the first expedition under the leadership of Prince Bekovich Charkoski during 1716-1717 but the move ended in failure. In 1793 a Russian Physician Dr. Blankengal visited Khiva and exaggeratedly expressed that the state of Khiva had rich and in-exhaustible gold and silver mines which once again encouraged the Russia to undertake another move in 1839 but again it could not get victory. The year 1842 witnessed a nominal commercial treaty between Russia and Khiva. The Russian advancement in the Sar Daria during the middle of the nineteenth century created resentment in the khanate.<sup>14</sup> The Russian government tried to force the khanate of Khiva to sign a commercial treaty which would permit the Empire to conduct trade with the khanate and lay it open to the imperial merchants with the same privileges provided to native merchants but the Khan had always rejected these demands in one way or the other.<sup>15</sup> Khiva again adopted its traditional way of raiding the Russian border territory, plundering caravans engaged in trade with the Empire and creating troubles for the Kazakhs of Russia. The khan of Khiva was informed by

<sup>10</sup> *Ibid*, pp. 10-11.

<sup>11</sup> In old Persian Language Khwarizm means eastward. It was a huge and powerful empire in the middle ages. During his rule Ala-ud-Din (1200-1220) captured Samarqand, Bokhara, Kashgharia, Balkh, Khurasan and Mazandaran. A good relationship had been developed by Changez Khan with the rulers of Khawarizm shahi. Thereafter Khiva became an appendage of the house of Juji Khan, the son of Changez Khan. It did not form properly the khanate of Transoxiana. It was Temur who attached it to his dominion. While at the break up of Temur's Empire an independent Uzbek khanate was established at Khiva.

<sup>12</sup> Anwar, *England, Russia and Central Asia*, p. 184.

<sup>13</sup> Becker, *Russia's Protectorate in Central Asia*, p. 65.

<sup>14</sup> Anwar, *England, Russia and Central Asia*, pp. 184-85.

<sup>15</sup> MacGahan, "Oasis of Khiva", p. 118.

General Von Kaufman that Russian troops were being sent across the lower Sir Daria to punish the robbers. The *kush-begi* governing the northern part of the khanate protested against the Russian crossing the Sir Daria which he claimed as the Russo-Khivan border. Russia could not show her muscles to the Khivan authorities as this time she was concentrating on Krasnovodsk Bay on the eastern coast. In August 1869, Kaufman accused the khanate of Khiva of inciting disturbances in nomads subject to Russia, not releasing Russian captive at Khiva and providing shelter to rebels and robbers.<sup>16</sup> It is interesting to note that after the failure of his mission to Khiva, A. Ignatiev called it a “den of robbers” and in a letter to Katenin, the Governor General of Orenburg, wrote that to expect any consideration or respect from Khiva for an international agreement was a farce.<sup>17</sup> Kaufman on 20<sup>th</sup> September 1869 again stressed the Khivan authority to punish the robbers, restore the property snatched by them and release all Russian and Bukharan captives. The Governor General did not receive any satisfactory response from the Khanate and he for the third time on 18 January 1870 wrote to Muhammad Rahim and warned him that Khiva must choose between friendship and enmity towards Russia. Kaufman concluded on a threatening note, “anyone’s patience has its limit, and if I do not receive a satisfactory reply, I will [come and] take it”<sup>18</sup> However, after subjugation of Khokand and Bokhara, Russia turned towards Khiva.

The Russian government launched preparation on an extensive scale against the khanate of Khiva. Weaponry from Germany was purchased, the desert equipment for the army was acquired from France, foreign military experts were invited to take part in the campaign and the spring of 1873 was chosen for the march on the khanate. The invasion took place from three directions. All the Imperial military establishments in the East i.e. Turkistan, Orenburg and Alexanderovsk actively participated in this campaign. All the arrangements were made in a much sophisticated way as five columns [53 companies] of infantry, 25 sotnias of Cossacks, 19,200 camels, in all 14000 men, with two dukes as of decoration under overall command of Van Kaufman moved on a foe ephemeral in order and organization. The Turkistan and Krasnovodsk columns put up poor show while Kaufman with his soldiery made some headway from the east and then the Orenburg forces under Vervekin pierced through from the north and broke into the city in June 1873. The imperial master needed no extra exertion as defenders lost their courage to encounter. Consequently, on June 10, 1873 the khanate of Khiva formally surrendered to the Imperial power.<sup>19</sup>

General Kaufman during the occupation of Khiva took an active part in the administration of the khanate. Though Muhammad Rahim was permitted to reenter his capital but was no longer a sovereign ruler. Kaufman established a *divan* (council), comprising three Russian officers, a merchant from Tashkent and three Khivan dignitaries, including new *divan-begi*. Muhammad Murad, the most important anti-Russian adviser of Muhammad Rahim was dismissed from his office as *divan-begi*. The Russian government not only arrested Murad but also exiled him to Kaluga, almost one hundred miles away from Moscow. The new *divan-begi*, Muhammad Niayz who belonged to the peace party was more loyal to the Russian government. The *divan* was given more administrative powers and it became the instrument through which Kaufman ruled the khanate during the Russian occupation. Out of the seven members of the *divan*, four were directly appointed by the Governor General while three were the native members appointed by the same

<sup>16</sup> Becker, *Russia's Protectorate in Central Asia*, p. 66.

<sup>17</sup> Anwar, *England, Russia and Central Asia*, pp. 186.

<sup>18</sup> Becker, *Russia's Protectorate in Central Asia*, p. 68.

<sup>19</sup> Anwar “Age of Imperialism” in *Central Asia*, pp. 24-25.

authority. The deliberations and its sessions were held in the vicinity of Russian Camp. It was however a temporary administrative body which had to be ceased upon the termination of the Russian occupation after two and a half months. The main achievement of the *divan* was the abolition of slavery in the khanate. According to an estimate the slave population at the time of Russian occupation was 30,000 who were mostly Persians.<sup>20</sup>

The Russian government for about two weeks continued military operation against the Yomuts, the most powerful and numerous tribes among Rahim's Turkoman subjects. The Governor General imposed a fine of 600,000 rubles on the Turkomans of the khanate and gave the Yomuts 14 days to pay half of this sum. Yomuts, failing to collect and pay such a huge amount, the Governor General ordered his troops to annihilate the whole tribe and confiscate their property. They were, however, attacked by the Cossack troops with a crushing defeat. After this campaign Kaufman was short of money to conduct his return march to Tashkent. On July 21 he levied on the other Turkoman tribes their share of the fine amounting to 310,500 rubles. Leniency was ensured in a way that they were allowed to pay half in camels and half in either hard currency or in gold and silver. By the deadline (2 August, 1873), only 92,000 rubles had been collected but keeping in view their firm intention to pay, Kaufman gave an indefinite period of time to pay the rest of the sum.<sup>21</sup>

### 5. The Russo-Khivan Treaty 1873

After his formal surrender to the Russian troops Muhammad Rahim was compelled to sign a treaty with the Russian government on 12 August called the Russo-Khivan treaty of 1873. The treaty reduced Khiva to the formal status of a Russian protectorate and the khan declared himself the 'obedient servant' of the Russian Empire. The khan gave up his authority to deal foreign relations or to take up arms against another state without the consent of Tashkent. In this way his sovereignty was demolished. The treaty settled the issue of Russo-Khivan boundary. It provided Russia the whole of Ust-Urt Plateau, the eastern coast of the Caspian Sea and not only the left bank of the lower Sir Darya but the right bank of the lower Amu Darya and the intervening Kizil Kum Desert too. According to the treaty the khan had given his consent to the Russian confiscation without compensation of all estates belonging to him or his officials on the right bank of the Amu Darya. However, an exception was made in the case of Muhammad Niayz, the new *divan-begi*, who was allowed to keep large estates.<sup>22</sup> The treaty provided the Russian government complete control over the navigation of Amu Darya. The Khivan government was held responsible for the security of Russian subjects who had the right to establish wharves and trading posts along the left bank of the Amu Darya. The treaty provided that the khanate of Khiva would be opened to Russian trade on terms similar to those of the 1868 treaties with Bukhara and Kokand with the main difference that trade between Russia and Khiva would be exempted on both sides from *zakat* and custom duty. The right to own the real property in the khanate of Khiva was given to Russia. In settlement of different civil cases, the Russian creditors were given preference over Khivan creditors. A war indemnity of 2,200,000 rubles to be paid to Russia over a period of twenty years was one of the most important conditions on the part of Imperial designer. The abolition of slavery promised by

<sup>20</sup> Becker, *Russia's Protectorate in Central Asia*, p. 73.

<sup>21</sup> *Ibid*, p. 74.

<sup>22</sup> *Ibid*, pp. 74-75.

the khan at June 12 declaration would be practically enforced. Since the treaty was signed the Russian troops began to withdraw and a process of reconstruction was started.<sup>23</sup>

## 6. Conclusion

It might be concluded that the Russian imperial power had focused its eyes on the land of Central Asia since the time of Czar Peter the Great. It was actually the material existence of Central Asia which played a role of catalyst during this gradual process of occupation. It is obvious from different treaties of the Russian Empire with the khanates of Central Asia that time and again the Empire stressed particularly on issues relating to economic concerns and left no stone unturned to obtain those economic ends. The Russian conquest of Khiva was motivated mostly by the desire of acquiring abundant and cheap sources of raw materials such as cotton for Russian textile industry and gaining a privileged position for Russia's commerce. Thus the use of political, strategic, diplomatic, and then ultimately the use of heavy military might especially against the khanate of Khiva during 1873 were basically the means to achieve the economic benefits.

## 7. Glossary

<i>Beglik</i>	province, subdivision of khanate.
<i>Divan-begi</i>	finance minister of and treasurer (Bukhara); prime minister (Khiva).
<i>Hakim</i>	governor of a beglik (Khiva).
<i>Jadid</i>	new, modern/reformist (Arabic); here also used to refer to members of reformist movements in Turkistan and Bukhara.
<i>Jadidism</i>	modernism/reformism.
<i>Kazi</i>	muslim judge.
<i>Kazi-kalan</i>	chief justice and head of the clerical hierarchy.
<i>Khan</i>	oldest member of the ruling house.
<i>Kush-begi</i>	prime minister (Bukhara); administrator of the northern half of the khanate (Khiva).
<i>Zakat</i>	obligatory alms paid by Muslims on various forms of property for purposes outlined in the holly <i>Quran</i> .
<i>Zakatchi-kalan</i>	chief collector of the <i>zakat</i> .

## References

- [1] Great Soviet Encyclopedia, Volume 31, A Translation of the Third Edition. New York: Macmillan Inc, 1982.
- [2] The New Encyclopaedia Britanica, Volume 7, 15<sup>th</sup> Edition. Chicago: Encyclopaedia Britanica Inc, 1997.
- [3] Encyclopaedia Americana Vol. 5, Edition 10<sup>th</sup> New York: Longman Publishers, 2002.
- [4] Ahmar, Moonis, "United States and Central Asia: Distant Neighbours" in ed. Moonis Ahmar, *Contemporary Central Asia*. Karachi: Department of International Relations, University of Karachi in Collaboration with Hanns-Seidel Foundation, Germany, 1995.
- [5] Ali, Muhammad, "In Pursuit of Caspian Oil" in *Pakistan Observer*, February 25, 2008.

<sup>23</sup> *Ibid*, p. 76.

- [6] Aman, Shahida, "Motives Behind the Russian Conquest of Central Asia" in *Central Asia*, Issue No. 59, Winter 2006, Area Study Centre for Russia, China & Central Asia.
- [7] Anonymous "The US in Central Asia" in *Central Asia*, No. 52, Summer 2003, Area Study Centre (Russia, China & Central Asia) University of Peshawar.
- [8] Becker, Seymour, *Russia's Protectorate in Central Asia: Bukhara and Khiva, 1865-1924*. London: Routledge Curzon, 2004.
- [9] Blank, Stephen J., *U.S. Interests in Central Asia and the Challenges to Them*. America: Strategic Studies Institute, 2007.
- [10] Hussain, Javed, "Central Asian Republics: A Profile" in eds. Riazul Islam and Others, *Central Asia: History, Politics and Culture*, Karachi: Institute of Central and West Asian Studies University of Karachi, 1999.
- [11] Karagiannis, Emmanuel "Political Islam in Uzbekistan: Hiz ut-Tahrir Al-Islami" in *Europe-Asia Studies*, Vol. 58, No. 2. London: Routledge Taylor & Francis Group Ltd, 2006.
- [12] Khan, Azmat Hayat and Shabir Ahmad Khan, *World Interest in Central Asia: Implication and Policy Option for Pakistan*. Peshawar: Area Study Centre for Russia, China & Central Asia, University of Peshawar, 2006.
- [13] Khan, Mohammad Anwar "The Land of Central Asia: Geographical Survey" in *Central Asia*, No. 45, Winter 1999, Area Study Centre (Russia, China & Central Asia) University of Peshawar.
- [14] Khan, Mohammad Anwar, "Age of Imperialism" in *Central Asia*, Issue No. 52, Summer 2003, Area Study Centre for Russia, China & Central Asia.
- [15] Khan, Mohammad Anwar, "The Land of Central Asia: Geographical Survey" in *Central Asia*, No. 45, Winter 1999, Area Study Centre for Russia, China & Central Asia.
- [16] Khan, Mohammad Anwar, *England, Russia and Central Asia (A Study in Diplomacy) 1857-1878*. Peshawar: University Book Agency, 1963.
- [17] Khan, Sarfraz, *Muslim Reformist Political Thought: Revivalists, Reformists and Free Will*. London: Routledge Curzon 2003.
- [18] King, John and Others, *Central Asia: A Lonely Planet Travel Survival Kit*, Australia: Lonely Planet Publications, 1996.
- [19] Knobloch, Edgar, *Beyond the Oxus: Archaeology, Art and Architecture of Central Asia*. London: Ernest Benn Limited, 1972.
- [20] Knobloch, Edgar, *Beyond the Oxus: Archaeology, Art and Architecture of Central Asia*, London: Ernest Benn Limited, 1972.
- [21] Lenin, V.I., *Imperialism, The Highest Stage of Capitalism: An Outline*. 1917.
- [22] MacGahan, J. A., "Oasis of Khiva" in *American Geographical Society*, Vol. 6, New York, 1874.
- [23] McChesney, R. D. *Central Asia: Foundations of Change*, New Jersey: The Darwin Press, Inc, 1996.
- [24] Nuri, Maqsdul Hasan, "NATO in Afghanistan: Outlook and Challenges" in *IPRI Journal*, Vol. III, No.2. Islamabad: Islamabad Policy Research Institute, Summer 2008.
- [25] <http://www.ast.uz/en/catalog.php?bid=72&sid=35/24/10/2010>.
- [26] [http://www.esa.int/esaEO/SEM1XWB1S6F\\_index\\_0.html/22/10/2010](http://www.esa.int/esaEO/SEM1XWB1S6F_index_0.html/22/10/2010).
- [27] <http://www.lonelyplanet.com/kazakhstan/northern-kazakhstan/lake-burabay/24/10/2010>.
- [28] <http://www.world66.com/asia/centralasia/kazakhstan/lakemarkakol/24/10/2010>.

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