

Development of transportation types and their usage on caravan roads in middle ages

Ergashev Jahongir Yunusugli¹

¹Doctorate student of world history and cultural heritage faculty Bukhara state university, Uzbekistan

Email: ergashev.j@umail.uz

ABSTRACT

During the existence of the Bukhara khanate, the economic and trade relations with neighboring countries on the territory of Central Asia have been largely based on transport system of the old network of roads. Along with the formation and development of communication routes, transportation vehicles also improved based on the natural climate and geographical location of different regions. In the following article the info is given on the means of the transport used in the caravan routes in the trade-economic relations of khanate of Bukhara with neighboring countries in medieval times. Included there, the starting of domestication and usage of horse drawn vehicles, camels, donkeys and others, the capacity of daily load of camels, horses, donkeys which were core of caravans, their daily distance, the necessary tasks in the incidents occurred in caravan routes (injuries, bruises, contagious diseases) the stopping regulation of caravans (sand storm, in heat and frost) is thoroughly analyzed.

Keywords: caravan, means of transport, animal, carrying load, horse-breeding, trade relations, camel, Bactrian camels, Qorabayirhorse race, transport with wheels, ships of desert, Kokand cart.

1. INTRODUCTION

In Central Asia, from ancient times there were two types of camels: the one hump camel (Dromedary) and two hump camels (Bactrian). [24: p. 686]. These camels were interbred to create the breed known as *Nortuya* to the Uzbeks and Kazakhs [24: 686], and as *Iner* to the Turkmens. In general, as a result of interbreeding between the one and two hump camel throughout the centuries, there were 7 species of *Nortuya* and three species of two hump camels. The *Nortuyas* could carry 16-20 pounds of load and cover 30-35 km a day with it, or 60 km without the load [20: 192]. One hump camels of Central Asia, particularly of *Nortuya* breed played an important role in the economic relations with other countries [14: 135]. At the same time, there was high demand for the two hump camel known in the East as “Bactrian camel”, that was known for its strength and endurance from ancient times until Middle Ages [9: 23]. We can see that when Hungarian scholar Arminius Vambery visited Bukhara and wrote about the province of Andkhoy, he noted that the species of the *Nortuya* camel that possess highest endurance and could carry heavy loads could be found there [6: 206].

2. ANALYSIS

The nomadic and semi-nomadic tribes of the region were still breeding camels at the turn of the 19th and early 20th centuries [12: 249]. Alexander Burnes, who visited Central Asia in 1832-1833 noted that the two hump camels used by the nomadic Qaysaq (Kazakh tribe) that lived in Bukhara khanate could carry the load of 640-500 pounds [1: 1 English pound - 453.6 gr.], and cover the distance of up to 2 miles per hour with that load, and could cover 70 miles non-stop in 44 hours with an average load [5: 255-256]. According to some sources, mature camels weighed 500-800 kg., that could carry the load half of their weight. The average speed with the load was 10-12 km/h. [24: 686].

It is well-known that the domestication of horse brought big changes in the history of human civilization. Chinese emperors were very interested in the horses bred in our region. Horses bred in our region as well as neighboring steppe areas were also well-known in South-East and South-West Asia [13:

56, 63]. The report about thousands of horses from Qipchaq steppe that were delivered through the Hormuzd port in the Persian Gulf to Iran and the fact that Central Asian merchants made good profit on this trade [18: 261] illustrates the international importance of horses bred in our region.

Due to the fact that the animals that were used for carrying products of trade were the main means of transportation in our region during the ancient and medieval periods, it is important to discuss them more in detail. The domestication of horses, camels, donkeys and other animals made it possible to use them widely as main means of transportation since Eneolith and especially in Bronze Age. From the later stages of the Bronze Age, cattle and camel breeding developed into separate spheres of agriculture, and areas and tribes that were specialized in breeding these animals emerged in our region. This specialization and the way of life remained almost unchanged until the early 20th century.

The camels, who were distinguished among the other animals by their strength, endurance and ability to carry heavy loads were especially important as means of transportation. The demand for camels was equally high among the nomadic and semi-nomadic people as well as sedentary farmers, who benefited from the economical and trading relations with other parts of the world. This demand also led to the divination of the camels valued as the main means of transportation.

The introduction of the new breeds played an important role in the horse-breeding. For example, it is important to note that during the late medieval ages breeds known for their speed and beauty, such as *Ahalteke*[23: 528], *Yovmut*[25: 464], *Laqay*[26: 158], *Arabi*[22: 386–387] and others were introduced.

There is a lot of information on purebred horses from the southern and south-western part of the region found in ancient and medieval written sources, in the accounts of foreign travelers and members of embassy missions [11: 20-22]. This proves the importance of horses in the socio-economic and cultural life of our region. In the following centuries, much attention was paid in Central Asia to breeding *Qorabayir* horses. In the 19th century Russian sources, it is noted that the *Qorabayir* horses, known for their strength and endurance were bred in the khanate of Bukhara [7: 23-24]. The main means of transport of caravan routes the camels, their domestication, the races of camels, peculiarities of each race of camels, horses, their races and the demand for them, the significance of the horse breeding, the carts having wheels, which are created during the Bronze age, their significance in the development of trade are exposed. In the article the transition through the passing in the caravan routes, the means of transport in the passing, and the order of their service are revealed thoroughly.

3. DISCUSSION

Thus, the development of the horse-breeding led to the emergence of purebred horses in Central Asia and the neighboring regions during the medieval period, that were adapted for use in military operations, transportation, carriage, in steppe or mountainous terrain. These horses were distinguished by their physical structure and specialization and can be divided into three types:

1. Horses for riding (*Ahalteke* horse, *Yovmut* horse and others);
2. Horses for riding and carriage (*Laqay* horses, *Qorabayir* horses, *Kyrgyz* horses and others);
3. Horses for transportation of the heavy loads [3: 593-594].

In ancient times and throughout the Middle Ages horses have played an important role not only in military operations, but also in the economic, trading and political relations. The distance covered by the carriage horses was also close to that. In the Russian sources of the late 18th - late 19th century, it is noted that Cossack horses, which are close to the horses in our region, could cover 6-7 km/hour, with riders and loads on the roads along the plains [19: 256].

The horses were used in the post service to deliver urgent messages, and in such cases the average horse speed was three to four times faster. Therefore, horses have been used by the rulers in the postal service, as well as in the distribution of important messages. The development of horse breeding in our region and adjacent territories influenced the improvements in horse trappings and saddles.

Donkeys also played a special role in local economic and trade relations of our region. This animal is one of the first means of transportation to be domesticated in mountainous and foothill regions of Central Asia, and it is also remarkable that the number of donkey bones found in Bronze Age sites is twice as much as the bones of the horses [17: 17]. This animal, due to its low cost compared to other types of transportation means had become widespread in our region during the following centuries, and the need for it was very high among the middle and poor layers of the local societies. It is known that

during the Medieval Ages donkeys played a central role in the transportation of products from countryside to the city markets, and in some cases they were also used with carts.

At the beginning of the Bronze Age, perhaps even earlier, one of the most important discoveries in human history the wheel was introduced. This innovation, which was the basis for further technical advancement, led to the invention of carts of different types (based on the specific geographical area and landscape). The transition to the use of wheeled vehicles contributed to the development of communication lines. Initially, there was a need to build roads that could be used by such carts. Such roads may had been initially built in the areas of the cities or other major locations that were important trade-craftsman centers. This can be seen as a result of a certain level of socio-economic relationships, such as the exchange of commodities and trade, the availability of cart-making masters and workshops, animals for carriage and other relevant factors. It is well-known that construction of roads, especially the ones for the wheeled transport is expensive and labour-consuming. Therefore, initially these roads were primarily linked to narrow local frameworks, such as connecting urban and other economic centers, with areas under their influence [14: 33].

The introduction of wheeled transport, such as carts of different sizes and shapes, led to the beginning of the use of horse as a carrying force for these means of transportation. For this purpose, depending on the natural conditions of different regions and the specialty of domestic livestock horses, camels, donkeys, mules, and other animals were added to the carts starting from the Bronze Age. The use of carts for defensive purposes during the medieval ages is mentioned in "Baburnama" [8: 363].

The use of camels, mules, horses and other animals for carrying carts in ancient times and medieval ages in Central Asia is reflected in a number of written sources. The Moroccan traveler, Ibn Battuta, noted that on the road from the Golden Hoard to Khorezm he passed almost non-stop the Oghuz desert on the cart carried by two camels, and that the camels after this journey were given a year off to restore their strength (fat) [9: 72]. This information indicates that traffic on the roads through the steppes and deserts of the region was very difficult for the transportation means. This is supported by the information in the Russian written sources of the last quarter of the 19th century. In particular, we know from the written sources that well-fed fat camels, bought or rented out to travel from Bukhara to Merv in the markets of Bukhara, were reaching their destination losing much of their weight, exhausted due to lack of adequate eating and drinking water. [16: 63]. There was also an opportunity to exchange camels on the roads going across Central Asian territory inhabited by cattle-breeding nomadic tribes. In particular, it is known that the Kazakhs who were hired for transportation in the trade relations between the cities of Central Asia and Siberia, were entering their villages to exchange the camels, and in some cases the cattle-breeding nomadic tribes were meeting large caravans on the road offering the exchange of their exhausted camels (2: 22-23).

In general, camel-driven carts played an important role as the main transportation mean to cover long distances on the plains of Central Asia in the ancient and medieval ages.

Even though the speed of camel-driven carts was slower, they were still of much importance in passing desert and steppe areas (19: 7). That's why the carts, which were mainly pulled by camels, were widely used in crossing the desert and steppe areas of the region. This is testified by the wide use of carts as transportation means in trading relation between the Central Asian khanates and cities of Siberia during the late medieval ages [2: 15-16].

During the late medieval ages in Central Asia primarily two-wheeled open carts were used. Carts were divided into several types depending on their structure and size. Making the wheel of the cart was carried out by skilled craftsmen in the specialized workshops. If in the north-eastern part of the region big-wheeled Kokand carts were widely used [4: 103], small-wheeled carts were spread in the north-west, while the peculiar shaped carts were used in the region of Khorezm [21: 391]. There were specialized cart-repairing craftsman that lived in the cities and some large villages along the trade routes, providing services for local residents and trading caravans.

4. CONCLUSION

Thus, the new stage in the development of communication and trade routes in the region started with the use of transportation means (mainly carts). Generally, the emergence and evolution of transportation means from the Bronze Age to the introduction of modern vehicles went virtually unchanged. The use of

wheeled transportation means began during the Eneolithic - Bronze Age period and played a key role in the internal and external economic and cultural relations until the emergence of modern roads and vehicles (automobiles, trains and other vehicles and roads). The use of camels, horses, donkeys and other animals as first means of transportation had a great impact on the development of ancient network of roads, mutual exchange of goods between different regions and the increase of economic relations. The introduction of the wheel in turn became the main part of carts - transportation means pulled by different animals. These processes, which form an important link in the communications system of the region, made a great contribution to the development of the general economic and cultural rise in the Bukharan khanate and the development of the region's civilization.

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