

A PRELIMINARY STUDY ON KANG AND KANG FURNITURE IN NORTH EAST OF CHINA

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Abstract:

The paper presents the history of a platform (bed-stove) named Kang, initiated 7200 years ago, providing a brief description of Kang development. Kang furniture is defined as furniture used on kang, which can be divided into three categories according to functions: Kang table, Kang storing furniture and other categories. These kinds of Kang furniture can reflect the Kang culture and the lifestyle of the northeast people. The wood material used for kang furniture almost is local wood such as Manchurian ash, mongolian oak, Chinese walnut, elm, Chinese red pine ect. The result of this paper is a basic part of the doctoral research, which helps for understanding the furniture culture of northeast in China.

Key words: chinese furniture; Kang; furniture culture; material.

INTRODUCTION

The traditional Chinese furniture refers to the classical furniture manufactured throughout different historical periods of the Ancient China (Liu et al. 2013a). The traditional Chinese furniture varied from one area to another, expressing specific lifestyle, patterns of style and skillfulness characteristic to each geographic position. In the northeast China, the winter climate is very cold (-30°C), a traditional long platform (approximate 2m), with a height about 70cm, named **Kang** (bed-stove) is used for general living, working, entertaining and sleeping (Xu and Wang 2010). It is made of bricks or other forms of fired clay and more recently of concrete in some locations. Its interior cavity, leading to a (often) convoluted flue system, channels the hot exhaust from a firewood/coal fireplace, usually the cooking fire from an adjacent room that serves as a kitchen (see Fig. 1.), sometimes from a stove set below floor level (Ren et al. 2012).

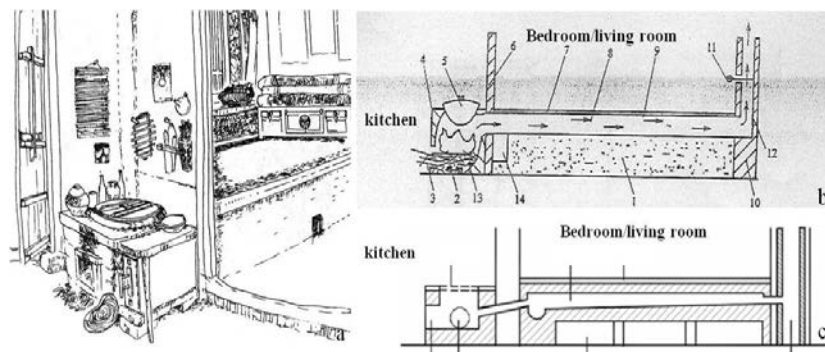


Fig. 1.

Schematic diagrams of kang: a. copy figure of kang in northerneast China, b. Cross-section drawn of traditional kang, c. Cross-section drawn of modern kang.

The Chinese character “炕” (Fig. 2.) with two parts, one means fire and the other means pipe or channel, explains how it works. In general, Kang is considered invented by Manchu and Korean people. However, according to analysis of archeological excavations of building remains in *Banpo*, Xi'an, the *Kang* is derived from the concept of a heated bed floor called a “fire wall” found in China in the Neolithic period (Shi 2008a). The archeological sites in Shenyang, Liaoning province show humans using the heated bed floor as early as 7,200 years ago (Shi 2008a and b). The bed at this excavation is made of 10cm pounded clay on the floor. The bed was heated by fire which is simply the process of placing an open fire on the bed floor and clearing the ashes before sleeping. Nowadays, Kang is also common used in the northern China. Furniture used on Kang can reflect well the lifestyle and culture of northeast of China (Xu and Wang 2010).



Fig. 2.
Explanation of the Chinese charater for kang.

OBJECTIVES

The present paper is a first step in a PhD research project focusing on a comparative study of traditional furniture in Romania and Northeast China.

The current objectives were:

- ✧ Northeast China culture study;
- ✧ Traditional furniture in Northeast China;
- ✧ Culture, types and culture of Kang furniture.

FUNCTION AND TYPE OF KANG

Function of Kang

In cold winter days, northeast people often gather together on the warm and comfortable Kang. In addition to sleep, many behaviors in rural houses also happen on the Kang. The Kang plays a very important role in rural houses. Its main function is reflected in:

Rest and sleep: In early time, due to the limited sleep spaces, whole family lives on one Kang. Usually from the head of Kang (near to the kitchen) is warmer than the end part (far from kitchen), successively living elder member of a family, host, hostess and children. On the one hand, it reflects the traditional Chinese concept of respect and inferiority, and on the other hand, it conforms to the modern health and wellness principles.

Daily life: In their spare time, farmers chat with their neighbors and relatives, watch TV and play cards on them. *Kang* table is the daily work place of housewives. Housewives often do housework and manual work on the *Kang* and beside the *Kang* table. Children learn, and play games on them.

Three meals per day: in the northern rural areas of the meal is a more formal family activity, by no means just eating. Especially in winter, everyone on the warm Kang, around the Kang table to eat, drink, chat, comfortable atmosphere, harmony.

Entertain guests: There is no living room in the traditional farm house in northeast China. When guests come to visit, taking off your shoes and sitting on the Kang is a way of intimate and respectful hospitality. Nowadays, despite the addition of a living room in some newly built farmhouses, the Kang still serves as a hospitality function, especially for the close visitors. The communication time is a little longer, and they like to sit on the hot Kang to chat.

Type of Kang

Because the Kang plays an important role in rural housing, the location of the Kang has a great influence on the layout of the housing. It is found that the location of the traditional Kang in rural houses in Northern east China is located in the south, north and middles of the house, so the layout of rural houses was also the basic types. In summary, it can be roughly divided into the following situations:

The southern type Kang was built earlier, mostly before the 1970s, common to have three (Fig. 3.a) or five (Fig. 3.b) rooms. The main entrance of the house is located in the middle of the room, which is both the hall and the kitchen, commonly known as "out of town". On both sides of the field are bedrooms, opposite to the field, commonly known as "inner room". The advantages of this type of layout are good orientation, ideal lighting and ventilation, sufficient sunshine, and comfortable living on the Kang. Defect is the entrance field often because pile up fuel and other sundry and disorderly, because the kitchen is not closed into an independent room, when cooking smoke will diffuse the whole field, even into the back room.

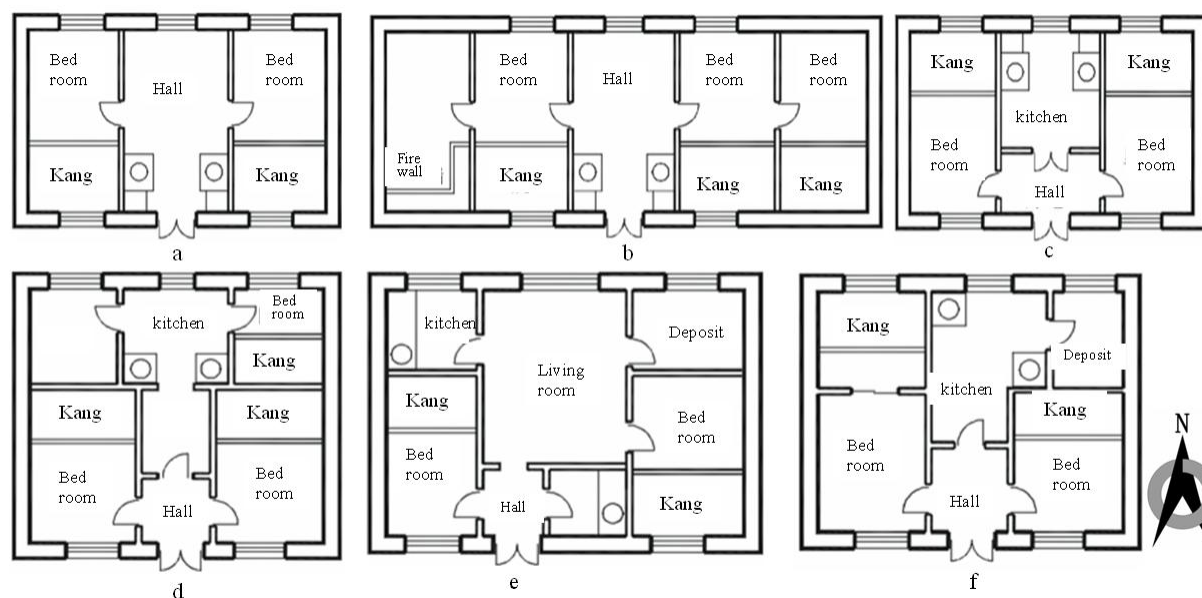


Fig. 3.

Schematic diagrams of Kang: a. Southern type Kang with 3 rooms, b. Southern type Kang with 5 rooms, c. Northern type Kang, d. Middle type Kang, e and f synthesis type Kang.

The northern type Kang: This type of farmhouse appeared later than south type Kang. The difference between the two is that the northern type Kang residence is separated from the outside by a partition wall and a door kitchen. The north side is an independent kitchen, and the south side is the outside of the pure hall function. The advantage of this type of farm house is that people do not have to go through the kitchen when entering the house. Sundries such as fuel can be concealed in the north kitchen. The disadvantage is that the Kang corresponds to the kitchen stove moved to the north side of the inner house, and the sunshine condition is far less than that of the south Kang. People's activities on the Kang will be significantly reduced, but they can also set up sofa seats and other living activities in the sunny area on the south side of the inner house, so they are more popular among young people.

Middle type Kang: In the 1980s, the Middle type of Kang began to emerge. This kind of residence is characterized by large depth, which is developed from the first two types of single depth to the north and south. North part of the depth of the smaller size generally set for the kitchen, bathroom, warehouse, etc. This type of farm house is deep, conducive to saving land. At the same time, the secondary rooms on the north side form a thermal isolation zone, separating the cold gable on the north side in winter from the hot Kang space on the south side, which is helpful for the warmth of the main house and conducive to energy saving.

Synthesis type of Kang: The layout of northeast traditional farm houses above the comprehensive type is relatively simple, all of which are opposites-type pattern, with weak adaptability and pertinence. Therefore, a more appropriate layout should be made for the space, such as: a warm and comfortable south-facing Kang for the elderly and a bedroom with clean and neat beds for the young. Therefore, in recent years, some asymmetric integrated farm houses have begun to appear, such as the mixed type of intermediate Kang and southward Kang (as shown in Fig. 3.e), and the mixed type of intermediate Kang and northward Kang (as shown in Fig. 3.f)

KANG FURNITURE

Type of Kang furniture

The appearance of kang greatly improved the life of people in northeast China. People live and eat on the heated kang, resulting in the rapid development of furniture on the kang with complete functions and diverse shapes. Furniture on kang is usually called kang furniture. Kang furniture is divided into three

categories according to functions: Kang table, Kang storing furniture and other categories (Chen and Zhang 2006).

Kang table

The Kang table is an indispensable part of the household with a height of 25-30cm. They are used not just on the Kang but on other beds as well. Small and portable, the table was used for many activities including serving tea, writing, playing board games. Larger ones were used when more than one or two people were gathered. The designs varied so they might have drawers for storing smaller items. In the old time, one kind of Kang table with a big hole in the centre of table surface for putting a brazier.



Fig. 4.
Kang table.



Fig. 5.
Kang cabinet.

Kang cabinet:

Kang cabinet, especially in Changbai mountain area, is called Kang Qin (piano). Because the cabinet is placed on the Kang, with a shape of piano; it is a special cabinet prepared by the Kang. People regard it as "cash box on the Kang", "treasure box" and "patron saint", "blessing box", "town house auspicious". Usually it made by hardwood and painted with, black, purple, red, yellow colour. Kang cabinets are divided into upper and lower parts: the upper part stores clothes, a pair of doors in the middle of the front surface can be opened to put clothes, quilt and pillows. In the front 4 pieces painted glass (birds, flowers or fishes) or ceramics are inlaid. In the lower part, there are 4 drawers to put scissors, needle, line, the sundry such as cone is prepared lay aside. The bottom of the cabinet is about 100mm away from the kang surface, for resistance to the heating, and it is externally supported by narrow wooden boards or textiles to keep out the cabinet legs. It is placed slightly against the wall of the Kang.

Kang chest

Kang chests, usually appear in a pair on the Kang cabinet with a shape of square or rectangle. Kang chests are very popular used as dowry item from bride's family. Kang chest is used for storage of clothing and bedding and other items. Tung oil and linseed oil are common used to finished these chest. The hinges, pinboard and locks usually are made of copper. Some chests painted with flowers, dragon, phoenix, birds can be found from rich families. Some chests with small dimension is used as dressing box.



Fig. 6.
Kang chest.

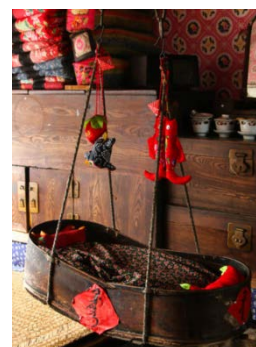


Fig. 7.
Cradle Cradle.

Before 1970s, a cradle was a bed for a baby. In northeast of China, due to the cold climate, people don't want to leave their children in the cradle of the ground, but if the cradle is put on the Kang it will occupy too much space and will break Kang mat. The cradle was suspended from the roof by a rope. The baby in

cradle can be warmed by the heat from Kang and aslo from sunlight through the southern window. This furniture modelling also is considered "one of 3 north east big strange "all the time.

Wood material used for Kang furniture

Wood materials used for Kang furniture almost are local wood speices, such as ash, walnut, elm, oak and pine. Sometimes Kang chest made of camphor wood can be found due to the durable propriety and good resistance on insects (Liu et al. 2013b).

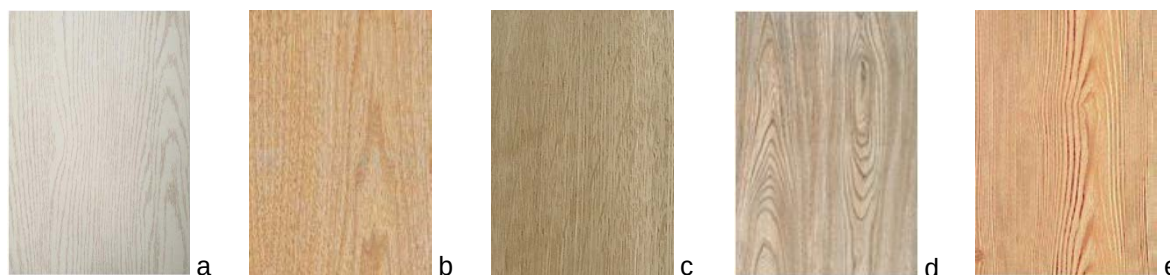


Fig. 8.

The macroscopy aspects of wood material used for Kang furniture: a. Manchurian ash (*Fraxinus mandshurica* Rupr.), b. Chinese walnut (*Juglans mandshurica* Maxim), c. Mongolian oak (*Quercus mongolica* Fisch. ex Ledeb), d. Elm (*Ulmus rubra*), e. Chinese red pine (*Pinus tabuliformis*).

Chinese ash (*Fraxinus mandshurica* Rupr.) is a species of *Fraxinus* native to northeastern Asia in northern China especially in northeast China. It is one of the three most preciousness wood species in northeast China, the other two are Chinese walnut (*Juglans mandshurica*) and Cortex *Phellodendri* (*Phellodendron amurense* Rupr). Chinese ash is a hardwood and is hard, dense (670 kg/m^3), tough and very strong but elastic, suitable for dry climate, and very slight aging, small performance changes. It extensively used for Kang cabinet and table.

Chinese walnut (*Juglans mandshurica* Maxim) is important for its attractive timber, which is hard, dense, tight-grained and polishes to a very smooth finish. The color ranges from creamy white in the sapwood to a dark chocolate in the heartwood. When kiln-dried, walnut wood tends toward a dull brown color, but when air-dried can become a rich purplish-brown. Because of its color, hardness and grain, it is prized furniture and carving wood. It is good material for Kang chest.

Mongolian oak (*Quercus mongolica* Fisch. ex Ledeb) wood has a density of about 0.75 g/cm^3 creating great strength and hardness. The wood is very resistant to insect and fungal attack because of its high tannin content. It is good material for Kang cabinet, Kang table and also for cradles.

The elm (*Ulmus rubra*) is the most popular wood for furniture in northeast China and also principal wood for Kang furniture. Elm and Chinese beech wood are the most commonly used woods for furniture in north and south China respectively, usually called "northern elm southern beech". Elm wood is tough and heavy. It has rough structure with little flexibility, good elasticity and moderate strength. It is superior in its resistance to humidity and corrosion and suitable for processing and carving.

Chinese red pine (*Pinus tabuliformis*) is a pine native to northern China from Liaoning west to Inner Mongolia and Gansu, and south to Shandong, Henan and Shaanxi, and also northern Korea. Its wood is softer, have natural fragrance, color flaxen, knot scar is more common, it is the material that northeast area makes furniture to use commonly, can obtain fine wood through artificial processing.

CONCLUSIONS

Primitive Kang appeared before the articulated words, while the culture had a great impact on Kang ever since the words were created. The traditional Kang culture has promoted the unique area of the Kang furniture while the art itself shows the aesthetic awareness and the spiritual specificity of the Chinese culture. As a main conclusion, it can be stated that the platform „Kang”, experiencing an evolution of thousands of years, is engraved within the development of the national characteristics.

Kang furniture can reflect the lifestyle of northeast people in China. Some local wood species such as Manchurian ash, mongolian oak, Chinese walnut, elm, Chinese red pine are selected for Kang furniture. It reflects the wisdom of the northeast people in using natural resources. The result of this paper is a basic part of the doctoral research, which is help for understanding the furniture culture of northeast in China.

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