

## A Chinese model of a pigsty and privies – 2000 years old



I recently circulated a note about some Chinese model buildings, made for placing in tombs around 2000 years ago. The image above shows another Chinese tomb model (35 cm wide) from the same period, but this time it is a courtyard-style pigsty with two privies (outside toilets) at opposite ends of a raised platform. It even comes with an 8 cm-long pig ..



You may find it odd that a pigsty and toilets for people are combined in a single structure, but actually until recent times this has been a common arrangement in East Asian countries, especially China, Korea and parts of India. The frequency with which such models are found in Chinese tombs suggests that it was also common in China 2000 years ago. This ancient association is reflected in the fact that the symbols for pigsty and for privy in Chinese writing are the same.

The one or two pigs kept by an East Asian subsistence farmer were not kept primarily to be eaten (though in due course they would be) but rather as a 'fertiliser factory', as the farmer would periodically spread the mixture of straw bedding, droppings and urine from the pigsty on the fields. There was another benefit, as the pig would be fed on the food waste from the family, so avoiding the accumulation of piles of food waste which would attract rats and other creatures.

The reason for the close association of pigsties and privies seems distasteful to modern sensibilities. I knew that pigs were famous for being willing to eat almost anything, but I was surprised to learn that this includes human faeces. Apparently in some cases up to a third of the pig's diet in these pigsties was human faeces. The privies associated with pigsties were typically elevated, as in my model, so that the faeces would fall into a basement area which was open to the pig. The pig needs to be trained when young to eat human faeces, but apparently once this has been achieved they particularly like the still-warm deposit and I have read that the privy needs to be high enough above the pig's level to avoid any unwanted attention from an over-enthusiastic pig while the privy is still occupied!

The direct spreading of human faeces as fertiliser creates health risks, as human pathogens can come directly into contact with food plants. The processing of these faeces by the pig eliminates these risks, though I don't suppose people 2000 years ago fully understood this benefit. Unfortunately, there is a health risk which is increased by the pigsty/privy method. The pork tapeworm has a lifecycle by which meat from pigs ingesting contaminated faeces may contain tapeworm cysts. These can develop into tapeworms in humans eating this pork if it is not cooked well enough. In the 20<sup>th</sup> century, studies showed that there was a high incidence of pork tapeworm in farmers using the pigsty/privy approach. Partly as a result of these studies, governments in East Asian countries have now banned or strongly discouraged the use of pigsty privies.

It is quite common in such tomb models for there to be two privies, and it has been suggested that one is for men of the family and the other for women. In my model one of the privies is a more impressive structure, fully enclosed with a gable roof, while the other is open to the elements. It is tempting to speculate that the enclosed one with the roof was the one for the women to use.



As would have been common in China, these toilets are both of the squat type. In recent years I encountered a privy very similar to the one on the right in the photos on the previous page, while on a tour in rural China, thought that one was not connected to a pigsty.

The clay which my model was made of has fired to a dark grey colour, and broken areas show that this is not a surface coloration but is the same throughout the thickness. In this respect it is very different from the light beige clay of the models I wrote about previously. The grey coloration could have resulted from colouring minerals in the clay, but I suspect it is more likely to be caused by the permeation of smoke throughout the clay during firing. I once visited a ceramics factory in China where all their pottery was black, which they achieved by packing the kiln with fuel at the end of the firing and restricting air access, creating a dense smoke inside the kiln.

Adhering in patches to the surface of the model there is a layer of very fine beige dust. This brings to mind the very fine wind blown dust, called loess, which covers much of Northern China, often in layers many metres thick, suggesting that this model may have come from Northern China.

Although these pigsty privies were common in Eastern Asia I have found a couple of tantalising references to similar structures in reports of archaeological investigations in the UK. I have been unable to find any more information about these, but it would not be surprising if the idea had come up in more than one part of the world.

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