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How to put up a cathedral ... or a bookshelf?

Masons' marks from 4,000 years ago may offer an end to flat-pack assembly woes, according to researchers

Lucy Tobin

It's the flat-pack furniture problem that almost all of us have faced. You open the box, trawl through its contents, lay everything out, then cross-reference the instructions. You look at them every which way since they appear to be in Sanskrit, then have a go, and feel like you've done a decent job. Only then, disaster strikes. You turn around and see an extra three pieces of your flat-packed furniture kit lying innocently behind you. Will the bed collapse in the night?

But a remedy could be in sight. New research into the work patterns of medieval masons by academics at the [University of Warwick](#) could spell an end to the leaflet-grappling, component-finding problem of furniture assembly. So build-your-own cupboard and bed designers, listen up.

Masons' marks

The idea is centred around a system called masons' marks, a series of sophisticated symbols that, for the past 4,000 years, have been used by designers and builders to inscribe patterns on stones to enable instructions to be transferred with ease. Originally, they helped illiterate masons to carry out their orders and know which materials fitted in where. But now Dr Jenny Alexander, of Warwick's history of art department, believes modern manufacturers could use the marks as a cheap and efficient way to help us put together self-assembly furniture at home.

"If companies that make flat-pack furniture used a system similar to masons' assembly marks to show which pieces

went together, it could remove the need for the complex and often impenetrable instruction booklets they currently issue," she explains. Doing so would resurrect a system popular for centuries. Indeed, the inspiration for Alexander's research came when she was studying for a doctorate at Lincoln Cathedral, which was built in 1072 but destroyed by an earthquake soon after,

and later rebuilt. The cathedral, Alexander says, "had so many of the marks all over it that I decided to see if I could use them in some way, as part of a study of the construction of the building".

She discovered that the simple designs and ciphers were cut into several faces of the dressed stone, and learned that as well as being used to transmit instructions between designers or master masons and their workforce, the marks were also used to help assemble pieces that had been carved elsewhere and then transported to the building site - just as we do with self-assembly furniture. Alexander also discovered that medieval stonemasons used to have their own marks for when they were working on part of a specific project, which would then be used as a kind of "clocking in" system to ensure they were paid for their part of the work.

"The marks had an agreed meaning within the building trade, and are understood in the same way as mathematical symbols," she explains. "So, for example, when the sign '+' means one thing in maths, another thing on a road sign, and a third thing in a religious context, as a masons' mark it has a fourth meaning - indicating where in the overall design the piece fits - which has nothing to do with the other three meanings."

Even nowadays, there's no need to travel too far to find masons' marks. They are visible on old buildings all over the world, from the stone buildings found in Pompeii to the Capitol building in Washington, and on kerb stones in Newcastle upon Tyne. "They can also be found on

most medieval cathedrals and plenty of Elizabethan houses," Alexander adds, before going on to say that her research into the marks' existence stemmed from her interest in understanding how the great buildings in the past were designed and built "before the advent of modern technologies".

She explains: "It's clear that you could set a medieval mason to work building a

modern cathedral and he would be able to work alongside his modern counterpart, but there's no longer an equivalent to the master mason, the person who designed and oversaw the engineering of the building - the job has now fragmented into a lot of specialisations." Alexander's current research includes an examination of the period during the 16th and 17th centuries when the architect - as we understand the job today - began to emerge, and the master mason disappeared.

Traditions

"By looking at the organisation of this workforce and their use of non-literate communication systems in comparison to the medieval ones like masons' marks, we can get a sense of how long the medieval traditions lasted," she explains. "The great houses of the Elizabethans and Jacobean can now be understood more fully by this sort of buildings archaeology, and the people who actually built these structures emerge from the shadows at last."

Some modern stone masons still use marks, but they are no longer made on to visible surfaces. Alexander does, however, have one exception: "I once met a mason in the cathedral at Trondheim, in Norway, who had a masons' mark as a tattoo," she says. But if you're hoping the marks will make a comeback in furniture flat-pack, you'll have to cross your fingers that one of the firms' bosses is reading this. "There are a few bookcases in my house with shelves the wrong way around, but I haven't contacted the manufacturer," says Alexander. "I'm just an academic, trying to understand the great buildings of the past."

