

Daily grind: The biography of a stone axe

April 19 2019, by Merijn Van Nuland



Credit: Tom Breukel

Tom Breukel analysed some 250 stone axes from the Caribbean and reconstructed their biographies, thus increasing our knowledge of production and trade in the period around the arrival of Columbus. His Ph.D. defence is on 18 April.

Breukel researched how the [stone](#) axes – a collective term in archaeology that also includes adzes and chisels – were produced, traded, and used in the Dominican Republic and the Windward Islands between 1200 and 1600. Previous research had already shown that there was intensive barter between the islands in that region: some axes 'travelled' as far as 1000 km to their final destination.

Semi-finished axes

Breukel studied the axes and discovered that many were only partly finished before they were transported. He found unusual semi-finished products among the traded goods. "The buyers probably wanted to finish the stone axes themselves," he says. "This may have helped them develop a close relationship with the object. Even today, the users in some [indigenous communities](#) in the Amazon have a personal relationship with an object, and that's not as easy if you order a ready-made axe."

In addition, Breukel concluded that the majority of the axes were actually used for the purpose for which they were made. He only found one that had never been used and thus may have primarily served ceremonial purposes. "Sometimes you find beautiful jade stones that have been polished until you can see your reflection in them. Then it's tempting to think that the stone was only used as a talisman or pendant, but if you look closely, you nearly always find traces of wear."



Credit: Tom Breukel

One millimetre at a time

Breukel made his discoveries under a microscope. He studied the 250 [stone axes](#) by looking, one millimetre at a time, for wear traces and information about the type of stone and production method. This resulted in a biography for each individual object. "Each time the object is used traces are left behind that archaeologists can find later, even on a cup as you stir your tea," he says as he holds a greenish axe. "You can read from the grooves in the stone or the residue left behind whether the tool has been used to grind, polish or hack."

Another aspect of Breukel's research was an experiment that involved reproducing how axes were used. He worked with fellow archaeologists and the [local community](#) to build a stone age house on Saint Vincent, using only stone tools. This allowed him to compare the traces on the experimental axe with traces on real stone age axes. "I spent two whole weeks hacking at posts with my stone axe – in the sun at least."

Provided by Leiden University

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