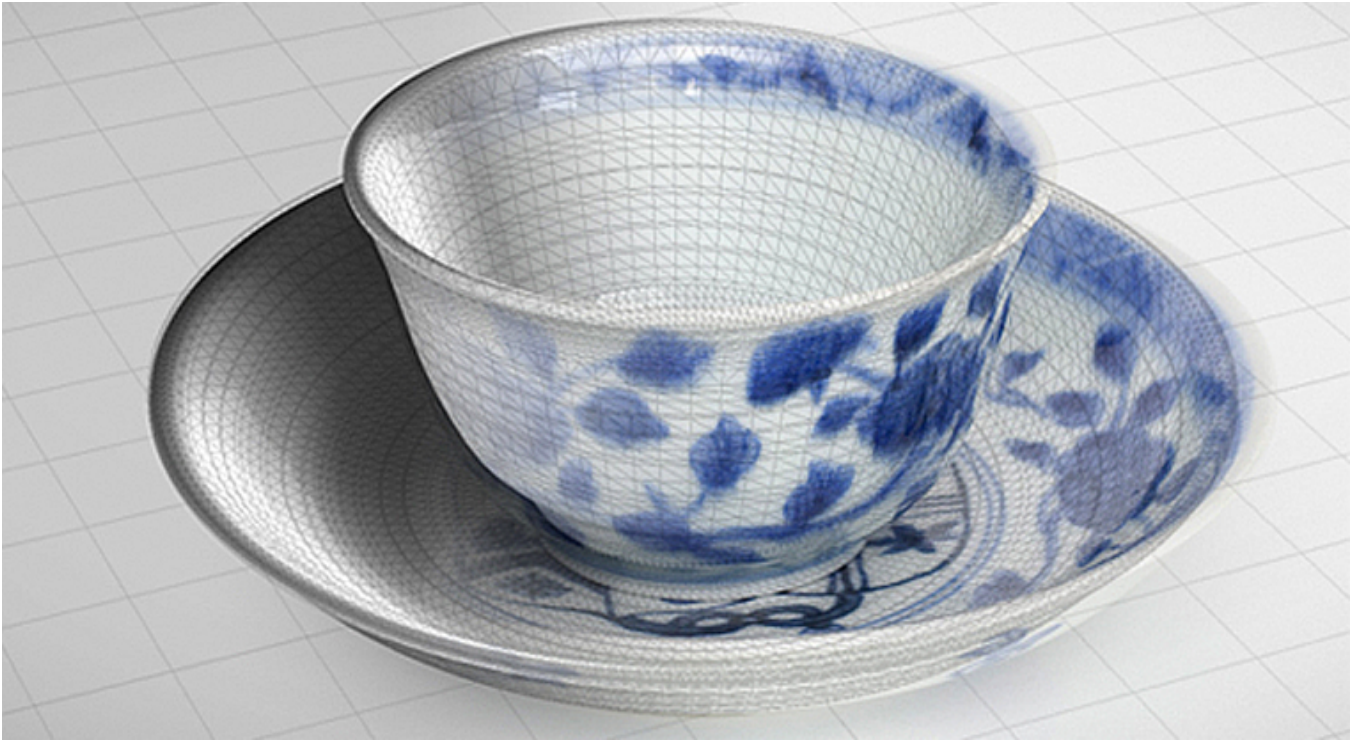


3D printed reproductions enable gallery visitors to touch and feel precious historical objects



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A parent's worst nightmare during a museum visit can be when kids try to grab the artefacts on display, but 'no touching' rules do present a barrier to interaction, making exhibitions less engaging. Dutch designer and art historian Maaïke Roozenburg now hopes to change this with her [Smart Replicas](#) project, which uses augmented reality and 3D printed reproductions of priceless museum objects to make visits more hands-on.

According to [Roozenburg](#), not being able to touch and feel items in art galleries and museums "strips the objects of their main purpose and function – their original use – and isolates them from our daily lives." That's one of the reasons she created Smart Replicas, using 3D-printing technology and ceramic techniques to accurately recreate items from history. Choosing to reproduce antiques from the collection at the Museum Boijmans Van Beuningen in Rotterdam, Roozenburg received permission to scan items such as glass tea cup sets and turn them into 3D models. Moulds were then 3D printed out of plastic and used to create porcelain replicas.

Instead of being displayed behind glass, the tea cups were exhibited at the Boijmans van Beuningen, where visitors could actually pick up the pieces. Partnering up with the Royal Academy of Art, The Hague and creative agency LikeFriends, augmented reality layers and 3D animations were also created to overlay original designs onto the pieces when viewed through a mobile device.

The project offers a way to make staid museum exhibitions more engaging and tech-friendly,

although Smart Replicas reportedly got a mixed response when it went on display – perhaps testament to the ingrained idea of looking but not touching. Are there other ways 3D printing can be combined with AR to demonstrate historical, or even non-existent objects?

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