



Richard on the Holodeck

Description

Archaeologists and reconstruction experts used laser **scanning** technology to scan the fragile bones of the body exhumed from the car park in Leicester. Then **3d printing** was deployed to produce a physical replica of the entire skeleton.

The 3d computer model of the skull provided the substrate of a 3d reconstruction of the face, which was then also given physical form by means of a 3d printer. The physical face was mounted, clothed and III now **on display** and featured in the press. The interdisciplinary collaboration and of technology.



The discovery is also cloaked in sentiment. Members of the

Richard III Society describe the face as handsome and personable.

It doesn't look like the face of a tyrant. I'm sorry but it doesn't. He's very handsome. It's like you could just talk to him, have a conversation with him right now.

Thankfully, the recreation team chose to deploy their artistic license to give Richard unblemished skin, rosy cheeks, relaxed brow and a slight upturn at the corner of his lips above that proud (but not haughty) jutting jaw – someone you think might give you the time of day.

3d scanning and 3d printing are the next stages on the path to complete representational realism abetted by digital media. I'm reminded of Janet Murray's claims in her book *Hamlet on the Holodeck*, that one day we'll be able to interact with the objects in the world an author or historian has created, rather than by only reading or viewing them (276).

The *holodeck* refers to the *Star Trek* fantasy of being able to interact with characters in a virtual environment, as if you were really there. She focuses on a conjectured "holonovel" by Charlotte Bronte, in which the reader takes tea with Lord Burleigh, feels the mood of the situation, and can even steal a virtual snog.

Thanks to CGI, computer game interaction, telepresence, robotics, scanning and now 3d printing we are on track to ever greater representational realism, whether historical, actual or imagined. We'll be able to touch the virtual worlds we create and display them on the mantelpiece – if this is what we want.

Guns and roses

This week some of us were talking about 3d printers as affordable consumer products, and their impact on craft production. At the moment a consumer-oriented 3d printer costs about the same as a top end television set. With a 3d printer in every home, the possibilities for customisation and design variation are endless. You will browse the Internet for a pair of shoes, retrieve the file for the shoes, and then print them off at home, or at least the components, and then assemble them yourself.

In our discussion, attention quickly turned to the objects most likely to be printed by casual or idle hobbyists. In the worse case, perhaps the biggest market for domestic consumers will be trinkets and ornaments, toys (including adult ones), and then weapons: toy guns, sling shots, air rifles and major league weapons for boys and girls of all ages, or components of these. Already a US Congressman has proposed putting a ban on 3d-printable gun magazines (that hold bullets) ([Forbes](#)).

You can print an iPhone case, a mount for a computer screen, cups, trays, lemon juicer, and a Captain Kirk Chair. For many other things you can print see

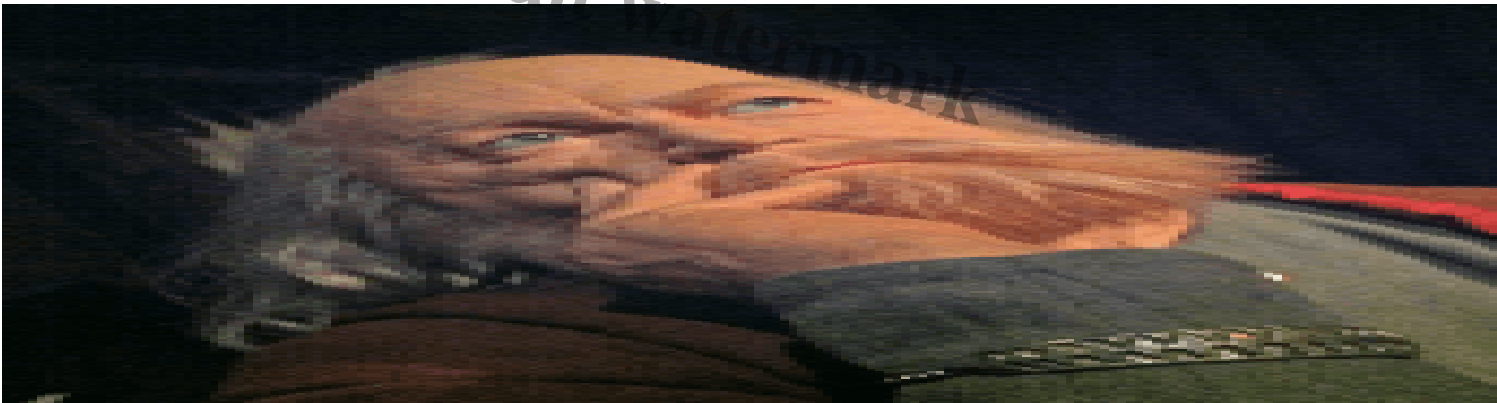
- Open source hardware designs: <http://www.thingiverse.com>
- A RepRap machine is a low cost printer that can also print itself. The website says that if you have one then you can use it to print another printer for a friend. So they self-replicate – a factory that makes factories! http://www.reprap.org/wiki/Main_Page

References

- Murray, Janet H. 1999. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Cambridge, Mass.: MIT Press.
- Ratto, Matt, and Robert Ree. 2012. Materializing information: 3D printing and social change. *First Monday*, (17) 7, [[online](#) 27 June 2012].

Notes

- Thanks to Diego Zamora for alerting me to the possibilities of 3d printing.
- Guns and roses: The white rose was the symbol of Richard III's dynasty, the House of Lancaster. The victorious Tudors bore the red rose on their coat of arms.
- We are waiting for the academic papers that give an authoritative account of the Richard III reconstruction process.
- Mark Wright explains how you can touch the untouchable in museums via an innovative use of scanning and 3d printing ([YouTube](#)).
- For further reflections on things, and the Internet of Things, see Speed, Chris. 2010. An internet of old things. *Digital Creativity*, (21) 4, 239-246.
- For a critique of representational realism see: [Pictures devour reality](#), [Hygienic reality](#), and [Computer images and realism](#).
- These are not of Richard III, but are pretty lifelike, life size wax models in the Saga Museum, Reykjavik, Iceland. For "lifelike" you could say "theatrical." Do we really want *reality*, or something that closely resembles what we expect a representation to be like, a bit of theatre, a film or a painting.



Category

1. Design

Tags

1. 3d printing
2. guns

3. printing
4. realism
5. representation
6. Richard III

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