

'Here is my face as people see it'

A 3D printer at the Royal Academy will re-create you in disconcerting detail. Nancy Durrant looks into her own eyes

I admit it, I'm no stranger to the mirror. I'm moderately vain, and besides, with hair like this you've got to give it at least a glance once or twice a day — or you run the risk of a family of sparrows making their home in it while you're walking to work. However, what I have never seen before is my face as other people see it — not in the mirror, or (as I have also experienced) through the subjective view of an artist, who sculpted my head over the course of a day and a half. Now, faced with a 3D mini-me that is perfect in every way — and when I say perfect, I mean including wrinkles, moles, eyelashes, everything down to that weird hole in my forehead that people claim never to notice — I feel slightly disconcerted.



Nancy Durrant preparing to be captured by the Veronica Scanner

The little bust in my hand is the product of the Veronica Scanner, a hi-tech piece of kit created by the Madrid-based fabrication house Factum Arte that will crank into action at the Royal Academy in London next month. Over ten days (followed in October by a short residency at Waddesdon Manor in Buckinghamshire, home to the Rothschild Foundation, which is supporting the show along with Factum's foundation), members of the public will be able to be scanned and processed and their images will join a gallery online.

Fies from the gallery can be downloaded and printed at home or via a commercial 3D printing company. (Prices for this vary wildly, from the low hundreds to print

a small bust in a basic resin to many thousands for a bigger size in higher-end material.) At the RA, some of the scans of the public will be selected at random to be printed on site, joining the serried ranks of the art world's great and good — including the collector Jacob Rothschild, the artist El Anatsui, the architect Lord Foster and the dealer Nicholas Logsdail (and me) — who have already been scanned and will be ranged round the walls. In addition, there will be a group of "character portraits" (largely Factum employees making impressively gruesome expressions), based on Franz Xaver Messerschmidt's 18th-century alabaster carvings of his own face in a variety of grimaces.

The project to create the Veronica Scanner began at a dinner party just north of Milan, the founder of Factum Arte, Adam Lowe, tells me after

picking me up from Madrid airport on a sweltering August afternoon (Lowe is the sort of man whose stories often start in this way). At this dinner Lowe was sitting next to a leading anti-ageing doctor working with Botox and hyaluronic acid (a volumising agent). Lowe asked his dining companion whether any regulation exists covering the aesthetics of aesthetic surgeons. "Because you can have good modellers and bad modellers, and if you're actually modelling someone's face — I find it incredibly offensive seeing people who are badly treated," he says.

A lively discussion ensued that culminated in Lowe promising, with some hubris, to make the surgeon a scanner "that could record the before-and-after difference" of the very small changes made in aesthetic surgery. "Of course," concedes Lowe, "there are limitations, so that's not quite true, but it's quite close. It's enough to show the difference when someone's had a little bit of hyaluronic acid."

The Veronica Scanner uses the principles of photogrammetry — the science of making measurements using photography. You sit very still in a sort of pod with holes in it and a mechanical arm equipped with eight cameras whizzes around you, photographing you from 96 different points. It takes all of four seconds. It's not new technology, but the Veronica is unique in that it's small enough to be portable, and because it uses only eight cameras (instead of, say, 96), it's relatively inexpensive to construct.

The file it creates is then downloaded to a computer (about



Nancy Durrant with her 3D likeness, a full-size version of which will be exhibited at the Royal Academy

five minutes) and processed (about 40 minutes) and then any "noise" on the image is fiddled about with by technicians, who prepare the file for a 3D printer (up to half an hour or so). The actual printing time varies depending on the complexity of the bust, but usually it's a day. (Three days after I leave Madrid, a mint-green

shoobox scrawled with the word "fragile" arrives at the office. Inside it, wrapped in tissue, is my head, which I show to anyone who will look.)

You may have noticed that throughout this process the one thing that is missing is an artist. The Veronica Scanner is so named after the biblical miracle of Veronica's veil, on which the face of Christ was imprinted when she wiped the blood off his face on the road to Calvary — an image created without recourse to human artistry. Won't this put a few noses out of joint at the Royal



The scanner's eight cameras take four seconds to take pictures from all angles

Academy, where the artist is king? Tim Marlow, the RA's artistic director, says not. "The RAs [royal academicians] are relaxed and some are quite excited about the project. I see it as a kind of laboratory or an experiment."

However, Lowe is interested in the questions that having a show such as this at the RA raises. "If you could have objective portraiture, is it what people want? And is a scan made by a mechanical system art?" he asks. "This isn't portraiture in the sense that we know it since the Renaissance."

A mechanical arm with eight cameras whizzes around you

Lowe argues that the artistic neutrality of the Veronica Scanner better reflects an earlier aesthetic idea, the theoretical aspiration to create art that hadn't been touched by the human hand at all. "The Greek goal was very different: objective realism without human intervention — icon paintings and Byzantine works of art were the same. Human intervention [subjectivity] was seen as obscuring the truth, not getting closer to it. So objective images, made without human touch [were thought to] bring you closer to God."

Holy or unholy, the technology clearly does have great potential for contemporary artists — Factum has been working with the artist Marina Abramovic on a series of computer-carved alabaster reliefs of her face — and for preservation and research. Walking through Factum's sprawling warehouses, Lowe points out a photograph of a badly damaged Ancient Egyptian

relief. It is such high resolution that the text, almost invisible to the naked eye, can be clearly picked out — useful not only because the relief now happens to be situated inconveniently above a motorway in Egypt, but also because it can be shared with scholars who needn't travel to study it.

We pass a full-sized replica of a colossal winged lion statue from the gates of a palace in Ancient Assyria (now Iraq) that lives in the British Museum in London. "These were scanned in the BM. In 2014 we shipped all the pieces we recorded in the BM to Mosul, where they were given to the Ashurbanipal Library project," says Lowe. "About six months later they were all destroyed. However, fortunately they're all plaster casts so the beauty is that we can do it again, at some point."

He's not absolutely sold on the idea of just remaking everything, however. "Yes, with all of the damage that's going on to world heritage, if we could get everyone with simple cameras uploading data and archiving it properly, you could set up and build one of the great archives that would preserve heritage," he says. "The problem is that there's so much misunderstanding about it. Lots of people saying, 'Yeah, we can rebuild [the ancient city of] Nimrud from crowd-sourced photos.' Well, can you create something? Yes. Can you create something meaningful? No."

I'm afraid my bust will simply alert the world to the fact that I've got a weird hole in my forehead, and I'm not sure my excitement at being exhibited is bringing me closer to God, but it will definitely delight my mum. The Veronica Scanner: Live 3D Portraiture is at the Royal Academy, London W1 (020 7300 8000), September 2-11; Waddesdon Manor, Buckinghamshire (01296 653226), October 22-30

Six great busts

■ **Nefertiti** by Thutmose, 1345BC, Neues Museum, Berlin

This is one of the most famous and frequently copied works in Ancient Egyptian art, and no wonder. Queen Nefertiti, right, was famed for her poise. This portrait bust, carved from limestone and coated with painted stucco, captures her loveliness with exquisitely stylised delicacy. The statue is possessed of a timeless aura. It could almost be Audrey Hepburn in costume or a supermodel in Vogue.



creases in the cardinal's robes. In his second version one of the buttons is about to pop undone.

■ **Cicero**, 1st century, Uffizi Gallery, Florence

Of the many portrait busts of Cicero, this marble, left, is the most haunting. Its creator is not interested in evoking the worldly status of the great Roman philosopher by sculpting, for instance, the outlines of senatorial robes. He eschews the sensual to capture the intellectual instead. Here is the supreme orator in his late years, lean and deeply lined, cheeks hollow, brow furrowed. His expression speaks of the intellect that is lodged within that bony skull.

■ **Cardinal Scipione Borghese** by Gian Lorenzo Bernini, 1632, Galleria Borghese, Rome

Borghini's virtuosity was dazzling. This portrait, right, of the supremely powerful Cardinal Borghese coaxes a living presence from a lump of polished stone. The plump lips are parted as if about to speak. One can almost see the sagging flesh of that fat chin wobbling. To add to the sense of movement, Bernini dramatically emphasises the twisted

■ **Self** by Marc Quinn, 2006, National Portrait Gallery, London

The bust is brought up to date by Marc Quinn's Self, a mould of the artist's head, filled with eight pints of his blood and standing frozen, in a glass case. He repeats the process every five years. Rachel Campbell-Johnston

■ **Monumental Head of Balzac** by Auguste Rodin, 1897, Rodin Museum, Paris

As a physical likeness it is decidedly unflattering. Rodin, sinking his fingers into clay, creates an image that even now looks malleable. This is a face that feels as if it is about to move. Rodin is not aiming for physical veracity. Rather he captures the author as a creative force.

■ **Sleeping Muse** by Constantin Brancusi, 1910, Metropolitan Museum of Art, New York

The model was Baroness Renée Irana Fracchi. She commissioned the master to carve her portrait. The result is a masterpiece of modernism (carved in marble, cast in bronze) in which Brancusi creates an ovoid as simple and yet as sensual as an egg. The spectator yearns to cradle it.

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