Broomberg and Chanarin's best photograph: Pussy Riot in 3D

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Karin Andreasson Photography My best shot

'We took this with Russia's new 3D surveillance camera. Pussy Riot's Yekaterina was happy to pose'

Last summer, we went to Moscow to visit a company that was developing a new kind of portraiture. The aim is to take shots of people passing through places like border crossings, railway stations, sports halls, even cinemas. It is eerie and sinister: it captures the shape of a face in a split second, from multiple angles, using various lenses. It then constructs a 3D model of the head that can be closely analysed and stored for future reference. The result is more like a death mask than a photograph. The eyes have a deadened appearance because at no point does the subject look into a camera.

The image could be used as evidence in a court of law in the same way as a fingerprint. So if somebody was in a protest and a camera caught just part of their face, their identity could be traced – if one of these pictures had already been taken of them.

What scares us is that this technology operates in what its developers call the non-collaborative mode: the subject is not aware of the camera, they never look into it, or engage with it. Yet historically, photography has always been about collaboration: there has always been a relationship between subject and photographer. Sometimes it's been romantic, sometimes problematic. This undoes all of that narrative.

The big theme of the last year has been the degree to which both state and companies can access our private lives. This technology takes things a step further by colonising the human face. It might be used at a petrol station: a camera recognises the face of a 35-year-old woman and then an advert for sugarfree gum is sent to her radio.

Our work is heavily influenced by August Sander, a photographer who spent his life documenting Weimar Germany, from the butcher to the banker to the vagabond. What he ended up with were portraits of people at a time when Europe was imploding and the Nazis were using social categories for their own ends. We felt echoes of that in today's Russia, so we decided to use this new technology to re-enact his great work, People of the Twentieth Century.

We photographed 120 people using Sander's categories. One was the revolutionary, which in Russian today clearly had to be one of the Pussy Riot girls. If you spend any time there, you'll find that, in broad society, they are totally disrespected. We wanted to take this technology developed for state control and subvert it, so it made sense to involve them. Yekaterina Samutsevich was happy to pose for us.

Ironically, the only deterrent against this camera is very low-tech: the balaclava. So we are calling for people to knit them. When these shots go on show, we will have knitting circles. That way, people can make their own.

• Adam Broomberg and Oliver Chanarin feature in Ruin Lust at Tate Britain, London, 4 March to 18 May.

CV: Oliver Chanarin

Born: London, 1971.

Studied: Philosophy and computer science, Sussex University.

Influences: "August Sanders, Walker Evans, Saul Bellow, my mother."

High point: "Winning the Deutsche Börse prize."

Low point: "Photographing David Cameron."

Top tip: "Never refuse an invitation."

CV: Adam Broomberg

Born: Johannesburg, 1970.

Studied: Sociology at University of the Witwatersrand, South Africa.

Influences: "The Marx brothers."

High point: "Sharing an opening of our work at MoMa with work by Magritte."

Low point: "Photographing cheese in Ragusa."

Top tip: "Life is short."