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Detection, Deterrence, Docility: Techniques of Control by Surveillance Cameras

Surveillance cameras are everywhere. Often we do not know whether they are operational, and nothing definite is known of their effectiveness in reducing crime. How, then, do these ubiquitous cameras — either functional or not — work?

Surveillance cameras. White, motionless and perching. Cables plugged at the rear. While their contours reveal little, CCTV cameras are assumed to contain an electronic eye that is used to remotely monitor — and periodically record — places and people. They are said to be 'watching over' what is considered valuable and, by extension, under risk: public spaces, busy intersections, transport hubs, cash dispensers, shopping malls, gated communities, militarised zones, to name but a few. They furthermore meet several expectations: from the security of wealth or discouragement of crime to various entertainment purposes, such as the reality television phenomenon *Big Brother*.

While the techniques and effects of surveillance have been studied in various disciplines, the object itself remains somewhat of a mystery. In spite of the growing omnipresence of surveillance cameras, information that would otherwise be readily available for products similarly destined to mass consumer culture — such as their designer, manufacturer and branding remains elusive. At first sight, given the secretive nature of surveillance cameras, the absence of such particulars appear to be intentional; their identity is not supposed to be known by the general public. This paper will attempt to make sense of the artefact starting from its design characteristics, before situating it as part of a broader surveillance network.

The design of surveillance cameras

While the genealogy of surveillance cameras can be traced to the very invention of photography, perceived early on as useful for identifying criminals,[1] we will focus on the first video cameras specifically conceived for surveillance. Unsurprisingly, it was a military programme during World War II that gave birth to this particular use of cameras. In order to observe the launching procedure of V-2 rockets —the first generation of ballistic missiles— the German engineer Walter Bruch (later, inventor of PAL television) designed and installed the earliest close-circuit television (CCTV) system.[2]

After the war, as technical innovations carried on, it became possible to produce more sophisticated and less costly cameras. Other developments in recording and communication technologies gradually improved their usability, and surveillance cameras finally became available as a commercial product. As banks and stores adopted the practice of installing permanent electronic eyes, the surveillance industry systems grew, steadily on its way to become part of quotidian urban experience. In recent years, especially after 9/11 and the War on Terror, public spending on surveillance cameras soared, notably in the United Kingdom.[3]

Today's surveillance cameras rely on digital high definition recording with advanced video compression, thermal imaging and wireless transmission. They have anti-freeze and anti-dust shells, and are monitored remotely by computers, with software that allow diverse functions like pan, tilt and zoom, movement tracking or facial recognition, to name a few. Inside the shell, it is such an intricate 'engineering design' that it is virtually impossible to count all the components and mateials constituting the final product.

One of the most widespread designs of digital surveillance cameras is underneath a roughly forty centimetres long, white powder-coated, weather proof, pressurised aluminium casing. The enclosure consists of multiple parts assembled in an integrated package, with slightly rounded edges. It can be said that such a hefty object weighing more than ten kilograms is built to resist the harshest environmental conditions and, quoting one commercial description, 'to withstand whatever you throw at them'.[4] It is designed for minimal maintenance, with no gears to adjust, no handles to operate, no buttons to press.

The auto-focus lens of the camera is sheltered with a dark glass window — sometimes even with a window wiper — and with an additional metallic sun shroud. It can be mounted with screws to walls, ceilings or poles, thanks to its load-bearing, wind-resistant, white painted metallic bracket, configurable to the desired angle of the camera. Crucially, two intertwined cables — one white, the other black — are plugged at the rear of the camera, carrying the electrical circuit and the electronic data, which is then transmitted to a monitoring station for screening and recording.

Surplus functionality of form: simulated cameras

There are several recognisable types of surveillance cameras on the market, but the direc-

tional 'bullet' model and the dome-shaped version remain the most common. The former has assumed archetypical status, its outline being employed as the graphic symbol representing surveillance as such. Whilst its rather plain form is no longer strictly determined by its engineering, it is kept all the same as it has such an identifiable shape. The bullet camera is even advertised as an 'overt product providing greater deterrence'. The ease of identification is usually doubled by additional signage informing that the premises we have entered are under permanent video surveillance — even if one fails to detect any really existing cameras, he or she is 'kindly' made aware of their presence. These signs thus supplement the cameras in extending the reach of surveillance networks, not by concrete infrastructure, but by constructing a perception.

The genuine surveillance camera is not an autonomous product; it does not function separately from the spatial context it is inserted into, or without its remote operation equipment.[5] But its form provides a surplus functionality solely by its evocative power: when a camera is seen, the basic anticipation is that it is recording remotely. Dummy cameras rely solely on this surplus functionality of the form. 'For a fraction of the price' of real security cameras, these replicas provide the deterrent/repellent effect of the imitated design. Just like a scarecrow, it is only the form ('white, motionless and perching') that is effectively functional, while the anticipated recording function is nowhere to be found. They have psychological rather than physical effects, yet nobody is supposed to know this fact except their owner. Instead of excercising reactive control as a functioning surveillance camera would — by making it possible to 'return to the crime scene' and perhaps to apprehend and prosecute offenders — dummy cameras aim at deterrence. Since we do not know whether they are working or not, they genuinely work on us.

The University of Florida's National Retail Security Survey reports that in 2001, 75% of the retailers in the US were relying on live surveillance, and just under a third had installed fake cameras.[6] Regardless of the actual degree of their effectiveness, installing surveillance cameras is the most visible and effortless solution that the authorities can invest in. While they might not be really effective, they create the illusion of security: 'Anything could happen here. However, as we are watching, everything will be all right and you can feel secure.' Locally, it may bring an improved sense of safety, but it is just as often argued that surveillance cameras only end up displacing the crime to another location, rather than preventing it. Similarly, while a false sense of security is convenient to counteract fear, incidents that reveal dummy cameras undermine the whole enterprise built on trust.[7]

The signs and decoy cameras act as mediating devices, crystallizing and rendering visible and invisible (and in some cases inexistent) surveillance infrastructure. The sheer presence of a surveillance camera stands for the moral authority of police forces or private security: 'dummy cameras act as totems of the law's omniscience.'[8] While the surplus functionality appears in some cases to be more cost-effective than the standard recording function of cameras, it does not provide an uninterrupted and continuous surveillance, requiring yet another technique of control.

Surplus functionality of formlessness: covert cameras

The archetypal camera models may also have their drawback; since they are easily recognisable, it is possible to avoid their gaze, and they can also become targets of sabotage. This is why some cameras function in a surreptitious manner; they are hidden. The object itself might be invisible, but the recording function is there. As long as one is not an experienced camera-spotter, there might always be cameras that are unseen from one's point of view — we do not see them but they see us. All visible cameras (real or fake) then appear as just the 'tip of the iceberg', a constant reminder of a far more pervasive mass surveillance. By precaution, we behave like there are potentially always recording cameras, even when there are none.

Today's surveillance cameras are a variation on yesterday's Eye of Providence: when the myth of an all-seeing yet unverifiable God has become relatively obsolete, it became evident — for those in power — that it had to be substituted by something else. Technological tools superseded metaphysical explanations, but the principle remains the same: we

feel watched, but we can never be sure of it. Consequently, we act in compliance with rules. According to Michel Foucault, we become 'docile bodies'. Inducing discipline and docility in individuals through the 'unequal gaze' of mass surveillance, is what Foucault calls Panopticism, derived from the Panopticon, the famous 18th century prison design by Jeremy Bentham.[9]

The principle is the same: in both cases, power is made visible (through the observation tower or cameras on display) and unverifiable (total uncertainty about its reach) at the same time. As Foucault observed, 'the surveillance is permanent in its effects, even if it is discontinuous in its action'.[10] Surveillance cameras manifest themselves as the twenty-first century Panopticon. Only this time, specifically constructed architecture is no longer required; a standard camera is equally effective.

Concluding Remarks

Fear is a powerful motivator and mobiliser in today's politics. The extension of surveillance systems indicate to a widespread fear of others, and rely on several techniques of control. The original surveillance cameras counter the fear of crime by deploying detection strategies.

There is clearly more to surveillance cameras than meets the eye. Their design is less about 'identifying and capturing wrongdoers' than stimulating automatic discipline and control, rendering the actual physical exercise of power redundant. While overt policing is expensive and troublesome to carry out (think about militarising urban space), putting scarecrows against people is much more gentle, ambiguous and elusive. Following the example of the Panopticon, if not the original purpose, at least the main use of mass surveillance appears to be self-surveillance.

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