Recognizing Everyday Activism: Understanding Resistance to Facial Recognition
Nora Madison, Chestnut Hill College
& Mathias Klang, Fordham University

Abstract

The widespread implementation of facial recognition systems as a tool for live surveillance is challenging the ability of individuals to be anonymous in public, and through this, addressing the level of privacy one has the right to expect in a public space. Among those attempting to draw attention to this discussion is a group of artists and designers, whose contribution involves the creation of anti-surveillance practices and artefacts. Given that these have been viewed as ingenious and often entertaining, but hardly as viable solutions to surveillance, it may be tempting to ignore them as failed resistance. This, however, would miss the importance of, and contribution to, the larger discussion on everyday resistance and activism. This paper argues that these systems are examples of surveillance resistance, that their role is to form part of an online discourse on surveillance and as such become a form of digital resistance. Furthermore, this paper argues, that through the form and nature of their contribution they have the ability to further nuance the discussion of resistance in that they become an example of everyday activism. By recognizing their true contribution, we may move beyond mere trivialization of these anti-surveillance artefacts to be able to study digital resistance.

Introduction

In an attempt to avoid surveillance a man lowers his head and pulls up his collar. His behavior is deemed suspicious, he is stopped by the police and as he resists questioning, he is made to identify himself to the officers, his photo is taken, and he is fined (Dearden, 2019). This is not the plot of a dystopian science fiction but occurred in London in 2019. His attempt to avoid surveillance was not motivated by guilt, but simply the desire not to be identified, paradoxically in a society where surveillance is the norm, the desire for privacy may be seen as suspicious. Hiding one's face in this manner is an act of everyday resistance: A quiet, disguised or seemingly invisible act, not politically articulated (Vinthagen & Johansson, 2013).

It was the small-scale reaction from a member of a relatively powerless group; it required no formal coordination (Scott, 2008). In his work on peasant resistance, Scott (1985) argues that: "most forms of everyday resistance are, after all, deployed precisely to thwart some appropriation by superior classes and/or the state. If the resistance succeeds at all, it of course confers a material benefit on the resister" (p36). The man in London was attempting to thwart the state's attempts to appropriate his likeness and identity while he walked in his own neighborhood, and, while he ultimately failed, his attempt illustrates an important resistance to the growing encroachment of surveillance and its threat to public life.

Surveillance—and resistance to it—is not new, yet there has been an increasing public discomfort with the growth of next level surveillance systems. This discomfort stems from the increasing sophistication of surveillance systems, with little or no human intervention, to

identify individual faces, store geographical data, and connect to external databases for access to additional data about the subject. This discomfort is increased with the threat of future additional features which will allow surveillance systems to identify individuals in massive crowds, through gestures or gait, and to reduce the need for human involvement altogether.

The man in London is also an illustration of the ways in which legal regulation and norms have made attempts from individuals to protect their identity either explicitly illegal or functionally useless. This paper will demonstrate the potential threats to open activism posed by these surveillance systems. Coupled with recent anti-masking ordinances, we argue that the ability of the populace to resist surveillance severely curtailed and attempts at resistance have the opposite effect. Left with little or no options, resistance to surveillance systems has become a creative practice where designers and artists have demonstrated personal anti-surveillance masks, clothing, jewelry, or styles of hair and makeup intended to frustrate surveillance.

These examples of design to thwart facial recognition can easily be brushed aside as minor acts. Indeed, a general audience would probably view them more as curiosities rather than grand art or useful products. However, this focus on the product misses the true purpose. The designers and artists are using digital technology in order to communicate political messages that question the state of surveillance and its challenge to human agency. By making everyday objects and sharing their designs they are demonstrating a potential for resistance that underscores that there is a power that needs to be resisted.

Despite the analog nature of the designed artefacts these are really secondary. The truly activist product is the uncoordinated invitation to a wider digital audience to be part of a noisy online dialogue on the social effects of surveillance.

Live Facial Recognition Systems
Surveillance systems built with live facial recognition (LFR) are a combination of several forms of technologies. Most readily identifiable is the camera whose development as a surveillance tool has gone through multiple stages of evolution. The earliest cameras were unable to record events and therefore required the human operator to be watching the screens the entire time. the advantage here was the ability to watch several screens from a distance, the disadvantage was the ability of the operator to maintain focus on the screens.

Widespread use of camera surveillance begins with the development of cheaper recording systems of cassette tapes (Kruegle, 2011). These allowed the use of cameras to be independent of parts of the human operator's work. The advantage being that they were useful devices for reviewing what had happened in the past at a certain location. As such the deterrent effect was secondary. The goal of the tapes was to provide evidence of what had happened. The systems still required human intervention in deciding when to review the tapes, in the reviewing of the tapes, and in the identification of the recorded individual.

The second pillar of LFR is the ability of information systems to be able to be used in the identification of individuals. Among the early systems were the Bertillon system in the late

1800s which used a sophisticated system of bodily measurements and identifying marks to create positive identification of individuals. Aside from the data gathered from the measurements of the suspect the main innovation was the organizational system of references and cross references that made this into a human searchable paper-based archive.

This use of biometric measurement was soon superseded by the use of fingerprints as a way of identifying individuals. These had the added feature of sometimes being able to connect the individual to the crime and therefore together with their uniqueness quickly became the preferred system. However, until the development and dissemination of computers, these systems remained cumbersome paper-based archives.

Dealing with repetitive mundane tasks is the driving force behind the early development of computers and their ability to create higher levels of search and recovery efficiency in archives were instrumental to their early successes.

The next step in the development was to connect cameras to computers and begin to create systems that would enable them, through facial measurements, to identify individuals. Beginning with early pattern recognition these systems soon used large databases of facial images to "learn" how to differentiate between individuals. Once all these elements coalesce, together with networked communication, and access to databases of faces the groundwork was laid for LFR (Bowyer, 2004; Introna & Wood, 2004).

LFR is the ability of the surveillance system to, in real time, identify individuals appearing in front of the camera and connect their images to any and all databases the operators may have access to. The system has overcome the limitations of humans to watch screens, identify actions, or need breaks. The result of these interconnected cameras, recognition systems, and databases is that: "While passive camera surveillance focused on *acts* of the individual, and facial recognition focuses on *identity*, live facial recognition brings the *entire history of the surveilled* to the attention of the observer" (Klang & Madison, forthcoming, italics original).

Identification, Resistance, and State Reactions
There are a wide array of tactics that can be employed to either directly resist or engage with surveillance. The equipment itself can be attacked, information about camera locations can be shared, or attention can be drawn to their prevalence (Monahan, 2006). Undoubtedly, the most readily available among these tactics is to obscure the face from the view of the camera. Clothes have always been used to cover the face for an array of different reasons; for warmth, modesty, or to prevent identification.

From the perspective of the modern state we see two trajectories where some of these uses have been frowned upon. The modern origins of prohibiting individuals from wearing clothes that cover the face and prevent identification stem from attempts to regulate the Klu Klux Klan in America, while in many European countries they arise from desire to control Muslim dress practices (Winet, 2012).

As clothes, even those covering the face form part of the bearer's identity and are a form of expression, and they are often protected by various national and international legal instruments (Winet, 2012). However, legislators have carved out exceptions to these rights and we find a wide array of legislation that prohibits face covering outside certain accepted practices. There are carnival regulations in Belgian municipalities that prohibit masking the face in public with masks or make-up unless in designated spaces in specific public festivals (Winet, 2012).

Putting aside the origins and goals of legislation such as these, they have now become practical to the state surveillance apparatus. This legislation is used in order to ensure that surveillance systems are not impeded. A quick survey of laws around the world shows that there are municipal, regional, and national prohibitions against masking the face in order to prevent identification. Countries such as Australia, Austria, Canada, Denmark, Germany, Italy, Latvia, Netherlands, Norway, Russia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, and the United States. France, in an act that coincided with the 2019 *Mouvement des gilets jaunes* (Yellow Vest Movement) protests, added to their existing prohibitions on face covering to include a ban on masks at public demonstrations. The latest to react is Hong Kong, where a ban on face masks is a direct reaction to the ongoing protests.

The state fears masked protest and reacts by giving itself, via regulation, the privilege to take away the individual right to wear a mask in public. As Caillois (2001) points out, the mask "characterizes equivocally sensual intrigues and mysterious plots against the powers that be. It is the symbol of amorous or political intrigue. It is disturbing and somewhat of a thrill. At the same time, it assures anonymity, protects, and liberates" (p 130). To this we can now add that the mask invalidates the systems of surveillance and makes investments into LFR less effective; therefore, in order for the system to be able to function, the human law enforcement must work to remove individuals' freedom to be anonymous in public. The man in London—which began this article—was not stopped by the police for their direct interest, he was stopped to make the surveillance system function. The police become the arms of the surveillance machine, human actors within a sociotechnical system. The wearing of the mask is no longer allowed to be a form of expression but rather a symbol of transgression and is met with the force of the state, as represented by the uniform. Which, according to Caillois (2001) is juxtaposed to the mask:

> The uniform is almost the exact opposite of the mask, and always symbolizes a type of authority founded on entirely opposing principles. The mask aimed to dissimulate and terrify. It signified the eruption of a fearful, capricious, intermittent, and inordinate power, which emerged to evoke pious terror in the profane masses and to punish them for their imprudence and their faults. The uniform is also a disguise, but it is official, permanent, regulated, and, above all, leaves the face exposed (p 131).

Once the mask is prohibited, the mandate of identification has a chilling effect on activism. The power imbalance is reinstated and the protester must stand identified in front of the state. As

usual it is the less privileged and vulnerable in society that will suffer most. Those whose identification will lead them to harm will most certainly be deterred from participating and they will have no recourse other than the weapons of the weak.

The loss of these participants and the lack of masks in protest may also lead some to believe that there is no resistance and that there is an acceptance of the status quo of identification. The need for masks becomes invisible as you would need to have to drive political change for the right to conduct masked demonstration. Therefore, we must look elsewhere for the critique of the status quo.

Resistance by Design
As LFR systems become more sophisticated—and legislation expands to prohibit masks, hoods, and clothing obscuring faces—we see a rise in artists and designers creating innovative designs intended to frustrate LFR. These designs may, in certain jurisdictions, fall outside the language (but not the intention) of the law, but it is unlikely that they would be practically useful if they were used on a larger scale. We have included several examples below, but this is not an exhaustive list.

Several artists have created minimalist designs that do not cover the entire face; rather, through applying metals or makeup in strategic places on the face these designs accomplish the same result in obscuring personal identity. Adam Harvey created "CV Dazzle" (2010), a series of hair, facial paint and jewelry designs used to camouflage the individual from face detection technology. His designs were launched as a digital booklet available and spread online. Scott Urban launched his kickstarter in 2016 for "Reflectacles", wearable glasses embedded with retroreflectors, which overwhelm many LFR systems' abilities to make measurements and thus carry out identification. The glasses work against CCTV, LFR, and also retinal tracking systems. In 2019 Urban also announced "IRpair" and "Phantom", both of which block 3D infrared facial mapping, obscure facial data on 2D infrared surveillance cameras in low light environments as well, and block infrared eye-tracking. Similarly, Polish designer Ewa Nowak created "Incognito" (2019) facial jewelry made of brass similar to the design of a pair of glasses. Instead of lenses that sit over the eyes, two brass circles are worn just under the eyes, connected to a rectangular brass shape that sits between the eyes and reaches up to the hairline, all connected to a lightweight frame that sits over the ears like glasses.

Baccus-Clark et al. (2017) developed Hypeface, a collaborative design project of Hyphen Labs' NeuroSpeculative AfroFeminism, which takes a different approach. Instead of trying to obscure the face, the objective of Hyperface is to minimize the difference between figure (an individual's face) and ground (proximal information), and in doing so interferes with face detecting software.

Notably, these designs—and their designers—are neither apolitical nor quiet. Nowak says of her work: "The project touches on the subject of social surveillance and protection of one's own image in public places.

The object is to protect the image against face recognition algorithms used in modern cameras installed in public space" (Nowak, 2019). Harvey explains CV Dazzle as:

> Derived from a type of World War I naval camouflage called Dazzle, which used cubist-inspired designs to break apart the visual continuity of a battleship and conceal its orientation and size. Likewise, CV Dazzle uses avant-garde hairstyling and makeup designs to break apart the continuity of a face. Since facial-recognition algorithms rely on the identification and spatial relationship of key facial features, like symmetry and tonal contours, one can block detection by creating an 'anti-face' (Harvey, 2010).

On the website explaining their most recent prototype, NeuroSpeculative AfroFeminism claims that they are a:

> Transmedia exploration of black women and the roles they play in technology, society and culture—including speculative products, immersive experiences and neurocognitive impact research. Using fashion, cosmetics and the economy of beauty as entry points, the project illuminates issues of privacy, transparency, identity and perception (Baccus-Clark et al., 2017).

As we will argue below, this consciously political stance removes these acts from the definition of everyday resistance, but as mundane, uncoordinated, and non-spectacular acts form part of everyday activism.

Interpretations
What are we to make of these projects, and others like them? Naturally we could discard them as trivial pieces of art, making some comment on the state of surveillance, or we could see them as artefacts attempting to reach audiences in a capitalist marketplace. But what if they are more than this? They are quite obviously not a central part of a large, coordinated, political campaign to protest the loss of anonymity and public privacy. Nor are they practical products intended for the large-scale marketplace. If they would succeed in the latter they would fall afoul of the anti-mask legislation; then what purpose do they serve? In our view these examples were never intended to become large-scale workable countermeasures to surveillance. Therefore, they need to be understood in a different context than the plethora of other practical tips and devices recommended to protesters in order to help them keep warm, energized, and safe.

Like most things technical it is easy to focus on the uniqueness of the artefact and in this view, these examples seem outlandish and exotic; however, the concept of bricolage or improvisational creation provides a critical lens. As Levi-Strauss (1966) explains, "the 'bricoleur' is adept at performing a large number of diverse tasks; but, unlike the engineer, he does not subordinate each of them to the availability of raw materials and tools conceived and procured for the purpose of the project" (p 17). This tinkering and improvisation (Ciborra, 2009) leads to the making of artefacts, which may be said to be "the creation of structure out of events"

(Louridas, 1999, p 5). In the same way as the study of bricolage moves away from the artefact to study the art of the bricoleur, we want to focus less on the products of the anti-surveillance designers and look towards the practices of activism entailed in their work.

Like the bricoleur the designers above have taken their knowledge and the materials they have at hand to produce a resistance to surveillance. The point and purpose of their work is not so much the artefact but the communication of the message around their artefact. Indeed, in most of the examples of anti-surveillance designs, the ideas far supersede the artefact in interest and importance. By looking at the practices of resistance, for the designers it is bricolage, for the audience it is learning and maybe using or developing this knowledge further. We can see how the whole process of manifesting ideas into artefacts and spreading their designs via the Internet is a form of everyday communication of resistance to the power of the surveillance state. #ese are acts of mundane everyday activism performed over highly complex technologies.

In his analysis of antisurveillance camouflage and fashion, Monahan (2015) presents the surveillance studies perspective on the meaning of these phenomena. His focus is on the impact that they may have: "anti-surveillance camouflage and fashion ultimately fails to address the exclusionary logics of contemporary state and corporate surveillance" (p 160). This perspective fails to take into consideration whether, in order to be of importance, the exclusionary logic needs to be the focus of their work. In his conclusion he argues that projects such as these are:

> Narrow forms of resistance that are unlikely to challenge current regimes of visuality. The reason for that has to do with how the artworks frame problems with surveillance as universally experienced or as needing individualized and product-based solutions to manage—rather than correct—systemic social problems (p 173).

The flaw with this approach is the way in which it seems to present these designs as having no value in relation to surveillance, because they are unable to either address the entirety of the logic of surveillance, or that they are unable to act as a corrective to a powerful hegemonic system. Monahan's approach does not take into consideration these acts as being forms of resistance carried out by those who have little or no power to change the system, and that they should not be judged by their failure to undo the system to which they are subjected. We feel that these examples fall within the larger discourse on resistance (cf Scott, 1985; Abu-Lughod, 1990; Vinthagen and Johansson, 2013), but do not conform to the criteria set out for everyday resistance.

Our argument is that these designs present us with useful illustrations of the concept of everyday activism which we see as a part of the wider continuum between full blown resistance and everyday resistance (Scott, 1985; Vinthagen and Johansson, 2013). They point to the need for a bridge concept within resistance studies that addresses the mundane acts of activism.

Everyday Resistance

Abu-Lughod inverts Foucault's (1978) adage of "where there is power there is resistance" (p 95), and turns it into "where there is resistance there is power" (Abu-Lughod, 1990, p 42), which is to move away from abstract theories of power in order to better study power in particular situations. She writes:

> We could continue to look for and consider nontrivial all sorts of resistance, but instead of taking these as signs of human freedom we will use them strategically to tell us more about forms of power and how people are caught up in them" (1990, p 42).

Trivial acts of resistance may provide rich interpretations and understanding of the dynamics of power in the given situation (Abu- Lughod, 1990).

In Scott's (1985) study on peasant resistance to hegemonic power, Weapons of the Weak: Everyday forms of resistance, he opens up the study of resistance by arguing that acts of resistance are as critical as the organized, political, large-scale events such as protests or revolutions. He advocates for the study of the techniques of resistance employed by relatively powerless groups, such as "foot dragging, dissimulation, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so forth" (Scott, 1985, p 29). History and political science tend to focus on and teach about the large events because they are spectacular; however, that focus may fail to understand the underlying causes of these events, or, even more seriously, may fail to comprehend the impact of smallscale, persistent resistance. In a salient passage Scott likens this to a ship being wrecked on a reef:

> Just as millions of anthozoan polyps create, willy-nilly, a coral reef, so do thousands upon thousands of individual acts of insubordination and evasion create a political or economic barrier reef of their own. There is rarely any dramatic confrontation, any moment that is particularly newsworthy. And whenever, to pursue the simile, the ship of state runs aground on such a reef, attention is typically directed to the shipwreck itself and not to the vast aggregation of petty acts that made it possible (Scott, 1985, p 36).

Beyond the examples above, Scott discusses resistance as a subtle form of countering public norms through the use of:

> Rumor, gossip, disguises, linguistic tricks, metaphors, euphemisms, folktales, ritual gestures, anonymity. For good reason, nothing is entirely straightforward here; the realities of power for subordinate groups mean that much of their political action requires interpretation precisely because it is intended to be cryptic and opaque (Scott, 1990, p 137).

The goal for Scott is not to deny the role of large overt political action but rather to shine a light on the everyday acts of resistance as a form of strategy without coordination.

In his attempt to include the mundane into the study of resistance, Scott allows a wide range of acts to be interpreted as resistance. This recognition of the importance of small acts brings with it a challenge— what is, and is not, to be understood as resistance? Vinthagen and Johansson (2013) recognize this in their work to form a theoretical framework in the understanding of everyday resistance. They begin their work by addressing that resistance may cover a wide range of acts that exist on "a continuum between public confrontations and hidden subversion" (p 3), but also emphasize that "all expressions of difference, deviation, or individuality should not, we think, be labeled 'resistance'" (p 3). In addition to this it is often not fruitful to question the intent of the actor, as they themselves may not define what they do as resistance. Vinthagen and Johansson further argue that: "It becomes almost unthinkable for subalterns to define what they do as 'resistance' if their practices are made invisible and marginalized in public debates, mass-media and scientific discourses" (p 38). Not only is intent not always conscious in the mind of the actor, it also all but impossible for the researcher to gauge the true intent of the actor, in particular when studying past events where the actors may no longer be with us. Vinthagen and Johansson similarly note that: "intent is irrelevant for *the definition* of a type of action, but relevant for *understanding* the ideas, strategic thinking, plans, psychology or cultural meaning that actors articulate when they resist" (p 21, italics original).

Resistance should also not be interpreted through its results. Individual acts of resistance do not need to have a tangible effect. In line with Scott's reef, each individual organism does nothing. For Vinthagen and Johansson it is the potential for undermining power that is the defining characteristic of resistance. This approach dovetails nicely with the work of Abu-Lughod, who reminds us that resistance is more than its outcome:

> The problem has been that those of us who have sensed that there is something admirable about resistance have tended to look to it for hopeful confirmation of the failure – or partial failure – of systems of oppression. Yet it seems to me that we respect everyday resistance not just by arguing for the dignity of heroism for the resistors but by letting their practices teach us about the complex interworkings of historically changing structures of power (1990, p 53).

Building on these fundamental points, Vinthagen and Johansson (2013) put forward a coherent set of criteria of everyday resistance:
- done in a regular way, occasionally politically intended but typically habitual or semi-conscious;
- in a non-dramatic, non-confrontational or non-recognized way that (has the potential to) undermine some power, without revealing itself (concealing or disguising either the actor or the act), or by being defined by hegemonic discourse as "non-political" or otherwise not relevant to resistance; and is
- done by individuals or small groupings without a formal leadership or organization, but typically encouraged by some subcultural attitude or "hidden transcript".

This everyday resistance is connected to power in a complex messy way. Large-scale, organized, political resistance is easier to identify and understand, while everyday resistance has a relationship to power which is "both subordinate and rebellious at the same time" (p 37).

Countering Surveillance as Everyday Activism
Given these criteria, how shall we view the actions of the artists and designers of the anti-surveillance systems? From the descriptions of their intent of these works they have taken a clear political stance against the surveillance apparatus. Their motivation is to challenge the lack of public privacy and anonymity as they believe the surveillance systems are fundamentally harmful. While they are not facing any risks through their openness and visibility, their intention is to be noisy and to purposely interrupt the quiet acquiescence of surveillance and our limited ability to challenge this growing legal norm.

It could be argued that their acts are not mundane enough to fall into the categories of acts usually discussed in the study of everyday resistance. We disagree. Very few of these projects are overly complex, they are communicated openly, and intended to be shared widely. The artists and designers have frequently placed their design specifications freely online and, to a large extent, the materials and systems can be easily and affordably replicated or copied in lesser versions without any loss of their effect. This last factor must not be overlooked as it plays an important communicative act: it enables the larger scale sharing of their ideas and their technological practices as a form of everyday resistance in itself. Furthermore, it spreads awareness about surveillance systems and state power. As any use of these artifacts would still run afoul of the legal prohibitions discussed above, they are not necessarily viable instruments of resisting surveillance; therefore, they become representations of the performance of activism. Their goal is not necessarily to singularly upend the status quo but rather to loudly question the black boxed nature of a system that allows for less and less human agency. The knowledge sharing and invitation to challenge the status quo central to the aims of these designs aligns these projects within everyday activism. Therefore, we claim these are mundane acts carried out with a political intent.

Thus, we see the acts of the designers as being made up of individual acts, often fitting a schema or model, that may be seemingly invisible yet speak volumes to the intended audience. they may be undertaken anonymously, under a pseudonym, or publicly and, when successful, may need little or no formal coordination or organization. Each of these choices depend on the culture of the hybrid spaces where the resistance is being carried out. #ese acts may entail the risk of online censor, attack, online legal responses, or may pose no risk at all. Digital everyday activism is neither spectacular nor hidden.

Conclusion
The impetus for this paper was to better understand the role of artists and designers who created anti-surveillance practices and artefacts and to place them into the resistance context. As we have discussed, their work is a form of bricolage that results in physical artefacts or practices that they then present to a wider audience. While the physical results of their work inhabit the world in limited space, it could be argued that their real contribution is the

encouraging of their audiences to think more deeply about the lack of agency when living in an increasingly surveilled society.

To those of us surrounded by digital technology, the artefacts stemming from their work are innovative but the broader product of their work—the increase in awareness and discussion on the role of surveillance—is most definitely commonplace. Interpreted in this way, their work feels familiar in the study of activism and everyday resistance. Given its mundane nature it is tempting to fit this into the work of everyday resistance as defined by Scott (1985) and refined by Vinthagen and Johansson (2013); however, due to the loud, disruptive, and political nature of this communication, these examples do not fit neatly within the concept of everyday resistance. This therefore illustrates a need for a companion discussion on the need for everyday activism.Uncoordinated, mundane acts carried out with a political message, with the intent of creating noise, in order to reach an audience and perhaps provoke discussion.

As much of what we do over our digital technology would fail the criteria for everyday resistance it is important that the mundane digital acts are studied as forms of everyday activism and not ignored or derided (Klang & Madison, 2016). Therefore, we see the importance of the terminology in order to be able to study these commonplace acts of digitally located everyday activism.

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