Wolves Devour the Sun: Counter-Terrorism Design in Cities

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Counter-Terrorism
Design in Cities

Alejandro Salas Strus

The Wolves Devour the Sun

Counter-Terrorism Design in Cities

Alejandro Salas Strus
HFBK Promotionsarbeit, 2023
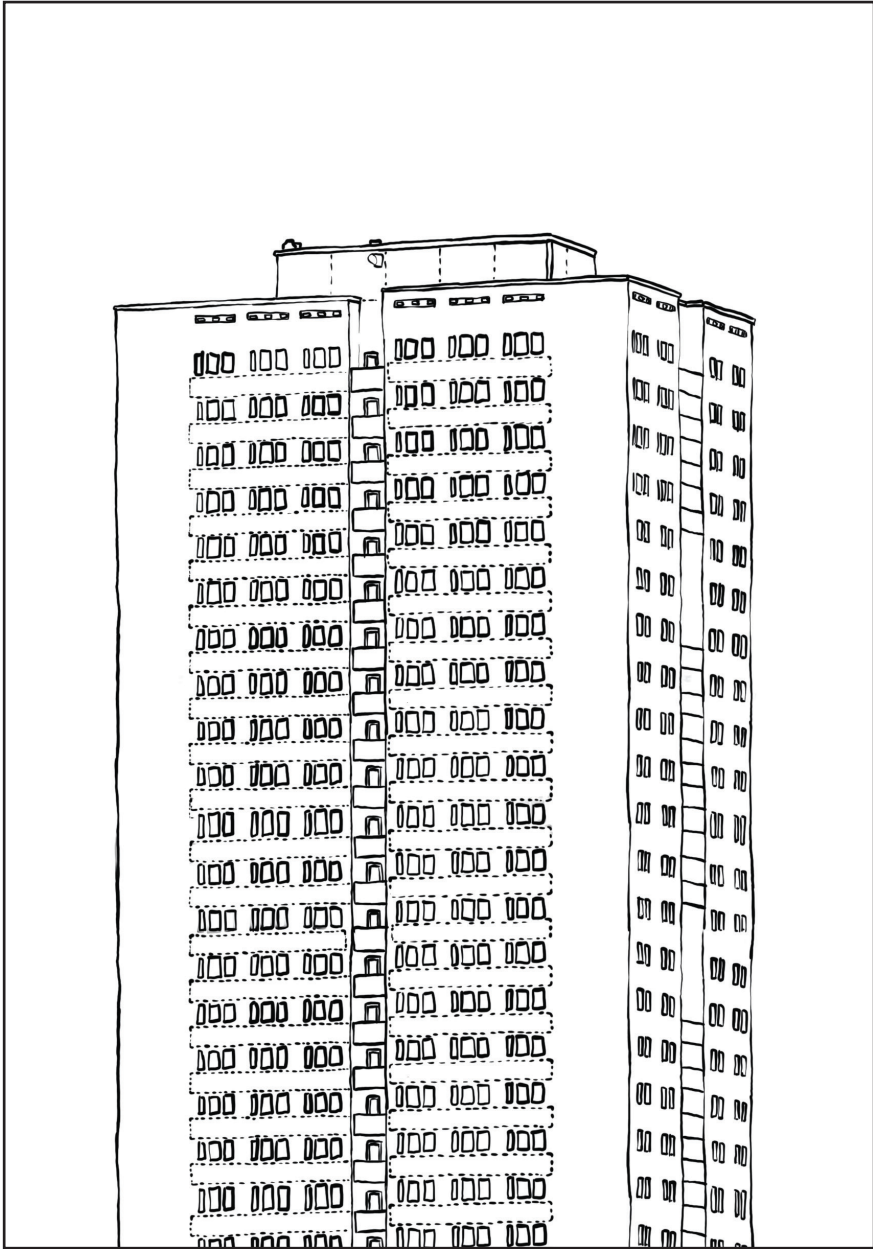
A high-rise tower in the former East-Berlin, Germany.

"The map had been the first form of misdirection, for what was a map but a way of emphasizing some things and making other things invisible?"

—*Annihilation,* Jeff Vandermeer

Awknowledgements

Dogs of course are one the oldest security systems used by people.

Contents

Car barriers in the form of planters, outside the City Hall building in my native Toronto, Ontario.

Introduction: Security Devours the City

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Security has devoured city spaces. The threat of terrorism lays siege to public space – and so have city and national governments responded with car barriers, more cameras, dogs, the forward deployment of police special forces, and new urban strategies to combat crime.

The acceleration of this security obsession since 9/11 is visually apparent in cities – but in truth the twentieth century saw a slow arc of anti-crime policies and surveillance-oriented architecture develop in Western cities. The U.K. grappled with IRA terrorism and pioneered strategies of neighbourhood-level car-barrier design in Belfast and London,[1] the Americans invented "Broken Windows"[2] policing alongside "Crime Prevention Through Environmental Design"[3] and so many other concepts during the long "War on Drugs", and the German GSG9 was among of the first civilian counter-terrorism tactical units established after the 1972 Munich Olympics.[4]

Cities have long been testing-grounds for security techniques too[5] – Marshall Thomas Bugeaud wrote "A War of Streets and Houses"[6] on his experience as a French Officer in Algeria in 1840, advocating the use of explosives to blow open walls, creating mouse-holes to move soldiers from one building to the next without exposing themselves in the open street. While this might represent a more extreme and violent end of the spectrum, a wartime approach to cities –rather than one we'd expect in our peacetime neighbourhoods– being the spillover of military technology, tools, and techniques, is a phenomena supported by numerous examples. From the first American domestic use of a drone to kill a suspect in Dallas Texas in 2016,[*] to

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[*]   *A sniper was killed by police in Texas, when a police robot with a bomb*

the use of observation towers during the 2011 Occupy Wall Street protests in New York, to "persistent surveillance" of whole cities by airplane in a strategy brough homet from the Iraq war and launched as a pilot program in Dayton Ohio in 2015.[7]
The technology of dystopian science fiction now exists technically in the present day, and risk-adverse governments are increasingly willingly to deploy these experiments in security in peacetime cities.

The field of 'security' is opaque, in part by professional necessity, but this also makes it a difficult field to assess and evaluate security infrastructure. But evaluation is vital, because security infrastructure has implications both for human rights, and in that the actual effectiveness of security practices impacts public safety. If "Security Theatre" is to be avoided in favour of practices which actually produce safety for city residents in the short and long term, then the mechanisms by which security is practiced need to be examined critically. We need to honestly understand how our collective security practices work, and what their limitations are – we need to understand how security is functioning in the real world, so that we can undertand how it is intersecting with our civil rights.

This book then aims to catalogue and analyze the techniques of security in cities – and examine them from a criminological perspective, an urbanist prospective, and a design perspective.

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was driven up to him and detonated. (W.J. Hennigan and Brian Bennett. Dallas police used a robot to kill a gunman, a new tactic that raises ethical questions. Los Angeles Times, July 8th 2016)
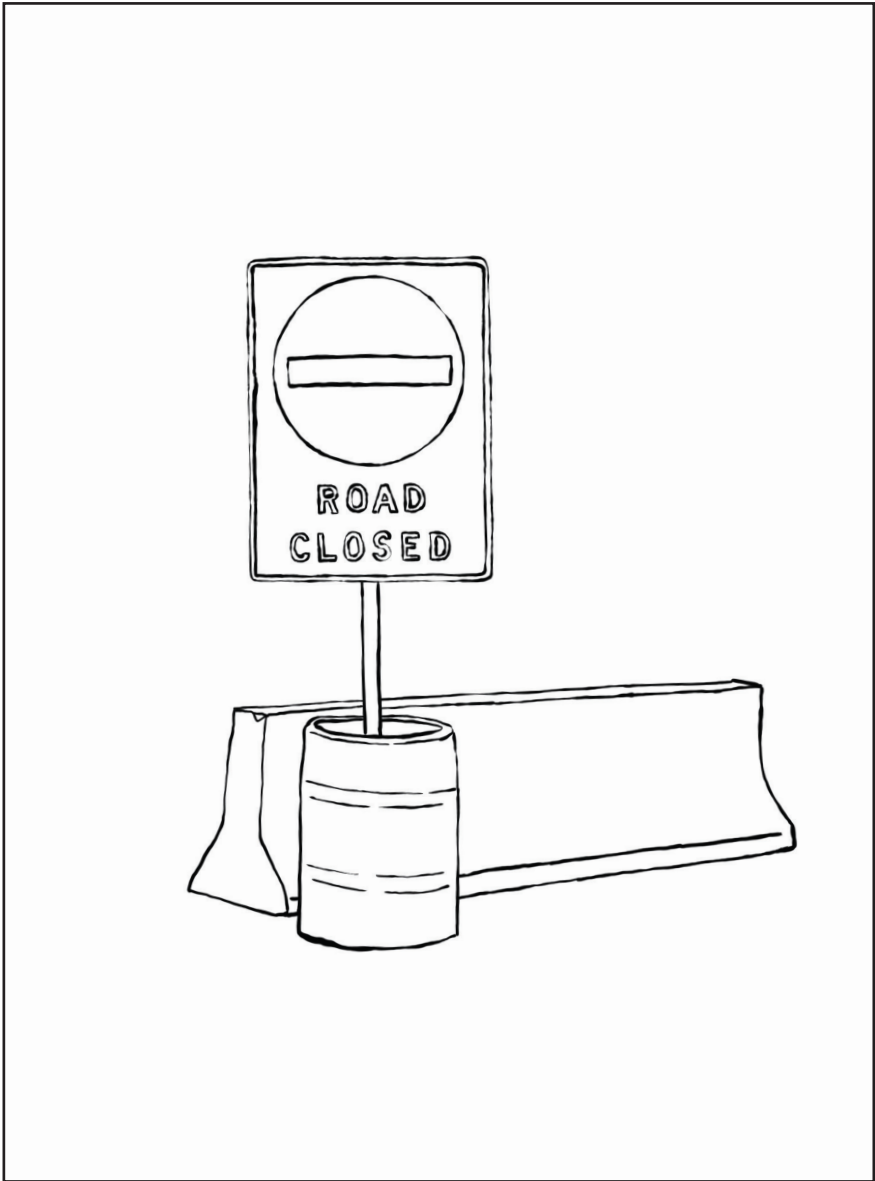
Jersey barriers –moveable concrete walls used to divide highway lanes– are often employed to close roads. As a visual marker they function well, but they offer little protection against direct frontal impacts from even small vehicles.

Endnotes

1   John Coaffee's (Terrorism, Risk, and the Global City: The Making of a Contemporary Urban Landscape. Ashgate Publishing, 2003) work on the "Ring of Steel" will be further discussed in Chapter 3 Access Control, but at its core observes how Belfast's city core was progressively lock-down to limit car traffic, facilitate police control of the city centre, and control access around key downtown public and government sites. Checkpoints, one-way streets, and limited entrance and exit points were key design features. The model was later ported over to London.

2   Originally published by James Q. Wilson and George L. Kelling as an article in 1982 (Broken Windows. The Atlantic, March 1982), and then later as a book with Catherine Cole (New York: Touchstone, 1996), the Broken Windows Theory gained popularity among police and city leadership through the 90s, with a simple promise that by fixing small crimes (for example: broken windows) communities could prevent large crimes and general lawlessness. This resulted in police departments taking a heavy handed/zero-tolerance approach to all crime, particularly in minority communities. The other reforms proposed by the book included reform of American police department leadership, a shift in focus away from reactive policing that responds only to emergencies and a shift towards community-oriented patrols by foot. The latter part of the book even predicted that the poor implementation of zero-tolerance policing could undercut support from minority communities in the police, and lead to a generation of black youth being lost to incarceration. This occurs alongside comparisons of African American teens to "vultures" loitering in public "menacingly", and making Kelling feel unsafe.

3   Crime Prevention Through Environmental Design (CPTED) takes its inspiration from Jane Jacob's concept of "Eyes on the Street," (Life and Death of Great American Cities. New York: Vintage Books, 1961) but was coined by criminologist C. Ray Jeffery and is also closely associated with architect Oscar Newman's concept of "Defensible Space" (Defensible Space. Macmillan, 1972). Newman's work in particular was concerned with housing (he was composed in 1996 by the US Department of Housing and Urban Development to write an updated guide), and reducing crime in public housing complexes. Broadly speaking all these strategies of using design to reduce crime tend to focus on improving visibility, reducing areas that fall out surveillance (i.e. stairwells, back ally-ways, or densely vegetated areas). They attempt to appeal to supposed human territoriality, in making clear delineators between public and private space.

4   Through the 60s and 70 various police special forces were developed. The first S.W.A.T. (Special Weapons And Tactics) team in Los Angeles was formed in 1967, and the French GIGN was formed in 1974..

5   Eyal Weizman has written about this extensively in the context of his "Forensic Architecture" practice, often calling Palestine a laboratory of military

extremes. See his work Hollowland for more discussion of this:
Weizman, Eyal. Hollow Land. London: Verso, 2012. Print.

6   Cabinet Magazine (Issue 22: September 2006) republished the text with a forward by Eyal Weizman.

7   Persistent Surveillance Systems was not allowed to continue after the pilot program, but proved the concept in Juarez by solving a murder. An (updated) podcast telling of the story was released by RadioLab September 13th 2016 entitled "Eye in the Sky."
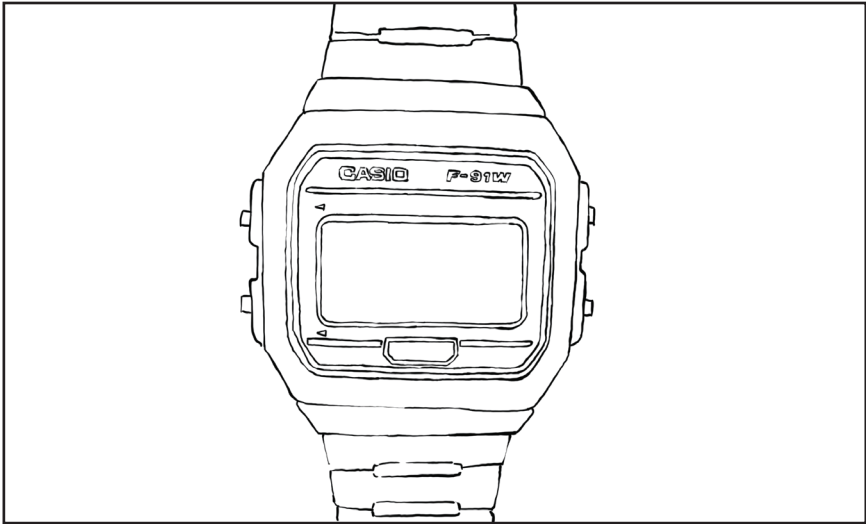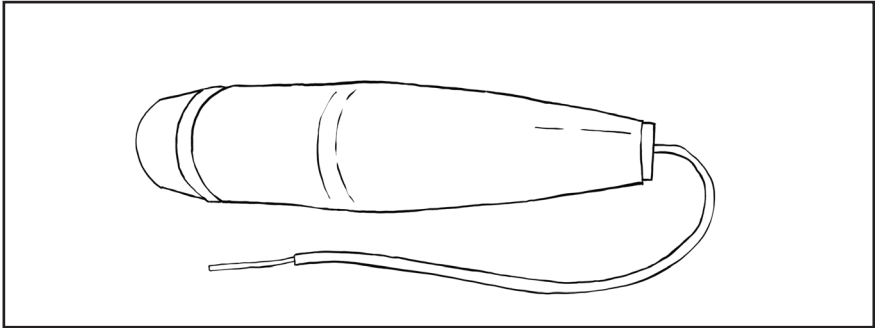
IEDs can be hidden in a bag or burried, but the device may look like anything: a kitchen pot, a propane canister, an old artillery shell.

The Casio 91FW is a cheap digital watch, which gained notoriety during the War on Terror for it's use by bombmakers in the Middle East.

Introduction II: Security as a Culture

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This was not an undercover research project – during the past 5 years, I spent several months at INTERPOL working on counter-terrorism projects in South East Asia, I worked for Deutsche Bank's Chief Security Office performing physical security reviews of vendor locations globally, and was employed in a consulting company focused on United Nations management and reform projects. In my last role I moved to a major technology company, where I performed security audits in different European countries and led security operations for their Germany office. All my employers knew I was writing a PhD on the topic of security – they asked me to respect operational secrecy requirements (i.e. do not write on active or planned operations, no proprietary information), but I generally encountered few restrictions. I was not a reporter or observer, nor was I 'embedded' in the journalistic sense: I was hired directly into the organizations, into regular roles, a participant in the production of security.[*]

The core motivation of this project was to perform research in the way I had been trained as an artist: I wanted to understand the mechanical methods and techniques by made up 'security'. As someone whose first degree was mostly in oil painting, I was taught to read an image based on the organization of its various parts, elements, references, and context – a painting is made by the choice in surface, choice in technique, the execution of the brushstrokes, the decisions of the artist regarding subject matter, and the presentation of the work to a particular audience and in a particular format. To understand an individual painting, one needs to have an under-

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[*]   _Henri Lefebvre's concept of the "Production of Space" where city space is the collective product of signs, histories, and the lived experience are referenced here. His influence on my thinking about space runs through this text._

standing of how these elements function, and are related to each other within this particular painting.

Security too can be understood as the sum of its parts. How you do something affects what you get as an end result – and yet technical knowledge about the methods of security are not well known nor discussed outside the circle of security practitioners. Even the administrators or policy shapers of security programming often have a higher level or 'strategic' understandings of security, rather than a more ground-level or 'tactical' appreciation of the subject. There exists a disconnect between the form and function, between concept and implementation – a problem an artist has much experience in confronting.

I would also like to propose with this project a way of working for artists, as a long-term researcher, in the style of ethnographer John Van Maanen,[1] who in 1970 joined a police academy and took part in high speed pursuits in California as the basis for his PhD. The intersection of art and ethnography has grown in popularity through recent years – bolstered by groups I admire such as Goldsmith's Forensic Architecture,[2] or the work of individuals such as Kader Attia, Alec Soth,[3] and exhibitions such as documenta 14.

I propose an approach to experiential research that is grounded not just in theory but in direct confrontation with the labour and everyday life of the subject matter. To observe the subject is not enough – I am seeking to change the material reality of the subject at the same time as a I record it. This personal approach to research and art-making is also reflected in the 'personal' style of the writing. A work in which the writer lives so closely to the subject matter will be compromised in its objectivity –arguably all work is anyways– but this is reflected in the format. In a very Canadian tradition, I inevitably am influenced by Marshal McLuhan for his "medium is the massage" approach to book composition, and those who have taken up such a project previously like Michael Ondaatje in "The Collect-

ed Works of Billy the Kid," and American photographer Christian Patterson's retelling of a crime story in the photo collection "Redheaded Peckerwood."

Like all projects, this one also became less simple as it went on – the type of technical drawings that I created, seemed less and less helpful, less and less illustrative, and even at some point dangerous and deceptive.[4] The expedition started alright, but due to the nature of the project, it was inevitable there would be a point where as a participant I would become what I was studying.[5] This is of course why contemporary anthropology has handrails – and the lack of these controls is a wholly valid point of criticism against my project.

I also struggled not to dumb down 'security' – as it pulls together so many layers of our physical, political, and social world – I don't necessarily think the overall landscape or science of security is unknowable, but it's certainly difficult to account for the full causality of security events: what violence costs, where does it come from, and where does it go?[6]

What results here then is something compromised – an artistic version of the so-called 'popular science' book. Is this anyways so different from the opinioned survivalist manual, where the reference points are the authors own experience? Hopefully, but I'm not sure.

Endnotes

1   John Van Maanen's most famous works focus on police socialization, which saw him join the Union City Police Academy, graduate their 13 week program, and then be assigned to regular patrol duties carrying a weapon. His work as an embedded participant formed the basis for his 1973 PhD paper.

2   Founded by Israeli architect Eyal Weizman, this group has used their architectural training (and collaborated with specialists) to provide architecture as evidence for ongoing human rights investigations and court cases. They are also known for their reconstructions of crime scenes, which are installed in an arts context. Their work on one of the Neo-Nazi murders by the NSU terror group were presented at documents 14, through a video installation at an internet cafe (the murder in question took place at a similar cafe), with the name 77sqm_9:26.

3   Alec Soth's work seems situated less radically in his own discipline of photography, than "socially-engaged" engaged art is viewed within the field of fine arts. His series on survivalists (Broken Manual) or travel portraiture (Sleeping Along the Mississippi) for example, build on a history of reportage work, or the tradition American road trip photography, or the more German tradition of the "archive" like that of August Sander. "Fine Arts" arguably also used to have this tradition of reportage drawing and a socially observant art practice, especially in the pre-Modern era from Goya to Kaethe Kollwitz or Edward Hopper, but since Post-Modernism one might argue that figurative "craft" work or illustration has diverged from academic fine arts. In the present day there are still some figurative artists like Steve Mumford (Iraq drawings) or Francis Alÿs (work in Afghanistan)– but art as a social practice is somewhat divisive, with the documenta14 drawing sharp criticism from all sides.

4   James C. Scott makes this point in his seminal work "Seeing like A State," that maps facilitate navigation of a territory by authorities, but also because of their abstraction must necessarily also exclude information.

5   A major influence is surely the other political topic of my generation and era: the environmental apocalypse. Jeff VanderMeer's work drew me in, and I was made aware of the connection to Timothy Morton's "Hyperobject" through an interview in the December 2016 LA Review of Books "A Conversation Between Timothy Morton and Jeff VanderMeer." I also am inevitably influenced by the older literary works Joseph Conrad, whose "Heart of Darkness" is certainly no stranger to those in the security field, if not from exposure to the original or through the film "Apocalypse Now."

6   Heri Lefebvre's concepts of space, and a space for revolution must be credited here. Specifically Lefebvre discusses the need for a space of conflict in healthy within a healthy society:

Lefebvre, Henri. Writings on Cities. 1968. Ed. Transl. Elenore Kofman & Elizabeth Lebas. Oxford: Blackwell, 1996. Print.

The Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma. Destroyed in 1995, when a white supremacist parked a VBIED (truck bomb) in an underground garage.

Part 1
The Black Mountain: Terrorism

"War amongst the people is different: it is the reality in which the people in the streets and houses and fields –all the people, anywhere– are the battlefield."

– General Rupert Smith, UK armed forces

Chapter 1: Everything is Terrorism

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Defining Terrorism:
"International Terrorism: Violent, criminal acts committed by individuals and/or groups who are inspired by, or associated with, designated foreign terrorist organizations or nations (state-sponsored).

Domestic Terrorism: Violent, criminal acts committed by individuals and/or groups to further ideological goals stemming from domestic influences, such as those of a political, religious, social, racial, or environmental nature."
– Federal Bureau of Investigation of the United States[1]

"Terrorismus ist nach der Definition der Verfassungsschutzbehörden der nachhaltig geführte Kampf für politische Ziele, die mit Hilfe von Anschlägen auf Leib, Leben und Eigentum anderer Menschen durchgesetzt werden sollen, insbesondere durch schwere Straftaten, wie sie in § 129a Abs. 1 StGB genannt sind, oder durch

andere Straftaten, die zur Vorbereitung solcher Straftaten dienen."

English: Terrorism is through the definition of the Constitutional Protection Office seen as the sustained fight for political goals, achieved through attacks on the life, limbs, and property of other people, in particular through serious crimes such as those listed in Section 129a (1) of the German Criminal Code or through other crimes which serve to support these [terror] crimes.

– Bundesamt für Verfassungsschutz (Federal Office for the Protection of the Constitution) of Germany[2]

"Terrorist groups use violence and threats of violence to publicise their causes and as a means to achieve their goals. They often aim to influence or exert pressure on governments and government policies but reject democratic processes, or even democracy itself."

–Taken from the website of the British security services MI5[3]

In 2003 the US Army conducted a study to "bound" the Global War on Terrorism reflected that an even earlier 1988 study existed, and had found 109 definitions of 'terrorism' with 22 definitional elements, while the noted historian/terrorism expert Walter Laqueur had found 100 definitions.[4] There is no single U.S. government definition of terrorism.[5]

What is Terrorism
'Defining Terrorism' is inevitably the first chapter or the first point of discussion in any book or study on the subject, because "terrorism" as a colloquial term encompasses a whole spectrum of activities, tactics, motivations, and offender-types – distinguished by a political motivation. The terroristic label has been ascribed to a wide range of crimes from murder, bombing, property damage, vandalism, financial crime, and even video/media piracy.[6] The underlying political motivation however, is the key factor in de-

fining or pinning down terrorism. It introduces an element of subjectivity – of philosophical complication especially during situations of wartime, and moreso during irregular wars, guerrilla warfare, or small war, where terrorism may be an extension of the conflict. Some have argued that even beyond wartime, terrorism can be a legitimate or even moral resistance to totalitarian.[7]

Regardless, the essential understanding of what terrorism is has not changed significantly since the French Revolution of 1795 – "intimidation through violence",[8] typically performed by non-state actors, although state-backing may be present.

Where is Terrorism
Cities are the primary focus of this text, because of their importance: three out of every four terrorist attacks and four out of every five causalities of terrorism occur in cities.[9] Violence and acts of war, if they are to be categorized, probably occur on a spectrum – with terrorism, guerrilla warfare, and conventional warfare representing escalation of violence, or different modalities of conflict. To return to Laqueur, he makes a helpful suggestion that "terrorism" takes place in cities, and "guerrilla warfare" occurs in the countryside, and that terrorism generally involves small groups of people, with guerrilla warfare involving larger groups.[10] Mao Zedong defined "revolutionary warfare" as an intensifying and phased strategy of war ending in overthrow of government – the early stages of which should involve more contained and small scale violence.[11] Violent actions acts like bombing, could be classified as part of a campaign of terrorism, or insurgency, guerrilla warfare, revolutionary warfare, asymmetrical engagements, 4th generation warfare, irregular warfare, small war, direct action by military or paramilitary actors, direct action by protestors, or civil unrest. This is part of the complication in defining terrorism, or coming to any consensus on what terrorism is, or if terrorism can be legitimate.

Violence in cities is also never without geographic context. Terror
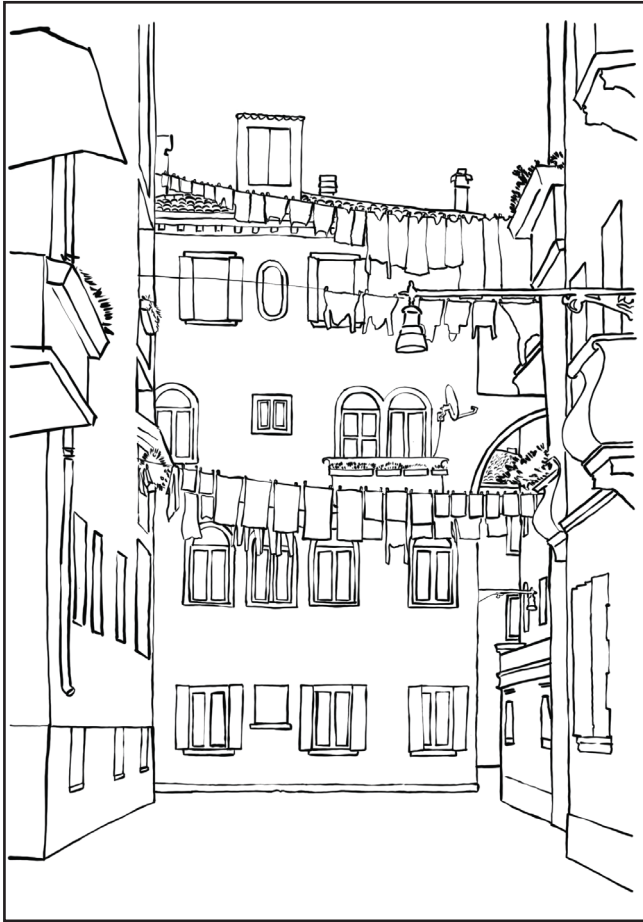
Close, confined, local, difficult to navigate. Wide avenues to facilitate movement by vehicle, or by a large force in formation.
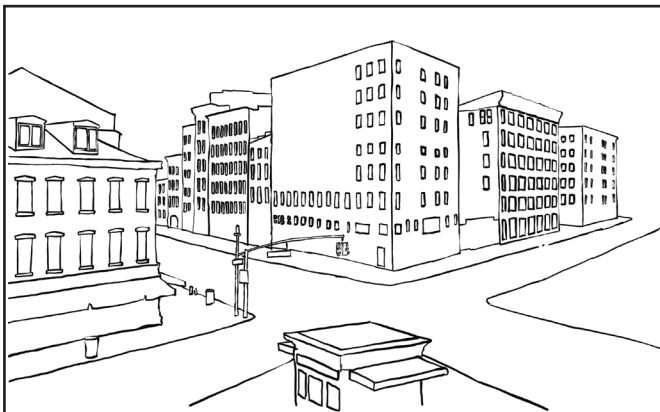
groups use space strategically: prioritizing land with economic connectors, as seen in Al Qaeda's interest in territory with oil,[12] to the targeting of policy/political spaces by terror groups during the Bosnian civil war,[13] and also symbolic spaces[14] – with the World Trade Centre as an obvious example.

The physical and natural landscape of terrorism and counter-terrorism is important to consider: insurgency or rebellion are facilitated by transitional areas, remote borders – where state control is more loose and external resupply from outside the battle space is possible.[15] By "entering the bush" terror actors can enter a zone for criminality, where the spatial organization (or from the perspective of a state: disorganization) supplies the spatial structures for rebellion.[16] Rebellion and insurgent activity favours difficult to access territory.[17] The link between geography and guerrilla activity was been previously demonstrated: notably in a study from 1993 on the so-called "insurgent state" the Shining Path group in Peru operated.[18] The study tracked how government pressure pushed the guerilla group to retreat from cities to rural areas, and saw Shining Path find a new preferred area of operations in the Andean ecological zone named "puna", which is primarily above 4000 meters in elevation, sparsely populated, and difficult to access.[19]

Difficult to access rural territory certainly undermines the ability of authorities to exercise control – even with the benefits of technology. In a city however, the difficult physical geography is replaced by a difficult human (built) geography. A city can be organized in way that James C. Scott dubbed a "geography of insurrection" – tightly packed blocks, streets that are confusing difficult to navigate for non-locals, an illegible city. This may be in contrast to the 20th century city with a geographic grid layout, wide boulevards which facilitate movement by vehicles and observation by a central observer.[20]

This text will keep a more narrow focus on more concentrated acts of political violence in Western cities, rather than later-stage guerrilla engagements, or terrorism performed in theatres of war – although cognizant that acts perpetrated in cities far from the
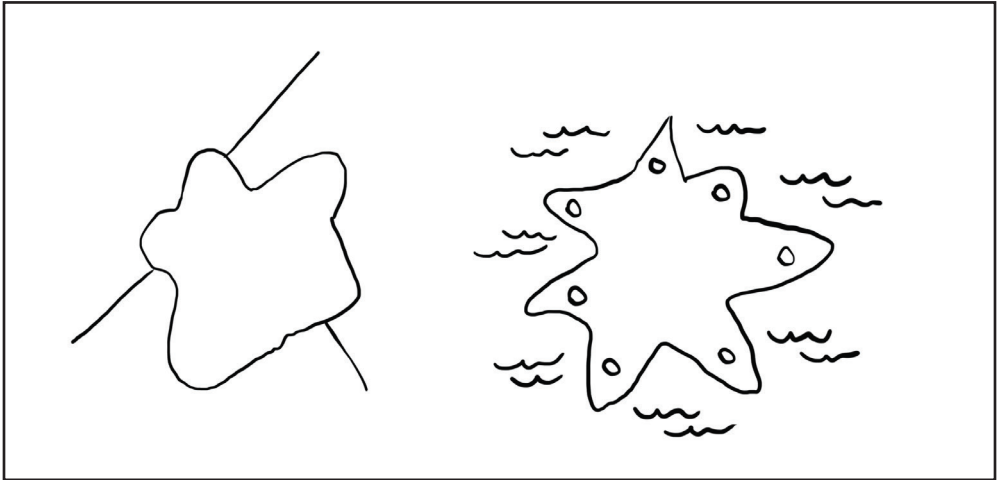
David Galula's 1964 "Counterinsurgency Warfare" remains one of the most influential texts on the topic, drawing from his experience in the French military and specifically the Algeria campaigns. The above is a fairly faithful redrawing a diagram included in his text, representing two fictional theaters of battle. On the left is an ideal space for the insurgent: landlocked, multiple borders, jungle-covered mountains along the borders, a dispersed population, and a poor economic situation. Smuggling is easy, and the insurgent can hide in the terrain.

On the right is the ideal space for counter-insurgents: an island with cities spread out, and a stable economy. Control and lockdowns are easier on an island.

frontline or battle-space, occur in the context of real or imagined fiction of revolution. Cities far away from active warzones experience terrorism as an immensely intense, disruptive, and unexpected violence. The layered space of the city's social networks is suddenly punctured, as one viewpoint forces its way to momentary superiority through the most primal and brutal vector of force.[21] Terrorism in cities is small but hits with disproportionate strength – asserts the perpetrators above the personal rights of others, and aims to challenge the ownership of public space socially or culturally but not yet physically in a permanent way.

The Social-Conception of Terrorism
In 2011, the Los Angeles Deputy Police Chief Michael P. Downing identified his priority counter-terrorism focuses, being "black separatists, white supremacists/sovereign citizen extremists, and animal rights terrorists."[22] This statement – carrying the weight of the speaker's office, and the policy implications it makes in terms of how public resources and police resources will be spent– is important because it groups together a wide variety of crimes in their severity: from white supremacist terror with their broad networks of supporters, and entrenched historical presence in the United States, with eco-terrorists which have which admittedly do destroy property, but have yet to kill anyone in the United States. A 2020 study examining nearly 900 terror incidents and plots in the United States since 1994, published by the Center for Strategic and International Studies, found 335 fatalities associated with right-wing terrorists versus just 21 by left-wing violence[23] –and as one journalist pointed out many of those incidents were killings of police officers by black men as a response to police violence, and the CSIS researchers categorized these attacks as "left" because of leftist association black nationalism carries from the 1960s. The same analysis pointed out that Antifa had been associated with no deaths over the course of the study.[24]

Terrorism trends in the present point overwhelmingly to right-wing

Breitschiedplatz Berlin: after the 2017 truck ramming at a Christmas market, future events protected by heavy non-permanent anti-ramming barriers, as well as by redirecting traffic away from the area to decrease opportunities for a vehicle to approach the market head-on at high speed.
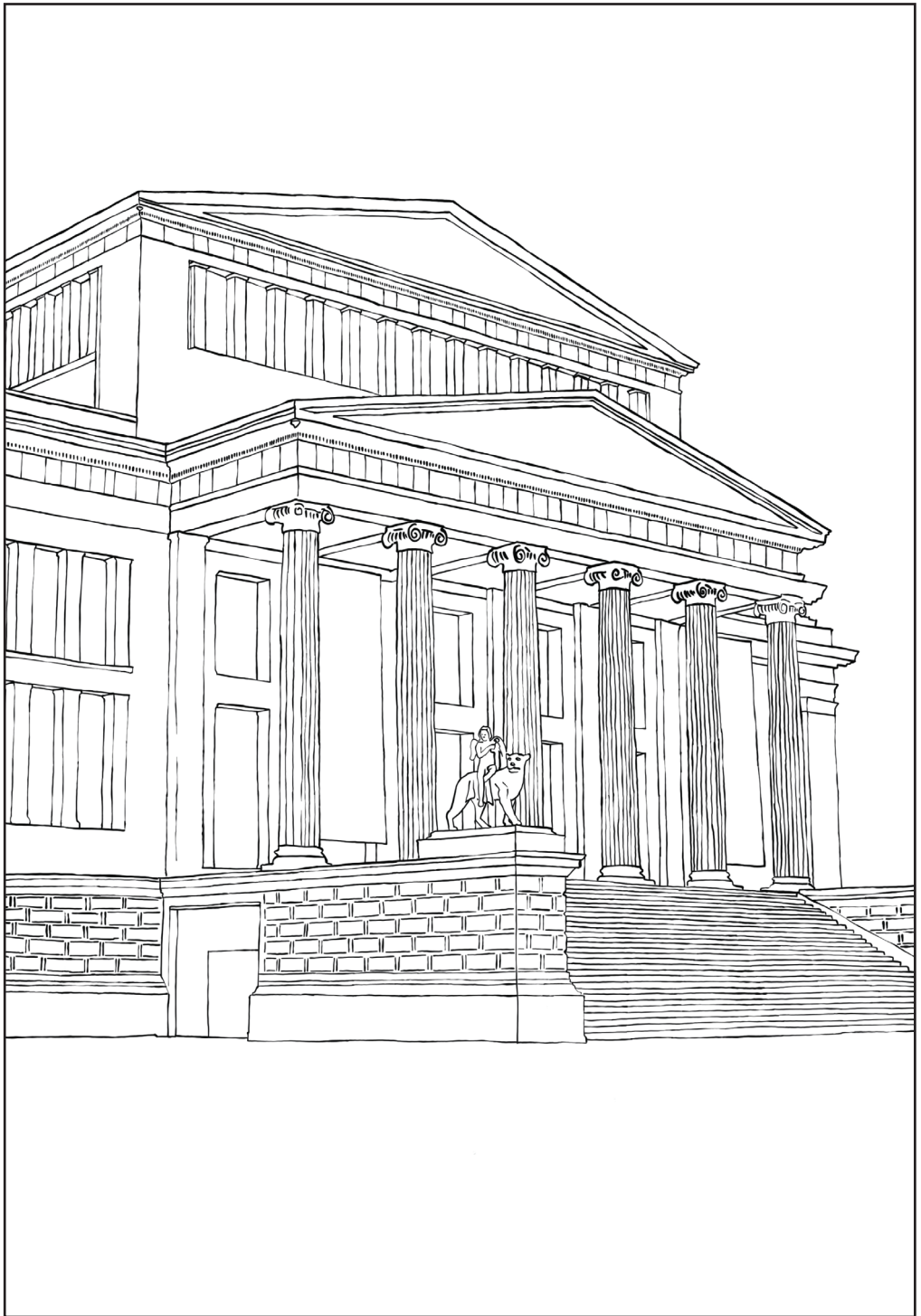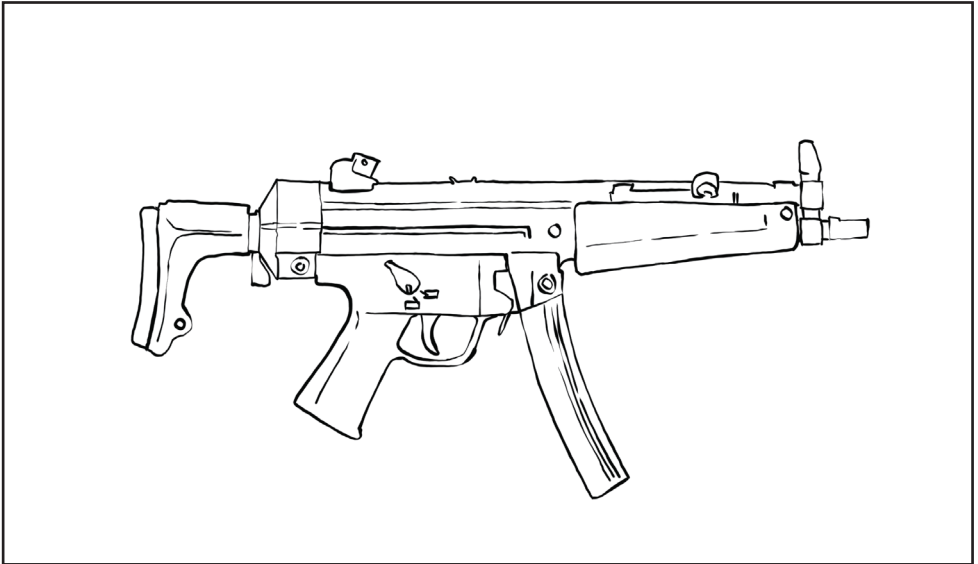
Early in my research I spoke to a police officer from a South East Asian nation, who was a weapons identification specialist in his country. I asked him about the weapons that terrorists tended to use – and he gave me a summary that matches the general criminology trends observed worldwide.

The best weapons tend to be in the hands of organized crime. These are the people with the resources, and supply networks to acquire sophisticated or military equipment, and move it around. Organized criminals are reluctant to get involved with terrorists, because they are interested in making money, and terrorism draws police attention.

All terror groups resort to some sort of crime in order to fund themselves, but with a few exceptions (notably Al Qaeda at its peak) they still tend to be less succesful at this, and frankly if they're too successful they might find themselves in conflict with organized crime. Terror cells, or individual terrorists are particularly limited – financially and in terms of where they can source their weapons.

A lone wolf ideological figure is less likely to have access to military grenades, or high powered rifles. Unless they themself have privileged access (i.e. through work), they will be buying them black-market as an amateur, and will be restricted by finances and their own connections. A much more attainable weapon would be a pistol, some home-made explosives (if the terrorist the skills to make it and use it), or the person's own vehicle.

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Left: high-traffic and cultural/symbolic sites are considered high-risk for attack.

and religious-extremist groups for being responsible for the vast majority of deaths in present-day terror incidents, yet risk registries and security surveys utilized in the private sector, and policy documents published by police and public security organizations, consistently attempt to offer an even-handed approach to identifying possible 'threat actors' by listing anarchists, environmentalists, or even journalists and academics as possible security threats.

Which is to say that not only is our higher-level, strategic or public perception of terrorism political, but the operational level –the management of security by professionals– is also political, driven driven not by a statistical approach but by our social perception of risk.

As much as the articulation of 'terrorism' is plagued by frequent disconnect between actual and perceived risks – additional confusion arises when security planners convert the public's feelings into action or choreography. Nan Ellin coined the phrase "form follows fear,"[25] in the context of architectural design, and yet the design of security programming follows a similar vector. Policy or strategic frameworks express our (the public's) terroristic fears at a national and strategic level, which are dutifully responded to at the operational level and tactical level by security services. The public gets a response to the threat of terrorism – often not understanding how their abstract fear is translated into concrete action by their local government.
Security systems can also be technical, filled with their own paradoxes and professional traps – as you devote more police resources to a certain area, you will find they make more arrests;[26] if you prioritize terrorism then your staff will realize that is how they achieve recognition and funding as opposed to pursuing different types of crime; if you build a crime database based on a certain history of criminal activity, and then feed that database through a predictive algorithm to help you allot future resources, history will tend to repeat itself.[27] It is easy for the public to lose the thread – as outsiders
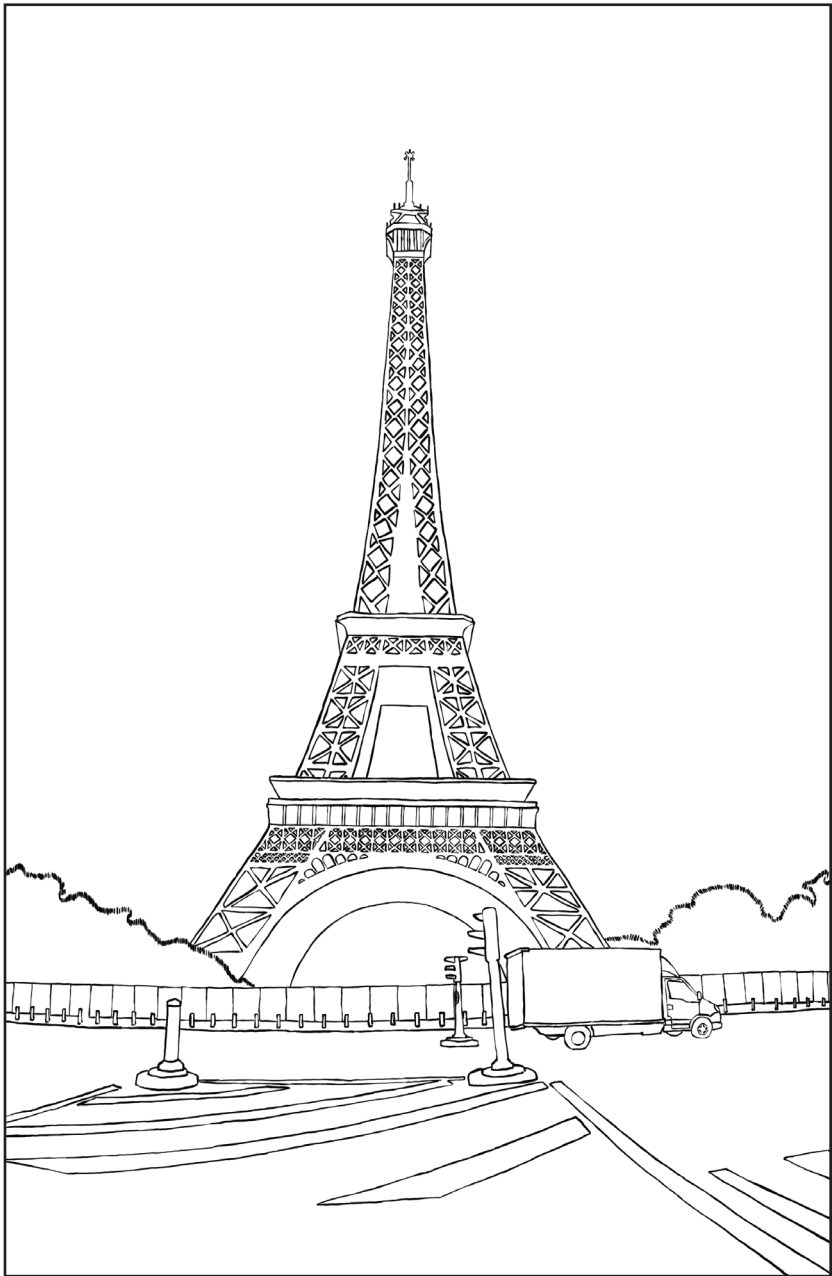
The base of the Eiffel Tower is surrounded by bollards and bullet-proof glass.

to the field of security, the public may struggle to understand , and therefore criticize security systems. This is even further amplified in cases where the mechanical workings of security infrastructure itself is kept secret: the public is asked to trust something which they cannot inspect.

Who Are Terrorists

An axiom across terrorism research and policy writing is that profiling terrorists is not possible beyond some basic sketches: they tend to be white, unemployed, and with criminal records.[28][29] Radical islamist groups tend to recruit individuals for their connection to communities while right-wing groups tend to recruit people for their skills.[30] Terror groups or types, also tend to have some shared characteristics created based on the structural tendencies of their groups or the nature of their operations: points of failure for islamic terror groups tend to be that they alienate local communities, face high barriers to international travel, and are inexperienced at concealing incriminating evidence.[31] Right-wing groups tend to be bad at counterfeiting and maintaining internal security (i.e. their groups become compromised by informants).[32] The actual perpetrators carrying out the attacks of organized terrorists groups follow the typical expectations of criminologists for violent offenders: they are overwhelming teens and those in their early twenties.[33]

Perhaps no terrorist is as difficult to pin down as the so-called "lone wolf" attackers, those who act alone. It can often be unclear if these individuals are terrorists or mass murders,[34] and to look at a three recent American cases: James Fields killed 1 person and injured 28 by driving a car through a protest – apparently an enactment of his white supremacist political beliefs;[35] Stephen Paddock killed 58 people and injured 900 in a mass shooting from a Las Vegas Hotel overlooking a music festival with no apparent political purpose nor did he exhibit warning signs or overt symptoms mental illness;[36] James Holmes murdered 12 people in a movie theatre, and clearly did suffer from mental illness at the time he walked into the theatre

and began shooting, although his insanity defence was rejected by the courts.[37] These three individuals show circumstances where researchers, prosecutors and judges, and security officials must parse the full details of a case to make a judgement on categorization – and the legal definition of "insanity" may be quite different from a scientific understanding of how something like mental illness works. Criminals are often labeled as sick and abnormal in Western culture[38] – an observation long made by Foucault on "dangerous individuals",[39] and post-9/11 discourse has pathologized terrorist criminality as abnormal behaviour.[40] To connect mental illness to terrorism is difficult – and it is often done with an appallingly cavalier quality in casual conversation, the press, and in political rhetoric. At present, the evidence connecting mental illness and terrorism is weak,[41] and large studies tend to show that terrorists are generally not mentally disturbed.[42] One example cited is the case of Anders Brevik (Norwegian lone-wolf terrorist), who under forensic psychological evaluation was found to be suffering from a narcissistic personality disorder, but critically was not affected by a serious mental disorder at the time of his technically complex attack.[43] Research on the topic has showed differences between mass murder and lone-wolf terrorist mental health profiles leading up to their attacks: mass murders were likely to have substance abuse problems, major depressive disorders, disorders relating to psychological development, and experience long term and chronic stress like trouble maintaining employment, business failure, suffer a recent incidence of stress, have disabling injuries, inability to maintain appropriate social relationships, have been a helpless victim, and have a low education level.[44] Lone wolf terrorists were far more likely to have university experience and be educated, military experience (and be a combat veteran), have criminal convictions, experience a "tipping point" on their way to radicalization, change address prior to their attack, live alone, be socially isolated, engage in dry runs, demonstrate their anger escalating, stockpile weapons, and have psychotic disorders like schizophrenia or suffer from delusions.[45] The lone wolf terrorists also engaged in behaviour that signalled their polit-

The lone wolf individual typically relies on whatever they can get their hands on. They may have basic firearms training and access to weapons, which is easier than building a bomb for most people. In recent years vehicle ramming attacks in cities have become more and more frequent, as vehicles are easy to obtain, and don't look out of place in busy downtown areas.
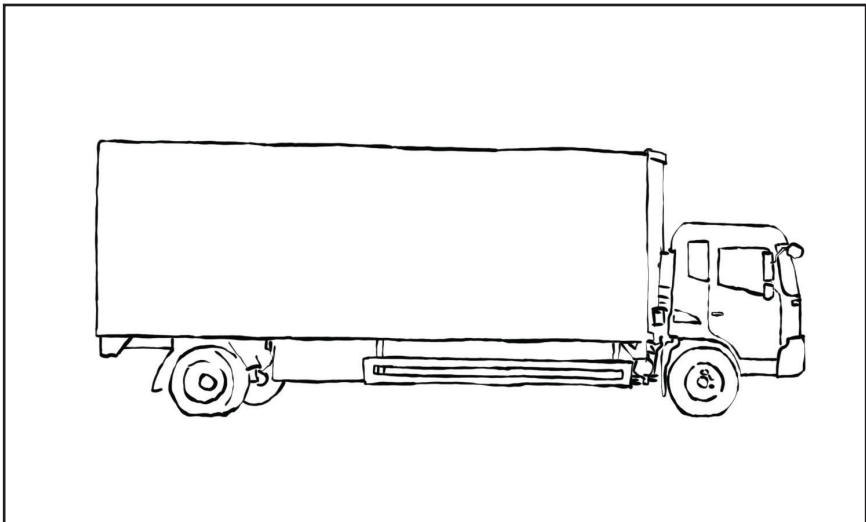
ical motivations: they attempted to interact with members of wider networks, they produced letters and statements, they were more likely to attempt to recruit others, and they were interestingly more likely to leak details by verbalizing their intent to friends and families.[46] Interestingly lone wolf terrorists defy the 'rule' of criminology that criminality decreases with age –a rule that tends to apply to terrorists working within terror organizations – as lone wolves are seen distributed across the different ages, with spikes seen even in the 40s and 50s.[47]

Lone-wolf terrorists also represent a phenomenal challenge for law enforcement authorities – their lack of group connections represent less opportunities for law enforcement to intercept suspicious communications, their is no co-conspirator to get arrested on unrelated charges. Lone terrorists are also more limited in what they can accomplish – they must depend on their own skill base rather than defer to a specialist, and they must fund and equip themselves with what it is possible for an lone individual to procure. Some recently popular attack methods, like vehicle ramming, require in principle no or minimal planning.
Technology has transformed lone wolf terrorism as well, supporting the recent rise of 'inspired' terrorists – those inspired by the acts of a terror group they are not formally members of, and self-radicalized through the internet or through minimal virtual contact with a terrorist group or ideology. It can be especially difficult to parse the intentions of these individuals: they may have digital media from terrorist groups on their computer, or participate in radical internet forums, but that may not reflect their intent to plan an act of terrorism.

Despite greater public awareness, the number of lone wolf attacks did not increase in the United States between 1940 and 2013, although researchers did see shifting motivations over time, with pre-9/11 attacks "motivated by black power, the Palestinian question and abortion" with all but one post-9-11 attack against law enforce-

ment targets motivated by "anti-government and white supremacy anger over the election of the nation's first African-American president."[48]

Changes over time were also seen in offender profiles: again we are speaking of the United States, but in the period of 1990-2005, there was a higher prevalence for offenders with a military-background, as opposed to the 2006-2013 period, suggesting risk factors that define or make a terrorist "may have cohort effects rather than having a stable influence over time."[49]

All of which is to say that different eras have different political issues, with different terrorists – coming in waves rather than as single isolated incidents.

These details all sound like we are getting somewhere in identifying who terrorists are – but even with all of the factors taken together, we are left with a very loose sketch of what makes a troubled individual. Knowing generalities may allow us to steer our broader social interventions or social programs, but it doesn't allows to pick individuals out of a lineup. The core researchers we cite here (Horgan et. al.), in light of this ultimately recommend to an approach focusing not on identifying individuals – but instead on identifying the 'how' and 'what' of potential crimes, towards a situational approach to crime prevention.[50] Reduce the opportunities for crime, and you will reduce the number of crimes that occur.

A Field of Distortions

We have so-far identified a cascading series of distortion with 'terrorism.' From the beginning, the definition of terrorism is a point of argument – complicated by political subjectivity, where in some circumstances it might be good, and in other circumstances bad. Secondly we have discussed that that the articulation of security risks is a politicized process, where actual risks are set aside in favour of perceived risks. Thirdly we have touched on how fears become "translated" into action by security professionals, a process which adds professional and mechanical complication. Fourthly, we

touched on the complicated identification of terrorists – their lack of a consistent profile, and the intermingling of political motivations with personal difficulties that makes it hard to parse terrorists from criminals.[51]

Security infrastructure then faces a tall task – it must design against distortion, design through distortion, and be prepared to organize space in flexible way to adapt to this distortion. Security designers must organize space while the space is moving – and if they get it wrong there are consequences which affect democratic rights and human dignity.

Endnotes

1   The definitions are taken from their website (https://www.fbi.gov/investigate/terrorism).

2   The Bundesamt für Verfassungsschutz (BfV) is a the domestic intelligence agency of the German state, in some ways similar to MI5 in the UK or CSIS in Canada. Their primary responsibilities are counter-intelligence, counter-terrorism, and counter-extremism. This definition is taken from their website (https://www.verfassungsschutz.de/de/service/glossar/_lT).

3   The MI5 definition is taken from their website at (https://www.mi5.gov.uk/counter-terrorismEnglish).

4   Record, Jeffery. "Bounding the Global War on Terrorism" US Army War College: Carlisle, 2003. <https://www.webharvest.gov/peth04/20041025063914/http://www.carlisle.army.mil/ssi/pdffiles/PUB207.pdf>

5   Connor Jeffery and Carol Rollie Flynn. "Document No.4 Prepared by Security Studies Program National Security Critical Issue Task Force June 27 2015." Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.

6   Treverton Gregory et al. "Film Piracy, Organized Crime and Terrorism." RAND Corporation: Santa Monica CA, 2009. Print.

7   Jeffery is referencing Laqueur here on some arguing that terrorism could be legitimate or moral under some circumstances.
Record, Jeffery. "Bounding the Global War on Terrorism" US Army War College: Carlisle, 2003. <https://www.webharvest.gov/peth04/20041025063914/http://www.carlisle.army.mil/ssi/pdffiles/PUB207.pdf>

8   Mathewson, Kent and Michael Steinberg. "Drug Production, Commerce, and Terrorism." The Geographical Dimensions of Terrorism. Ed. Susan L. Cutter, Douglas B. Richardson, and Thomas J. Wilbanks. Routledge: New York, 2003. Print.

9   Savitch, H.V. "Cities in a Time of Terror: Space, Territory, and Local Resilience." M.E. Sharpe: Armonk New York, 2008. Print.

10   Laqueur, Walter. "Guerrilla Warfare: A History and Critical Study" Routledge: New York, 2017. Print.

11   Freedman, Lawrence. Strategy a History. Oxford: Oxford University Press. 2013.

12   Murphy, Alexander. "The Space of Terror." The Geographical Dimensions of Terrorism. Ed. Susan L. Cutter, Douglas B. Richardson, and Thomas J. Wilbanks. Routledge: New York, 2003. Print.

13   Ibid.

14   Ibid.

15   Silberfein, Marilyn. "Insurrections." The Geographical Dimensions of Terrorism. Ed. Susan L. Cutter, Douglas B. Richardson, and Thomas J. Wilbanks. Routledge: New York, 2003. Print.

16   Ibid.

17   Murphy, Alexander. "The Space of Terror." The Geographical Dimensions of Terrorism. Ed. Susan L. Cutter, Douglas B. Richardson, and Thomas J. Wilbanks. Routledge: New York, 2003. Print., here citing a 1969 paper by McColl.

18   Kent, Robert B. "Geographical Dimensions of the Shining Path Insurgency in Peru." Geographical Review, vol. 83, no. 4, 1993, pp. 441–454. JSTOR, www.jstor.org/stable/215825. Accessed 7 Jan. 2020.

19   Ibid.

20   Scott, James C. Seeing like a State. Yale University: 1998. Print.

21   I am re-interpreting Clara Irazabal's concept of urban spaces, who in revolutionary circumstances rise to disruptive supremacy within the state, from Ordinary Places, Extraordinary Events in Latin America. Routlege: 2008. Print.

22   Bjelopera, Jeffery. "Document No.1 Domestic Terrorism an Overview." Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.

23   The CSIS study can be accessed on their website: https://www.csis.org/analysis/escalating-terrorism-problem-united-states

24   The article discussing the previously mentioned CSIS study was: Beckett, Lois. "Anti-fascists linked to zero murders in the US in 25 years" The Guardian, 27 July 2020. Digital. <https://www.theguardian.com/world/2020/jul/27/us-right-wing-extremists-attacks-deaths-database-leftwing-antifa>

25   Ellin, Nan. "Architecture of Fear." Princeton Architectural Press: 1997. Print.

26   A study on New York's "Stop and Frisk" policy found that the number of racially motivated stops in a certain policing precinct was more closely correlated with the precinct commander and the patterns seen from their previous commands, rather than on local crime patterns in the new area in which the commander was working:
Bacher-Hicks, Andrew and Elijah de la Campa "Social Costs of Proactive Policing: The Impact of NYC's Stop and Frisk Program on Educational Attainment" draft paper at Harvard University, Kennedy School of Government. 2020. Digital. <https://drive.google.com/file/d/1sSxhfmDY3N1VAN5XwyRObE65tmAZzhTj/view>

27   The bias of algorithms is a common point of criticism for their use in the criminal justice system – and this is because of how they work, since "Predictive Policing" or A.I./machine learning based systems that attempt to identify future crime patterns, base their predictions on past crime data. This historical data is never neutral: it reflects the biases, strategic priorities, and or also anomalies which occurred at that time. The algorithm is not "predicting" the future, as much as it is curve matching – extrapolating past events into the future.

28   Hamm, Mark and Ramon Spaaij. "Document No5 Lone Wolf Terrorism in America: Using Knowledge of Radicalization Pathways to Forge Prevention

Strategies." Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.

29   Connor Jeffery and Carol Rollie Flynn. "Document No4 Report: Lone Wolf Terrorism, Lydia Alfaro-Gonzales et al., Security Studies Program, Georgetown National Security Critical Issue Task Force (NSCITF), June 27, 2015" Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.

30   Treverton Gregory et al. "Film Piracy, Organized Crime and Terrorism." RAND Corporation: Santa Monica CA, 2009. Print.

31   Ibid

32   Ibid.

33   Lovelace, Douglas C. "Commentary by Douglas C. Lovelace, Jr." (Introduction). Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.

34   Ibid.

35   Ibid.

36   Ibid.

37   Ibid.

38   Rimke, Heidi "Pathologizing Resistance and Promoting Anthrophobia: The Violent Extremism Risk Assessment (VERA) as Case Study." Manufacturing Phobias: The Political Production of Fear in the Theory and Practice. Ed. Hisham Ramdan and Jeff Shantz. University of Toronto Press: Toronto, 2016. Print.

39   Ibid.

40   Horgan et al. "Document No2 Lone Wolf Terrorism in America:Across the Universe? A Comparative Analysis of Violent Behavior and Radicalization Across Three Offender Types with Implications for Criminal Justice Training and Education, National Criminal Justice Reference Series Document No. 249937." Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.

41   Khoshnood, Ardavan. "The Correlation between Mental Disorders and Terrorism Is Weak." BJPsych Bulletin, vol. 41, no. 1, 2017, pp. 56–56., doi:10.1192/pb.41.1.56.

42   Ibid.

43   Ibid.

44   Horgan et al. "Document No2 Lone Wolf Terrorism in America:Across the Universe? A Comparative Analysis of Violent Behavior and Radicalization Across Three Offender Types with Implications for Criminal Justice Training and Education, National Criminal Justice Reference Series Document No. 249937." Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.

45   Ibid

46   Ibid.

47	Ibid.
48	Hamm, Mark and Ramon Spaaij. "Document No5 Lone Wolf Terrorism in America: Using Knowledge of Radicalization Pathways to Forge Prevention Strategies." Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.
49	Ibid.
50	Horgan et al. "Document No2 Lone Wolf Terrorism in America:Across the Universe? A Comparative Analysis of Violent Behavior and Radicalization Across Three Offender Types with Implications for Criminal Justice Training and Education, National Criminal Justice Reference Series Document No. 249937." Terrorism: Commentary on Security Documents Volume 148: Lone Wolf Terrorists. Ed. Jr. Douglas C. Lovelace. Oxford: 2018. Print.
51	Ibid.

The drawing of the Alfred Murrah Federal Building at thebegining of this chapter is based on a photography taken by Staff Sergeant Preston Chasteen.
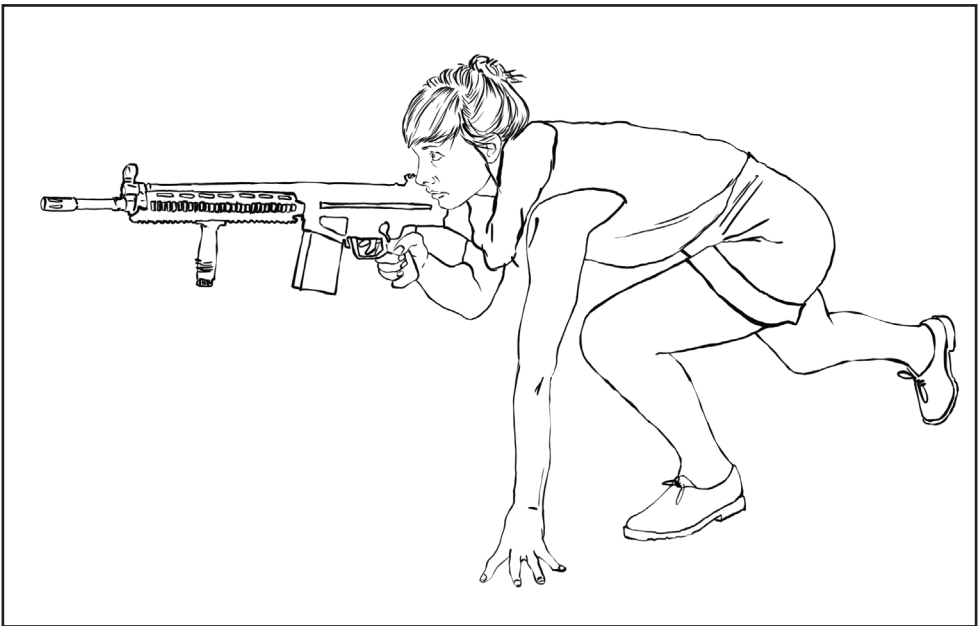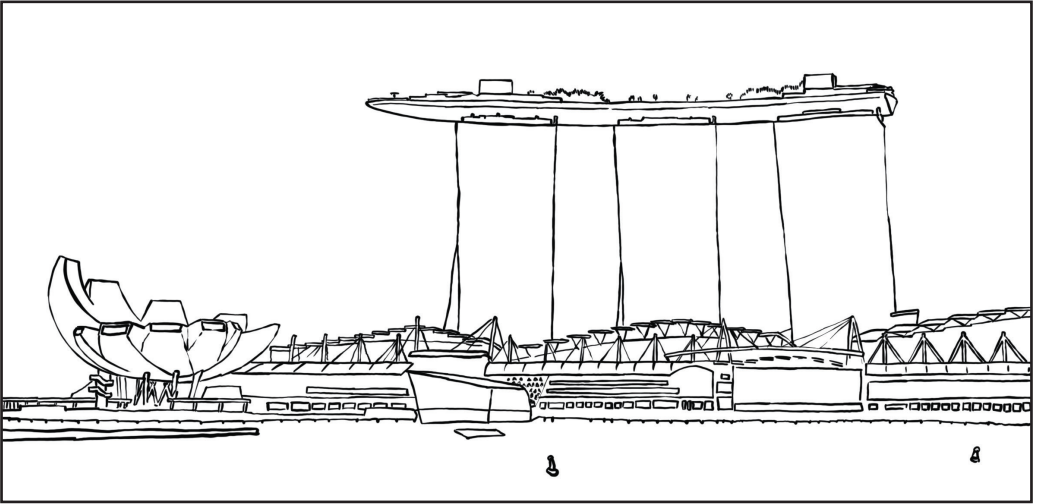

When caught in the open taking fire, dropping to a prone position on the ground until you can locate cover is likely the best solution.
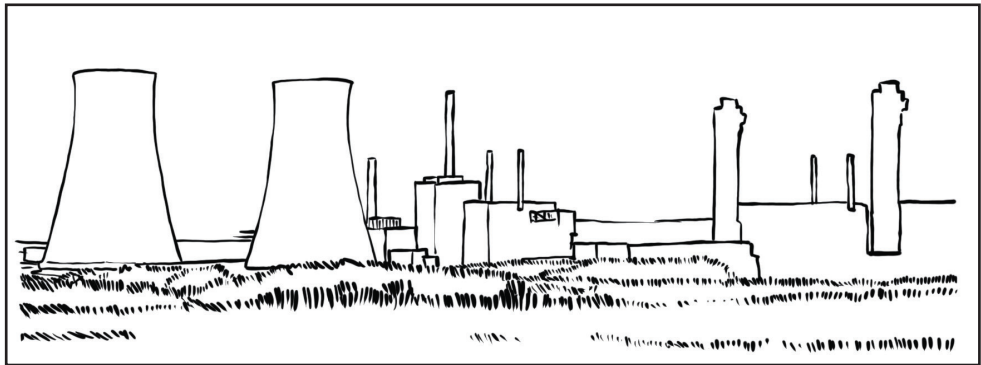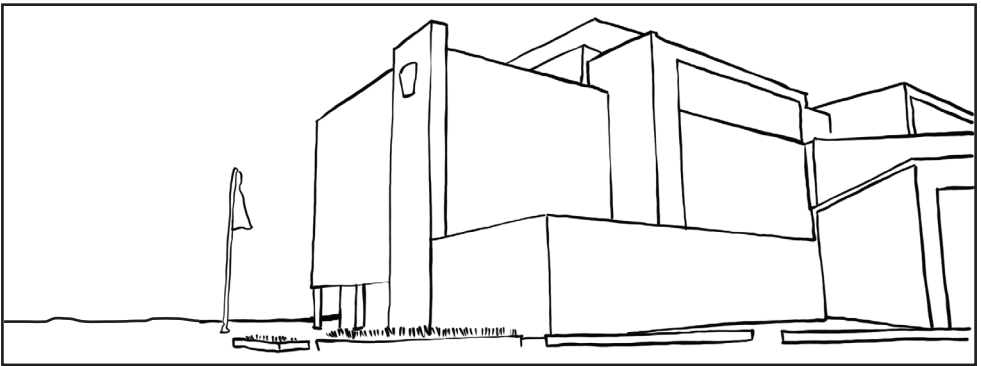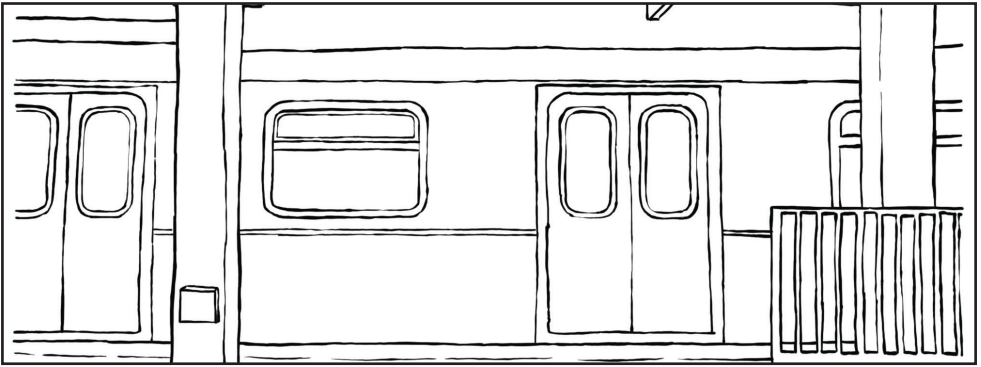
High density, target richt sites like a subway station or mall. Symbolic or critical infrastructure sitees like a police station, embassy, or power station.

Singapore was built by its port - and the waterfront remains a hub of shopping, commercial real estate for European companies, and also hotels (see above). From the harbour looking out, one sees waiting cargo ships in every direction – and Singapore is accutely aware of the security risks involved in its role as keystone for global shipping. The island maintains extremely strict border protection measures, and very visible internal security controls on the island.
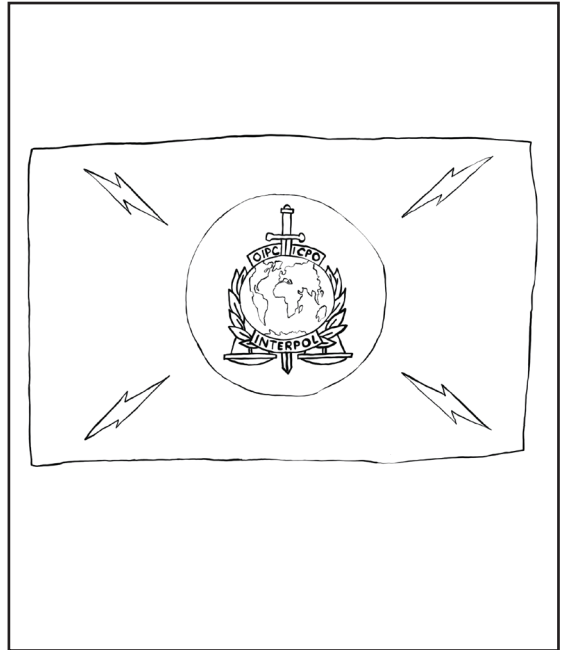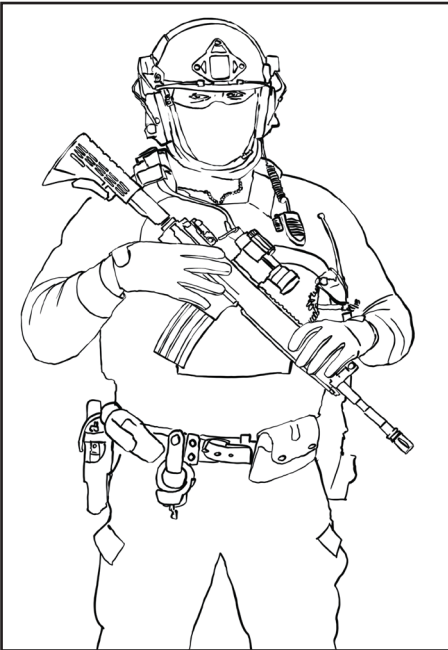
"America is a target: the homeland is under threat."

– McGraw Hill's terrorism textbook, "Homeland Security and Terrorism," the first line on page one[1]

"See those guys on patrol? Here's a secret: the guns aren't loaded. The first magazine is empty, so if something happens they actually have to reload before they can shoot."

– loose summary of conversation with a work colleague in Singapore

Chapter 2: Welcome to INTERPOL

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Wild Borders

Framing your security operation as "counter-terrorism" is the ideal way to get funding in a post-9/11 world. In 2016 some rural borders in South East Asia lacked up-to-date technology to perform identity checks, resulting in flags being raised after wanted individuals had already passed through border crossings. Additionally, not all borders had internet access to police databases –they were updated by manually bringing a new hard-drive to the border station, with the new version of the list of flagged names. Checks of databases could also take several minutes (or much longer), meaning that individuals who weren't otherwise detained for some specific reason, would pass through the border before the database search sent back hits on

"wanted" individuals. At this point, an ideal situation would be that country A calls country B, to tell them that a positive hit was registered, and to tell them the person is long gone.

Individuals can and have slipped through numerous official border checkpoints because the database was too slow or outdated or had limited or no biometric checks – and this job of helping update IT infrastructure was one of the many small projects tasked to INTERPOL, with its staff of less than 1000 and a global budget smaller than many Western city police forces.

Theatre and Dance

When I entered INTERPOL to for several months in their Singapore regional headquarters, I was first struck by the overwhelming presence of the organizational culture that existed there. UN, INGO and NGO organizations cultivate an incredibly strong sense of mission, which translates into a very intense pride that workers carry – and that sustains them through the drawbacks such as mediocre pay, unstable work contracts, opaque bureaucracy, a lack of personal responsibility, and a politically volatile workplace. Pride animates the work, and the organizations (and senior leaders) capitalize on the social prestige that comes with their organization's name and global reputation.

But security organizations have an additional level of pride in the importance of what they do, because of the perceived protection benefits they offer to their community. This is reinforced by a sense of shared personal risk, by a code of silence and confidentiality, often a shared sense of being misunderstood by outsiders, as well as a sense of duty and mission. All professions probably believe that they are secretly the underlying 'red thread' that makes everything else in society work – artists believe this about the importance of art, bankers believe this about the importance of commerce, and security professionals believe that they hold society back from a Hobbsian state of lawlessness.

There also exists though in the security profession a gap between those "who don't know," and those "who know." There it is a gap between those with theoretical and practical experience – in the military context it's the difference between those who have been in combat arms (front-line teams), and those who have not (i.e. support teams). Those who "don't know" are not necessarily uninformed, but some of them give off a desperate air of masculinity; their personal feelings of inadequacy result in an over-performance of security culture, and over-projection of their membership to security culture. Historian Joanna Bourke remarked that similar trends were noted by the British during the Second World War – where unbombed neighbourhoods polled with more violent and genocidal views of the enemy Germans than those neighbourhoods which were actually bombed, and Home Guard units expressed more extremist militant views than actual combat troops.[2] Sometimes those far away from the danger express very strong opinions on the necessity of violence, and how they would go about it, if only they had the chance.

Entering Security Organizations
At present public security organizations are mostly entered through two ways: an 'operational' path which entails police or military experience, or else a 'policy' or technical skills path such as project managers or IT specialists. Former police or military experience is still preferred as the basis for a security career, and this results in significantly more men than women working in the field. The end result of this in INTERPOL was a fairly macho culture – sexist comments and behaviour made towards female staff by male superiors was not uncommon. Optimistically I would hope this changes as the dinosaurs retire, but when the major career pipelines (i.e. army, police) into security organizations have problems with low female representation, progress will be slow.

The private sector by contrast allows more routes to entry – and so at least my personal experience was for a more diverse workplace,

although technical roles which favour previous military/police experience are still male-dominated. The private sector also punishes non-performance more quickly than the public sector, and again to speak anecdotally, I found senior staff and leadership to me generally more consistently high-performing. In INTERPOL there was a seconded officer who watched videos of trains from Switzerland at his desk, openly, during working hours.

International organizations are also by mandate (somewhat) diverse in where they recruit staff – as they should be. The practical result of this a clash of values – I spoke to European police officers as they complained about the integrity or values of their Asian colleagues, in a way that was wholly colonial, as we shared drinks at a party speaking English in a country neither of us was from. The "local staff" of course are aware of this, and their second class treatment is one of the top complaints across INGO organizations. Questionable integrity however is a worldwide phenomena – I did have concerns about working alongside law-enforcement individuals from countries where the police organize death squads, and I was instructed carefully on how to navigate official communications from some countries, to avoid situations where police captains might try to bring their wives on a work trip.

The Westerners however were busy with their own intrigue – internal rumours told stories of workplace relationships that had resulted in promotions, of angry anonymous letters from jilted lovers posted in elevators, of using subordinates to work on university assaignments. Western countries also used the organization as a dumping ground for colleagues they didn't want: senior staff caught in scandals could 'fall up' into INTERPOL positions, and disappear from their home country for a few years. INTERPOL had decorated an office for collaboration with the soccer organization 'FIFA,' and then before this office opened was put in the awkward position of assisting in the arrest of FIFA executives for corruption (which was well suspected for years). The Singapore office I had worked out of was new – built in Singapore instead of less-expensive (and

UN-hub) Bangkok, a point that will inflate costs for the conferences and meetings the organizations lives to facilitate – and violated numerous basic principles of security design (see anecdote in next section).

Like all INGO organizations, INTERPOL also answers to whoever funds it – and the INTERPOL is not large, which means that one can direct the programming of major departments by funding them with a few million dollars for workshops and training.

The Good Soldier
Large organizations reward those who can work the system – which was actually a criticism offered in George Kelling's infamous "Broken Windows" doctrine, where he complained that the bureaucratization of police offers resulted in the promotion of good bureaucrats rather than good officers.[3]
The INGO and public sector world has this problem more broadly, as they maintain their own set of qualifications[4] rather divorced from the private sector, and they tend to prefer to hire from their own ranks. Anecdotally many of the top leaders were impressive people, since once does not rise to those ranks without a high level of at least social competence, but nevertheless middle management at INTERPOL and the UN tended to have individuals who held long tenures, but did not have comparable technical or leadership skills to their private sector colleagues of the same rank. There are certainly bad leaders in the public and private sector both – but my experience was that public sector leaders tended to be less consistent.[*]

This small experiential chapter has not been intended to slander public security organizations, but rather to illuminate in a small

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*_I made this note to myself/observation rather meanly when I was with INTERPOL –but in truth if someone is a low-level criminal, no one is really looking for you. It's kind of like having an unpaid parking fine with the city government, in that no one cares until its time to renew some other document. But when someone is actually wanted for terrorism, then there is a very different team of people looking for them._

way, what they actually struggle with. In truth there are things the public sector do exceptionally well, and one is to cultivate specialized skill. The private sector is rather bad at training people who don't immediately generate returns – and so there isn't a private sector internship program in forensics, security investigations, facial recognition, and security operations. Public organizations can and do train up these people – sometimes for years, and then the best individuals get put into elite teams where their sense of purpose or mission is highly motivating. The end result combines strong financial resources with real authority, and so those specialized project teams tend to be the strongest elements of the public sector from my observation.

SWAT hand signal for "Crouch/Go Prone".

Endnotes

1   Russell Howard, et al. "Homeland Security and Terrorism: Readings and Interpretations" McGraw Hill Professional, 2006.

2   Bourke, Joanna. "An Intimate History of Killing." Granta Publications, London. 1999.

3   Kelling, George L. & Cathrine M. Coles. Fixing Broken Windows. New York: Touchstone, 1996. Print.

4   They seem to still be obsessed with traditional 'Project Manager' certifications such as PMP or Prince2 despite most of private industry moving to Scrum/Agile, or towards technical platforms which are oriented on software developer-focused PM methods.
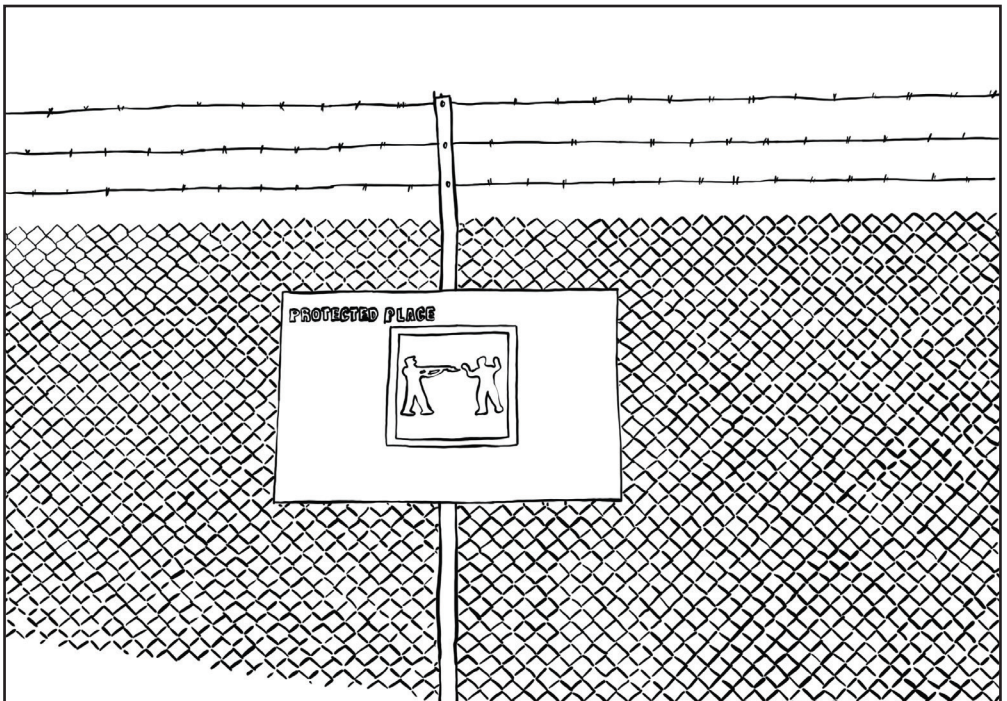
*Fence around critical infrastructure, Singapore.*
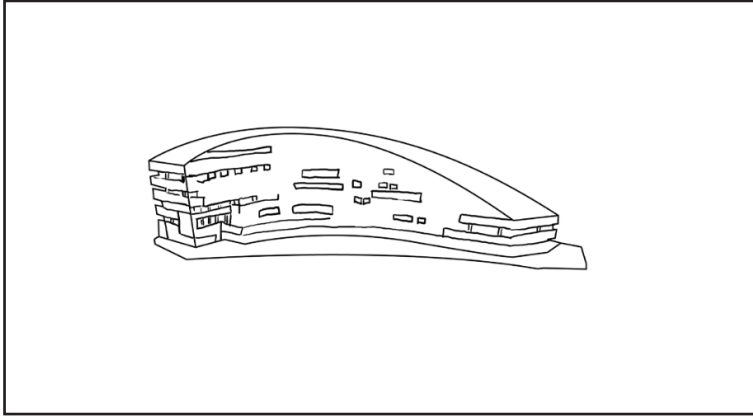
INTERPOL IGCI building in Singapore.

"If a bomb goes off everyone here is going to die," was apparently the first impression of a colleague, when they were posted at the INTERPOL Innovation Center in Singapore.

INTERPOL's Asia HQ was completed in 2014, and strangely includes underground parking –avoided since the Oklahoma City Bombing where a truck bomb parked under the building killed 168 people. The building is located in close proximity to multiple high-risk sites, most significantly being the American embassy and British Council directly across the street. This is problematic, because INTERPOL's structure is build like a curved sail, with a mostly glass facade. An explosion at a neighbouring site would see a blast wave "caught" by the sail-building – blowing glass shards through the INTERPOL office.

The new building also leaked water at multiple points. This is unfortunate in tropical country where it rains on a near daily basis, even outside of monsoon season.
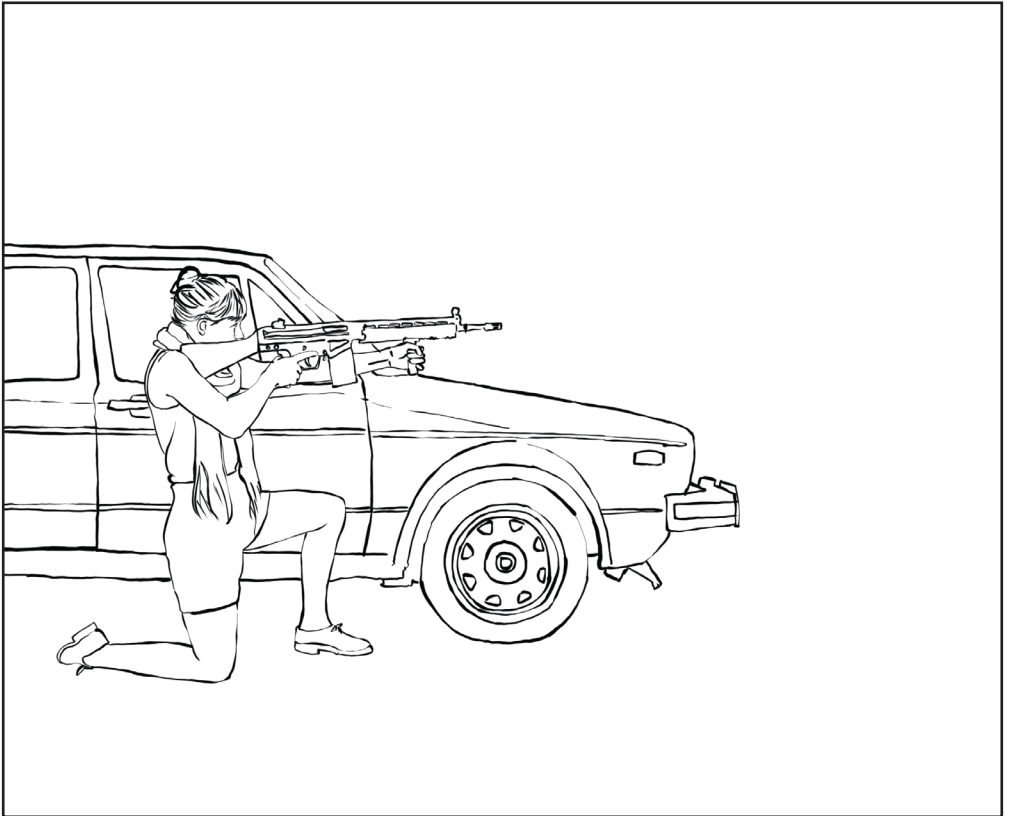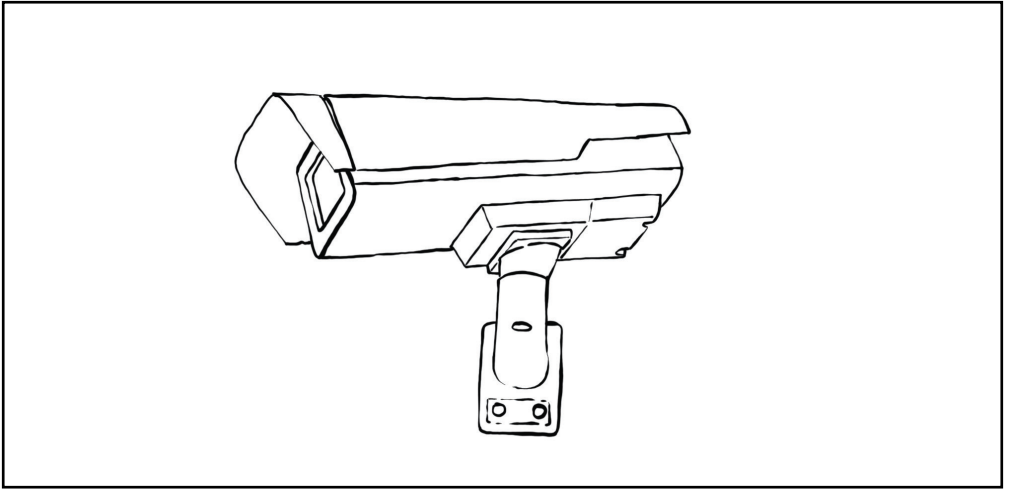
Part 2
Space, Cities, Access Control
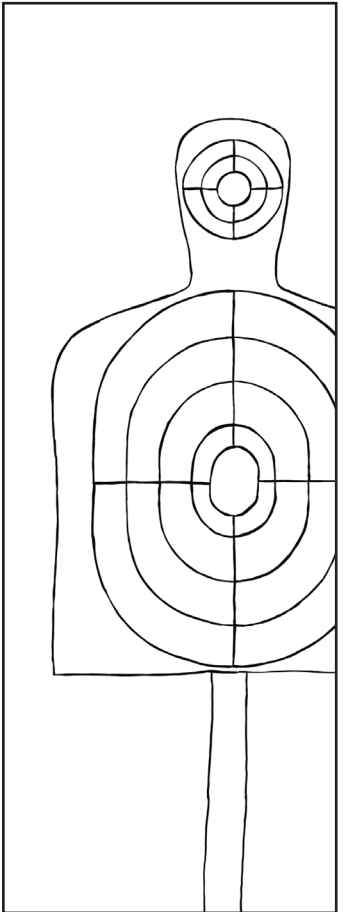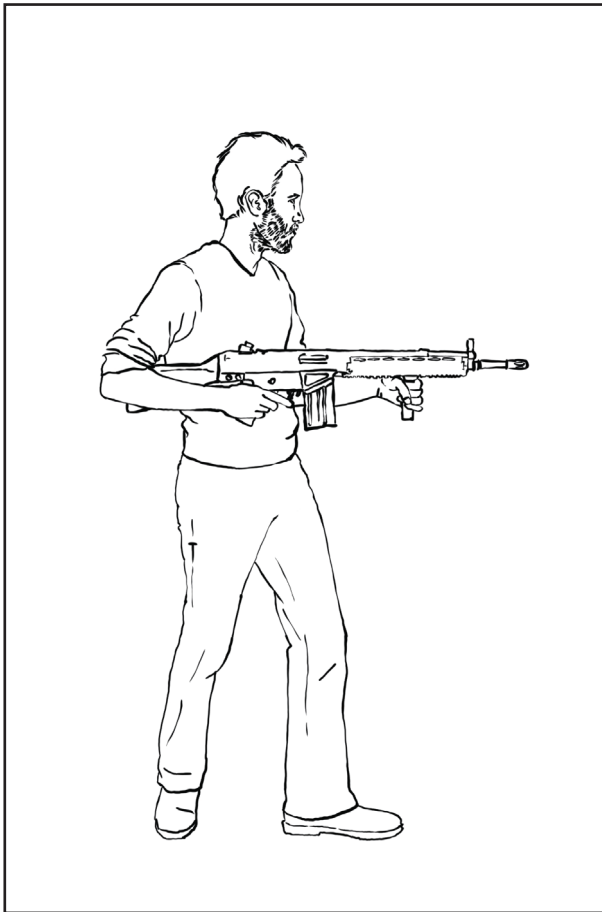
"Listen to the chirping birds or watch the ducks paddle their way to their oversized fellow aquatic bird, the "Erpeldenkmal", a statue of a drake, a male duck, and an icon of Freiburg's main green space. Local tradition says that, on November 27, 1944, the loud quacking of a drake warned Freiburg's citizens of an imminent air raid by the British Royal Air Force, which destroyed a large part of the historic Old Town in just a few minutes. The story goes that many people got to the air-raid shelters in time to save themselves. The drake's neck cranes upwards, his bill open and quacking. The statue was erected in the Municipal Park in 1953 as a memorial for world peace."

– VisitFreiburg website, on the origins of Freiburg's statue to the security goose. [1*]

Chapter 3: A City in South Germany

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The Job Offer

In 2018 I was offered an opportunity to work as an actor in a fake city, which was run by a British company for the purpose of training American soldiers through role-play. They planned to run two weeks of simulations in South Germany, and offered that a bus could take me to the "Civilians on the Battlefield" site, and that accommodations would be arranged. It would be a fake city, filled with real soldiers and real immigrants (foreign language skills were

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[*]   *Geese were apparently used in Cold-War Germany to guard American military facilities, on the basis that they were cheaper than dogs, reported an anonymous Time Magazine brief from Monday May 26th, 1986, entitled "West Germany: Enter the Goose Patrol". < http://content.time.com/time/subscriber/article/0,33009,961483,00.html >*

particularly sought after). The recruited civilians would populate the fake village, to train American soldiers in urban warfare, so that when they left the richest parts of Germany for the poorest parts of the Middle East, they would be better prepared for combat. Sadly because of immigration reasons, I could not accept the role.

Fake cities, "Kill Houses" and "Assault Courses" represent the latest advancements in the 20th century evolution of military training – a long slow arc from basic training with stationary targets, to moving targets, to theatrical fake battlefields with explosions and gunfire overhead,[2] through to modern day elaborate participative theatre-like experiences with interactive characters and literally imagined communities.[3] It makes sense of course that training should be realistic, a common consensus on training/education of any kind is that realistic role-play represents the pinnacle of facilitated instruction (at typically a super premium expense) – but the history of military training has a funny quirk, being that the realism of modern training is still often to this day justified by some very fake research.

SLA Marshall was a celebrated American military sociologist, who during the Second World War began interviewing US soldiers in the Pacific, leading him to declare that no more than 15% of the soldiers in the unit he studied had fired their weapons in combat, despite 80% being in range to do so.[4] While a small minority would fire to hit – most of the men would 'appear busy' and fire in a way to miss or otherwise fire ineffectively. With a thesis that improved realism in training could boost these numbers, Marshall conducted follow-up research during the Korean War to show firing averages improving to 50%. [5]

The problem is that Marshal in all likelihood never really conducted this research. His alleged research journals (which should have contained the interview records and notes) have never been found, and subsequent follow-up interviews with the military units he suppos-

edly interviewed revealed that he never made interviews – or had anything more than some informal discussions with the men.[6] The research methodology itself was also dodgy: Marshall apparently asked people to estimate their own combat performance, and asked them what they recalled from combat situations they had been in[7] – so whether the answers quoted could be believed anyways is a bit dubious. It seems likely that asking anyone "did you and your team-mates fake it?" is likely to be subject to a high degree of bias.

> *"Professional officers said it did not make much difference whether General Marshall's work was accurate, because he had provided data to support what many believed to be true, both instinctively and through combat experience. In basic training after World War II, soldiers were taught to keep up continual rifle fire as they advanced on enemy positions."*
>
> *– Historian's Pivotal Assertion On Warfare Assailed as False*
> *By Richard Halloran, Special To the New York Times*
> *Feb. 19, 1989[8]*

Marshall tells a neat a tidy story: that more military training must be immersive, and that without this training the average person is good and just and even subconsciously may not have it in them to commit violence. This myth is pedalled by American police speaker David Grossman, a retired military psychologist who studies the self-invented field of "Killology," and is infamous as one of the proponents of a "warrior" training for police officers. Grossman tours constantly – apparently offering courses 200 days per year, with at least one officer who attended his courses being instigating a bad police shootings (the case of Philando Castile). [9]

This example is rather extreme, but it illustrates a common disconnect in the field of security, between what the research honestly supports, and what we believe to be true. A hypothesis isn't necessarily wrong – but we ought to be honest about what it is.

Endnotes

1   Visit Freiburg Website. < https://visit.freiburg.de/en/attractions/stadt-garten-municipal-park >

2   Bourke, Joanna. "An Intimate History of Killing." Granta Publications, London. 1999.

3   Imagined Communities refer to the ideas of Benedict Anderson on national identity. In this case of course though, the community is literally imaginary, since it would apparently mix various refugees from middle eastern countries with other Europeans, and even potentially a Canadian into the same setting.

4   Bourke, Joanna. "An Intimate History of Killing." Granta Publications, London. 1999.

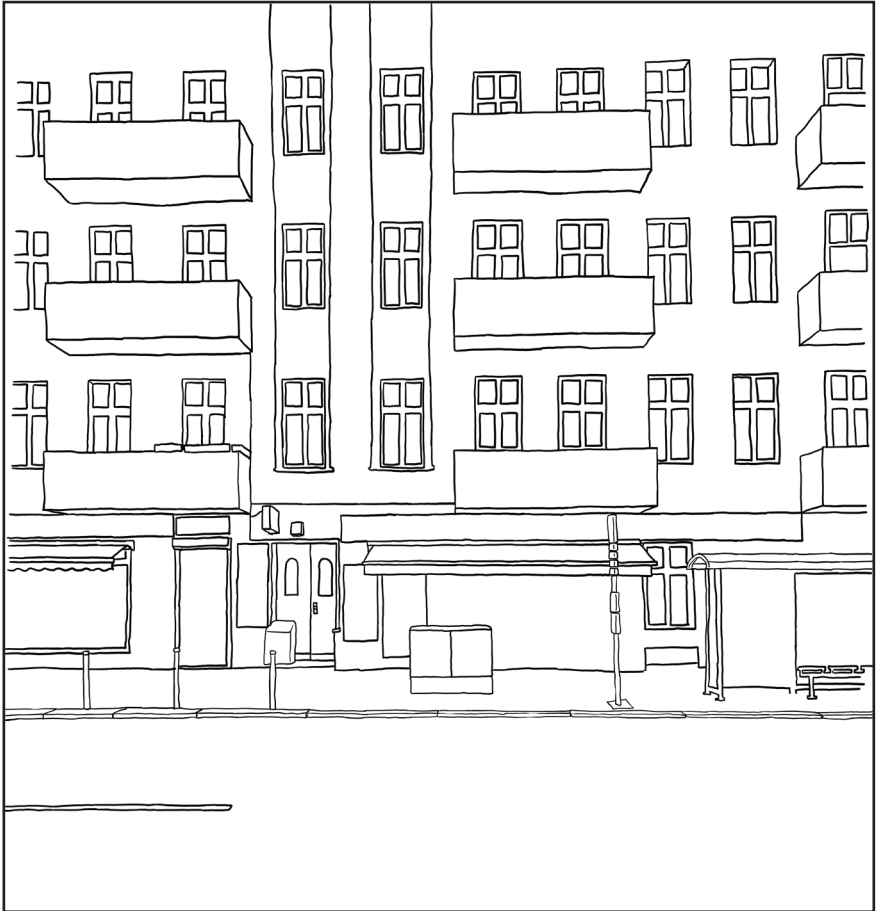5   John W. Chambers II, "S. L. A. Marshall's Men Against Fire: New Evidence Regarding Fire Ratios," Parameters 33, no. 3 (2003), https://press.armywar-college.edu/parameters/vol33/iss3/6

6   Ibid.

7   Halloran, Richard. "Historian's Pivotal Assertion On Warfare Assailed as False." New York Times 19 February 1989.
 < https://www.nytimes.com/1989/02/19/us/historian-s-pivotal-assertion-on-warfare-assailed-as-false.html >

8   Ibid.

9   J Jacobsen, Lenz. "Er macht Polizisten zu Kriegern" ZEIT. 5 July 2020. https://www.zeit.de/politik/ausland/2020-06/dave-grossman-polizeigewalt-usa-training-polizisten

Residential neighbourhoods provide an opportunity where locals provide "eyes on the street" – a phrase coined by Jane Jacobs. Locals may recognize vehicles, activity, or individuals which are out of place.
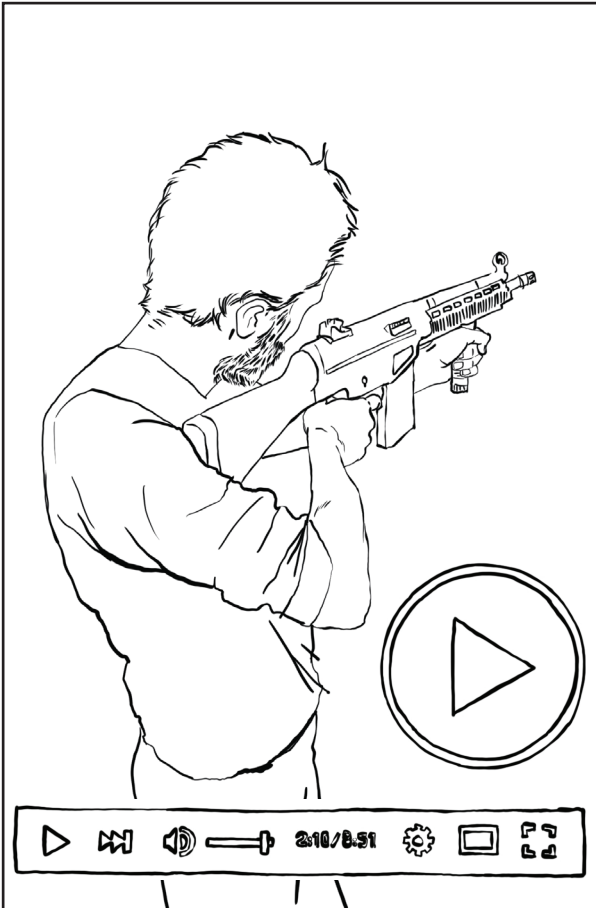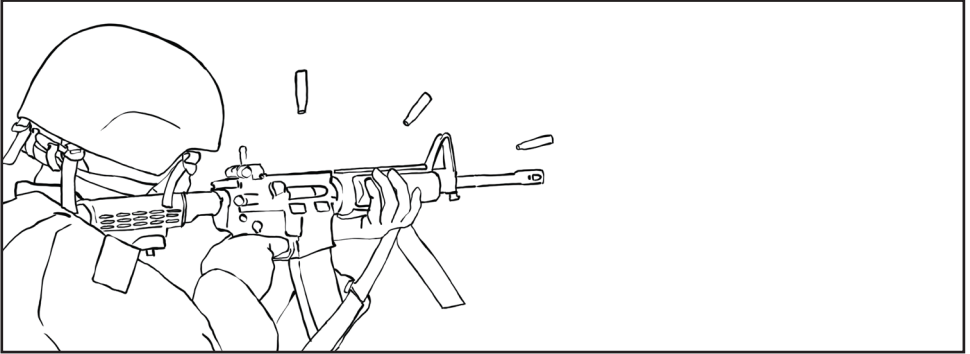
"*Open Source Intelligence*" *is the term given to information gathered through public channels. When it comes to security techniques, policies, and strategies, there is a wide variety of information available online. From "tricks" that entertain and gather views on video websites like Youtube, to the field manuals published by US military, to detailed demonstration and training videos that show special forces soldiers in action.*
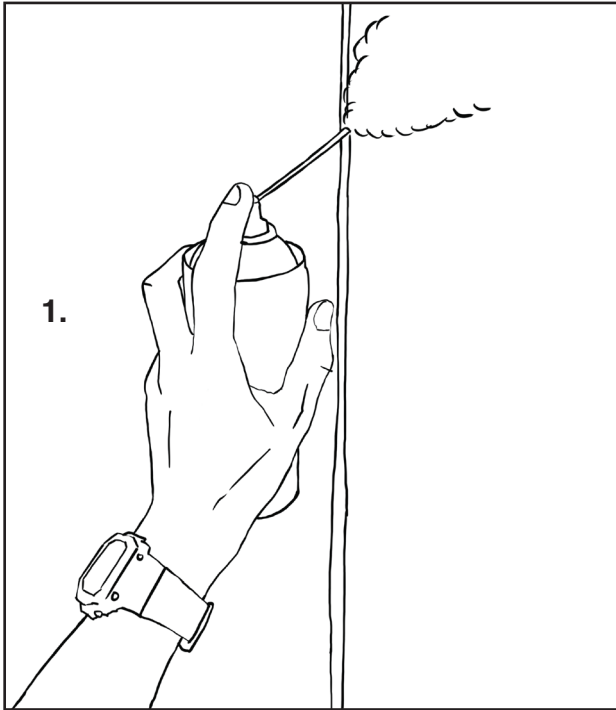
Outside: the person locked out of the building uses a can of compressed air, and sprays it through the crack in the door.
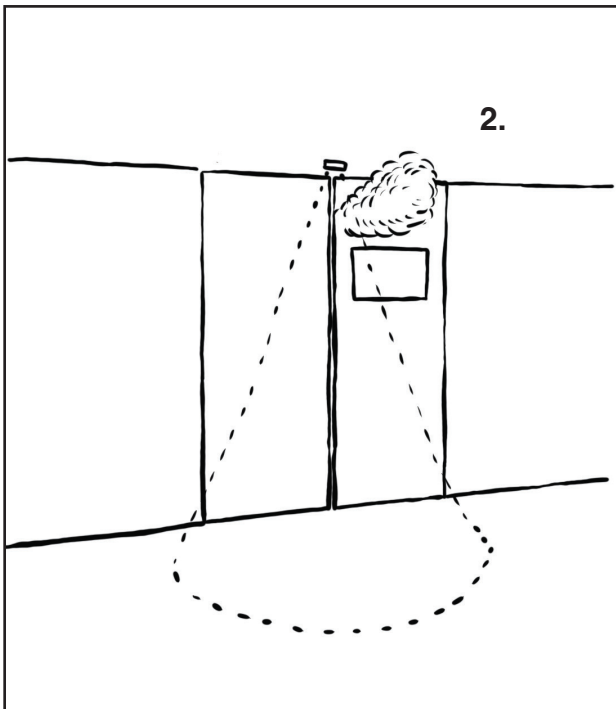
Inside: the cloud of vapour created by the compressed air interrupts the sensor field, triggering the door to open as if a person was exiting from inside. The door opens.

A favela in Brazil. Such sites have been the increasing focus of military planners, and this interest has spilled over into popular media, with films such as "Elite Squad" depicting police special forces in Brazil, and video games such as "Call of Duty" chosing slums as the setting for their narratives.

"He surveyed through the park railings the evidences of the town's opulence and luxury with an approving eye. All these people had to be protected. Protection is the first necessity of opulence and luxury."

– Joseph Conrad, "The Secret Agent"

Chapter 4: Access Control

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A Renewed Focus on Cities by Western Military Planners, and Security Policy Makers

In 2016 a variety of news outlets, reported on a Pentagon film "Megacities: Urban Future, the Emerging Complexity," which the Intercept obtained through a Freedom of Information Act request.[1] The film was shown in the "Advanced Special Operations Combating Terrorism" course under the theme "Emerging Terrorism" at the American Joint Special Operations University, and builds on previous military forecasts, of dystopian South East Asian coastal megacities, in a 2014 "Megacities and the United States Army" report.[2]

This concern for "megacities" could be traced further back, to the work of David Kilcullen, an influential Australian counter-terrorism advisor to the American government during the Iraq war and contributor to its FM 03-24 manual on Counterinsurgency, who wrote in his 2013 book Out of the Mountains: The Coming Age of the Urban Guerilla around a similar vision of a Malthusian future of cramped, tropical, urban slums –Dhaka is mentioned, like in the Pentagon video– as future locations for terrorism and organized crime. Kilcullen cites Mike Davis' Planet of Slums in his text[3] –and

puts Davis' endorsement on the cover of his book– as he extrapolates Davis' vision of cities, into a strategic dilemma for future police and military forces.

'Cities' and urban centres as a source of anxiety for security professionals, appear in media articles that follow a similar structure – for a typical example we examine The Hill's "Investing in understanding cities investing in national security". The 2018 article begins with stressing the shifting trend in human settlement patterns as the global population has passed the threshold where more people live in cities than do not, with similar dire projections for the distant future: "By 2050, two-thirds of the world's population will live in cites" cites the article.[4] The piece focuses on population growth in China, but then cites Islamic State urban warfare in Iraq and Syria as examples of 'future warfare' trends already existing. The article concludes by decrying the unpreparedness of American military training schools.

This array of text: the Hill article (written by a former soldier, and republished by the Modern War Institute at the American military university West Point) or the Pentagon video, or Kilcullen parroting Mike Davis, build a specific vision of future conflicts in cities: suspicious of urban complexity, often wary of the concentration of social problems like poverty, and anxious about the potential for terrorism in urban spaces. They also tend to mix "here" and "there" – in that they draw examples from non-Western conflict zones, and anticipate the same outcomes in Western cities, despite vastly different infrastructure and social conditions.

Urbanists such as Stephan Graham have of course noticed this trend as well, as he observes "anti-urban military discourse"[5] which frames cities as places where Western soldiers are on equal footing as guerrillas, in what is challenge to the late Cold-War era "Revolution in Military Affairs" approach of the United States totally dominating all adversaries with superior technology.[6] A city is a place

where Western forces will expect to take much greater casualties because urban spaces can only be truly held by infantry, in contrast to a war fought by pilots from 5000 feet.[*] Graham's work specifically looks at how 'war' strategies are brought 'home'.

Architect Eyal Weizman, a well-known academic like Graham, has similarly traced contemporary military urbanism, through exhibitions documented in his texts like "Forensic Architecture: Violence at the Threshold of Detectability" or through the publication of books like "Hollow Land", which make explicit the interest of Israeli military planners in altering urban spaces – the construction of suburbs on hills in circular fortress-like rings which conscript residents into the roles of spotters,[7] and which facilitate 'withdrawal' to inner rings in the event of an attack,[8] and with coloured roofs that facilitate aerial navigation by military aircraft.[9] These techniques re-prioritize urban planning through the lens of military necessity: the landscape is built to reflect military futures.

What this research aims to stress here then, is that there are a plethora of individuals –academic, in the press, and government staff– who are observers to a blurring, or are themselves actors towards a militarization of urban space: military paradigms and strategies are imagined in peacetime urban spaces. The 'battlespace' is expanded from foreign theaters to the domestic theater, and this expansion justifies the policies and technologies of war in the Western domestic space.

Access Control – How it Works
'Access Control' includes fencing, doors, and locks, but also car-barrier technology, anti-ramming barriers, embankments and gates – which are passive security tools that serve to bar or restrict access of vehicles and people to sites. These methods for controlling entry

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*	_Omar Fast's "5000 Feet Is the Best" is a reccomendable art film that brings the dislocation between air and ground into focus – portraying drone pilots and civilians in their respective worlds._
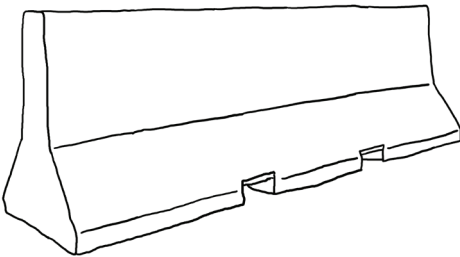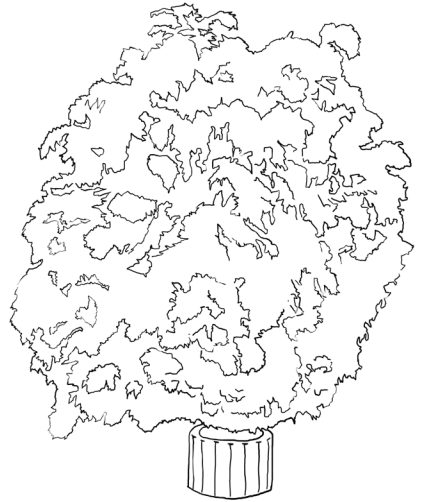
I made a personal trip to Dresden in 2017, and noticed that Dresden's smaller Christmas markets (i.e. not the large historical one which draws tourists) had already deployed heavy vehicle barriers around its entrances and exits. The same winter, Berlin – the site of an actual terror attack a year prior, with four times the population– used mostly jersey barriers (illustrated to the left), these are the typical barriers found on highways, which are largely ineffective against ramming attacks. The city of Dresden, at that time a hotbed for anti-immigrant fear, had invested substantial resources in purchasing and deploying these heavy barriers, while Berlin was still deploying heavy barriers in only a few locations.
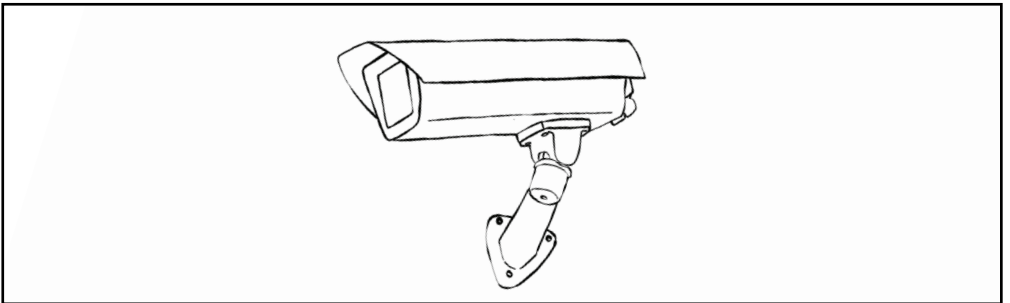
and exit serve to filter participants in public space, and therby make these locations more difficult to infiltrate or attack, and they attempt to minimize damage from attacks (especially bombings).

These barriers do not exclude the possibility of attack, but if we apply the frameworks of environmental criminology and the framework of 'Situational Crime Prevention' –that decreasing opportunities leads to decreasing occurrences of crime,[10] we can reasonably expect that they deter attacks, and to which extent depends on the level of security employed. With that said, static measures have limitations, and without other security systems in place –i.e. human guards, or sensors– a fence or barrier alone cannot be expected to prevent a determined intruder from entering a site. An alarm with no security response is unhelpful, and sites which are not properly supervised show greater chance for criminal activity.[11]

Barriers also do not preclude the necessity for other design elements: large and tall buildings need to be engineered so that they are resistant to progressive collapse and use impact resistant materials around doorways and stairwells.[12] Bollars on the street outside a building will provide standoff distance, which reduces the power of explosive shockwaves, but does not preclude injury to occupants.[13] Glass and building façade collapse cause the most injuries in an explosion, but progressive collapse of a structure has traditionally been responsible for most of the fatalities.[14] Building designers should therefor employ glazed glass,[15] or specialized window film to prevent shattering, or blast curtains to catch shards.[16]
From an engineering and architecture perspective, stand-off barriers and structural reinforcements represent part of a solution; from a criminology perspective, likewise access control represent part of a solution. It is problematic then when we slap down barriers in public places, and that amounts to our total security strategy.

Fences and Walls
Fences delineate the security 'envelope' of a building. They establish

boundaries of territoriality, and tell the public where they should not go – a concept developed and brought into planning discourse in the 1970's by the architect Oscar Newman as defensible space.[17] Originally writing in the context of his design planning for public housing, Newman proposes fencing as social que to people of where to and where not to go,[18] and opened a discussion into security design elements shaping human behaviour around the topic of safety and access.

Fences and walls may either be transparent (typically a wire mesh fence), or opaque, depending on the material used, the security risk to a site, and the aesthetic requirements for a site. Removing objects from sight/view remains an important part of disrupting criminal foraging,[19] and if an offender cannot know that a target exists, or understand how it functions, then the target is less likely to be victimized.[20]

The Public: In or Out
Fences and walls also critically control the number of people in sites: the less individuals who have access to a site the less crime there is.[21] If you bar all public access, then the public cannot commit crimes in your site, and you will achieve 'zero crime.'

There is an additional complication however, in regards to public spaces, in that the presence of the public also discourages crime through their social control of the space. Anna Minton concisely summarizes the issue of strangers, by comparing and contrasting the viewpoints of Jane Jacobs "eyes on the street"– that the loose social relationship connecting people on the street creates a "natural surveillance" re-enforcing order–with the perspective of Defensive Space writer Oscar Newman who "made the case for strangers dangerous intruders."[22]

Recognizing that the two extremes in urban planning discourse are rarely possible or desirable –total exclusion of outsiders, nor totally accessibility of the site– fences and walls have a role to play in passively facilitating the regulation of sites: avoiding that unhelpful spot where you have too few people to create social safety, but
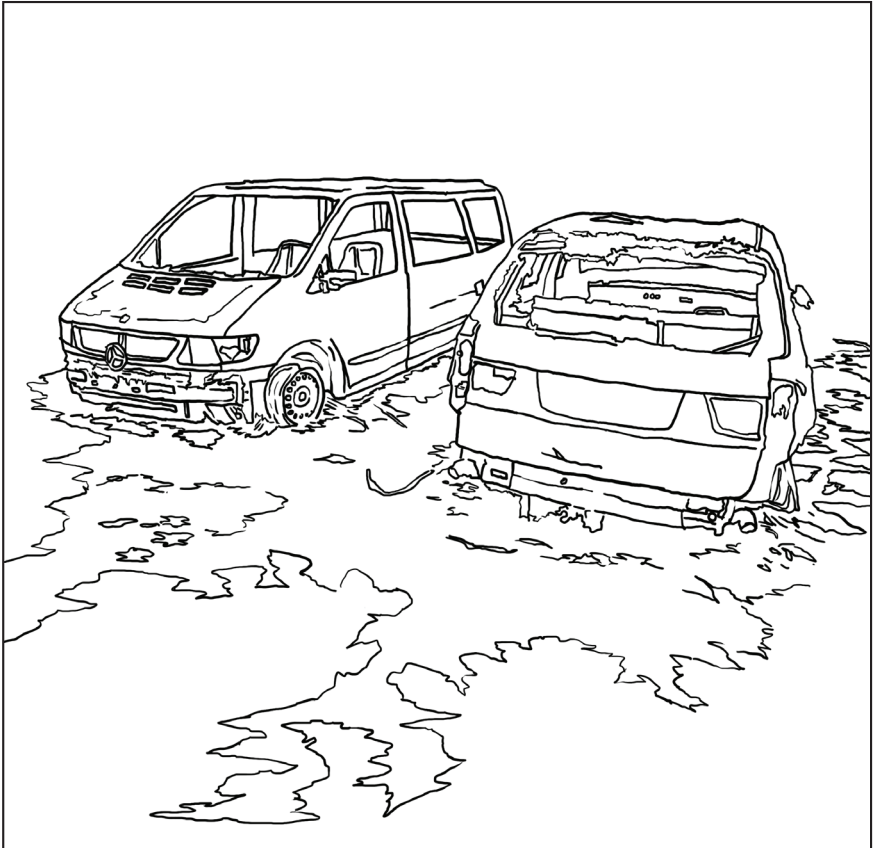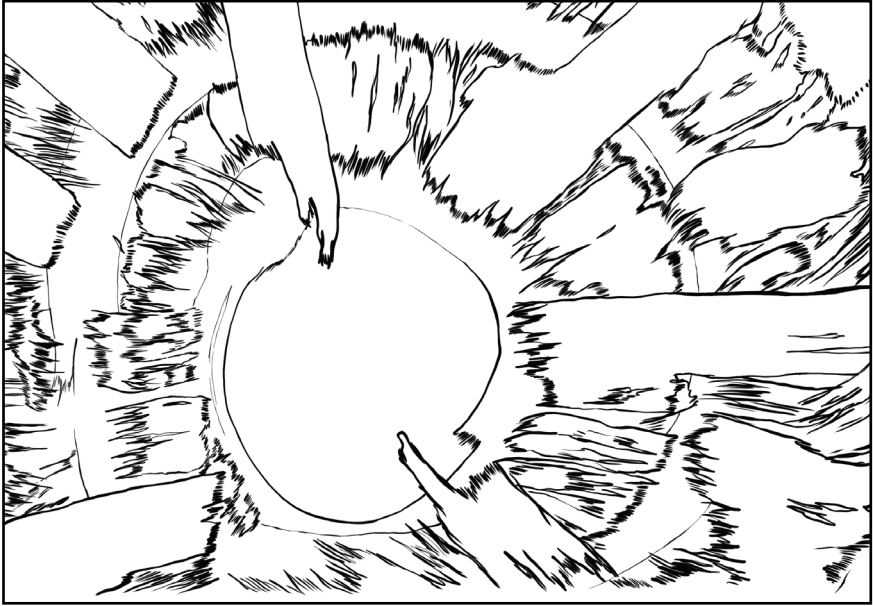
having too many where there are still strangers and the potential for unwitnessed conflict.

Of course this simplification is not entirely fair to urbanists like Jacobs, nor the criminologists who have expanded on her work: as they try to define the right sort of open public space, with Jacobs devoting a whole chapter in her book to defining the right sort of parks,[23] which can be contrast with the perspective of even more radical urban thinkers like Henri Lefebvre in who welcome the chaos of masses in public space – seeing it a necessary force towards longer term good.[24]

So the argument comes full circle again then: the quantity of the people in the space (and therefore access control) becomes increasingly irrelevant if the space is 'well' structured, and the debate therefore needs to move to exploring what this structuring looks like.

Cars and Vehicles in the City
This paradox of access control is most evident in discussion of automobiles: how to keep them away from buildings, how to screen them or limit their movement in public places, and more recently: how to stop ramming attacks.
Discussions of vehicle security have traditionally focused on bombing attacks, which have dramatic effect, in utilizing something so ubiquitous in cities as a car or truck to create destruction.

> *"The use of explosive weapons is likely to have long-term impacts on socio-economic and human development. Unexploded explosive remnants present a continuing threat to people, are an obstacle to the safe return of displaced populations, and prevent safe access to homes, farming land, and schools. The reconstruction of public infrastructure may be costly, and survivors with physical and psychological impairments may require long-term medical care and other forms of assistance."*

Mechanically, an explosion begins with the detonation of an explosive compound, causing a change in atmospheric pressure resulting in radiating blast waves.[26] Travelling faster than sound, these waves cause an 'overpressure' that results in damage to human tissue and the destruction of buildings.[27] The strength of these blast waves fades with distance, thus underscoring that the best 'defense' against explosions is to be as far away from source of the blast as possible (see the diagram of stand-off distances, given in the next pages). Explosions additionally throw fast-moving and highly damaging shrapnel through the air, either intentionally or by effect of the blast.[28] Vehicles used in car bombings have been deliberately filled with metal shards to increase the shrapnel effect against bodies,[29] thus underscoring the use of carbombs as not merely a way to destroy infrastructure or buildings, but to terrorize people and have an anti-personnel effect.
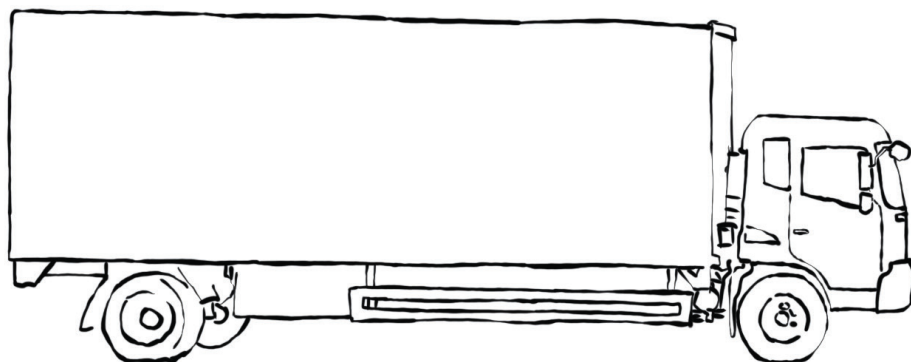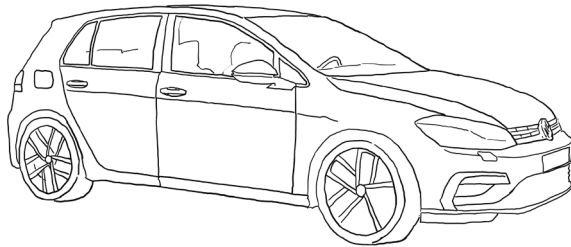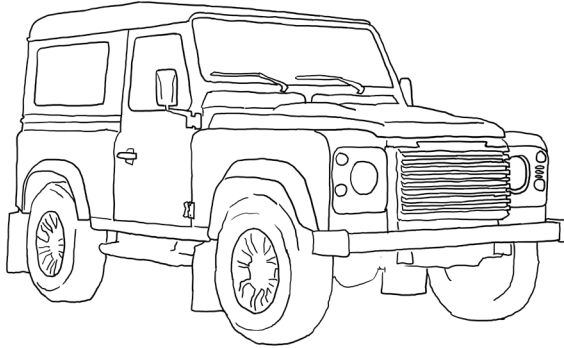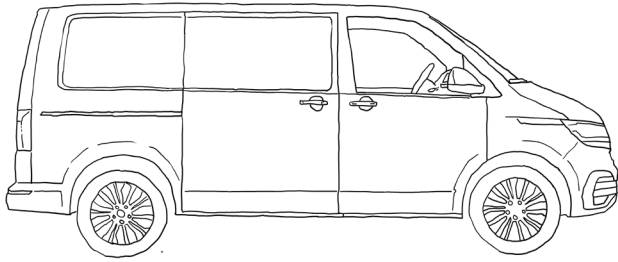
Safe Stand-Off Distances for Humans

	In A Building	Outside
Pipe Bomb (2.3 kg)	21m	259m
Briefcase/Suitcase (23 kg)	46m	564m
Car (454 kg)	122m	533m
Van (1814 kg)	183m	838m
Delivery Truck (4,536 kg)	262m	1,143m
Semi-Trailer (27, 216 kg)	457m	2,134m

Source: *US National Counter-Terrorism Center*

It is also worth considering the pattern of violence which car bomb-ings set off; Mike Davis' book "Buddha's Wagon" on the history of car bombings show that the entry of vehicle bombing into a conflict situation tends to results in the proliferation of the know-how on how to build these weapons,[30] and subsequently to the expansion of car bombing as a tactic in the arsenal of the warring parties. Davis labels car bombs as "open source warfare" for their tendency to pro- liferate as the technical knowledge to build them spreads,[31] and really any modern car-centric city provides the potential materials for these attacks to occur.

As previously discussed, from an engineering position then, build-ings under threat of car bombing need to be placed as far away from vehicles as possible – a need which can be incorporated into the design of new buildings which are at risk (i.e. newly build prisons or embassy structures), but which is difficult or impossible to imple-ment for older buildings and older neighbourhoods, which were not designed with a 'set- back distance' in mind, so buildings are always too close to cars. To address this necessitates access control schemes which encorporate whole city blocks and entire neighbourhoods of the city – limiting how, when, or which vehicles can enter an area. A prime example of this could be seen in Belfast during The Troubles.

Car Access Control Systems

Belfast "Ring of Steel" was built through the 1970s to contain IRA terrorism,[32] and the city saw bombing displaced to outside the security cordon, and then eventually a decline in bombings.[33] The security cordons and street controls essentially reduced the num-ber of entry and exit points for the downtown core, facilitating the search of vehicles,[34] and then later entirely sealing some streets to traffic.[35] It was a gradual process: checkpoints went up, streets were made one-directional, and then eventually closed entirely to make pedestrian malls.[36] Coaffee (the author of study we are referring to) points out that the "rehabilitation" of Belfast also coupled with urban devel- opment and planning activities,[37] and broader political strategies to address terrorism from social and political perspec-

tives. Indeed the number of checkpoints and the security zone itself was reduced gradually over time[38] – while bollards and gates might have been the most visible aspects of public security in Belfast, they were always accompanied by less-visible supporting programs.

The success of barrier systems as anti-ramming defenses is also also mixed. DEKRA – the German Motor Vehicle Inspection Association carried out tests of various concrete barriers in 2017 and found them generally ineffective,[39] and the U.S. Federal Emergency Management Agency (FEMA) more specifically reccomend that security sites use embedded wall structures which are partially buried underground, rather than employ use of superficial blocks or heavy concrete planters.[40] FEMA warns that if a light planter where struck by a rapidly approaching vehicle, it could become a flying hazard.[41] A complete anti-ramming solution ideally involves walls, berms, ditches, hills or other aspect of the site's physical landscape,[42] and this planning should be done in consideration with the realistic security threats that the site could be expected to face.[43]

All of which is not to argue that security cordons do nothing – certainly they do create less opportunities less for terrorism to exist, displacement occurs to some extent but is incomplete,[44] however it should be stressed that the apparent success of physical infrastructure does not take place in a vacuum, and it is unclear to what extent we can credit them for reducing terrorism in light of other social, policing, or political developments.
It has been pointing out by some observers, that it is difficult to rate the success of a security system, when success means nothing happens.[45] When success means that terrorism doesn't occur, then any programming activity (including only tangentially related ones – or ones branded "anti-terrorism" to achieve more funding) can claim success.

Gatekeeping
The objective of this text, and research is to begin to begin to offer a

cross-section, of the mechanisms by which urban security practices are theorized, justified, and implemented. By better understanding the means by which different actors work: from the military, to police, to criminologists, and to urbanists, we can understand the limits of specific technologies or strategies, and better access the true efficacy of security planning.

Access control is on its surface a binary system –people in and people out– but the space that the access control system protects (its context), and the holistic overall way that this space is managed, are likely both more important than the exact technology technology used, or the exact rules imposed. Access control works when multiple complimentary controls are in place – 'magic bullets' or simple solutions, like car barriers blocking streets, or scanners at airports, do not represent a total fix to a complex problem.
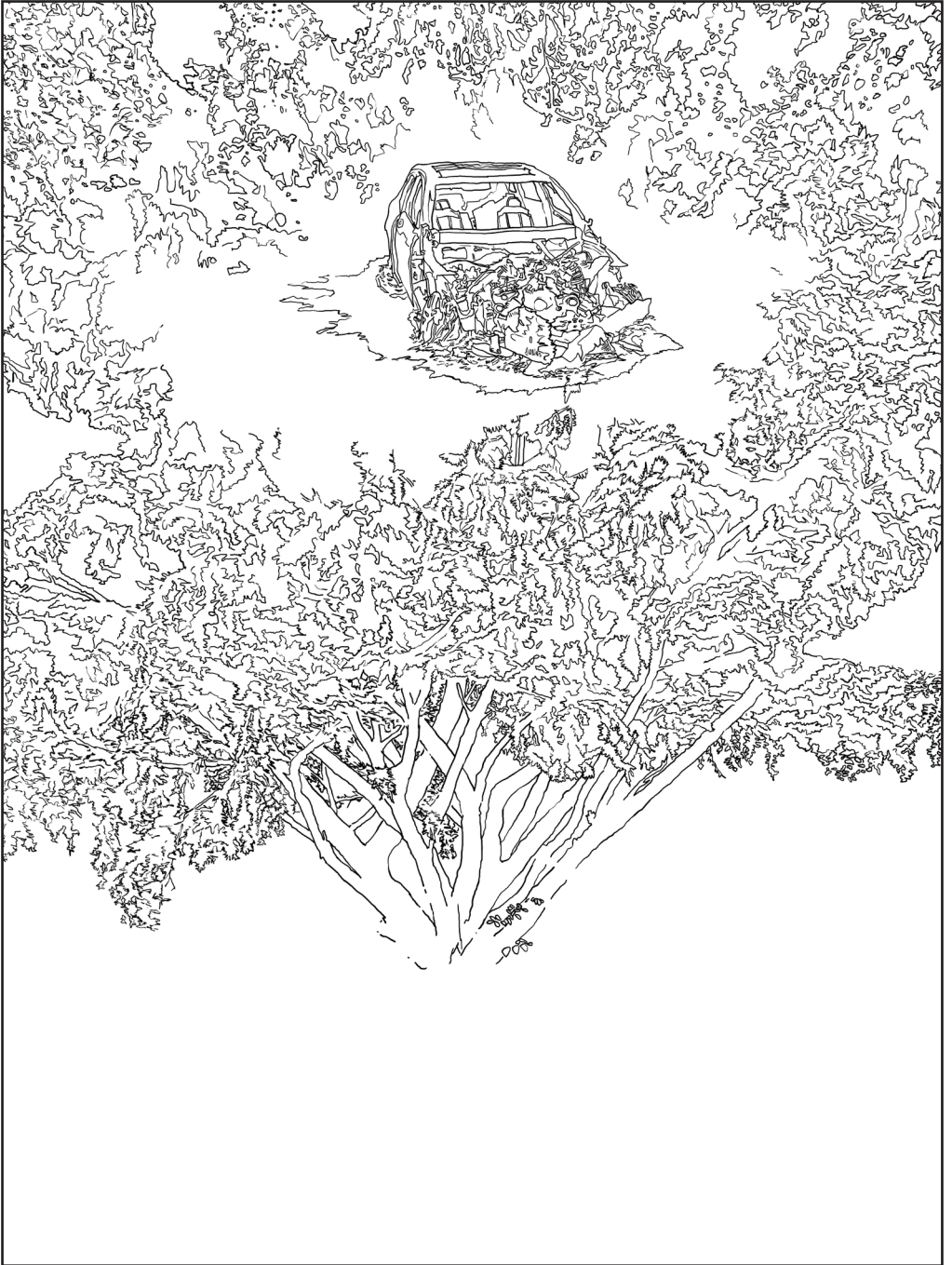
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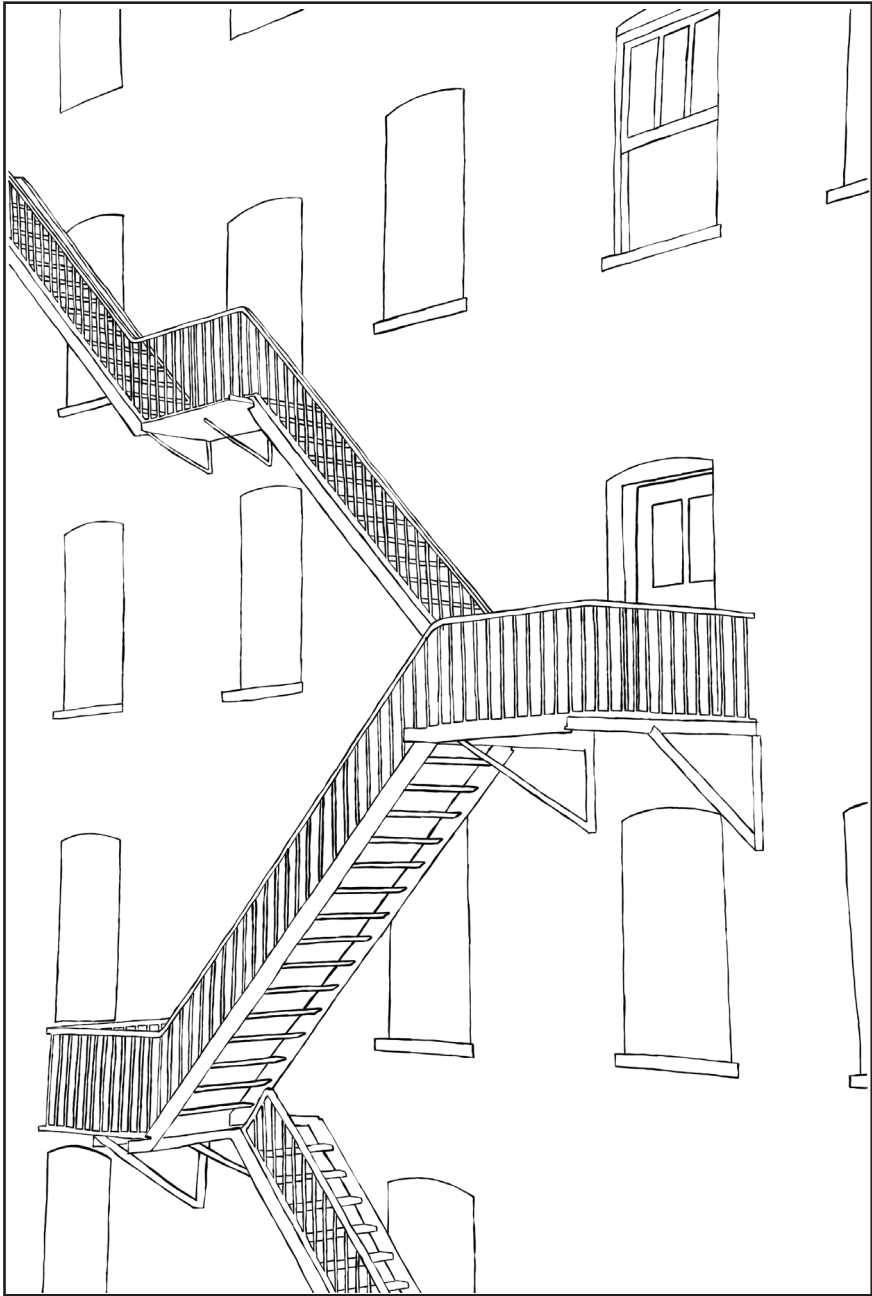45   Elmer, Greg & Andy Opel. Preempting Dissent. Arbeiter Ring Publishing, 2008. Print.
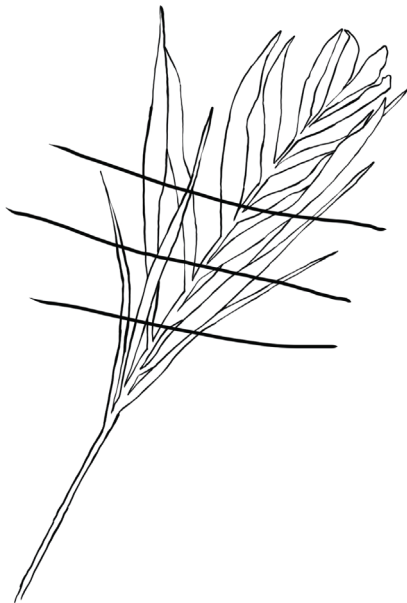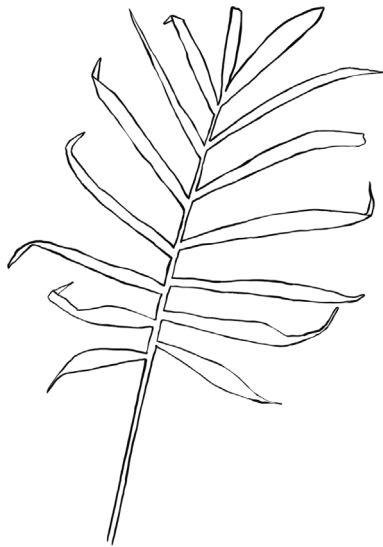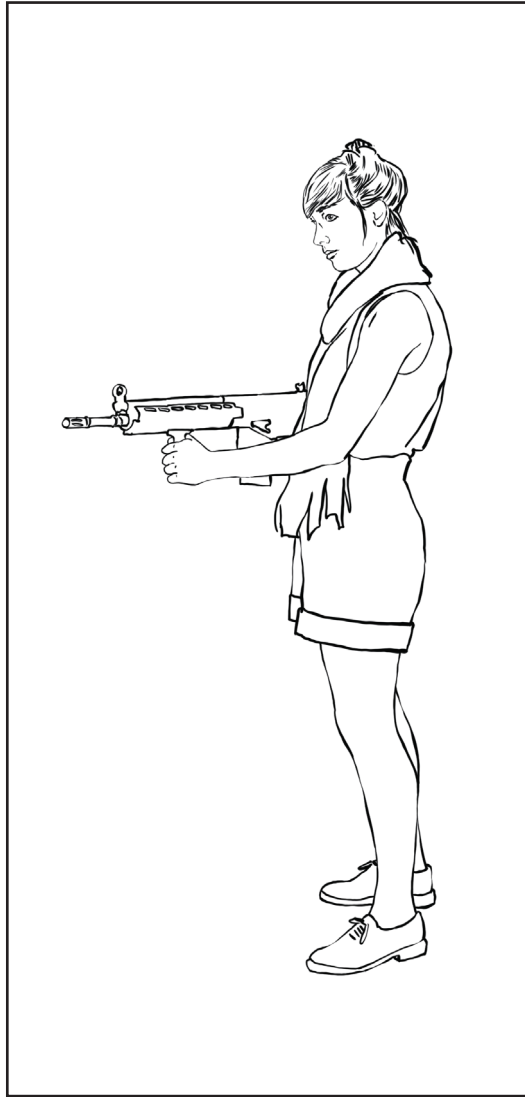
Tracking an individual involves looking for signs of where they've been before – leaves they've broken off, and how long ago they were broken off, evidence of past crimes, or past training.
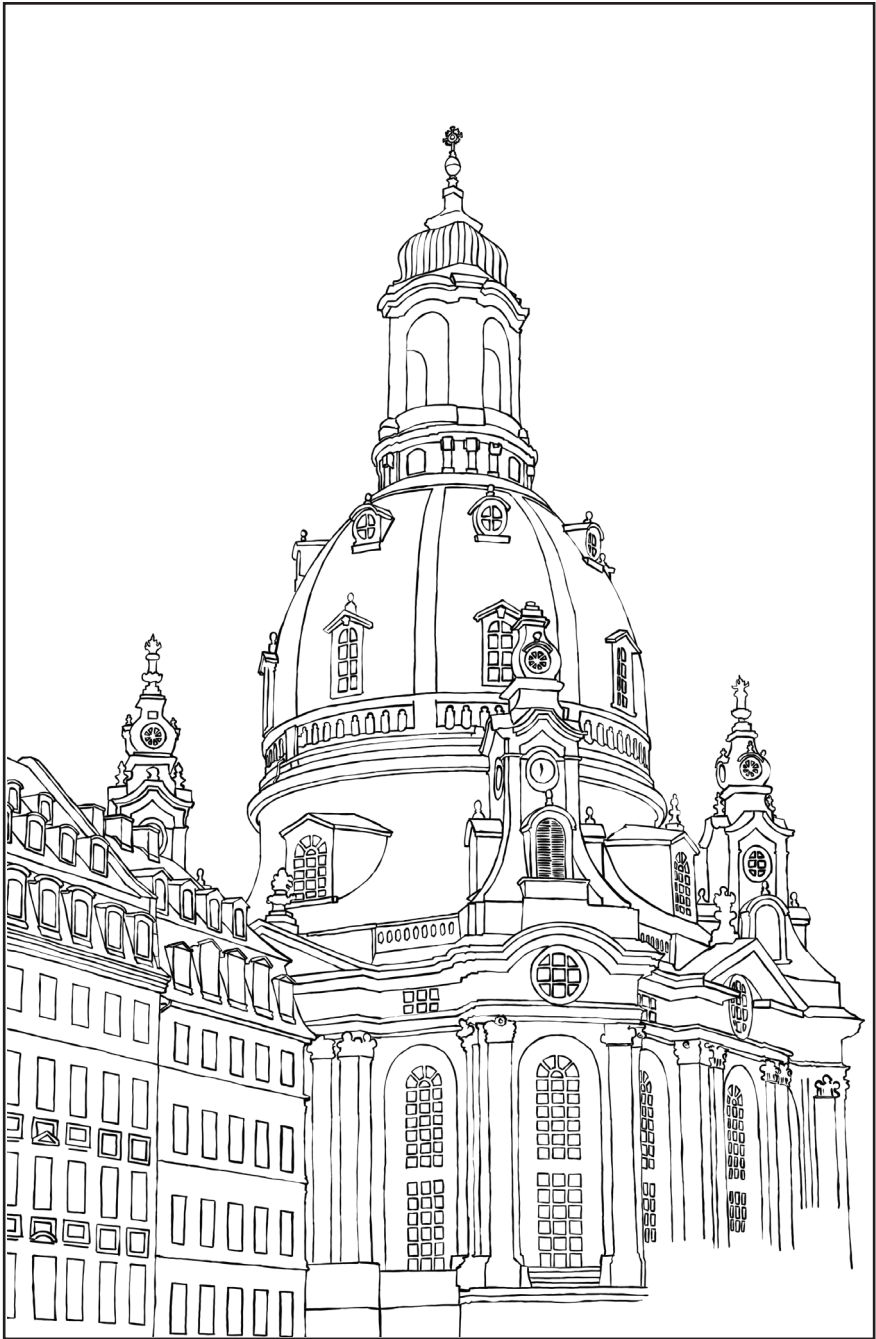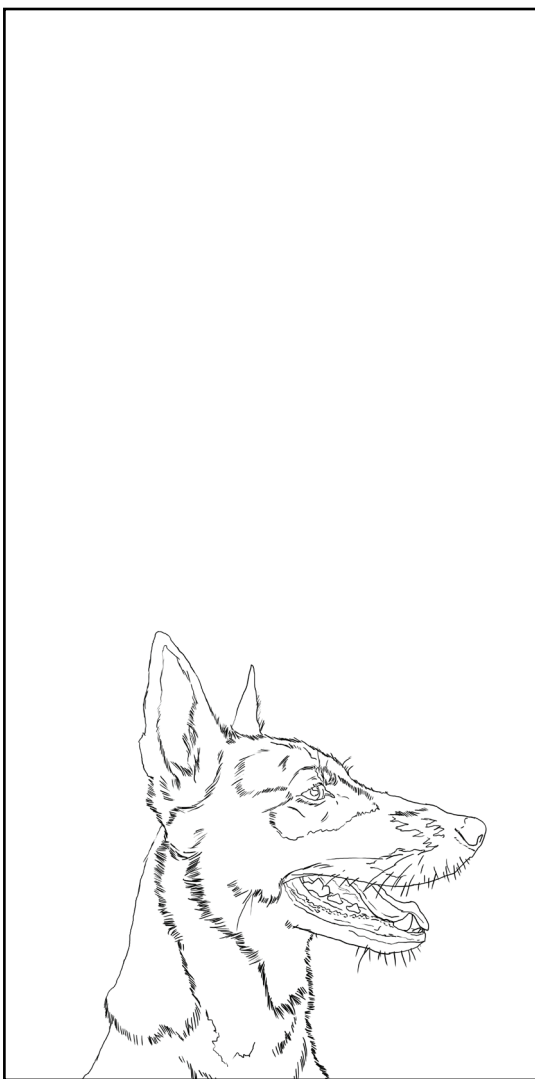
"Modern problems require modern solutions."

– Dave Chappelle, in a phrase that has become a meme

Chapter 5: Red Teaming

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What Could Go Wrong?
Geoff Manaugh's "A Burglar's Guide to the City" fantastically covers his journey speaking to professional thieves and security experts, and one of the key take-aways from the book must inevitably be how creative break-ins are. If a door is locked securely – why not break in through a wall? Why can't the public fire-code be used as a "cheat sheet" to tell an enterprising burglar how many access points a building has?[1]

The quality of empathy in security planning cannot be understated, and failures in creativity lead to failures in anticipating risk. One has to expect threat actors taking unusual solutions – from abandoned USB drives which are attached to a keyring with a stuffed animal to make its loss seem more tragic (an example from Manaugh's book), to construction workers in safety vests who may wander freely without drawing attention, to the more aggressive 'social engineering' by con artists who try to talk their way into buildings impersonating managment or an authority figure, berating and intimidate anyone who questions them.

In advance of a workshop on "Open Source Intelligence" (Googling

and using public records) a police officer and I explained to our superior that their personal travel photos on social media could be used to establish their whereabouts, and gently suggested that in their position this might not be advisable. To put this small interaction in perspective however – at the same time the fitness tracking app Strava was in the midst of a scandal where it published activity maps of popular running paths worldwide. These maps revealed the presence of very athletic individuals doing heavy training in remote desert locations, suspected of being classified and previously undisclosed special forces bases.[2]

But the pace of new technology surprises even those 'in the know' – groups like Bellingcat, even being private and without the benefit of government resources or a legal mandate, are pushing the limits of Open Source Intelligence to show incredible creativity in using information such as flight records to identify fleeing spies,[3] using social media to identify Russian soldiers true locations,[4] and leaked public and passport records to even identify government assassins.[5] Security planning, to protect sites and protect information, must be underpinned by a creative flexibility to imagine what might be possible. One dimension of this is certainly a strong understanding of what is technically possible (and true technical experts are a rare quantity in all fields outside of the well-paid IT industry), but also an ability to put oneself in the shoes of an external party, and imagine what could be done. Empathetic creativity: imagining what the audience will see, and how the audience will react, is a skill that few education paths train for.
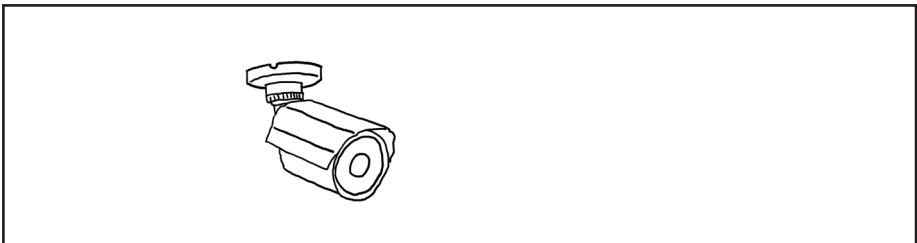
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1 Manaugh, Geoff. "A Burglars Guide to the City." New York: Farrar, Straus and Giroux. 2016.

2 Hsu, Jeremy. "The Strava Heat Map and the End of Secrets." Wired Magazine, 19 January 2018. <https://www.wired.com/story/strava-heat-map-military-bases-fitness-trackers-privacy/>

3 Grozev, Christo "World's Most Wanted Man Jan Marsalek Located in Belarus; Data Points to Russian Intel Links " Bellingcat 18 July 2020. <https://www.bellingcat.com/news/uk-and-europe/2020/07/18/worlds-most-wanted-man-jan-marsalek-located-in-belarus-data-points-to-russian-intel-links/>

4 Toler, Aric "How These Adorable Puppies Exposed Russian Involvement in Ukraine" Bellingcat 11 March 2015. <https://www.bellingcat.com/news/uk-and-europe/2015/03/11/vreditel-sobaka/>

5 Bellingcat Investigative Team "Suspected Accomplice in Berlin Tiergarten Murder Identified as FSB/Vympel Officer" Bellingcat 29 August 2020. <https://www.bellingcat.com/news/uk-and-europe/2020/08/29/suspected-accomplice-in-berlin-tiergarten-murder-identified-as-fsb-vympel-officer/>
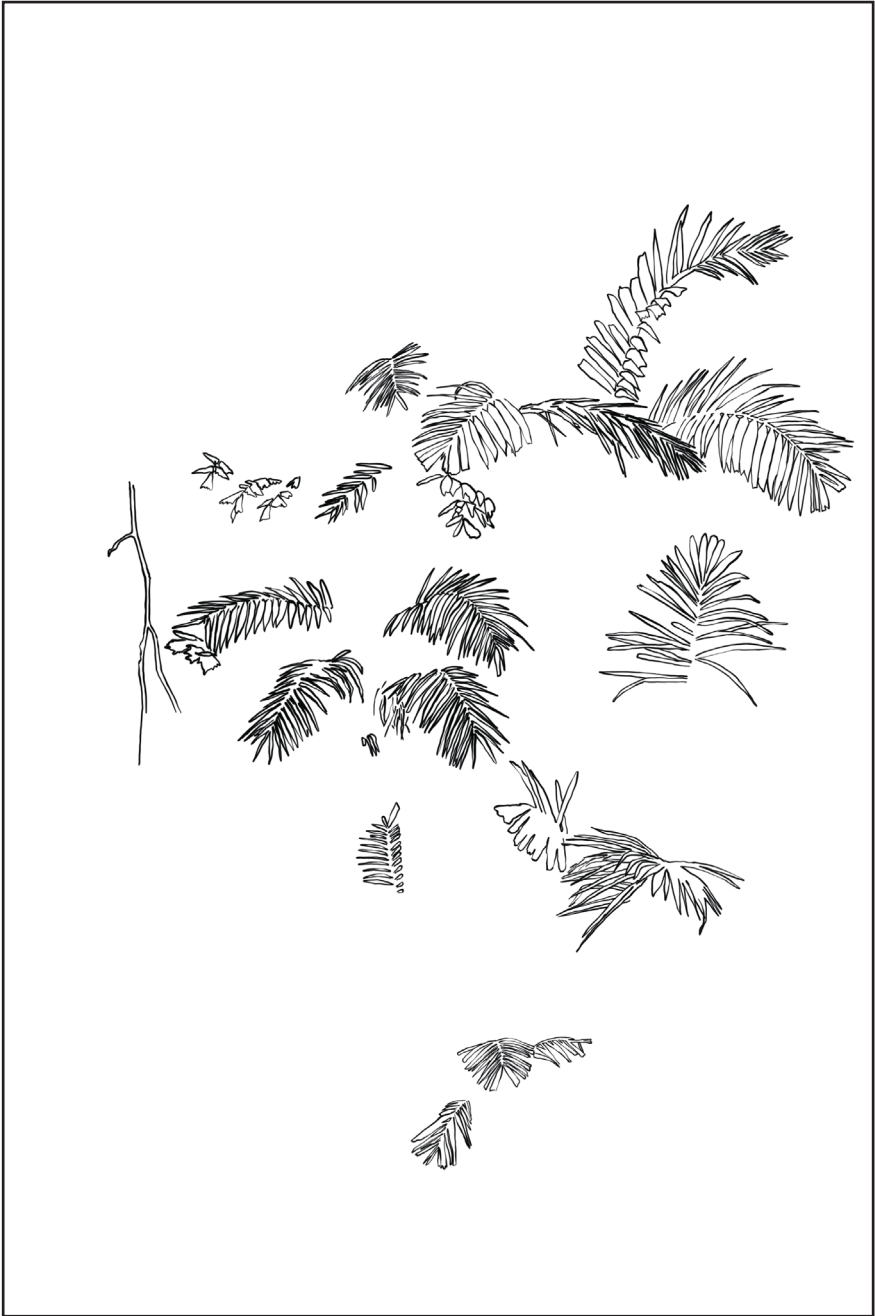
Timothy Morton's 2013 work "Hyperobjects" *proposed the idea of the 'Hyperobject' as a sort of networked entity that exceeds human capacity for understanding. Something like an ecosystem may be considered a hyperobject: it's complexity, and the number and depth of its relationships exceed our ability to fully grasp and meaningfully control it.

Certainly within the field of urbanism, the idea of a city as an unknowably complex mess has older roots in thinkers like Henri Lefebvre, who proposed an idea of the city as a place for the unstable clash of ideas**, and contemporary urbanists like Clara Irazabal have proposed the concept of cities as contested, "extrodinary" (revolutionary) spaces where competing public political narratives are apt to explode suddenly and with minimal warning***. I am also forced to think of John C. Scott's work on tribal societies, who create for themselves a political situation that does not support control (security) by outside forces – they plant vast wild gardens, so any invader would be unable to efficiently harvest the produce and steal their labour. ****

Perhaps security is also like wild forest - involving an ecoystem that exceeds our ability to understand all control inputs.

On a more practical level – I was once asked to consider the literal applications of plant-based security. An office building had a balcony, with a fence separating the office from a neighbouring aparment – such that someone from our balcony could easily enter the apart-ment beside, or that the apartment residents could enter the office balcony. We were asked to consider an aesthetic solution to the problem – perhaps a thorny bush, or roses, to discourage any drunk guests (or employees) from spontaneously climbing over.

*   Morton, Timothy. Hyperobjects: Philosophy and Ecology After the End of the World. University of Minnesota Press, 2013.

**   Lefebvre, Henri. Writings on Cities. 1968. Ed. Transl. Elenore Kofman & Eliza-beth Lebas. Oxford: Blackwell, 1996. Print.

***   Irazábal, Clara, "Chapter One: Citizenship Democracy and Public Space in Latin America." Ordinary Places Extraordinary Events: Citizenship Democracy and Public Space in South America. Ed. Clara Irazábal. New York: Routledge, 2008. 11-33. Print.

****   Scott, James C. Against the Grain: A Deep History of the Earliest States. New Haven: Yale University Press. 2017.

1.

Part 3
Surveillance
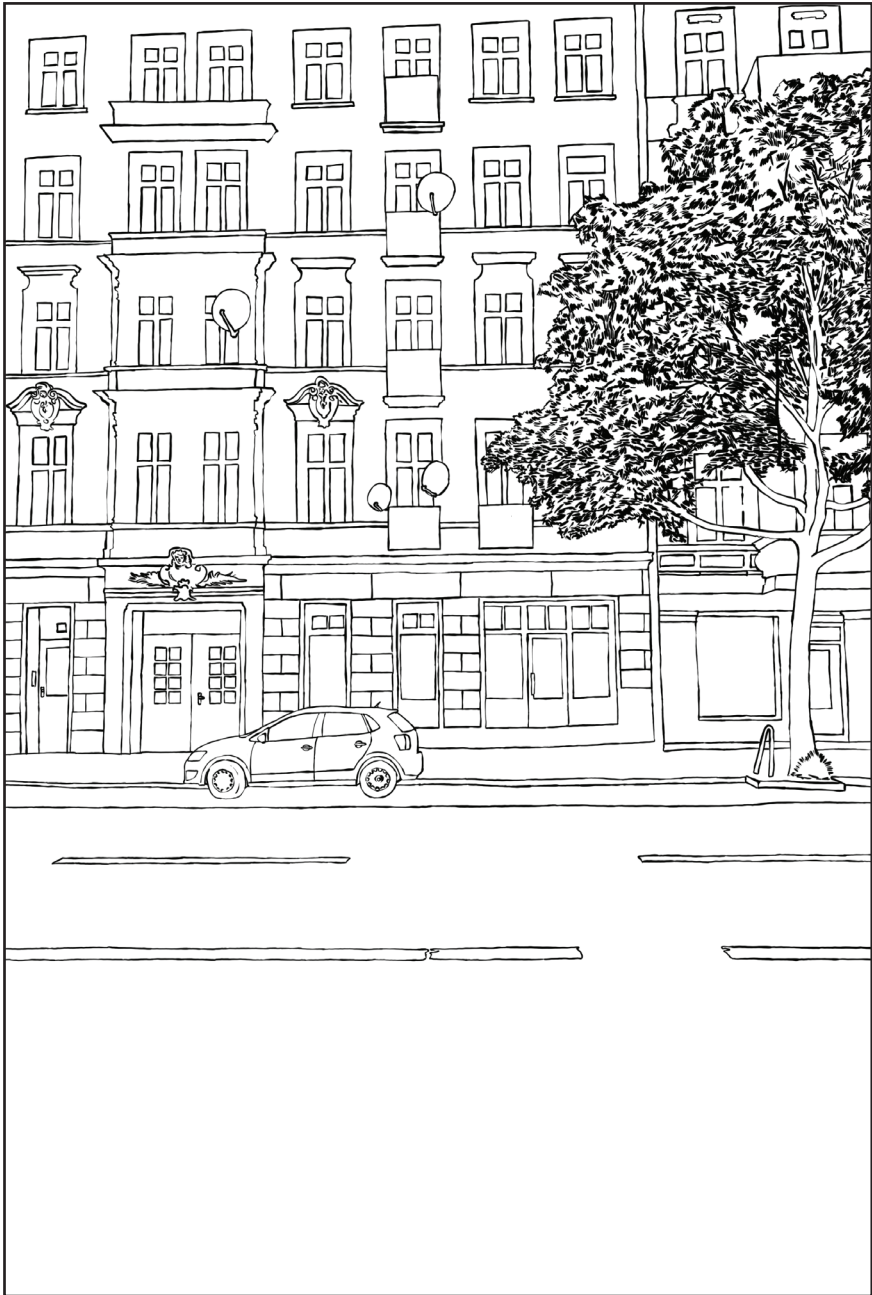
Former site of the Mindscape Universe studio.

"Six Degrees of Kevin Bacon or Bacon's Law is a parlor game where players challenge each other to find the shortest path between an arbitrary actor and prolific actor Kevin Bacon, linked by films they have appeared in together."

– Wikipedia

Chapter 6: Our Neighbours Are Trying to Go to Syria

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A Studio With Dirty Windows

I worked in loose association with a Berlin-based art collective ("Mindscape Universe") since 2013, and a few years in some of the members decided to rent a storefront to use as a studio space in Moabit Berlin. The neighbourhood was working class, and the studio was across the street from a large police administrative building.

One night in 2015, a police raid occurred – and dramatic photos of masked commandos appeared across German media the following day.[1] The neighbours beside the studio – a mosque run out of what was a converted shopfront– had been under surveillance for some time. After the raid, the landlord warned the art collective that the mosque used to rent our studio space also – and suggested that the studio might also be bugged. A friend's mother mentioned that the studio windows looked very dirty when she saw them on the evening news. The studio leader was thankful she had never put a sign with our name in front of the building.

A year later, I was working outside the country for INTERPOL when the Berlin terror ramming attack happened at the Breitscheid-platz Christmas market in 2016. The suspect fled the truck he used in the attack, and was caught by surveillance cameras outside the mosque,[2] beside the studio. He later fled Berlin, and was killed by police in Italy. The mosque apparently had numerous cases pending against it since the raid, and a neighbour complained to the press that the residents were men with long beards who were unfriendly.[3] The studio had not had really any interaction with them – they kept to themselves and they didn't come to the art openings.

Afterwards there was yet another raid, on suspicion that individuals in the mosque were preparing to join ISIS in Syria.[4] Photos of our studio began to appear in unrelated news stories as the stock image used for "terrorism in Germany." I once panicked, as I saw a picture of the studio in The Guardian – thinking something had happened, only to find out a raid occurred in Munich or some other city.

The mosque finally closed, and was replaced by what appeared to be some sort of hippy kita (daycare), which painted colourful pictures on the windows.

In the following year there was a break-in at the studio, where the thieves were unable to find anything remotely resembling new electronics, or personal valuables – but they did make off with some rare, antique photography equipment. Frankly there isn't a market for this at all – the network of people who are interested in such specialized equipment are all likely in the same Facebook groups for buying and selling, but it was nevertheless a very expensive loss. When the incident was reported to the police, they said that the building was no longer under surveillance, and so supposedly no footage of the incident existed.

Endnotes

1   Kather, Timo & Robert Ide. "Polizei nimmt zwei Terrorhelder fest." Der Tagesspeigel, 16 January 2015. <https://www.tagesspiegel.de/politik/razzia-gegen-salafisten-in-berlin-polizei-nimmt-zwei-terrorhelfer-fest/11238290.html>

2   Heine, Hannes et. al. "Das Kalifat in Berlin-Moabit." 23 December 2016. <https://www.tagesspiegel.de/berlin/fussilet-moschee-das-kalifat-in-berlin-moabit/19175066.html&usg=ALkJrhjL5DqCHvBqprY3rrnQWO_P0DffSg>
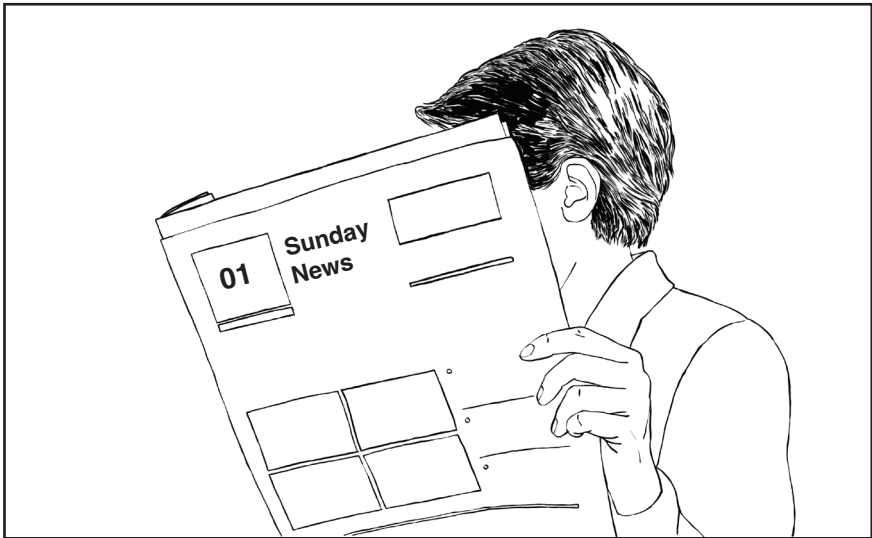
3   Ibid.

4   "Berlin Polizei nimmt drei mutmaßliche IS-Terroristen fest." 01 February 2017. <https://www.tagesspiegel.de/berlin/razzia-in-fussilet-moschee-berliner-polizei-nimmt-drei-mutmassliche-is-terroristen-fest/19330302.html>

Unattended baggage.

SWAT hand signal for "Dog".

"I can't let you do that Dave."

–Hal, in 2001 a Space Odyssey

Chapter 7: Closed Circuit Television

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Does CCTV Work?

Yes – but the research seems to indicate CCTV is good at preventing thefts, and bad at preventing violence. Rachel Armitage made a survey of research conducted by the British Home Office on a variety of sites where cameras were deployed (car parks, public housing, city centres, and public transit), and observed the effects on crime levels:

- "Public Housing saw a 3% decrease in crime"
- "Public Transit saw no statistically significant effect"
- "Car parks saw a 45% a reduction in crime"

Prefaced with the context that these studies looked at 24 sites in total, and were situated in the UK, Armitage makes a conclusion that CCTV appears to have no effect on violent crime, but does deter theft.[1]

This trend 'affects theft but not violence' is the common knowledge of CCTV deployment – it is reflected in publications such as The Effects of CCTV on Crime: What Works Briefing from the College of Policing UK ("CCTV is more effective when directed against

specific types of crime; it is effective at reducing theft of and from vehicles, but has no impact on levels of violent crime"),[2] and from COPS' (U.S. Justice Department) Using Public Surveillance Systems for Crime Control And Prevention: A Practical Guide for Law Enforcement and their Municipal Partners (La Vigne et al.) which gives similar advice to US officers.[3]

A 40 year meta analysis of American and British research, completed in 2019, generally found CCTV to be associated with a "modest and significant"[4] decrease in crime, with car parks being a clear area of reduction – although it was pointed out that several of these sites had 100% camera coverage and also used a combination of other factors such as guards and improved lighting.[5] Drug crime, auto theft, and property crime were the crime types which saw reductions, with no observable reduction for violent crime.[6]

> *Video surveillance systems do not resolve psychological, emotional, economic, or social conditions that can lead to crime, but the systems do present the opportunity to prevent specific types of crime under specific contexts through the variety of causal mechanisms….*
>
> CITRIS p169

What Does Observation Do To The Public?
CCTV digitalizes and expands Jane Jacob's concept of "eyes on the street" – that is the eyes of the public watching and controlling space,[7] a key aspect of the contemporary model of "situational crime prevention", where supervision reduces the number of places where crime can occur.[8] Observation also makes crime a less rational decision – thus discouraging offenders, in the school of thought of rational choice theory/routine activity theory.[9] In Armitage's view, the success of CCTV in reducing property crime as opposed to violent crime, reinforces the technology's impact on changing criminal behaviour where crime is a rational choice – where costs to benefits

are weighed, CCTV impacts in the calculation of those who would commit crimes.[10]

Finally, observation has a strong role in schools like Oscar Newman's theory of "defensible space" by where human territoriality is to be encouraged: boundaries of space are to be enforced through the clear delineation of public and private space, but also required is a control mechanism.[11]

> According to routine activity theory, most crime occurs in the presence of four circumstances: 1)A motivated offender; 2)A desirable target; 3)The meeting of the offender and the target; and 4) The absence or ineffectiveness of "controllers," including "intimate handlers," guardians,' and "place managers."[12]

In regards to the non-criminal, CCTV systems remind potential viewers that they should be vigilant for crime.[13] Another UK study found that the public tended to worry less about being victims of crime in CCTV areas – but this seemed to be tied more to areas where crime actually declined over time, suggesting the worry was linked to actual crime levels, and those who were aware of cameras showed increase worry about crime.[14] Members of the public predicted that they would visit new areas of town which were protected by CCTV, but in the end only 2-7% visited places they had previously avoided.[15] In the same study, support for CCTV tended to be very high at over 70%, and the perceived effectiveness was mixed – but on the whole the public were less likely to think that crime had lowered, or that the number of incidents was reduced.[16] CCTV is very popular with the public – referendums and polls in the United States have shown public support in the range of 70-80%.[17]

Anna Minton argues that CCTV causes the public to feel safer, but then retreat from participation in the 'natural surveillance' which would otherwise exist in public spaces.[18] It is an abdication of responsibility for personal safety – an assumption that someone else will report suspicious behaviour, or deal with the problem.[19] As

an alternative, Minton points to the work of Dutch traffic engineer Mondermann – who demonstrated that the removal of traffic signs and barriers in smaller intersections resulted in a decrease in the accident rate, as individuals took greater responsibility for their own wellbeing. Such a system forced individuals to make eye contact, consider body language, and base their actions on the observations of others.[20]

Do We Use CCTV?

CCTV remains one of the better researched areas of security or surveillance studies – with the UK producing many studies since their full embrace of the technology in the 90s,[21] and yet like so many aspects of security design, CCTV deployment still suffers from a distorted perception of effectiveness and folk-knowledge surrounding its use. One of the most comprehensive studies I have found was the 2008 CITRIS report from San Francisco – which again confirmed many of the previous adages about CCTV, pointing to mixed effectiveness, with no impact on violent crime (displacement of homicides – to outside the camera-surveilled areas), no impact on drug offences, but a reduction in property crime and theft. Use of CCTV by police and prosecutors did occur, but only in a small number of incidents when one looks at the entire city crime reporting.[22]

The question of CCTV effectiveness is then frustratingly neither a strong 'yes' nor a strong 'no.' The implementation of camera systems needs to be technically competent – but also well integrated within existing police and prosecutorial working needs, and hopefully as well in coordination with community programming to address crime more broadly.[23] Other studies also seem to indicate that active-monitoring of CCTV combined with a physical presence may be more helpful in reducing crime, and additionally more cost-effective.[24] As an anti-terror strategy, CCTV may have value in assisting with the identification of suspects, but it's lack of effectiveness at stopping violent crimes would seem to indicate that it has little to offer in this crime area.

The Surveillance Society[25]

Surveillance in the present however expands beyond CCTV – it takes many forms, and David Lyon argues that we are subject to an increasingly bureaucratic system of information collection, with the end objective of legibility[26] – to make all things readable, and sortable. Surveillance is probably better thought of, not as just a record of who is on tape, but as the combined record of all personal activities which can be searched. This plea for increased legibility is where the anti-terror argument is made: that expansive surveillance offers the opportunity to detect terror networks before events occur, rather than to just reactively identify perpetrators after they have acted and been caught on camera.

To freely brainstorm, it is worth considering all the following means, by which it is presently possible to identify individuals and track their activities:

- Social media including personal information, work information, travel information (through photographs, geotagging), and commercial activity tied to online habits or payment records.
- Cell phone tower records – identifying which cellphones were used in a particular area, or tracking the use of a single cellphone. Bluetooth data/RFID presence is also trackable with sensors. Metadata is also of course collectable. Apps running on cellphones may also collect and sell location/meta data.
- Networked CCTVs, tracking movement between different sites.
- Arial surveillance of entire cities by an airplane taking photographs (pioneered in the Iraq War, and later offered by private companies).
- "Shot-spotter" systems which track gunshots/loud noise in cities.
- Facial recognition, license plate recognition systems (stationary CCTVs and also cameras mounted on police cars), gait recognition.
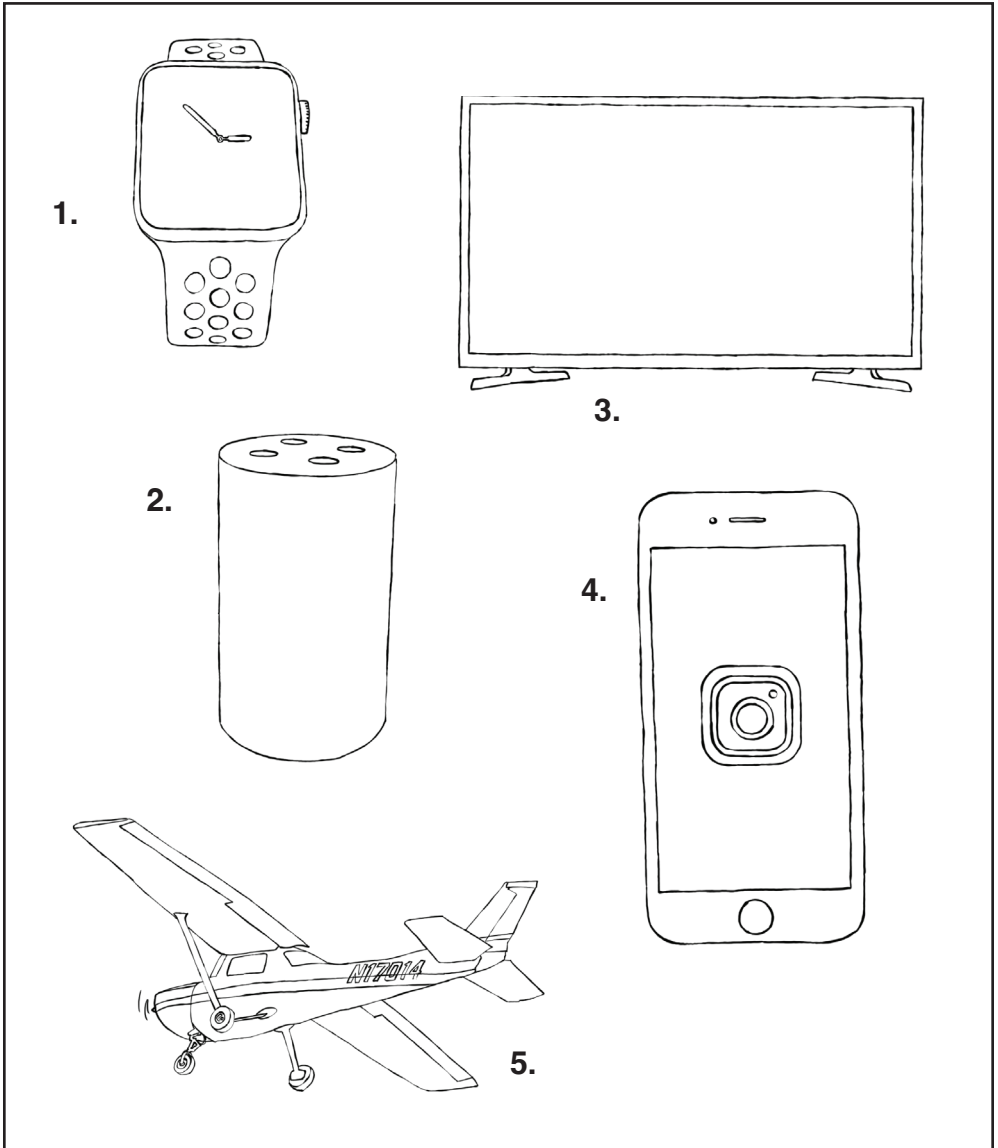
1. Fitness tracker – biometric/health data, location data, emails/messages. 2. Smart home device – microphone, potentially camera system, schedule, access to computer files. 3. Smart TV/IOT "Internet of Things" device, schedule, microphone, access to data. 4. Smart phone – location, data, microphone, camera, emails/messages/calls, access to data, social media allows networking of your contacts. 5 Arial Surveillance Airplane – location outisde and potentially inside, call interception.

- "Smart Home" and IoT ("Internet of Things") devices like fridges connected to the internet may reveal the activities and habits of their owners, or directly listen in on them.

The information gathered by these relatively new technologies is also subject to ground-breaking data processing which was not previously possible: artificial intelligence can sort images, identify relationships, and assign probabilities to unthinkably large data sets. 'Too much data' is no longer a problem, when a human being is no longer required for manual review, machine learning can now even be done by small companies, to identify patterns of behaviour and pick the best targets (people) out of huge pools of data.

But what can go wrong? Privacy is compromised when information goes missing, "social exclusion" occurs (including sorting of persons without their consent, or in a way that reproduces existent structures), there are transparency concerns about where data is, and "function creep" occurs (when information is used beyond its originally intended purposes).[27]

A very real-world example of many of these problems is seen in Russia's open data markets – which the research group Bellingcat famously used to identify the FSB behind the 2020 Navalny assassination attempt.[28] For low prices, all sorts of non- public government data and private sector data on individuals can be purchased, from plane and train manifests, to passport records and registered addresses, to cell phone meta-data.[29] The extent to which this data is available makes it possible to identify the movements and contacts of even spies working for the Russian government.

As Bellingcat points out – none of this is possible in the West for private citizens (governments with a court order are another matter), but there is still the flourishing world of OSINT, or Open Source Intelligence gathered from social media, news articles, public records, Google Street View, etc. Details such as social media

photos can reveal information about a persons life, routines, consumer habits, or movements.

The Intelligence Cycle – Where We End Up
The endpoint of all this surveillance, is an increased legibility to cities – which security forces need the ability to read, so that they can act.[30] Information on people and places will no longer belong solely to insiders, but to governments as well – and "geographies of insurrection" (places that are not under control) will be be reduced.[31] 'Surveillance' as an exercise favours the big players – governments, large organizations, security forces, companies – and is anti-local, anti-individual by nature.
We might judge that there are circumstances where surveillance and CCTV are worth the risks – or that the risks can be controlled through an approach like 'privacy by design' or a decentralized approach to record keeping, but in order to make that decision we have to understand the technical basis of security technology, and the social implications that the record keeping entail.

An example of this technical nuance alone, is seen in debate around the intelligence gathering and how surveillance should be developed. Terrorism expert Walter Laqueur writing in 1985 on the collection of intelligence, lamented that technological advances starting in the 1950s had led to a perception that technical intelligence gathering offered new solutions to a knowledge gap – and had contributed to a further decline in the already sidelined aspect of human intelligence gathering.[32] Which is to say, that we have had a long-running trend of looking towards investing more in technical surveillance systems, at the expense of more nuanced human-sourced or interpersonal information gathering. As Laqueur points out: technical intelligence can provide quantitative metrics which are easier to prove or disprove, but it is harder to assess the accuracy/value about a specific "debate in the Soviet Politburo."[33] The later activity may be more rich in information, but harder for a large organization to quantify and count: harder to measure suc-

cess for, and track for expense purposes. All of which is to say, that reading the final score of the baseball game is a poor substitute for having watched the actual game – and it is worth considering if the opportunity cost from surveillance technologies is actually an effective way to address problems of crime in cities.
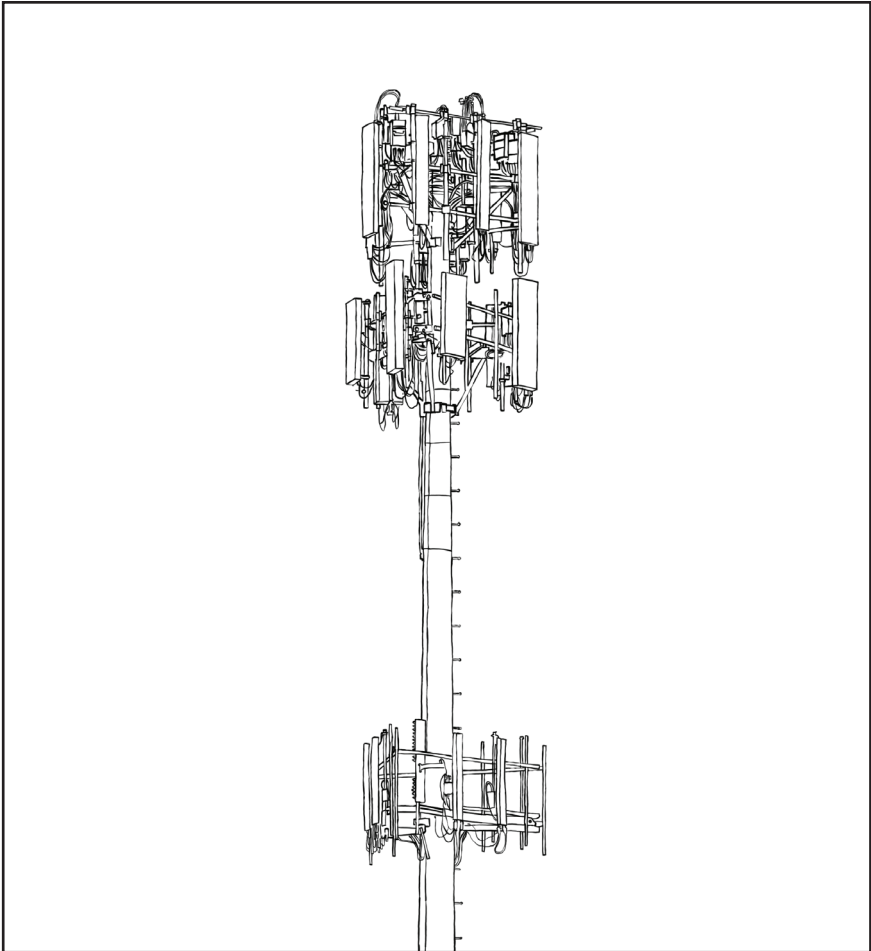
Cell phone tower data has been used in recent years to place individuals at crime scenes. Fake cell towers ("Stingrays") have also been used to intercept cell signals, in a "man in the middle" attack to listen in on communications. Conspiracy theorists have also begun to target cellphone towers for attack.

Endnotes

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5   Ibid.

6   Ibid.

7   Jacobs, Jane. The Death and Life of Great American Cities. New York: Random House, 1961. Print.

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10   Armitage, Rachel. "To CCTV or Not to CCTV." Nacro Crime and Policy Section: London, 2002. Url: https://epic.org/privacy/surveillance/spotlight/0505/nacro02.pdf

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of the Effectiveness of San Francisco's Community Safety Cameras (December 17, 2008)." Available at SSRN: https://ssrn.com/abstract=2183381 or http://dx.doi.org/10.2139/ssrn.2183381

18   Anna Minton "Ground Control: Fear and Happiness in the Twenty-First Century City." Penguin Books: London, 2009. Print.

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25   Lyon, David. "Surveillance Society." Talk for Festival del Diritto. Piacenza, Italy. Sept. 28 2008. Lecture (transcribed).

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28   Bellingcat Investigation Team. "Hunting the Hunters: How We Identified Navalny's FSB Stalkers" December 14, 2020. <https://www.bellingcat.com/resources/2020/12/14/navalny-fsb-methodology/>
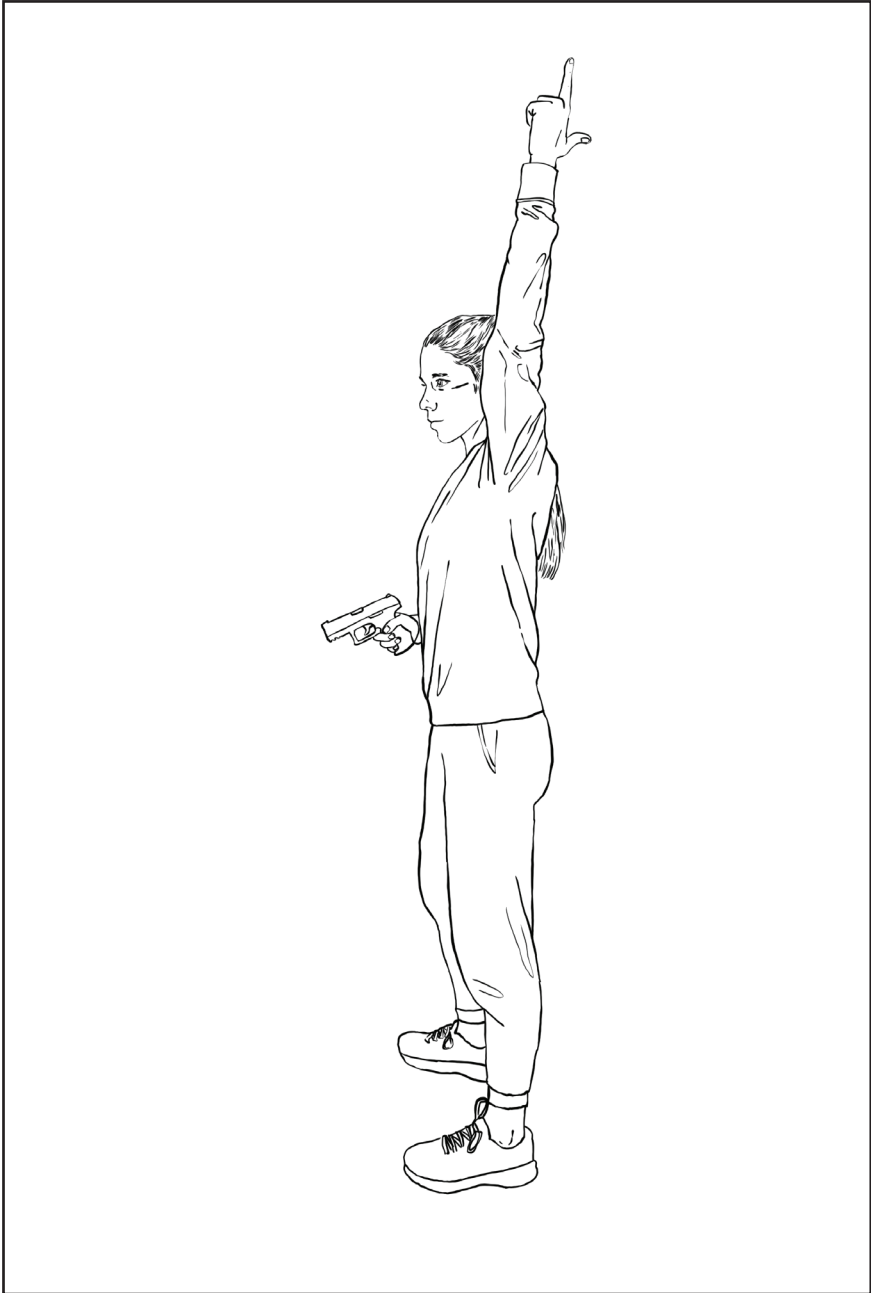
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Hand signal for "Rifle spotted".

Part 4
Raids and CQB

"Das Einfamilienhaus hat viele Angriffspunkte."

–Hans-Werner Bastian, *Sicherheits-Check fuer Haus und Wohnung: Schutz vor Einbruch, Brand und Wasserschaden*

Chapter 8: Doom

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Dynamic Entry

In 1840 a hundred-thousand French troops hunted for ten-thousand insurgents in the streets of Algiers, deploying into columns that blasted and burned their way through the dense city in an act of "military urban planning".[1] The French General Bugeaud put into writings his prescriptions for how raids should work in an urban setting: covering and overwatch fire, rapid entry to reduce exposure to the enemy, use of explosives to create new passageways between buildings, working methodically to clear structures before moving on to the next.[2] "The War of Streets and Houses", serves as an early manual for urban combat and close quarters battle – detailing strategies still used today.

Raids, dynamic entry, CQB (close quarters battle) and the like are tactics used by police special forces, security forces, and military forces for capturing built structures when they cannot be outright destroyed. In the Western world, police special forces teams arose with a young LAPD Commander Daryl Gates starting the Los Angeles Police Department "Special Weapons and Tactics" in 1966.[3]

As an "urban counterinsurgency bulwark"[4] the tactic of deploying police special teams has spread across the United States, and there are now an estimated more than 30,000 such police units,[5] who are deployed for incidents of overwhelming violence such as the 1997 North Hollywood Shootout, but also in the the infamous Ruby Ridge stand-off,[6] and to serve municipal code violations for improperly stacked wood.[7]

Battle Drill 6
The mechanics of room clearing are detailed in the U.S. Army's "Battle Drill 6" which lays out the protocol for how to enter a building, and these generally follow many of the basic principles of combat: approach the building from positions of cover/concealment (i.e. don't expose yourself to getting shot at), and suppress enemy fire (i.e. shoot at them with an overwhelming volume of fire so that they are forced to stay behind cover, and not shoot at you, especially while your teammates are moving).[8] Building-specific concerns also arise, for example doorways must not be blocked in a human traffic jam (the so called "fatal funnel" because a doorway is more likely to attract gunfire, and multiple individuals could be hit if a doorway is blocked), and grenades should be thrown into rooms before entry (to kill/wound/stun occupants – this depends on the ROE/Rules of Engagement for the specific mission).[9]

With this said – discussing room clearing in text is difficult, akin to describing a dance choreography, and individuals I have spoken to, and accounts I have read generally describe room clearing as an activity learned from practice and rehearsal than from a book. This also means that the mechanical details by which room clearing is conducted are likely best gained from speaking to experienced practitioner, reading the accounts of practitioners, attending workshops or viewing recordings of workshops or groups of soldiers running the Battle Drill 6 exercise.

Online one can find a huge surplus of training videos, interviews,

Knowing as much as you can about layout is key – how deep will the room be on the left and right side? Are there windows? Which way do the doors open?

Avoiding dangerous parts of the structure is also important – don't hover in doorways (the "fatal funnel"), and don't get choked up in hallways.

In principle when you decide to take a structure, there are broadly two approaches – the so called "Dynamic Entry" and a "Limited Penetration" approach.

The latter approach favours initial observation of from the outside – can we see through windows, can we work any angles of observation from outside the space before committing to full entry?
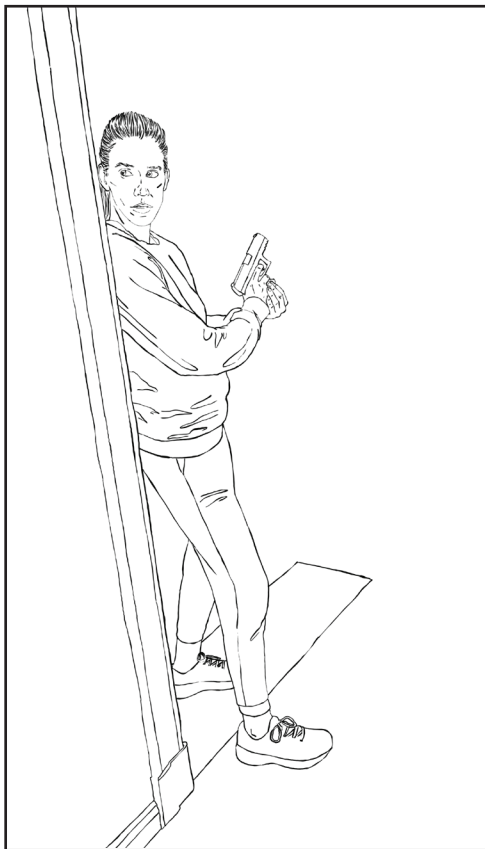
A basic principle then is to "pie" the angle – that is peek around a corner in small increments, clearing the room degree by degree. This allows you to duck back behind the wall if a threat engages you first.
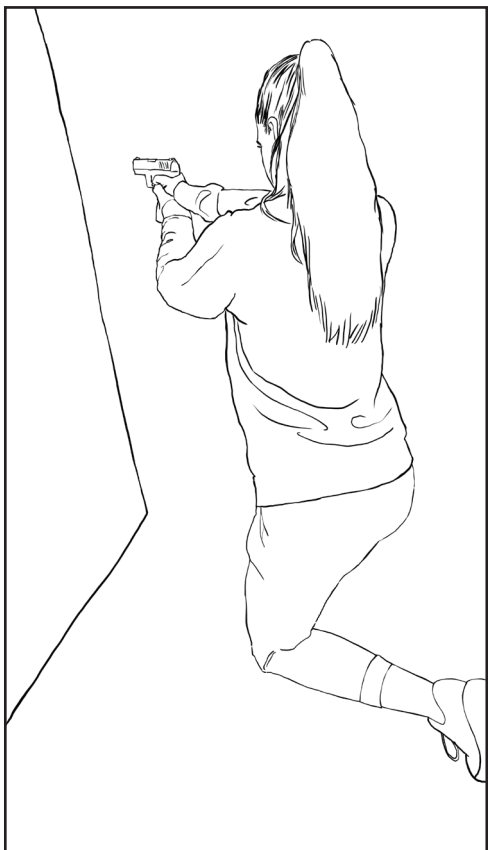
This approach is slower, but potentially safer.

critiques, and even combat an training footage of actual soldiers and special units. One example of very complete videos can be found on Youtube, sponsored by the clothing company UF Pro, which has a series of videos from a workshop by an Israeli trainer Eli Feildboy, who appears to be training German police officers.[10] The videos give a perspective on room clearing, on what might be called the "problem of doorways", that is how to enter a room by controlling angles of visibility. The person attempting to enter a room 'slices the pie', or in the parlance of Eli Feilboy works the narrow and wide angles, to clear a doorway degree by degree instead of all at once.[11][12]

This also represents an alternative, or less militarized approach to room clearing – where the attackers are not using grenades, and they are not dynamically entering a room to dominate it, but rather are attempting to work the room from the outside as much as possible before making entry While some tactics such as "mouse-holing" (creating a new entrance way with explosives) may be allowable in military contexts, this is not necessarily possible in a domestic/policing context – the same way that the use of 'non-lethal' stun grenades may not always be possible (they are still ultimatly an explosive, and can cause fires, or burns or even death if they explode on a person), and so training methods need to reflect a police context rather than the military context where CQB was invented.

Room clearing represents one of the most difficult combat problems: there is a high potential for injury or death for the attackers since the occupant of the building can be hidden and position themselves well, and vast numerical superiority is needed to minimize the angles for counterattack. In a military context, room clearing is never desirable: it is safer and faster to simply destroy the building and move on – but for police this is obviously not a viable strategy, or at least it shouldn't be in most contexts.

Extreme Prejudice
In the United States, the over-application of of SWAT teams, or

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police executing no-knock raids, has been a focal point for criticisms about policing tactics, from occasions where they kill or apply extreme violence to offenders,[13] injure other police officers,[14] see deployment in situations where there is no indication that regular police would encounter armed suspects,[15] or they raid the wrong premises with tragic results or injury involved people.[16] Raids are high-risk operations: the police officers themselves have little space to maneuver, they are in close proximity to suspects they often do not know well, in a building they do not know, sometimes in the middle of the night. While some specialized units, such as a designated Hostage Rescue Team may have the training background to support such work – it is also worth realistically considering if local police force SWAT teams have the training and skills to be in situations.

In the United States, 90% of SWAT teams are not typically constituted on a full-time basis, but rather are regular officers who have special training and weapons.[17] These officers can be called when situations arise, and were in part a response to the Columbine school shooting, where the local police did not enter the building to confront the attackers, but instead waited for SWAT.[18] This is an approach that has generally since been revised, and now officers on the scene of incidents will attempt to enter buildings if they can.[19] However this also makes a point that while SWAT teams may be needed to resolve special incidents –especially say when an elite team is needed for a pre-planned raid, or a hostage crisis– when it comes to an unfolding act of terror, or an unfolding act of violence, the officers most likely to confront the individual or individuals are likely to be those most nearby, and likely have not had special training. While a large city has the scale to justify a specialized unit, the proliferation of SWAT teams in small cities and towns begs questions about the use of resource – specifically if it would be better spent on something less glamorous than a police special forces team, like range-time for officers, or de-escalation training.

Dynamic Entry is typically what we think of from SWAT teams, and how they are often portrayed in film.
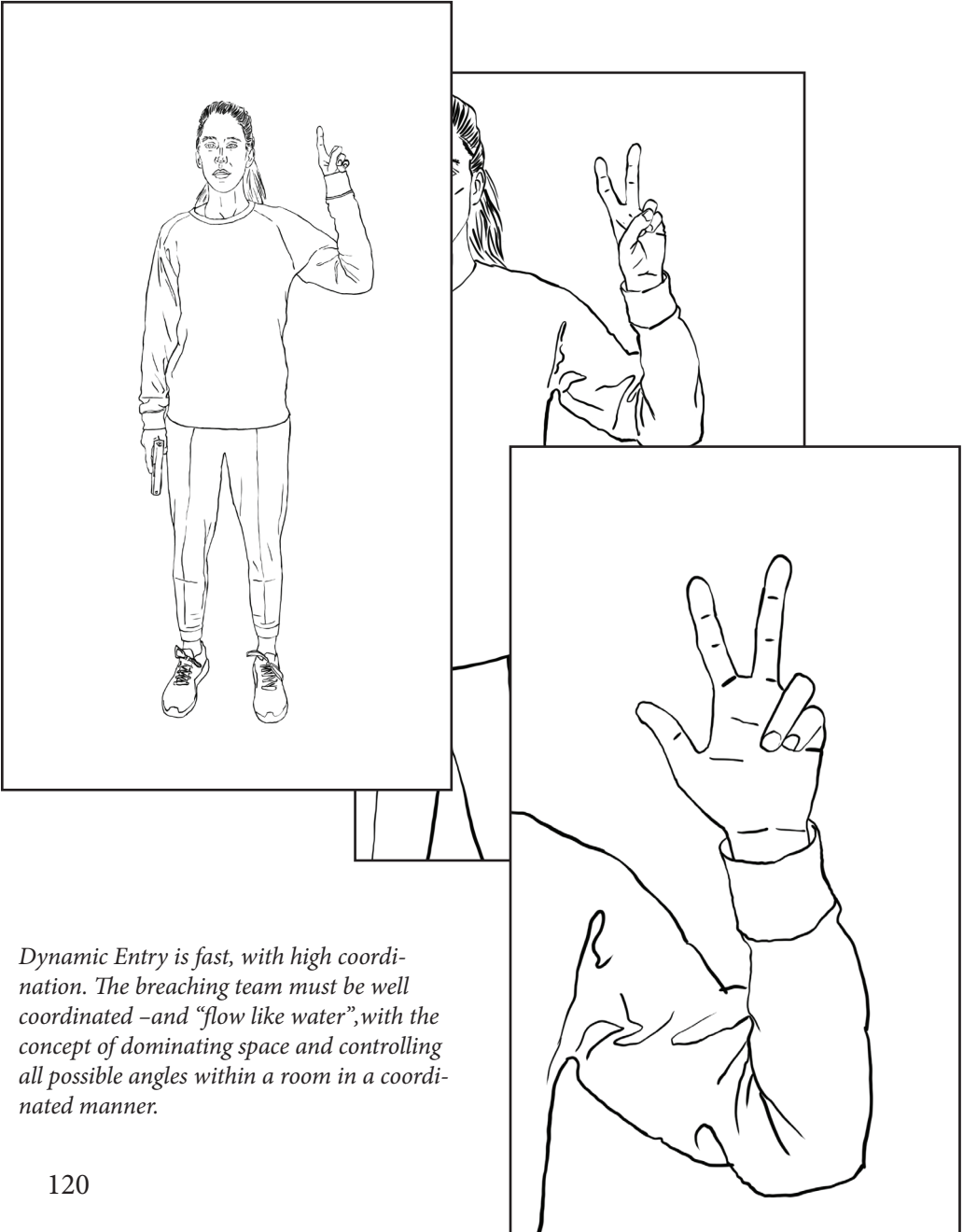
Dynamic Entry is fast, with high coordination. The breaching team must be well coordinated –and "flow like water", with the concept of dominating space and controlling all possible angles within a room in a coordinated manner.

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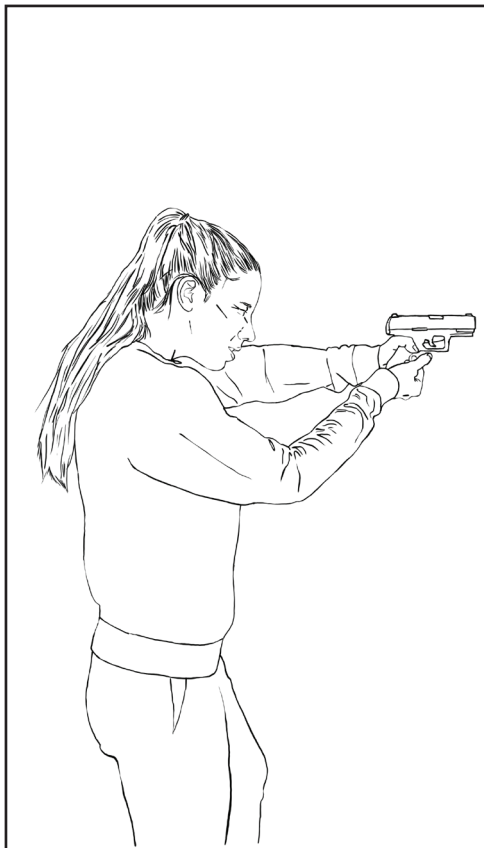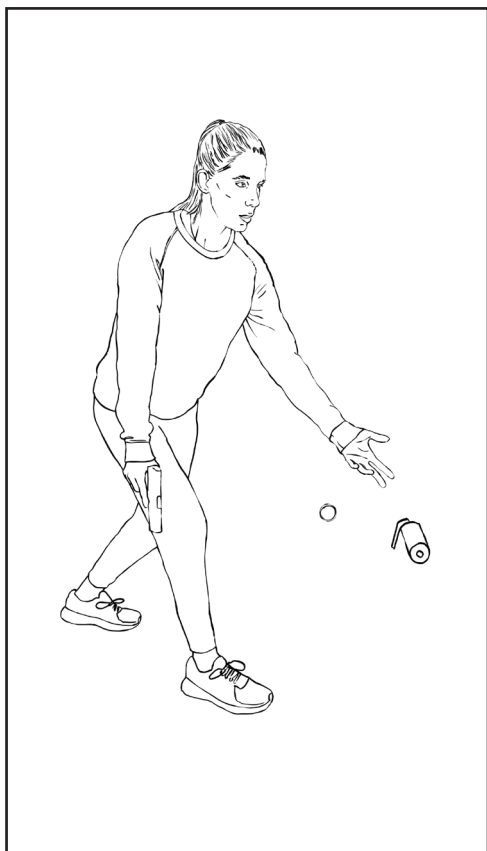
Dynamic Entry uses the element of suprise – flash grenades or fragmentation gre-nades are used to stun and disorient the occupants of a room, while the breaching team moves quickly into the space. The attacking team is subject to great personal risk, but they hope that by moving quickly they gain the iniative and can fire first – securing the room before the defenders have an opportunity to react.

Dynamic Entry is the popular approach to CQB. It may be of particular use in situations where hostages or explosives are present, with the idea that you need to secure these before the defender can act. Realistically a hybrid approach is of course also possible.

There is a bit of a problem then – in that in the United States alone 50,000 SWAT team raids take place yearly,[20] executed by mostly part-time members. It is clear that police do need some tactical training, since they may be called on to intervene before a designated tactical team arrives, and that it would be good if a tactical team can be reached on short-notice. The problem is perhaps then not as much in having the team, and having the training, but that police department reach for that capability when they shouldn't. One study on the city of Maryland for example found that SWAT teams were most likely to be deployed in communities of colour and could not be statistically correlated with lower crime, with the same study finding that news reports of SWAT activity eroded confidence in the police.[21] Prince George County in Maryland has 900 000 people and averages 1 raid a day, while the whole U.S. State of Maryland has about 4.5 raids a day – half of all raids are for non-violent crimes, and 90% are for executing a search warrant.[22]

In the American context there are a variety of specific problems which come together: government programs such as "1033" which provide surplus military weapons to police forces have been implicated in police militarization, and police attitudes and policies of engagement seem to support the use of deadly force in more situations – Germany regular posts yearly police shooting statistics in the double digits, and even more culturally similar countries the UK and Canada don't see the same level of raid activity. Critics have argued that when you have a hammer – everything looks like a nail, so cities that have SWAT teams tend to use them for an increasing number of circumstances, even when other methods might be less risky, or less likely to escalate. The town of Ludlow Massachusetts, population 21,000, has 40 police officers on payroll, and has a SWAT team.[23]

Endnotes

1   Weizman, Eyal. "Introduction to text The War of Streets of Houses by Thomas Bugeaud." Cabinet Magazine, Issue 22: September 2006.

2   Bugeaud, Thomas "The War of Streets and Houses" Cabinet Magazine, Issue 22: September 2006.

3   Parenti, Christian. "Lockdown America: Police and Prisons in the Age of Crisis." Verso Books, 2000.

4   Ibid.

5   Ibid.

6   The Ruby Ridge incident in Idaho in 1992, saw the U.S. Marshalls Service and the FBI Hostage Rescue Team saw an attempt Randy Weaver at his isolated cabin devolve into a standoff, resulting in the deaths of a police officer, Randy Weaver's 14 year old son, the family dog, and Vicki Weaver. Ms. Weaver was shot by a police sniper through a door, while holding a baby. The disastrous siege is generally credited as being one of the motivating factors behind the 90s far-right militia movement, alongside the Waco Siege. This wave of militia movement would only come to an end with the after white supremacist Timothy McVee perpetrated the Oklamoha City Bombing in 1995

7   Balko, Radley. "Texas Police Hit Organic Farm With Massive SWAT Raid." Huffington Post 15 August 2013. <https://www.huffingtonpost.com/2013/08/15/texas-swat-team-conducts-_n_3764951.html?ncid=engmodush-pmg00000006>

8   Battle Drill 6 is reprinted by the non-government affiliated Army Study Guide website, and can be accessed at <https://www.armystudyguide.com/content/EIB/EIB_Related_Battle_Drills/battle-drill-6a-enter-a-b.shtml>

9   Ibid.

10   The video in question can be found at <https://youtu.be/QSzTqh8ZsEE>

11   Ibid.

12   Ironically, one also encounters the exact same discussion in military shooting games, especially Counter Strike, with its highly developed competitive circuit. Angles of visibility dictate that players should ideally "peek" around corners that are far ahead of them, so that they gain maximum visibility through minimal movement, and are able to fallback more easily. Players use grenades and flash grenades at specific angles to strategically block lines of visibility – and while the game does not allow "cooking off" grenades (holding them before throwing) players employ the tactic of throwing grenades high into the air, so that they land and explode with no warning – to the same effect as cooking off. Players also employ the tactic of "pre-firing" their weapons – that is they anticipate the potential position of a person behind an object, and as they move around the object they fire in anticipation, achieving a speed of engagement that is faster than moving, observing, and reacting.

13   Christian Parenti's details how the Oxnard California SWAT team killed

an unarmed suspect emerging from his house after an officer became confused by the sound of his colleagues ess-lethal weapon and thought he heard shots. (see earlier citation in this section)

14   Parenti details how the same Oxnard SWAT had within the same year, shot an officer during raid who died of their wounds. (see earlier citation in this section)

15   During the COVID pandemic, a former data scientist who worked for the State Government of Florida left her position, and continued to update a private count of infections, in contradiction of the government statistics on the pandemic. Armed police raided her house with guns drawn, to confiscate her computers as evidence.
Pilkington, Ed. "Armed police raid home of Florida scientist fired over Covid-19 date." The Guardian 8 December 2020. <https://www.theguardian.com/us-news/2020/dec/07/florida-police-raid-data-scientist-coronavirus>

16   The Breonna Taylor shooting in 2020 was one of the flash points for the Black Lives Matter in the United States, provoking massive protests. Police executed a raid in the middle of the night, searching for the ex-boyfriend of Ms. Taylor, and began shooting into her residence, killing her.

17   Griffith, David. "Answering SWAT Critics" Police Magazine 16 August 2019 <https://www.policemag.com/523365/answering-swat-critics>

18   Peterson, Randy. "Is It Time to Scale Back on SWAT Teams?" The Hill, 18 May 2017. <https://thehill.com/blogs/pundits-blog/civil-rights/334069-is-it-time-to-stop-using-swat-teams-so-often>

19   Ibid

20   Balko, Radley. "Shedding Light on the Use of SWAT Teams." The Washington Post, 17 February 2014. <https://www.washingtonpost.com/news/the-watch/wp/2014/02/17/shedding-light-on-the-use-of-swat-teams/>

21   Mummolo, Jonathan. "Militarization fails to enhance police safety or reduce crime but may harm police reputation" Proceedings of the National Academy of Sciences Sep 2018, 115 (37) 9181-9186 <https://www.pnas.org/content/115/37/9181>

22   Balko, Radley. "Shedding Light on the Use of SWAT Teams." The Washington Post, 17 February 2014. <https://www.washingtonpost.com/news/the-watch/wp/2014/02/17/shedding-light-on-the-use-of-swat-teams/>

23   Kirschner, Seth. "Small Town SWAT Team" Boston Insitute for Non-Profit Journalism, 15 November 2017. <https://binjonline.com/2017/11/15/small-town-swat-team/>
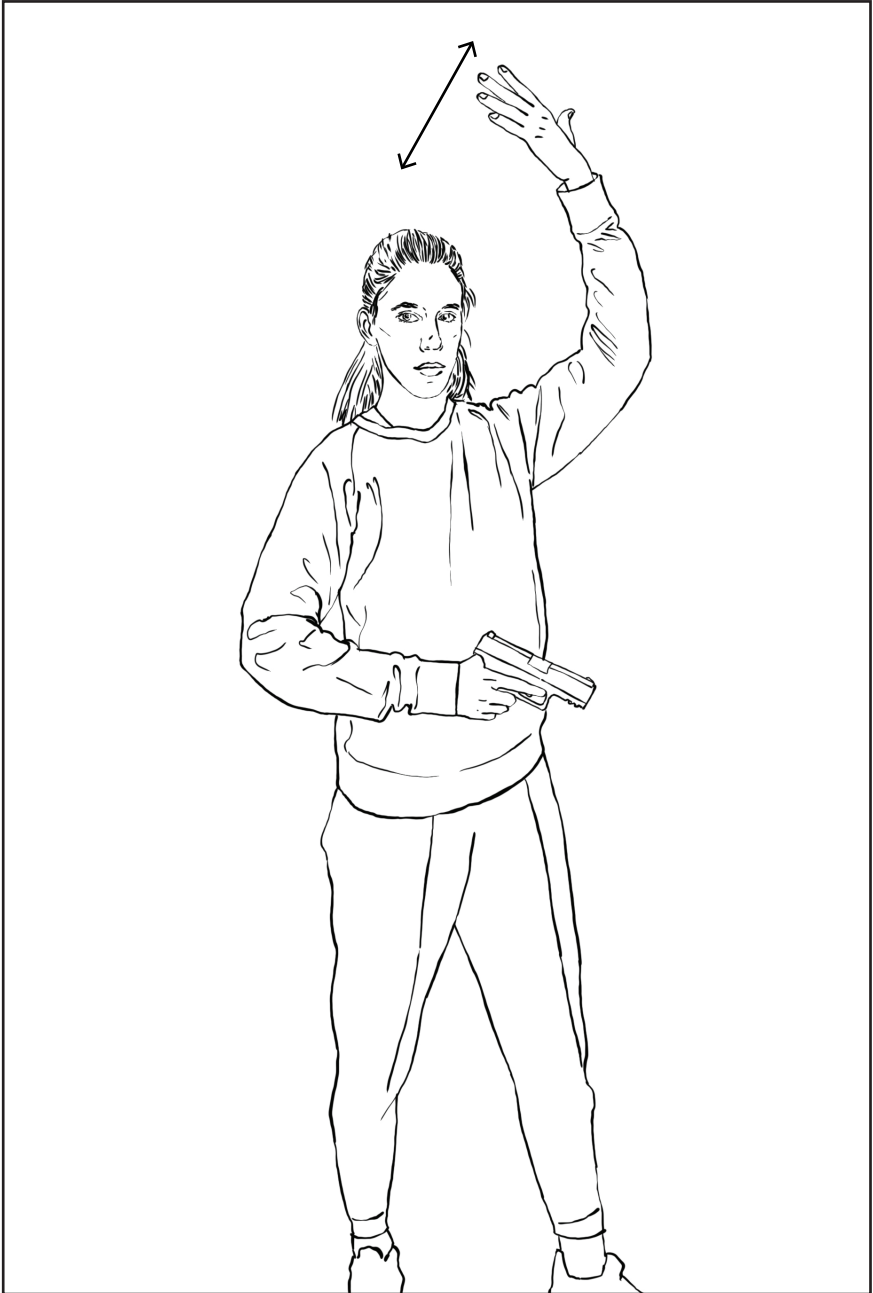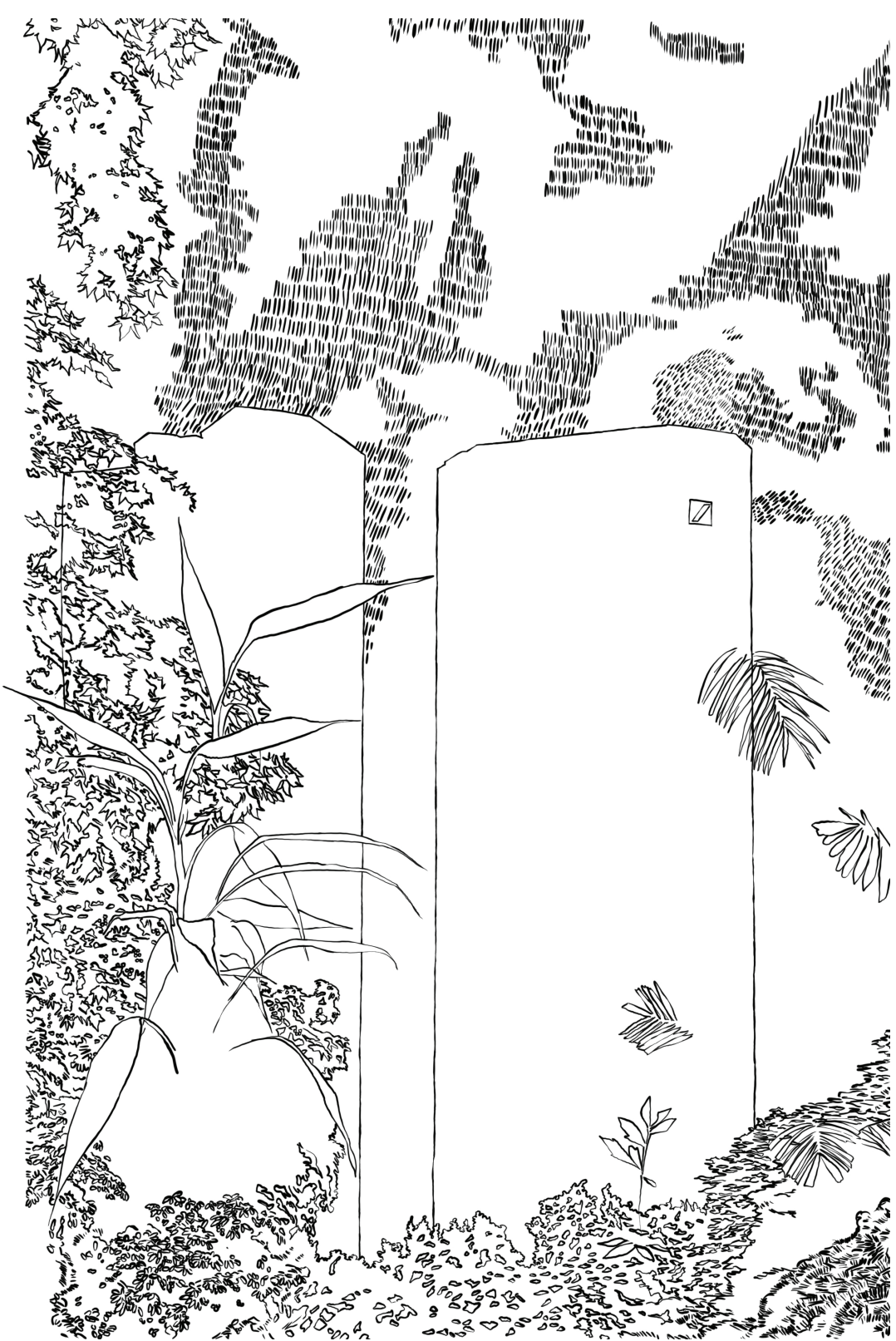
Hand signal for "Come to Me".

Hand signal for "Hostage".

Part 5
Building Security

"If you want a vision of the future, imagine a boot stamping on a human face –forever."

– George Orwell

Chapter 9: Hell on Earth

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Final Fantasy

We live in era where the technological opportunities for security are expanding, the expansion of this technology comes with risks which require careful evaluation, and there is political enthusiasm for this expansion regardless in the two decades since 9/11.

Specifically, the effectiveness of anti-terrorism infrastructure is difficult to evaluate – when the non-occurrence of a rare and unlikely event is the measure of success, it is easy to claim that security measures were effective.[1] Additionally, centralized security power, and the infrastructure that those systems require, are obviously suceptible to function creep –where the system is used beyond its original purpose,[2] and we have historical experiences to back that up,[3] and new examples have been frequently emerging in the era of dig data.[4]

A previous chapter on 'surveillance' included a brainstorming exercise of surveillance technologies that are presently existent – these are not experimental or theoretical, but products and services which security services can (and do employ), if still in a limited way. We need not reach towards a futuristic science fiction land-

scape: we can simply role-play with the technology we have right now.

The complete personal and digital data of an individual can be obtained by warrant in most jurisdictions: search history, social media activity, all payment activity including deposits and withdrawls of cash notes, all electronic communications, their movements based on cellphone triangulation and the activity logs from their electronics. Outside of someone's home, in most jurisdictions a person has limited expectations of privacy, and they may be recorded by CCTV from residential and commercial buildings, in public buildings like train stations and city offices – or recorded by mobile cameras such as those mounted to cars and drones – facial recognition could link videos together to establish the movement patterns of a person and their contacts. A person's social network may be infiltrated by a stranger or the records simply supoenaed, their use of public space controlled through the use of "security zones" or infrastructure which modulates what transportation they can use, and stipulates that they must pass through checkpoints to access increasing parts of the city. A whole city can be observed by airplane – photographing everyone's movements, and the movement of groups of people can be tracked by cellphone tower activity. Militarized domestic security forces in some regions appear indistinguishable from the regular army – using armoured vehicles, and undercover agents to infiltrate community groups. Journalism and academia are tracked and listed as threat vectors for companies and government agencies, while environmental protests are labeled as national security threats.

The reality is that technology and policy are intertwined: all of the database systems, A.I. platforms, and engineering solutions are accompanied by a political permission to operate. Security experts and technologists design these solutions, but they operate with political oversight.
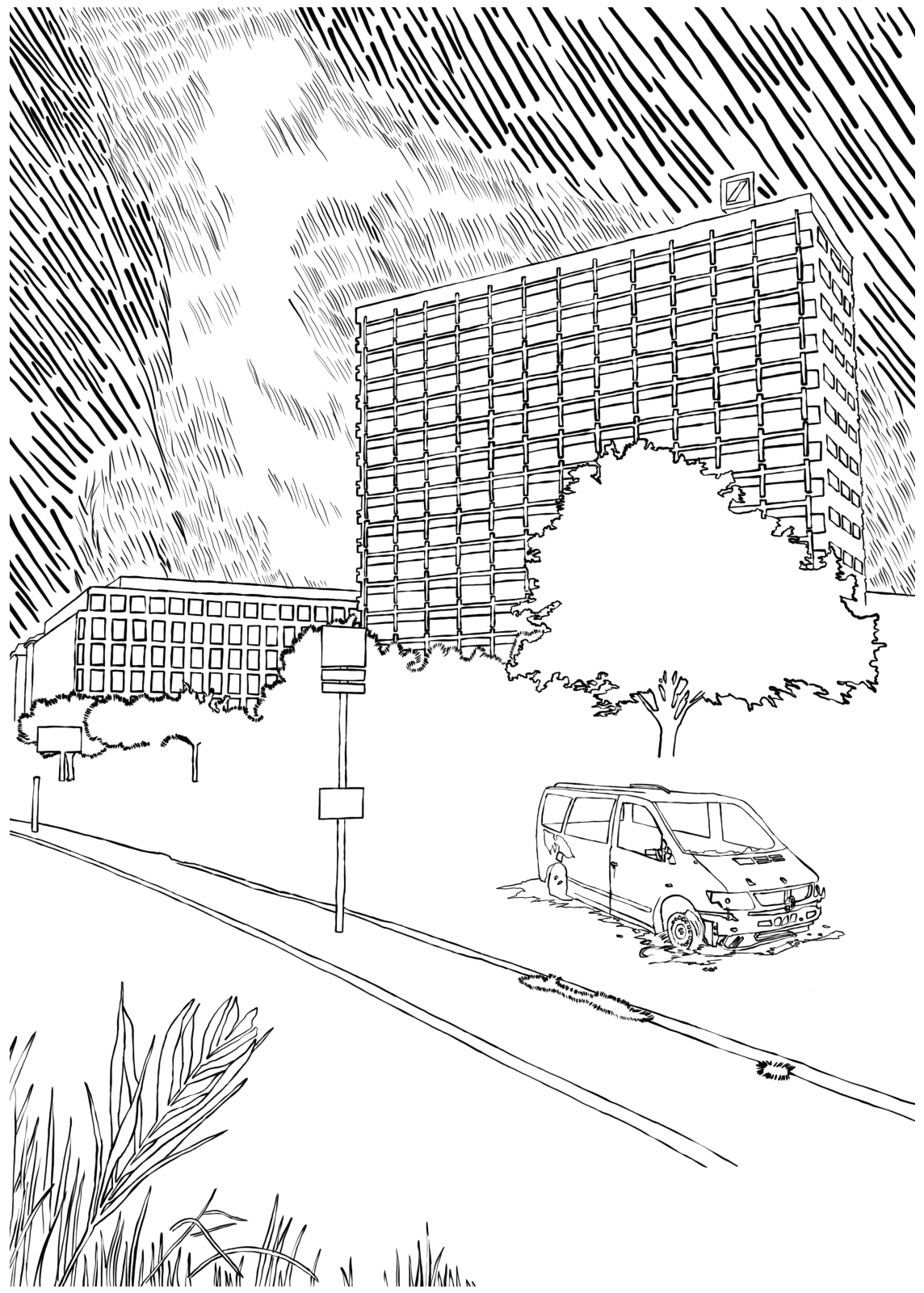
And herein lies a problem – in both the poor way that security systems are explained and communicated to the general public, and to policy makers. The mechanics of how these systems function are not clear, but the mechanics matter!* The way that security is implemented on the mechanical level has implications not only in terms of its impact on human dignity, but also in terms of its effectiveness. Even if one ignores the human rights dimension to this discussion (and they shouldn't), the questionable effectiveness of many technologies and strategies presently deployed for 'counter-terrorism' amounts to poor planning, and irresponsibility when one considerts the lost opportunity cost of money invested in solutions that 'perform' counter-terrorism, but do little to actually affect outcomes.

Open Source Security
Professional secrecy is a part of the security world – and to some extent it makes sense that the exact operating procedures for a building or organization would be confidential. But within the security industry individuals are suprisingly forethcoming, there is of course lots of movement of people between the public and private sector, and realistically when we exclude day-to-day operational procedures, the core knowledge of the security industry is fairly wide-spread, worldwide. While the literal daily working manual of a Western police hostage rescue teams may be 'Classified' – you can take in-person courses, read and watch videos online, and hire these people to train you: the basics of room-clearing are broadly similar across the Western world and these invidivuals all train with each other, from secretive elite units down to local SWAT. There is a

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*   It was said best and most iconically by Marshal McLuhan when he pointed out the "medium is the message." The way that security is delivered is a message. Even encounters which for police may be non-eventful –i.e. temporarily handcuffing an innocent person until they can confirm their identity– deliver a message. These events spell out for individual how the authorities view their human dignity as an individual, or as a member of a group. Messages require the participation of an audience – the artist cannot control what the audience believes or how they recieve the work – and neither can security forces truly explain their way out of a message which recieved a certain way the audience.
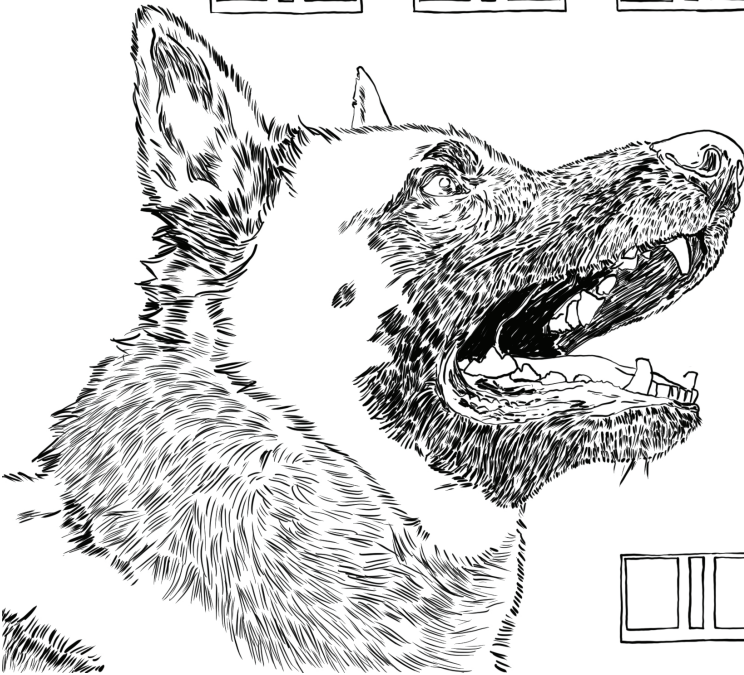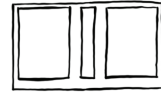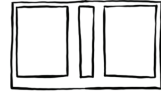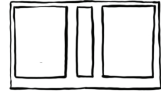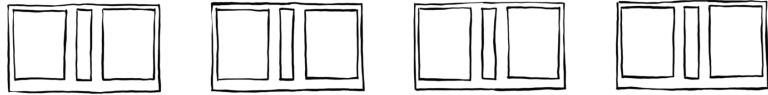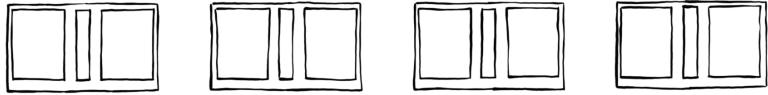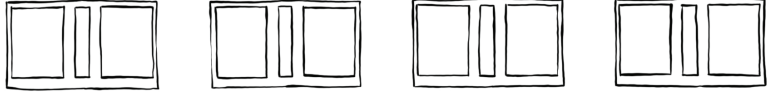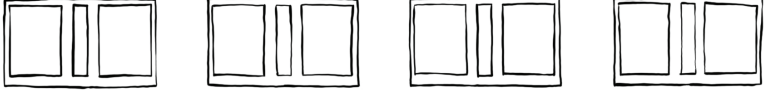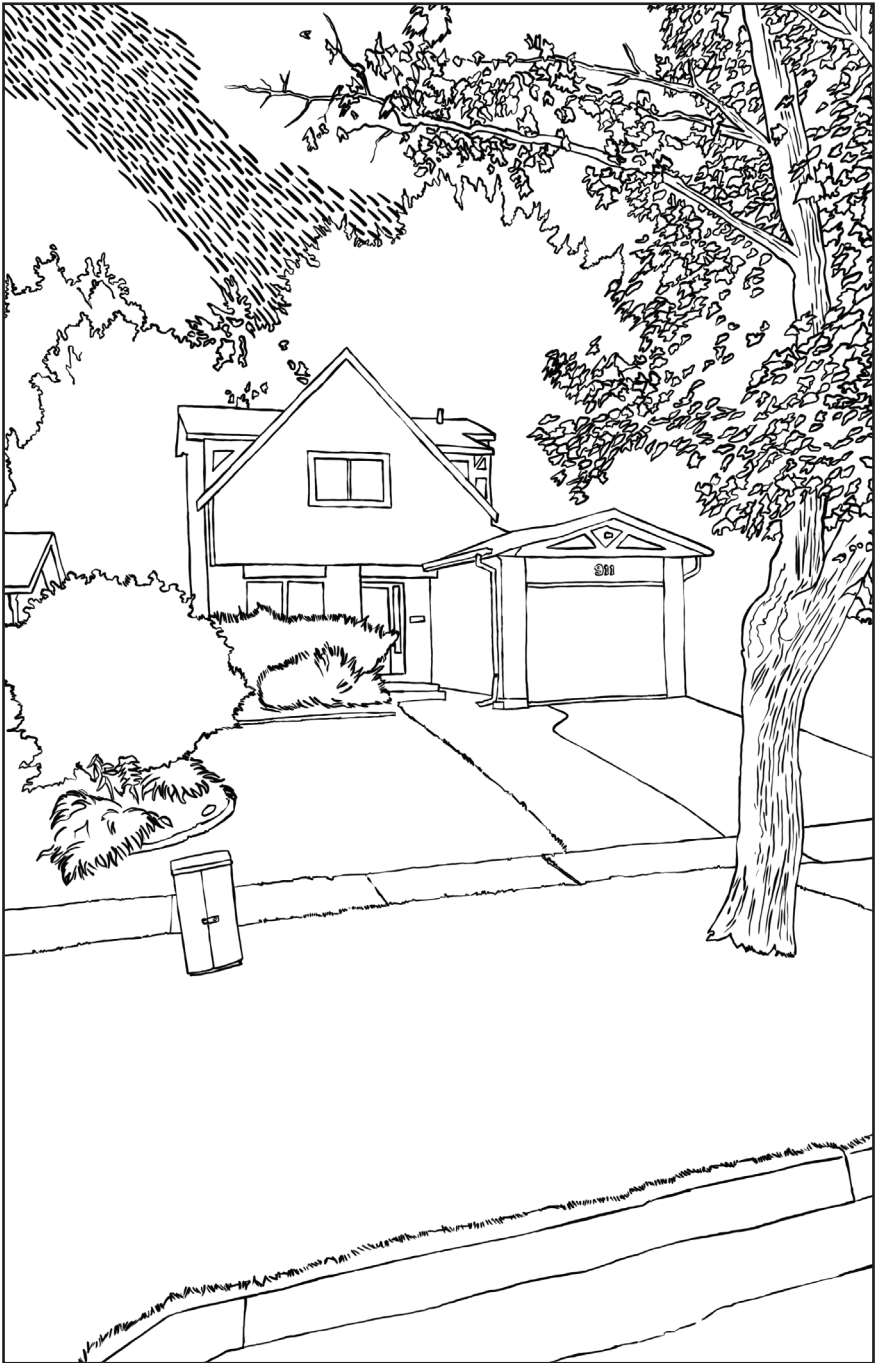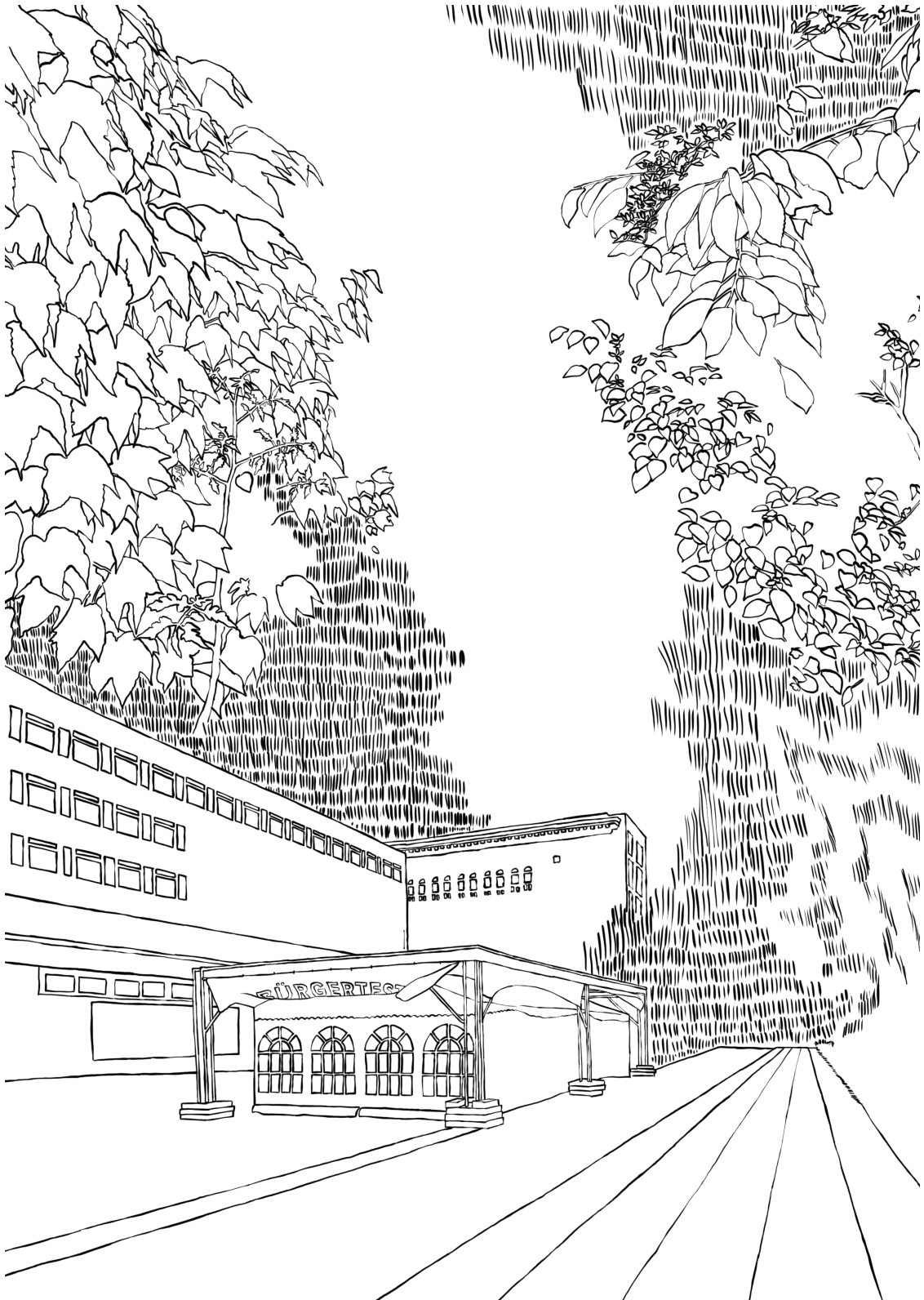
Fig. The author's childhood house. The family house is the foundation of all security planning.

certain suspicion to outsiders, and there are efforts made to protect information on live operations (OPSEC – 'Operational Security'), but the level of detail which is already effectively public is very high.

But maintaining a facade of secrecy over security tactics, or barriers to entry, has a very concrete downside, in that it covers for incompetence and poor security planning. When we don't have specifics, we cannot audit and verify that things actually work. The security industry, in it's public and private sector, has high levels of friction around information sharing – some of which are because of its technical subject matter, but many of which are also for cultural reasons, which I observed first-hand working across various government and private sector projects. Security projects are poorly understood outside the security industry, and in the short-term that has not harmed the security industry, through two decades where money was easy to come by for security projects, and when public support was high. 'Amateur psychology' about how crime works, and what is needed to prevent terorrism has passed for real research, and the result is that we have infrastructure and policies in place in cities which have questionable effectivness against their stated goals. The security industry remains inpenetrable to outsiders, and so the status quo avoids critique.

This may have worked in the post 9/11 world, but in the longer term it is foolish to count on unquestioning public support, and also on adversaries who don't see through some of the sloppy security measures we have put in place. The security industry needs to move towards a more transparent approach to 'showing work', whereby standards are made public, even if exact operational details are protected. You can tell somebody generally how a building is protected without telling them how to compromise the building – and this sort of demonstrable standard exists across various industries which have high levels of secrecy but also robust audit standards: banking, research, IT. The basic tactics and generalized protocols don't need to be private – and when someone is not willing to explain why

something works, we should be suspicious.

Security as a Forest
Crime and terrorism are complex social and political problems, and they are incapable of being solved solely using the narrow toolbox of 'security' – and this point is being increasingly made by proponents of police reform, and by the small municipalities that have enacted alternative first-reponder programs, such as for social workers to respond to non-violent calls. Realistically, security professionals need to be team players to social problems (including problems of violence) alongside social workers, medical professionals, employers, etc.
'Security' in the future must function as one part of a diverse forest ecosystem[5] – and that ecosystem collectively will include many other social actors, and as a whole will generate or produce the society we deserve.[6]
A part of this also involves recognizing which areas benefit from a security approach, which interactions may occur where 'security' negatively affects another area or results in a net negative effect on the whole systems, and which areas or relationships we just don't understand well enough to predict an end result.[7,8]

Closing Thoughts on Dogs
This book has used the metaphor of dogs throughout - but really any animal training or animal relationships involves navigating a series of inputs and outputs. The tasks and activities you set for the dog shape how the animal interacts with the world around it: whether it is loyal, whether it barks at strangers, or is understanding towards children.

There are the conscious inputs you control, the environmental inputs over which you have a degree less control, but also the unconscious inputs in how you interact with the animal: how it lives in your house, how you talk to it, how you navigate your relationship with it. Animal training is subtle – your actions inevitably coming

back on you.

'Security' is an abstract concept, but it is similarly subtle. The way that security takes place matters – the design of the individual steps in the process shape not only effectiveness, but how people feel about security, which in turn impacts effectiveness. The design of security is the shaping of human behaviour with force. That must carry with it responsibility.

This is a heavy-handed metaphor to employ, but stories about security have always been told with very colorful symbolism, and an abundance of confidence about the future. In my view the future of security will be coming to recognize that the world of security was much bigger, with much broader inputs than were previously recognized.[9] I am optimistic that we will awknowledge that many of the factors contributing to 'security' are indirect, or outside the domain of typical security actors (police, military, local government). Security is a negotiation.[10] Security is not a personal feeling but a community feeling.

Endnotes

1   Elmer, Greg & Andy Opel. Preempting Dissent. Arbeiter Ring Publishing, 2008. Print.

2   Lyon, David. "Surveillance Society." Talk for Festival del Diritto. Piacenza, Italy. Sept. 28 2008. Lecture (transcribed).

3   The use of terrorism legislation to target cases which seem more like activism, and less like the intended target of the original legislation has occurred in many regions. In Canada anti-terrorism law C-51 gathered widespread criticism that is could be applied to activist groups <https://www.ctvnews.ca/politics/demonstrators-across-canada-protest-bill-c-51-1.2279745>, while int he United States protestors who obstructed resource development were labeled as a domestic terror threat in police documents <https://www.theguardian.com/environment/2019/nov/25/keystone-xl-protests-pipeline-activism-environment>. Until the European Court of Human Rights struck it down in 2010, a section of the UK's anti-terrorism law allowed senior police to declare special zones in which individuals could be stopped and searched without reason – which ended up being all of Greater London <https://www.theguardian.com/world/2010/jan/12/stop-and-search-ruled-illegal>.

4   The era of big data seems to result in weekly news articles on data misuse. One of the more egregious examples is the American company Clearview AI, which used data-scrapping from the major social media platforms to collect a purported database of 100 billion images. The company's database has already been used by law enforcement in multiple countries.

5   There exists a concept proposed buy Jeanette Sordi of "Landscape Urbanism" – that is the design of a city's landscape rather than individual buildings. Security as an industry already takes an approach of considering context quite widely – what does the neighbourhood or context around a building do for it's security profile?– but I think the concept could be taken further, especially outside of security technical topics. How would social systems affect the security profile of a building? How would schools affect the security profile? How would measures of LGBTQ+ tolerance?

6   French philosopher Heni Lefebvre proposed that a certain amount of friction is important in democratic societies, because it allows for political discourse and change. I think it's worth considering the sort of society we want to live in – if security locks down every aspect of public life, will we still live in countries where dissent is possible? The history of the last 100 years has shown numerous instances where protest and even civil disobedience was in retrospect firmly on the right side of history.
Lefebvre, Henri. Writings on Cities. 1968. Ed. Transl. Elenore Kofman & Elizabeth Lebas. Oxford: Blackwell, 1996. Print.

7   David Price has written critically about counter-terrorism programming in the Middle East, and specifically the American anthropology teams that were deployed during the War on Terror to assist with winning hearts and minds. Price argues that modern counterinsurgency is simply try to convince people they weren't being occupied, which is doomed to failure because its not true. More broadly, Price argues that the anthropologists workin in the support of the military were naive in their thinking, that they could somehow hack a culture, or even fully understand a culture to the extent that they could redirect or reorient cultural attitudes.

Price, David H. Weaponizing Anthropology. Oakland: Counterpunch, 2011. Print.

8   I come here again to Timothy Morton and his concept of a "hyperobject" as previously discussed.

Morton, Timothy. Hyperobjects: Philosophy and Ecology After the End of the World. University of Minnesota Press, 2013.

9   Clara Irazabal – has made the arguement that large revolutionary protests in cities stem from competing spatial realities in the city. That different groups of people lay claim to the same space (unaware or only partially aware of the existence of each), and that at key moments one spatial narrative rises to claim spaces. This is a humbling way to think about cities, and examples Irazabal offers show how little central authorities actually understand and control their city spaces.

Irazábal, Clara, "Chapter One: Citizenship Democracy and Public Space in Latin America." Ordinary Places Extraordinary Events: Citizenship Democracy and Public Space in South America. Ed. Clara Irazábal. New York: Routledge, 2008. 11-33. Print.

10   Heni Lefebvre proposed a tri-part division of space, i.e. that "space" itself would be composed of collective balacing between representational space (history, the arts), daily spatial practices, and representations of space (politics, politicies). I believe it is also worth considering that security might function in a similar such way, as a negotiation between these elements.

Lefebvre, Henri. The Production of Space. 1974. Transl. Donald Nicholson-Smith. Wiley- Blackwell, 1991. Print.

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