Article

Designed for Threat: Surveillance, Mass Shootings, and Pre-emptive Design in School Architecture

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Abstract

Contemporary political discourse around security, immigration, and terrorist threat manifests in two trends in educational architectural: the fortress school and surveilled flow. The fortress grows out of the urban-renewal movement of the post-World War II era, particularly on American university campuses. This architecture pre-empts threat by clamping down and fortifying its peripheral walls while controlling, surveilling, and limiting the number of entrances. Lockdown procedures, encouraging surveillance among citizens, metal detectors, increased police presences, and data-mining are all tactics at the fortress' disposal. The alternative, much newer approach pre-empts threat by surveilling flow; that is, inviting people inside the structure and encouraging traffic while relying on more remote and less obvious tactics for detecting undesirables, such as closed-circuit television (CCTV), data-mining, and, like the fortress model, encouraging peer surveillance. Surveilled flow maintains the gesture of openness; however, this is mainly aesthetic, as other methods of intrusive policing take place at less-visible levels. At the heart of both of these articulations of pre-emptive threat culture is the digital-age anxiety about the alignment and possible misalignment between visual and information-based citizen profiles: Does the student or visitor appear to be a threat? Does his or her online behavior indicate potential threat? The profusion of information in the digital age meets this more primal desire to commensurate the appearance of risk with other forms of information-based evidence of threat. Digital-era concerns about how to interpret a wealth of information at various institutional and cultural levels pervade the riskscape in the developed world, and educational architecture is but one manifestation.

Introduction

While the nascence of surveillance studies owes much to Foucault's connections between institutional architecture and modern discourses on discipline, and surveillance literature routinely covers the role of architecture in security regimes, security and surveillance studies rarely discuss architecture and the structures of power from a designerly perspective (Foucault 1995). This article prioritizes this approach through the case study of educational architecture in the era of mass shootings. Its intervention is mostly conceptual in nature; thus, approaching educational architecture as an expression of the way surveillance and control are exercised in the Western postwar security state. Specifically, this article explores the discursive negotiations of safety, risk, information, surveillance, and citizenship by looking at how primary, secondary, and tertiary educational architectures respond to the threat of mass shootings. The exchange between architecture, visual culture, and power belongs to a much longer history; however, the interplay of these factors takes on different tones in an era when mass surveillance, digitality, neoliberalism, and mass shootings shape each other. Contemporary educational architecture inscribes the pre-emptive threat into its design, marking a shift from a postwar modernism that saw itself as treating the aftermath of a nuclear war.

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Trade publications in architectural design, higher education, and urban planning indicate a prominent concern across these industries around how to address and control for gun violence. This study places these in conversation within histories of urban renewal, surveillance, education, and architecture to argue that there are two articulations of this pre-emptive-threat environment in school architecture: the “fortress school” is a term this study repurposes from Bewley-Taylor (2006) to refer to a reactionary style of school architecture that is modelled on older understandings of security and surveillance; the second articulation is the “surveilled flow” and operates on the concepts of threat established in the newer negotiations over information, privacy, and security that are unique to the digital era.

Surveillance studies offers several theoretical contributions that are relevant to this article’s case study of educational architecture in the era of mass shootings. These include the idea of lateral surveillance (Andrejevic 2006); the ideas of soft surveillance and diffused surveillance, which allow for the illusions of freedom and personal privacy while monitoring is ongoing and ubiquitous (Marx 2006); theories on risk culture; and the social control of children’s bodies as a testing ground for the increasingly popular toleration of surveillance intrusions into personal privacy. From its earliest days surveillance studies has been concerned with the intersections among privacy, individualism, and various ideas of personal space.” In the first issue of *Surveillance & Society*, Lyon (2002) defines the field as covering “a huge range of activities and processes, but what they have in common is that, for whatever reason, people and populations are under scrutiny. Focused attention is paid to personal details that are monitored, recorded, checked, stored, retrieved, and compared—in short processed in many different ways” (2). These activities are carried out using a variety of tools, including CCTVs, metal detectors, biometrics, motion sensors, and the tracking and collection of people’s online behavior. This study’s contention is that architecture should be included among these tools as it often works in concert with them.

Lyon acknowledges how privacy is enmeshed with discourses of modernity and rationalism, which conceive of privacy as the “protection *against* surveillance” (Lyon 1994: 36; Lyon 2002: 2). Stadler links the nascence of “privacy rights” to the bourgeois ethos of “my home is my castle” (Stadler 2002: 121). However, this “bubble theory” approach to privacy, which assumes clear demarcations between public and private spaces and the uses of media technologies, does not quite work in the digital era (ibid.: 121). Stadler argues that ideas of personal privacy and privacy rights rest on outdated 19th century ideas of individualism and the separation of work from home, notions that are largely rooted in print culture (ibid.:122). Lyon claims that “there is a sense in which modern surveillance was from the earliest days a means of keeping tabs on the mobile (Lyon 2001) but today surveillance itself is part of the flow” (Lyon 2002: 3). It is impossible for surveilling powers to remain ever alert and watching; consequently, surveillance is largely devoted to sorting people, spaces, and events into abstract categories that may then be flagged for further monitoring (Lyon 2002: 3). This tension between mobile agents and keeping select targets under observation, between keeping the illusion of freedom and transparency while also surveilling people and places of interest, is very much present in school architecture in the age of mass shootings. Schools want to create illusions of community and freedom of information and knowledge. These often translate, in physical terms, to communal spaces that allow for freedom of movement and circulation. However, there is an increasing pressure that these spaces and the people occupying them must be monitored for risky or errant behavior.

Educational buildings not only articulate how society constructs learning but they also reflect the broader dynamic among civic and private institutions of power and how these power exchanges shape lived space. In the current global socio-political climate, which is increasingly shaped by pervasive threats of terrorist attacks (in the US this also takes the form of mass shootings carried out by American citizens), school architecture offers an important opportunity to study the intersections among state and private surveillance, society, and urban environments. This is not only because the school is repeatedly a terrorist target but also because it is among the most potent physical embodiments of contemporary definitions of citizenship, state power, and privacy. School architecture is thus a ripe topic of study for surveillance scholarship. Foucault’s theory of the panopticon is formative for scholarship on power relations, surveillance, and security. However, the idea of the panopticon has been so abstracted in scholarship (Murakami Wood 2012) that it is

easy to forget it originated with an architectural manifestation of an emerging conception of modern power and control over populations. Foucault reminds us that architecture and power and, in particular, the politics of watching and being watched, are always overdetermined. This interdependence has particular resonance in an era of proliferating mass shootings in the US and terrorist attacks worldwide. As this recasting of violence develops, architecture is responding so as to accommodate and prevent attacks from being carried out by one or two perpetrators on semi-public (schools and corporate lobbies) or public spaces (places of mass transit). Schools exist at unique intersections between public and private spaces. Public university campuses are often architecturally porous, peppered across urban centers or nested in college towns. Even schools that are privately funded need to create at least the impression of communal or shared spaces for their own populations even if outsiders are excluded.

Because architecture is central to how surveillance and security are expressed in society, we need to think about how we build spaces for different kinds of terrorism and how these spaces interact with new perceptions of risky individuals moving through those spaces. While there have been efforts to entirely ban groups of people that are designated as high risk (i.e., the US Muslim ban of 2016), most institutions of power accept that banning whole demographics based on race, appearance, religion, gender, or class is not only impractical and expensive but also bad for business (i.e., the US Muslim ban is having negative effects on the nation's tourism and the number of international students coming to pursue education) (Muther 2017). Therefore, buildings and security systems must shift to allow for the movement of people across borders, both architectural and national, while also monitoring for potential risk. Architecture is a surveillance mechanism, particularly when airports, government buildings, and schools are being designed with potential terrorist attacks in mind.

Historicizing the Fortress School

The fortress school strongly delineates between inside and outside space through few and highly controlled entrances and exits. Their façades are often confrontational towards their surrounding contexts. For example, the façade of the architects de Rijke Marsh Morgan's extension to a primary school in South London has a white-and-orange curtain wall of interlocking rectangular panels that simulate laid bricks. Despite the bright colors, the façade is bunker-like. Within the school's walls, however, a sense of community is created through open space that situates multiple discrete entities (offices and classrooms) around an agora, a center courtyard, or a corridor for flow. The architects from Rijke Marsh Morgan declined my request to use a print image of the building in this paper because they did not agree with my interpretation of the school as fortress-like.

The Danish firm CEBRA's award-winning design for a Russian smart school in Irkutsk is doughnut-shaped in its plan: its hallways and classrooms wind around a central open atrium that is landscaped with trees and grass. The interior spaces feature floating walkways, high ceilings, and open sight lines that focus on the central atrium (Figure 1). CEBRA agreed to allow this paper to use a render of the design with the provision that the building be discussed as being part "of a larger move in educational architecture that creates senses of enclosure, safety, and community by creating communal spaces for flow and student-use inside the building" (Anne Strange Steizner, personal communication, July 6, 2018). While the building design could be seen as simply a response to a cold climate, there are many different architectural means of providing warm enclosures that do not necessarily include open spaces on the inside in the form of a doughnut shape. In other words, the exact form this school takes is as much a response to how it wishes to encourage sociability and surveillance as it does to protect its population from a harsh exterior. Tensions in communications with the architects about their work in relation to the wider context of security culture speak to either an unease on the part of the designers to position their work vis-à-vis the global politics of threat and violence, or perhaps a genuine difference in the way they see their work; perhaps, they have internalized and naturalized the politics-of-threat culture and do not see these buildings as being guarded but rather open. In any case, further study is needed on the dynamic of these communications as evidence of the complex politics around the perceptions of surveillance and the security culture among designers.

Figure 1: CEBRA Smart School. Image from CEBRA Architecture website, "Smart School." Accessed June 28 2018. <https://cebraarchitecture.dk/project/smart-school/>.

The fortress school belongs to a longer history of modernism, tertiary architecture, and urban renewal. Urban renewal was a coordinated response on the part of city planners and tertiary educators to oust residents of slum areas that had resulted from the postwar emigration of white residents out of cities. Urban renewal also accommodated the sharp increase in college enrolments affected by the GI bill, a postwar piece of US legislation that subsidized returning veterans' tertiary education and home mortgages (Bewley-Taylor 2006: 237-238). The worst trappings of modernism, including its context insensitivity and presumptions of universality, were mobilized in campus buildings constructed in the 1960s and 1970s. This architecture reinforced a culture of urban surveillance that conveniently coincided with the war on drugs and the dislocation of low-income residents of color (Bewley-Taylor 2006: 239). Allen makes the case that the urban-renewal projects of the 1960s and 1970s and the student radicalism of the same period have overdetermined histories. Incidents of large student protests in the People's Park at Berkeley and student riots in Paris and at Columbia University in 1968 were part of a global response to the political climate of the time, which included the rapidly expanding university campus (Allen 2007: 5). In the context of growing political conservatism, bellicose Cold War regimes, escalating police brutality, aggressive campus expansion projects, and student and community protests in developed postwar nations tried to reclaim the urban spaces that urban-renewal projects had forcibly annexed. Campus planners subscribed to an ethos of "utmost rationality" that divided academic departments into "planning modules" and designed dormitories as "towers in the park" in order to conserve space (Allen 2007: 8-11; Riker 1961). A hunger for more space forced universities to turn to surrounding residential areas, which they bought and from which they evicted these residences' tenants under the guise of "cleaning up" the neighborhood (Allen 2007: 12).

It is necessary, then, to historically locate the language of mid-century modernist architecture and educational building design in the context of these cultural tensions. Modernism embodied the private institution's uncompromising rationalism and imperialistic expansion that stood in complete contradiction to the low-income housing, community gardens, and urban bohemia of the neighborhoods located around these universities' peripheries. Educational contexts traditionally position modernism as rationalizing, disciplining, and organizing ornery student and residential populations. By the 1980s, student populations and university-town residents were understandably bitter about the modernist eyesores that peppered campuses. These university buildings were often hurriedly built and poorly constructed due to the competitive forces of the urban-renewal movement (Williams 1985: 15). Williams paints a depressing picture of the tensions between students, communities, and tertiary administrations in the mid-1980s. She

writes about the hypocrisy of a tertiary modernism that strove to express aspirations of interdisciplinarity and departmental collaboration by inserting sky bridges and walkways between buildings (ibid.: 20). More concerned with fostering connectivity inside its walls, urban renewal articulates an institutional insularity by turning away from the surrounding community. For Williams, hallways and courtyards are little more than empty and privileged expressions of the tertiary penchant for reflecting upon the outside world in the absence of interacting with it (ibid.: 27).

Primary, secondary, and tertiary architectures are all shaped by the language of a postwar modernism that is deeply associated with projects of urban renewal, civil unrest, racial segregation, and rising income disparity. Urban renewal, white flight to the suburbs, unpopular programs of university campus expansion, and the concurrent war on drugs are important geneses for the millennial-era culture of surveillance that continues to ostracize and segregate disenfranchised populations from desirable white spaces that symbolize citizenship and learning (Bewley-Taylor 2006: 239). According to Bewley-Taylor, the highly mediated Bush-era war on drugs resulted in the proliferation of “defensible spaces” in American communities, a term he applies to gated communities, SUVs, GPS tracking in cars and mobile devices, and CCTVs, all of which come hand in hand with the erosion of public space (ibid.: 244). Malls, university campuses, neighborhoods, and schools are rebranded as closed, private, and fortified spaces in the surveillance era. The contemporary progeny of the urban-renewal movement in educational architecture displays types of inward- and outward-looking that are also shaped by the social transformations accompanying digitality, the war on terror, and domestic terrorism.

The Fortress School and Practices of Inward-Looking

Much like the modernist university campus, open spaces within the fortress school are exclusive to insiders. However, in this newer iteration, insiders are encouraged to patrol and surveil each other through a system of internal security mechanisms, such as CCTVs, classroom doors that lock from the inside, transparent lockers, and spaces that foster ideas of transparency through such features as atriums with adjacent offices that have bullet-proof glass walls. Kupchik and Monahan (2006) write on the encroachment of surveillance systems in British and US schools through police presence, security cameras, and metal detectors (624). Hope (2009) writes about the proliferation of CCTVs in UK primary and secondary schools. Like their US equivalents, UK schools justify their public-surveillance tactics by citing instances of school shootings (most notably the Dunblane primary school shooting of 1996 in which a gunman shot 16 children and one teacher before killing himself) (899). Hope notes that the “severest risk narratives tend to be reserved for those perceived to be dangerous outsiders, ‘undesirables’ who should remain beyond the school boundaries,” thus, the need to fortify schools to protect them from the outsider (ibid.: 893). However, Hope notes the contradiction that it is oftentimes someone attached to the institution who conducts a terrorist attack. CCTV, as an internal surveillance tactic, enables us to label insiders as either others or potential risks (ibid.: 899). The bunkered, protective outward-looking of the fortress school is coupled, therefore, with a practice of internal monitoring and inward-looking that patrols citizenship from within and monitors for errant behavior.

Lateral surveillance is a term borrowed from Andrejevic (2006) who uses it to describe the peer-to-peer surveillance that is encouraged in an increasingly mediatized society. From one point of view, this heightened lateral surveillance was inevitable; Thompson (2003) argues that surveillance is bound up with the development of capitalism. However, in the era of late capitalism the exact forms lateral surveillance take are very much related to digitization and dominant neoliberal free-market ideologies. Thompson adopts Sewell’s distinction between vertical and horizontal control, according to which late capitalism develops fewer direct forms of social coercion or a kind of “chimerical control” over workers (Sewell 1998: 422; Thompson 2002: 139). Zuboff also notes that softer forms of surveillance characterize late capitalism and are manifested in the high value placed on teamwork and collaborative learning (Zuboff 1998: 308). Thompson similarly observes that these softer, more chimerical forms of surveillance are exercised when workplaces collect performance data and encourage teamwork (Thompson 2003: 140-1). However, he

acknowledges that teamwork has panoptic limits when people resist management (ibid.: 146). Traditional top-down surveillance in the form of direct monitoring is thus but one tool in a variety of managerial control tactics (ibid.: 147). The kinds of lateral surveillance that are encouraged by the fluid, open, and communal workplaces that are appearing in school architecture speak to similar transitions that are occurring in the corporate workplace Thompson describes.

Andrejevic (2005: 486) argues that the intensification of lateral surveillance typifies a culture involved in the war on terror. Terrorism and states' security responses shape a "sense of shared civic responsibility in an era of perpetual decentralized warfare" (ibid.: 487). This results in the integrated aspects of peer surveillance as the status quo; Andrejevic takes DIY background checks on dating sites as an example of this more pervasive acceptance of vigilantism, micro levels of governance, and scrutiny of others (ibid.: 494). Thompson and Andrejevic's notions of lateral surveillance are played out in school architectures that are intrinsic to the era of mass shootings. Their architectural designs encourage people to be perpetually vigilant of each other and aware of their own visibility and participation in a surveillance-driven culture.

Fieldwork on the surveillance of children is another body of surveillance literature that is relevant to this intersection between school architecture and the rise of security states. It is often the case that societies have higher tolerances for intrusions on the personal privacy of children and marginalized publics, such as low-income populations. These intrusions are often justified in the name of safety. Children and people living in poverty or on welfare, problematically, act as guinea pigs for surveillance techniques that are not yet considered palatable for broader application (Maki 2011). Studies show that while parents shy away from more extreme surveillance tactics, like sub-dermally implanted RFID chips, they prioritize their children's security over their privacy, suggesting that people are generally more tolerant of invasive surveillance technologies so long as they are applied to children (Ema and Fujiyaki 2011). The study reinforces that the surveillance systems applied to the lives of children need particular and consistent scholarly attention, since children, like members of low-income groups, are among the vulnerable populations most likely to experience encroachments on personal privacy rights.

Finn and McCahill (2010) conducted fieldwork on how teenagers living in low-income areas of Northern City, UK, experience surveillance at school and in urban areas. It is troubling that students assume that forms of classroom surveillance and security (like staff-card swipes at doors) are integrated with city CCTV cameras so as to track their movements (ibid.: 276). They also assume that teachers track what they do on school computers (ibid.: 281). Finn and McCahill show that surveillance culture is fully integrated into the lived experiences of youth and the expectations they have of public and private spaces (ibid.: 286). It also suggests that students do not feel they have any negotiating power or agency in these systems (ibid.: 287). This study shows that the students in these school buildings are already primed for highly securitized regimes. Secondary-level students in low-income groups see educational spaces as part of a larger fabric of their surveilled profiles. Recent mass student protests for gun control in America point to this group's increasing frustration and dissatisfaction with what they see as limited degrees of agency and sovereignty in the present school system and political climate in their country (Blinder and Yee 2018). As such, these students' feelings and experiences need to be addressed and this can be done through considering these feelings when designing school architectures as well as the security systems embedded within them.

If students feel current systems of education and government constrain their rights as citizens, they have good reason. The recalibration of the fortress school has historically been in steady conversation with incarceration systems. This is particularly true in the post-industrial state that disciplines a potentially disobedient population of young citizens who face decreasing job security within the context of the decline of the welfare state (Kupchik and Monahan 2006: 618). School architecture borrows heavily from early systems of incarceration. Indeed, the architectures of schools, prisons, and asylums are inextricably bound together with Enlightenment-era notions of discipline, reason, and governance (Foucault 1995: 73-4). However, the surveillance tactics of the modern security state are continually tailored to the particular historical disgruntlements of the students of the moment. In this era, millennials in developed nations struggle with daunting income disparity, political polarization, debt, the prevalence of private and public

institutions' use of big data, and declining job security. This specific set of concerns calls for complementary disciplinary precautions. Kupchik and Monahan (2006: 620-1, 624) cite the multiple signs of increasing internal surveillance in schools since the 1990s, such as metal detectors, CCTVs, and police presence on campuses. They associate these with the parallel trends of imprisonment rates that began to soar with the increasing privatization of the incarceration system (ibid.: 621). According to Kupchik and Monahan, the rise of school shootings in the 1990s alongside fears of rising crime rates justified these social and political shifts in the education and criminal justice systems (ibid.: 621). However, "[t]hese fears may not match the statistical reality of school violence, but they are the forcibly expressed responses to high-profile acts of violence" (ibid.: 621). Surveillance programs like "classmate informants" who are paid in neighborhoods, rise in poor neighborhoods. "Students' experiences are thus framed within a climate of distrust under the watchful eye of the state" (ibid.: 622). Kupchik and Monahan's depressing image of increasing surveillance in public schools describes the internal ocular regime of the fortress school. The fortress school encourages self-surveillance and co-surveillance among its citizens; it encourages them to yield information on themselves and each other under the auspices of safety and transparency. Citizens are also encouraged to constantly scrutinize the internal population for possible dissidents, such as those who appear unhappy or depressed, or exhibit anti-social behaviors that might pre-empt potential acts of terrorism.

Connecting these trends of inward-looking to broader systems of discipline and power, Kupchik and Monahan (2006) premise that the modern state, then,

facilitates the criminalization of poor students in order to establish and maintain a criminal class to legitimate systems of inequality in modern capitalist states. It rewards flexible students who can adapt or submit to labor instability, invasive monitoring and exploitative work conditions. It accommodates industry's desire for new markets by creating a demand for costly high-tech equipment that can only be provided by private companies, and can only be paid for, seemingly, with public funds. (628)

Arguments like these can read as almost conspiratorial in the efficiency and internal logic of their interlocking systems and parts, whereby public education, government, private corporations, and prisons work in tandem to oppress a low-income and complacent population of snitching automatons. This is partly because school architectural and incarceration security systems of self- and mutual-policing share historical precedents in residential urban planning.

Newman's pioneering work in security and public housing introduced the idea of the "defensible space" to urban planning (Newman 1996). Newman argues that high crime rates are exacerbated by high-rise buildings and, instead, advocated for limited private dwelling units with individual yards (ibid.: 13-14). In place of a large shared courtyard, each handful of dwelling units would face a smaller courtyard offset from the street, Newman's way of "bringing the streets into the control of the residents" (ibid.: 22). Newman therefore reinforces the idea of self-policing through architectural design, providing a strong historical precedent for similar notions of the mutual surveillance inscribed in educational spaces today. In addition, his recommendation for fewer and spaced-out entrances echoes the high-security architectural façades of current educational architecture that provide finite and controlled points of penetration for the next potential mass shooter (ibid.: 28).

The development of security architecture in public housing historically coincided with what surveillance scholars describe as the intensification of a risk culture. Vaz and Bruno (2003) write about cultures of self-surveillance that aim to pre-empt mental and physical illness (i.e., rating and recording your daily mood). These cultures fit into popular ideologies of self-care and lifestyle management. Individuals who do not subscribe to regimens of self-care are therefore at risk. Surveillance scholars have written extensively about risk management as a defining characteristic of modern culture (Douglas and Widavsky 1983; Beck 1992, 1999, 2009; Douglas 1992). Douglas describes risk as a heading for categorizing and conceptually controlling ideas that exist outside a given culture (ibid.: 29). But the rhetoric is not so much to protect the community, as the individual (ibid.: 28). This is very much apparent in the American gun-control debate:

risky individuals who might carry out mass shootings are constructed as inscrutable and obtuse. While endless media coverage pontificates on their motivations, these ultimately remain outside the boundaries of dominant understandings and thus are relegated under the heading “risk.” The concern becomes, then, how to identify individuals at risk, rather than to treat the problem as systemic, which would force people to focus on eliminating guns rather than trying to pick out potential shooters. Discussing the softer end of the spectrum of self-control, Bruno and Vaz (2003: 281) relate lifestyle-management discourses to the now taken-for-granted rule-of-thumb of controlling the baser impulses to smoke, overeat, and abuse alcohol, etc.

Risk-management logic premises the idea that certain incidents are preventable. In modern medicine, paying attention to symptoms and routine screenings can aid early diagnosis and proper self-care can mitigate genetic predispositions to certain conditions. These are the tenants of preventative care in medicine but they extend to other areas of life. In corporate workplaces, human-resource training about sexual harassment and bullying are increasingly mandatory as ways to prevent future incidents. Surveillance culture is thus supported and sustained through this ideology of risk, as if to say, “Whatever relinquishments of individual privacy rights we experience surely cannot outweigh the silent victory that is averting a terrorist attack, workplace bullying, a mass shooting, a heart attack, etc.!”

Constructions of risk have unique applications for young adults, particularly those belonging to low-income groups or otherwise disenfranchised populations. Osmond applies Deleuze and Guattari’s (1987) ideas of risky individuals to Australian programs in New South Wales that try to deflect youths away from earning criminal records by identifying who is at greatest risk beforehand. In Deleuze and Guattari’s words, “Technologies of control can be characterized by their potential for the ‘molecularization’ of surveillance that re-configures the target of surveillance as a member of a risk population rather than as a (molar) individual” (Deleuze and Guattari 1987: 334-337; Osmond 2010: 328). In effect, people are treated differently based on a risk assessment and not on criminal behavior (*ibid.*: 335). While such programs are thought to be preventative, they come dangerously close to stigmatizing individuals before they have even committed a crime. Osmond also invokes Agamben’s idea of the risky individual as an exception (Agamben 1988: 175; Osmond 2010: 338). Here, the risky individual roams free in society but is under constant surveillance as an “inclusive exclusion” (Agamben 1998: 9; Osmond 2010: 338). Agamben recounts his experience of being denied entry into post-9/11 America because he would not provide biometrics. He theorizes this process as a stripping of citizenship on the basis of the potential for violence ascribed to him (Agamben 1998: 18). In this context, the state of exception becomes the norm in which risky individuals must prove their right to be citizens.

When these ideas are applied to the high-security school, buildings are designed for students to move through communal spaces, but they also make risky individuals highly visible to authorities and peers. The external gatehouses discussed in the next section effectively force pupils and visitors to prove their belonging or citizenship before entry. In the post-industrial educational context, the inward practices of looking in, in the fortress school, encourage insiders to self-monitor like previous iterations of the panopticon. What is different is that citizens also monitor each other and find security in fluxes and disruptions in workflow that come with being constantly available, visible, and present. In addition, citizens are primed for and accepting of state-initiated and corporately-run invasions of privacy.

The “Russian Nesting Doll” Security of the Fortress School

Pre-emptive inward-looking also includes a Russian nesting-doll-type hierarchy of personal privacy. There is inside the city walls and then there is deeper inside the city walls, where the classroom is located. One example of how this manifests in material design is the lockdown key, a quick, easy mechanism that allows the user to lock the classroom door from the inside with the push of a button. Only people who have the master key can unlock it from the outside. Yorio (2016), a defense consultant and proponent of lockdown keys says, “Imagine that a shooter or terrorist is outside a classroom door. The speed and ease with which a teacher or student can lock that door will determine the chances of survival” (24).

Mid-century approaches to school design present a spatial organization of community that is quite different from the Russian nesting doll. Ernest Kump was one of the most prolific school design experts in the mid-century period, particularly in California (Logan et al. 2013: 48). Kump's now very familiar "finger-plan" schools were meant to model economy and practicality. The finger-plan school enabled room for school growth and flexibility as its design included single-story classrooms that branched off from a central corridor. Kump also believed that classroom spaces should be quite bare architecturally, allowing for teachers to mold them as desired (ibid.: 48). However, by the 1960s, the idea of designing the perfected, entirely flexible classroom had become outmoded as educators turned elsewhere to strategize improvements in education (ibid.: 48).

The inward-looking echoes Masumi's understandings of pre-emptive time and space, particularly in the distinctions made between "danger" and "threat." Masumi writes, "danger lurks but is discrete whereas threat is more of an environment and more pervasive. Danger is past centric whereas threat is future centric and indeterminate" (Rice 2010: 34). For example, a grizzly bear is dangerous, whereas airport immigration checks are threatening. Masumi states that pre-emption "emerges from a vague field of potential action, and it does not necessarily correspond to functional divisions of spaces that might already be in place" (ibid.: 34). Threat is the possibility of a space being coopted in nontraditional and usually undesirable ways. The space that pre-empted the unwanted event creates a different environment. This "urban ambience," Masumi says, "is structured as a kind of superposition of different paths unfolding" that color encounters and interface as vague and threatening (ibid.: 36). While bearing some similarities to trends in urban renewal, the architecture of pre-emption suggests some significant shifts in the understandings of public space and the interpersonal encounter. In the postwar era, the threat of a nuclear holocaust was met with large-scale infrastructural apocalypse-greeting projects, like the highway system, duck-and-cover drills, and bunkers. However, these are mostly reactive: they are measures that are put into play once the danger has occurred. A culture of threat and pre-emption is different in that it inscribes and anticipates potential pathways danger may take into the present-day lived realities of people and places. Threat and its anticipation are omniscient. Architecture does not wait for threat so it can then respond; it is primed for threat so it may shape the chaos that ensues.

The city-within-walls and nesting-doll systems are designed based on pre-emption: they encourage the flow of people and sight lines within their walls but are conditioned to lockdown within seconds to control the entropy of terrorism. This cultivates a certain nervous urban ambience within these walls that is different from the apocalyptic preparation of the postwar nuclear bunker or the highways system.

The Fortress School and Practices of Outward-Looking

The nervous inward-looking is coupled with a corresponding outward-looking, which takes the form of a sniper, or drone view of the outside world. Two years after the Sandy Hook shooting of 2012, in the US, in which a twenty-year old man killed twenty six-year-olds and six staff, the school demolished the original building and erected a new one next to the footprint of the original. The final design by Svigals and Partners features a rain garden between the parking lot and the school building, or what amounts to a moat as a first line of defense (Urist 2014). Entrances are limited to three points in the façade, with the back of the building facing a thick wood. Administrative offices are placed at the front of the building, looking outward, and the main entrance has a double-entry port akin to those we would encounter at banks. This type of design makes sure the inhabitants have the higher ground, from which they can keep a watchful eye on the exterior world. The styles of façades that are attached to architecture built for threat tend to be gruff, homogeneous, and illegible. Architectures of pre-emption draw sharp distinctions between insider and outsider, with liminal passage points whereby visitors undergo a security induction by passing through gatehouses, metal detectors, or administrative offices (i.e., the 2014 guard house Jonathan Tuckey designed for Wilberforce Primary School, in London, England [Frearson: 2014]). The irony of these structures is that terrorism is rarely the result of a truly outsider threat because most mass shooters are affiliated, in some way, with the communities they terrorize. Hope (2009) observes this contradiction and goes on to explore how internal

systems of surveillance, like the CCTV camera, enable us to label insiders as “others” or potential “undesirables” (898).

In this way, outward- and inward-looking are entangled and mutually reinforcing. Inward-looking in pre-emptive school architecture engenders the process of monitoring each other and acclimates us to intrusions into personal privacy on the part of institutions of power. This is less the panoptic environment that Foucault theorizes than it is a visuality and a culture of surveillance focused on one-on-one interrelationships that are determined by access to information and the control of its flow. Recent scholars have commented on the impact of drone warfare in visual culture as a whole. Stahl (2013) agrees with previous scholarship on colonial optics that drone imagery rescripts the Western vocabulary for engaging with the rest of the world, saying “drone vision must be considered within a long history of imperial looking” (Lutz and Collins 1993; Spurr 1993; Stahl 2013: 663). Stahl observes that drone vision naturalizes a colonial military gaze in popular culture and follows a long tradition of domesticating war through its gamification and the repurposing of drone optics in consumer culture and everyday life. This gamification through drone vision is part of a larger trend of what Shapiro describes as an “ocular enmity” in the political discourse that separates “protected versus expendable bodies” (Shapiro 2008: 65-66; Stahl 2013: 666). This discursive shift mobilizes drone vision as a mechanism of othering. When applied to the domestic environment and the threats that come from within, drone vision is more aligned with security measures than with defense strategies (Hardt and Negri 2004: 20; Stahl 2013: 668). As security replaces defense as the primary strategy, drone vision works alongside other tactics, like co-surveillance, to rebrand threat as pervasive and domestic rather than as external and consolidated (Stahl 2013: 668). The profusion of cyber-warfare and parallel digital-era scrutinization of news sources in political discourse gives shape to another form of education architecture. But pre-emptive architecture’s outward ways of looking across all forms of the secure contemporary educational school that is designed in response to domestic terrorism inscribe drone vision in everyday lived space. It fosters false binaries of outsider and insider. It also spatially and symbolically separates institutions of education from surrounding communities and other institutions of power.

Surveilled Flow

Mass shootings are cited to rationalize building the fortress school. However, mass shootings are one symptom of a host of other political pressures that shape educational architecture. Pre-emptive school architecture scripts practices of outward- and inward-looking that reflect the desire to sharply delineate the outsider and the insider, to acclimate young citizens to incorporate invasions of privacy as well as to create the illusion of transparency and freedom of movement within a building that, at any moment, is subject to a complete lock down. Pre-emptive architecture encourages mutual surveillance among its citizens and is designed around predicting how attacks unfold rather than responding to or preventing them.

One of the most interesting aspects of these shifts in school and institutional architecture, more broadly, is their heightened internal systems of visuality. Security and surveillance are premised on visual and/or informational access. Outward-looking relies on complete visual and informational access to all outsiders. Once inside, inward practices of looking rely on maintaining some degree of access to insiders and insiders who might potentially turn hostile. In a digital age, however, I argue that much of the fear is around aligning the visual with the information-based surveillance of citizens. Is the student falling asleep in class or acting out by researching firearms and bomb-making in his or her spare time? Do undesirable citizens’ outward behaviors reflect their online deviance and vice versa? Pre-emptive institutional architecture reflects the anxiety around aligning these two planes of information about citizens in order to determine whether they belong inside or outside its walls.

There is a popular perception that the correlation between visual information and digital information is in crisis: “alternative facts” and “fake news” go hand in hand with “catfishing” and the uncertainty of whether or not the person in the next office cubicle is in fact a neo-Nazi on social media. Educators who express alarm at the possible disjoint between public appearances and private intention participate in this broader panic around the opacity of surface information that, maddeningly, seldom aligns with our digital lives. Fox

and Harding (2005) use the idea of organizational deviance to explore the notion that an open disruption at a school is the primary indicator that a mass shooting will take place (81). Rather, they premise that it is usually the students who are aloof and quiet who conduct acts of domestic terrorism. They argue that the problem with predicting instances of “organizational deviance” is that information about students’ achievement, health, economic background, peer relationships, etc., is spread across numerous departments that are not in conversation with each other. The “structural secrecy” of private information renders terrorists illegible (ibid.: 73). The surveillance-driven encroachments on students’ privacy and civil rights that Fox and Harding support are deeply troubling. Their assessment of the “problem” of domestic terrorism, however, clearly articulates the fears around the misalignment between citizens’ digital and “real-life” behaviors and appearances, as well as the pre-emptive motivations behind increased surveillance at school.

The fortress school is one method of dealing with the perceived tectonic shifting of facts that also describes how our digital lives connect with real-world threats. Another model is what is termed surveilled flow. The Royal Dutch Military Police Complex designed by Zvi Hecker Architects (Figure 2) powerfully illustrates this iteration of pre-emptive educational architecture that aims to make the whole school porous and flowing rather than shutting it down as the fortress does. Permission rights for this image were equally sensitive; the firm consented to reproduction with the understanding that Zvi Hecker’s original intention for the academy would be preserved. Hecker believed that “If the democratic society needs army and police, we have the duty to express it architecturally” (Paolo Fontana, personal communication, June 29, 2018).

Segal writes that the building “turns the campus as a whole into a kind of landscape created by the interweaving of the wall-like buildings and the open spaces created in between them and around them” and, as a result, “the line between building and landscape is blurred” (Segal 2008: 85). He calls it a “city within a wall” or “an emptied-out fortress, of which the walls have split and shifted to allow sight, air, and space to enter” (ibid.: 85). Plans of the school look like dynamic shifting planes at various heights. Rather than blocking out the outside world, the surveilled flow model invites it inside but only in order to carefully monitor and control. The implicit logic is that it is safer to render threats transparent through the architectural auspices of openness and inclusion because these allow for early detection and tracking. This strategy is markedly different from the school fortress and its Russian nesting-doll layout. Segal writes of the Royal Dutch Military Police Complex,

The campus’ horizontal, dynamic and dispersed nature counters the concentric, symmetric, hierarchical and enclosed buildings commonly associated with state power, control, and supervision. A main element of enclosure – the peripheral wall – becomes here the building itself, which does not enclose a thing but meanders around open spaces. Furthermore, this peripheral ‘wall is permeable; by its mere shape and configuration, it creates a form that interweaves and connects open and closed, building and landscape, collective and private spaces, allowing the campus to remain ‘exposed,’ open and porous. (ibid.: 87)

Indeed, some college campuses sport hybrids of the two styles: with surveilled flow models that can, at any point of alarm or plausible threat, be locked down to operate as school fortresses. The airy atriums enclosed by the glass offices discussed in the school fortress model subscribe to the surveilled flow inside the building. The Dutch military academy and other examples like it carry this to the next level by inscribing the surveilled flow by dissolving the traditional peripheral wall.

The contradiction in the call to make school buildings safe without regulating gun ownership is that these spaces must still function as semi-public: staff, parents, visitors, and students need to move in and out of the building with a degree of ease that conflicts with traditional notions of the fortress-like security which limits entrances and integrates screening measures upon entry and exit. In this sense, they bear resemblance to national borders because both buildings and nations need to harness a kind of regulated fluidity. Current surveillance policies applied to national borders capture this balance between control and movement. Côté-Boucher (2008) writes about the smart border in Canada, describing it as “diffuse,” or “the extension of the border into a multiplicity of sites for the surveillance of movement” (ibid.: 143-4). These sites include spaces

of confinement, interrogation, and refugee camps (ibid.: 149-50). Movement also describes the fluid communication and flow of data across these sites (ibid.: 146). Amoore, Marmura, and Salter have a similar take on national borders that uses biometric programs that perform the idea of a portable border that is transported through mobile bodies (Amoore, Marumura, and Salter 2006: 151; see also Amoore 2006). So the border and the security are not static and location-based, rather they are attached to the individual and their risk categorization. Similarly, Van der Ploeg (2002) conceived of the twenty-first century body as a data set with migratory potential that is also subject to constant monitoring (Van der Ploeg 2002; 2012). Like national borders and the migrant bodies moving across them, school spaces and the student bodies inhabiting them need to be thought of in terms of a surveilled flow: less as finite and static agents and more as information repositories that allow for regulated movement and constant surveillance.

Figure 2: Royal Dutch Military Police Campus by Zvi Hecker and Studio Mintus. Image from Studio Mintus website, "Works." Accessed June 28 2018. <http://studiomintus.blogspot.com/p/works.html>.

The surveilled-flow model has precedent in Washington DC's revised urban planning. The capital underwent changes after 9/11, which marked a shift in the political discourse on threat. As home to one of America's largest Muslim populations, the greater Washington area's popular image was recast from civilian homeland to "threatscape" (Natsios 2005: 83). In response, DC began dispersing its government buildings across the metropolitan landscape in ways that would decrease their visibility as targets from terrorist aircraft (ibid.: 82). Tysons Corner, a suburban shopping center outside of DC, was central in redistributing government offices among corporate buildings. In conjunction with surveillance features, like data-mining and CCTV cameras, this security tactic of detection through surveilled diffusion introduced this popular alternative to the government's postwar nuclear bunkerfication. Educational environments are following suit by adopting this model of surveilled flow.

This alternative spatial and cultural approach to security is sometimes cleverly positioned as multiculturalism, particularly in higher educational environments. Horwitz (2005) writes about the artificial patina of neoliberal campuses incorporating “multicultural” or “ethnic” materials into central thoroughways and student spaces, which she describes as “hollow references” to non-white cultures (25). Arbitrary and decontextualized wall murals inspired by Islamic art and booth upholstery that quotes Navaho textiles send the message that “everything you desire can be purchased, and everything that you buy will appear to have always been part of your life” (ibid.: 25). Horowitz connects these observations with architectural flow and its political message to her analysis of the design use of materials and textures in higher educational spaces: “By threading traffic through architecture, and urban infrastructure through cultural heritage, its designers play context and circumstance against place and tradition – only partially controlling the complex ambient environment of this urban campus” (ibid.: 27). Architects and interior designers are asked to express a “network society” that is globalized and multicultural and in which a casual acquaintance established in these spaces of surveilled flow could ultimately end in securing a job (ibid.: 28). These spaces want to appear open, porous, and textured from both the inside and out. However, they must maintain this appearance while also meeting contemporary security standards, which they do via increased digital surveillance.

Conclusion

Future educational architecture will feel the pressure to marry notions of pre-emptive threat with the demands of neoliberal multiculturalism and increasingly virtual learning environments. One response to these pressures is the school fortress: an architectural inscription of pre-emptive threat that is as literal as President Donald Trump’s isolationist promise to build a wall that would encase the United States from the outside world. Another response is the surveilled flow, which is shaped by the neoliberal claim that “opening up” provides the best chances for digitally and visually detecting internal aberrations or organizational deviances. This is also an architecture that dangerously conflates suicide bombers and mass shooters with civil protesters, citizens with mental health conditions, and the quiet outcast, or loner—all of whom are branded as unruly occupants and potential hostiles.

The two models of designing school buildings, discussed in this paper, articulate surveillance culture in the age of mass shootings and how we conceive of threat and risk and, more broadly, what it means to be a citizen. School buildings are shaped by these culturally and historically specific concepts. Threat and risk discourses are present in school architecture in the way the buildings foster illusions of flow and lateral surveillance. We should therefore rethink the relationships among surveillance, architecture, and spaces more broadly. What kinds of optic cultures do our designed spaces encourage? What kinds of flow and movement do they invite? What kinds of barrier-building and divisions do they elicit? What forms of citizenship and belonging do they shape? The lines between surveillance and architecture were very strong in Foucault’s theory of panopticism, but these connections have since been abstracted to the point of forgetting architecture’s important role in relations of power and the ways that designed environments both reflect and enact social constructions of individuality, group identity, and the power of the state. Future research might extend the surveillance-directed designs of school buildings outlined here to government buildings, corporate architecture, and the urban planning of public space to see how different iterations of publicness, privacy, and surveillance transform across such places.

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