‘a woman leaping, sleep walking, escaping, held in the suspension between fungibility and fugitivity […] She both escaped out of the window and is not yet returned to the exposure of her captivity through the forces that could return her to the earth’ (Yusoff 2018: 93).

**‘Fall Girl’: Vertical Evacuation and the Aesthetics of Emergency**

**Introduction**

In 2013 the eight-story Rana Plaza garment factory collapsed in Dhaka, killing over 1100 workers. The disaster happened a year after the Tazreen fire of 2012 on the outskirts of Dhaka in Ashulia district, where workers jumped from the higher floors of the building to escape the fire (ANROEV and AMRC, 2013). Many had been prevented by management from using internal stairs to descend. Others found an absence of fire escapes halted their escape. One extraordinary image that populated much of the media from Rana Plaza was that of the garment workers, most of whom were women, sliding down a make-shift shute of bright, colourful fabric. The image glorified by the press showed a kind of improvisation, a creative variation using the garment fabric to spin a new line out of the building in the absence of adequate means to do so in the crumpled building. As opposed to evacuation protocols that route their own kind of arrangement of bodies perhaps as ‘diagrams of power’ (Deleuze, 2006) to route or determine emergency movements – many of which were absent or substandard in both of the Dhaka disasters - the Rana Plaza escape performed a kind of ‘diagramming’ (McCormack, 2004). In this, I understand and take seriously ‘diagramming’ as the creative, unruly and generative potential – an ‘eventful creativity’ (Latham and McCormack, 2004) - through which predominantly women and other subjects have escaped inadequate, restrictive and individualising urban forms and aesthetic orders *together*.

The event would instantiate longer-term gestures in the rush through global labour alliances and reform driven by the US, the ILO, the Bangladeshi government and a growing establishment of unionization and strengthening worker solidarities to improve the building safety and working conditions of garment workers, particularly through fire inspections and evacuation drills (Marriot, 2014). One common occurrence within the commentaries, protests, memorial events that followed, including petitions to the US Secretary of Labor given the complicity of Western fashion brands and household retailers in sourcing garments from the factories (Nova and Gearhart, 2012), was the evocation of earlier emergency evacuations, fire disasters or other urban calamities in the textile industries of late 19th century North America. One such event was the Triangle Shirtwaist Factory Fire of 1911 in New York, where 146 predominantly female, young – characterized by some as just ‘young girls’ – Jewish and Italian immigrant garment workers were killed. Many jumped to their deaths. The fire and its problematic evacuation followed in the footsteps of many other deadly factory fires where young female workers jumped from high floors, some holding hands. While clearly very different contexts, there are some similarities with the age and gender of the Dhaka workers who were low-waged, young women – some again under 18 years old - working to pay off family debts, provide additional household income and remittance payments (Matsuura and Teng, 2020).

The Bangladesh disasters might summon a recurring shudder at a female workforce seen jumping from high-rise buildings together, or ‘stampeding’ in panic as a crowd, as the spectral ‘afterlives’ (Zeiderman, 2020b) of the constitutive relationship between gendered labour with race, capitalism and urban verticality. And yet, as Dina M. Siddiqi (2015) warns, ‘a literal comparison between two events separated by a century’ can be problematic’ as it ‘has the effect of placing Bangladesh in an economic past that the US appears to have, by implication, experienced and moved beyond’ (168). It portrays the Bangladesh disasters as ‘literally out of time’, backwards, haunted by events many times removed from it, and a necessary ‘phase of capitalist growth’ (Siddiqi 2015: 168). In one opera production ghosts from the Triangle fire and Rana Plaza disaster even mingle in song. My intent here is to avoid the pitfalls of a literal comparison as Siddiqi criticizes, but rather to recognize how exploited labour and urban high rise emergencies (Wermiel, 2003) could be understood as recursions in the balance of capitalistic production, even if their conditions are very different. They see consistencies in the de-valuation of working lives, and inadequate fire safety regulation, monitoring and evacuation infrastructures and practices, which are challenged by figures of falling-jumping-sliding female garment workers that transcend time and space.

If 9/11 marked one of the most contemplated urban disasters of recent memory involving albeit a relatively successful evacuation of office workers underneath the 90th and 60th floors of the North and South towers of the World Trade Centre (Dwyer and Flynn, 2011; Galea et al., 2011), there is a tendency to conceive of the mobilities of vertical evacuations in more technical terms, as problems for engineers and architects, or regulators, rather than as social and political concerns despite the widespread social science mobilization in the wake of Hurricane Katrina (Cutter, 2006; Graham, 2005). Perhaps the worst tendency is to consider vertical evacuation as a kind of ‘common sense’ of individualised rationality and individuated agency, tellingly vocalised by the British Conservative MP Jacob Rees-Mogg in a radio interview in which he suggested that the victims of the Grenfell Tower-block disaster in London in 2017 didn’t use what he called ‘common sense’ to evacuate. Rees-Mogg performs a particular kind of closure which renders evacuation as individual, singular and vertical (Cavarero 2017), as *apolitical.* Thisdiminishes the processes of simultaneous council neglect and gentrification which led to the flammable cladding being installed in the first place that endangered the building yet further (GAG, 2017). Rees-Mogg served to render those who followed the advice of police, fire officers and call operators as too stupid to know better, and condescended the social inequalities which put poorer, multi-generational migrant, black and ethnic minority people (Hanley, 2017; Preston, 2018) within the ‘ordinary verticalities’ (Harris, 2015) of tower blocks in Britain (Dorling et al., 2007).

The paper explores how classed, gendered as well as racial prejudices that imbued vertical governance in the form of factory regulations and fire escape design, were escaped by the collective diagrammings of the urban subjects they presumed to know, stereotype and deem culpable. This is captured in the figures of falling garment worker whom I describe knowingly as the ‘fall girl’. I use this term deliberately in order to highlight both the masculine assumptions and realities of what were predominantly young migrant garments workers – many of whom were children - but whose gender, age and ethnicity condemned them to the precarities of the workplace, the contingencies of high rise evacuation, and distributions of culpability as their collective capacities to survive were blamed as insufficient or maladaptive. By diagrammings I mean to understand the embodied creative movements, solidaristic and tight coalitions with other workers. As opposed to what Adriana Cavarero (2017) situates as ‘vertical’ and singular agencies in her philosophy of rectitude, these more horizontal movements and relational ties exceeded the workers’ expected responses as individualistic and selfish, and in contrast to the already existing diagrams of emergency evacuation guidance, and the interesting yet flawed approaches which sought to identify fault post-disaster but also embodied those norms. Against this false framing, I present an important way to think urban verticality and emergency otherwise; to present an embodied, feminist and solidaristic glimpse of high-rise escape, which does not blame or victimize the worker for seeking to move and evacuate together. The research involved re-examining existing histories and secondary literature of the Triangle Fire, as well as primary documents in the form of archival newspaper collections of the print media, union and worker magazines and newsletters, individual accounts and diaries, as well as court materials held at the digital archives of the Kheel Centre for Labor-Management Documentation & Archives, Cornell University.

Firstly, the paper sets out the case for a more expansive tracing of vertical evacuation within urban scholarship, which would both take more seriously the gendered and raced politics of mobility and mobility (in)justices (Sheller, 2018) bound up in vertical evacuations, and the aesthetics of emergency and urban infrastructures. Next, the paper alights on the Triangle Shirtwaist and other North American factory fires and explores how femininity became closely tied to both the diagnosis and blame of the failed evacuations and the death of young migrant workers, some of which are made comparable with suicide. Examining how the workers colluded in ways which escaped the inadequate fire regulations, worker discipline, rescue technologies, and stood up to poor working conditions, I suggest we might find more affirmative, embodied solidarities that should be embraced in urban evacuation, not maligned or criminalised.

**Vertical Evacuation: emergencies, mobilities, aesthetics**

Vertical evacuation has not received the emphasis it should have within urban studies, at least within the full breadth of urban scholarship. While emergencies and disasters have become crucial components of the slow and fast violences that pervade urban life – from terrorism to heatwaves, storms, to mass flooding - evacuation – as the mobilities of people, animals and things, has often been seen as a more technical concern (although see Susan Cutter for an exception Cutter, 1991, 2006; Cutter and Barnes, 1982). Difficult to characterise within disciplinary and sub-disciplinary boundaries, evacuation has often flitted between different kinds of understanding of mobility (Adey, 2020; Cresswell, 2006; Sheller, 2013). In one of the only book length studies of urban evacuation, Zelinsky and Kosinski (1991) point out the ‘deafening silence in the demographic community on the subject of emergency evacuations’ (13), yet they tend to elide evacuation from the fabric of the everyday or ordinary city, tending to view it as an ‘evental’ concern reflecting the punctual nature of disaster and emergency.

As Sheller (2013) has shown in Port-au-Prince in the aftermath of the 2010 Haiti earthquake, multi-scalar inequalities and asymmetries of mobility often follow emergencies and build on existing mobility injustices. Susan Cutter and others have shown that the inequalities experienced during evacuations from events like Hurricane Katrina can speak as a microcosm of race, gender and class relations (Cutter and Smith, 2009: 30–31). Much of this has been set within a wider examination of structural racisms (Giroux, 2015), yet where marginalised communities and alternative social reproductions (Katz, 2008) – such as queer kinship (Chapman, 2017) – have offered some of the most promising forms of social togetherness and resilience to survive and endure urban emergencies.

How then might we draw together urban evacuation with an understanding of the vertical?

Some tendencies of urban scholarship might have worked against such a move. Evacuation seems counter-intuitive to the ideologies of masculine ascensionism bound up within the history of the high-rise and skyscraper geographies (Graham and Hewitt, 2013; McNeill, 2005; Morshed, 2015), and the minimal amount of work to explore how vertical mobilities might be performed and supported up and down and across these building types (see for an exception Bernard, 2014; Graham, 2014). Indeed as Graham has observed: ‘the cultural geographies and politics of vertical transportation within and between the buildings of vertically structured cityscapes have been largely ignored by social scientists and humanities scholars’(2014: 241). Moreover, Dolores Hayden’s (1977) devastating explication of the skyscraper as a kind of ‘rape’, aligns the sense, visual symbolism, and felt impressions of the city thrusting upwards as an expression of male reproductive and sexual virility (Brown, 2013) – what she calls ‘procreant power’. In this sense, the phallic shape of the high-rise, with its expressions of vigour, uprightness, confidence, expansion, ‘crescendo’, seem to dominate. Indeed, the associations of masculinity with rectitude, suggests Cavarero, have dominated the visual imagination at the expense of an inclining feminity that leans towards more collective, sororal or horizontal agencies. Even the vertigo inducing risks of the vertical and often exploited labour involved in constructing high-rise architecture (Graham, 2016) speak of male and biological competitiveness important to the speculative and accumulative properties of capitalism.

On the other hand, there are tendencies notably in British realist fiction as well as sci-fi literature (Butt, 2018; Hewitt and Graham, 2015) to see the high-rise in a different kind of more everyday or ordinary light, that sees the technologies for vertical mobility notably stuck and breaking down. The ‘up’ is ‘starkly contested' (Graham 2014). Failing elevators can be signals of social decline and the state’s abandonment of social housing or landlord extortion of rental tenants, and even government withdrawal in middle class enclaves, as Abaza (2020) shows in an intimate account of everyday life in Cairo. Moreover, these are not altogether examples of female passivity and disempowerment (Hampton, 2019), and there are alternative and more affirmative narratives of vertical working class and migrant lives, even in death (Ramkissoon, 2019). Perhaps in the way that Andrew Harris (2015) has questioned the paired logics of verticality with height and power, the possibility of escape through evacuation downwards and out, rather than up, suggests a subversion of these dominant logics.

Most closely to the topic of this paper, emergent non-technical research on vertical evacuation has tended to diagnose particular kinds of aesthetic closure which renders evacuation as *apolitical* and naturalised as neoliberal. For example, Daniel Barber’s (2019) exploration of the sculptural air transfer system that winds its way through the University Centre of The New School in New York, providing clean air to the emergency egress stairways of the public building, signals for Barber, the parallel and contradictory moves of emergency exit with disclosing and enclosing powers, because it ‘allows one to stay in a state of constant risk, yet by being carefully tucked away, also provides a cover for these conditions of precarity’ (Barber, 2019). In contrast to the wider neoliberal tendencies for urban elites to create vertical secessionary enclaves of securitized withdrawal (Graham and Hewitt 2013), for John Preston (2018), the history of ‘stay put’ instructions for working class and minority communities occupying residential high-rises in Britain during conditions of emergency, has operated as a form of high-rise containment and individuation. In the context of Grenfell, Preston argues that ‘stay put’ continued a policy that has pathologized the mobilities of poor working class bodies, and relied upon a ‘probabilistic eliminationism’ in which ‘disadvantages in terms of language, mobility and resources’, would make ‘certain groups of individuals more likely to follow the ‘stay put’ advice’ (2018: 46). Yet the now maligned non-evacuation ‘stay put’ policy within Grenfell Tower was not total. Many of the residents - who were largely minority ethnic and some from migrant communities (Oxley, 2018) - had been given guidance in which evacuation was actually ‘conditional’ and ‘based on the judgment of the resident’, or if it was their ‘wish to evacuate’ (Preston 2018: 39). This had the effect of placing the ‘responsibility for survival onto the individual’, while requiring the ‘cultural capital necessary to do so and having the resources and capacity to get out (2018: 46), a form of what Austin Zeiderman has called ‘endangerment’ (Zeiderman, 2020a: 72). Evidence has even shown that the residents’ response to the fire was overwhelmingly collective in spite of the individualising instructions (Hampton, 2019).

Of course there are other approaches to the ‘up’ and the mobile within aeromobilities research interests too, which have born feminist, decolonial and critical approaches to the body in flight and through vertical approaches to territory and geopolitics. While those literatures have been most interested in the body above, or made airborne, especially through masculinist cultures of the body and militaristic regimes of seeing and targeting, perhaps of most relevance to this paper is Charlotte Veal’s (2021) work on the falling body. Veal’s research on the first paratroop training school in Britain from the 1940’s, explicates ‘a political geography of falling’ that can ‘deepen theorisations of the organisation and performance of political space’ (2021: 2). Veal’s attention to ‘*embodied vertical practices*’ (2021: 2) explores the origins of the parachute training programme in order to trace vertical securitization through the intimate acts of ‘micro-bodily mobilities’ with the possibility to rework ‘geopolitical realities through conspicuously politicised movement’. While Veal’s concern is that of the modulated military body redefining strategy and conflict, I take heed of female escaping falling bodies that rework urban orders, cultures and practices.

In other words, this paper draws on the attentiveness to the vertical body and its aesthetic experience and (dis)closures. It recognises that as the vertical aerial body is made vulnerable, it opens possibilities for the making vulnerable of existing orders that ascribe and attenuate embodied agencies, affects, responsibility and culpability to female workers, building owners, material infrastructures, as well as fire and evacuation regulations that come together in high-rise disasters. In what follows I work next with the coeval logics that interpreted the disaster and found the womens’ fall in either a sympathetic manner of identifying victimhood from exploitation, or fault from culpability.

**Culpability and Sympathy**

The notion of the ‘fireproof’ building (Wermiel, 2000) was partly intended to assuage concerns over so-called ‘firetrap’, and even ‘man-trap’ (Philadelphia Inquirer, 1881) structures endemic to tenement residential and converted factories, timber mills, and multi-story buildings with limited or no means to escape them. High-rise emergencies drew upon narratives of masculinity in the form of the rescue of sexually vulnerable recipients of the heroized and masculinized fire fighter (Cooper, 1995; Maleta, 2009). Rescue by fire brigades could be a form of sexual subservience, spectacle and equally a chivalric display of courage. As Cooper suggests, the portrayal of scenes of urban rescue ‘were an enhancement of the fireman’s masculinity, a reassuring affirmation of gender difference, and a visible demonstration of man’s power over women’ (Cooper 1995: 156). The ascendant and vertical technologies that went with urban fire fighting and evacuation by rescue even drew on other masculine sexual tropes tied to technological adeptness, from manning and handling ladders, to fondling fire hoses and coaxing the feminised steam engines. In this the female high-rise worker seems destined to a dual role which would repeat itself in Shirtwaist, as an object of sympathy and even siren desire in the victimhood of high-rise fires. And as equally as an incompetent and irrational inhabitant of the urban order, additionally endangered within a fire. In this section we see how the collective movements and solidarities of the worker’s activities could be viewed as inclinations of sympathy and culpability. Women’s solidaristic socialities before, and during evacuation, was a problem.

As discussed in numerous histories and biographies of the Triangle Shirtwaist fire (see Stein, 2010), the fire started on the 8th floor of the Asch building, from an oil rag bin on the cutting room floor. 146 workers were killed – most of whom were female and in their late teens and early twenties. Under a hundred were killed jumping or falling from the building and the rest were burnt or suffocated within. Attempts to narrate the disaster seemed to draw upon the inability to rescue the garment workers from their passionate inclinations to fall. The most infamous jumper during 9/11 was the so-called ‘*falling man’* (Mackay, 2016)*,* yet women have been more central to submissive ‘falling’ urban narratives expressed within wider cultural representations aligned to tropes of morality, sexuality and poverty, via masculine desiring gazes of empathy *and* redemption from their own proclivities and faults. For many commentators on women’s exposure to the Victorian and Edwardian city, ‘fallen women’ encoded of a new found autonomy and public mobility to the extent that Nicolleti finds narratives of an ‘inescapable downward mobility’ when women ‘ventured from their respectable homes into the city’ (Nicoletti, 2004). Suicide, perhaps by falling from public bridges, could be both a ‘a remedy for dishonour, self-destruction becoming a means for a generally passive woman to protest, or at least abandon, her subordinate position in the patriarchal system’ (2004), or a more passive sort of crumbling of agency (Edwards, 2008).

At the Asch building, a single fire escape ended in mid-air on the 2nd floor. The doors to the factory floors had been locked in order to stop the women taking informal breaks and to prevent their movement between floors. The control of mobility in and out of the building was key to the employers’ often pernicious organization of labour. A story in the *Ladies Garment Worker*, a union newsletter campaigning for workers’ rights, frequently emphasized the embodied hardships of garment factory practices. It described the cold, arduous lines of waiting workers being ‘checked’ by a single person in order to punch their time cards, fining them even if the long queue had made them late (Barnum, 1910). About 150 of the workers were able to leave the 10th floor of the building and escaped onto the roof before crossing to the building next door. Those on the 9th were trapped. Some made it to a fire escape that lacked a drop ladder to take them to the ground, but it buckled and collapsed. By 1911 almost half the factory and garment workers in New York were working above the seventh floor in loft factory spaces (Patricia et al., 2003) where light was plentiful, above the tallest ladder of fire fighters.

The reporting of the event attempted to expose fault or cause. One way of representing Shirtwaist was to draw on Brown Brothers photography, which ranged from imagery of the fire-stricken building and twisted and distorted shapes, including the fire escapes, and the broken bodies of the garment workers lined on the sidewalk. Passersby go on their way. Others crane their necks upwards presumably looking at the blaze or other workers trying to leave or jump from the building (Mackay, 2011). And yet, what also troubled these representations was how the women came together, even in death. Even in their photographed rectitude on the sidewalk the individual bodies seem to dwell together as the fabric undulations of their clothing blend one body into another. In one instance, this made it even harder to see the women as people. As a reporter wrote ‘it was hardly possible to call them bodies, because that word suggests something human’ (New York Times, 1911a).

The photographs can help us understand a gender politics and ethics embedded within the representation of the young women (Todd, 2005). Different levels of male authority document the processing of bodies on their way to the morgue. Yet the images further perpetrate the silencing of migrant and working class women, who had already endured so much to voice the poor labour and working conditions of the factory in a strike that had only ended the previous year, but were not permitted to adequately contest the structural inequalities and material impediments that prevented their safe evacuation, especially given that the strike did not result in union representation in the Triangle Shirtwaist Factory. It took the Triangle fire to lead to actual factory and fire regulation reform (Wermeil 2000).

Another more diagnostic kind of view also emerged in the form of pseudo-photograph/montages of photos combined with sketches and maps, a synoptic view of the park and street layout, and an oblique sketch of Grace Church. The *New York Tribune* called their own front cover a ‘Diagrammatic Sketch of the Surroundings of Yesterday’s Horror’ (New York Tribune, 2011). Other newspapers featured similar imagery with labels, arrows and numbered legends, premediating the diagrams used at the later trial. These function more as diagrams of power reproducing a language of victimhood. The imagery assigned culpability to the building’s owners and the regulators, yet the language of the reports tended to construct the workers themselves - labelled “unfortunates” – as maladaptive victims of their own gendered, social and bodily faults. The women were deemed part culpable and part-victims.

Very little of the testimony comes from the surviving garment workers themselves, who in their absence were characterized as raced, migrant others. Those who escaped were claimed to have been ‘foreigners who spoke little English and fled for their homes’ […] as soon as they gained the sidewalk’ (New York Times, 1911a: 2). Paula Hyman’s (2000) tracing of the Jewish community’s response to the fire is also revealing of the invisibility of the ethnicity of the Jewish immigrant workers from Russia and Eastern Europe - who outnumbered the Italian workers - from within many authoritative narratives and histories of the event. Even the solidaristic relationships between the workers were deliberately fractured along ethnic lines as employers’ deliberately paired workers with disparities of pay to increase ‘alienation’. Some started rumours in order to ‘arouse race prejudice’ suggested the suffragist Theresa Malkiel (Malkiel, 1990: 17).

The fire codes which regulated the building and the technologies that adorned it, tended to work on the assumption that the building’s inhabitants were ill-adapted to evacuating. Early fire escapes involved moving parts, wires, gears, pulleys, and the ‘mutual and indeterminate affectivity of material bodies (human and non-human) as they move and transform in time’ (Blair 2008: 55). Fire escape design reflected a belief that the main problem of evacuating a building was the inhabitant themselves, their ‘physical and psychological abilities, their sobriety, and their resulting behaviour’ as highly contingent (Blair 2008: 54) and as indeterminate as the fire itself. The worker/inhabitant was imagined filled with involuntary, untrained or clumsy motions, even incendiary terror - their bodily autonomy displaced somehow by the extreme conditions. John Protevi suggests that ‘panic’ might even be understood as ‘an evacuation of the subject as automatic responses take over’ (Protevi, 2009: 50). Yet, the attribution of panic to emergency evacuations is rarely unproblematic and subjects the panicking body to classed, gendered and racial prejudices (Solnit, 2010)

At the Triangle fire, the workers’ bodies tended to speak through bystanders, elevator operators, and other male workers, as precipitously unstable. Gendered, classed and raced, the workers’ identities and heritage grouped them problematically, being characterized as ‘girls nearly all of them Italians’, innately passionate and melodramatic. The immigrant Jewish workers were not often mentioned in the press write-ups either, promulgating further problems around attributions of Jewishness and fault. One newspaper described the women as ‘fugitives’ in the subheading, and while the article does finger blame at the owners, city codes and building inspectors, it seems to harbor the conviction that the garment workers were as much at fault - for breaking open the windows with ‘frenzied blows’, making a ‘mad rush for the two passenger and two freight elevators’ (*New York Tribune* 1911). The intersection of their heritage and gender signals what McEvoy has called assumptions about their ‘lack of capacity for survival in the industrial order’ (McEvoy, 1993: 637–638). The male elevator operators – cast as heroes by the press - (Diffrient, 2018) described a scene of ‘young Italian girls, their eyes starting from terror’ while fighting with ‘insane strength and savagery to gain the elevators’ (*New York Tribune 1911*). Some were said to have ‘screamed for help’ and made ‘flying leaps’ into the elevator cars.

The descriptions account for a dehumanized or animalistic selfish self, throwing themselves at and clinging to the elevator’s barriers – some with their teeth. Apparently, some girls died in this violence of escape as, ‘dead and mutilated bodies’ who were ‘not killed by fire, but torn to pieces, almost, by frenzied human hands […] It was a mad fight for life’. Newspapers speculated that it was the way in which the girls tried to leave that killed them, declaring that it, ‘is certain that many of the unfortunate creatures were killed not by fire, but in the mad trampling of many hundreds of feet’ (*New York Tribune* 1911). The ‘girls’ – cast as ‘unfortunate creatures’ - are infantilized and animalized as susceptible figures falling into an animalistic-like potential to panic and harm themselves and each other by acting individualistically and selfishly which, in a collective, becomes even more deadly.

Even Leon Stein’s authoritative history repeats the panic that seizes the young women into a violent selfishness: ‘Panic stricken girls battled each other on that rickety, terrifying descent’ (2011: 57). The girls fly into a panic or panic pushes them into flight. A fire insurer and consultant described, ‘human bundles self-flung to the pavement as a choice to roast in the flames behind. Bridges and chains of stout limbs and bodies are constructed where apparatus does not avail’, those found trapped were ‘doomed like trapped beasts in the jungle’ (McKewon, 1911) – compared by one factory manager to “a lot of cattle” (Llewellyn, 1987; Stein, 2010) - an outcome of apparent primal, maladaptive, vulnerabilities. As Laurent Berlant suggests in another form of bodily and affective excess, the workers were blamed for their own ‘failing’ and falling ‘will and body’ (Berlant, 2011: 109). The crowd below even catches a kind of ‘hysteria’, perhaps as a deleuzian contagious affect that surpasses the apparent differences of human and animal, emotion – like fire – can leap across. The fire brigade and police horses, Stein suggests, cannot cope with the blood and bodies, succumbing to the affective atmosphere of trauma, rearing up ‘on their hind legs, their eyes rolling’ (Stein, 2010: 18). To paraphrase Beeston’s analysis of literary modernist writing that commented on the Shirtwaist fire, the events made it hard to distinguish between bodies, ‘an individual or a mass? a child or an animal’ (Beeston 2018: 642). These alternative diagrams, spread beyond the event of the fire but to the inquest, a criminal trial, and provided some of the energy for significant labour and workplace reform.

At the criminal proceedings, journalists picked up on the distribution of blame, both from the defence lawyers and members of the jury. When workers’ testimonies were solicited, in cross examination the defence attorney predictably sought to undermine the reliability of a garment worker’s recollections. This continued in the press even when reporters sought to garner sympathy for the workers, impugning an unreliability to their testimony as they were said to have ‘swooned’ at the ‘sight of the bodies hurtling through the air to the passageway below […]’, and on coming-to ‘she leaped from one of the windows’ (*New York Time*s 1911b). Escape from the building becomes an act of only partial consciousness. The court trial even spent much time clarifying the unfolding events through the repeated use of drawn diagrams of the building and the position of windows, escapes, tables and garments and other workers which witnesses were asked to point out - to draw and be drawn by diagrams. The defence directed the court’s attention to a worker’s inability to control her emotions, suggesting mockingly: “Of course you were calm and collected. You are always calm and collected are you not?”. When she replied, “No, I am not always calm. I wasn’t calm then”, the judge rebuked her for not answering in a “respectful” way (*New York Times*, 1911b). For the jury, the emotional instability of the workers became part of a pattern – the feelings apparently erupting for a moment in the courtroom only convinced that they were susceptible to other maladaptive actions. One of the members of the jury that acquitted the building’s owners suggested:

I can't see that any one was responsible ... it must have been an act of God. I think the factory was well managed, and was as good or better than many others. I think that the girls, who undoubtedly have not as much intelligence as others might have in other walks of life, were inclined to fly into a panic (; New York Times, 1911c).

For others, the conclusion of the court was unforgivable (McEvoy 1993). “God did it”, was a title in the *International Socialist Review* (1912)*,* who poured scorn at the outcome and the juror’s words, asking (Literary Digest, 1912): “Is it God who traps the worker in blazing factory or buries him in a tomblike mine, without providing him with even one means of escape?’ (Russell, 1912).

### **Solidarities: Diagramming Evacuation Mobilities**

The disaster was the worst of a long line of garment and factory fires in North America. The Newark Factory Fire of the previous November 26th 1910 saw numerous female factory workers jumping to their deaths from the higher floors. Another extraordinary diagram reproduced in *The Survey* (1910), shows a detailed cut-away look of the outside and inside spaces of the factory in one image. The annotations are accusatory, identifying window sash locks which made the windows impossible to open. Their distance from the floor required the girls to jump onto the tables to reach them. At first glance, it is easy to miss the drawn figures of jumping/falling girls sketched in different postures and forms of bodily expression of hot desperation, clutching at something, their hair trailing behind. Skirts billow in the rush of air and they are for a moment immobilized. Some are impaled on spiked railings below intended to keep workers in and as others out, just as they were in the Shirtwaist fire. The diagram connects the positions of blame or sympathy discussed in the previous section, where the ‘girls’ even in this diagnostic and forensic view are individualized. Indeed, in the Newark fire, the coroner’s jury, like the Shirtwaist jury, concluded that blame could not be pinned on the factory owners, but accidental death caused by the workers’ ‘maladaptive’ actions. The jury identified an individual worker Carrie Robrecht who ‘came to her death by misadventure and accident caused by a fall, and not as the result of a criminal act’ (*The Survey*, 1911). Robrecht was the figurative ‘fall-girl’. The court’s finding was not universally accepted however, as a *New York Times* reporter spoke out at this kind of blame, arguing:

It will not do to say that the innocent victims lost their self-control and caused their own destruction. Few if any of them jumped from the windows until all hope of rescue was gone and their clothing was in flames. (*New York Times*, 1910).

Figure 1. ‘Girls' leap from the Newark Factory Fire, *The Survey* 1910; The attempted use of life-nets at the Newark Factory Fire, *Le Petit Journal illustré* du 11 Décembre 1910 (gallica.bnf.fr/Bibliotheque nationale de France)

Both fires show an industrial worker whose individual and collective movements and practices were already rationalised as a material-energetic-abstraction of productive processes and capital (Cresswell, 2006; Rabinbach, 1992), to be found wanting. The labor reformer, feminist and suffragist Mary Alden Hopkins’ found that the workers’ disciplination which directed their attention away from socialising but to their tasks may have actually prevented them from leaving. As a worker explained, the attentive economy of the factories meant that they were not even aware of the fire until it was too late, ‘A piece-worker must keep her eyes on her machine if she wants to make out and I didn't know anything was wrong until I happened to look up and saw all the girls running to one end of the room’ (Hopkins, 1911: 524). Stein (2010) even accounts for one woman who ‘punched’ or ‘clocked out’ during the chaos of the Shirtwaist fire. Valued for their productive yet semi-disposable labour, the female worker as evacuee is reduced to an ‘abstraction-a contractor of labor power or an append to the machine’, rather than a ‘complex, material construction of biology and culture’ (McEvoy, 1993: 630–631), a ‘human being’ wrote one worker in the *Ladies Garment Worker*, ‘throbbing with the aspirations, ambitions and hopes of life’ (Mayerson, 1910: 6).

Another way of understanding what was constructed as ‘panic’ and maladaptation is to see the collectives of escaping, jumping women as far more affirmative, powerful and sympathetic movements drawn by people moving together, sharing their fears, coaxing, touching, calming or exciting one another in their efforts to escape. These were expressions of embodied feminist and socialist solidarities and intimacies that had powerfully been expressed during the industrial action that had led up to the fire. Even at the criminal proceedings, several hundred female protestors, some from the families of the victims, were declared to have rioted in a strange mirror of the actual disaster. The women were once more ‘locked out’ from the courtroom, beating on the door “murderers” whilst the factory owners were ensconced inside. The protestors, seemingly unable to control their passions, were described to have ‘formed a line, paraded about the corridors crying and tearing at their hair and waving photographs of those dear to them’ (New York Times, 1911c: 24). While all this happened, the police took the factory’s owners from the courtroom and rushed them to the elevators to escape-cum-evacuate.

As opposed to the diagrams of power that structured their work, and that have come to define the drilled bodily movements that came after the Shirtwaist Triangle fire in the form of disciplinary evacuation exercises and fire drills (Adey, 2020), the working class women diagrammed their exit out of the building very differently. While the *Boston Morning Journal* (1911) remarked on these acts sympathetically by describing the tenderness of the workers as three of the ‘girls’ were reported to have kissed ‘each other in a last farewell’ before they ‘clasp their arms around each other’s necks and together plunge hend foremost to the pavement’, these collective forms of escape rework the positions of culpability and victimhood so far described.

Even while reformers highlighted the inadequate infrastructural provision of fire and evacuation materials, they tended to imagine individual, universalizing bodies using them, often in atomistic and asocial ways. The Tenement Housing Commission’s official study of New York and Brooklyn in 1900, found that almost a quarter of the houses had no balconies at all, others had a peculiar system of ‘ostensible fire escapes, consisting of a vertical ladder suspended in-mid air in front of the building at each story by two iron brackets’ (Bonner 1900: 13). But many of the escapes had been effectively colonised by the building’s tenants as living, storage and social space. ‘It is hardly necessary to point out that this arrangement could not, by the furthest stretch of the imagination, be considered a fire escape’, read a report to the Commission (Bonner et al., 1900: 14). Admonishing the dangerous use of an evacuation infrastructure, the Commission undermined the ways of life of the working classes for whom the fire escape could be a form of sociality, space and unstifled breath. The segregation practices of the 20th century American cinema and theatre (Abel, 2008), even shows how some fire escapes became outside staircases for people of colour to reach the elevated ‘crows-nest’ of segregated seating.

The Shirtwaist garment workers’ panicky movements and leaps – discredited in order to level guilt, or credited as ways to raise sympathy for those workers - were actually efforts to evacuate *otherwise*, wearing away and diagramming differently to the atomistic and individualistic assumptions we have seen. Derek McCormack identifies moving bodies forming shapes, seething and expanding, and contracting ‘as elemental variations excessive of the category of entity’ (McCormack, 2018). The Newark and Triangle fires saw envelopments of bodies seeking solace and escape. The women pushed against the atomistic envelopes of bodily space or kinespheres and the restricted factory conditions which were regulated in New York City by the volume of factory space rather than floor area. They resisted attempts to disperse and isolate the same standing and marching interlocking female bodies that had constituted and symbolised the solidarities of the Shirtwaist labour force which had been on strike only the year before for better working conditions, paid holidays and fixed working hours. The linking and joining of female bodies by interlocked hands and arms was a potent symbol (Malkiel, 1990) and constituting act of embodied solidarity and evacuation from inadequate working conditions, and the fires that they led to.

Almost everything was working against these more solidaristic configurations, even technology and infrastructure exemplified in the factory’s locked doors, the defunct fire escapes, and the excessive entanglement of bodies and elements that escaped a technology used in both the Newark and Shirtwaist fires: the ‘life-net’. These were used by metropolitan fire departments to catch leaping people trying to escape building fires, but they could not cope with the garment workers embodied and intimate sociality, pressed together by heat and violence, unravelling the structural assumptions of fabric under pressure – bodies that came ‘down with arms entwined – three or even four together’ (Stein 2010: 51), complained New York’s fire chief in press reports and the criminal trial (People of the State of New York vs Harris and Blanck 1911). The nets involved material tensions to produce an ‘elastic space-time’ permitting a soft landing. Fire departments liked demonstrating the nets as muscular and heroic attractions – some of the garment workers may have seen these shows at Coney Island on their days off (Peiss, 2011). In the coroner’s inquiry, fire chief Croker explained that because the workers jumped, arm in arm, hugging, holding hands - they ”all went in a pile together” - the nets were just not strong enough (Llewellyn, 1987: 9). The evacuees diagrammed in social and bodily configurations at odds with the assumption of the life-net apparatus.

In the wake of these disasters, the depiction of jumping, falling women became relatively common, yet there are unlikely resonances with an earlier portrayal of women in flight as Terri Snyder (2015) shows in the representation of ‘Anna’s Leap’, which depicts an enslaved woman confined to an attic in the District of Colombia, who, in 1815, jumped out of the attic window rather than to face enslavement in Georgia and separation from her family. Preceding the Shirtwaist and the Dhaka disasters that gathered together outrage and concern for subsequent labour reform, Anna’s leap helped mobilise anti-slavery sentiment in the United States (Snyder 2015: 3). Yet the garment workers’ attempted escape was more collective, even if their embodied solidarities undermined them. Law, construction materials, building assumptions, rescue practices could not match the diagrammings of the bodies and subjects who evacuated in creative, improvisory, and solidaristic ways. The seething images of clamouring women’s bodies of fire and smoke falling or beating at the locked doors in the Triangle Shirtwaist fire, can read of tragedy and victimhood, but equally as a moment of violence and resistance. These were lives coming together in ways that startled commentators searching for culpability or sympathy within an urban social order, and that challenged the assumptions which were built into the urban environment, endangering the working classes and their capacities to escape.

**Conclusion**

This paper has traced a moment of pre-history to the more recent fast-fashion high-rise factory disasters of today and attempts to evacuate poorly conceived and unregulated buildings. The paper has foregrounded vertical evacuation mobilities in scrambling, falling running, walking bodies - some arm in arm, some holding hands - as a relatively unacknowledged but important form of vertical mobility in the contemporary city that has tended to lie outside of the purview of critical urban research, save in a technical register of engineering, or a problem of building regulation. Events like the 1911 Triangle Shirtwaist fire explicate troubling but persistent gendered understandings of agency, solidarity and mobility that underpin evacuation planning and mobility today, and the afterlives of vertical, capitalistic, gendered and racialised labour (Zeiderman 2020b).

Kathryn Yusoff (2018) has drawn upon several images and narratives of jumping, falling women of colour, including Anna’s Leap mentioned above (2015), to suggest that such imagery might impugn something more than marginality, but rather agencies of escape in resistance to objectification and incarceration, ‘the woman who is fleeing out of the window’, suggests Yusoff, is given an escape route that matches her own claim to possession of her body by the printmaker […] she has unbound herself in the very same language of matter that would make a person into a thing, defying the weight of her flesh’ (Yusoff, 2018: 92). Yusoff helps us to recognise the racialised and emancipatory lineage of the trope of the falling ‘girl’ or woman.

If the Triangle Shirtwaist Factory fire continues to form a popular event from which contemporary urban disasters befalling the working classes are compared, especially around the failures of inadequate or poor evacuation, there are other lessons we might learn from the ‘fall-girl’, to find in the fire a catalyst for working class and womens’ identities that powerfully surpass individuated portrayals of female passivity, victimhood or culpability. The Triangle Shirtwaist fire continued the solidaristic configurations of young women who were deemed as transgressive, conspiratorial, animalistic, panicky, promiscuous (Adey 2020), and dangerous to themselves and others. This made them somehow culpable for their inability to survive, yet they actually diagrammed away from the disciplinary, carceral and inadequate assumptions around the building’s design and management, and even the rescue infrastructures designed to save them. The falling girl or woman was not alone or passive, but should be understood as a plural expression of intrapersonal solidarities, agencies which young migrant women turned to for comfort, collective strength and survival. Of course, we must take care in neither lionising or celebrating acts of apparent martyrdom to death – especially in the eyes of the reformists that the Shirtwaist fire galvanised. Martyrdom, even together, cannot be exemplary of an urban order either. Escaping together in the ways described followed other modes of contestation and subversion, and were rather attempts to live on through emergency, or even dying better together when there was no other choice.

Such acts can help to rethink the architectures, and arrangements of vertical evacuation, and the landscape of vertical buildings more from below, to account for those who live in and with them, to better accommodate the ways we evacuate together in more communal, social ways. Such histories push back vehemently against tendencies to depoliticise urban evacuation and fire disasters as asocial, or neither classed or raced. And they question the condescension of the capacities of people to evacuate, or not, but rather to recognise differing capacities to go against the guidance of authorities and the norms that are used to design buildings and evacuation arrangements. It is against these that people are made to conform, are judged and found wanting. In this way, the figure of the jumping woman can be drawn more ambiguously. The act is more enigmatic, appearing at once an act of despair and self-destruction, while equally a ‘gesture of love or rebellion’ (Snyder 2015: 160), a story of strength and solidarity.

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