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Forensic Architecture: Digital Citizen Intelligence in the Age of Urban Warfare

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Abstract

Forensic Architecture is an emergent investigatory practice and the name of a multidisciplinary research collective founded in 2010. They produce architectural evidence around human right violations and environmental destruction perpetrated by states and public actors. By integrating human rights research within architectural frameworks and technological innovation, they have developed a unique set of methods. Extending the discipline of open source intelligence, they empower victims to become agents of investigation. How effective is this approach for investigating contemporary political and environmental conflicts, and addressing state violence? Based on all investigations published by Forensic Architecture until March 2019, this article aims to evaluate the judicial and communicative impact of their work. It demonstrates that their effectiveness in courts is comparably low, and argues that their main quality is instead symbolic: with their investigations, they expose disinformation strategies, shape narratives around current conflicts and contribute significantly to a critical public discourse

Keywords: Human rights investigation; open source intelligence; spatial evidence; forensics; research architecture

Introduction

In the 21st century, most conflicts unfold in cities (Bernard 2016), and most victims die in buildings (Weizman 2017: 57). The built environment therefore holds traces of violence, and can be a valuable clue for those who wish to elucidate them. Leading the way in this discipline is the research collective Forensic Architecture. It was founded by the architect Eyal Weizman in 2010 and involves a multidisciplinary team of architects, software developers, filmmakers, journalists, artists, scientists and lawyers. Based at Goldsmiths, University of London, they investigate human right violations and environmental destruction undertaken by states and corporations, and produce evidence for civil-society groups, prosecutors and media organisations (Weizman 2017: 64). What defines their approach is their study of buildings as "sensors" (Weizman 2017: 52). To them, the built environment is a dynamic fabric that records social and political phenomena, and it does so especially clearly in the case of violence.

Beyond this "hyperesthesia" of buildings to the eruptive violence of warfare (Weizman 2017: 52), buildings can also embody a subtler form of violence: the creeping violence of architecture, when it is used to solidify oppression. This means there is a necessity to establish causality beyond the direct, physical determinants of architectural defects, and to look for their origins in politics, society or economy.

In turns, architecture can therefore be the backdrop against which violence occurs, the instrument of violence, and for Forensic Architecture, the mode of research and presentation. At the same time, urban areas are media-saturated places. The widespread availability of smartphones and social media platforms means that acts of violence rarely go unrecorded. Thus, while communication technologies may not have the powerful anti-repressive potential they were once bestowed with (Morozov 2011), they do play a significant role in human rights research. Evidence is now more accessible than ever, as is the forming of collaborative networks. This leads to a fundamental change in power dynamics: victims of violence are evolving from being objects, to agents of investigation. This type of user-generated content, and publicly available data in general, are the second pillar of Forensic Architecture's research.

Situated at the intersection of open source intelligence, architecture, technology and design, Forensic Architecture's approach opens up new perspectives for human rights advocacy. How effective is this method for investigating contemporary political and environmental conflicts and addressing state violence? This article formulates the hypothesis that due to the power dynamics in which it operates, Forensic Architecture's overall effectiveness remains limited when looking at legal accountability and law enforcement. Much more pertinent is its symbolic potential, both through the intervention in public discourse and in the long-term shaping of the narratives around contemporary conflicts. This will be demonstrated by first providing context on human rights investigation, then introducing the theoretical framework of Forensic Architecture's research. By analysing the spaces in which their evidence is presented, and providing an account of its reception, it will then evaluate the judicial and communicative impact of their work. Conclusions are drawn based on the empirical support of all investigations published by Forensic Architecture until March 2019.

Recent developments in human rights investigation

From the "era of the witness" to the "forensic turn"

In the first stage of post-World War II investigation, trials were conducted mainly on the basis of official or seized war documents (Bois et al. 2016: 121; Keenan and Weizman 2012), since Holocaust survivors were considered to be too traumatized to issue rational accounts. It is only with the 1961 Eichmann trial that survivor testimonies became central to the elucidation of human rights violations - a development coined "the era of the witness" by Wieviorka (2006). Especially during the Cold War when human rights groups such as Amnesty International, Human Rights Watch and Médecins Sans Frontières emerged, conflicts were told through human stories that went beyond the simple account of facts. This allowed to bypass the ongoing clash of antithetical ideologies and foster empathy, but it also depoliticized suffering (Weizman 2017: 81).

From the 1980s onwards, Weizman observes a "forensic turn": a methodological shift towards material evidence and the natural sciences, translating into an increased attention to the body, and medical records (Weizman 2017: 82; see also Weizman 2014: 21-24). Why? Because the witnesses of the worst atrocities are those who are dead (Levi 1988: 83). Starting in the 1980s, grave exhumations became a way to expose mass killings and identify missing persons. Multidisciplinary teams of archaeologists, anthropologists and pathologists contributed to the increasing use of osteological findings as legal evidence (Weizman 2017: 79). Beyond bones and human remains, other objects were mobilised as evidence not as a positivistic alternative to human testimony, but rather a complement, equally subject to indeterminacy.

Forensic Architecture draws on all three paradigms and looks at "intersections of material and media analysis with new forms of testimony" (Bois et al. 2016: 121) with a focus on spatial analysis. They produce evidence from a juxtaposition of matter, buildings, ruins, cartographic and photographic material as well as user-generated content.

Open source intelligence

The work of Forensic Architecture also builds on the discipline of open source investigation. While its origins are disputed – intelligence has always drawn on publicly available information – the widespread availability of digital data has certainly led to its expansion. Wirtz and Rosenwasser (2010: 736) describe open source intelligence as "insight gleaned from publicly available information that anyone can access by overt, non-clandestine or non-secret means to satisfy an intelligence requirement". Eldridge et al. (2018: 393) specify this definition by adding that typically, "this information is not self-generated by the actor engaged in collection".

While in the past, practitioners were sometimes struggling to collect as many witness accounts as possible, testimonies are now available immediately and in large quantities through digital media. The challenge now lies in their overabundance (Weizman 2017: 115; Bois et al. 2016: 18). As many as seven thousand pieces of media can be generated from the events of a single day, as seen in the investigation of "The Bombing of Rafah"[1] (Weizman, 2017: 165-212). Next to Forensic Architecture, the availability of user-generated content as a source of evidence has given birth to a wide array of investigatory practices: crisis mapping (Ushahidi[2]), violence documentation (Syrian Archive[3]), participatory fact-finding (Map Kibera[4]), circumvention of censorship (Tor Project[5]). Through what is called "citizen intelligence", victims of violence are evolving from being objects to agents of investigation, challenging state impunity[6].

However, there are a few potential weaknesses that must be noted. Aronson (2016: 445-447) has pointed out two fundamental issues: the potential non-representativeness of data (i.e. the difficulty to determine the place, extent and frequency of the incidents documented online) as well as the methodological collection of the data which does not necessarily meet scientific criteria[7]. Finally, falsification of digital media and "deepfakes" generated by artificial intelligence remind us that untruthfulness is the biggest potential weakness of social media-based evidence. Verifying the legitimacy of digital content is thus a crucial step of which the importance cannot be stressed enough.

Forensic Architecture's research principles

Truth as a common resource

As a research organisation that assembles evidence of state crimes for civil society groups, Forensic Architecture seek to "reverse the forensic gaze" (Weizman 2017: 9). This repurposing of forensic methods was first titled "counter-forensics" by Sekula (1993) and is described by Weizman as such: "While forensics is a state tool, counter-forensics, as we practice it, is a civil practice that aims to interrogate the built environment to uncover political violence undertaken by states." (Weizman 2017: 64). It is therefore a critical, "counter-hegemonic" practice (Weizman 2014: 11) that challenges truth monopolies.

By its very nature of civil society organization, Forensic Architecture does not have access to the same quality and quantity of technologies and information as their object of investigation. Rather, they rely on publicly available information, operating at the "threshold of detectability" (Forensic Architecture 2014: 752). Counter-forensic evidence is not "hard" and indisputable truth; it may hide behind a shadow, an indistinctive sound, a blur. This threshold is inseparable from the materiality of the recording media, and it is largely conditioned by state powers, who may for example regulate the resolution of satellite imagery. Because of these material ambiguities, Weizman sees a necessity for their work to be political, "driven by a desire to change the way things are" (Weizman 2014: 30). This "sensitivity to the materiality of politics", to the destruction and pain it can inflict, goes along with "a heightened aesthetic state of material sensitivity, tuned to weak signals" (Weizman 2014: 30).

Furthering their intent to put forensics "in the hands of the people" (Weizman, quoted in Zeiba 2020), they generally share their tools openly. Examples are the free software "PATTRN", which they created in 2014 to enable first-hand witnesses and victims to produce basic reporting of acts of violation (Bernard and Policinski 2016: 35), or "Timemap", which offers an adjustable timeline tool. The latter comes with the extension "Datasheet Server", a data-mining tool.

Forensic Architecture also trains fellow investigators or citizens. At the Centre for Research Architecture at Goldsmiths, University of London, they offer workshops, conferences and seminars. Furthermore, they publish extensive videos of nearly all their investigations, describing their methods step-by-step for others to learn from their procedure, as can be seen in the 37-minutes long video reporting on the murder of Pavlos Fyssas in Greece in 2013[8]. Investigations like "Destruction and Return in al-Araqib"[9] and "The Destruction of Yazidi Cultural Heritage"[10] have also seen them training activists on the ground, working hand in hand with the people affected by violence and thus making the production of evidence a "collective social practice" (Weizman, quoted in Zeiba 2020). The results are then published on Forensic Architecture's various media channels, creating public repositories of state-led violence. These help citizens understand complex events, aiming to establish truth as a common resource (Tate Britain, 2018).

Architecture and innovation

Another element central to Forensic Architecture's practice is their multidimensional approach to architecture. Over the course of the 20th century, warfare moved from the trenches to the urban environment. Now, most conflicts unfold in cities, home to more than half of the world's population. A contemporary example is Raqqa, one of the many battlegrounds of Syria's civil war: an estimated 70 percent of the city had been destroyed by April 2019 (Blue 2019). The domestic and civilian space have become targets of armed conflicts, dissolving the barrier between citizens and combatants (Kazan 2014: 161). Besides this immediate violence of warfare, Forensic Architecture also looks into the slow, more subtle violence of architecture: "crimes committed on drawing boards and by buildings and infrastructure – a violence that is incremental, slow, and ever-present" (Weizman 2017: 134). This echoes the research Weizman has done in his earlier work[11].

Architecture can also be a method of research, which truly defines Forensic Architecture's approach to human rights investigation. Their method portfolio is broad and involves techniques such as digital spatial modelling, physical reconstructions, effects-based analysis and situated testimonies. By integrating the human figure into architectural frameworks, they "create a synthesis between testimony and evidence" (Weizman 2017: 58), allowing to bypass the opposition between the emphatic, emotion-loaded "era of the witness" and the scientific gaze of the forensic investigator. The team constantly develops new tools and methods, which is related to its funding by the European Research Council, a grant that aims to benefit innovation and accounts for Forensic Architecture's largest financial backing (Ngo 2017). Weizman therefore calls his agency "a lab for the development of new evidentiary techniques. [...] The minute that our techniques and technology become more mainstream, we need to move on" (quoted in Holmey 2020).

Architecture is also employed as a mode of presentation. In order to portray complex events captured from multiple perspectives at different times, Forensic Architecture developed the "architectural image complex". It is a way of articulating evidence into a digital spatial environment (Weizman 2017: 100). This 3D representation can be navigated spatially and through a timescale. It allows to recognise dynamic relations and simultaneities between disparate, chaotic pieces of evidence. It also makes the conclusions of the investigations easier to follow (Bois et al. 2016: 125). This method of composition thus surpasses both the archive, the montage and

the linear comparison of before-and-after representations, which do not allow interactive navigation (Weizman 2017: 100).

Reception and overall potential

Judicial limits

Open source and citizen investigation have recently grown in acceptance within legal processes. In 2017, the International Criminal Court issued the first arrest warrant to be based largely on evidence collected from social media (Irving 2017). Forensic Architecture has shown its work in national and international courts such as the Israel High Court[12] and the European Court of Human Rights[13], and collaborated with the United Nations[14]. It was successful in a few cases. A 2012 petition to the Israeli High Court against the construction of a wall in the area surrounding the Palestinian village of Battir[15], to which they had contributed a digital model, was successful (Forensic Architecture 2015). After their investigation on "Airstrikes on the al-Jinah Mosque"[16], a report by the United Nations' Commission of Inquiry on Syria concluded that US forces had violated international humanitarian law. In the "White Phosphorous"[17] case, the Israeli military declared it would no longer use these munitions in densely populated areas (Forensic Architecture 2012).

Nevertheless, the use of social media-based evidence in international criminal courts has remained limited (Hiatt 2016). Courtrooms have yet to adapt their tools and procedures to make sense of these investigations. As for Forensic Architecture, its evidence has often been rejected or ignored. Their investigations on "The Killing of Tahir Elçi"[18] and "Torture and Detention in Burundi"[19] have yet to receive a formal response, while their findings on "The Killing of Bassem Abu Rahma"[20], "Airstrikes on al-Hamidiah Hospital"[21], "Chemical Attacks in Douma"[22] have been categorically disputed by those they considered guilty. Accused individuals and organisations will refer to errors and omissions (such as in "The Ali Enterprises Factory Fire"[23]). In general, findings based on digital media, reconstructions or simulations have "almost always encountered objections" (Weizman, 2017: 75). As a result, a precise description of the methodology has become an integral part of each report in an effort to counter technical objections.

In other cases, their analysis may be inconclusive or fragile. In the case of "The Killing of Tahir Elçi"[24], it is a single testimony that reduces the investigative time frame and plays a critical role in developing the investigatory conclusions (Forensic Architecture 2019). This is a bold decision, considering that the temporal precision applied in this case is granular to the level of single seconds – a scale which might be imperceptible for human memory? Other times, the available material does not offer sufficient accuracy for drawing conclusions ("Nil'in case"[25]). Finally, their hypotheses may not prove to be true – as in "The Grenfell Tower Fire"[26], of which the investigation page, calling for video material from witnesses, has not been updated in over a year.

Furthermore, when investigating state violence, judicial forums may reach their limits. A forum never stands alone, but rather is embedded in institutional, legal, (geo-)political contexts:

> *Forensic activists must examine the politics of the forums in which evidence is presented. No forum is neutral. Each is a product of and situated within a specific political reality, and each operates according to different sets of protocols. Each forum differently frames evidence's condition of visibility - what can be said, shown, and heard. (Weizman 2017: 68-69)*

In undemocratic systems, jurisdiction of state-led crimes may not exist. Defending rights from within such legal and political frameworks can reveal itself ineffective at best, counter-productive at worst (Weizman 2017: 69). And the right forums may not yet exist at the moment where human right violations are taking place: some specific frameworks (such as the Rwanda court, or International Criminal Tribunal for the former Yugoslavia) are created in retrospect, making structural violence especially hard to address while it is still occurring. Another challenge in counter-forensics is that many conflicts are extraterritorial – meaning, they take place outside the effective reach of state jurisdiction. When the judicial infrastructure and sovereignty is disintegrated or unclear, it is difficult to point out and adjudge human right violations (Weizman 2017: 69). Finally, legal processes can be instrumentalised and supplant sustainable political action[27]. This shows that law-oriented handlings of human rights violations are not enough; they must be part of larger political and social transformations: "the legal cases are only as good as the political processes of which they are part", (Weizman 2017: 69).

Overall, the judicial effectiveness of Forensic Architecture is comparably low. Many of the cases they have been working on are part of complex, ongoing multinational conflicts. With thousands having died in the Syrian conflict, the outlay and time scale of their work – spending weeks meticulously examining a single air strike – may seem disproportionate, even futile. At this level of efficiency, and within the power dynamics of counter-forensics, it is unrealistic to believe the investigations of Forensic Architecture currently play a substantial role in adjudication. Nevertheless, their development of new tools and methods is a benefit for the general public independently of that. And since law is a "living construct" (Cole 2015), professionals and experts are confident that legal frameworks will progressively open up to the potentials of citizen- and technology-led investigations (Cole 2015).

Symbolic power

From a legal standpoint, the effectiveness of Forensic Architecture and their methods is therefore disputable. However, their communicative strength and media presence suggests that there is another, more adequate criterion by which to judge their relevance as it relates to contemporary conflicts. In general, forensic work evolves around three sites of operation: the field where the object of investigation is located, the laboratory where the material is processed into evidence, and the forum[28] where the evidence is presented (Weizman 2017: 66). For Forensic Architecture, this forum can be an institution of justice such as a court, but also spaces of discourse and education such as museums, media, citizens' tribunals, conferences or scientific literature. By collaborating with, and appearing in influential platforms outside of courts, they shape the narratives built around current conflicts, raise public awareness and contribute significantly to the international discourse.

Forensic Architecture have exhibited their work at some of the most prestigious museums and cultural events: documenta14 in Germany[29], Biennale de Venezia 2016 in Italy[30], the UK Institute of Contemporary Arts in 2018[31] and more, often as an opportunity to interrogate architecture's relationship with media and to situate their work within a broader political and cultural context. In 2018, Forensic Architecture was shortlisted for the Turner Prize, one of the UK's most important art prizes (Searle, 2018).

Besides cultural venues, Forensic Architecture has a strong media presence and appears regularly in outlets across the globe, such as The Guardian, ARTE, Al Jazeera, The Telegraph India or The Times of Israel. They cooperate directly with certain media platforms or human rights organisations to conduct their investigations, such as the New York Times ("Chemical Attacks in Douma"[32]), Watch the Mediterranean Sea ("Death by Rescue"[33]) or Amnesty International ("Torture and Detention in Caroon"[34]). In three exemplary cases, they presented their findings in civic forums such as citizens' tribunals or truth commissions ("Living Death Camp"[35], "Destruction and Return in al-Araqib"[36], and "The Murder of Halit Yozgat"). Similarly, Eyal Weizman and his team are frequent speakers at conferences and lectures including at re:publica, the World Economic Forum or the Architectural Association. They have also authored extensive literature presenting their theoretical framework and methodology. Besides the Turner Prize, they have been nominated for and won several awards across disciplines ranging from design, journalism, to technology. As one of the most vocal groups in citizen intelligence, they contribute actively to a critical public discourse. Even if their investigation volume is small, they are effectively monitoring state violence and holding perpetrators to account in the communicative realm, if not in the judicial. Their work has often sparked debates, amplifying the resonance of singular incidents, such as with their investigations "Killing in Umm al-Hiran[37]" or "The Murder of Halit Yozgat" , both followed by interventions from state officials and non-governmental organisations. Their work can also be evaluated within broader phenomena around truth and disinformation. Weizman sees the so-called "post-truth" denial of facts and of their verification as a new form of propaganda:

> *It does not aim to persuade or tell you anything, nor does it seek to promote the assumed merits of one system over the other [...] but rather to blur perception so that nobody knows what is real anymore. [...] In the face of governments' increasing difficulties in cutting data out of circulation and in suppressing political discourse, it adds rather than subtracts, augmenting the level of noise in a deliberate maneuver to divert attention. (Weizman, 2019)*

This is a form of propaganda that does not seek to produce its own facts but deconstructs the very notion of truth as a criterion to which rhetoric would be subordinated. The work of Forensic Architecture therefore seems especially valuable in exposing these strategies, and filling the void with systematic, transparent evidence. With their methods of remote investigation, they can do so even when ground access to conflict zones is restrained. They value their work as an act of resistance, separately of its success in courts[38].

Finally, beyond truth for truth's sake, investigating obscured cases and amplifying the voices of witnesses who may have risked their lives recording an incident is also a way of paying respect: "It felt odd to investigate the killing of two teenagers when more than five hundred Palestinian children were being killed, but it was our way to respect every young life lost", says Weizman (2017: 162).

Criticism

While being largely acclaimed for their work, Forensic Architecture have been occasionally questioned for their motives, qualifications and unconventional methods. The fact that many team members are "motivated by political commitments" (Weizman 2017: 74) makes them particularly vulnerable to ad-hominem attacks. The cases they select align with the political claims they aim to defend. In some cases, this political positioning is used to disqualify their research. It is a strategy that Weizman (2019) refers to as the "contaminating factor": critics will identify an association with "a person, an organization, a political affiliation, a video, or even a funder" that is disputed in some way, and thus claim that "the entire network and the information it produces is tainted and meaningless" (Weizman 2019).

Furthermore, while the cultural forums where Forensic Architecture present their work offer freedom and accessibility, their role in forensics is ambivalent. Critiques call out the fact that distressing material should not be used as voyeuristic entertainment; and that criminal evidence runs the risk of being commo-

dified by a competitive art economy (Harper 2018). This may weaken their credibility as human rights investigators. Unlike courtrooms, art shows do not select based on the criterium of truthfulness; rather, they welcome subjectivity and aesthetics. Holger Bellino of the German Christian Democratic Party (CDU) considered their investigation of "The Murder of Halit Yozgat"[39] as an artistic project, rather than serious evidence[40]. Similarly, after their report on "The Use of White Phosphorus in Urban Environments"[41], they were met with the scepticism that architects do not possess the "relevant expertise in relation to conflict analysis" (Weizman 2017: 75).

The distrust against their use of "special effects", of "trickery", demonstrates, once again, conflicting opinions around the concept of truth. Does it exist independently, waiting to be found, or does it need to be produced and staged (Weizman 2017: 74)? Mégret (2016) argues that facts are not absolute, rather, they are tied to the pre-existence of constructed notions and labels. What we consider facts is based on whether they fulfil the criteria arbitrarily constructed around them:

[Facts] are better seen as a category of understanding rather than a thing in itself. [...] This is not to say that facts cannot describe something that happened or something that is but simply that "facts" are not the same thing as the things they refer to. They are necessarily construction of the mind based on certain detectable clues. (Mégret 2016: 35)

In empirical research, truth is not immediate; it is tied to a certain range of probability. This is especially the case in forensics, where objects are made to speak through what Weizman calls "forensic speech": a relation between the object, the expert, and the forum (Weizman 2017: 67). The truth of the object is therefore mediated through the speech of a human being. As a result, the "subjective probability" – the credibility of the speaker – is closely tied to the "objective probability" – the authenticity of the object (Keenan and Weizman 2012: 23). As noted in a review of their exhibition "Counter Investigations" at London's Institute of Contemporary Arts (ICA), Forensic Architecture take great care to "produce their own [...] aesthetics of objectivity, which, ironically, has the goal of persuading us of its objectivity." (Charlesworth 2018).

Conclusion

In Forensic Architecture, architecture is extended into both a critical practice and an operative device. It is alternately the object of investigation, the method of research and the mode of presentation. Considering that modern warfare often takes place in urban spaces, this approach appears to be an indispensable addition to human rights investigation. In the first place, architecture functions as a sensor through which materiality is analysed to reveal human right violations as they relate to space, or more broadly, the (geo-)political, social and military forces shaping the world today. As Weizman observes, the organisation of space is a crucial mechanism of power (quoted in Kastner 2009). In its operative meaning, architecture is synonymous with spatial analysis. Like "archaeologists of the present" (Forensic Architecture 2014: 743), they analyse deliberate transformations of the natural and built environment. This reflects a recent methodological shift in judication towards materiality and forensic methods of research. Finally, architecture is a way to organize and synthesize multiple forms and pieces of evidence. This evidence is then presented in a multitude of forums: courts, cultural spaces, media outlets, investigation reports, online platforms. Each forum is defined by different possibilities as to what can be shown and achieved.

Forensic Architecture's mode of research is both highly innovative and adaptable to multiple scales and timeframes of violence – from the human body to the city, from the split second to several years. By involving citizens and victims, they make evidence gathering a collective practice. But how effective is it? Characterized by meticulous procedures, comparatively long investigative timespans, and a judicial validity that constantly needs to be re-negotiated, their ability to produce tangible results remains questionable. However, their evidence has been successfully admitted in a few cases, creating precedents which may lead to a wider acceptance in the future. By sharing their tools and techniques freely, they also extend the scope of what these can achieve. On the other hand, the above analysis of how their work is received outside courts shows very productive interventions in the realms of public discourse and knowledge production. With their meticulous analysis, Forensic Architecture is able to expose lies and to offer a nuanced view where confusion has been deliberately manufactured. As a highly communicative organisation, it amplifies unheard voices and directly confronts obfuscation strategies, and thus significantly shapes narratives around some contemporary conflicts. In doing so, they raise important questions around modern-day propaganda, political implications of architecture and accountability for state violence. Where social media has often been denounced for spreading disinformation, they seize its constructive potential and politicize these platforms as media of resistance, ultimately aiming for truth as a common resource.

References

Footnotes:

[1] Investigation page: https://forensic-architecture.org/investigation/the-bombing-of-rafah

[2] The platform "Ushahidi" was initially developed in Kenya in 2008 in the context of post-election violence and has now been used internationally as a crowdsourcing device in a wide number of cases: https://www.ushahidi.com/

[3] "Syrian Archive" collects and verifies evidence on human rights violations in the Syrian conflict: https://syrianarchive.org/

[4] "Map Kibera" was created in 2009 as the first information project and digital map of the Kibera slum of Nairobi, Kenya: https://mapkibera.org/

[5] "Tor Project" is an open-source software providing encrypted and uncensored access to the internet: https://www.torproject.org/

[6] This evolution has been examined extensively by Aronson, Ball, Land, Mégret and more in Alston and Knuckey (2016 (eds.)), as well as Piracés, Latonero and more in Land and Aronson (2018 (eds.)).

[7] The main argument is that data is not collected in a systematic way under controlled sampling conditions; rather, it is what he calls "convenience data", used because it is available (P.446). Although the sample can be comparatively big, it does not exclude the risk of distortion through selection bias: for example, instances of abuses towards marginalized victims with limited access to media devices may go unreported (P.447).

[8] Investigation page: https://forensic-architecture.org/investigation/the-murder-of-pavlos-fyssas

[9] Investigation page: https://forensic-architecture.org/investigation/destruction-and-return-in-al-araqib

[10] Investigation page: https://forensic-architecture.org/investigation/the-destruction-of-yazidi-cultural-heritage

[11] In 2002, Weizman collaborated with the civil rights organisation B'Tselem to publish a report on human rights in the context of Israeli settlements in the West Bank: Land Grab. Israel's Settlement Policy in the West Bank. Architecture as a way to solidify oppression was later the topic of his publications Hollow Land. Israel's Architecture of Occupation (2007) and The Least of All Possible Evils. A short history of humanitarian violence (2017).

[12] "The Killing of Bassem Abu Rahma", investigation page: https://forensic-architecture.org/investigation/the-killing-of-bassem-abu-rahma

[13] "Sea Watch vs the Libyan Coastguard" (Forensic Oceanography), investigation page: https://forensic-architecture.org/investigation/seawatch-vs-the-libyan-coastguard

[14] "The Drone Strikes Platform" and associated investigations: https://forensic-architecture.org/investigation/the-drone-strikes-platform

[15] "Stopping the Wall in Battir": https://forensic-architecture.org/investigation/the-wall-in-battir

[16] Investigation page: https://forensic-architecture.org/investigation/airstrikes-on-the-al-jinah-mosque

[17] Investigation page: https://forensic-architecture.org/investigation/white-phosphorus-in-urban-environments

[18] Investigation page: https://forensic-architecture.org/investigation/the-killing-of-tahir-elci

[19] Investigation page: https://forensic-architecture.org/investigation/torture-and-detention-in-burundi

[20] Investigation page: https://forensic-architecture.org/investigation/the-killing-of-bassem-abu-rahma

[21] Investigation page: https://forensic-architecture.org/investigation/airstrikes-on-al-hamidiah-hospital

References

[22] Investigation page: https://forensic-architecture.org/investigation/chemical-attacks-in-douma

[23] Investigation page: https://forensic-architecture.org/investigation/the-ali-enterprises-factory-fire

[24] Investigation page: https://forensic-architecture.org/investigation/the-killing-of-tahir-elci

[25] This investigation does not have a webpage, but it is described in Forensic Architecture (2010).

[26] Investigation page: https://forensic-architecture.org/investigation/the-grenfell-tower-fire

[27] As in "The Killing of Nadeem Nawara and Mohammed Abu Daher" (investigation page: https://forensic-architecture.org/investigation/the-killing-of-nadeem-nawara-and-mohammed-abu-daher)

[28] Originally, forensis is Latin for "pertaining to the forum" – the place where people, objects and arguments were presented to a critical public from the realms of economy, politics, law and more. Now, its meaning has evolved and "forensics" mostly refers to the use of science in courts, cf. Weizman 2017.

[29] "The Murder of Halit Yozgat", investigation page: https://forensic-architecture.org/investigation/the-murder-of-halit-yozgat

[30] „Death By Rescue: The lethal effects of non-assistance at sea", investigation page: https://forensic-architecture.org/investigation/death-by-rescue-the-lethal-effects-of-non-assistance-at-sea

[31] Investigation page: https://forensic-architecture.org/investigation/chemical-attacks-in-douma

[32] Investigation page: https://forensic-architecture.org/investigation/death-by-rescue-the-lethal-effects-of-non-assistance-at-sea

[33] Investigation page: https://forensic-architecture.org/investigation/death-by-rescue-the-lethal-effects-of-non-assistance-at-sea

[34] Investigation page: https://forensic-architecture.org/investigation/torture-and-detention-in-cameroon

[35] Investigation page: https://forensic-architecture.org/investigation/living-death-camp-staro-sajmiste

[36] Investigation page: https://forensic-architecture.org/investigation/destruction-and-return-in-al-araqib

[37] Investigation page: https://forensic-architecture.org/investigation/killing-in-umm-al-hiran

[38] "This is also a form of resistance. When there is an effort to erase those violent events, just the effort to record, to clarify and to debunk the official line, it's an act of resistance towards that erasure." (Christina Varvia, deputy director of Forensic Architecture, quoted in Ravenscroft 2019)

[39] Investigation page: https://forensic-architecture.org/investigation/the-murder-of-halit-yozgat

[40] Original quote: "documenta-Beitrag ist kein seriöses Beweismittel, sondern ein Kunstprojekt" (Bellino 2017).

[41] Investigation page: https://forensic-architecture.org/investigation/white-phosphorus-in-urban-environments

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