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Field: Data-driven architecture

Documenting (destruction) and Data

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Abstract

As the computational aided design and representation tools available for design professionals advance, designers' capacity to amplify cognition through representations, models, and simulations increase. Advanced tools come with the expansion of the limits of what is documented and (re)presented derived from the data. With cognitive artifacts used by design professionals becoming more accessible to users, the domain of design, and research is changing. The evolution of the participatory design paradigm and the tools appropriated through open-sourcing, crowdsourcing as well as the changing notion of mapping and representation in architectural design and practice is one such attempt to redefine the discipline and the practice. Also, for built environment professionals, the role of such tools can be regarded merely as a matter of organizational capacity, efficiency, and innovation. Advanced skills and techniques imply better-situated and targeted solutions to complex problems in the built environment, from a pragmatic perspective. However, this also indicates a need to assess the significance of the role of such tools, which derive their representational and design capabilities through the way they organize, stack and recall the data and the relationship between data at hand. Documenting, processing and representing the data at hand, for built environment professionals, start to define a new niche, that demands a practical investigation into the syntax of tools architects appropriate with their design and representations, models and simulations of the built environment. This is an investigation whether a domain in between hermeneutical and cognitivist perspectives that help us to postulate data as fundamental building blocks of codifiable yet subjective procedures is found.

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Design professionals appropriate cognitive artifacts either as representational or design tools. As available computational aided design and representation tools for design professionals advance, designers' capacity to amplify cognition through representations, models, and simulations increase. Advanced skills and techniques imply better-situated and targeted solutions to complex problems in the built environment, from a pragmatic perspective. Also, for built environment professionals, the role of such tools can be regarded merely as a matter of organizational capacity, efficiency, and innovation. However, this also indicates a need to assess the significance of the role of such tools, which derive their representational and design capabilities through the way they organize, stack and recall the data and the relationship between data at hand. This paper investigates the domain in between critical -almost hermeneutical- and more formal -almost cognitivist- perspectives that help us to postulate data as fundamental building blocks of codifiable yet subjective procedures. With investigation looking at violence, conflict, and destruction in the built environment, such a domain start to appear. Documenting, processing and representing the data at hand, for built environment professionals, start to define a new niche, that demands a practical investigation into the syntax of tools architects appropriate with their design and representations, models and simulations of the built environment.

Background

Referring to the knowledge of the architect, Raymond J. Cole and Richard Lorch make use of explicit knowledge and *tacit* knowledge (know-how), as they distinguish knowledge from information in order for the architectural discipline to acquire professional status. (Cole and Lorch, 2003, 2) According to Cole and Lorch, knowledge is attached to an individual or a group that is not as easily transferable as information is; it is more than mere data which are assumed to provide a factual basis of reasoning, but rather "a deeper understanding of a subject (the why)." (Cole and Lorch, 2) This also "entails capabilities of assessment to form judgment, interpretation, and understanding." (Cole and Lorch, 2) It can be argued that, to distinguish architects as professionals within their industry of built environment design and practice, "formal exchange of explicit knowledge between researchers and practitioners," is not as helpful as it is in medicine or engineering, in making them figures of authority through their expertise. Cole and Lorch, who put tacit knowledge at the center of the kind of knowledge for the design and construction process, describe it like the knowledge that "is provided largely through the experience of the diverse members of the design team." (1993, 3) Architects' participation when they "join a wide circle of other skilled professionals to provide a service leading to the construction and operation of a suitable environment fit for its purpose" as Giles Oliver describes what acting as an architect is. (Oliver, 2005, 61)

Discussions around architecture as a discipline with its kind of tacit-knowledge (know-how) that is specific to its professional aspects and its relevance in the process of design and practice is a starting point for questioning the research that concerns design. On top of this, the critical approach to scientific knowledge and method in the 20th century leads to a notion of "designerly ways of knowing" as Cross make use of

in the title of his 2001 paper, is another thread in this discussion. (Cross, 2001) This refers to the transition from assuming design as yet another domain where scientifically grounded knowledge can be acquired, as proposed in the 1960s under the influence of behaviorist cognitive studies; to a disciplinary-specific site, where design becomes to be approached as possible to be "studied on its own terms." (Cross, 53) There is a lean towards approaching knowledge as a construction instead of an objectively fixed and grounded truth by even the pioneers of those who proposed a scientific ground on which architecture was assumed to operate, such as Christopher Alexander with his *Notes on the Synthesis of Form* (1964). This trend must correlate with the moving ground of science with Popper's, Kuhn's and Feyerabend's seminal works on the history of science, all of which, consecutively shifted the stable ground of scientific knowledge and objectivity to a more socially constructed ground. (Popper, 1963; Kuhn, 1970; Feyerabend, 2010)

In the early twentieth century, "tacit knowing" could have challenged a "reductive empiricist" perspective that ignored the "creative, non-codifiable dimension of inquiry" into knowing that and knowing how. (Gascoigne and Thornton, 2013, 15). This epistemological quest to understand what is not capable of being said was in fact against naturalized epistemology that granted nature and justification of scientific knowledge prompted by positivists and rigid empiricists. Regardless, through the emphasis on tacit knowing, Polanyi was capable of defending" science's speculative autonomy." (Gascoigne and Thornton, 15)

In the twentieth century, what Polanyi states as "we can know more than we can tell" in *The Tacit Dimension* (2009), is today reappropriated for pragmatic reasons in administrative and organizational studies. (See, for example, Kmetz, 2012; Adloff, Katharina and Kaldewey, eds., 2015) Such attempts to understand and enable tacit knowing have impacts on organizational efficiency that would affect architectural practice directly in terms of its potentials in a network society from a pragmatic perspective. Simultaneously, challenges to codify and render what used to be non-codifiable and rendered; allow another possibility of approaching scientific knowledge, in particular. This may indicate, "the ontological shift of hermeneutics guided by language offered a movable viewpoint from which others could perceive the convergence of the late philosophies of Heidegger and Wittgenstein." (Zabala, 2008, 4) Research in the field of design, therefore, is also being affected by this "linguistic turn" pioneered by philosophers such as Jacques Derrida, Richard Rorty, Jean-Luc Nancy, Alain Badiou, and Ernst Tugendhat. (Zabala, 2008, 4)

On top of this shift that transcends a traditional dichotomy between the objectivist account of knowing against a subjective ground; the social, political, and economic context also changes. Similar to a source of knowledge that can not be attributed to a center, the society in which knowledge is produced, translated and circulated is defined through networks. This is the picture in The Professionals' Choice, which is published by a joint initiative between Royal Institute of British Architects (RIBA), Commission for Architecture and the Built Environment (CABE), Davies and Knell depict the transition from the industrial society to the 'professional society.' (Davies and Knell, 2003) They describe a context to which built environment professionals, including architects, need to adjust, respond, or intervene in order to sustain their profession. (Davies and Knell, 20) In five different scenarios: "regulatory scenario;" "economic scenario;" "social scenario;" "technological scenario;" and "managerial

scenario," different authors are asked to depict the future of the architect in different contexts in which built environment professionals operate.

By depicting different pressure points, which the group believes affecting the construction industry, the publication aims to expose the compromises and benefits design professionals are faced with a social political and economic structures transform. In those scenarios, architects are depicted as sharing a common ground with other built environment professionals. This common ground does not only include the client, the constructor, and the architect; but includes various agents representing governmental and professional bodies, institutions, investors, insurance companies and such. As one of Building Futures' objectives is to build upon and complement the existing work, there is no break from the existing political social and economic structures in any of their scenarios or projects. Instead, they establish the existing dominant social, political, and economic structures and their transformation as given. Hence theirs is an attempt to perfect this as a development of an acquisition of new ideas and skills, which predominantly refers to the need to give more emphasis to the tacit knowledge component of the discipline. With their ideal to promote the advancement of society, built environment professionals' skill to know-how to make things happen do not only constitute a model with the process of realization of their 'material object': the building, but also ascribes a social agenda to it: the need to address problems associated with "building". This is concretized and narrated in Cole and Lorch's work with the aim to improve "the environmental performance of buildings," (Cole and Lorch, 2) that underpins one of the most contemporary "social" role of architectural design and practice: sustaining the state that is prior to the architect's intervention with the building, as the worst case scenario. This vocation they seek commonly revolves around the notion of a more 'sustainable' future: an environmentally sustainable built environment that is further articulated via notions of such as participation and social sustainability for the vocations professionals to occupy to ensure social well-being. (Cooper, 2003)

While this challenges the way we assume how an architect practices their profession, as part of a larger team who are concerned with a physical intervention to the built environment, a researcher who is assuming a role in the discipline of architecture through inquiring into the knowledge that is associated with the discipline can be scrutinized as well. What does the research in the field of architecture entail: research that seeks answers to practical questions architecture as a discipline and practice demands for answers? Alternatively, does it entail a rather methodological strategy one can appropriate in getting involved with epistemology? This resonates with the dilemma Frayling recapitulates his paper in 1993 as he quotes from the novelist E.M. Forster's aunt: While the epistemological question can be sustained between the questions "How can I tell that I think til I see what I make and do?" and "How can I tell that I think til I see what I say?" The rather ontological question following is: "How can I tell that I am till I see what I make and do?" (Frayling, 5)

The role of architecture as a discipline and profession within the contemporary modes of production and consumption as well as epistemology and research is not my research question. However, the shift in epistemological positioning does not only affect how the architectural practice is perceived, but also the way research within the field of architecture can be conducted. One significant related effect is how the archive is treated, for example. While the archival survey can be related to

historiographical studies, by introducing empirical data and computation into architectural design methods, a niche for architectural research is opened. In this niche, architectural design and survey methods accessible to the researcher allow not only inquiring into the design for their research agenda. The researcher can also research through design, as Frayling would describe it. This indicates a domain of knowledge accessed through a series of, especially, representational methods, which are not always at the hands of researchers in other fields. Archival inquiries that are not necessarily historiographical studies, and yet do not exclude them, in the field of architecture fall into this niche.

The Niche

Forensic Architecture was established in 2011 as a collective of multidisciplinary researchers and professionals. It is a pioneering research collective whose work has been influencing the architectural design and research methods. Since their establishment, the collective received extensive public attention within the art and architectural circles. In 2018, Tate Britain listed Forensic Architecture as one of the three nominees for the 2018 Turner Prize. The collective's work has been referred and praised as a combination of different aspects of journalism, architecture, animation, documentary filmmaking, and human rights activism that delivers the "archaeology of the very recent past." (Pearce, 2018) In response to their nomination, Weizman stated that the collective aims to "win cases, not art prizes." (Bevan, 2019)

The collective is not a team of human right lawyers, but a group of specialists, who work with international and local NGOs as well as some prosecutors around the world, with a prominent presence in art and design exhibitions in various galleries and biennales around the world. Then again, despite Weizman's pronounced apathy towards their nomination, the kind of architectural practice that the collective promotes through the combination of forensic methods and architectural representation might have altered the sovereign judicial system to an extent. In a series of cases since 2004 against the separation wall Israel proposed and enacted in the Palestinian village of Beit Surik, earlier attempts of using advanced computer-aided architectural design and representation techniques in the context of a lawsuit were submitted to the Israeli High Court of Justice and the International Court of Justice. Weizman reports from Michael Sfard, the lawyer who represented the Palestinian landowners in the court, that the "presence of the model [a CNC computer milled topographical model of the Beit Surik area with different possible walls] introduced very dramatic changes to the courtroom," and disturbed the legal protocol. (Weizman, 2011, 71) However, the legislative process also disturbed the role of the human rights lawyers and activists as they found themselves "helping the authorities design a better wall, a wall that goes through a route that is more sustainable." Regardless, the material provided by the Forensic Architecture was part of the case that was eventually won by Sfard in 2015. (Weizman, 79)

The task Forensic Architecture undertakes is not necessarily a humanitarian task for design professionals who are inclined towards establishing a social role in their discipline. There is already an inherent relationship between violence and the built environment, which can be articulated by architects, planners, and design professionals. Stephen Graham opens the seminal volume on Cities, War, and Terrorism with a premise that underlies violence as one of the constituting elements

of the city. “Cities, warfare, and organized political violence have always been mutual constructions.” (2004, 1) While September 11, 2001, and the following events of catastrophic urban terrorist attacks could have been a common point of departure for numerous studies on this inherent link between violence and the city, for many inhabitants of the city, protracted violence has always been a prominent part of the urban-life experience. For minorities or diverse cultural, social and gender communities, poverty, law-transgressing activities, or hate-motivated discrimination and segregation is part of their daily life within the urban context. Hence everyday experience for many urban dwellers is a violent confrontation with the city. War is a moment of rupture of such violence and also yet another source of it. As Graham notes, wars which are “driven by imperial or geopolitical imperatives of maintaining, or expanding, national territories” are being replaced with wars that “transcend national boundaries and territories.” (2004, 3-4) Given the increase in the number of studies on war and armed conflict’s effect on the urban experience in the early twenty-first century, one should be alarmed. However, this might also suggest that through studies on the link between the built environment and conflict and violence, we have developed multiple toolsets to understand the imperative of security. Examining the works that expose the logic of sovereign power structures, for example, of Carl Schmidt, Hannah Arendt, Michel Foucault, Paul Virilio, and Jean Baudrillard, we are more capable for a confrontation with the violence that was overlooked in the urban studies before.

Conflict urbanism denotes one of the threads where the relationship between violence and the built environment is studied. Conflict urbanism can be described as a collection of theoretical and practical toolsets introduced by critical scholars, architects, and urban planners with which one can assess the impact of the dynamics of urbanization and violent conflicts in the urban experience as well as the formation of urbanity. Significant work on the relationship between violence and architecture can be found in a collection of essays present in the edited volume by Graham (*Cities, War and Terrorism*) and *City of Collision* (2006), a volume edited by Philip Misselwitz and Tim Rieniets. Both of these volumes depict how intervention into the built environment as a mean to exert violence can be directly, or indirectly through architectural practice.

One can predict that conflict-prone geographies, namely the post-colonial Africa, Middle East, South America, and Asia-Pacific constitute the domain for the prominent literature. Once demarcated geographically, or with case studies, conflict urbanism studies require information regarding the urban context in which the researcher identifies the protracted violence. Like in the case of Aleppo, the local on-ground agents can provide this data. However, due to the violence itself, those local agents are in constant danger of confrontation with the sources of violence. When those who are experiencing the event are already at risk of annihilation, let alone the data they provide, the intertwined threads for the conflict are not accessible to outsiders. (Kurgan, 2017, 76) Official reports assembled by the sovereign authority or parties of the conflict provide biased reports from the ground.

Given the limitations of registering the experience and the event, without any spatial dataset at hand, third-party sourced data becomes crucial. Satellite imagery, like any set of orthographic architectural drawings of an area of architectural researcher’s interest, provides the ground for conflict urbanism studies. However, these are by-

products of the military-industrial complex, which have become accessible to the public in the late 20th century with an expensive price tag. In the case of Aleppo, curated data of urban destruction through the analysis of UNITAR –UNOSAT (the United Nations Institute for Training and Research Operational Satellite Applications Programme) reports allowed the researchers from Center for Spatial Research to maintain a more stable, and most likely cheaper, form of documentation in their project Conflict Urbanism: Aleppo. However, in the post-conflict urban context, the interest of third parties, which could provide and fund services UNITAR –UNOSAT can provide, are expected to be humanitarian aid oriented. Unless their presence in the post-conflict urban context is justified, their services can be no longer accessible to researchers. Ironically, further analysis and study of conflict urbanism seem to be vulnerable to both intensified and declined violence. "Even in the era of 'big data' many of the most pressing urban issues are often those for which there is little or no recorded information." (Saldarriaga, Kurgan and Brawley, 2017, 104)

The role of data in conflict urbanism is not necessarily limited with the "documentation" process during and after the conflict. Like numerous dystopian narrations have suggested, today it is possible to monitor defined parameters for violent conflict in the urban context if algorithmically programmed, and parsing of the data can be attained. "Open Source in Post-Conflict Development" in South Sudan's capital Juba can be approached less cynically as it is formulated as a remedy to heal a conflict area with rapid urbanization. (Kovats, 2016, 296) However, is it always taken for granted that wars and violent conflicts are the reasons for the temporary suspension of the normal functioning of the city that would require a remedy afterward? Urban regeneration laws and urban renovation projects and their confrontation with the disadvantaged communities in non-conflict-prone urban contexts are one of the many examples of such micro-cosmos of conflict embedded in the neo-liberal urbanism. Designing and implementing master plans; urban renovation plans and programs along with the building permits and their regulations can be identified as sources of conflict. "Urbanism is parasitic on the crisis; architects do not heal trauma; they are complicit with its production." (Attuyer, 2015) While non-violent "social conflicts," have been perceived as "pillars of a democratic society," protracted violence tends to stem from "unmediated conflicts." (Lahoud, 2010, 14) Instead of demarcating conflict urbanism in the already identified zones of conflict, deciphering the concept as part of the urban geopolitics is possible: "duality between a pacified and harmonious *Western city* and the violent cities located at its periphery, which evokes the traditional colonial mind frame, has been shattered [emphasis added]." (Misselwitz and Rieniets, 2009, 74).

In many cases, conflict urbanism studies appropriate empirical data, such as recordings, photographs, and videos. Also, witness testimonies whether in the form of a legal document or through interviews, observations from the site and field accompany the survey researchers undertake in studying their cases. However, as mentioned above, due to the nature of the field in which the research is being conducted, acquiring the relevant data for the research from the field is not always accessible. Moreover, whenever it is, it can be biased, if not limited. Hence, inquiring into the archive for this study area is not less challenging.

For cases where the field is no longer accessible, historiographical studies are undertaken through archival material. What is destroyed, the motives and the rationale

behind destruction as a violent form of intervention to the built environment are the subjects of research in Bevan and also Lucia Allais' very recent work *Designs of Destruction* (2019). A significant example of these attempts can be found in Robert Bevan's *The Destruction of Memory* (2006). While Bevan's work is not directly affiliated with conflict urbanism, it provides a historical context for studies that look at contemporary fields of war and conflict. Bevan's work demonstrates how historiography is relevant to conflict urbanism; while Forensic Architecture shows how research through methods design professionals possess, that allow the acquired material from the field can be useful. This material, in other words, data, is to be analyzed and studied as if they are parameters to define the project site for such endeavors.

Conflict studies and destructive nature of conflicts in the built environment invite cases that can be researched into, rather than through, even though there are alternative examples like Keller Easterling's theory of subtraction (*Subtraction*, 2014). In Bevan's work, destruction implies military maneuvers to dominate and subjugate if not to gain territory. It denotes the desire to wipe out the enemy's capacity to fight, or destruction of the cultural artifacts of an enemy people or nation as a means of dominating, terrorizing, dividing, or eradicating it. (Bevan, 2006, 7) However, it is also a process that does not always terminate once the target is annihilated. ISIS' campaign of cultural destruction gained international reaction after they invaded the city of Mosul in Iraq in 2014, and still affects the political, cultural, and social life in the area. ISIS' destruction of the artifacts in the Mosul museum and the ancient site of Palmyra in Northern Syria produced the shocking visual imagery of destruction. ISIS' rationale behind the destruction and violence they have caused has been questioned. While Ömür Harmanşah refers to Bruno Latour's elaboration on iconoclash as a method to shock the audience through visual media and social networks, Lucia Allais refers to Faisal Devji to explain the logic of destruction ISIS initiated with the invasion of Mosul. (Melčák and Beránek, 2017, 390; Allais, 2017, 53) '[Devji] diagnoses a "hatred of all historical, sociological, and ideological depth" as motivating the architectural destruction of "pre-Islamic monuments, [and] also of all "traditional," "heretical," or "infidel" sites.' (Allais, 53) These represent only some aspects of the violence and destruction inflicted by ISIS, according to Melčák and Beránek. Trying to understand the significance of "destruction" in a contemporary conflict zone, Melčák and Beránek emphasize their discourse by mapping the places of destruction in Mosul and compare them with ISIS' propaganda material. With their inquiry, they suggest "iconoclasm inherent in the Islamic religious doctrine of taswiyat al-qubur": leveling of graves. (Melčák and Beránek, 390) This is casting the religious and ideological doctrine not as a pretext, but as the genuine rationale behind the destruction. While military maneuvers to subjugate the enemy can be judged on rational and ethical grounds, religious interpretations are less likely to be put into question. This means destruction is not a tool during the war but can be a tool at the hands of those who strive for authority. Hence demarcating conflict to the war zones and conflict-prone areas, which fall outside the "Western city," needs to be reassessed. Here we can reiterate Graham's point: 'Urban everyday life everywhere is stalked by the threat of interruption: the blackout, the gridlock, the severed connection … [t]he everyday life of cities shifts into a massive struggle against darkness, cold, immobility, hunger, the fear of crime and violence.' (2010, 11) Studies on politics of emergency declare that '[w]hether in relation to events of terror, environmental catastrophes or civil unrest, the' state of exception' is no longer, if it ever was,

exceptional'. (Adey, Anderson and Graham, 2015, 4) In the contemporary political space, the 'hidden matrix' of the political space can be understood as the administration of those exceptional circumstances rather than approaching exceptional states as anomalies. (Adey, Anderson and Graham, 2015, 7)

Robert Bevan refers to the French historian Pierre Nora in his work on *The Destruction of Memory*. Bevan quotes Pierre Nora: 'Modern memory is, above all, archival' and it 'relies on the materiality of the trace, the immediacy of the recording, the visibility of the image.' (2006, 16) This approach to memory must grant significant power to destruction for the depredators. Bevan further argues that 'individual memories interact within a framework provided by societal memory' that leads consequently to 'a shared attitude to representations of the past.' (2006, 16)

This can draw our attention into the archive, once again, slightly more in-depth this time. The inherent link between the psychoanalysis and memory is followed by Foucault's work in 1969: "The historical a priori and the Archive." (Foucault, 2002, 142-148) The word *arkhe*'s significance established a commencing and a commending role to the idea of archiving in Derrida's *Archive Fever*. (1995) Studies on destruction and memory are directly concerned with what can be seen, represented, and documented. With the advancement of computational tools and their accessibility in everyday life as well as in humanities, the medium of the archive transcends the "fixed order" and replaced by the "permanent reconfigurability." This is what Wolfgang Ernst refers to as the "archival order." (2013, 99) This order "is being replaced by the dynamics of the archival field, which in the new media environment is itself based on the dynamics of electromagnetism and […] mastered by cybernetic reasoning." (Ernst, 2013, 99) However, rather than the content dismantled through the Internet, instead, it is the system of technical protocols that constitute the *arkhe* of the archive.

In contrast to the excess number of visual media, "the Internet's cybernetic dispositive itself operates as a command system." According to Ernst, this is "far more time critical than classical archives ever were." (Ernst, 2013, 85) Katrina Sluis suggests that" Derrida's archive fever is supplanted by database fever, technologies of memory are increasingly linked to the industrial processing of information and the performativity of software." (Sluis, 2017, 28) With data that can be mined becoming the media that can be collected and distributed, the discourse we need to be capable of understanding is the technologies databases employ. SQL/XML and algorithms that are used to structure, evaluate the abundance of accumulated data introduce another form of language.

Archive in the age of the Internet, protracted violence and destruction introduce two critical considerations in this discussion. First, documenting the violence and destruction cannot be equivalent to acquiring the footage and imagery that shows the transformation of the built environment. Secondly, on top of the speech that is withdrawn from the domain of those who face protracted violence and destruction, modern memory forming institutions introduce a new form of language. This language is not only withdrawn but obscured behind advanced statistical and computational operations.

For conflict urbanism studies or the very notion of destruction itself, seem to deal with memory at first glance. Memory and archive, as intriguing as they may sound for a researcher, have the potential to consolidate the researcher for a historiographical perspective only. Within the field of architectural research, the fundamental element of what is recollected, namely, data is being emphasized in works that appropriate architectural design and representational methods with the historiographical work. Hence, what Ernst refers and Katrina Sluis reiterates as the "performativity aspect" of the archive in the form of network is something architectural design methodology and representation is capable of performing. In the age of being capable of storing, processing and representing potentially more bits of data we can ever imagine, an archival survey, which looks at the bits of archived material in order to represent or put forward a statement, argument or representation regarding the built environment is not relevant to this performativity aspect of the archive. The archive's performativity depends on algorithms that structure the data at hand and the protocols, which make them accessible to users. The possibility of how the data present can be related to one another and translated to another medium is part of these algorithms and protocols. Forensic Architecture's work is only one dimension of this potentially fruitful analogy: Representing and reiterating the event in order to explain how it unfolded in the built environment. However, it is likely that the aspiration for the use of verifiable evidence and its spatial and temporal representation that is derived from open and accessible data may not find its proper place in a context which Weizman characterizes as an era where "lack of evidence for a case is ignored, and they are presented as being equally valid". (Bevan, 2019)

Regardless, architectural forensics and recording internally displaced people with their identities, their movements, their stories, and documenting the violence, destruction are credible and urgent tasks. Forensic Architecture demonstrates that architectural and design professionals can commit to such tasks as long as there is still hope for having real-world consequences such as compensation, rebuilding, or even historiography. However, once this task is not limited with a humanitarian task or a response to the lost social role architects had depended on for the sake of the autonomy of their practice and discipline, data-driven architecture and representation might situate architectural practice in a more complex network RIBA anticipated in 2003. This is because the role of data in architectural practice and representation is not necessarily to produce evidence to shed light on what is disguised otherwise. However, more importantly, this network does not become more complicated because of the expanding specialization of professionals, such as data scientists and data engineers, who collaborate with the built environment professionals.

Architectural design and practice can be considered as always been a translation of a set of data from one medium to another medium. However, as the limits of what is documented and (re)presented as data extends and the tools to process these become more accessible to users, the domain of design and research is reevaluated. The evolution of the participatory design paradigm and the tools appropriated through open-sourcing, crowdsourcing as well as the changing notion of mapping and representation in architectural design and practice is one aspect of this reevaluation. Another aspect is to understand the built environment itself as the domain for this data-pool, which can be overlooked but becomes most visible in the cases of crises. The relation between the conflict urbanism, data-driven architecture, and

documentation is most likely not arbitrary, but present a case to be looked into in more detail.

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