

A PROLEGOMENON TO IMAGE-BASED HISTORIOGRAPHY: Forensic Architecture's Spatiotemporal Model and the Split-Second Event

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Abstract: This paper looks to the investigatory work of Forensic Architecture as a model for new practices of architecture historiography. Departing from architecture history's long-standing familiarity with events corresponding to long histories, this paper investigates the split-second event and the media platforms that mobilize it. A close reading of a series of video-stills taken from Forensic Architecture's video-based spatiotemporal investigations reveals that contemporary media has reconditioned our perception of the duration of historical events, as well as the spaces in which these events are thought to have occurred. Beginning with an outline of Forensic Architecture's spatiotemporal model and the historical narratives it produces, this paper subsequently traces Forensic Architecture's most recent investigations to eighteenth-century precedents, making evident a historical progression toward increasingly higher "thresholds of detectability." The emergence of a "forensic aesthetics" in the mid-1980s is then read as the seed of a historiographic rhetoric concerned with densifying and diversifying medias and the platforms facilitating their circulation. Finally, Forensic Architecture's investigatory work is understood as producing historical narratives in which historiographic methods that routinely differentiate between speaker, content, and reference are eclipsed, offering instead near-seamless continuity and an emergent opportunity to witness history speak for the events and objects under its gaze.

Keywords: Historiography, Forensic Architecture, media, evidence, method

INTRODUCTION

The making of facts, then, depends on a delicate aesthetic balance, on new images made possible by new technologies, not only changing in front of our very eyes, but changing our very eyes—affecting the way that we can see and comprehend things. Aesthetics, as the judgement of the senses, is what rearranges the field of options and their perceived likelihood and cuts through probability's economy of calculations. The word conviction thus articulates the legal verdict with the subjective sensation of confirmed belief, of being convinced (Keenan and Weizman 2012, 24).

Eyal Weizman's "Threshold of Detectability"

In the introduction to his 2017 book, *Forensic Architecture*, Eyal Weizman defines the "threshold of detectability" in relation to the maximum resolution of publicly available satellite imagery in the years between 2008 and 2014. Weizman defines this limit as the threshold at which figures depicted in satellite imagery can or cannot be identified. Given that one pixel typically equates to 50 cm of real measurement, things measuring greater than 50 cm by 50 cm can be detected but things measuring less cannot. Weizman is careful to point out that a person cannot be detected but something bigger, like a building or landscape, can.

In the pages that follow I would like to bring Weizman's concept of the threshold of detectability to bear upon what I identify as the *spatiotemporal*

models defining Forensic Architecture's investigational work.¹ I propose to do this by reorienting Weizman's definition of the threshold of detectability from being almost exclusively about satellite imagery and related issues of resolution and legibility towards a more general discussion about historiography and the media contributing to Forensic Architecture's projects. This reframing will allow me to speak about Forensic Architecture's practice as a unique model for historiographic inquiry with historical ties to ever-changing perceptions of the veracity of images.

Many of Forensic Architecture's more recent investigations are communicated via web-based videos², in which a 3D model depicting a built environment is used to carry various forms of primary- and secondary-source evidence. Video and audio recordings, models of both physical and digital kinds, witness testimony, simulations and timelines are all assembled in a way that yields a multi-sensory reading of an architectural environment. It might be said that Forensic Architecture writes—in the medium-non-specific sense—the biographies of the various objects factoring into their investigations. In a complimentary way, my intent is to use this paper as an opportunity to write the biography of the object made by Forensic Architecture: the web-based video investigation. If Forensic Architecture's work is understood as occurring within the rectilinear video frame, then my work looks

beyond this frame and aims to better contextualize Forensic Architecture's work as a historiographic model tuned toward emerging media through which scholarship can be both formulated and disseminated.

1. FORENSIC ARCHITECTURE'S SPATIOTEMPORAL MODEL

At the beginning of Forensic Architecture's investigations, a past event and a series of lingering questions surrounding that event are identified as the target or cause of the investigation. If not coincidentally, then shortly thereafter, Forensic Architecture reveals a digital 3D model representing the space in which the event took place. This model is a critical aspect of the investigation because it serves as the site in which both primary- and secondary-source evidence is located and subsequently read. To convince viewers of the fidelity of this model to the real-world space for which it is intended to speak, Forensic Architecture locates primary-source photographic images and video recordings on top of the 3D model in an effort to demonstrate continuity between the two forms of evidence (figure 1).



Figure 1: Still from 00:02:23 of Forensic Architecture's "Ali Enterprises Factory Fire" investigation. A photograph of the third-floor workspace of the Ali Enterprises Factory—destroyed by fire in 2012—has been laid over a 3D model of the same space. Continuity between the photograph and model may be seen where the edges of the photograph meet the 3D model space behind. (Forensic Architecture, 2018)



Figure 2: Still from 00:02:27 of Forensic Architecture's "Ali Enterprises Factory Fire" investigation. The photograph previously visible in figure 1 is no longer present, allowing a 3D model of the Ali Enterprises factory building to occupy the entire frame. (Forensic Architecture, 2018)

In Forensic Architecture's "Ali Enterprises Factory Fire" investigation, a critical moment in the argument comes when the 3D model must be accepted as an accurate reproduction of the burned-down building for which it is intended to speak. With this in mind, it may become evident why the photograph featured in figure 1 is not actually very important to Forensic Architecture's task of "uncover[ing] the many ways in which design and management decisions not only failed to prevent injury and casualties [250 people died in the fire], but in fact augmented the death toll" (Forensic Architecture 2018). The photograph we see laid over a grey-tone digital model in figure 1 does not provide novel information pertaining to the "design and management decisions" that may have "augmented the death toll." Rather, this photo says something about the remaining thirteen minutes of the video clip: that Forensic Architecture's 3D model may adequately speak for the building as it was before the fire, when the building was intact and undamaged. The photo's correspondence to structural aspects of the building, as well as furniture found in the model, helps convince a viewer that the entire model—not just the part visible in this single frame—is a faithful representation of the space for which it now speaks (figure 2).³ If this single photo of an interior space on the third floor of the Ali Enterprises factory building matches the 3D-modeled space immediately beyond its edge, then why should we not be convinced that the rest of the building's floors, its exterior and neighboring context—all featured in the ensuing video investigation—would also match available photographs?

As a rhetorical tool, the novelty of the 3D model is found in its functioning as a spatial entity binding together various kinds of historical evidence. Though we have only witnessed the correlation between a single photo of the building prior to the deadly fire overlaid upon a 3D model produced several years thereafter, this mode of argumentation is characteristic of the early stages of many of Forensic Architecture's investigations. What typically follows is a process of locating various kinds of historical evidence within the 3D model. In the case of the Ali Enterprises factory fire, low-resolution copies of photos taken during the initial investigation by local fire marshals, witness testimony, legal documents pre- and post-dating the event and speaking to local fire codes and the building's lack of appropriate infrastructure are all interrelated within the referenced 3D model of the architectural space.

If we can now see how the "spatio" component of Forensic Architecture's spatiotemporal model corresponds to a 3D model created after the event for which it is intended to speak and serves to hold evidence and relate it to a spatial environment,⁴ the presence of a timeline within these investigatory videos affords a complimentary purpose.

A timeline is defined as a graphic representation of the linear passage of time. When time is rendered as a line, an event may appear upon that line; identified by the specific moment at which it is believed to have taken place. This makes it so that multiple events may be ordered in sequence. Expressed another way, a timeline makes it possible to say that event 'x' happened before, during or simultaneous to event 'y' because of where events 'x' and 'y' appear on a timeline. Forensic Architecture often attempts to re-enact a past event, so it becomes necessary that they be able to chronologically order micro-events comprising a larger macro-event. For example, in the top area of figure 3 we see the timeline used to order the smaller micro-events comprising the Ali Enterprises factory fire: "the earliest

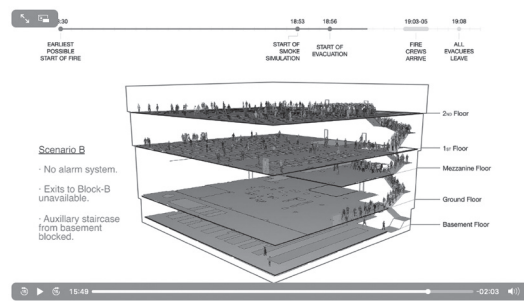


Figure 3: Still from 00:15:49 of Forensic Architecture's "Ali Enterprises Factory Fire" investigation. The timeline visible above the 3D model organizes the events comprising the building fire between 6:30pm and 7:08pm. (Forensic Architecture, 2018)



Figure 4: Still from 00:14:45 of Forensic Architecture's "Murder of Halit Yozgat" investigation. The timeline visible at the leftmost side of the frame plots the activities of five people in an internet café during the seven minutes between 4:57pm and 5:04pm. (Forensic Architecture, "The Murder of Halit Yozgat" 2019)

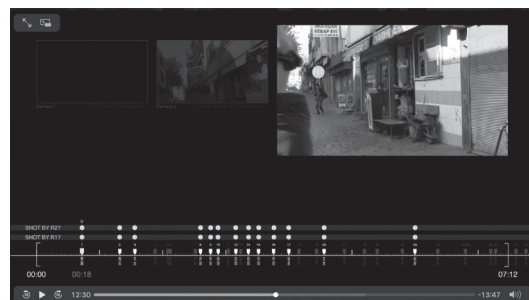


Figure 5: Still from 00:12:30 of Forensic Architecture's "Killing of Tahir Elci" investigation. The timeline visible in the bottom quarter of the frame plots the discharge of more than 40 bullets by seven different gunmen over a period of 7.12 seconds. (Forensic Architecture, "The Killing of Tahir Elci" 2019)

possible start of fire” precedes the “start of evacuation”, which in turn precedes the moment “fire crews arrive” and, later still, “all evacuees leave” the building.

When the timeline in figure 3 is read alongside other timelines featured in contemporaneous Forensic Architecture investigations (figures 4-5), we see something unique: Forensic Architecture is not dealing with typical historical timescales like the “period” (100 or more years) or “generation” (generally 30 years). Rather, they are dealing with “split-second” events taking place over the course of seconds, minutes, or hours.⁵ Events for which fractions of a second often matter in the parsing of micro-events like the evacuation of several hundred people from a burning building, the activities of five people in an internet café, or sustained gunfire from multiple sources.⁶ Additionally, these timelines serve to relate the evidentiary media speaking for the event to the media by which the investigation of the event is communicated. In other words, video and other digital (or digitized) evidence is narrativized in a web-based video with its own unique timeline, (refer to the media-player interface visible in the bottom portion of the screen in figures 3, 4, and 5, as an example). The timeline is thus as crucial to organizing the evidence pertaining to the event, as it is to organizing the medium through which the event will be communicated.

Perhaps we can now see how Forensic Architecture's spatiotemporal model holds the potential to add several new and intriguing potentials to the writing of history. The split-second event, the spatiotemporal model as a research-carrying tool, and the web-based video as a method for narrativizing this research all constitute novel approaches to traditional historiography. Having a good grasp on the types of investigations Forensic Architecture conducts and the kinds of models in which evidence is located and subsequently animated, we now turn to see how these investigations more generally relate to contemporary visual culture and other inquiries into the split-second event.

2. THE DEATHS OF CAPTAIN JAMES COOK AND TAHİR ELÇİ

Captain James Cook died in 1779. Tahir Elçi died in 2015. Four years after each event images speaking to the causes of these men's deaths would begin circulating. Let us juxtapose these two images: an eighteenth-century copperplate print, *Death of Captain Cook*, 1783 (figure 6) and a still-image from Forensic Architecture's web-based video investigation of "The Killing of Tahir Elçi," 2019 (figure 7).

First, we need to know a little about what is depicted in each image. In February 1779, the famed British sea captain James Cook returned to Hawaii's Kealahakua Bay just a few months after having departed



Figure 6: John Webber's *Death of Captain Cook*, 1783. The faintly visible engraved inscription reads, immediately below image at left, "Drawn by J[ohn] Webber"; below image at center, "T[h]e Figures engr[ave]d by Fra[ncesco] Bartolozzi"; below image at right, "The landscape by Will[iam] Byrne." (Yale Center for British Art)



Figure 7: Still from 00:08:23 of Forensic Architecture's "Killing of Tahir Elçi" investigation. The content in the video-recorded image at center and that of the 3D model behind it may be seen as continuous where the 3D-modeled red figure at right converges with the video recorded image featuring Elçi's head and left arm. Continuity is also visible where 3D-modelled storefronts behind the central figures merge with those of the video recording. (Forensic Architecture, "The Killing of Tahir Elçi" 2019)

due to a broken mast on one of the ships in his fleet. The Royal Academician and painter John Webber was aboard one of the ships in Cook's fleet when it returned to Kealakekua Bay. Although it is generally accepted that Webber did not personally witness the moment in which Cook was killed, Webber's assignment on Cook's third and final voyage was that of "topographical artist" tasked with "illustrating the official journey of the trip" ("The Death of Captain Cook" n.d.). In October 1780, more than a year after Cook's death, Webber returned to London where the British Admiralty commissioned him to produce finished drawings and engravings of what he had seen during his travels. In 1783 the London-based engravers Francesco Bartolozzi and William Byrne would produce the copperplate etching from which the print reproduced in figure 6 was first made.

If Cook was indeed killed upon returning to Kealakekua Bay in February 1779, it would be more than four years and at a navigable distance of more than 25,000 miles, before the institutionally authorized image depicting his death would be produced under the direction of a pre-determined witness.

The second image (figure 7) speaks to an event that occurred on November 28, 2015 when Tahir Elçi was fatally shot in Diyarbakir, Turkey. A Kurdish lawyer, Mr. Elçi was at the center of a press conference when two nearby gunmen "shot and killed two policemen . . . who approached the taxi in which they were traveling. They [the gunmen] leapt out of the vehicle and fled the scene" (*Open Democracy* 2019). The pair headed down Yenikapi Street, toward Elçi's press conference and, "as they approached the scene, at least five of the policemen present at the press conference [four with handheld video cameras] opened fire. In a little over nine seconds, forty shots were fired. The brief shootout ended with only one fatality: Elçi. . . ." (*Open Democracy* 2019). "In 2016, the Diyarbakir Bar Association, of which Elçi was chairman at the time of his death, asked Forensic Architecture to examine the evidence in their possession, and to independently investigate the circumstances of his death" (Forensic Architecture, "The Killing of Tahir Elçi" 2019). The evidence factoring into Forensic Architecture's investigation, and located within a spatiotemporal model, was primarily limited to video recordings produced at the time of the shooting.

We might now ask: what is the threshold of detectability for each of the two images? In the still image excerpted from "The Killing of Tahir Elçi" we must remember that we are looking at a single frame from a twenty-six-minute-long video outputting thirty frames per second. We must also remember that the still image depicted at the very center of figure 7 belongs to primary-source video embedded within the video investigation, and has been sourced from one camera perspective among three others that captured video at the time of Elçi's killing. All together, these four cameras initially produced sequences of still images at a rate of twenty-five images per second. This means that the "nine seconds and ten frames" Forensic Architecture identifies as the duration of this event, considered in conjunction with the footage from four cameras capturing still images at a rate of 25 per second, yields 100 still images produced each second, and a total of 940 distinct images for the duration of the event identified as the killing of Tahir Elçi (Forensic Architecture, "The Killing of Tahir Elçi" 2019). Conversely, the image said to depict the death of Captain Cook is a print made from a copperplate etching produced by two London-based engravers, Francesco Bartolozzi and William Byrne, upon both visual and verbal instruction

from the institutionally-authorized witness, John Webber, who, four years prior, indirectly witnessed an act of violence that resulted in Cook's death.

Indeed, it would be difficult to argue that one of the images reproduced in figures 6 and 7 depicts the truth more faithfully than the other. It would be just as challenging to say that one image is a better form of documentation than the other. What is certain is that the image produced by Forensic Architecture references a form of media for which the threshold of detectability has been magnified from a single image depicting a person's death to several hundred. We must also keep in mind that not being present for neither Cook's nor Elçi's deaths, we are only able to act upon and speak about these events by way of the media representing them. This warrants a moment of pause precisely because, during the eighteenth century, an image like Webber's was considered by many to be an accurate image in the way that Forensic Architecture's is today. It may be that our collective fascination with images as communicative tools and as documentary recording devices has not changed very much in the preceding two-and-a-half centuries. What has changed, and dramatically so, is the threshold of detectability and the culturally assigned limits we set as the norm for truthfulness, accuracy, and fidelity.

Weizman addresses the influence of media upon thresholds of detectability when he acknowledges a shift from witness-oriented testimony to object- or "thing-" oriented testimony, during the second half of the twentieth century (Keenan and Weizman 2012, 11-13). We see this shift in action when Forensic Architecture mutes the eyewitness' account in favor of the video-camera-as-object's account.⁷ In "The Killing of Tahir Elçi" investigation, the video camera is framed as distinct and autonomous from its holder: emphasis is not placed on who holds the video camera (the eyewitness) but on what information (audio-visual data) is contained on the camera's memory card (the object). The reason for this, we might surmise, is because we are encouraged, in the present, to see in Webber's image all possible personal biases. This renders the image's usefulness in answering questions surrounding the circumstances that resulted in the 1779 death of Captain Cook in Hawaii extremely unlikely. Alternatively, we do not have the same reservations when Forensic Architecture poses versions of these same questions to four video cameras. And why? Put simply, it is because the video cameras magnify the threshold of detectability to a degree we find satisfactory.

Thus, we are left with two distinct thresholds of detectability, albeit constructed by similar means. In the case of the death of Captain James Cook, a single painting believed to be authored by Webber between

1781-3 (figure 8) serves as the surviving visual evidence of the event that led to the production of the copperplate etching reproduced in figure 6. Like the makers of Forensic Architecture's 3D model who could not visit the site in which Tahir Elçi was killed—it is noted in the video investigation that the area of Diyarbakir in which Elçi was killed was razed some weeks after the murder—Francesco Bartolozzi and William Byrne were in a different global hemisphere at the time of Cook's death. Bartolozzi and Byrne's capacity to act as translators—the former working with the figures, the latter with the landscape—rendering Webber's painting as an etching, and thus an image capable of mass reproducibility, is similar to that of the Forensic Architecture model makers, who take disparate and peripheral forms of evidence—publicly available satellite imagery, building elevation drawings, leaked police documents including video and photographic images—and construct a single 3D model capable of being located in a web-based and distributable video. Although achieved according to historically distant and distinct culturally-determined standards, both the print and video may be understood as endeavoring to collate as many evidentiary forms as necessary, in order to yield a reproducible image capable of speaking for the event depicted and carrying with it the highest possible threshold of detectability.

3. 'A' IS FOR ANALOGY: MENGELE'S SKULL AS A THEORY OF METHOD⁸

Coauthored by Eyal Weizman and Thomas Keenan in 2012, *Mengele's Skull: The Advent of a Forensic Aesthetics* was published just two years after Forensic Architecture was founded. Elucidating the shift from witness to object-based testimony, Keenan and Weizman's book deals with numerous images from forensic scientist Richard Helmer's "face-skull superimposition demonstration" carried out at the Medico-Legal Institute Labs in São Paulo, Brazil in June 1985 (Keenan and Weizman 2012, 38). As Keenan



Figure 8: John Webber's oil painting [Death of Cook], c. 1781-83. (State Library of New South Wales)

and Weizman situate them, the images depicting Helmer's forensic analysis served to convince a public audience that the skull of a recently exhumed body did, in fact, belong to Nazi war criminal Josef Mengele. We can identify in these images two notable qualities that consistently feature in Forensic Architecture's investigational work of the last decade. Presenting photographs of a living Mengele alongside those of a faceless skull, Helmer's studies yielded (1) side-by-side sliding comparisons in addition to (2) comparisons made on the basis of transparency (i.e. fading out one image to be supplanted by another). Relying on visual as opposed to verbal rhetoric, Helmer's demonstrations effectively convinced viewers that the superimposition of two different images—scientific analysis performed upon a recently exhumed skull on the one hand and a photograph of a living person on the other—could be read as speaking to one and the same event: in this case, a person identifiable as Nazi war criminal Josef Mengele.

Similar phenomena of simultaneity and transparency may be observed in the stills from Forensic Architecture's "Ali Enterprises Factory Fire" investigation reproduced in figures 1 and 2.⁹ During the four seconds that span the temporal gap between these still-images, the photograph visible at the center of figure 1 steadily gives way to the 3D model visible in figure 2. This visual rhetoric is comparable to that used in Richard Helmer's images from thirty years earlier. And, at a conceptual level, figures 1 and 2 depict a key characteristic of nearly every one of Forensic Architecture's investigations: the claim of fidelity that exists between a 3D model and firsthand documentation of a specified event.

We must not fail to acknowledge that it is during these moments in the video investigations that Forensic Architecture's arguments are at their most vulnerable. If a viewer is not convinced that the 3D model corresponds to available primary-source material and they cannot subscribe to the model's ability to speak for the event targeted by the investigation, then Forensic Architecture's inquiry cannot proceed. This is because, from these moments onward, the 3D model stands in for the site in which the referenced event took place. Given that Forensic Architecture's investigations usually target geopolitical sites which no longer exist or are otherwise difficult to access, the fidelity of the 3D model is of singular importance. In the same way that a public audience had to be convinced that an anonymous skull formerly carried the face of a man named Josef Mengele, Forensic Architecture must convince their viewers that a digital model corresponds to a burned-down factory in Pakistan, or the razed sector of a city in Turkey.

We can observe the implications of this polemic in "The Killing of Tahir Elçi" investigation. Once the investigation turns exclusively to 3D model space, we do not question the veracity of the locations of any of the actors or the architectural layout they inhabit (figures 9-10). Instead, we are accounting for bullets discharged and the orientation of weapons and their carriers as the event plays out. We do not worry about the fidelity of the model or its resolution. As Forensic Architecture likely intends, we worry about which scenario seems most likely to have occurred in the space and time for which these models speak. In figures 9 and 10 we see very clearly that the scenario is being played out in a digital model but, in our mind's eye, we apply this scenario to the historical space and time for which the model convincingly speaks. As we did earlier with figures 1 and 2, comparing now figures 7 and 10 demonstrates how Forensic Architecture primes us to associate their 3D model with the space referenced with primary-source evidence. Hereafter, anything Forensic Architecture acts out or simulates in the 3D model, a viewer sees as being acted out in the spatiotemporal condition in which the event actually took place. It is for this reason that a Forensic Architecture investigation can be frighteningly convincing: the counter-scenario they enact leads us to effectively believe that we have witnessed—firsthand and in person—the true event.

CONCLUSION

Zeno's Dichotomy Paradox and the Ethics of Historiography

Zeno's dichotomy paradox states that before a person traverses the distance between two points that person must first traverse half the overall distance. And after traversing half the overall distance that person must traverse one half of the remaining distance. And after traversing that distance, another half-distance must be traversed *ad infinitum*. The paradox concludes by stating that in order to traverse the distance between two points one must first complete an infinite number of successively smaller tasks.

The density of available visual content describing contemporary events relates our inquiry into Forensic Architecture's investigatory work of recent years to Zeno's paradox. While the unaccounted for space between an event and its imaging is getting smaller, a gap is nevertheless present. It is not difficult to debate the veracity of the copperplate etching describing the death of James Cook because it was produced four years after the event and at a navigable distance of more than 25,000 miles. And, even if we identify Webber's painting as a more credible image—after all it was produced *by* and not *after* Webber—it is still only

thought to have been painted as early as 1781, a full two years after Cook's death. Jump forward to the killing of Tahir Elçi and we find 940 still-images describing his death; images, it may be argued, that were produced simultaneously to the event and at a rate of one image every 0.03 seconds. And because the cinematic sequencing of these images renders individual frames imperceptible to the human eye—we can only discern the difference between individual frames up to a rate of about 15 frames per second—we are left to believe that they are seamless, and contrary to their existence, completely fluid. This is not the case, however, and the videos gathered by Forensic Architecture do in fact contain blind spots. Consider, for example, that the cameras from which the primary-source videos were produced captured at a rate of 30 frames per second instead of 25. Given the parameters of Forensic Architecture's investigation, this would add 180 images to the investigation. Add another camera (from CCTV, a bystander's cell phone or a police bodycam) and, capturing 25 frames per second, another 235 images enter into Forensic Architecture's investigation. In addition, if the four cameras present at the time of Elçi's death captured at a rate of 60 frames per second, 1,260 images would be added to the investigation, effectively doubling the relevant media to parse through.



Figure 9: Still from 00:08:37 of Forensic Architecture's "Killing of Tahir Elçi" investigation. This image depicts the events surrounding the killing of Tahir Elçi only through 3D model space. (This view is perpendicular to that depicted in figure 10). (Forensic Architecture, "The Killing of Tahir Elçi" 2019)

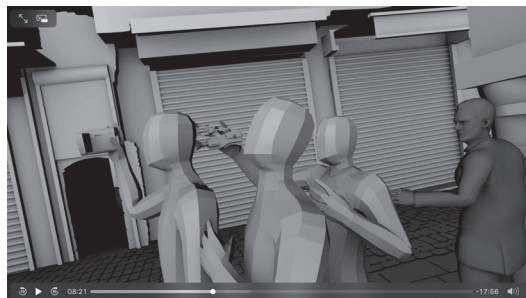


Figure 10: Still from 00:08:21 of Forensic Architecture's "Killing of Tahir Elçi" investigation. (Forensic Architecture, "The Killing of Tahir Elçi" 2019)

The analogy to Zeno's dichotomy paradox serves to remind us that we are dealing with an ever-present gap between an event and its reproduction. The gap of time and space may be shrinking, and at exponential rates toward imperceptibly small distances of time and space, but for now it is still present, and we must acknowledge it.

So, when the discussion shifts from the witness to the "thing" (as we see at the start of Keenan and Weizman's *Mengele's Skull*), it is not so much that we stop trusting the witness as much as we reorient who functions as a witness and in what capacity. In the mid-1980s Keenan and Weizman identify a shift away from the witness as someone able to speak about an event towards someone tangential to the investigatory scene, like a scientist, tasked with speaking for, about and through objects that act as witness to the event in question. In terms of images like the ones featured in this paper, a witness no longer produces images in the way that Webber did with Cook's death, but instead interrogates the evidence which witnessed or "sensed" the event, much like Forensic Architecture does with video-camera footage. With this shift comes the immense responsibility of speaking for these object-oriented witnesses.

We might now recall certain pre-Hegelian models of art and architecture historiography. In *Threads and Traces*, Carlo Ginzburg (2012) claims that "modern historical writing came into being from the convergence...between two different intellectual traditions: Voltaire's type of *histoire philosophique* and antiquarian research" (13). The antiquarian research that Ginzburg describes was conducted by a person who, contrary to the established practices of the seventeenth-century historian, "used nonliterary evidence to reconstruct facts connected to religion, to political or administrative institutions, to the economy—spheres not touched upon by historians tendentiously oriented toward political and military history. . ." (12). Perhaps most relevant to the questions outlined in this paper, Ginzburg says that the shift toward "modern historical writing" came about precisely when, "in the second half of the seventeenth century...one [began] to analyze systematically the differences between primary and secondary sources" (12). In Ginzburg's account, the debates that occupied historians of the fifteenth through seventeenth centuries centered around which objects should fall under the historian's gaze, what he or she did to manipulate these objects, and the historical narratives that resulted. In briefly recalling these debates, I am compelled to bring to the foreground those models of historiography which were *not* codified: those models predating the systematic parsing of primary and secondary sources. These are

models for which, we might conclude, synthesis among speaker, content and reference was not only seamless, but a desired condition offering historical truths by way of *energeia*: what Ginzburg summarizes as a series of "procedures" with which ancient historians attempted to communicate that "effect of reality" through oratorical strategies, such as "activity," "clarity," and "vividness" in the Homeric tradition, and which ultimately resulted in a "guarantee of truth" (8-9).

Weizman speaks to this notion of the continuity between speaker, content and reference when he writes about Quintilian's concept of *prosopopoeia* in a text from 2010, predating the publication of *Mengele's Skull*, and coinciding with the earliest investigation published on Forensic Architecture's website. Weizman writes that "because the thing speaks through, or is 'ventriloquized' by, its translator, the object and its translator constitute a necessary and interdependent rhetorical unit" (Weizman 2010, 11). Undoubtedly this "interdependent rhetorical unit" is characteristic of the relationship we have observed among primary and secondary sources in

Forensic Architecture's most recent investigational work.

In *Mengele's Skull*, Keenan and Weizman (2012) tell us that, "The shift in focus from the living to the dead, from the witness to the bones or the missing person, from memory and trauma to a forensic aesthetics, also erodes the otherwise clear distinction between subjects and things" (70). This is precisely what this paper hopes to show: in the same way that Ginzburg wrote the territory out of which modern historiography emerged was not contested, Forensic Architecture brings to light the methods and the forming of this contested territory in the present. This is a territory for which subjects and things, speakers and spoken for need not be so clearly differentiated. The forms of historiography, in which we treat as an asset the erosion between subjects and things, are those that might render history more relevant in an age when speaking about or of some *thing* is increasingly difficult when that thing demands to be spoken for. In the present, Forensic Architecture is certainly one of these speakers, speaking for the objects falling under their investigative gaze.

ENDNOTES

1 As of November 2019, Forensic Architecture groups the work featured on their website under one of two headers: "investigations" and "programme." The latter category is broken down into several subcategories: "exhibitions," "events," "news" and "publications." The projects included in this paper may be found under the "investigations" header on the Forensic Architecture website.

2 Forensic Architecture's investigations sometimes simultaneously exist in different media including print media, web-based internet videos and museums. In this paper, my references to Forensic Architecture's investigations are restricted to those versions of an investigation as they appear on Forensic Architecture's website.

3 In this and many other investigations undertaken by Forensic Architecture, the space in which the crime being investigated took place no longer exists. It is for this reason that the 3D model may be said to speak *for* these spaces and not *about* or *to* them. It is also for this reason that the 3D model is such an important component of Forensic Architecture's investigations: the sites in which the scrutinized event initially occurred can no longer be visited.

4 It is often the case that 3D models and the software in which they are made—particularly in design-oriented disciplines—are used as projective tools, created before, or in anticipation of the event or object for which they speak. The fact that Forensic Architecture creates 3D models after the event for which the model is intended to speak is somewhat unique and relates their investigational work to other historically-oriented projects.

5 "Split second" is a term I have borrowed from the title of Weizman's postscript in *Forensic Architecture* (2017): "The Slow Violence of the 'Split Second'."

6 Of the events depicted in figures 3, 4 and 5 "The Ali Enterprises Factory Fire" is framed as an event lasting thirty-eight minutes, "The Murder of Halit Yozgat" lasting nine minutes and 26 seconds, and "The Killing of Tahir Elçi" lasting nine seconds and ten camera frames.

7 This especially is the case today with body-cam footage, which is taken as "evidence," often calling into question police officers' testimony.

8 In *Heuristics: The Logic of Invention* Gregory Ulmer outlines the acronym CATTt as a tool not only helpful in analyzing but inventing method. Ulmer first demonstrates CATTt on André Breton's *Surrealist Manifesto*: "A comparison of Breton's manifesto with the various classics of method [namely Plato's *Phaedrus*] reveal that they tend to include a common set of elements, which are representable for mnemonic reference by the acronym CATTt. The CATTt includes the following operations: C = Contrast (opposition, inversion, differentiation), A = Analogy (figuration, displacement), T = Theory (repetition, literalization), T = Target (application, purpose), t = Tale (secondary elaboration, representability)," (Ulmer 1994, 8). It follows that I read *Mengele's Skull* as the Analogy in Forensic Architecture's CATTt.

9. Although I have only selected two investigations dating from 2018-2019, these examples are not uncharacteristic of Forensic Architecture's earlier work. As of May 2019, only one of the forty-two investigations featured on Forensic Architecture's website predates the 2012 publication of *Mengele's Skull*.

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