



Asymmetrical Warfare

Planetary Computation

Energy and Raw Material

Susan Schuppli, Tom Tlalim and
Natasha Hoare

IN CONVERSATION

Natasha Hoare Art has become imbricated in recent conflicts. The so-called ‘Islamic State’ has publicized their destruction of ancient artifacts, even holding them to ransom, whilst image making is itself central to the organization’s recruitment drive and marshalling of public perception. Further to this, do you observe an interpenetration between art’s dispersal and flow, and that of warfare? The arms trade itself seems a particularly apt model.

Susan Schuppli Destroying ancient, non-Western artifacts is a form of iconoclasm: these archaeological sites are being obliterated because they are perceived as heretical to the program of birthing a new Caliphate. That’s a somewhat different gesture than the execution videos, which are explicitly produced as a direct critique of the West in their aesthetic mimicry of various motifs that have emerged out of the ‘War on Terror’ (i.e., the orange jumpsuits of Guantanamo), although both acts of violence (execution videos and the destruction of ancient ruins) are utilized as tools of propaganda.

Contemporary conflict does not happen without images. Images are central to the way they are organized, managed, and controlled. The US learnt this lesson during the Vietnam War, which dramatically changed the ways in which media coverage of any subsequent conflict was conducted. The bodies of dead American soldiers viewed nightly on US television screens greatly contributed to growing domestic opposition to the war. Since that time, media representation of conflict has become an extension of military planning

and logistics, exemplified by the phenomena of embedded journalism. With the opening up of online channels for media distribution, all of the actors engaged in or opposed to a given conflict are positioned as potential producers and consumers of images — controlling the message becomes *the de facto* mission.

Richard Grusin breaks with the photographic discourse of Susan Sontag and Judith Butler — in terms of an ethics of spectatorship — emphasizing instead, the concept of “mediality”. What is at stake in Grusin’s analysis is not the one-to-one relationship we might have with a particular image, but the broader mediation of images as they circulate and connect with other networks to craft new associations and meanings. The global circulation of images from Abu Ghraib offers a case in point, from soldiers sharing their pictures with family and friends to the broader media circuits into which the images would eventually move.

This marks a difference in how the photographic event unfolds and thus how it should now also be theorized, Grusin argues: a situation in which we move away from the specificity of what we can see in a single image to a consideration of how images operate in the world as an aggregating visual dataset of information. Such an understanding of mediality is perhaps also congruent with the ways in which Islamic State is producing images. The kind of violence that is about to take place in the execution videos is excruciatingly clear, but there is also something else at stake, other than the taking of a life. It seems evident that such terrifying images are being primed for their collective mediatic uptake within the various discursive networks that Islamic State wishes to provoke into action, whether they are oppositional or supportive.

Natasha Hoare Given that artistic practice operates in the realm of image-making as well, what is the role that art can play within this context?

Win McNamee, Obama Speaks On Implementation Of New Health Care Reform Law, June 22, 2010, detail. Courtesy of the photographer and Getty Images.

[Susan Schuppli](#) That's interesting. This is where I agree with Jonas Staal in that art has been reasonably effective in exposing injustice in the world, but it has been less effective in producing the conditions for transformative politics. Ultimately this is what we need to do. Exposure doesn't provide the means with which we can intervene politically. It's a big ask of art, however, to conceptualize this task, let alone put it into action.

I also just wanted to return to the question of the arms trade that Natasha began with. In the film *Lord of War (2005)*, which I believe to be reasonably accurate, the collapse of the Soviet state results in stockpiled arms flooding into various politically unstable regions, especially in Africa. Militarized combat drones offer another example of how the recent deregulation of export controls has opened up new economic markets for the US, but of course also potentially created new violent adversaries. The art market has of course always operated as a de-regularized market.

[Natasha Hoare](#) Yes, absolutely. I've seen recent reports that Islamic State is selling ancient artifacts to fund its activities on eBay. Within this context, what was the impetus for creating the piece *Uneasy Listening*?

[Susan Schuppli](#) Bringing attention to a lesser-known aspect of drone warfare: the sonic dimension. In the opinion of some lawyers I have consulted with, this is in violation of one of the central pillars of international humanitarian law, that of proportionality and distinction. Harm caused to civilian populations must be proportional (not excessive) to the military advantage that a choice of weapon permits. Much has been said about the highly precise nature of a Hellfire missile strike — which is true — in comparison to the use of conventional weapons, such as the dropping of a cluster bomb. That being said, the sonic dimension of drone surveillance has created a much more diffuse but ubiquitous harm in the regions of the world in which drones

are used. Through my work on the UN drone strike inquiry with Forensic Architecture, my research was conducted primarily on the use of drones in northwest Pakistan, although they are used in Gaza, Yemen, Somalia, and the Philippines, etc. Chris Woods, who used to run the Covert Drone War investigation for the Bureau of Investigative Journalism here in London, was instrumental in assisting me with the project's research challenges. Because there are no figures for drone sorties flown in Pakistan, we extrapolated from figures that we knew from Afghanistan; that for every thirty drone sorties flown, only one results in a strike. Most drones are flown for intelligence-gathering purposes and cruise the skies along the Tochi River in Waziristan. Healthcare workers have documented increased depression and anxiety in this region, with patients claiming that the constant sonic menace of drones — a buzzing, mosquito-like sound that can signal one's death at any moment — has generated widespread fear. As one person characterised it, "the sound of the drone was like a wave of terror coming over the community."

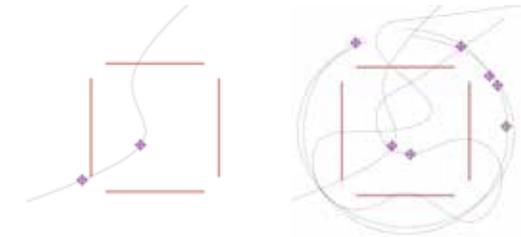
[Natasha Hoare](#) So was the piece intended as a provocation for a transformative politics?

[Susan Schuppli](#) Good question. First of all, what is crucial about the installation is that we tried to design a piece that was diagrammatic rather than immersive. We decided it would be completely inappropriate to create a simulated sonic environment in which one was asked to imagine oneself in this part of the world (Northwest Pakistan). The point was rather to manufacture certain sonic typologies in order to raise public awareness of this harmful feature of armed combat drones, and thus ideally to produce a counter-narrative to the accepted view that the weapon is precise and minimizes civilian casualties. It was also created in order to raise broader questions about our own implication in the ways in which the 'War on Terror' is being conducted in our names. How does violence produced in Pakistan produce a field for action or intervention here in Europe? How does one go

about investigating the conditions of state violence when strategies of representation have been woefully inadequate to the task?

[Natasha Hoare](#) Why does the piece reconstruct the sound of drones rather than use field recordings?

[Tom Tlalim](#) Images of violence can distance viewers and make them close their eyes, as Harun Farocki noted with respect to images of napalm. Our ears cannot be shut like the eyes, but sound also has the capability to produce a sense of distance or proximity through different modes of audition. But listening is not imperatively coupled with hearing. We also listen with our minds. Seth Kim-Cohen addresses this issue, proposing a conceptual turn toward a non-cochlear sound art. Alluding to Marcel Duchamp's "non-retinal" visual art, which asks questions that the eye alone cannot answer, a non-cochlear sonic art, "responds to demands, conventions, forms, and content not restricted to the realm of the sonic." It is a, "noise that functions linguistically and is therefore read as much as it is heard." (Kim-Cohen, 2009) He proposes a conceptual turn, where sonic art engages both the cochlear and non-cochlear, which leave traces in each other. I think in this case our strategy is to set up a space where one experiences the uneasy sound of drones as a cochlear (and bodily) presence, while also being able to register and reflect on the sounds at their typological level, beyond what is heard, understanding their meaning and consequences as operating within a political context in which we are all implicated. So I think in terms of this question of diagrammatic versus immersive, what we wanted to do was to produce an immersive sonic experience in the gallery space, without proposing that the listener is somehow being transported to another place by hearing documented sounds that someone else had recorded elsewhere. It had to be a direct and present experience, without forcing the listener to be suspended somehow as a subject of our documentary practice. Perhaps as a strategy for addressing



Susan Schuppli & Tom Tlalim, Drone flight path simulations, 2014. Courtesy of the artists.

political issues through sound art, the non-cochlear and the cochlear must continuously leak back and forth into each another. It is a work that allows the listener to get a taste of what it might be like to experience the constant, menacing sound of drones first-hand but it stops short of attempting to convince; in that way, it is diagrammatic: not reconstructing a particular sound from a particular village at a particular time, but rather simulating the typologies of these sonic-spaces within the exhibition space.

[Natasha Hoare](#) How was the sound created?

[Tom Tlalim](#) We realized early in the process that high-quality field recordings of Predator and Reaper drones in operation are scarce. The material that is available is mostly low-quality and filmed by mobile phone or hand-held camera. This means that field recordings of drone sounds mostly include the specificity of the place where they were filmed and the subjective perspective of a camera and microphone. We wanted to create a space that is simulated, an artificial space, which works beyond these features. We worked with custom software that I wrote for the work, where we could draw flight paths in space and compose them on a timeline. Based on Susan's research, we identified certain operation modes: how many drones would fly at a time, in what spatial pattern, and for how long, etc. The sound source itself was produced using a synthesised physical model of a drone at an average engine and propeller frequency of 150 hertz, taking into account the Doppler effect and different resonant frequencies produced by the

vehicle's body and by the spectral and resonant typologies of some of the prevalent areas of drone operations — from small towns to mountains. Creating the spatial effect was a combination of a spatial-panning algorithm and impulse-response-based reverbs of such spaces.

Natasha Hoare The Dutch government has recently put in orders for drones for surveillance purposes, both domestically and abroad, and in the Rotterdam context, the aerial bombardment at the beginning of World War II looms large in the imaginary of its inhabitants. I think, therefore, there is a very specific and real historical and contemporary trajectory to an understanding of this work at Witte de With.

Susan Schuppli That's important, too. Likewise, when we staged a performative lecture based on the research around the piece here in Britain, we did in fact make a direct connection to the nightly air raids and sirens of the Blitz. The loaded-frequencies of this drone soundscape can perhaps tap into the history of aerial warfare and thus layer additional meaning onto the piece for some (Tom works on aspects of this in his own work on Israel / Palestine). It could perhaps also trigger sonic memories of a historical fear, though the piece *Uneasy Listening* wasn't conceptualized to operate as a mnemonic device for triggering the past.

Tom Tlalim This is probably another reason for using sound as a primary material in our work. Although triggering collective is not the direct intention, sound does address memory and subjectivity differently to images. Hearing is a sense through which subjectivity is constantly and instantaneously being negotiated. There are fascinating studies on how aversive sounds influence memory at the point of construction. The ear grants direct access to subjectivity and trauma at a primordial level, prior to processing or analysis. Jacques Attali wrote that sound heralds the movement of politics. It has this ability to penetrate our minds and sweep us along with it.

I think the sensorial presence of the piece is therefore still important in this case; it is not an immersive gesture, but there is something about it that engulfs the listener in the longer temporal sense. This is also similar to the sonic effect of the drones. They are constantly present — not as an overwhelming force, but as a persistent hovering buzz that sinks in slowly and never lets go.

Natasha Hoare That's something else I wanted to ask. How does sound play a part in conflict, beyond the drone sorties you deal with in *Uneasy Listening*? I'm thinking of the torture techniques of the CIA, enemy radio broadcasts during World War II, and sonic booms in Palestine.

Tom Tlalim There are indeed many examples of the use of sound in conflict, some of which are recounted in my PhD on the subject. Israel's use of sonic booms over Gaza is a well-documented one. Individuals and non-state groups often use sound to undermine the power of the state as well. Settlers in the occupied West Bank, for example, use sound systems and their voice to territorialize and claim space. Sound art is also a potent tool in Palestinian resistance to occupation. And there are sound systems that are controlled by the state and religious institutions as well. One case I have written about is during Israel's attack on Gaza in the summer of 2014. I happened to be in Tel Aviv at the time for research at the B'Tselem archive. It was interesting to hear how central Tel Aviv was filled with intense sounds of war (sirens, interceptor missiles explosions, voices of military analysts on the media), which contrasted with the visual normality. During the research, I became aware that the frequency of siren soundings in conjunction with intense, low-frequency explosion sounds produced by Iron Dome missiles explosions, produced an intense soundscape of war for Israelis, yet the sounds heard mostly came from the Israeli security apparatus. These sounds — along with rituals of running to shelter, etc. — affected the levels of fear and arguably may

have had influenced the levels of public support for the attacks on Gaza.

Natasha Hoare We mentioned the changing face of the 'War on Terror' as having produced an acceleration in the number of drone sorties, which brings me to ask: What role does the photograph of Barak Obama and the fly play in the piece?

Susan Schuppli Instead of providing gallery-goers with a didactic text linking the annoying frequency they are hearing in the other rooms with the escalation of the US drone campaign under the Obama presidency, we use this well-known image of him being pestered by a buzzing fly as a visual clue to help people make the connection. Obama eventually killed the fly, expressing his accomplishment with the fatal words: "I got the sucker." His fly-swatting feat was widely seen as demonstrating his single-minded sense of purpose — at least that's the way most media covering the event chose to spin it.

Tom Tlalim Many witness accounts speak of the drone sound as being like a mosquito sound or the buzzing of a fly. There is something about the effect of the work in a public space, where your mind drifts away as you go about the space looking at other works. The sound leaks into your other activities and conversations, but the dynamics of the work act as a constant reminder in your physical awareness. I just read today that in music, "burden" is an archaic term for the drone or bass of musical instruments. For me, this is in some sense how the work operates; as a sonic burden.

Natasha Hoare Our exhibitions for *Art In The Age Of... span Energy & Raw Material, Computation, and Warfare*. How do you see these interrelating in your work?

Susan Schuppli No drone can take off in Pakistan commandeered by operators in the US without an integrated system of computation in place. The data stream of drones is transmitted from Pakistan / Afghanistan, and then on to CAOC in

Qatar; from there, the signal is bounced to Nevada. The Obama administration has a profound conviction that the 'War on Terror' can be won by out-computing its foes. Data analytics got him elected, and also re-elected. The infamously rebranded "disposition matrix" is, in effect, a complex set of data filters that tag and aggregate information to create the working "kill list" detailing who can legally be killed by the US in conducting their 'War on Terror'. Drone warfare is only an extension of this logic of computation, albeit one that is enabled because the infrastructures used to manage planetary-scale computation are now fully in place.

In terms of energy and raw material, our piece might also speak to the material infrastructures needed to run these complex weapon systems; the resource extraction of coltan in the Democratic Republic of Congo (the site of a brutal conflict rampant with human rights abuses) offers but one example of the material practices that subtend the immaterial realms of bandwidth and code. In terms of energy, the thing that is 'interesting' about armed combat drones is that one of their major operational limitations is the weight and consumption of fuel — they can only be in the air for a period of between twenty-four and forty-eight hours. There was speculative research done into the use of nuclear energy to keep drones in the air for months at a time. Energy needs are a major logistical factor in how you conduct warfare.

Tom Tlalim We could look at the sounds emitted by drones as a form of energy distribution in itself — in the way it changes the acoustic energy distribution in the places where it operates, or the way it affects people's emotional experience, evidently leading to changes in their patterns of consumption. Thus, drones may have a broader effect on those wider distributions in these ways as well.