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Preemptive Architecture: Explosive Art and Future Architectures in Cursed Urban Zones¹

Abstract: This article describes the art and architectural research project *Preemptive Architecture* that uses artistic strategies and approaches to create bomb-ready architectural structures that act as instruments for the undoing of violence in war. Increasing environmental usability through destruction represents an inverse strategy that reverses common thinking patterns about warfare, art and architecture. Building structures predestined for a constructive destruction becomes a creative act. One of the main motivations behind this paper is to challenge and expand the material thinking as well as the socio-political conditions related to artistic, architectural and design based practices.

Keywords: *preemptive architecture*, inverse thinking, discursive methodology, bomb-ready architecture, destruction as aesthetic category, smart materials

Art, Destruction and Explosive Designs

Destruction is a significant aesthetic category, but rarely treated in depth.² The Futurists with Marinetti's manifesto hailed the process of destruction,³ but Gustav Metzger's manifest and work on Auto-Destructive Art is more known to contempo-

¹ The project is a collaboration between the artist and researcher Prof. Stahl Stenslie and architect Prof. Magne Wiggen with his office MMW architects, mmw.no

² Kristine Stiles, "Book for the Unstable Media," accessed December 30, 2016, <http://v2.nl/archive/articles/selected-comments-on-destruction-art>

³ "The Futurist Manifesto, 1909," accessed December 20, 2016, <http://www.italianfuturism.org/manifestos/foundingmanifesto/>

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rary practices.⁴ There are several interesting artistic manifestations and approaches to the field of violent and explosive designs. Jean Tinguely's 1960 sculpture *Hommage à New York* is particularly well known.⁵ Although not using explosives, it is characterized by its loud, noisy and burning 30-minute lifespan toward self-destruction and implosion. Pro-Diaz produced his work *Painting with Explosion* in 1966 (Tate Modern). As the title indicates, the 'paintings' were made by triggering small explosions on canvases laid flat on the ground. The American artist Gregory Green has exhibited homemade bombs since the 1980s. His designs range from kitchen table made IED (Improvised Explosive Devices) to advanced nuclear bombs, albeit without the explosive material. In his works he illustrates the negligence of society toward terrorism. He believes, "the real potential for chaos that is out there – the more we ignore the disenfranchised, the more the possibility of horror exists."⁶ After 9/11 in New York one could say he had a point. Kendell Geers has perhaps operated most intensively with explosive and dangerous aesthetics in his works such as *Withheld (Blow)* from 1993. In these works he unleashes the destructive potential of aesthetic practice while simultaneously documenting the devastation caused by dangerous indoor blasts tearing down and reshaping wall-sized structures.

These mentioned works are important references for the field of aesthetics, a field that is based on different and challenging ways of thinking to awake new ways of perceiving, understanding and acting in the world. Where art and aesthetics might fail to change the world in the short run, it might succeed in time through providing alternative ways of thinking – and ultimately behaving. As the following sections will examine, thinking destructive might even prove a necessary preemptive measure to undo violence.

Introduction to Preemptive Architecture⁷

"Nothing but unadulterated non-violence can meet organized violence." – Gandhi⁸

There is no lack of violent conflicts on earth. Civilian lives, buildings and infrastructures are targeted on a daily basis. Modern warfare has seen the development of battle from the rather clear division of two fighting forces meeting on the battlefield, toward a messy, asymmetric and much more dirty kind of fighting. As a consequence,

⁴ Gustav Metzger, "Manifesto Auto-Destructive Art, 1960," accessed December 20, 2016, <http://radicalart.info/destruction/metzger.html>

⁵ Richard Lewis and Susan I. Lewis, *The Power of Art* (Cengage Learning, 2013), 152.

⁶ Jonathan Jones, "Magic Mushrooms," 2002, accessed January 29, 2017, <https://www.theguardian.com/artanddesign/2002/aug/06/art.artsfeatures>

⁷ From preemptive – the power to prevent an anticipated situation.

⁸ M. K. Gandhi, *Non-Violent Resistance* (New York: Dover Publications, Inc., 2001), 226.

the differences between insurgents, protesters and civilians have become blurred. ‘Smart’ bombs, drones and other functional battle toys further fuel new and bloody wars based on the illusion that there can be a surgical warfare that only takes out and neutralizes the ‘right’ targets. The idea of a “remote, bloodless, pushbutton battle in which only military targets are destroyed”⁹ is a myth. Avoiding civilian loss is not possible given the current state of conflicts and ways to wage wars. From a humanist perspective the interesting question is how can we use our new technologies and tools to undo violence? How can we build new thinking and new architectures that counteract the destructive potential of our new weaponry?

The *Preemptive Architecture* project asks what role architecture and aesthetic thinking can play in building a better future for all the cursed places of battle. The project uses artistic strategies and approaches to create bomb-ready architectural structures that act as instruments of peace. Increasing usability through destruction represents an inverse strategy that reverses common thinking patterns about art and architecture in warfare. Building structures predestined for a constructive destruction becomes a creative act. The project is built around material innovations and creative thinking made possible by emerging technological tools, from nanotechnologies and materials to networked models of collaboration.

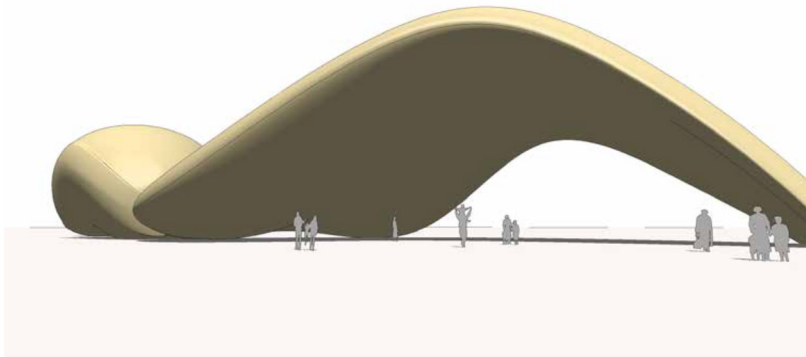


Fig. 1: Concept drawing for Amathlaah, an experimental, bomb-ready structure, top view. Users seen in scale. Copyright: MMW architects.

⁹ Paul Walker, “U.S. Bombing: The Myth of Surgical Bombing in the Gulf War,” 1992, accessed December 30, 2016, <http://deoxy.org/wc/wc-myth.htm>. “Defense Issues: The myth of the precision bombing,” 2013, accessed December 30, 2016, <https://defenseissues.net/2013/01/19/the-myth-of-the-precision-bombing/>

Cursed Locations

There is no lack of war zones on the planet. In 2016 there were 737 militias-guerrillas and terrorist-separatist-anarchic groups involved in wars in 67 countries.¹⁰ The project relates to these, but specifically to all the cursed places of war: places where war and terror seemingly never stops. Such cursed regions and cities are many: the Balkans, Iraq, Afghanistan, Jerusalem, Syria, Iraq, Georgia/Russia, Chechnya, Sri Lanka, Kashmir, Kurdistan, Colombia, Congo, Somalia, Darfur, Lebanon and Gaza to mention some. In all these settings the places we know as home have become subject to violent destruction.

Architecture as a Failure

Buildings and infrastructures are main targets in modern warfare. They stand out as obvious objects in the landscape. They do not run away and they are easy to hit, and they house resources that are most essential in war: people. Further, they are the shelter to resources like food and equipment, resources that no resistance or insurgents can live without. Destroy the land by taking away crops, livestock, buildings and infrastructure and there are no resources left to keep the battle running. That is the basic hypothesis from the established war strategy of scorched earth practice.¹¹ This strategy of destroying the livelihood of the population in an area of conflict has long since been banned in the Geneva conventions, article 54 under Protocol I. It states that: "It is prohibited to attack, destroy, remove, or render useless objects indispensable to the survival of the civilian population [...]"¹² Although modern invasion armies are no longer dependent on local resources to survive, this practice continues in order to subdue the local, homestead enemies.

Another and particular failure of architecture is revealed through the construction of bombs to take out people inside buildings – but not by targeting the humans, rather the building itself. Buildings then contribute to making more effective bombs.¹³ The project therefore originates from the background that we still see in the present urban battlefield of Iraq and Syria: architecture and its infrastructures are primary war targets in modern warfare. Contemporary architecture within contemporary war zones has completely failed to take this into concern. In the last Gaza war in 2014, more than 14.000 single homes were bombed to trash. Enabling destruction at such

¹⁰ "Wars in The World," 2016, accessed December 30, 2016, <http://www.warsintheworld.com/?page=static1258254223>

¹¹ Cf. Maria Brouwer, *Organizations, Individualism, and Economic Theory* (London: Routledge, 2012).

¹² Cf. Red Cross, 2016, accessed December 20, 2016, <https://ihl-databases.icrc.org/ihl/INTRO/470>

¹³ Léopold Lambert, "Weaponized Architecture / Designing Volumes of Energy: A Materialist Reading of the Explosion," 2013, accessed December 30, 2016, <http://thefunambulist.net/2013/05/15/weaponized-architecture-designing-volumes-of-energy-a-materialist-reading-of-the-explosion/>

a scale is a major failure – not just for architecture, but for all the money spent on rebuilding these houses after the last war six years earlier in 2008. What current architecture and builders in war zones have in common is that they are all building new war targets, not safe zones or safe havens. They are building for the bombs to be effective, again and again, and they are building so with the help and support of massive donations, because repeating such mistakes is a form of learned helplessness.

Architecture as a Weapon

Rather than continuing in the wrong direction of past architectures, we need to break away from this useless practice. *Pre-emptive Architecture* therefore proposes a durable form of architecture, that, like Ghandi's thinking and actionism, resists violence and bombing in the ways that destruction will contribute to the practical value of buildings and infrastructure, not decrease or annihilate it. Defying conventional warfare and bombing practice is a step toward pacifying aggressors' will to assault. If architectures resist war-based destructions, it will make architecture function as a weapon. And it might become a very effective defensive weapon too if it manages to inflict damage on current military thinking and 'logic'.

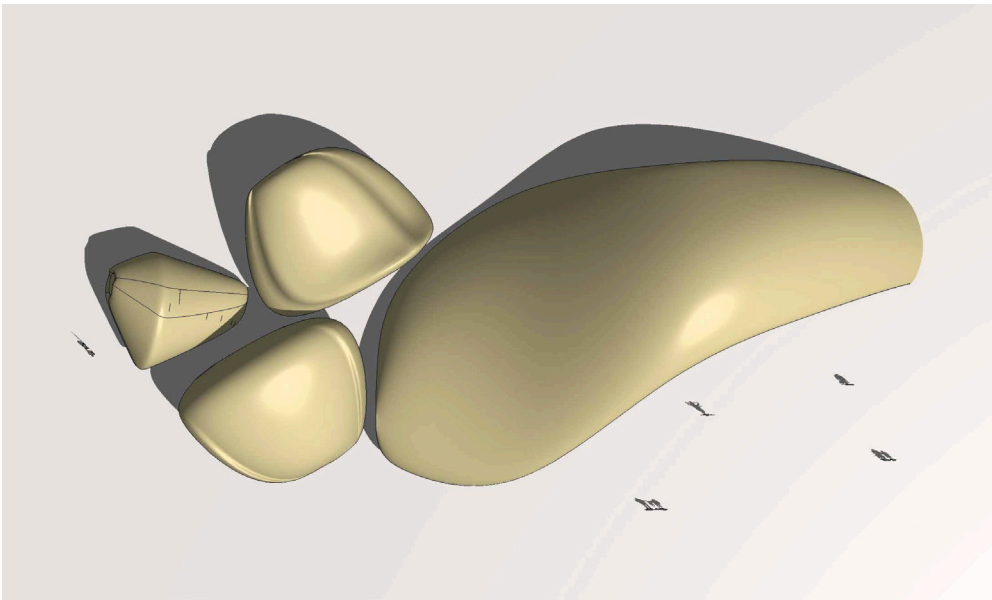


Fig. 2: Concept drawing for experimental, bomb-ready structure, top view.
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Inverse Methodology

Where traditional logic and reason do not work, other methods must be developed. The project therefore makes use of *inverse strategy* and *inverse technology*. This method of thinking turns current value, norm systems and common patterns of thought on their heads with the intention of exposing why previous and well-intended solutions did not work. This technique can be excessive, exaggerated and absurd in order to expose the extreme polarizing elements of extreme situations. Such an approach is not without irony, but the project at its core is about the determined and serious implementation of architecture as a positive way to counter violence and destruction.

Tackling the contradictory and conflict-ridden issues of the architecture of war demands a different approach than 'good' design for 'better' solutions. It needs a design methodology similar to that of violence: an approach full of conflict and disruption. Preemptive architecture is also developed through the methodology of discursive and speculative design.¹⁴ The purpose of this methodology is to ask speculative questions of both how things can function and how/if we want them. Dunne and Raby are proponents of such making and thinking, as the odds of achieving desirable futures increase if we open up the debate and discussion about what kind of future we want – or not.¹⁵

Gazalogic

The mechanics of conflicts are many, interwoven and complex, some more than others. One location in need of pre-emptive architecture is Gaza. The reasons for choosing Gaza are many. First, the Israel/Palestine conflict is tragic and indefensible. It is also one of the longest lasting conflict zones we know. Gaza has been described as the world's largest concentration camp.¹⁶ It is a little dusty piece of populated land where the sea is the only natural boarder. The key to peace in the Middle East is to resolve the Israeli/Palestinian conflict. Before this is done Gaza is destined to be bombed and invaded. The numerous blockades, scarce water supplies, and lack of natural resources in itself constitute Gaza's *genius loci*, or 'spirit of the place' as the architect Nordberg-Schulz would call it. There is no logic in this situation except the 'Gazalogic': it is a deadlock situation bound to explode again and again. The *Preemptive Architecture* project seeks to see the possibilities in this and similarly impossible situations and to examine how this can be used as material to produce alternative patterns of thought, strong visual representations and actual bomb-ready structures, i.e. artistic architectures.

¹⁴ Cf. Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge: MIT Press, 2013), 11.

¹⁵ Cf. *Ibid.*

¹⁶ Sam A. Cohen, *Future of the Middle East – United Pan-Arab States: Divided by Imperialism, United by Destiny* (Bloomington: AuthorHouse, 2014), 155.

Architecture of Passive Resistance

Inspired by Gandhi's thinking about passive resistance, the project aims at developing structures, monuments, and physical forms constructed in the same spirit. Buildings are generally static structures that are easily damaged in war. What if they could be made plastic? Not rigid and tough, but malleable and transforming structures in case of destruction. Examples are traditional Japanese pagoda architecture, constructed so that the buildings do not become damaged by earthquakes,¹⁷ or buildings where materials can be put together again afterwards. Other examples of aesthetic products that receive added value through destruction are Guy Mishaly's *Blast* chairs; or those that are transformed through physical violence as in Marijn van der Poll's *DO HIT* furniture.¹⁸ The discursive question emerging here is what if we could design something that receives added value in the event of war? How can the energy from bombing and fire be collected and used in future architectures, and acquire both the actual, practical and symbolic value of reuse for victims of war?

Such a type of passive resistance architecture represents a non-violent strategy, and a strong opposition to giving in to the conventional logic of war. Moreover, such architecture of resistance represents a tactics to undo violence, much in Gandhi's spirit: let the violence of the other become a medium for peace. Thus, preemptive structures or acts/actions could function as a peace symbol and instrument against violence and war's futility. The project also contains an immaterial dimension, aiming to create psychophysical structures, i.e. objects and constructions that have both a physical, mental and social affect on our everyday lives. The quest to realize this starts with the material building itself.

Bomb-Ready Buildings: Technology and Materials

The common and logical approach to building structures to resist bombing is to design against high-impact blasts and explosions. Building such architectures that resist explosions is a complex task, and there are no completely blast-safe architectures. Blast protection and blast damage reduction can be achieved in various ways.¹⁹ An established practice is by building structures rigid enough to resist the force of a blast. Typically, this would be military bunker design. Concerning more normal building structures there are several measures one can take to reduce the impact of bombs. Some of these conventional means are terrace-shaped buildings, building convex outward shapes, reducing sharp corners and angles, avoiding ornamentation, as this easily

¹⁷ Clarence W. de Silva, ed., *Vibration and Shock Handbook* (London: CRC Press, 2005), 29.

¹⁸ Marta Herford, ed., *Brutal Beauty. Violence and Contemporary Design* (Berlin: Kerber Verlag, 2016), 40, 90.

¹⁹ Cf. Robert Smilowitz, "Designing Buildings to Resist Explosive Threats," accessed December 30, 2016, <https://www.wbdg.org/resources/designing-buildings-resist-explosive-threats>. Mitra Kanaani and Dak Kopec, *The Routledge Companion for Architecture Design and Practice: Established and Emerging Trends* (London: Routledge, 2015).

becomes debris hazard. Other basic physical protection strategies for buildings to resist explosions are establishing a secure perimeter, preventing progressive collapse, and isolating internal threats such as concealed suitcase bombs from occupied spaces.²⁰

These points are valid and interesting for traditional ways of building and protection in war zones, but it does not do away with the actual problem: civilian buildings and infrastructures as main targets in war. The different way of thinking presented in this paper is that buildings are planned to be bombed – and not to be protected. There are several concrete ways to develop a bomb-ready structure. The main approach presented here is through planning physical reshaping and form reactions through explosions. Planning and preparing buildings for bombing will radically influence how we think and form our environment. First, by asking the right questions about recurring war, and second, how to initiate actual reconstruction processes. Proposals for functional architectural materials and construction methods that facilitate inverse thinking include:

- Materials that change composition through high pressure (pliable, plastic, mechanical).
- Built in structural explosion patterns. Concrete and cement-based structures collapse in explosions and cannot be repaired, while a brick building can be built up again brick by brick, because the binding cement gives in first in case of explosion.
- Surfaces that change by explosion/pressure/heat, change colors, etc.
- Sound. Integration of mechanical sound recorders/players provide the basis for sound based expression/compositions.
- Walls and structures woven into textile like patterns and flexible structures.

The project currently works on aesthetic and technical research in these and other possible areas.

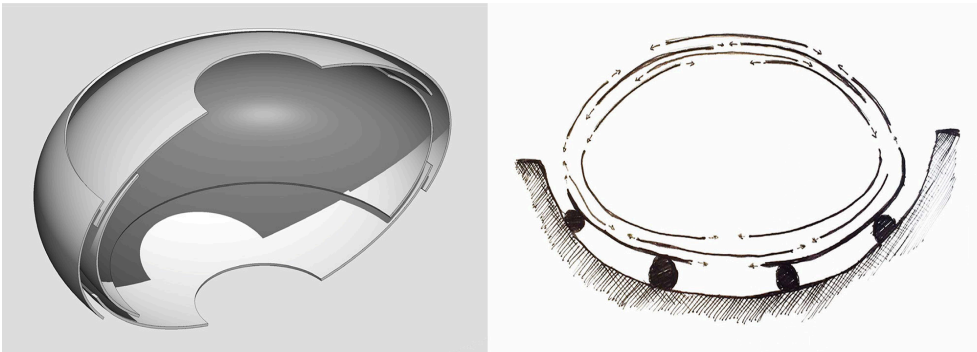


Fig. 3: Shell structure for bomb-ready structure based on the beetle.
Copyright: MMW architects.

²⁰ Cf. Smilowitz, “Designing Buildings to Resist Explosive Threats.”

Manifestations

The current phase of the preemptive project has a strong conceptual dimension. In the process of realizing physical objects and structures to be test bombed we are currently developing:

1. Concepts and visualizations for bomb-ready buildings/structures.
2. Planning explosion tests with various materials and structures.
3. Full scale physical structures.
4. Research of cursed zones through auto-ethnography and action research.

A part of the first action research phase includes interviewing the inhabitants of cursed zones. This serves at least two purposes: first, examining inhabitants' responses both to the devastation and their ideas about the reconstruction process, second, to discuss proposals and how they can be processed and realized locally.

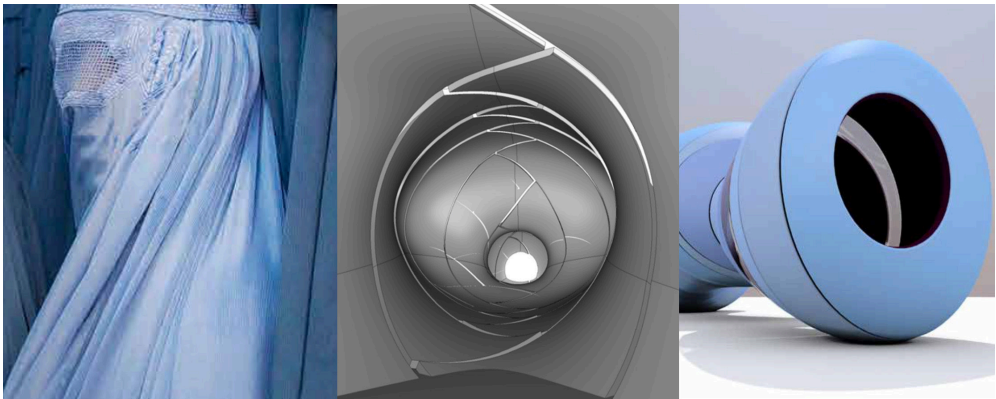


Fig 4: Textiles transformed from costume to protective building material.
Copyright: MMW architects.

Architecture of the Feminine

Despite the high level of conflict and warfare going on between Palestinians and Israel, there are also strong, common cultural roots. In our research we have looked at these 'commonalities', trying to find unifying symbols. Our approach towards building real bomb-ready architecture starts with the symbolic dimension. One of the early historic, common symbols we found was the mentioning of Amathlaah, the mother of Abraham, appearing in the Old Testament. Departing from this one root-figure of the mother, we have developed several generations of form-function experiments, looking at how these symbolic shapes can be constructed using various materials,

ranging from concrete and steel toward textiles and new, experimental materials. This approach is exemplary of our method of developing relational architectures, both in symbolic and material terms. The search for other common points of departure is continued, serving also as an inspirational source for thinking.

Virtual Architectures

The structures proposed by the project will not only be material. They will also take form as virtual plans and virtual architectures that both inform and shape how we think about a place. One example would be developing town planning that redirects our orientation and constructions according to historical bomb impacts. In such ways, impacts from war will significantly change how we move through the city of Gaza. Thus virtual and mental architectures become very real, adding a cognitive map to both the virtual and physical one.

Ethics

There are many unresolved loopholes and ethical dilemmas contained in the notion of *Preemptive Architecture*. What about the people and all the children who inhabit these structures? What happens to them as soft targets? The approach of the project is fundamentally humanistic and oriented toward the dignity and worth of all people. It enters impossible and unsolvable human conflicts with the purpose to develop alternative and much needed solutions. Yet it acknowledges that there is no one solution that solves all issues.

The establishment of a bomb-ready structure such as Amathlaah will also serve as a monument and symbol of peace and the humanitarian need for peaceful solutions. If Gaza is reconstructed with these types of buildings the area could also be read as a single monument for human worth.

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