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issue #3
aeolian urbanism

EDITORIAL

Two topics emerge from the third session of Taming the Horror Vacui. One is apparent, the other is fleeting. One is sought, the other is coincidental. Centred around the guided tour given by city planner Emiel Arends in Rotterdam in June 2020, the event firstly deals with the ways in which wind shapes the city and the city shapes the wind. The locations in the tour, explains Arends, are examples of how the city landscape interacts with its aeolian one, and is marked by specific architectural interventions. Rib's focus on the material language of the city joins Haseeb Ahmed's ongoing investigation into the phenomena of the wind.

On the other hand, the event brings up the topics of failing models and adhocism. In the previous publication, we investigated the nature of models. For this issue we instead look into their practical application, specifically in city planning and wind management. We delve into the ways in which models might come short in their duty of predicting future situations. Designers, architects, and artists are no gods knowing all that will result from their works, let alone a complex phenomenon such as the wind in the urban environment. Ad hoc and impromptu solutions are common, sometimes even welcome. We list a few in this publication.

The aeolian urbanism in the title can therefore be read as the title of a case study. Learning about the wind in the city during Arend's tour, the creativity of architects and city planners in respect of this issue, the testing of models of entire neighbourhoods in wind tunnels, implementing new regulations and procedures, getting smart to solve unexpected problems, all these things shed some light on the process of makers in cities. The artist's struggle between first intention and final result expands to the large scale of a city like Rotterdam. Philosophy of art is best done through concrete examples. This issue of *Taming the Horror Vacui* publication aims at that too.

In between these two topics, in between the wind in the city and unexpected futures for planners and artists, this publication presents different kinds of content. We give an account on Arend's guided tour of wind in Rotterdam, highlighting a few points and presenting stills from a film about the event that is currently in production; we include a contribution by architect and theorist Aslı Çiçek on a rather artistic, ad-hoc solution against wind nuisance in Rotterdam caused by the tallest building in the country; we present an original text by curator Laura Herman about the role of natural elements such as trees in hyper-artificial environments like a city; we feature original photographs of wind-taming interventions by Sander van Wettum, to which writers respond with their texts; we report a wind tale from a miller in Charlois; we showcase artworks by Haseeb Ahmed, putting them in relation to the topics at hand; we introduce engineering drawings of his wind tunnel currently under construction at Rib and soon to be inaugurated for his installation.

Rotterdam, September 2020

Cover image: Aeolian intervention in Rotterdam. Photo by Sander van Wettum, 2020

WIND IN THE CITY

Emiel Arends' guided tour through the city of Rotterdam focused on selected built interventions and public artworks made with the hidden intention of shaping the invisible but very physical effects of the wind.

Images from the guided tour of Emiel Arends, June 2020. Courtesy Charlotte Brand and Haseeb Ahmed.

Installation view of *Daedalus Departs: Holding Pattern/Problem*, an artwork Haseeb Ahmed made in 2010 for the MIT Media Lab, Cambridge, US. The piece includes a wind tunnel model of the artist's hometown Toledo, OH, similar to those used by Emiel Arends and other city planners in the Netherlands to test the response of buildings to wind. This work uses the leftover from experiments, providing a new look on the dominant narrative of technological progress. Not quite a collection of failed designs though, the piece does show the backstage of technological planning. Image courtesy: the artist.

One of the stops during Emiel Arend's walk in Rotterdam is Maastoren, a landmark building in the city by Dam & Partners architecten + Odile Decq Benoit Cornette (completed in 2010). Arends drew attention to the canopy on the building facade, an ad-hoc solution added after completion to avoid the dangerous wind nuisances caused by the tower at ground level.
Photo by Sander van Wettum, 2020

Emiel Arends' tour stopped in front of the tallest building in Rotterdam and the entire Netherlands: the Maastoren. The tower causes one of the greatest wind nuisances in the city, labeled as "dangerous" by the authorities in the official classification. Designers addressed the issues by including a canopy on the facade, reducing wind strength at ground level. Architect and theorist Aslı Çiçek reflects on this anecdote, suggesting that impromptu solutions should be seen as more than "foreign bodies" on existing designs.

BLOWN WITH THE WIND
by Aslı Çiçek

The existence of wind in urban surroundings is often defined as a problem, especially when wind canyons are generated by tall buildings placed in a not well considered order regarding the movements of air. Perhaps the most famous example is the Flatiron Building in New York City. Due to its triangular shape on the crossing of two wide streets, the building splits the Northern wind in two. New Yorkers were already worried about new, unpredictable wind blows around the building during its construction at the beginning of 20th century. After its completion Flatiron became the gathering location of several men trying to catch a glimpse beneath the high surging skirts of passing- by ladies. Police had to be present to control this unpredicted social phenomenon and to shout to those gentlemen regularly. This temporary intervention provided comfort in public space, didn't alter the building, and became a funny anecdote in NYC's history.

Obviously, the wind didn't change in its essence during more than a century since it went around the Flatiron and caused a public nuisance in the daily life of New Yorkers. It still blows hard if it finds a corridor in any city and makes it unpleasant, if not very difficult, to move. Though it might play today a bigger role during the design process of a building, the wind is still not the main concern while placing a new structure in a city. Hence, if a building reveals itself after its completion as a trigger for the disturbing side of the wind, the architectural object is regarded as having a problem to be solved. In order to avoid ad hoc, inefficient solutions, the city governments of welfare states handle this issue by involving urban planners and artists. Art in public space is then expected to also become functional by making the strength of the wind less effecting. A great deal of good will and professionalism defines this approach.

Architecture lives through time and it is not a crime to change it by additions. In this regard, the progressive attitude of Dutch cities dealing with their architecture has always been remarkably blunt to me. Paradoxically, in Rotterdam this straightforwardness is rooted in the history of the place, in its massive destruction during WWII. Flattened almost entirely back then the city has very few historical references of architecture which go back a long time. In post-WWII period, Rotterdam was rebuilt with such vision and the pragmatism of a modern city that still today it doesn't suffer from sudden changes; entire neighbourhoods can look different after the short interval of a decade. Undoubtedly this provides a freedom rarely seen in any other places. One could call Rotterdam an experimenting city, allowing interventions and trying to work with them constructively. Seen from this point of view, interventions to tame the wind around buildings in this city can be tested more courageously. Yet while trying to avoid impromptu solutions too much design can also miss the point and end up as weird objects in city scape.

A glass canopy resembling a spider added to a rigid facade of the highest building in the Netherlands is a straightforward, honest object about its intention. It doesn't pretend to adapt to the existing architecture, follows its own right of existence. Nonetheless the result is a Fremdkörper that attracts attention, the intended functionality of the art work re-defines here both the art and architecture. But to design architecture with attention to the wind involves scientific study and its adaptation into Baukunst. It might be worth to consider to excuse art in public space from the mission of taming the wind and to liberate it from that or any other task. Perhaps we can have cities that live with the temporary effects of the wind, where wind canyons can become a challenging but also interesting experiences, where the skirts and scarfs surge for a brief moment. Only, the police shouldn't be involved.

Ad-hoc solution, planned wind-breaker, public sculpture, air vent? Found element in Rotterdam, photo by Sander van Wettum, 2020.

Postcard from ca. 1905, showing the Flatiron Belle's.

De Zandweg windmill in Charlois, Rotterdam.
Photo by Sander van Wettum, 2020

MILLERS IN THE CITY

This wind tale from the neighborhood of Charlois in Rotterdam comes from the miller Leendert Sprong who works at De Zandweg. Paradoxically, a few millers benefited from the WWII bombardment of the city, whose flattened skyline allowed for strong winds to reach the still standing mills and boosted production. We learn that post-war urban planning didn't take windmills into consideration. The wind became something to tame in the growingly tall urban fabric: from resource to threat.

A Miller's Wind Tale

Easter Monday should, of course, be a day off, but it was the only day we could catch a bit of wind, so I milled the whole afternoon. You have to catch those days; when there's no wind, there's no flour, and so there's no food! I have been a volunteer Miller at Zandweg for 46 years.

When I was 12 years old I helped for the first time, and as I got older I started doing regular shifts and later even manning the grinding mill-stone, which is still a pleasure. On Saturdays, if there's enough wind, which we always need on a windmill, I grind flour that is then picked up by all the people in the neighborhood who bake at home. If there isn't enough wind we cannot turn the large mill-stone necessary for flour—this is a real problem in the park.

Before I started here in the 50s of the previous century, the urban expansion started getting threateningly close to the mill, which would cut it off from the wind. In 1951 the miller at the time protested, and appealed to exercise his Right to Wind (windrecht)*, which had been abolished by Napoleon! He tried his best anyway, stating that there should be a certain amount of empty space for the wind to reach his Mill, but it was all to no use. The city had been bombarded, so new houses needed to be built. They kept some free space for a while until in 1957 plans started to build a park there, which was finished in 1974.*

I have been working here for 46 years, so I have seen the whole park grow higher and higher—and of course, some trees have been blown over!—but a lot of trees block the wind out, and that is really a pity. Normally you grind a few hundred kilos of flour an hour, now I sometimes have to put in a lot of effort to get a bag full in half a day. On Easter Monday there thankfully still was quite a lot of wind, and I had a good time. When I'm working at the mill, it's always just fun. I'm busy with nature, with the wind, and visitors often come to watch, which I think will also start happening again soon.

This story is told by Leendert Sprong. Edited and transcribed by Jakob van Klinken.

THE WIND IS WILD
by Laura Herman

Like a leaf clings
To the tree
Oh my darling,
Cling to me
For we're like creatures
In the wind

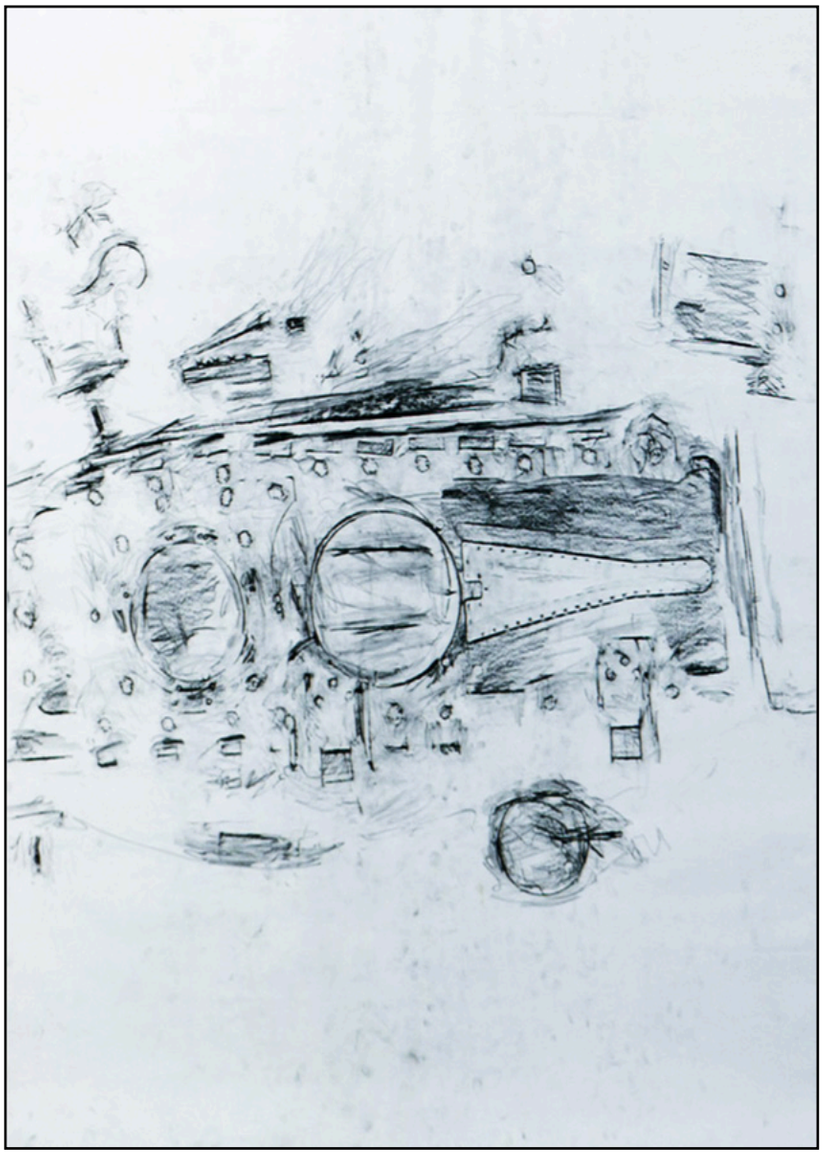
In nature, leaves are carried away by the wind, to ensure that nesting material becomes accessible to animals. Trees depend on wind pollination. They flower, then get leaves. The wind ensures that seeds fly long distances and land where they need to land. From the poplar's woolly balls to the elm's disk-shaped seeds and the helicopter-shaped maple's seeds, they float, glide or spin through the air.

Humans have used the wind for technological adaptations, creating planes and helicopters that move in the same way as seeds and birds. The wind is an aerodynamic performance that symbolizes freedom and change; it is the force that drove discovery and war. Whole empires were built thanks to the navigation made possible through wind.

Wild is the wind, as David Bowie put it. The wind connects and brings people together, but wild winds can also lead to stormy relationships and unpredictable natural phenomena. In mythology, the wind was explained as nothing other than the caprices of an erratic group of supernatural creatures. Winds and storms blew without regards of humans' will, and always worked either to be beneficial or devastating.

Wind can be quite the hazard even when it is not associated with tornado storms, tropical cyclones or hurricanes. In large cities filled with skyscrapers, there is an acceleration of wind at street level created by air being squeezed through narrow spaces. It is referred to as the 'downdraught effect' or so-called 'Venturi effect', named after the Italian scientist Giovanni Battista Venturi.

During his tour, Emiel Arends took the participants to the Mauritsweg project, rebranded the 'Calypso' building. It was designed by the English architect William Alsop and finished in 2013. Just like the Maastoren, the tower created unexpected wind trouble at ground level. The ad-hoc solution of a canopy was not an option, hence trees were planted with the hope they would break the "wind canyon" (the condition of fast wind funneled down between buildings) and save wind-blown pedestrians. The bush didn't meet the challenge.
Photo by Sander van Wettum, 2020



A detail of Haseeb Ahmed's *Peenemünde Scroll,* 2020. This scroll uses rubbing, an archaeological technique used to study architecture, to capture what was the world's first supersonic wind tunnel. The wind tunnel originates from the once-top secret Nazi research facility located in Baltic-coast city of Peenemünde, Germany. The V2 rocket, the world's first modern rocket used during the Battle of Britain was developed there. After their victory in the war, the US and USSR agreed to split the V2 scientists and facilities equally to found their own space programs. This marked the transition of a technology developed for destruction of humanity to one of humanity's greatest endeavors. Ahmed's artwork comes across as a representation of the 20th century modernist approach to technology, solutions designed to face bigger-than-human challenges. The drawing technique (the rubbing of secluded wind tunnel surfaces) speaks of a furtive strategy to bring to the public what can't otherwise be shown. Image courtesy: the artist.

Is the wind in a city a natural or cultural phenomenon? Is it a natural technology? Are urban trees a natural technology? Curator Laura Herman reflects on what might be seen as natural and societal at once, responding to the image of trees planted in the urban space of Rotterdam as a failed technological attempt to avoid wind hazard caused by high-rise buildings. She puts forward the idea of the city as a biotope, that is an area associated with a specific ecological community rather than a mere human-designed, artificial, and appropriated environment.

Around the city of Rotterdam, public artworks and clusters of trees have been introduced in order to calm the effect of the wind on city dwellers' psychology. There is no doubt that trees are powerful allies to all life on earth, but yet the wind proves hard to discipline. In lieu of taming the ever-present wind, how can it be acknowledged as an integral part of the biotope city?

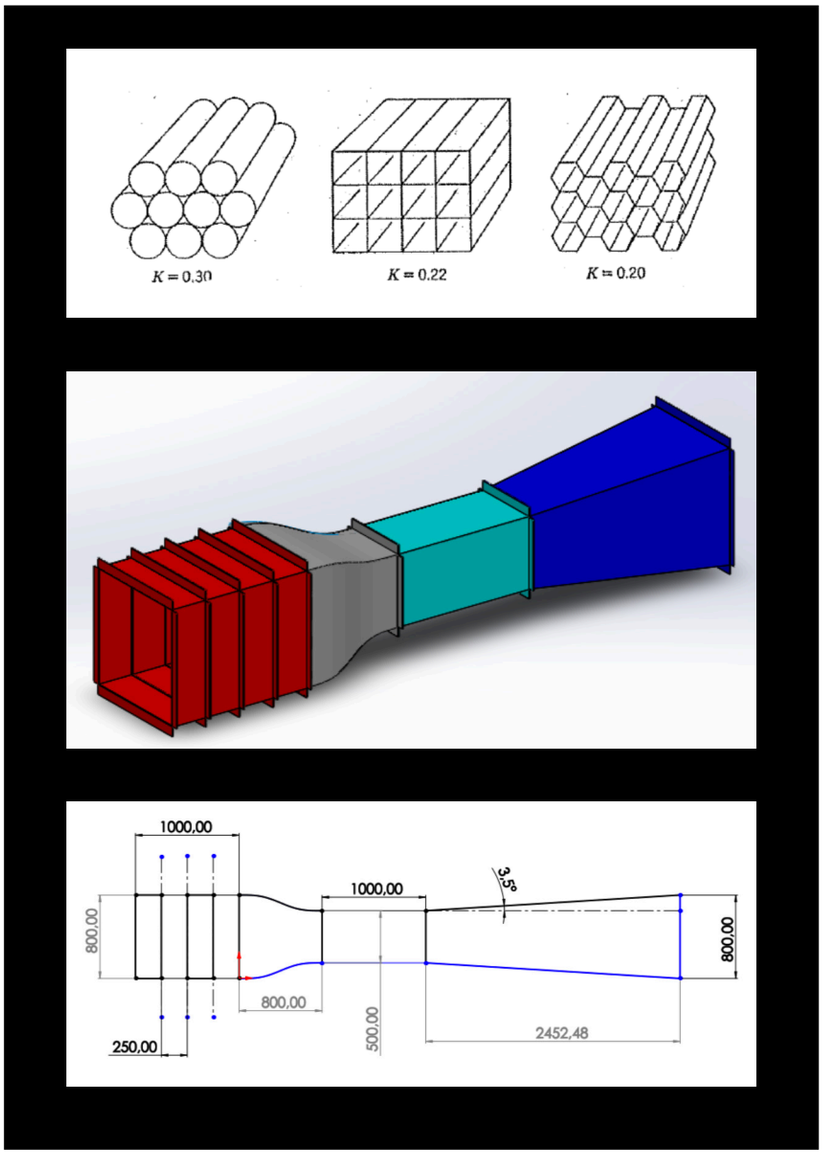
While skyscrapers are often built in response to environmental concerns, tall buildings have a high appetite for energy. Could we learn from traditional techniques and bioclimatic design principles in order to rethink the lost spaces between the constructed and the raw natural? How can the ambient energy of the wind - a meteorological, mythological and technological phenomenon - be used as a medium or a guiding tool in architecture; a built environment that bears a connection to nature?

As a gust of wind blows through the cracks of our imagination, each time from different angles and with different temperaments, perhaps we can come to terms with the wind as an old friend we can learn from.

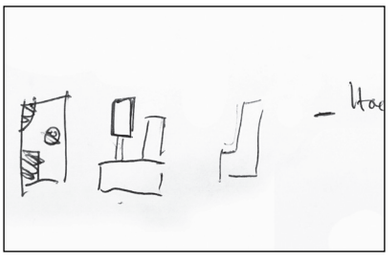
WIND TUNNEL IN THE MAKING

After months of design stage, a functioning wind tunnel is finally being built for Haseeb Ahmed's mutable installation at Rib. The next issue of this publication will report on its inauguration. The artist has collaborated with several engineers from two different institutions in Belgium, coming up with a device that will allow visitors to Rib to perform wind tunnel tests in the space with different models.

The wind tunnel at Rib will not be very different from the one used to test city blocks for wind nuisance by city planners like Emiel Arends. Ahmed's wind tunnel at Rib will serve more metaphorical and poetic purposes however. The tested objects will be transformed into starting points for artistic and philosophical investigations, between the experience of nature and its modeling in an art space, between function and fiction.



Technical drawing of the wind tunnel under construction at Rib (August 2020). Courtesy of Maxime Hendrick and Nassim Giblet, under the supervision of Dr. Benoît Bottin (Institut Supérieur Industriel de Bruxelles) and Ing. Olivier Chazot (Von Karman Institute for Fluid Dynamics)



Scribbles by Emiel Arends. Examples of high-rise design with wind in mind. On the left side, the dark spots depict holes to redirect wind, which were added later, thus dramatically affecting the original design.

COLOPHON

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Rib Director
Maziar Afrassiabi

Artist
Haseeb Ahmed

Editor and Graphic Designer
Piero Bisello

Contributors
Emiel Arends, Aslı Çiçek, Laura Herman, Citizen of Charlois, Rotterdam.

Rib Staff
Kristin Metho, Roxanne Da Graca, Marta Navarro, Ana Paula Teixeira, Jakob van Klinken, Linus Bonduelle.

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