

The Building, a Scaffold, a Score

Exercises in Unveiling Materialisation

A Few Notes

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ABSTRACT

The finance-driven deregulation of buildings in Hamburg's HafenCity, and the subsequent reorganisation of production and labour conditions, based on new technological and infrastructural development, are the main focus of this study. Both, privately financed - and affordable housing, paradoxically, accelerate the amplifying operation of finance through their interaction. Concepts such as the scaffold, which refers both to physical labour on the construction site as well as to the algorithmic scaffold, or framework, as both method and object in algorithmic infrastructure and logistics constitute the tools alongside which new social and cooperative performances of living and working are emerging. Consisting of performative practices, workshops, video installations and a planned publication, this project approaches the politics of the post-Fordist expansionist logic behind construction labour in HafenCity and the accompanying decentralised form and organisation of architectonic and civil space, focusing particularly on current developments in Hamburg.

The research hypothesis for this text, which is structured around a few notes in twelve paragraphs, was originally discussed with the participating performers in temporary social settings on site, on the basis of which they develop dance scores that fed back into these notes. The performers' responses were articulated in bodily gestures, whose transmissions aim to propose new social infrastructures for the present.

KEY WORDS

scaffold, infrastructure, building, finance, performance, post-Fordism, zone, communities, social class

Walking through the Baaken Quarter in Hamburg's HafenCity, a large-scale urban and waterfront redevelopment project, one feels almost detached from the rest of the city. I recently wandered along Versmannstrasse in the Baaken Quarter, passing large areas of wasteland occupied by sea birds, with the river beds smelling of marsh drying out in Hamburg's early July heat, when the street ended abruptly in front of a block of pale green shelters. Some mothers and their children were in front of the buildings, on the playground between the blocks of shelters, their temporary homes. In immediate proximity to their living space, refugees are confronted with private corporations' aspirational new luxury enclaves, the clime of urban redevelopment. Most of the land is being sold to private investors; new homes are rising up and will soon change the landscape entirely.

In responding to HafenCity's urban re-renewal and taking into account recent technological developments, one must understand the link between labour and housing that underwent a transformation as a result of urban and economic reorganisation and neoliberal victories in the areas of labour and cognitive value production. Housing has always been a spatial instrument of governance, wielded for the purpose of making society calculable.

Hamburg's HafenCity is emerging as a form of governance in which liberal democratic structures are mimicked for use in the organisation of residential urban space. Since its beginnings at the turn of the century, HafenCity has been characterised by an expansionist policy of turning former warehouse lots into luxury apartments, supplemented by shared 'community' spaces with amenities such as playgrounds, saunas and swimming pools. The demand for collective space beyond the publicly funded means that exclusive 'islands' of communities are created, completely detached from one another yet within the same neighbourhood¹.

HafenCity's representation of business, consumer and lifestyle doctrines mixed with residential usage, as well as the imperatives of affective atmospheres as expressed through chi-chi housing, invite upper middle class individuals and families into penthouse imageries. Accordingly, city and civic life are dominated by data governance and smart homes: electronic money and virtual civic services in the form of life streams and invisible cables remodel the city into a dematerialised stream of desires.

More than a third of the usable land is taken up by residential developments, some backed by property developers, private investors, cooperatives or joint ventures, others taking the form of social housing. Privately financed housing and affordable and/or subsidised housing are the very forms of living that, paradoxically, favour and accelerate the amplifying characteristic of finance through their interaction. The solo-living capital locked up in residential housing blocks, given that apartments are often only sporadically in use or are left vacant for speculative purposes, serves to separate dwelling space from its social and utilizable value. This reality is mirrored in the material presence of architecture, which becomes both perceptible and visible in housing policy, as will be examined in greater depth in the course of these notes.

The post-Fordist saturation of urban life merges with a Fordist approach: the speed with which property is physically built and the machine-led approach contradict the anthropomorphic agendas of algorithmic architectures.² This work ascertains the possible agencies inherent to this

¹ Andreas Rumpfhuber, "Housing Labour", *E-flux Architecture* (2017)

See <http://www.e-flux.com/architecture/artificial-labor/140678/housing-labor/>; visited on 12/06/2017

² Algorithmic architecture describes the cybernetic feedback of data into the computational design process of a building. Ned Rossiter (for example, in *Software, Infrastructure, Labour*, New York: Routledge, 2016) refers to algorithmic architecture in the way that he approaches them as algorithmically managed forms of automation serving both, infrastructure, trade, and the building industry; and describes algorithms as complex machines operating under neoliberal forms of governance, labour, and the globalization of manufacturing and service industries. In using the term

agonism, to confront the ubiquitous processes of dematerialisation, the digital fabrication of civic and urban life and the deregulation of dwellings and built space with methods that aim to reveal materialisation to be an *organisational planning practice* – also called a *constituent support structure* – as well as to identify the processes involved. Which potential and productive articulations result from this agonistic confrontation?

Not far away from the refugees' homes mentioned in my opening remarks, workers live in shelters within the confines of HafenCity, their living quarters ever-changing due to the expansion of construction work. They move as the city moves forward, yet are never bound to any one place. The lack of housing for these workers, from a social housing perspective, normalises precariousness, reformulating the housing question into a challenge; namely to envision other forms of housing, or indeed other ways of living and working together.

From the outlines of future buildings as set out in development plans, it becomes clear that the future of residential property can no longer be determined by means of conventional architecture, since this, in its present form, will not be able to meet the needs of future urban populations. The question then becomes one of the possibilities of form and organisation, since the traditional approach to building dwelling space is, from both an economic and an ecological standpoint, incapable of meeting the current and future demand for housing.

1.

One of the core features of HafenCity's 'urban reinvention' is the implementation of sustainable or mixed communities, whose emerging social capital will, it is hoped, not only attract new residents but also legitimize redevelopment as an economic propeller of value creation for the city beyond the merely situational. In particular, the relatively new and as yet un-researched concept of Social Mix is employed as a strategic instrument in urban developmental housing policy to reduce and prevent spatial and socio-economic segregation through intervention and alteration. But how can mixed communities be created when housing is not only dependent on private funds and market interests but also subject to specific selection criteria and interventions at various levels of urban realisation, given HafenCity's status as a corporation funded by the City of Hamburg as landowner?³

In particular these notes, which are based on my art practice, are a response to contradictions and failures in the implementation of Social Mix policies in HafenCity, formulating in their place a series of demands for an alternative conception of Social Mix, in which the development of a social support structure for residents aims to tackle the root of the problem. It does so by placing the grossly exploited labourers on HafenCity construction sites at its core, departing from this basis to recognise the failure of housing policies to create sustainably structured civic life. This work will also examine the city's complicity in certain aspects of Social Mix.

HafenCity's Baaken Quarter is one of the city's primary production sites, given the ongoing creation of monetary value through living space. However, housing needs and the production of

algorithmic infrastructure, I am referring to Keller Easterling, *Extrastatecraft. The Power of Infrastructure Space* (London: Verso, 2014) and her understanding of infrastructure. For Keller Easterling, infrastructure "typically conjures associations with physical networks for transportation, communication or utilities. Yet, today (...) infrastructure includes pools of microwaves beaming from satellites and populations of atomized electronic devices that we hold in our hands. The shared standards and ideas that control everything from technical objects to management styles also constitute an infrastructure. (...) Infrastructure is now the overt point of contact and access between us all - the rules governing the space of everyday life".

³ Jürgen Bruns-Berentelg, "Social mix and encounter capacity – a pragmatic social model for a new downtown: the example of HafenCity Hamburg", in Gary Bridge, Tim Butler & Loretta Lees, *Mixed Communities. Gentrification by Stealth?*, (Bristol: Policy Press, 2012) 69-94.

new units do not correspond. Even though public housing concepts have increasingly been integrated into the agendas of HafenCity's recent developments, social housing policy, as experienced in the context of HafenCity, is still an ideological artefact. Only recently has the government entered into partnerships with pro-development local authorities and agreed to build more social housing. In the case of urban renewal, the state restricts itself to providing funds for projects primarily controlled by private firms. The government's policies are therefore focused on private sector real estate, with the aim of freeing up more sites for development. The rationale behind affordable housing is that in exchange for the right to build more market-rate housing than would be allowed under existing zoning laws, private developers construct a number of nominally 'affordable' units in addition. But when so-called housing programmes are producing apartments with a price tag that is almost identical to those not designated as 'affordable', it is clear that the term 'affordable' is rather ideological. The federal funds spent on public housing and other direct subsidies for working class and poorer households pale into insignificance in comparison with the money spent subsidising wealthy and middle class homeowners, as well as accommodation for construction workers. The liberal narrative recognises that housing markets can contribute to housing problems, but it fails to take into account just how often programmes nominally designed to alleviate housing difficulties in fact serve to enrich private developers. Rather than being a serious attempt to address housing problems, affordable housing policies are in fact tools that more often than not legitimise state support for luxury developments.⁴

During a work session in Hamburg's HafenCity, I stayed in an Airbnb close to the construction sites, taking in the hegemonic performance of the various players and authorities in this emerging town. Moreover, my presence mirrored the life and work of the artist as a nomadic, fragile condition: on a structural level, as art dissolves into life, neoliberalism celebrates its victory over creativity. Airbnb is a paradoxical substitute for state-subsidised affordable housing and public support structures, and it is having an effect on the commodification of housing.

2.

The concept of Social Mix is implemented by HafenCity in order to avoid a concentration of particular socio-economic tenant structures. The diversification of both housing type and tenure is used as an instrument for the development of sustainable, mixed and inclusive communities. To achieve this, the allocation and tenure of dwellings and office structures are determined through selection processes.⁵

A key signifier in the creation of Social Mix are the middle class creative actors who are meant to structure social life and create atmospheric urbanities through joint activities fostering potential relational spaces. Accordingly, the city conceives of housing cooperatives and joint ventures as creative and entrepreneurial stakeholders, the propellers of creative life and the originators of meeting places and a new generation of urban neighbourhood networks. In effect, cooperative residents are responsible for value creation in HafenCity. Consolidation processes between residents and employed actors, such as sociologists and town planners are, as indicated above, to provide the impetus for the processes that generate institutions. Local activity programmes, public events, neighbourhood meetings and social events are aimed at fostering networking between households, with social capital being increased on a local level through participatory decision-making strategies and initiatives. It is hoped that community groups will

⁴ David Madden & Peter Marcuse, *In Defense of Housing* (London: Verso, 2016)

⁵ Bruns-Berentelg, "Social mix and encounter capacity – a pragmatic social model for a new downtown: the example of HafenCity Hamburg".

develop into community organisations and that new arrangements for institutional governance, such as formally constituted residents' associations, neighbourhood councils or Tenant Management Organisations (TMOs) will be put into place.⁶

From its inception, the purpose of Social Mix was not to intervene in the politics of ongoing segregation processes, which would mean tackling the root of the problem, nor was it directed at the most disadvantaged areas and actors. Social Mix policies are, rather, aimed at opening up access to state-supported housing provision for lower and middle-income social groups, prioritising them over the more disadvantaged population. Within this framework, Social Mix represents a tool to promote an exclusionary type of 'social justice', whose sole beneficiaries are the middle classes. While on the one hand relatively limited new social housing stock is becoming available, on the other hand significant quantities of new housing, styled 'affordable housing', as previously discussed, have been provided for the private market. According to David Harvey the city has adopted entrepreneurial policies aimed at the maximisation of property values that closely mirror the ideal type of pro-growth urban regimes. This has been achieved primarily through urban planning strategies that favour the intensive use of land for private investment, while the proportion and scope of public benefits remain very limited.⁷

The involvement of private actors as the promoters of new social housing initiatives, whether for profit or not for profit, has been presented to the public as the only feasible approach to the provision of affordable housing, reducing the public actor to a limited role as the enabler of private sector-driven projects. Thus, Social Mix creates the conditions for greater feasibility and profitability of real-estate investments through a varying combination of local and supra-local functions. In a nutshell, social mixing of different populations and tenures provides more vivid and vibrant living environments, creating ideal conditions for greater investment opportunities and serving the housing needs of the middle classes. In this respect, Social Mix has, paradoxically, become a convincing argument, particularly when combined with principles of competitiveness, feasibility and rentability.⁸

3.

Some of the responses and key references on which this work draws are, amongst others, the architect Sérgio Ferro's marxist architectural criticism, which emphasises the socio-economic transformation of built space as the politics of the material and of social class. Several of his ideas have been discussed in a workshop with the performers involved in my work, so as to substantiate my notion of housing and construction site labour as embedded in political agency, with possible forms of unionisation also being examined. I would like to give a brief introduction to Ferro's position and approach.

Sérgio Ferro is a Brazilian architect who was born in 1938. He is a graduate of the University of São Paulo, where he also taught. Having been exposed to the realities of the construction site, he focuses particularly on questions of labour and the conditions of production. As a member of *Arquitetura Nova*, a radical architecture group which he formed with Flávio Império and Rodrigo Lefèvre, he critiqued Brazil's modernist impulses, which he viewed as excluding the vast majority of Brazilians who were living in poverty. The group took part in urban actions and proposed strategies

⁶ Bruns-Berentelg, "Social mix and encounter capacity – a pragmatic social model for a new downtown: the example of HafenCity Hamburg".

⁷ Bricocoli, Massimo. "Social mix and housing policy: Local effects of a misleading rhetoric. The case of Milan", *Urban Studies Journal* (2016), Vol. 53 (1) 77–91.

⁸ Ibid.

that would democratise access to architecture, as well as design and building processes. They described their work as creating an ‘aesthetics of poverty’ and a ‘poetics of economy’, envisioning a highly politicised approach to architecture. The Brazilian dictatorship later responded by exiling Ferro alongside his mentor, Vilanova Artigas, and his colleague Rodrigo Lefèvre.⁹

Ferro’s ideas took shape during the 1960s when he was involved in the design of Brasília, the new capital city. The disjunction between the architectural discourse of freedom and democracy that surrounded the project and the reality of the inhumane working conditions on site were formative for Ferro and his critique. He witnessed these conditions first hand; the low pay, lack of food and rampant dysentery, as well as dangerous building practices that took no account of the risks to workers’ lives. Based on these experiences, Ferro wrote of architecture as the production of commodity, with its ‘modern’ practices fostering a division of labour in order to generate value. For Ferro, this attitude was encapsulated in the jargon involved in architectural drawing, which alienated and was indeed largely incomprehensible to the builders. The situation was exacerbated by the compartmentalisation of the construction process, effectively giving architects complete control and removing all agency from those who build their designs. In Ferro’s conceptualisation of architecture, the process of designing buildings cannot be separated from their construction. His aim is a departure from the desired transformation of production in favour of design solutions. One of his key ideas was the ‘popular house’, which aimed to equip citizens with a support structure to enable them to build houses by themselves. In parallel with this thinking, he also developed a horizontal teaching methodology.¹⁰ Throughout his work he repeatedly emphasises the construction site as a place of unionisation, where workers’ cooperations and assemblies are formed and, thus, collective subjectivities and the articulation of their demands to society are rehearsed. Taking these considerations as my starting point, I would now like to examine the working conditions on the HafenCity construction site, the core focus of this work.

4.

The labour force on the construction site in Hamburg’s HafenCity is grossly exploited and its management corrupt. The incredibly harsh and unfair working conditions are not public knowledge, nor are they represented in any social discourse. The workers mainly come from the east and south-east of Europe for temporary work on the construction site, bringing home their earnings a few months or, possibly, years later. They are recruited by firms before leaving their homes, and are then ‘bought’ by construction companies in Germany, with the whole process akin to a trade in humans. Firms compete to offer the cheapest labour force, while often simultaneously charging the workers before closing down their operation. New firms emerge but disappear equally rapidly, due to their corrupt business. On arrival in Germany, the workers lack any kind of social support, relying on their colleagues to inform them about their rights and about on-site support networks in the few cases where these actually exist. Construction companies in Germany are doing business with ghost firms in the east and south-east of Europe.

As regards living conditions, workers live in shelters close to the construction site which often house six people per eight square metres, or in hotels that only accept construction workers. Others live on farms in the surrounding areas of Hamburg. Escape from this situation is impossible because the workers are effectively under surveillance and have no immigration status.

⁹ See under: <http://www.spatialagency.net/database/how/networking/sergio.ferro>; visited on 21/05/2017

¹⁰ Contier, Felipe, “An Introduction to Sergio Ferro”, in Katie Lloyd, Thomas, Tilo Amjoff & Nick Beech, *Industries of Architecture* (New York: Routledge: 2016) 87–93.

I am attempting to work with labour organisations in the east and south-east of Europe to ensure that the workers receive support from the very beginning, namely when first recruited by a firm that may in actual fact no longer exist, providing them with a stable network and support structure. How can these affiliations feed into the political aspect of our work? The workers themselves invest in establishing relations with unions in the east and south-east of Europe. They receive payment for their work from the local organisation. I envisage this organisation as a support structure particularly tailored to working conditions in these areas. I am in fact trying to establish a workers' solidarity network, with small on-site hubs that nevertheless have international connections. The representatives' aims are to inform workers about their rights on arrival and to link them up to the local network.

5.

Following Eyal Weizman's reading of Giorgio Agamben, the structure of these workers' shelters, regarded as a 'camp', is "a space that opens up when the state of exception starts to become the rule". In that space "power confronts nothing than pure biological life without any mediation". The unstable relationship between the camp and the (il)legal housing and labour structures make a state of exception possible. According to Weizman (2015), "in this confinement, in the juridico-political, much seems to be in play except the camp itself".¹¹ The first camp-like structure came into being in 2001 with the start of construction work on the HafenCity site, with political subjectivities being created amidst the production of a commercial enclave. Since construction began, the camp-like area has been in motion, in flux, with its form opening and closing and its boundaries changing. The displacement of refugees and workers about the construction site is necessary but never far-reaching. These traces never disappear and neither do the political subjectivities that have been fighting for their rights since the beginning of the construction of HafenCity and, indeed, throughout history, bearing in mind the site's history as the terrain of former harbour workers, who are famed for achieving their collective demands through leftist struggle and strikes. The camp is a space where oppression and agency are inextricably interlinked. An augmentation of the camp can be observed in HafenCity: as more workers and migrants have moved to HafenCity in the past years, they strengthen the state of exception through their connected on-site subjectivities of solidarity. The shelter as work and home is HafenCity's new multiplier. Are we facing a shelterization of the city as a subject of resistance?

6.

Over the course of several weeks I have worked with a number of performers¹² in temporary social settings, within which the group develops dance score¹³ that transform the urgencies of construction

¹¹ Weizman, Eyal. "The Roundabout Revolutions", in *Critical Spatial Practice 6*, Nikolaus Hirsch & Markus Miessen, eds (Berlin: Sternberg Press, 2015).

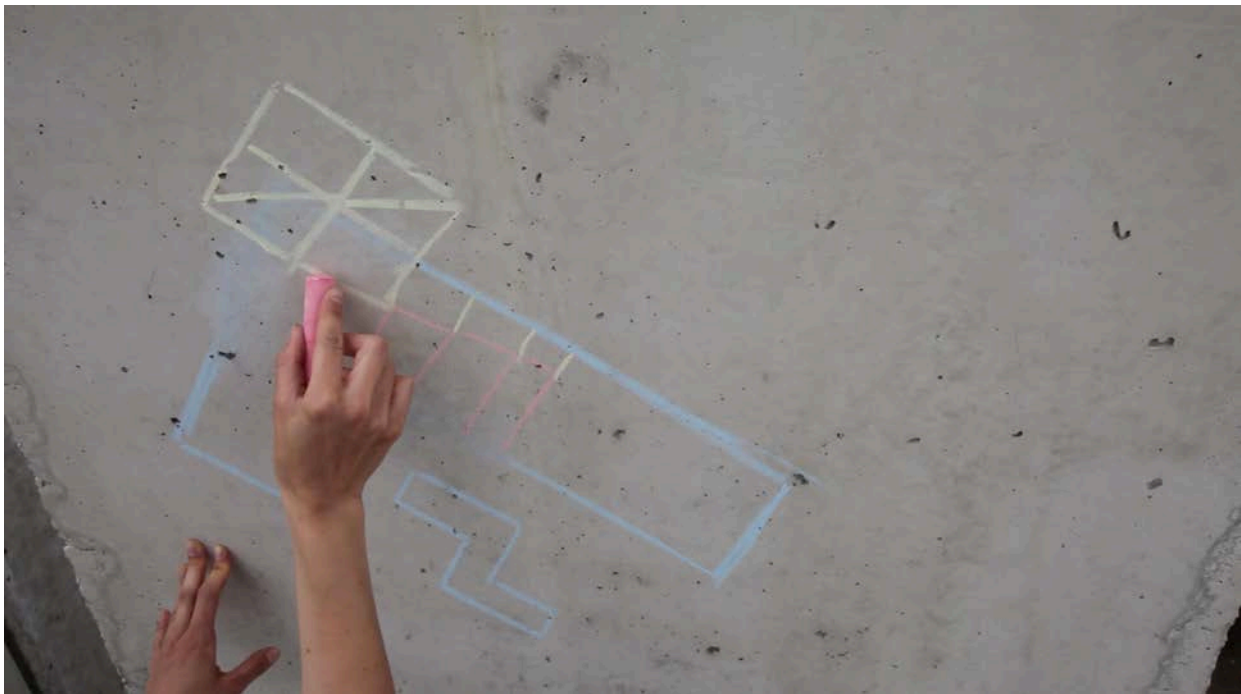
¹² Most of the dancers invited to participate in this project are currently students or alumni of contemporary dance, and were involved for a few weeks within a single year. The participants are Anna Weissefels, Eva Streit, Hedda Parkkonen, Milena Stein; Angela Millano, Magdalena Dzeco, Sandra Le Kong, Qadira Oechsle-Ali, with choreographic support provided by Nicole Berndt-Caccivio.

¹³ A dance score describes an element of movement or choreography whose practical code is written down, rehearsed and repeated. The scores for this project were produced by the performers and myself, although it must be noted that they are not primarily intended for an event or public performance. The development of the performance, the collective elaboration of the work in its ephemeral sense, is a temporary 'product', defined here as a relational complex of affinities and affective encounters which I also refer to as social intimacy, and through which the research that forms the basis for the workshops can be transformed into affectively formed agencies.

labour and its associated ambivalent structures into possible collective agencies. Accordingly, the group is developing scores for new housing possibilities in response to the housing crisis, for instance in the context of the unequal distribution of on-site resources (a support structure is also being created in the form of a video, a performance, drawings on concrete, and archive material). Together with the architect Caro Baumann we are marking the place in which a luxury building is to be built with a social housing scaffold in a public sculpture).

The bodies perform in relation to one other, creating a physical language that remains temporarily autonomous because the scores, in their emerging structure, cannot be read by the dominant. The bodies' movements are beyond the range and scope of HafenCity's surveillance mechanisms, as they interrupt and disrupt the algorithmic streams of data and finance. This bodily constellation performs as a self-determined, self-composed durational social endeavour, rehearsing relational accountabilities. Communal knowledge is created through horizontal exchange and learning, and different experiences in the investigation of labour and housing are discussed and put forward.

Score for new workers' housing



3D printing workstations are set up; citizens use new technology and software that has been created for HafenCity's new traffic software system. In the future, HafenCity citizens will be able to print their houses. Materials are sourced from self-organised networks; logistics and labour are self-determined and self-coordinated. We are investing in the creation of a social infrastructure with new technologies.

Score for workers' solidarity network



Planning and organising become a communal effort.

Scores for a Workers' Day





Giving voice to the workers' performances on the construction site at Versmannstrasse and while performing their specific labour tasks; forms of coordination amongst and between them. A multiplicity of labour tasks converge on the scaffold.

Score for rearranging the buildings

Drawing up plans for new housing cooperatives.



*Score for dividing the building structures into smaller units
Rearranging the maps.*

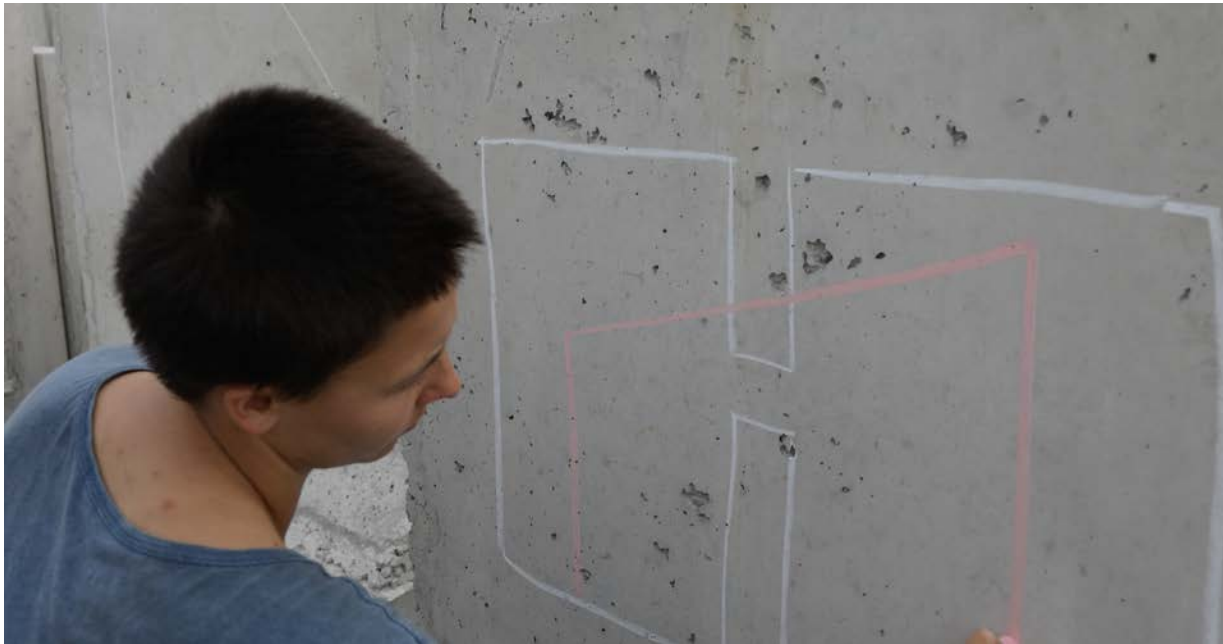


(Drawings)

(Walking)

Score for new housing structures

(Divisions)



*Scores for dividing the building structures into smaller units,
while taking into account Sergio Ferro's conceptions of building.*



The new buildings in sculptural formations



Four bodies are standing in the shape of a pyramid, with their heads interlocked. They all sink down very slowly into an interlocked position. An interwoven construction is produced on the floor. They continue to move a little further in this loosely connected structure.



Labour on the scaffolds that are otherwise invisible

Corrupt working conditions on site

Construction site's unionisation processes

Building sculpture for project 97, Versmannstrasse



A rearrangement of lines. Support structures

A body supports itself with both hands on the floor and bent elbows, with one elbow bearing the body's entire weight, reminiscent of the crocodile position in yoga. Both legs are straddled in the air, like scissors. Another body has its head on one of the three blocks of houses. Both are crouching. A third body is doing a headstand on the floor, with its legs bent diagonally. All figures are to be thought of in terms of their relative position to the blocks of houses.

The upper body moves backwards and forwards with small movements. The feet remain firmly on the floor. The body changes position and repeats the movement. It moves a few steps forward and repeats the movement after a brief pause, and again in another spot. It adds in the arms, which are stretched high in the air. Pause. Turn. From the beginning. The body rolls on the floor, a few rolls forwards: it sits up and reads a booklet, as though it were issuing instructions. It rolls further to a new spot. It sits up. Four wooden sticks are put down on the floor and covered with small stones from sandy soil. Sand is sprinkled over them with a toy shovel. Lines and rectangles become porous and their boundaries no longer clearly identifiable.

Two bodies move machine-like towards one another and interlock.

Two bodies move machine-like towards one another and interlock.

Two bodies move machine-like towards one another and interlock.

The movements repeat and redevelop themselves from their own selves. After several repetitions, one leads into the other. Self-composing movement structures.

Building sculpture for project 98 Versmannstrasse

A state school



The school is meant to be a community centre, like its partner institution, the Katherinen School, located nearby. Local residents' issues are discussed regularly. Community meetings are held to consider the organisation of space and its affordability. This becomes a part of the school's educational agenda. Teaching staff and the general public are involved in discussing the aims and creating possible solutions. All workshops connected to the creation of the housing sculptures take place in the state school. The political organisation of residential space and its connection to labour conditions is the primary concern of this newly built state school.

We are interested in regulating the housing market through citizen-determined cooperatives. A citizens' council must be established. If cooperatives are managed and coordinated by the HafenCity Corporation, then an autonomous, distinct housing market that is regulated from below cannot come into being.

*Council for Housing Cooperatives
Defining the plan and its policies*



Scores for Housing Cooperatives, Baaken Quarter



Score for a worker's task

The financialisation of space compels the buildings in HafenCity to perform in a certain way, meaning that only certain people can live and work in certain buildings and creating a social effect that reinforces and updates concepts of social class.

We are rehearsing the social organisation of a collective body. We are investigating questions about what it could mean to organise collective forces in response to the situational urgency in Hamburg: what does planning organisation mean and how would it manifest itself? We are attempting to define organisation as a *constituent planning force, based on situational immediacy*; a practice in which organisation is determined by the participants' consistent social relations and communication about aspects of politics that concern their rights, working hours, work load, duty times and so on. This organisational practice is simultaneously a general support structure and an archive and a data resource to be used on a global scale by those in need and their supporters: it is determined by workers' sharing of information about the situation and conditions on site and updating of information based on local and situational experience. The objective of this structure is for workers to meet regularly and to spell out their concerns and formulate them into public demands. It also means discussing strategies as to how the demands could be presented to the public and to whom they need to be addressed. This is then discussed in detail with the labour representative from the labour union that is responsible for the working conditions in HafenCity. Smaller workers' gatherings and formations are essential. We call this *Scaffolding Agency*.

7.

Social Mix Demands

As described earlier, the Social Mix's fictitious agenda does not provide any solutions that benefit the lowest income classes, since it is actually the tenants in subsidised housing and cooperatives who function as creative entrepreneurs in the techno-urban matrix. In order to achieve a sustainable

socially mixed community, a number of demands must be met. First of all, the political conditions for social and economic equity must be achieved, since this is the basis for the development of community organisations. Social equity is the principal resource for any communication and interaction because large-scale social stability is a pre-condition for building urban socially mixed communities.

During the course of this work, together with performers and labour unionists, we are building a support structure within which we demand transparency in real estate development with regard to pricing, speculation, sale and renting. We demand transparency about future plans for housing projects and housing types. We demand regular presentations of current research into the conception of social mix, clearly stating which resources are being used. We demand transparency in the selection criteria for tenants and residency, as well as for housing cooperatives. We demand transparency of working conditions for workers on the construction sites, also with regard to their pay. Workers must only be employed under regulated and stable working conditions. A designated organisation should take special responsibility for this area.

We demand payment for the work of local institution-generating processes, since otherwise precariousness is being transformed into value and benefiting entrepreneurial interests. Institution-building must become a regulated activity. Cooperatives should be organised into a networked structure, which must be governed by itself and its citizens rather than private corporations. Housing cooperatives must operate independently of state regulation. We demand rent control and social and public housing that exists outside private interests, as considered in these notes. We demand the regulation of labour and housing conditions via self-constituting and organically emerging social support structures. Resources are to be kept within the networks and distributed equally. We will only accept Social Mix if it is placed within the context of a social infrastructure that provides a toolkit to enable citizens to organise social planning autonomously.

We demand a less controlling approach from the HafenCity corporation towards the housing market, meaning less state intervention in what should be a self-regulating and self-constituting scheme. In end effect, we demand the decoupling of housing from financialisation and the generation of market value, shifting towards an autonomous housing market with cooperatives at the core of a self-determining network.

The implementation of Social Mix should be coupled with artists' demands for a stable income, thus avoiding the dissolution of art into life and value generation arising from gentrification processes. We demand mixed communities that do not merely drive gentrification and further enrich the rich.

We are building a public support structure, discussing which skills and which approaches should be brought into the process in what way, as well as considering a suitable format that will avoid the benefiting of a select few that has hitherto been a feature of Social Mix. We demand that the housing market be freed from its focus on the accumulation of profit and its role as an instrument of value production.

We accept the claim of social pluralism of perspectives and positions only under the condition that support structures sustain residents' and citizens' subjectivities on a stable and equal basis.

Score for a support structure (to be continued).

8.

Algorithms¹⁴ can be identified as the underlying structure of a scaffold. The vertical and horizontal lines of the scaffold are found on our construction sites, which essentially support the building process, correlating to the form and structure of an algorithmic instruction. In bioengineering, scaffolding is the method by which the support structure for a digitally fabricated product is created, as well as the means by which an algorithm instructs an object to come into being. It links and relinks 'bridges' and 'pillars' to the object, until the desired shape is achieved. In algorithmic architecture, the scaffold is also the support structure for an instructed object.

In the construction industry, these scaffolds are simultaneously instructions for an algorithm, reproducing the instructions that determine the design of the whole. Houses are scaffolds of the plurality of algorithms, instructing and governing the space according to the criteria laid down by market, governmental and investors' interests.

If we add in the scaffolding algorithm for the pale green shelters, it may give different instructions and thus affect the way in which a set of algorithms instructs an entire area. From a linear perspective the algorithm is singular and unfolded, being conceptualised in a non-complex way. It consists of sheer lines of verticality and horizontality. It behaves similarly to the algorithmic scaffold of the infrastructural buildings in this area, rather than that of residential space, unfolding less and demonstrating far fewer ornaments and less complexity. It follows that workers' homes can be compared to the scaffolds of infrastructural entities. From the map one can only guess where the workers' homes are located: scaffolding their location keeps them the subject of speculation.

The algorithm is the scaffold of property yet to be built. In scaffolding new residential space, instructions enable the building to take form. The fundamental scaffold is changing, due to property grouping policy, an operational strategy used by investors and architects, whereby serial reproductions of blocks of buildings are legitimised and grouped in close proximity to one another.

The unfolding of the algorithm mirrors labour complexity and the number of labourers involved in the building project. It also shows that labour is related to a variety of discrete nodal points within the scaffolded property: labour is linked to a multiplicity of labour tasks in a complex manner. These nodal points are unfolding points, where labour interacts and subjects meet, converge, relate and exchange experiences. Complex algorithmic shapes are complex scaffolding processes; they present a multi-layered algorithm, which we regard as scaffolding. The inherent potential of the agencies involved is yet to be defined.

The algorithm of a property is, along with the scaffold, linked to the construction profile used to mark the property out on the land before the construction process begins. At this stage, potential future residents may participate in reconfiguring the property's lines and, possibly, in changing its appearance. They will open and close the algorithmic shape in situ, interrupting and rearticulating algorithmic agency. They may recompose entirely new shapes for homes. The political imperative would be to step in at this point and create homes that are more responsive to the vulnerable, exhausting and exploitative labour market. As briefly set out here, the algorithm's totality and gaps in the scaffolding enable the rearrangement of the building's future shape.

The algorithm's instructions shape the property. The algorithm's implicit function as scaffolding means that labour is present within it. It is both the digital fabrication of labour and physical, manual labour itself. But what about the areas between the scaffold's lines, that is to say the

¹⁴ An algorithm is a set of instructions, a programing to solve a problem. Algorithms process data and instruct the performance of automated tasks. See also footnote number 2 for further explanations, referring to Keller Easterling and Ned Rossiter.

grey zones of an algorithm's scaffold that have not been instructed? These become the building block's parks and community spaces, areas for communal gatherings, that open or give access to space. Algorithmic architecture is vulnerable.

9.

A smart home is connected to the shared realities of the civic world through algorithmic instructions. The personal becomes the realm of the corporate, where companies use private behaviour for commercial benefit. The algorithm's scaffolding are the zero-hour workers, labour on demand, serving and reproducing the smart home. However, the algorithm's scaffold is porous. The labour of logistics - demand labour - is a dark, invisible and intangible scaffold.

Algorithmic architecture scaffolding also holds true for the 'non-place' architecture of refugees and migrant workers, located alongside the shells of buildings yet to be built. They are nodal points in urban infrastructural production and, adopting the form of a shelter, they serve another new market for reproducible dwelling space. Scaffolding is the status quo in areas characterised by urban redevelopment; it is the state of labouring in logistical on-demand sectors, as well as of porous interrelationships in the absence of a unifying social support structure.

Labour, from a scaffolding perspective, is a relational process: the complex coordination of construction work is a relationality between specific tasks. The main focus in the algorithmic relationship's design process for new social housing production is not the creation of a form, but rather the rules of the interplay that govern the process itself. Each new occurrence is the result of a previous operation, incorporated into a repetitive (rather than generative or parametric) linearity. We must be able to access the algorithmic instruction for new housing construction with the intention of agency, determining which rules are to be applied and, ultimately, which parametric relations are to be expressed. The house as an algorithm of scaffolding reminds us to think of labour, in the context of the scaffold itself, as an autonomous process, with workers as variables, managers replaced by nodal transaction points, combining, re-linking and composing new relationalities, and working hours determined by new technology. An association of workers, using co-operative decision making processes and on-site BIM technologies, will decide on the rules to be applied to the new housing complex, also discussing this with members of the labour union on site.¹⁵

The scaffold, the algorithm and the workers are to be regarded as relations rather than singular subjects. Labour is characterised as a reciprocal and transversal interlocking. Performance/labour itself becomes a set of parametric algorithms to be differently re-choreographed. The plurality of scaffolding, as an autonomous process-based performance, is the form of the object. The adjunct scaffold – the scaffold of unionisation – can be called extra-territorial or extra-spatial density; the tangible or the dissociated scaffold.

Why compare an algorithm's digital fabrication with a construction site scaffold? Or, alternatively, why compare labour with an algorithmic instruction? The aim is to free labour from becoming a rigid and logistical cluster of instructions to be followed by an individual subject; there is life in the algorithm, instructions become subject to organically changing rules. At the same time, to disrupt an algorithm's uncontrollable legitimacy is to occupy a corner of digital reality, since the scaffold is defined by the agency of the association of workers and the political practices of unionisation.

The scaffold/algorithm gives instructions as to what to construct, but not as to how to do this, or how to relate to one another. Relationality is a complex process of algorithmic operations,

¹⁵ The Hamburg organization Hochtief and Verdi are representatives of labour questions.

and one that could even undermine an algorithm's 'understanding' of this process. If we relate by means of affective or emotional exchange, we are already undermining the algorithm's power. Thus, workers' interactions during the working process, whether related to feelings, work load, exhaustion or excitement, can disassemble and undermine the relations intended by algorithmic scaffolding.

10.

The architecture of shelter

There is a link between new residential workers' housing and the aesthetics of communist housing, namely that of functional space: the legacy of the functional city is recognisable today in the mono-functional housing estates that develop far away from 'dirty' industry, peppered with space for consumption.

New housing blocks intended for social housing are the target of functional planning. These blocks, though new in design, and architecturally aestheticised, are nevertheless clusters or serial reproductions, reminiscent of large-scale post-war public housing estates. Their design is simple and easy to reproduce precisely; the groupings do not differ much in style and there is a single aesthetic code. The blocks are largely built on the outskirts of the city's urban fabric, designed both to appear and to feel removed. The difference between these blocks and post-war architecture is that these spatial productions are larger than post-socialist housing units and thus more functional, since property is perceived as a means of value production. The sharing of space is subsumed within a commercial goal.

A provocative claim: the HafenCity is likely to turn into a '*shelterised city*', with shelters as a form of social housing occupying the last of the former harbour areas that have not yet been bought or rebuilt by investors. Investment in new shelters is seen as an economic necessity, but also as another market commodifier.

11.

Scaffolding reminds us that labour is neither abolished nor dissolved, but present more than ever in our daily reality, constituting the fundamental core of the social interactions that make up our lives and on the basis of which we must demand change to and transformation of the current status quo. Scaffolding is the agency for the affirmation of new social infrastructures. Scaffolding refers to the affirmative potential of newly established relations between those present in a given place.

Zero-hour working contracts with labour on demand, as required in logistical urban infrastructures, have given rise to a system in which technologies of the working bodies signal an incorporation that is beyond control: physical managers no longer exist because BIM technology has taken over; a self-directed economy prevails.

Scaffolding refers to the porousness of logistical labour on demand, as commanded by the touchpads of the smart home. The set of instructions is comparable with a scaffold, within which workers co-ordinate their tasks. Nowadays, one may claim that labour is the expression of scaffolding, since work evolves through real-time performance, with no end product beyond logistical service; it enters the domestic and private spheres via instructions.

Amazon's Dash Button novelty has become a block chain currency used by autonomous workers' associations to collaborate with fellow citizens across shared fields of knowledge: workers use their hacked technology not just on the building sites, but also to connect with citizens from every walk of life in the context of ubiquitous civic demands. The state itself has been transformed into a decentralised organisation that exists only in its plurality, with every citizen a shareholder.

The BIM technology that used to coordinate workers' lives has been hacked, while an extensive digital fabrication infrastructure, maintained as a public utility, uses sophisticated algorithms to dismantle the production demands dictated by real-time surveillance.

The commercialisation of housing has become obsolete because the market is no longer deregulated by the corrupting financial capital that houses itself rather than human residents in empty units. The post-renewal market operates independently of both state and government, but is structured by planning movements' research organisations and their collective agencies. Housing areas can be mapped out and built by groups, with their parts being printed at one of the digital 3D printing stations in the city. Amazon can no longer service the Dash Button because people have realised that they can use the printing stations around them to fabricate their desired technology and determine its functions. Goods are essentially free for the taking.

Placeless urban sprawl is overwritten by high-density algorithmic instructions. Information about how to hack the Dash Button technology is everywhere, and workshops guide citizens in building their own versions of the Buttons according to their needs. Homes can no longer be 'smart' because the technology is no longer marketable.

The government crumbles and falls, its ability to sustain itself from tax revenue having been decisively undermined. A shared reality barely exists now. The stage is claimed by a group of smaller, more agile actors. The fracturing of consensus is an epidemic challenge.

Productive capacity is based in workshops at neighbourhood level, organised as cooperatives and linked by networked processes of deliberation. Economic power is exercised by loose federations formed from these cooperatives, although inter-coordination is complicated by differing values and styles of governance, as well as the realities of tendering in competing local currencies. Fabrication is cheap, widely available and as in demand as ever.¹⁶

But there is the danger that is no large-scale global action to preserve to global environment; if cooperatives keep manifest in their localism. However, technologies can even link between agencies of global scale; it may be a matter of politicizing coordination.

How to move on

During the course of this work we build a support structure together with performers and labour unionists, within the scope of which we demand the following with regard to HafenCity's development:

We demand transparency in real estate development with regard to pricing, speculation, sale and renting.

We demand transparency about future plans for housing projects and housing types.

We demand regular presentations of current research into the conception of Social Mix, clearly stating which resources are being used.

We demand transparency in the selection criteria for tenants and residency, as well as for housing cooperatives. We demand transparency of working conditions for workers on the construction sites, also with regard to their pay. Workers must only be employed under regulated and stable working conditions. A designated organisation should take special responsibility for this area.

We demand payment for the work of local institution-generating processes, since otherwise precariousness is being transformed into value and benefiting entrepreneurial interests. Institution-

¹⁶ The writing of section 11 is inspired by Greenfield, Adam. *Radical Technologies: The Design of Everyday Life*, Verso: 2017 (Chapter 10).

building must become a regulated activity. Housing cooperatives must operate independently of state regulation.

We demand a less controlling approach from the HafenCity corporation towards the housing market, meaning less state intervention. In end effect, we demand the decoupling of housing from financialisation and the generation of market value.

We will only accept Social Mix if it is placed within the context of a social infrastructure that provides a toolkit to enable citizens to organise social planning autonomously.

We accept the claim of social pluralism of perspectives and positions only under the condition that support structures sustain residents' and citizens' subjectivities on a stable and equal basis.

Technology has the potential to link agencies on a global scale but this, again, may mean giving a name to the politicisation of coordination

12. (SUMMARY)

Dwelling space defines and organises the logistics of HafenCity, ultimately determining who is able to live here by means of social class and its spatial reproductions as technology. We call these developments techno-urbanification, because we no longer see gentrification as applicable to the deregulation of built space and its environment. This financial performance in visible and hidden urban space becomes a vehicle for a new infrastructure as a scope for social action. This work, in its practice, examines these issues within the context of current transformations in HafenCity and from the perspective of labour as it is linked to the current housing situation. It looks at the historical development of the economic link between architecture, industry and work, politically organised industrial action and logistics, all of which are linked to the current developments in finance and its algorithmic infrastructure in HafenCity.

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BIOGRAPHY

Johanna Bruckner (*born in Vienna in 1984) is an artist who is based between Hamburg and Zurich. Her work was shown internationally, most recently, at KW, Institute for Contemporary Art, Berlin; the Migros Museum für Gegenwartskunst, Zürich; the Villa Croce, Museum for Contemporary Art, Genoa; the Kunsthaus in Hamburg; the Kunstverein Harburger Bahnhof, and Galleri Box, and she is now preparing a solo exhibition in Bern. Bruckner has lectured at various universities and institutions including the Bauhaus University of Weimar, the Lucerne School of Art and Design, Zurich University of the Arts and the BAC Center Contemporain in Geneva. Her work was awarded by numerous grants, she received the Hamburg Stipendium for Fine Arts (2016), was awarded a scholarship holder for the overseas artist studio program at the Banff Center for Visual Arts in Canada in 2015; and she is currently a fellow at the Sommerakademie Paul Klee (2017-19). Bruckner is interested in the conditions of labour that have been emerging in response to the technologies of communicative capitalism.

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