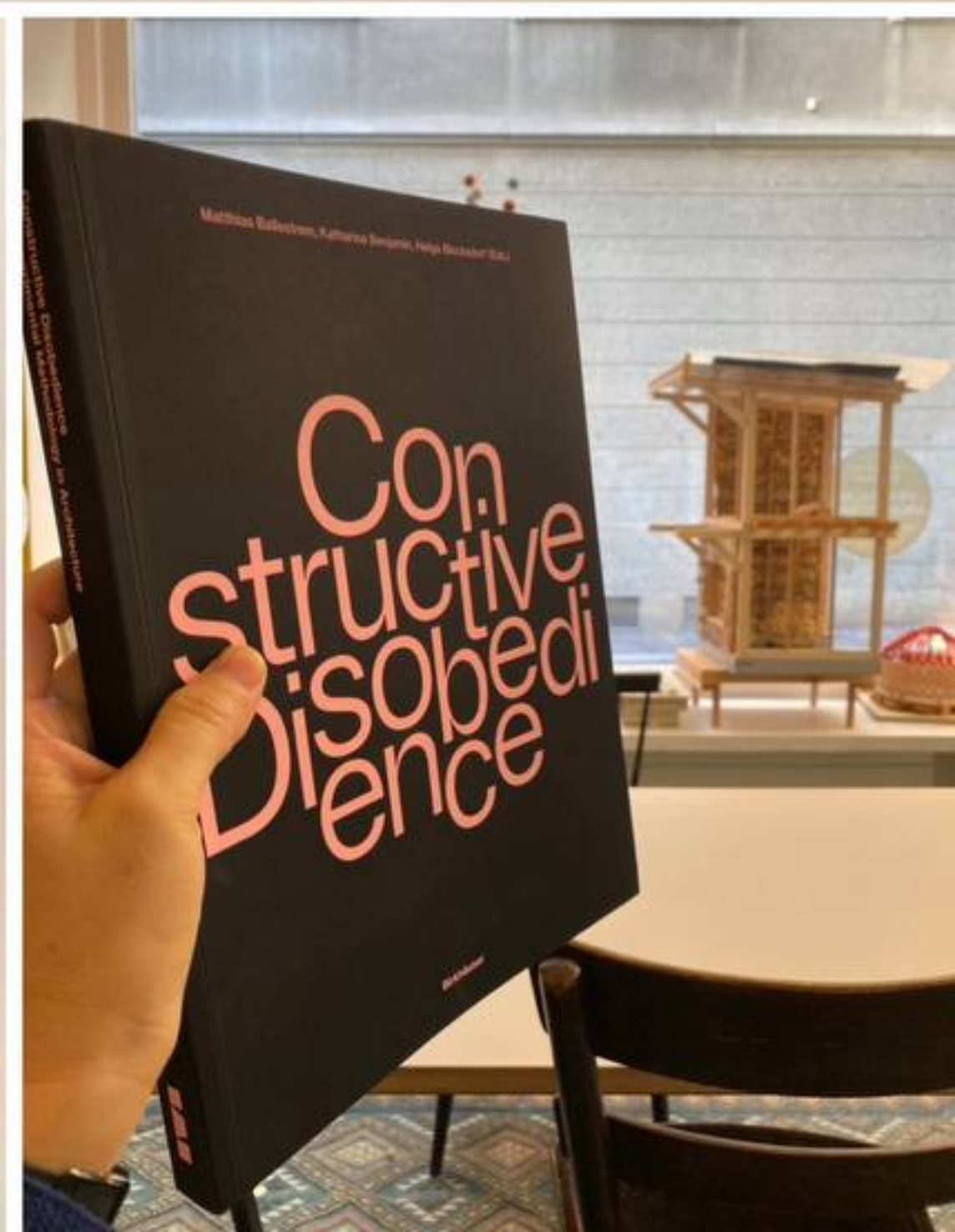
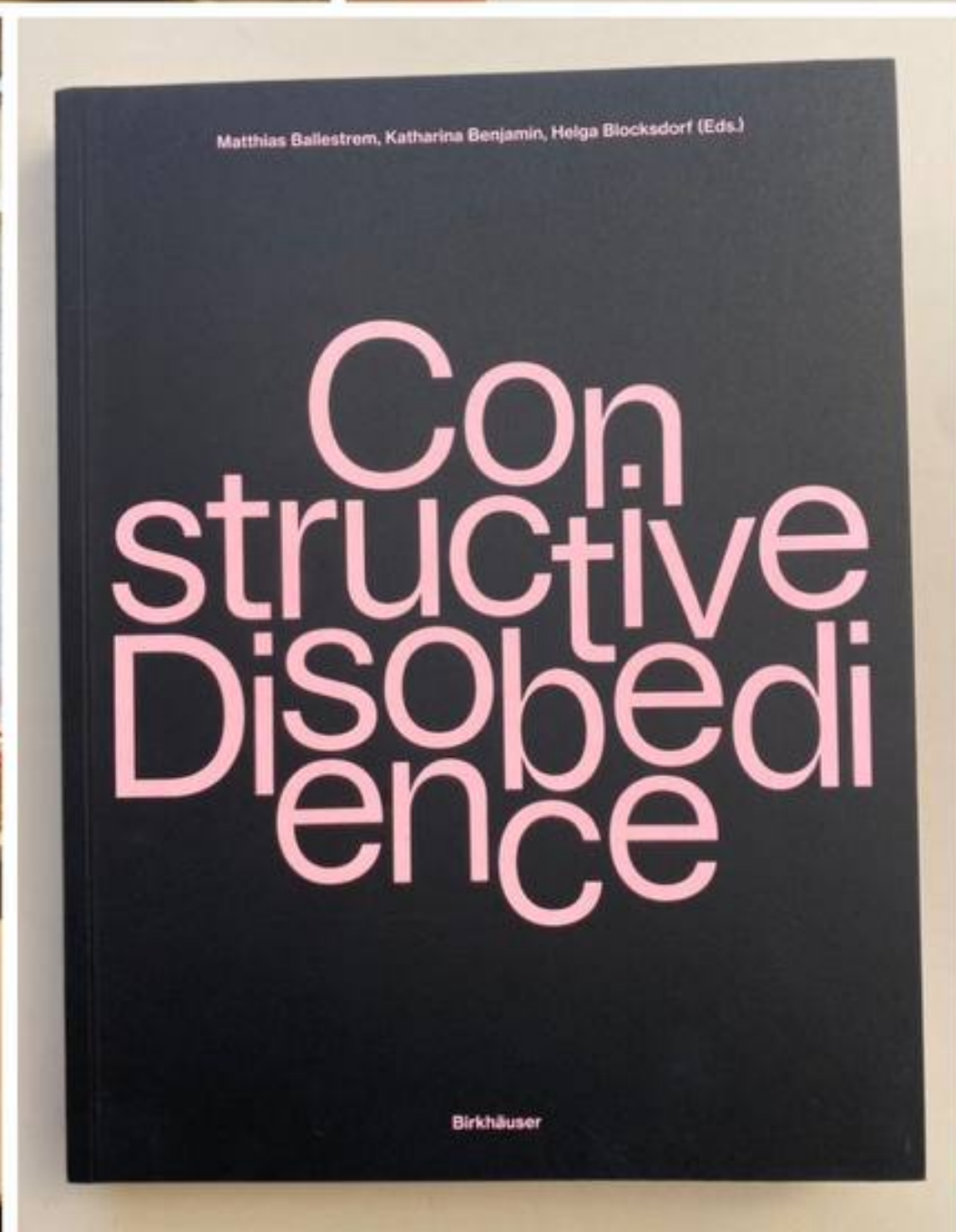
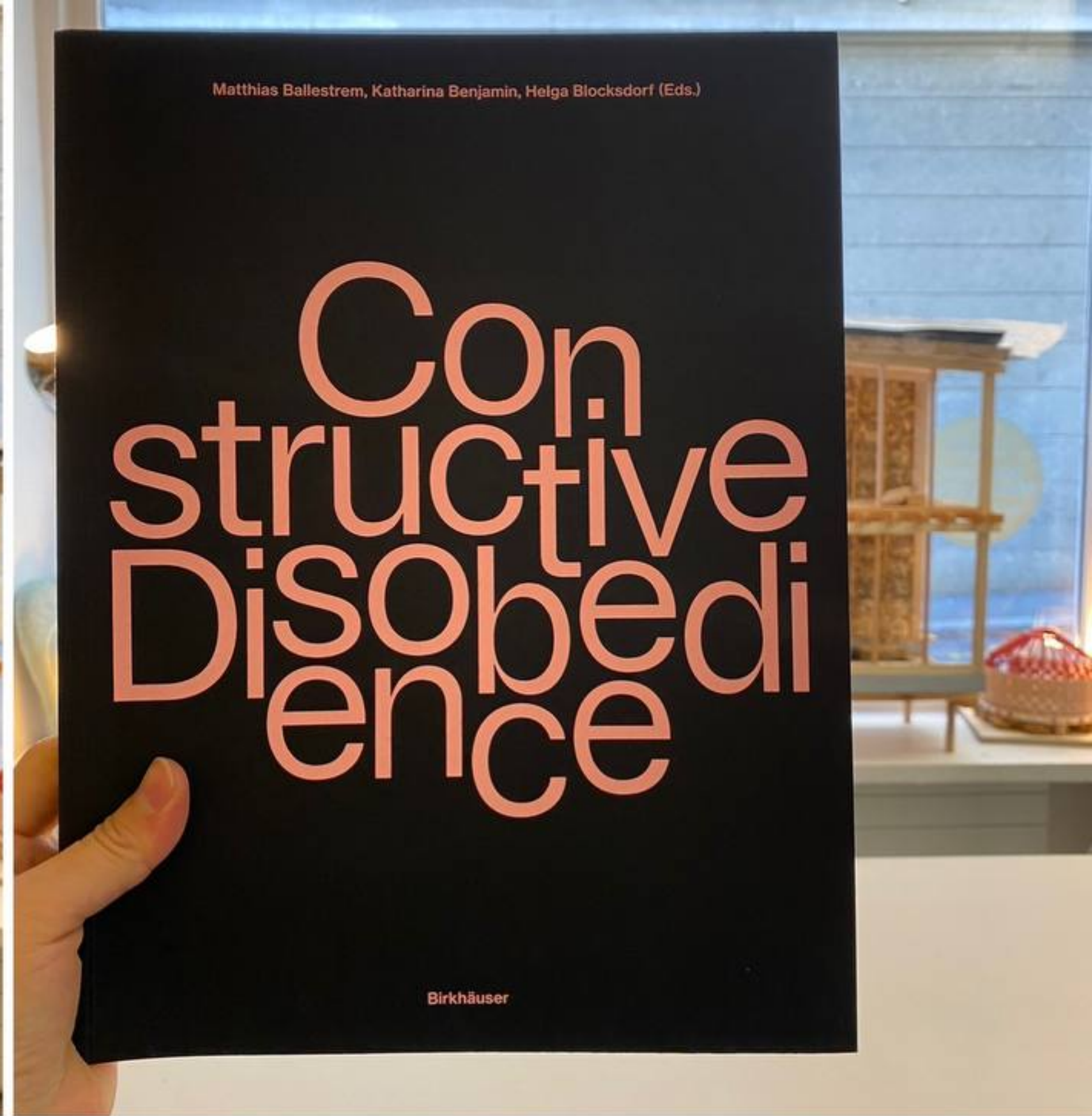
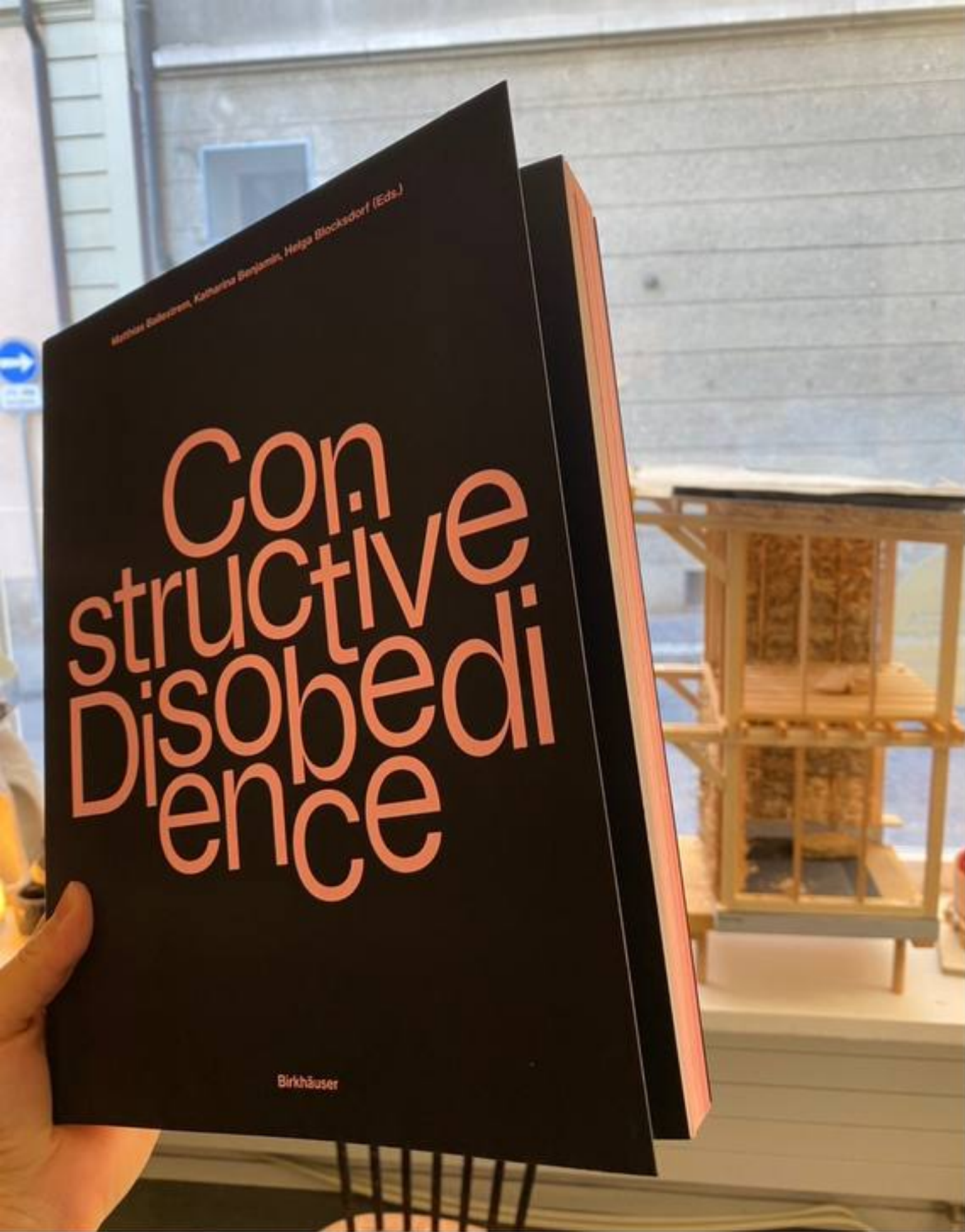


Matthias Ballestrem, Katharina Benjamin, Helga Blocksdorf (Eds.)

# Con structive Disobedi ence

Birkhäuser





Saikal Zhunushova

## Open Dialogue as an Opportunity for Innovation

... from the conference lecture in September 2022: Already during the office meeting with the clients, I talk about values, their requirements and their idea of quality of life. It's important to me, even during the first encounter with people who want to build, to encourage them to think emotionally about a better world and appeal to their common sense, or at least to start a discussion about both. Amongst the apparatus that a currently practising architect possesses, along with standards and technical knowledge, I find it increasingly important to bring an interest in everyday things, in life itself, with me, and to be able to 'question' things.

Trust and experience form the basis on which the key decisions are jointly made over the next 12 to 15 months. The first discussions usually last a long time so that the clients can express themselves unimpeded. Being listened to is important for everyone, and at the moment the task crystallises it is above all crucial for the client 'to be heard'. When a client's outline of the task and the functional programme is unclear or vague, as is usually the case, I begin to enunciate the vital approaches and arguments, introduce references and show my previous projects.

It's also important to me to always communicate openly, clearly and honestly about what I can and can't yet do but would like to learn about and try out. It's also crucial that I, as a planner, say what I prefer and what I don't understand, and that as transparently as possible. That way the client becomes the first trusted 'accomplice', the most essential partner in the architectural project. That way we become a team who sets out on a common journey, and also, if necessary, together can defy building standards. After that, the feasibility of the project is explored, rejected or confirmed with the engineer, or in some cases already directly with the site workers.

Dialogue and exchange are fundamental to questions of innovation versus rules. One's own assumption of responsibility is enormously palpable in team and expert-planners meetings. This means that unconventional, eventually better suggestions can be accepted or rejected in

Fig. 2 Load-bearing timber structure.



Fig. 3 View from the south side during the construction of the classrooms. Partition walls were built on-site from rammed earth.

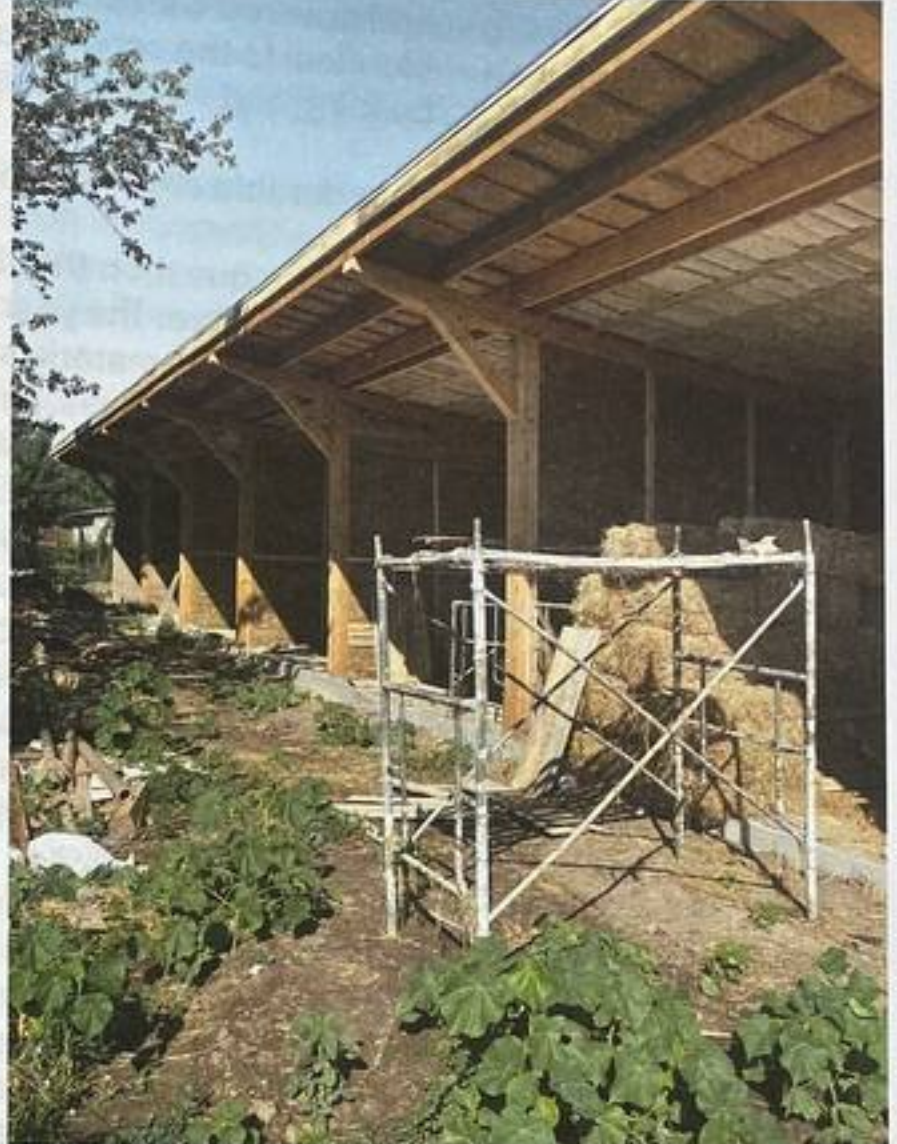


Fig. 4 Rammed-earth wall in the corridor. Inspection one year after completion in December 2023.



Fig. 5 The interior walls were plastered with 4 cm of coarse clay plaster and then painted with water-soluble paint. The black windowsills covered with plants are of course less effective at receiving and storing the sun's heat.



dependencies and a culture of demolishing building stock. Housing without technology is seen as outdated and unattractive for investors. However, the signs are that the high hopes set in technologisation are misguided and that it is instead necessary to erect low-tech, minimally equipped buildings and thereby wean ourselves off our dependency on energy imports.

Because I conduct my discussions via Zoom, I'm able to point to the corresponding images, plans and data to underscore what I explain during my monologue. I can't remember that anyone has ever complained that the discussions were too long or irrelevant.

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World Bank Group. 2012. *Turn Down the Heat: Why a 4°C Warmer World Must Be Avoided*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/865571468149107611/turn-down-the-heat-why-a-4-c-warmer-world-must-be-avoided>.

The results of the research were presented in the form of a book and a series of articles. The book is a collection of essays by architects and researchers who have been working on the project for several years. The articles are published in various journals and magazines. The book is available in both Russian and English. The articles are available online. The book is a valuable resource for anyone interested in sustainable architecture and urban planning. The articles provide a detailed look at the project and the challenges it has faced. The book is a comprehensive overview of the project and its impact. The articles are a great way to stay up to date on the latest developments in the field. The book is a must-read for anyone who wants to learn more about sustainable architecture and urban planning. The articles are a great way to stay up to date on the latest developments in the field. The book is a comprehensive overview of the project and its impact. The articles are a great way to stay up to date on the latest developments in the field. The book is a must-read for anyone who wants to learn more about sustainable architecture and urban planning. The articles are a great way to stay up to date on the latest developments in the field.

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- 1 50 mm dung, straw and compost mixture  
20 mm gravel fill  
40 mm recycled raw wool Geofleece  
sealing layer  
20 mm OSB board  
170 mm straw  
35 mm solid wooden panels
- 2 15 mm clay plaster  
30/50 mm wooden battens, with clay-straw mixture  
400 mm straw  
30/50 mm wooden battens, with clay-straw mixture  
15 mm clay plaster
- 3 20 mm tiles and adhesive  
50 mm screed  
100 mm polystyrene thermal insulation

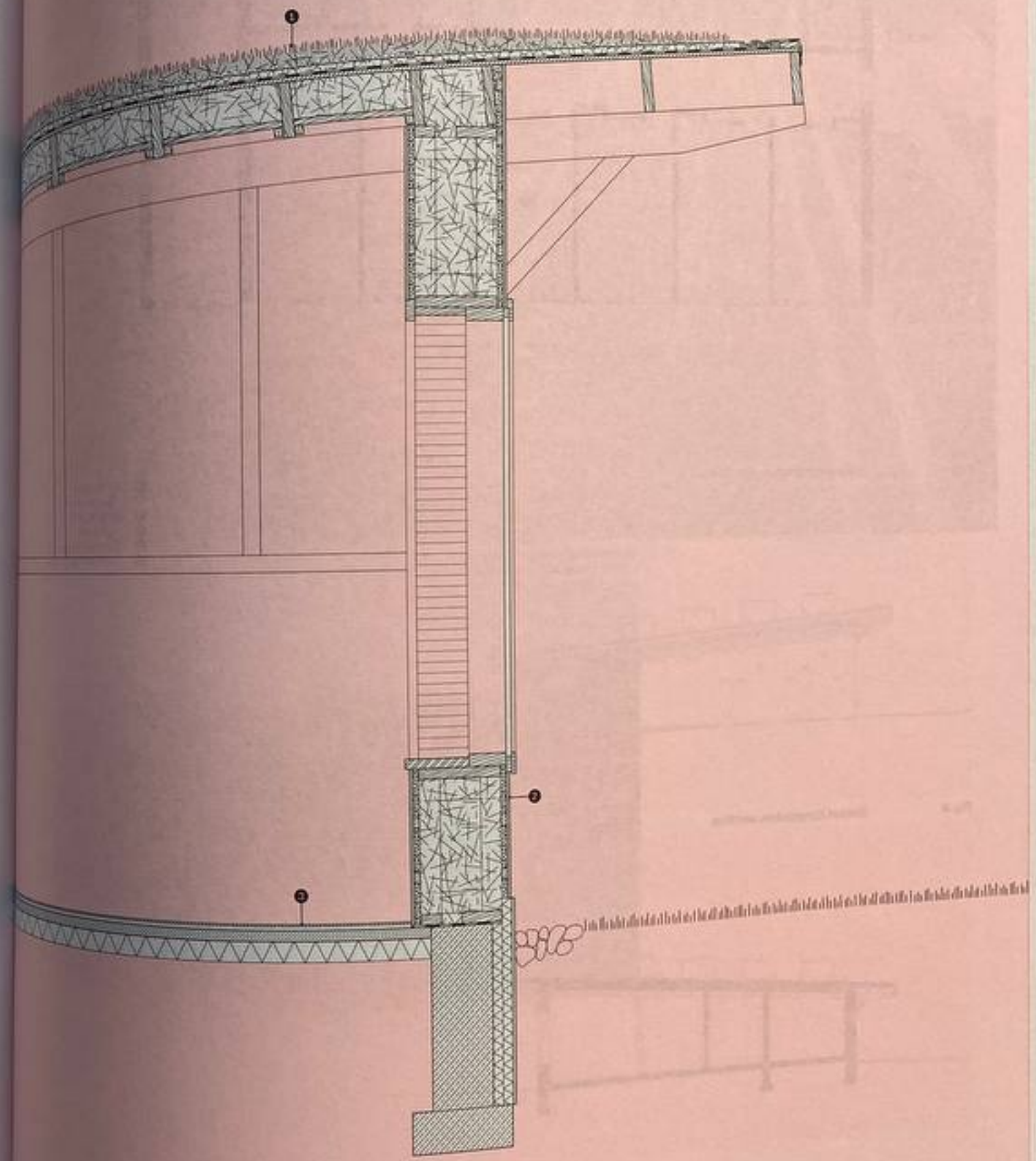


Fig. 7

School Kyrgyzstan, ground floor plan.

5 m

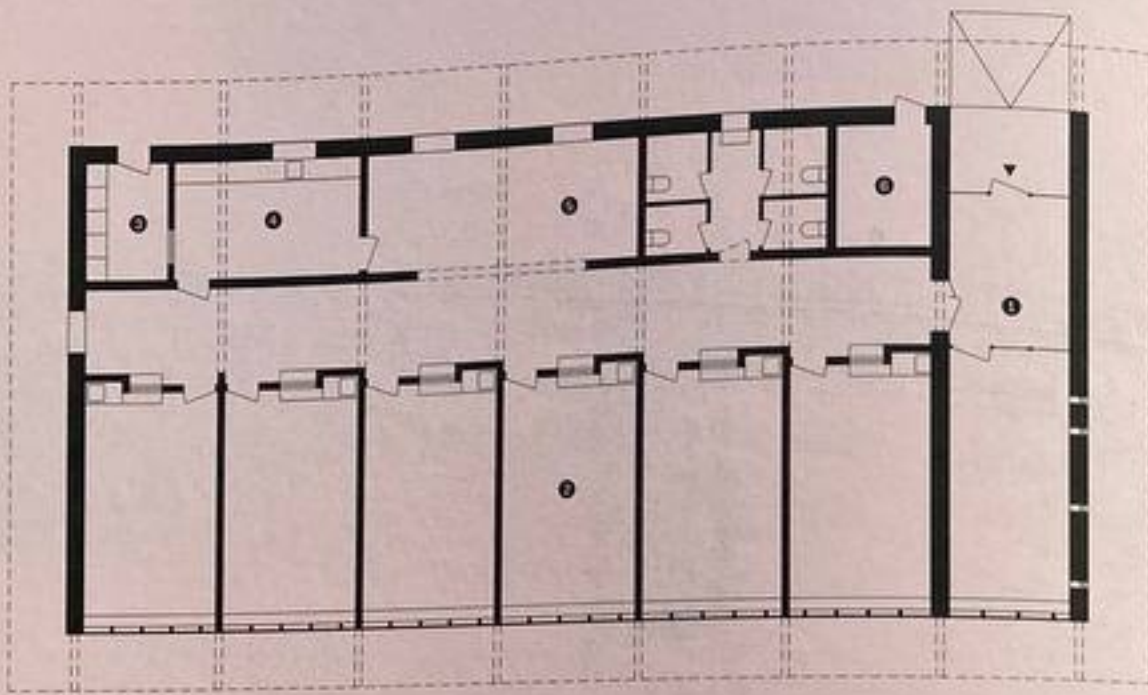


Fig. 8

School Kyrgyzstan, elevation.

5 m

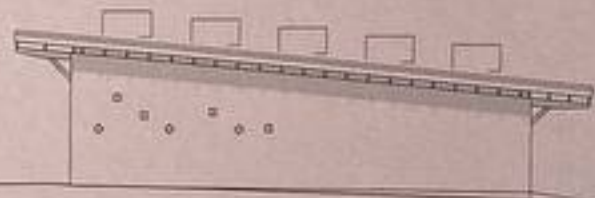
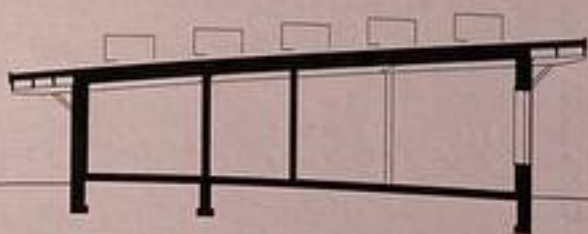


Fig. 9

School Kyrgyzstan, section.

5 m



- ① Entrance
- ② Classroom
- ③ Storage
- ④ Kitchen
- ⑤ Dining room
- ⑥ Technical room

Roof insulation made of straw and wood chips.

Fig. 10



Fig. 11 Installations for the PV system. The base of the construction is stabilised with a layer of gravel, followed by self-made sheep-wool mats as a base for the green roof.



realised school building, made of the same load-bearing wooden structure and covered with straw walls. The roof pitch and roof structure will also be identical to the school building. The investors in the hotel visited the school building and were impressed by it.

How durable are these types of wood, straw and loam buildings?

This is the question that the first discussions and process of familiarisation begin with. Over the years, traditional building methods in Kyrgyzstan using locally available materials have been replaced by imported, costly and energy-intensive alternatives. One of the reasons for this was poor building quality using locally sourced materials, such as loam and straw, while basic work rules that could have prevented the destruction of such buildings were not followed. Based on the sub-standard building quality, living in loam houses has become unattractive. Moreover, teaching programmes for architects and clients continue to fail to promote building with locally available materials. Independently of the building techniques (loam or brick construction), there is also a lack of understanding in the planning processes for the regional climate—there is currently no idea that sunny days can be advantageous or an appreciation of winter and summer insulation, etc.

The current situation

In Kyrgyzstan, based on the poor building quality, loam houses are considered to be short-lived, timber frames and straw are considered to be unstable building materials, and knowledge and experience about building with such renewable materials is simply lacking. Today's average Kyrgyz building users are forced to not only spend their hard-earned money on comparatively expensive brick and concrete building techniques but also on never-ending electricity costs for cooling, heating and, more recently, indoor air-filter appliances. On the streets, the population breathe in the exhaust fumes from cars without catalytic converters. A total of 2,333,000 people live below the poverty line, including 62.2% of rural inhabitants [Gottfried 2023]. The average monthly salary in 2022 amounted to \$290 [Kerimbekov 2023]. The private sector uses low-grade fuels for heating, such as coal, light-industry waste or other rubbish. The deterioration of living circumstances leads, in my eyes, to social destabilisation, in the sense that people who are entirely preoccupied with earning a living are more likely to neglect life itself—an idea that I derived from reading the Russian translation of Jane Jacobs's *The Death and Life of Great American Cities*. On checking the original, the equation reads differently. Jacobs herself cites Oliver Wendell Holmes. His concern was to show that one of the benefits of civilisation is that it allows life to be more complex, and that therefore, instead of uncoordinated selective endeavours, larger common intellectual efforts are required in order to meet the basic requirements of a population. These collective efforts lead, in his view, to richer lives and greater quality of life. It follows, argues Holmes, that because 'life is an end in itself ... the only question as to whether it is worth living is whether you have enough of it' [Jacobs 1992, 2]. Nevertheless, when I look at Kyrgyzstan and see the supreme efforts individuals have to make in order to simply conquer their everyday lives, I'm convinced that life itself is negligible for people who spend every waking hour simply trying to secure their means of existence.

## Open competition for the development of standard architectural plans for the construction of energy-efficient houses in Kyrgyzstan

Organiser and jury of the competition: International Organization for Migration (IOM); Unison Group Organization for Energy Development in Kyrgyzstan and Central Asia; Architects Association of Kyrgyzstan [IOM Kyrgyzstan, UN Migration, 2024]

As part of the project 'Promoting the Inclusion of Internal Migrants in the Process of Green Renovation in Kyrgyzstan', an open anonymous architectural competition for the design of small residential housing prototypes was announced at the end of 2023. The main criteria for the projects were:

- [1] Energy efficiency: the design should aim to achieve a zero-energy balance;
- [2] Sustainability: the design should incorporate environmentally friendly materials and technologies, and minimise the environmental impact of the house during its life cycle, from construction to demolition;
- [3] Affordability: the design should be affordable to most of the population and reduce the cost of maintaining the house by using durable and efficient recyclable materials and common engineering systems.

The results of the competition were announced in February 2024 and my submitted projects, planned thinking about sun and materials such as straw, clay and wood, were awarded second prize. The first and third prizes went to projects using classic materials: reinforced concrete with brick and basalt slabs as insulation. Nevertheless, for me personally, for my community and for supporters, this second place was a major breakthrough and a sign that such materials are recognised at the level of the national architects association and other bodies. Another positive and encouraging point of the competition is that other young participants also used straw and clay in their projects, which suggests that these materials are becoming more popular with architects. The three prize-winning architects are currently preparing construction projects involving standardisation and easy application.

The monologue before the dialogue

In discussions with clients and workers, I use the opportunity to address issues such as improving housing quality with simple and tried-and-tested methods such as passive heating, correct heat insulation, the use of locally available materials, quality building techniques, operational greenhouse gas emissions, climate change, poor habits acquired in the past, the production and transport of building materials, their use and disposal, and lastly the new era of saving the climate. Here there is a pressing need to explain general terms and processes in simple words.

According to the prognoses of the World Bank, average global temperature will rise by 4°C by 2060 unless global obligations to reduce greenhouse gases are met [World Bank Group 2012, 13]. 19 June 2023 was the hottest day in the history of Bishkek since meteorological recordings began. The maximum air temperature in the capital on the day in question was 36.8°C — 5.7°C above normal readings [Kudryavtseva 2023]. Until now, the common belief is that technology and building automation will solve all these problems, whereas for decades now modern architecture has effectively ignored the local climate and the properties of building materials. In order to achieve comfortable indoor conditions, buildings are equipped with automatic air-supply, heating and cooling systems. This trend results in technological