Mapping the City

as a Super-organism

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Artwork and text: Fanny Spång

Fanny Spång works within a multidisciplinary practice with visual expression through sculpture, installation, and animation. She holds a master's degree in design from the University of Gothenburg and the School of Visual Arts, New York. Originally from Älmhult, Sweden, she is currently based in Berlin.

Mapping the City as a Superorganism is an ongoing project initiated as a proposal for the Fresh A.I.R Scholarship, awarded by the charitable foundation Stiftung Berliner Leben in cooperation with Urban Nation Museum, Berlin 2020.

A superorganism is an organism consisting of a large number of individual organisms. The individuals are interdependent and often specialised with highly developed methods of communication and division of functions. Bees, ants and other social insect communities are common examples of superorganisms. They originate from small scale collaborations between organisms of the same species that develop into distinct patterns which define their interaction with their surrounding environment (cf. Dermody 2019). Comparable to how human societies coalesce into cities, superorganisms adapt to current circumstances and form collaborations and exchange systems to harness local and remote resources. On a larger scale it is possible to argue that the whole biosphere is a superorganism hosting different life forms that coexist and contribute to its survival. Some research also considers the human body a superorganism since it hosts microorganisms in large quantities. The microbiome interacts with the body and influences its development and functions throughout life (cf. Dietert 2016).

These three superorganisms (i) the human body, (ii) the city, and (iii) the biosphere as well as their relationship to one another are the subject of the research project *Mapping the City as a Superorganism*. The intention is to explore the city as a superorganism in connection to the humans inhabiting it. This is done through sculptural installations aiming to transform the space which they are located in. By collecting and visualising information, the ambition is to create a discussion about coexistence and sustainable urban environments. Sub-topics such as human life (microcosm) are set in relation to the city and the biosphere (macrocosm). The individual is an outcome of the community and distinguishes itself from it. Simultaneously, the community consists of individuals that form it. Subsequently, the individual and the community can only define themselves in relation to one another. »What characterizes human beings is thus not membership in one discrete superorganism, but a capacity to create and function in superorganismic structures.« (Kesebir 2012: 44)

The project *Mapping the City as a Superorganism* touches upon several subtopics. Nesting became a focus of the project for *Stiftung Berliner Leben* – through an exploration of urban housing in relation to nesting habits of synergistically interacting organisms. The connection between resilience theory and self-organising systems can be used as a guideline to understand contemporary societies. For architects, city planners and property owners, new views of urban growth, sustainable development and resilient cities could be understood by adopting the perspective of the building environment as an adaptive system (cf. Eken & Atun 2019). The term nesting refers to how superorganisms such as ants, termites and bees construct their nests in the wild, adjusting the construction to the surrounding environment by using natural cavities or by removing material to achieve the desired shape. By doing so, they create a dynamic construction that is tailored to their specific needs. Organisms in captivity adjust their nest to the given conditions rather than showing instinctive building behaviour. If the nest is restricted in one direction, it will develop by accommodating and adapting to the design restrictions. Despite efforts of modern city planning, most cities have areas with non-conforming urban housing where inhabitants claim abandoned or unused space to create living constructions integrated in the area by adapting to site-specific conditions and materials. The outcome might be less refined than housing areas planned by an external party such as city planners and architects, where the resulting living conditions are produced according to a predetermined vision of the average person's requirements and the idea of how contemporary housing should be constructed and regulated. Instead, these housing areas represent a more dynamic approach to urban housing, ownership and public space.

City planners often have a fixed idea of how the designed housing units and areas are supposed to be used. Their building plans include areas for socialising, recreation, work, transportation and green areas to incorporate nature in the

living surroundings, based on ideals associated with functionalism and attempts to rebuild destroyed cities after World War II (cf. Lago 2004: 11). Perhaps these areas would be different if the assigned usage of the space was decided by local inhabitants with their individual needs. If an area is excessively designed, the possibilities for the user to adapt to the space are limited. The user has to adapt to the given circumstances as opposed to a scenario in which the space and users develop in an organic, symbiotic way. According to research by Chalmers University of Technology, modern apartments lack possibilities of customisation without the need for further adaptations and renovations. This leads to discussions on the long-term sustainability of contemporary residential buildings from a social perspective. Questionnaires have shown that inhabitants tend to rearrange living spaces and floor plans due to limitations of the original design. Motivated by the original builders' ambition to fit more apartments within fewer square metres, open floor plans often prevent a creative use of space (cf. Femenias & Geromel 2020).

»Housing is no longer seen as a basic social need – it has become an instrument of profit making, transforming today's cities into sites of intense displacement, exploitation and poverty« (Vasudevan 2017). The restrictions of pre-designed housing and individual attempts to adapt to them are similar to how synergistically interacting organisms nest in captivity by adapting to constraints. The variety of nesting (and thus housing) forms of free-living organisms indicates a wider diversity and creativity than found among the nests formed in captivity. Superorganisms without restrictions adapt their nesting to the surrounding environmental factors, like urban squats or illegal settlements. This contrasts with contemporary city planning, where the environment is changed to suit the housing unit (or nest, speaking in terms of the superorganism).

Through industrialisation and urbanism, humankind has in many ways detached itself from the notion of being connected to the environment. The concept of humanity as a life form disconnected from nature has been widely spread, but with a rising environmental and climate awareness, new visions of humanity and its role have emerged. Understanding the city as an organism connected to the biosphere can help us find more sustainable forms of urban life.

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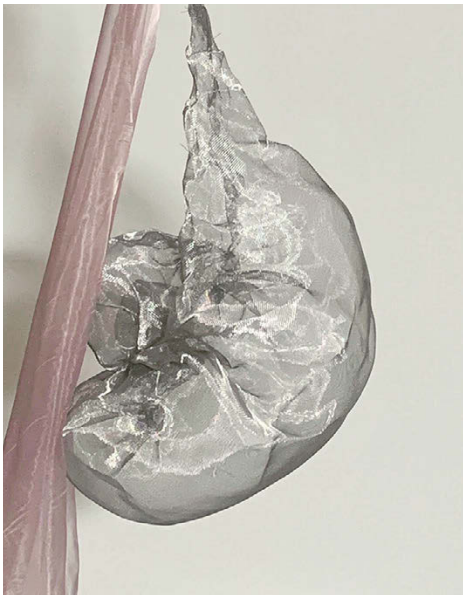

»In thinking about cities as superorganisms, Spång is interested in the interaction between inhabitants and their relationship to urban space and the biosphere as a whole. As she explains, her objects are inspired by the way people look for niches in cities designed by urban planners and architects, places that they use and interact with – like insects or other kinds of animals that adapt their nests to their surroundings, depending on the given environment and reigning living conditions. Spång's view of urban projects and phenomena are not simply romantic or misty-eyed. The delicate construction of her nests relates to the insecurity of many urban existences or living conditions as well as the dependencies and precariousness that are inherent to every life.«

Interpretation of the project written by Dr. Kea Wienand for Stiftung Berliner Leben, 2020.