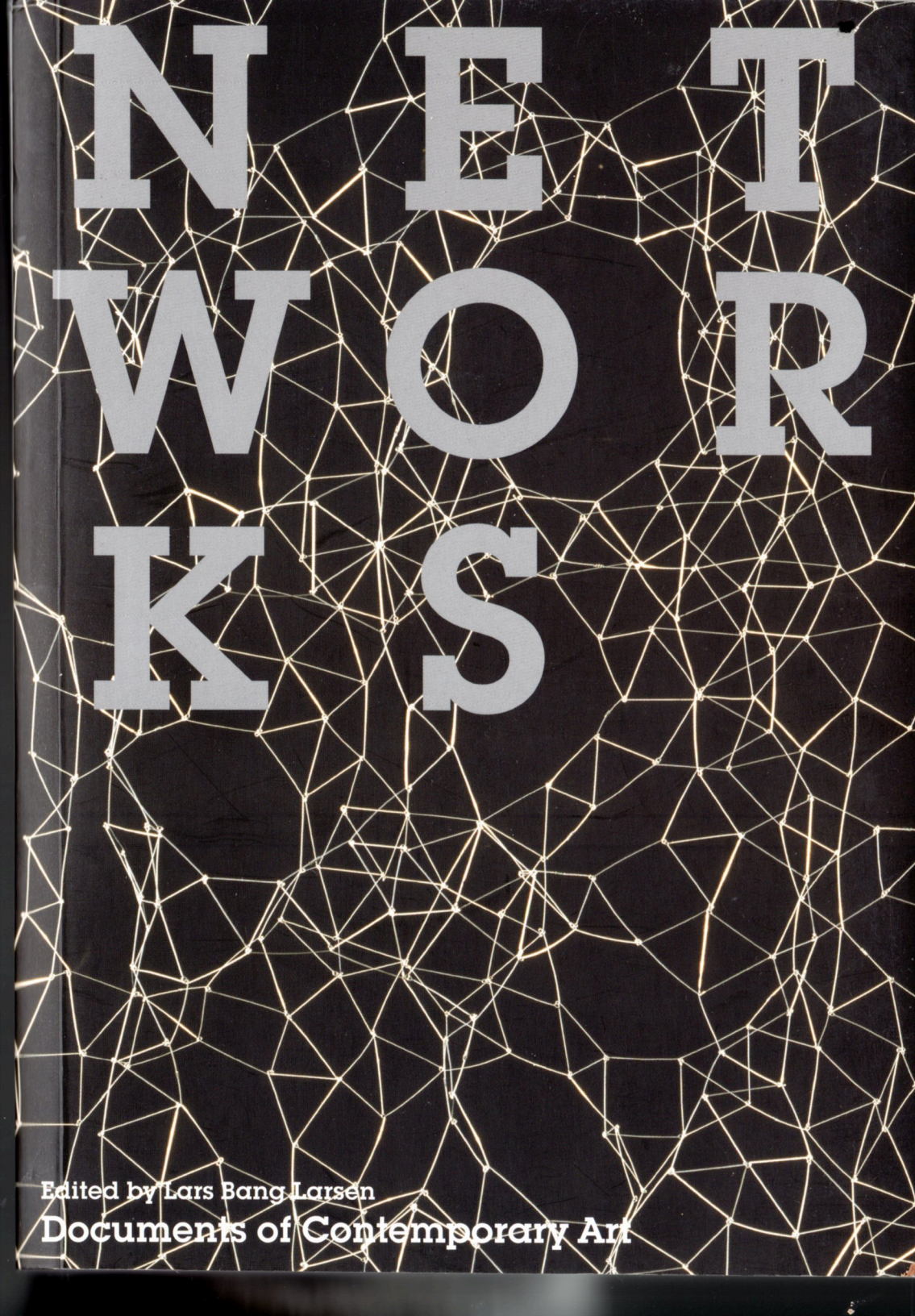
NETWORKS
Edited by Lars Bang Larsen
Documents of Contemporary Art

Pia Lindman
Learning from Mould//2013

Breathing mould drove me to investigate the processes of building houses

Being poisoned by nerve toxins produced by mould means that a complex set of biochemical and biomechanical events are set in motion in the body. The personal experience of poisoning is an even more complex set in which symptoms and sensations travel in feedback loops between the brain and sensing organs and cells. Since the toxin affecting you is often quite invisible and indeed scientifically immeasurable, your symptoms appear – even to yourself – absurd and weird. This incongruence of your own bodily experience with the rationale to which your surroundings (other people and you yourself) adhere makes the condition of being poisoned always also a social and psychological event. It is a highly personal experience and you feel isolated from those who do not experience the same. Your friends suggest you are a hypochondriac. In this moment, Evelyn Fox Keller's criticism of scientific processes is a helpful reminder of the relativity of medical 'facts'. Some decades ago, Fox Keller proved that intuition plays a major part in the processes of scientific discovery and invention, beyond rational thinking. In 'Slime Mould', an essay from 2011, Fox Keller tells us how a small, amoeba-like protist, a mould called Dictyostelium, challenged the 1960s anthropomorphic views on nature – those which assumed that life forms were organized by some predetermined plan or conscious will: '... the aggregation of a population of single-celled amoebae proceeds spontaneously, without ... founder cells; the population emerges as the product of *decentralized and local interactions* among molecules secreted by individual cells.'

In other words, slime mould is a self-organizing dynamic system, and Fox Keller continues: 'There is no "intention" guiding the development ... no agent "doing" the work.'

Instead there are local and individual parameters for action (or reaction) for changing circumstances on a cellular level: the slime mould transforms its life-forms depending on food supply. Fox Keller's slime mould research proposed new ways of understanding the organization of life. Like the slime mould, moulds in general appear to be semi-conscious and confusingly animal-like, yet plants. Understanding the hybridity of moulds does require giving up strict scientific categories – something scientists often resist, and thus Fox Keller's research was not well understood until decades later.

Learning my lesson from mould

Our relationship to our environment starts with our senses. The first field mediating this relationship to us is our skin; a connective tissue to the outside realm; a communicative and sensory organ. Indeed, it is not an impermeable border of an individual in regards to others. Mind, body and skin comprise a minute realm where everything existing in the world can appear and fold into the mix of passions, sensations and experiences. Thinking, practices of living and research are located both in our bodies and elsewhere in the universe, and are immediately interconnected through affect. In this sense, our bodies are the perfect sensory organs, 'measuring' instruments, in regards to all potential knowledge and action in the world.

Here it becomes relevant to introduce an expanded notion of senses and skin, one that includes taste, tactility, memory and genetics. For instance, my knee is hurting because I am no longer running barefoot on the sandy surfaces of a savannah. Yet the bone structure of my knee supports that kind of movement rather than sitting in a chair all day. In other words, my bones include information of former life forms tens of thousands of years back in time. The sensed world includes such elements as time and space.

The sensed world can be seen as an intersection between materials, objects, human and non-human life forms. What are the dynamics between all these elements and how do they feel, obstruct or activate energy and the sensory world around them? I propose to view this dynamics in terms of both human social interaction and human and non-human interaction with space, materials and objects, as well as with animals, microbes and various kinds of resonances. This means to say that I place no exceptional value on the human-to-other relationship but want to understand how other relationships (not including human parties) may affect the sensed world as well.

Approaches to Research

Human rationality seems to be drawn to a teleological approach to research. A sensory organism is seen to offer known inputs, and research is conducted so that the effects of given inputs are observed and measured in the organism. Based on these findings we develop applications (services, products, inventions) to this known input-output relationship, which is isolated from other relationships. In this model the sensory organism is separate from the 'application' that has an effect on it. The body is also seen as separate from the input that gave rise to the invention of the application.

I do not see the world functioning according to the model above. I suggest approaching 'input' and 'output' as mutually transforming in dialogue, and simultaneously intertwined with many other processes in the same time and

space. A sensory organ is not a separate entity. Rather, its borders are fuzzy and porous. Many fuzzy and porous sensory organs together form fields of interaction and influences in which many inputs and outputs converge towards and away from each other in various patterns. These are fields and bodies of varying intensity of attention and action. To relate to and to invent and connect an 'application' to these fields requires a more complex and always partial understanding of the interconnectedness of a sensory organ with itself and the surroundings. Maybe the 'application' no longer can be thought of as such, but rather as yet another field of influence.

In my research I try to identify fields of influences and learn what elements make them energized. I experience this in my own body: impulses of various forms and origin traverse through me, in and out of my skin. Impulses of touch, temperature, bacteria, sounds, vibrations, even the resonances of various atoms, all cross through, in and out of my body. Many of these events pass me by without any interaction with my brain, and yet some may emerge to consciousness, even as infinitely small as just hints. These notions may be baked back into the traversing of impulses in my body, now folded in together with memories, further impulses from the nervous system, ethical and utilitarian judgements and emotions, emanating more or less from my conscious mind. Affect, baked in with these 'rudiments' of my mind, forms this field of potentialities, pathways comprising both direct signals of the nerves and conscious thoughts. Pathways that sometimes look like decisions. The rudimentary pathways, those that are never expressed (lost out in the final decision-making process), remain in the body as tendencies, suspended actions, impulses, a field of potential.

A laboratory in real life

I am currently building my new home with straw-bales and clay in Solbacka-Fagervik. I collaborate with the Natural Building Company and architect Kati Juola. On the farm Solbacka, our community of five households is building an eco-village, which is at the same time a research laboratory for ecological living, community building, construction, and work – including energy production, waste management, heating, soil maintenance and production, and water systems.

Building my house in Solbacka, I train myself for further interventions into and collaborations with current common processes of planning and constructing of buildings. Making the construction process my laboratory, I want to research the tuning of buildings: how is a building connected to the soil it is rooted in, with the air it breathes, the organisms that traverse through and dwell in it, the water that flows and fumes in it. Air, water, soil, heat (energy) harbour molecules,

resonances and microbes facilitating various processes relevant to the tuning of a building. This tuning is also contingent upon human social energy, something that is 'baked' into the processes of constructing and living in the building together with the microbes, resonances and molecules.

Building as a body of sensory organs

I propose the perspective of a building as a body, with various sensory organs. This building is also connected to the field it is built upon. It has a relationship to the soil under itself, and to the water streams and air around it.

To give a few examples, if we collect heat out of soil to heat our houses (a technology currently in use), what does that mean to the energy of the soil? If we harvest electricity out of bodies of water (from the minute movements of microbes – also a feasible technology), what does that mean to the energy of the water?

What happens to the quality of the space and air in a house, when it is heated by fire, or by electricity? Different application of energy, i.e. heating, ionizes the air differently. Do we sense it? Or do the microbes sense it, change their constellation, and then we sense the change in the constellation of microbes in the air? How do various techniques and materials influence the atmospheric, social and sensual realms of those who dwell in them? For instance, covering walls with mixtures of clay containing fibres, microbes and minerals influence the haptic quality of the walls and the air inside the building. Further, is it possible to diminish negative effects of electricity and electromagnetic radiation with clay – as some current research suggests?

Indeed mould traverses our living bodies as if we were a bundle of inanimate proteins for them to burrow or eat, and bacteria communicate with our cells, telling them about a world 'out there', a chatter of which we are very little aware, not to mention the resonances of all matter in the world, constantly humming to every part of our bodies, the boundaries of which thus dissolve, because we are also resonance, a cloud of microbes, energy, smell and light.

Bringing back the social

Can we democratize or do-cratize planning and building processes, and create event/ceremony/performance-based processes of building? How can we build working with social processes and community action? For instance, can we amass people to contribute with recyclable materials and help produce matters/objects for dwelling and for social and material nourishment, such as furniture and soil for gardening? Can we set up collective production and re-use -cycles, intended to sustain the health of the building and those who dwell in it? Can we touch and be touched by our buildings and can buildings help us touch each other?

Concrete functions with which to experiment
– Transformation and application of energy: heating and cooling of space, bodies and food
– Light: colour, artificial, sun and fire
– Water, filtering, energizing (salts, stones, plants and light)
– Soil, ground, objects: energizing with heating, cooling, microbes and light

Practices (social manifestations of the above)
Sauna, bathing, sleeping, dancing, cooking, eating, drinking, dwelling, gardening

This research suggests an aesthetics that manifests itself to humans only on a sensorial level, since it is mostly about life on a molecular scale, rather than something visible to the human eye. Most of these minute activities are not consciously sensed. Indeed, perhaps microbes sense them on some not-so-conscious level. Therefore, we could talk about 'aesthetics of atmosphere' and 'sense-sphere'.

In Finnish, we could use the words *olon estetiikka*, which translate into 'aesthetics of being on a rather notional level'.

Pia Lindman, 'Learning from Mould', text commissioned for this publication, 2013.

Koncern°
FAX ONLY: Send more information//1991

Let us begin by establishing – as can also be seen in most of the literature written on the subject over the last few years – that the more communication which occurs in any given system, the better. This is in a way true with regard to biological systems, such as the brain and nervous system, in addition to mechanical systems, such as automatic pilot and industrial robots, and furthermore for social systems, such as primitive tribes, trade on the stock exchange and business organization. It would be appropriate, however, to observe the following three factors, which make it clear that certain functions can only work when certain variable pairs are not allowed to communicate, or when communication between these variables does not exceed a certain limit.

1 If it takes ten seconds to receive a given message, it is obvious that revisions of the message should not be sent more frequently than with intervals of eleven seconds. Correspondingly, if it takes ten years to observe the effect of a reorganization of the structure in a business, then such reorganizations will only be appropriate with intervals of eleven years. In connection with such incremental functions the amount of communication can be harmful if exaggerated.

2 When observing an organism, we see how it can take advantage of the suppression of communication. In a given situation, in which an organism first has adapted to condition A and subsequently to condition B, only to be presented to condition A again, the organism in question will only under certain circumstances be directly capable of producing behaviour that corresponds to condition A. This can only be done if those parameters that applied to condition A have not been affected during the adaptation to condition B. The existence of such communication will then be harmful and may entail functional isolation.

3 If we take a multi-stable system (MSS) and consider its possibilities of becoming functional in a relatively short time, then this is connected to its approximation to a stable form. In this way, any linkage of several communication channels will remove it from a stable form and, no matter what else might happen, prolong the time used to achieve operationality.

If we now attempt to introduce **Koncern°, FAX ONLY: Send more information** in this schema, many operational failures will appear in the form of situations of the types 1, 2 and 3. This has entailed a high degree of functional isolation and reduced operationality in relation to the overall objective of the Reflux system, resulting in exaggerated accumulation of incoming, not-decoded messages (circa 8 units). We must acknowledge that the structure of the variable behaviour has often failed, because the overheated organism has not been implicated as a stable form. For this reason it is now our programme to turn the communicative potential of the organism into an operative 'support model' in appropriate periodicity (see 1) on a par with other factors that the communication always takes into account: the positioning of the tribe, the influence on the nervous system, the brain rights, the primitive message, etc.

The comprehensive pilot arrangement Reflux has gained the status of a cultural project with the aim of reorganizing the communicative economy within not so few biological systems (BS). A BS is not merely an MSS with reduced operationality consisting of a diffuse amount of genotypes. It is also a 'continent' within the architecture of the communicative population in the

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Documents of Contemporary Art

In recent decades artists have progressively expanded the boundaries of art as they have sought to engage with an increasingly pluralistic environment. Teaching, curating and understanding of art and visual culture are likewise no longer grounded in traditional aesthetics but centred on significant ideas, topics and themes ranging from the everyday to the uncanny, the psychoanalytical to the political.

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NETWORKS The rise of electronic media has initiated a cultural shift from the modernist grid's determination of projection and representation to the fluid structures and circuits of the network, presenting art with new challenges and possibilities. Artists have used the 'space of flows' to set up countercultural or utopian scenarios, reveal hidden forms of subjugation or initiate new types of reciprocity, in works that address changed conditions of co-dependence and new sites of social negotiation.

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