Collective learning to handle (self)organization
Teaching and researching Big History

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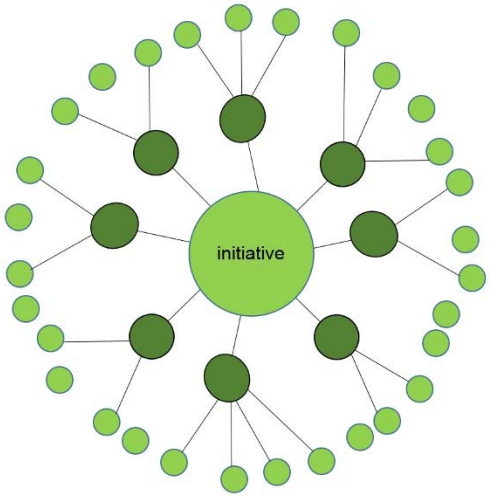
Since the eighties, I research questions of organizing and work with the network as an ordering principle. I start with some words about networked organizing in general, before I turn to its place in the big history education for children in particular.
Networked organizing helps us humans to organize ourselves in relationship with everything there is and to do so while making use of the self-organization of everyone involved. In networked organizing, the network is both ordering principle and unit of analysis.



Someone who organizes in a networked fashion starts from a current initiative or theme, analyzes everything involved (entities, things, ideas, thoughts, observations, resources and so on) and searches for nodes that connect these ingredients with the initiative. This way, the network gains identity. Next, the network further develops itself to strengthen its capacity to handle complex issues.

What is the value of networked organizing? Well, I posit that the future of humanity profits from the reinforcement of the capacity to handle issues, which also is, as said, the result of networked organizing. Increasing complexity demands commitment to and insight into the relationships between subject, object, space and time. Inspired by Big History, we can say that these relationships (between subject, object, space and time) have emerged over and over again in the course of millions of years. Whatever appears depends on the current starting point and its circumstances, and is always a surprise.

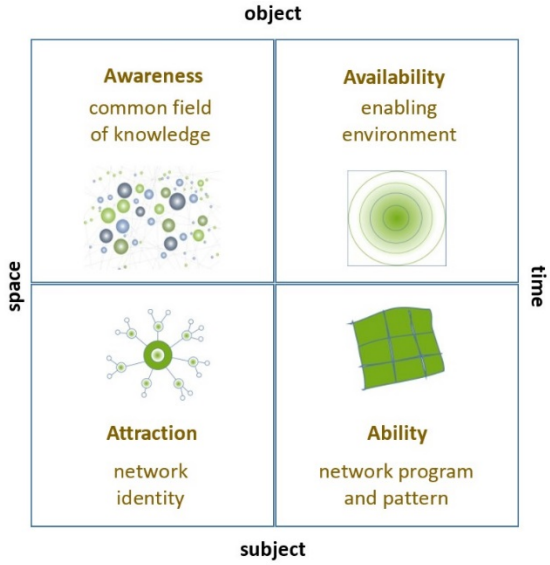
Yet, stating this as a matter of fact isn't enough. Networked organizing isn't what we humans easily do collectively. It becomes more and more clear that humans cannot completely oversee their role in this Big History, or at the very least are restricted in how *they organize with and profit from everything there is.*

I think it is of the utmost importance that people learn to organize in a networked fashion at the youngest age possible. It is therefore my ambition that children in elementary school learn to organize their own development in a networked fashion and along the way learn to make use of the total big history and develop the capacity to handle the complex issues of the future. The focus is not so much on knowing the answers, but on perceiving involvement, creating and deepening relationships, making use of potentials and opportunities, and being prepared for surprises.

The role of the teacher in this is crucial. The craft of the teacher is first, to posit big history as inspiring context, second, to assume the self-organization of the child in this context and third, to facilitate the development of the child via networked organizing. It is the challenge for the teacher to become more and more superfluous. This way, the pupil makes more and more his own school in relationship with everything involved. The responsibility shifts from teacher to pupil. The relationship between teacher and pupil generates a continuous dynamism between organizing from the child (organizing from the inside) and organizing from the teacher (organizing from the outside). The craft of networked organizing is to connect these two. The context of big history then becomes a facilitating context and self-organization becomes a developmental challenge.

As mentioned earlier networked organizing starts with analyzing the network around a current theme or initiative. The analysis of the network generates a network identity. The teacher teaches the pupil to build up his own network with the network analysis for initiators. The pupil is the one who takes initiative and the teacher can help by asking to name the initiative as core. We use paper table cloths to make the network analysis. The child positions the initiative or core in the middle of the table cloth and in a brainstorm writes up everything that is involved in a large circle around it (things, ideas, entities, thoughts, et cetera). Next, he looks for people he knows who can function as a link between the initiative and everything involved. This way, the network appears. The child invites the people and repeats the networked analysis together with these people.

The network develops from four different angles based on the relations between subject, object, space and time.



The first angle is attraction. Attraction concerns the initiative that radiates and attracts the current involvement around the initiative. The network builds an identity and develops from the core. Remove the core, e.g. let go of the initiative, and the network subsequently slowly falls apart.

The second angle is awareness, which emerges in conversations. The network builds a common field of knowledge. The initiative develops into a shared theme of the network. Through the network we gain access to a whole of nodes and connections. This is also called a nodal universe. Each node and connection opens the way to a diversity of sources. The conversations are an aid to generate and deepen a shared awareness of the theme. In communication the nodes become visible and connections can be made. We use different tools, for instance a narrative analysis to collect personal stories and create a shared story, or a network portfolio to collect stories, examples, initiatives, remarks, words, ideas, networks and events about a current theme. We use theme analysis to start the collection.

The third angle is availability and that refers to the potentials of the network and its interactions. The network builds an enabling environment. In an enabling environment, use is central. This is in line with the prepared environment, an aforementioned principle of Maria Montessori (1949). An enabling environment organizes access to each other's networks, tunes in on opportunities to use and changes in the course of time. The challenge is to repeatedly fine-tune this environment to its user. Inspired by the four basic operations of arithmetic and the three major ecological regime transformations (Fred Spier), one can say that a user of a prepared environment learns to add (as a gatherer and hunter), to divide (as a farmer), to subtract (as an industrial) and to multiply (as a concept of mankind).

And finally, the fourth angle is ability, the capacity to handle issues. It is not necessary to know all the answers if we are prepared for the surprises and to make creative use of everything there is. The network builds up its programs and patterns. Ability can grow as we construct examples. Key here is practicing what we are, what we know, what we want and what we can as a network. This translates into a practice of self-organization and a visualization of the development of a self-organizing network.

These four angles develop on their own, sequentially, interactively and as a whole. The four angles assume each other and each angle contributes in an unique way to self-organization, while relating to the others. Bateson (1979) helps to connect these various angles with each other. He describes a ‘pattern that connects’ as a dance of interacting parts.

Self-organization from a network perspective is about the human as he is accompanied by networks that consist of everything that is involved. By connecting these networks, the separate initiative power of each core remains active.

It is my experience that when you learn networked organizing and learn to build up and see your own programs and patterns (in life, work, research and so on), you learn to see and read programs and patterns in everything there is. The emphasis is on collective. My hypothesis is that we as humanity can collectively learn to handle self-organization from a network perspective and this will make available an enormous potential of powers, a potential that at the present time is hardly used and that can contribute to the capacity of humankind to handle issues.