Jumping Conversations

Wettre, Andreas, Dudani, Palak and Sevaldson, Birger

Relating Systems Thinking and Design
2022 Symposium
University of Brighton, Brighton, UK,
October 13-16, 2022

Jumping Conversations

Andreas Wettre, Palak Dudani, and Birger Sevaldson

Jumping conversations are essential when working with complexity. When talking about complex situations, one needs to find interconnections. Therefore, there is a need to jump between the different connected places in a complex system. However, jumping between issues in conversations breaks the schemata of what often is looked upon as polite and effective, namely, focused conversations, where one is expected to stay focused and talk about one thing at a time. When working with complexity, there is a need to work with transdisciplinary groups and jump between different perspectives, scales and levels to understand how details might affect the whole, depending on the perspective that is applied. This makes focused conversations in interdisciplinary groups extremely challenging. The narrow focus diminishes the opportunity for learning from the interdisciplinary mix.

Unfacilitated jumping conversations often lead to people talking past each other. People get lost in the jumps. However, focused and framed conversations fail to elucidate hidden contradictions and differing perspectives, and people start self-silencing to reduce frustration. This causes the group to miss out on important information and build shared perspectives. The traditional way of working around this is to examine one part at a time using PowerPoint presentations. Unfortunately, this can prevent participants from seeing connections and how some elements might influence others.

There is a need to facilitate jumping conversations that are inclusive and fluid. We have experience from numerous organisational workshops on how gigamaps work as mediating tools. We built on this experience to describe how gigamaps and other visual tools help in conducting jumping conversations in groups. Using gigamapping in unstructured open-ended conversations makes it possible to jump conversations while ensuring that group members can follow and understand these jumps. This technique ensures a fluid and sense-sharing conversation that bridges disciplinary silos and uncovers differences in perspectives and hidden contradictions.

KEYWORDS: complexity, conversations, systems, perspective taking, Gigamapping, Systems Oriented Design

RSD TOPIC(S): Cases & Practice, Methods & Methodology

Introduction

When a team works to make a decision, they are likely to get to the decision point faster and with a sense of consensus when the conversation leading up to the decision is focused—that, is, sticking strictly to the context and not adding information unless it is important. While this works well in highly coordinated groups working with highly framed issues, it works badly in less coordinated, new and interdisciplinary groups, as well as in groups collaborating across different silos. Strictly framed and focused conversations can easily lead to group thinking, where participants answer what they think makes the group leader happy, follow the majority and practice self-silencing.

Fluid conversations with multiple ways of shifting and moving in and out of topics are central to working with complexity. It is through these conversations that we engage in acts of building, alternating, distinguishing and sorting. Our ability to talk through, across and around topics and issues, weave layers and identify relationships within and between systems is crucial to understanding the complex set of relations within which we operate.

While focused conversations, at best, bring perspectives together within a framed set of meanings and concepts, unfocussed conversations tend to fragment and split into several disconnected threads. In jumping conversations, the wandering and eliciting of different perspectives and various threads are needed; however, we need a way to overcome fragmentation. To achieve this, we propose visual conversations to hold and bind the threads together. The form of visual dialogue we use is called gigamapping (Sevaldson, 2011, 2018), a technique that has been specially developed for visual dialogue in complex situations. Gigamapping works as the "glue" in these unstructured organic and emergent conversations. Visual mediational tools can play an important role in articulating, communicating and understanding the complexities of system relations.

We describe jumping conversations as being able to move across different perspectives and scales of information to build and communicate relations between them. We argue that jumping conversations are central and crucial to working with complexity. Without the ability to jump from point to point within a discussion, it can be challenging to make connections, reveal relationships and create networks. This becomes especially evident when complex systems are discussed with multiple stakeholders as they bring their own diverse subject matter, knowledge and lived experiences. Even while using the same words, these might not be on the same page.

Difficulties in jumping conversations

A free-flowing conversation might follow the participants' impulses and insights and unfold without any set structure. While this is crucial to discussing complexity, it can be a challenging experience for the people involved in such conversations. It can be difficult to distinguish between the foreground (topic) and the background (context). This may result in people talking past each other, where entering into a conversation or "jumping in" might be seen as a disruption. There is also a challenge between the roles held by the listener and speaker and the meanings each makes. For the speaker, the interconnections or jumps between topics may seem clear, but for the listeners, the connections may seem unclear or blurry, without any visual support to bring the image into focus and clarify what is going on to all parties.

Figure 1. A group of professionals mapping out an organisation and its processes. The mapping induces jumping conversations, helping the partaker to create a shared image of the whole of the system at hand as well as the specialities and details best known by the individuals (Photo: Andreas Wettre).

Learning to jump

Building on Sevaldson's (2018) chapter, "The Evolution of Gigamaps", the use of visual documentation has been crucial to supporting discussions on complex matters. Visuals in the form of drawings, doodles, annotations or images can be treated as scaffolding or pins on a map to hold ideas and concepts in place, while the conversationalists follow

their train of thought. Participants can easily jump from one place in the system discussed to another place by pointing and drawing, while the group can easily follow. Being able to mark and capture multiple trains of thoughts on paper helps everyone to be on the same page, as well as allows them to return to a specific matter and point to it. As one of the participants mentioned, “If it’s not on the paper (during gigamapping), we do not jump back to it”.

Methods and methodologies

The idea of turning jumping conversations into a systemic design practice is based on years of practice and experience. The first author’s experience has been central to the development of the concept. This combined experience can be summarised as follows:

- Teaching undergraduate and masters’ students (from 2013 to the present) at the Oslo School of Architecture and Design, including workshops and courses at other universities.
- Teaching SOD and gigamapping for practising designers and other professionals in the part-time master executive course at The Oslo School of Architecture and Design (AHO) (2021–present).
- Teaching gigamapping non-design practitioners in workshop settings in Oslo (2009-present). This includes hundreds of workshops with professional groups, including industry leader groups.
- Facilitating conversations, meetings and workshops with transdisciplinary teams in approximately 50 situations per year for 20 years (2000–2020) in more than 100 teams.
- We also include our reflections on academic and research work with doctoral students at AHO and industry practitioners from systems engineering organisations who have collaborated with us on H-SEIF research projects.

Our analysis of the concept is based on finding patterns in how to use visual jumping conversations.

Patterns of practice, what worked and what did not work

Through our vast combined experience, we have tested a range of different methods to create meaningful conversations with people from diverse backgrounds and positions, covering a wide range of topics and contexts. This has provided us with first-hand experience that individuals with completely different perspectives face serious communication problems when they interact with each other. We also recognise that team members tend to discuss common rather than individual or unique knowledge, even if that unique knowledge is essential to the team task. This is well described in Extreme Teaming (Edmondson & Harvey, 2017).

We attempted to facilitate focused conversations, divide the task into smaller parts and work with one part at a time. This approach led to losing out considerably on interconnections and, consequently, the inability to develop a common picture of the complex whole.

We also sought to sit in circles to facilitate dialogue and saw how people struggled to follow the emerging path of the conversation. We have experienced many situations in which people did not realise that they were talking about different things. This also led to frustration, as many participants experienced it as “we only talk; we need to do something”. We have experienced how short-time memory fails to maintain a connected dialogue unless it is supported visually.

We have used gigamaps in more than 100 workshops with leadership groups standing around a table and have seen how helpful that was. In this approach, jumping conversations were conducted, and people were able to follow these jumps. They were also able to naturally split into smaller groups and merge back into a larger group. As long as the different perspectives/parts were put onto the map, the participants did not forget and were able to jump back to these points. Gigamaps helped us continue the conversations in the next meeting, preventing the next meeting from being a copy of the previous one.

Pedagogical view

In our “Introduction to Systems Oriented Design” course at the bachelor’s and master’s levels, we made students work in teams and practice gigamapping to understand

systems of which they had almost no prior knowledge. We observed how they used jumping conversations to acquire rapid learning (Sevaldson, 2012; Sevaldson et al., 2011) and can show impressive insight into different systems after a few weeks. The learning effect comes from having jumping and open-ended conversations with stakeholders and actors, which correct and elucidate unknowns.

What is a jumping conversation?

When a group or team is working on a complex "issue", it is important to actively gauge the participants' perspectives (Edmondson & Harvey, 2017). Different perspectives need to be sought out and explored. Furthermore, we need to zoom in and out to look at different scales and examine both desirable and non-desirable futures from various time perspectives. Small elements and details need to be studied to understand them and how they influence and are influenced by other elements, as well as the whole. We should also discuss the boundaries of the complex issue at hand, assessing what is included and what should be excluded. To make this even more difficult, involving more people with different competencies, backgrounds and specialities are also required. Furthermore, we need to evaluate if, why and how to follow the various stakeholder needs and often conflicting interests.

The only way then to recognise complexity, design interventions and determine the effects of our interventions is to talk about the different effects. Then a jumping conversation should be conducted, and that involves jumping from one detail to another, jumping from one scale to another, from one perspective to another, and so on. There is no way to understand the whole if the issue is divided into sections and discussed one after the other. We also know that individuals with completely different perspectives face serious communication problems. A problem that is overwhelming for some might be marginal for others. When stakeholders with different perspectives and priorities interact with each other, it is hard to understand others in the group when they jump into the conversation. Why do they jump? Where do they jump to? Without visual support, this is very difficult to determine.

This process was first described by Andreas Wettre in 2012 in an internal report on gigamapping reporting on the feedback from leader groups participating in gigamapping sessions:

> Gigamapping helped them to have a “rambling” discussion that makes it possible to get an overview of a whole, relationships and consequences, and they continually worked on a proper (high) level. This demonstrates two typical problems for management groups: A) when they are decomposing a complex situation to discuss a portion at the time, it becomes impossible (difficult) to stick to the case because it has so many links to other issues (and if one does not have a gigamap each individual in the management team will jump on the links they associate without others having a chance to follow); B) when discussing individual cases, the discussion tends to be too detailed and they dig themselves down into things and become more officers than leaders. As leaders, they should focus on the major relationships, balancing risk and burden of organization and priorities (Sevaldson, 2022, p. 233).

One example:

> A transdisciplinary group in a bank was working on the future of banking when “open banking” was introduced. This is linked to General Data Protection Regulation (EU GDPR) and who owns the data the bank holds on their customers. Therefore, we had to understand the new regulations from the government. It is also linked to APIs (application programming interface), which to some was very technical and difficult to grasp, but everybody needed an overall understanding of this and its limitations. Open banking challenges the power dynamics in the business and might change consumer behaviour. Moreover, it opens up the possibility for new actors such as Google and Apple to move in and change the role of traditional banks. To get the team to understand, accept uncertainty, decide on what to do and monitor progress, we needed to jump between these topics as they all influenced each other. It was essential to decide how to invest in development, what should be designed and developed in-house and what could be bought as “products”. In an 8 h workshop, we discussed and highlighted

the different parts of the gigamap, performed ZIP analysis, worked in groups and moved back again around the big gigamap to jump between the different perspectives, zoom levels and time axis to establish a common understanding. The physical pointing on the map was critical to follow the many jumps conducted throughout the workshop.

Figure 2. Gestures in a jumping conversation (Photo: Birger Sevaldson).

Mediation tool for jumping conversations

A mediation tool is usually an artefact that helps us understand what we are talking about. When used as a visual that allows us to point at different elements, we have seen that it is effective. Visualising things makes it easy for us to materialise both the material and immaterial aspects of complexity. It enables working together with others and understanding their perspectives by visualising intangible information so that we are on the same page (Wettre et al., 2019). We ourselves have used a wide variety of visualisation tools for this purpose (Dudani, 2020). Next, we provide a short overview of some of the visual tools we have used in our work.

Gigamapping

When a group is involved in gigamapping, it can be observed that the map, as it evolves, serves as an effective mediational tool for jumping conversations. The participants can physically point to what they are talking about. When jumping from one point to another, we can move towards where that point is on the map and point to it or draw/write additional information connected to it. It is natural for the group or at least part of the group to stand up during gigamapping. This makes it even easier to use gestures to show where we are jumping to and also to see who follows the jump and who stays put at where we jumped from. We often see that discussions split and part of the group talks about one issue while the other discusses another. This works well because we stand at different points on the map. It is also easy to bring the group together and see the connections.

Gigamapping works well as a mediation tool for jumping conversations and should be used when one needs these kinds of conversations, even on those occasions where the map really is not needed. Jumping conversations happen all the time in teams without gigamapping; it works to some degree, especially in framed teams that are well-experienced. However, gigamapping reinforces the dialogue and helps move it into less known terrain.

Imagining, sketching and note-taking

At the core of the visual dialogue is the imagining and visualisation of the issues in the discussion. This can be illustrations and drawings or even texts and note-taking on a common large sheet of paper. This clarifies the differences in the conception and weighting of issues. It is also a highly efficient memory aid. The gesture of pointing is central to jumping. A participant will point at a different area on the map and claim that this is related to or affected by the ongoing issues discussed. Other partakers will immediately know where in the bigger system this jump is going and will be able, in an instant, to relate. It is also easy to jump back and continue the former discussion.

Metaphors

The use of metaphors has been shown to be useful in expanding the jumping conversation from resting in the known to travel to new themes and issues. Metaphors are linguistic devices that can be used to express and visualise the mental models that people use to interact with the world around them (Craik, 1943; Johnson-Laird, 1983). In a jumping conversation, sharing these mental models is central. They can prove useful in making critical systemic enquiries and building a better-shared understanding of complex systems (Dudani, 2021). As Dudani argues in her paper, "Just as complex systems are dynamic, changing, always in-flux, metaphors can also be seen as negotiative, and act as communicative devices that allow designers to engage with the fuzzy, indeterminate, relational, poetic, and emergent qualities of complex systems". In student projects (Dudani, 2019) and research projects (Dudani, 2020), the author has used metaphors to visualise complex systems and use them as mediational tools for discussions.

Figure 3. Right: Using metaphors to visualise the immaterial tensions within complex systems (Dudani, 2021). Left: Using balloons as a metaphor for shapeable futures (Dudani & Morrison, 2020). Photos by Palak Dudani.

Digital Miro board

When working in Zoom or Teams, only one person can talk at a time, which makes it more difficult to do jumping conversations. Digital Miro boards, for example, resolve this issue by making it possible for all participants to have access to space to document and visualise their talking points.

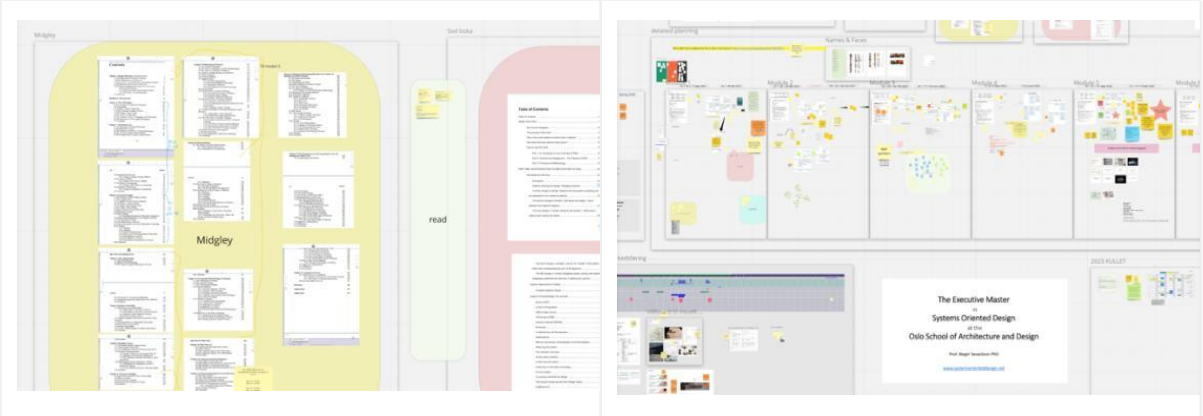


Figure 4. Right and left: Miro screenshots

Our experience with digital whiteboards versus physical media is premature. However, we can say at this stage that it works relatively well. We miss the physical gesture of pointing, which is immediate and spontaneous. Therefore, we lose some of the flow in the jumping process. However, after some training, people can follow the user icons. We think that the conversation becomes slightly more sequential and that digital media causes fewer jumps than physical media.

How to facilitate jumping conversations

We realise that gigamapping works best if it is natural to stand up and move around and if the map is big enough for the participants to be separated so that they can move and walk from one topic to another. As facilitators, we ask, when needed, “Where are you now? Can you point?”

According to the finding presented by Edmondson and Harvey in Extreme Teaming, “Those participating in extreme teaming efforts must do more than engage in mere information sharing or task conflict; they must emerge themselves in different

perspectives" (Edmondson & Harvey, 2017). By mapping, while talking about the complex issue at hand, it is easier to get the group to stay long enough within one perspective to understand it or to mark it with a Z so that they remember to zoom onto this as a possible next step.

There is a tendency when people meet to talk about what they have in common, and too often, experts with unique knowledge self-silence, as it feels socially risky to raise topics that they are the only ones with expertise on. When mapping, the facilitator can, as the map gets fuller, ask each individual if they see any perspective that is lacking. By doing this, an opening is created for unique knowledge so that the group can engage in active perspective-taking.

For many people, coming up with new topics is stressful, which means that the conversation jumps to yet another topic. Mapping and asking for perspective, details, connections and missing connections reduces this stress, and in that way, a better understanding is acquired.

Figure 5. Students at AHO are showing a jump in the conversation. Photo by Martin Hauge.

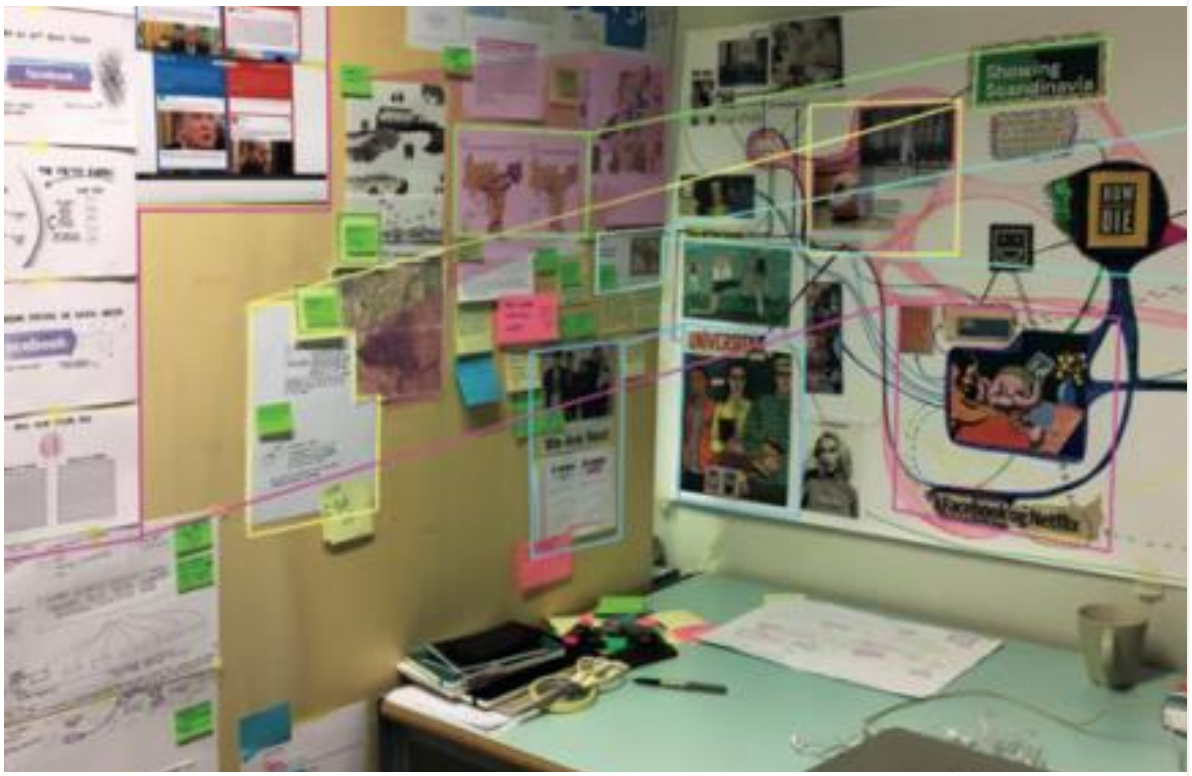
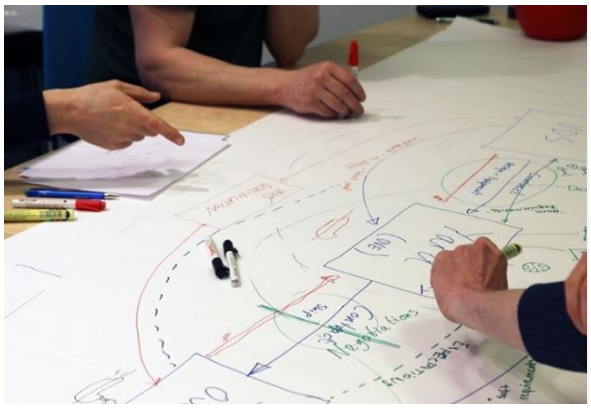


Figure 6. Three-dimensional gigamapping by the author as a design student to draw relations between topics and matters (Dudani, 2019). Photo and illustration by Palak Dudani.



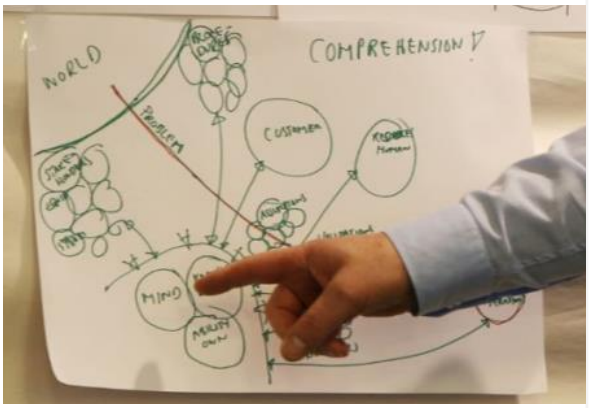


Figure 7. Jumping conversation between industrial engineers mediated via a gigamp (left). Workshop participant pointing to his reflections (right). Photos by Palak Dudani.

Figure 8. Gigamapping workshops to mediate jumping conversations in educational settings (left) and a conference setting (right). Photo by AHO and Palak Dudani.

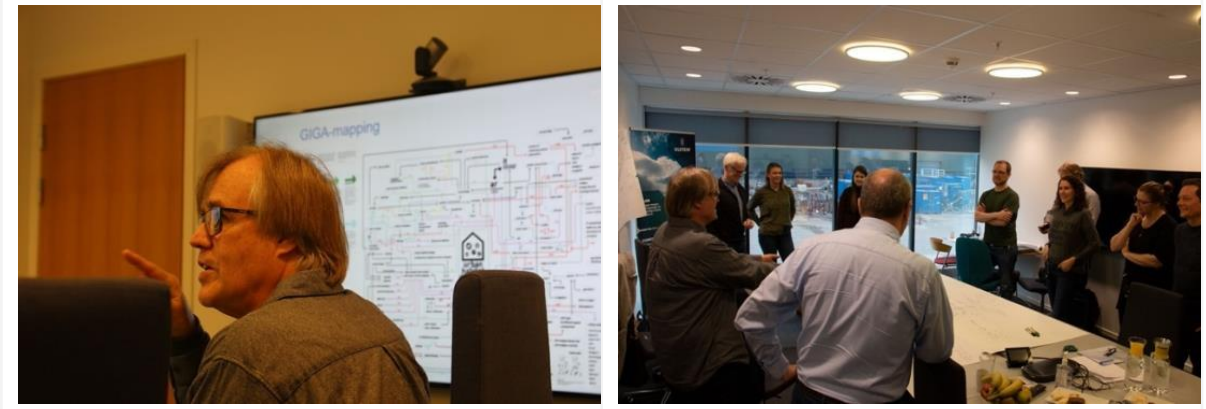


Figure 9. Industry participants in a workshop setting as part of the H-SEIF project. Photos by Palak Dudani.

Reflections

We all have experienced jumping conversations in different social settings. This can often take the form of “back to me” conversations, where one person in a group says something and is interrupted by another group member saying something such as “interesting you say that, because I experienced something similar and then—” This kind of action seems to be driven by trying to bring the attention “back to me”, which again implies that it is taken away from the initial context. This is NOT the kind of jumping conversation we seek to encourage. We do not want jumping conversations that sound more like a competition for context and attention.

Another form of jumping conversation happens when someone tries to make a point by offering an example from a similar situation in the past. In that case, the conversation does not get the point but jumps to the example mentioned and starts to discuss what actually happened in that example.

In this article, we claim that we need jumping conversations when working with complexity to understand the different perspectives and how different elements might influence each other. In other words, it is required to understand interconnectedness. We also need a mitigation tool like a gigamap to ensure that the jumps in the conversation are helpful in gaining understanding. We need something to ensure that we are doing the right jumps. The experience is that guiding the jumps needs to happen naturally and not by a clever facilitator, as the facilitator is limited by his/her own understanding. Experience shows that the gigamaps serve well as a mediation tool fostering jumps, although not necessarily only the right jumps—we seem to jump back into the right context when working with gigamaps. The paradox is that the gigamap seems to help this jumping conversation to remain focused.

However, with large groups mapping together, the jumping might be experienced as chaotic, and some might choose to pull out of the conversation. We need to further explore situations where people pull out of the conversation. What do we lose, and how can we bring them back in? There might be particular situations in which jumping conversations are more useful than in other situations. There is a necessity to explore the boundaries of jumping conversation as a tool.

Conclusions

We have facilitated gigamapping workshops primarily to develop a specific topic. However, in this article, we have been looking at this from a meta-perspective and trying to capture the learning of both the necessity of jumping conversations and how gigamapping works as a mediation tool when facilitating these conversations. Our next step will be to conduct further research on whether some gigamaps have special characteristics that make them good for jumping conversations. We will develop this further through partnerships with companies and test it more thoroughly with different student groups.

References

1. Dudani, P. (2019). Unpacking gentrification 2.0. *Proceedings of Relating Systems Thinking and Design (RSD8) Symposium*. IIT Institute of Design, Chicago. https://rsdsymposium.org/unpacking-gentrification-2-0/
2. Dudani, P. (2020). From wealth to wellbeing. *Proceedings of Relating Systems Thinking and Design (RSD9) Symposium.* NID, Ahmedabad. https://rsdsymposium.org/from-wealth-to-well-being-a-systems-oriented-design-exploration-of-imagining-alternatives-in-urban-housing/
3. Dudani, P., & Morrison, A. (2020). Futures design, language and systems – Towards languaging pluriversal futures. *Proceedings of Relating Systems Thinking and Design (RSD9) Symposium.* NID, Ahmedabad. https://rsdsymposium.org/futures-design-language-and-systems-towards-languaging-pluriversal-futures/
4. Dudani, P. (2021). Making metaphors matter within SOD. *Proceedings of Relating Systems Thinking and Design (RSD10) Symposium.* Delft University of Technology, Delft. https://rsdsymposium.org/making-metaphors-matter-within-sod/
5. Edmondson, A. C., & Harvey, J.-F. (2017). *Extreme Teaming: Lessons in Complex, Cross-sector Leadership* (1st ed.). Emerald Publishing.
6. Edvardsson, B., Tronvoll, B., & Gruber, T. (2011). Expanding understanding of service exchange and value co-creation: A social construction approach. *Journal of the Academy of Marketing Science,* 39(2), 327–339.

7. Johnson-Laird, P. N. (1983). Mental Models: *Towards a Cognitive Science of Language, Inference, and Consciousness (No. 6).* Harvard University Press.
8. Nelson, H. G., & Stolterman, E. (2014). *The Design Way: Intentional Change In an Unpredictable World.* MIT Press.
9. Sevaldson, B. (2021). *Designing Complexity - The Methodology and Practice of Systems Oriented Design* (Vol. Reviewers Manuscript). Common Ground Research Networks. https://doi.org/doi 10.18848/978-1-86335-262-8/CGP.
10. Sevaldson, B. (2018). Visualizing Complex Design: The Evolution of Gigamaps. In P. Jones & K. Kijima (Eds.), *Systemic Design: Theory, Methods, and Practice* (pp. 243–269). Springer.
11. Sevaldson, B. (2013). Systems Oriented Design: The emergence and development of a designerly approach to address complexity. *DRS//CUMULUS,* 14–17.
12. Sevaldson, B. (2012). *Very Rapid Learning Process.* Retrieved January 2, 2023, from https://systemsorienteddesign.net/very-rapid-learning-processes/
13. Sevaldson, B., Paulsen, A., Stokke, M. M., Magnus, K., & Strømsnes, J. K. (2011). Systems oriented design in maritime design. In RINA (Ed.), *Systems Engineering in Ship and Offshore Design Conference.* 2012 (pp. 13–26). London.
14. Sevaldson, B. (2011). *GIGA-Mapping: Visualisation for complexity and systems thinking in design.* Nordes, (4).
15. Wettre, A., Sevaldson, B., & Dudani, P. (2019). Bridging Silos: A new workshop method for train silo busting. *Proceedings of Relating Systems Thinking and Design (RSD8) Symposium.* IIT Institute of Design, Chicago. https://rsdsymposium.org/bridging-silos-a-new-workshop-method-for-training-silo-busting/