Getting Started With Visual Thinking

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ABSTRACT

This paper reflects on the author's experience with visual thinking methods and draws out some conclusions for future practice.

1. Introduction

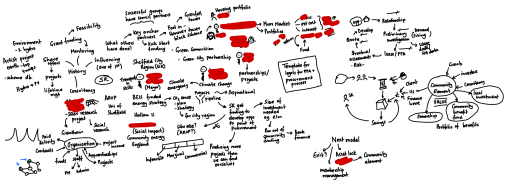
When we are children we learn to draw, unafraid and unselfconscious, happily making marks on paper. As we get older we become aware that there are such things as good and bad, right and wrong — and we start to judge our creations and stop making out of fear that what we're doing is not good enough, not the right thing.

Many of us learn that the right kind way to do things involves numerals and the alphabet and are funnelled down a route that uses an increasingly narrow form of learning. As Sir Ken Robinson said in a TED talk, when we first learn we learn with our whole body and then as we grow older we start to use the top half, and then the head, and that too, only the left bit.

Visual thinking methods seek to change that, by engaging both sides of our brain and liberating us from the confines of numbers and words. This paper will explore some of those methods and see where they lead.

2. Thinking freely

2.1. Mind Maps



The starting point for many of us when it comes to visual thinking is something like Tony Buzan's mind map. I used versions of mind maps all the way through university to figure out what on earth the lecturers were talking about. I was a slow student so I compensated by trying to get better at taking notes. So, when the lecturer spoke I would take down a headline and then in a different colour note down sub-headings as they spoke, along with notes. After a lecture series I would have a stack of paper filled with headings and sub-headings and points. Then I would take a single sheet of A4 and start in the middle with the topic and map out the headings first, connect the sub-headings and write a small summary of the content. As this map spread out on the page it was amazing how the pages of headings, started to make sense, how the underlying structure of the course revealed itself through the map. After the first few times I did this I knew that as long as I attended lectures and took notes in this way I could reconstruct the structure and understand how one bit of what I was studying fitted into the greater whole.

Mind maps are probably still the single most useful tool in exploring a situation. You can use them as a tool to listen closely as someone talks through what's in their mind and the resulting structure often reveals as much to the speaker as it does to the listener — as they become aware of just how much is going on in their own minds.

This alone is not sufficient usually to take further action, but more on that in a bit.

2.2. Process mapping

The next thing we often use visual thinking to work through is a process — the way in which one thing happens and then another thing happens, or how two things happen in parallel. Things happen all the time, everywhere around us, and some of the time we can express them as a process map. But, it's not always clear what the process is to people and sometimes having it laid out helps, and at other times it confuses everyone, but having it expressed does help you to at least question what is going on.

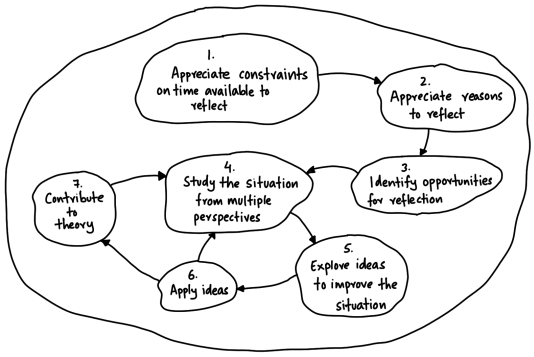
For example, the other day we were at a small airport and I knocked a cup of tea over. As the brown puddle spread across the airport floor, I wondered what to do. Should I ignore it — assume it was someone else's job? Tell someone? But there was no cleaner to be seen anywhere. Eventually, I went to one of the airport shops and told the person there, who asked me to go and tell someone else. That person's manager interjected and said to the first one, ''Do you work for the airport? Then safety is your job — you need to put a wet floor sign down.'' So, the first person put a wet floor sign down and went back to their job. The brown puddle of tea continued to flow.

So, we went hunting for a cleaner and found a crew. But they said it wasn't their job — someone else looked after that section. So we kept walking until we found that crew and told them where the spill was, and then we finally headed off to get our flight.

Now there are overlapping processes that describe all of that reality. There is a process followed by employees when notified of a health and safety risk, which clearly not everyone knows. There are processes followed by the cleaning crew who stick to their route regardless of the issues. And then there are the unwritten processes followed by the public, some one whom will walk away and others who will try and make sure the situation is being handled by someone in authority.

What this should tell you about a process map is that it will make the most sense to the people that have to work in accordance with the map. You have to make it specific to the situation and train the individuals in precisely what each element means if you want it to be useful. The more generic a process map becomes the less useful it is as a tool because the way it's used depends on the way in which the people involved interpret their responsibilities and the one thing you can predict about people is that their interpretations can be wildly different.

2.3. Purposeful activity models



Between the raw detail of a mind map and the rigid structure of a process map is an uncharted hinterland, a place that most people fail to see entirely. This is because we tend to approach the world with a mindset that it is filled with problems to be solved, and that the way to solve them is to have goals and objectives and plans.

This is the engineer's method and while it works a lot of the time it struggles as an approach with situations that involve people. The difference is that an engineering goal can be precisely met, for example, manufacturing a 0.9mm pencil lead.

When it comes to things like providing better customer service, increasing sales, becoming more sustainable or creating a better working environment, things get fuzzier. You might set a goal, for example, to increase sales by 20% but that's really something that emerges from what your business does. Unlike the width of a pencil lead, that sales number can be manipulated, massaged or faked because it depends on how people look at it rather than how an impersonal and precise scale measures it.

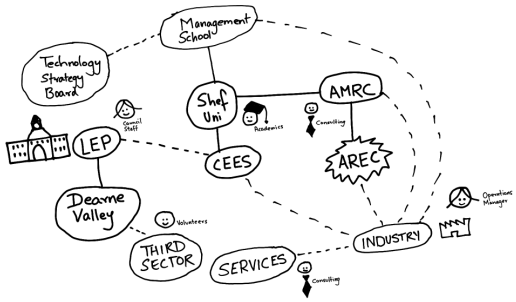
The thing that thinkers like Peter Checkland realised was that the pursuit of a well defined goal is actually a subset of what people are trying to do — usually they are trying to take "purposeful action" in a human situation. The purpose, for example, in better customer service is to create happier customers that stay for longer. This can be measured in terms of a retention rate, for example, but a better approach is to look at the "human activity system", or try and model purposeful activity, from which the purpose emerges.

This is not an easy thing to understand but a way to start is by thinking of a mind map as

something organic and free-flowing and a process map as something rigid, with hard edges and sharp lines. A purposeful activity map is something in between, with more structure than a mind-map but less rigid than a process map — something that tries to express a set of activities, from which emerges purpose, as seen from a particular point of view.

The idea of purposeful activity models is hard to grasp and not easy to explain. Once you get them you find that they help to fill that gap between free thinking and specific action, by giving you a way to show what people are trying to achieve, what their purpose happens to be.

3. Rich pictures



There is an emerging area of visual facilitation methods that are being codified into a visual language. The idea behind these is that you can express situations visually, representing entities, people, roles, flows in a way that people can grasp much more easily when laid out visually than in a textual or machine generated format — what Peter Checkland calls a "Rich picture".

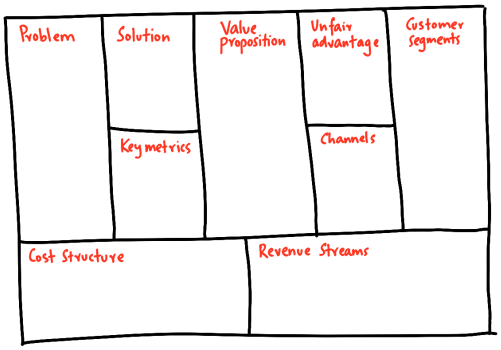
This approach is also set out in books such as Dan Roam's "The back of the napkin" or Mike Rhode's "The sketchnote handbook" and the emergence of visual resources such as Bikablo and the Noun project — to help you build up a library of visual representations.

So, how does this help? On the one hand, representing entities and flows visually and adding visual markers like a hand-drawn factory or building makes it easier for users to interact and remember what is involved — we're using the parts of our brain that deal with where things are in space and with pictures. The purpose of these approaches, as Dan Roam says, is that it's "communication, not art" and when the art starts to take over then the communication element has less space to be developed. There is a balance to be struck between something that is visually appealing and something that is useful.

The test of a graphic representation is how often you go back to use it for communication. Think of a cave painting, that shows a herd of buffalo and the story of how the hunting party went about getting dinner. You can imagine the children huddled around the fire as the hunters talk through the images on the wall, showing where the buffalo were and how the hunters positioned themselves and crept up and herded the animals into a narrow space where they could then isolate and trap one. If a beautiful visual representation of a session is then framed and put up and admired by passers by, it is a work of art, but is it useful to the participants?

For it to be useful it has to lead into a next step and that is where the methodology that underpins visual facilitation has not been entirely thought through. It would be relatively easy, however, to slot the various visual facilitation methods into a methodology like Soft Systems as effectively what they're doing is enabling participants to build up a Rich Picture of what is going on.

3.1. Learning tools

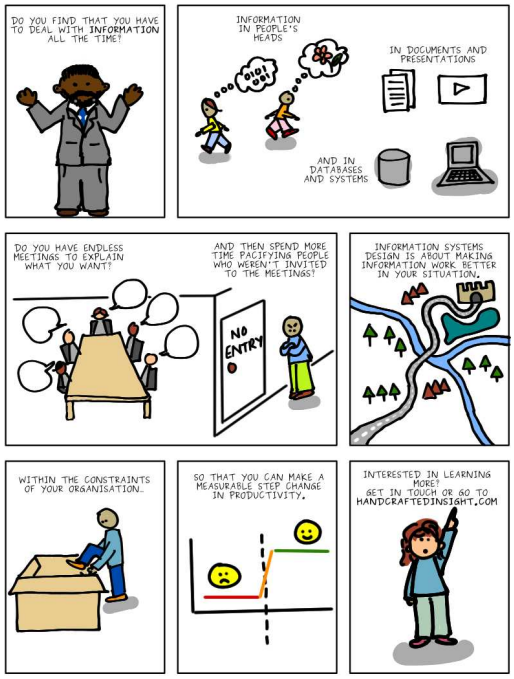


A final set of methods that are worth exploring is the value of visual layouts in helping people learn. For example, the Thinking Maps approach uses a visual language based approach to learning that helps students with eight thought processes that range from a circle map for a type of brainstorming to a double bubble map that's useful for comparing and contrasting. These are powerful tools for students who want to get better at critical thinking skills and improve the quality of their learning.

Other visual facilitation approaches use templates to help users structure their thinking. For example, a timeline is a very useful way to establish what happened when and focus on on

critical periods. A matrix can get you thinking about specific elements while a road or landscape can help you fill in details while keeping the big picture in mind.

3.2. Cartoons



While the tools described above are helpful in exploring and learning about situations, we also need to describe what we've learned and what we've going to do. The Rich Pictures, sketch notes, mind maps and other artefacts we create are examples of work-in-process, the things that come into existence as we do the work. But, we cannot — we should not show these rough drafts and workings to people and expect them to figure out what we think.

It's just as important that we organise and present our thoughts in a way that makes it easy for our audience to understand what we're trying to say. The visual equivalent of this that we're most familiar with is the cartoon, a narrative with picture and text that tells a story.

A cartoon is created to tell a story, and the way you design one is to start with a script, create rough text and art drawings, fill in the text and finalise the art and then create a finished product. When you've finished you have something that tells others what you think and why and whether it's expressed in a traditional strip cartoon format or laid out in a slide deck, the important thing is to remember that all your hard work in thinking through a situation can lead to nothing if you don't spend time creating and refining the story you tell others, especially decision makers.

4. Conclusion: An organised learning system

The conclusion that Peter Checkland comes to in his work on Soft Systems Methodology is that the research team moved away from the idea of a problem that needed solving to a "situation which some people, for various reasons, may regard as problematical." This means that tools we use, including the visual facilitation ones that are described in this paper, become a way to make the ideas people have visible and turn them into models that can be used to come up with questions to explore the "real" situation. SSM in Checkland's view, was becoming an "organized *learning system*" and is ongoing.

What matters is that the people involved can use this learning system to figure out what action they can take that works for them, given the views they have, the history they share, what they want, the relationships they have, and the culture they move in.

Ultimately, using these tools is a way of understanding others better and then explaining your point of view more effectively. When you do that you stop trying to impose your will on others and instead try and find a way that works for both of you, or for those involved.

And that's something worth aspiring to do.

About the author

Karthik Suresh is a Management Consultant who helps customers with energy, utility, sustainability, research, innovation and knowledge management projects. His experience includes working with large and small organisations to select and implement strategic decision systems, improve and develop management capability and deploy risk management, IT, communications and information systems projects.

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