

Synthesis Podcast: Text Summary

In his 2011 book "Exposing the Magic of Design", designer Jon Kolko described that synthesis results can often seem "magically derived" from the outside. Synthesis is, on the contrary, an intense, in-depth process. The overall goal of synthesis is to find relationships or themes in the research data and to uncover the hidden meaning behind the user's behaviour.

Kolko's book is a good resource for understanding the "**hows**" and "**whys**" of synthesis, so we will quote him a lot and recommend reading his work. In a working thesis, he defined design synthesis as "an abductive sense making process of manipulating, organizing, pruning and filtering data in an effort to produce information and knowledge."

We will discuss the essential parts of his definition.

1. what do we understand by **sensemaking**?
2. what is **abduction**?
3. what is the process of **manipulating, organizing, pruning and filtering**?
4. what is **information and knowledge**?
5. and what is the difference between **design research and market research**?

Sensemaking

What do we understand by sensemaking? In 2006, Gary Klein, Brian Moon, and Robert Hoffman defined sensemaking as an „effort to understand connections in order to anticipate their trajectories and act effectively“. With connections they mean relations among people, places and events.

Organizational psychologist Karl Weick and his colleagues emphasized that sensemaking is an issue of "language, talk and communication". They underlined that sensemaking is essentially a group activity and can be highly subjective. Or, as Kolko put it: „The point is that in design, one should not try to escape one's past, emotions, or upbringing in an attempt to be more 'objective' because these elements are central to making sense of a complicated problem."

Abduction

When we talk about synthesis, we often name it an abductive sensemaking process. What is abductive thinking? If we compare it to deductive or inductive thinking, abduction is "the logic of what might be", as business expert Roger Martin called it. American philosopher Charles S. Peirce named it "adopting a hypothesis as being suggested by the facts." So what are these different models of thinking?

Deduction is a logical conclusion that guarantees the truth: A equals B; B equals C; therefore A equals C. We know that this conclusion is correct and true, but it does not offer us any new findings. It does not INSPIRE us.

Induction is a conclusion based on a structured experience. For the last three times, A resulted in B, so I expect A to result in B the next time as well. This is probably correct, but does not guarantee the truth of the conclusion and - it also does not offer new findings.

Abduction: If I do A, B occurs. I've done something similar to A before, but the circumstances weren't exactly the same. I've seen something like B before, but again - the circumstances weren't exactly the same. So I abduct that C is the reason that B is occurring. See what we did here? We introduced C as a best guess for why B is occurring, even though C was not part of our original set of data. This conclusion might be false, BUT: it offers something new. It inspires us to develop something new.

This is the core principle of abduction. Roger Martin named this “the argument to the best explanation”. The idea that you come up with when you follow this thinking might not be great, it might not be technically feasible, but it is new and it is insightful.

The War Room - Visual Space for Synthesis

A lot of the data that designers collect is either in a cognitive realm (their heads) or a digital realm (on their computer). Kolko urges them to externalize it into the physical space - ideally a large, empty wall, where every data point can be put up visually. Companies often refer to this space as their “war room”. The term is derived from Stanley Kubrick’s 1964 satirical film “Dr. Strangelove”, in which many heated discussions take place in a “war room” in the Pentagon. Why do you need so much empty space for synthesis? It’s because the process involves a lot of data. Let us explain this:

What is the process of manipulating, organizing, pruning and filtering data?

When you put all the data up there, you usually stand in front of a big mess - and you can use the whole wall to move notes around and bring structure and connection into the mess. As designer Jeffrey Veen (2000) put it: “Good designers can create normalcy out of chaos.”

Kolko describes this process of moving data around in several steps:

1. structuring data according to the designer’s scale of importance. The scale is subjective, but reasonable
2. posing questions about the relevant data: why did the users do that? why did they feel that way? why did they need that?
3. making best guesses - or assumptions - about these questions, leading us to intuitive leaps - or inspiring interpretations
4. lastly, Kolko advises to write implications about the chosen information: why does this research matter? And how is it relevant?

From Data to Wisdom

Kolko quotes design strategist Nathan Shedroff when explaining that synthesis is the push from data to wisdom.

Kolko explains that during synthesis, we go from data to information, from information to knowledge, and from knowledge to wisdom. Let me explain what Kolko means with information, knowledge and wisdom.

- Information is meaningful data: the data that we determine as relevant through interpretation and pattern-finding
- Knowledge is a combination of elements of information.
- Wisdom means to apply knowledge in a new and novel way.

Design Research vs. Market Research

People who are new to human-centered design approaches often confuse, or mix up, market research and design research. These are two fundamentally different ways of gathering user data, though.

Market researchers aim at predicting the behaviour of a large group by quantifying their results. Design researchers, on the other hand, aim to find inspirations for design by qualitative exploration.

Here are the core differences between market research and design research.

1. market research aims to predict group behaviour, whereas design research aim to understand culture
2. market research avoids the unique and peculiar, outliers are often ignored - in design research we specifically search for the unique and peculiar and get inspired by extreme users.
3. in market research, avoiding bias is critical for the researchers; in design research, avoiding bias is

irrelevant: our subjective experiences will shape our interpretation, which is a central step in synthesis.

It is also important to mention that design thinking will help a team to find newness, but it will not help the team to bring that newness to the market. For this, we need traditional disciplines like engineering, supply chain management, marketing, advertising, distribution, and so forth.

References

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