



Let's Solve



Design Thinking: A Bias-Reduction Strategy for Organizational Innovation

Cognitive biases are unconscious assumptions that our mind uses to process the constant flow of information it receives, and can influence decision-making without us realizing it. Design Thinking allows companies to systematically focus on what matters most – improving the fundamental operations that lead to success. This paper talks about how cognitive biases affect business decisions and how Design Thinking can help overcome these biases for better, smarter decisions.



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Table of Contents

Abstract.....	3
Introduction	4
Defining Cognitive Bias.....	5
Design Thinking and How It Works.....	6
Disarming the Effect of Cognitive Bias	7
• Confirmation Bias.....	8
• IKEA Effect.....	9
• Anchoring Bias	10
• Availability Heuristic	11
• Attribution Bias	12
• Functional Fixedness	13
• Framing Bias	14
Conclusion.....	15
Authors Profile	16

Abstract

Cognitive biases affect nearly every choice we make. In the business world, we need to solve problems almost every hour, and these must be made without delay. No matter the industry, most organizations will eventually face a crisis – maybe new competitors will appear out of nowhere, or an existing brand will carve out a slice out of your customer base. To thrive in such an environment requires innovative solutions, and the solutions we make have broad, far-reaching consequences, which means that our ideas must remain rational, objective and free from potentially harmful cognitive biases. It's easy to lose sight of the goal when solving problems that are based on emotional responses or incomplete information. So, is there a magic bullet that can help overcome biases and increase reliability of our problem-solving endeavor? As it turns out, there is no magic formula, but a creative problem-solving approach called Design Thinking that drives effective innovation endeavors.

This paper explains how cognitive biases impede business growth and innovation, and how Design Thinking helps overcome this challenge by turning our attention to a number of business activities like sourcing inputs, managing customer relationships, developing effective digital interventions, and promoting better, more thoughtful, long-range strategies.



Introduction

We like to think that we're rational problem solvers and decision makers. But in reality, the human mind organizes the information from the external environment into patterns where it prefers to derive judgement and solutions through use of mental shortcuts or Cognitive Biases. As problem solving is a complex cognitive process, our brains choose these shortcuts over rational thinking. Naturally then, when it comes to business decisions these biases negatively influence our or the organization's capability to capture and utilize new ideas.

Even at the workplace, we tend to act in irrational and unexpected ways when it comes to business decisions. This is because our thoughts are influenced by cognitive errors resulting from incomplete information, or the inability to analyze the information that is available without being affected by beliefs or mental conflicts.



Defining Cognitive Bias

While processing information, the self-organizing nature of mind often deploys mental shortcuts or heuristics which can lead us astray in our problem solving and creative endeavors. Essentially, cognitive biases are a slip in our thought process that is usually a result of the way mind uses shortcuts to organize information. Though this makes our everyday lives easier by constructing patterns that govern our thought and action, it also leads to cognitive errors in the way people process and analyze information, which can lead them to think irrationally and this can negatively impact business problem-solving and innovation.

The main problem with cognitive biases is that they are not based on rational, systematic thinking. They are based on assumptions and stereotyping. And since they are unconscious and automatic, they can be difficult to identify and control. Let's understand how a Design Thinking approach can help us better initiate effective and creative problem solving.



Design Thinking and How It Works

Design Thinking counters cognitive human biases that stifle creativity while addressing the challenges typically faced in creating world-class solutions. It requires seeing the organization as a collection of people motivated by different feelings and perspectives and emotions, and also includes customers and other stakeholders in problem definition and solution design. The best part is that Design Thinking gives a fluid, non-restrictive structure to the innovation process, encourages collaboration and focuses energies on the outcome.

The main reason why Design Thinking works is that instead of asking for that one great idea or winning strategy, it asks people to come up with multiple ideas. This will prevent a person getting attached to any single idea and to avoid cognitive bias. The history of the business world is rich with tales of CEOs getting stuck to their idea, exaggerating the benefits, becoming passionate about the solution, looked for confirmations to support their idea and eventually failing.

As we get attached to a single idea, biases set in blocking our ability to pay attention to other factors resulting in an unbalanced thinking. Any disagreements are then viewed as a personal affront and could impact the future cooperation of the team. Such an environment stifles innovation and open sharing of ideas, which obviously will impact the business in the long run.

Design Thinking takes a multi-pronged approach to any situation. It views things from the customer's perspective instead of being self-serving. It also encourages the thought that ideas, and not people, need to compete by asking for multiple ideas and solutions. This means building a multi-disciplinary team that supports a healthy exchange of ideas and knowledge.

Disarming the Effect of Cognitive Bias

The first step to overcoming cognitive biases is to admit their existence and accept that we have them. If we are familiar with our biases, we stand a better chance of noticing them as they come into play and avoid letting our decisions be influenced by them.

The following section shows how Design Thinking helps in overcoming some of the important biases.



Confirmation Bias

Confirmation bias is our tendency to fixate on any new information that confirms our pre-existing beliefs and ignore any data that could challenge these ideas. When we become attached to our beliefs, we tend to look for information that further validates them, simply because it's easier to confirm that we're right than it is to even think of another perspective.

IT use case

An organization wants to rethink its governance model to improve its stakeholder alignment. The project manager in charge of this project believes that timely reports will lead to better stakeholder alignment and hence, while analyzing causes of the issue, he may only look at the instances where problems occurred due to not receiving reports on time and focus the solution on how timely reports can be shared with relevant stakeholders. How can Design Thinking help change this?

In Design Thinking, we start interacting with users to understand where the problem lies. In this case, by understanding the stakeholder universe and by conducting an empathy interview with each stakeholder group, the project team can better define the unmet needs of governance. They may uncover that the real problem is that the stakeholders feel a lack of connect due to inadequate face to face interactions. In addition to this, roles and responsibilities have not been defined well. Defining the problem holistically provides a strong foundation to transform the experience. This, when supported by ideation techniques like challenge assumptions, helps break a preconceived pattern of thinking while solving the problem which leads to a more holistic design.

IKEA Effect

The story behind the IKEA Effect is a great insight into how we become attached to something we create. In a study, IKEA customers were asked to place a price value on a chair they had assembled, and they were quite generous with their valuation. However, the same chair when preassembled was valued at a significantly lower price. The same way, even at work we have a tendency to get attached to an idea, a design or a product that we came up with and give it more importance than it probably deserves in the scheme of things. This bias impedes the objective assessment of ideas that are required for successful business innovation.

IT use case

Designers, on receiving feedback, like to think that since they have already invested in developing the solution, feedback is only meant to make minor modifications and not to completely change the design or concept.

Since design thinking emphasizes user testing through quick, iterative prototypes -mockups or simple concept sketches, it helps keep the cost invested to design the pototypes minimum giving opportunity to change the elements, along with the user based on their feedback. Design Thinking teams are usually cross-functional, which in turn, helps in designing solutions from various view points.

Anchoring Bias

It's the tendency to stay focused on just one item of information and trivialize all other available information, because that piece was the first or most recent information you received so you trust it more.

IT use case

A client wants a solution to improve the user experience for a particular application. The project manager in his last team review came across a few client complaints due to application down time. Hence, he believes that reducing down time would improve user experience. However for the client, application availability may be a basic requirement, but his expectation for improving the user experience could be completely different. How can Design Thinking help?

In a Design Thinking approach, the project manager would spend time interviewing and observing client stakeholders and user representatives to understand what is hampering the experience while using the application. This complemented with user/industry research and digging deep into problem definition helps build a more holistic understanding of the gaps while redefining user experience.

Availability Heuristic

This bias is the tendency to rely on immediate information we have readily available to us instead of making the effort to do proper research.

IT use case

The customer experience team wants a fantastic experience during a key client visit. So the manager in charge speaks to his team and also reads some blogs on how branding enhances client confidence and concludes that stronger branding leads to more successful client visits, while being completely oblivious to other factors.

When applying the Design Thinking approach, the manager will consult with various project managers to understand what the client is expecting, analyze client feedback data from multiple sources to understand the client's perspective, understand the client's business culture and future needs. Based on this, the visit will not only be customized but will also be tuned to positively impact the client's perception.

Attribution Bias

Perhaps one of the most common human tendencies, Attribution Bias is the tendency people have, to over-emphasize personal characteristics and ignore situational factors in judging others' behavior. While working with our colleagues, we form a general impression of their character based on certain scenarios, but never see the whole picture. For example, when someone turns up late to a meeting, we might judge the person as one who doesn't value others' time, but in reality, he had to take his ailing relative to the hospital.

IT use case

Let's take an example of a technical support team that wants to reduce the number of tickets being raised. Considering the amount of time spent in creating detailed user manuals, the technical team may assume that the people complaining have not read the user manual, which results in a lot of customer support time going in clarifying basic issues. The most obvious solution may be to create better awareness about available user manuals. But Design Thinking suggests otherwise.

Through observations and by empathizing with the users, the team may realize that perhaps the design was meant for a desktop view, whereas the current users are accessing the same via a mobile interface. This opens a completely different understanding of user needs, which means improved user experience and a reduced number of tickets.

Essentially, Design Thinking takes into account the contextual factors, thus enabling the practitioner to take a holistic view.

Functional Fixedness

Functional fixedness (coined by Karl Duncker) is the inability to realize that something could have multiple functions or uses other than their original function. This bias prevents individuals from thinking outside the box. As individuals get more specialized in an area, knowledge and experience from that area displaces imaginative thinking and ability to conceptualize innovative solutions.

IT use case

A development team has been tasked with improving a client's mobile application for busy professionals for car pooling and daily commute. Given their technical expertise, the solution focus of the team would address technical issues within the application or create a more interactive user interface. A design-led approach would, however, address the issue differently.

Empathizing with users would give insights into not only the current usage of the application, but also into scenarios when they use it. As a result, the team will become aware of some of the key concepts or hidden assumptions, which when challenged through deliberate ideation techniques or taking radical inspiration from different organizations can lead to insightful out-of-the-box solutions. Perhaps in this case the improvement idea could have been adding an feature of ordering "lunch on the go" during commute.

Framing Bias

Usually in innovation projects, solutions are tested before being deployed in the market. The testing and validation of concepts is usually done by seeking feedback from end users. The bias affecting this is known as Framing Bias, where the judgement is influenced by the way information is presented. Information presented to show gains will be more accepted than if it is shown in terms of losses (Kahneman, 2001). Usually such validations and testing sessions turn into “selling the solution” sessions resulting in loss of objectivity required for successful validations.

IT use case

While developing an ERP system for ordering some material, the IT team comes up with an aesthetically pleasing dashboard to showcase trends of material usage and what should be ordered. In the validation session, users respond stating they don't find the information useful. In a normal scenario, the developers may go on to explain why this feature is useful and how they can benefit from it and try to convince them regarding the same as a lot of time and effort investment has gone in to develop a solution.

In a Design Thinking-led approach, the emphasis is on low cost and quick prototypes. On receiving feedback that the dashboard is not useful, the designers will try to dig deep to understand why and they may uncover that a lot of data is not being recorded in the system as they deal with small suppliers who provide goods and only large procurements are entered in the system, as it is too much of a hassle to enter a lot of details for small orders. This understanding helps bridge the gap on how to provide required forecasting while making a very lean system to record offline transactions.

Conclusion

Although biases or mental shortcuts can never be completely eradicated since they could prove needful at times, however their impact on conceptualizing human-centric innovations can be greatly reduced through application of Design Thinking. It looks at the problem context holistically and this is made possible by bringing in a deeper understanding of the human aspect involved in the experience, or with the product usage. The fundamental advantage of this method is that it provides a simple structure to shift to deliberate modes of thinking, along with developing problem awareness and collaboration.

When our thoughts are not based on our personal beliefs and biases but on relevant information, customer needs and industry data, that's when an organization can build sustainable innovative culture and get a competitive advantage. Design Thinking shows how looking at a problem with an entirely new perspective and redefining the problem itself yields better results, and has a larger and more lasting impact. Designers tend to analyze a situation from the user's perspective and devise creative methods to communicate and to solve. When you challenge established beliefs and assumptions, it leads to innovative solutions and opens up new opportunities. It's quite simple – good ideas mean innovation and better business.

Authors profile



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Jayashree has rich experience in managing cross-functional project teams, and has driven multiple organization-wide improvement programs. She has also led human-centered Experience Transformation engagements and trainings across multiple industries and project types and crafted customized innovative solutions. She is an expert statistician and a Lean six-sigma green belt holder. Her white paper 'Journey from standardized to customized prediction models' was awarded first prize in QAI's International colloquium of High Maturity Best Practices.



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Saranya has been part of the Design Thinking team since its inception at LTI. He has conducted Design Thinking workshops and consulted on human-centered Experience Design projects. He has considerable experience in conducting psychology studies focused on the development of Creative Thinking skills and their application. He has a Masters degree in Applied Psychology as well as Design & Innovation, and has achieved the Edward De Bono Lateral Thinking certification.

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