

# Human Biases: Design Worksheet

Original Report: *Behavioral Guide to Customer Experience Design*

## SUMMARY

People make decisions using two different modes of thinking. The first mode is called *Intuitive Thinking* – or System 1 – and it is fast, automatic, and relies on a set of heuristics (mental rules of thumb) and cognitive biases to reach conclusions. The second mode is *Rational Thinking* – or System 2 – and it is slow, logical, and deliberate. Despite the fact that human beings make almost all of their decisions using *Intuitive Thinking*, organizations still tend to design experiences based on the premise that people – including customers, employees, and prospects – are logical, rational decision-makers. Use this worksheet to help you identify opportunities to design more compelling experiences by tapping into people's *Intuitive Thinking*. To help you brainstorm ideas, we have provided a list of common of heuristics and biases on pages 3 through 7.

## SIX CATEGORIES OF HEURISTICS AND BIASES

Human beings are not the entirely rational decision-makers we like to think we are. We make most of our decisions using *Intuitive Thinking*, which relies on heuristics and biases to reach conclusions. Consequently, systematic errors in our decisions and judgements frequently arise. While there are too many heuristics and biases to go through each one individually, we've identified six categories that are relevant to experience design. According to behavioral science, people:

- 1. Are more affected by losses than by gains.** People value losses and gains differently. We feel the pain of a loss more acutely than we feel the joy of an equivalent gain. So when we make decisions, instead of rationally evaluating the final outcome, we unconsciously seek to avoid losses and optimize for sure wins (see page 3).
- 2. Prefer simplicity over complexity.** People tend to choose options that are easier to mentally process – even when a more complicated option is actually better. Studies show that we find things with high cognitive fluency to be more likable, more familiar, more truthful, more moral, and more safe (see page 4).
- 3. Are affected by current emotional and visceral states.** People's choices are affected by both the emotions and the visceral states – like hunger, thirst, exhaustion, or arousal – they are experiencing at the time of their decision. Even emotions that are completely unrelated to the choice at hand can significantly impact on their perceptions and decisions. Additionally, more intense emotions – as well as those characterized by a sense of certainty (i.e. happiness, anger, or contentment) – will lead to a greater reliance on heuristics and biases (see page 4).
- 4. Are heavily influenced by those around them.** People are naturally social, and we automatically imitate the actions and mimic the emotions of those around us. When we aren't sure of the correct behavior, we tend to defer to the wisdom of the crowd and to the knowledge of experts and those we deem "successful." Humans also relate to organizations as though they are real people, which means the same social heuristics and biases that color our exchanges with humans also color our exchanges with companies (see page 5).
- 5. Make decisions based on context.** Decisions are not made in a vacuum; rather, they are extremely dependent on context. This can include the physical environment in which a person makes a decision, the unconscious priming effects a person encounters, how a decision is framed, and the other choices available for comparison (see page 6).
- 6. Misjudge their past and future experiences.** People remember their experiences based on the most emotionally extreme points and the end, which means that our memory weights some moments of an experience more heavily than others. We not only misremember past events, we also struggle to accurately imagine our future selves and we judge the probability of future events based on how easy events are to imagine or retrieve from memory (see page 7).

## HOW TO USE

To help you design experiences that tap into people's *Intuitive Thinking*, you can use this tool in a number of ways:

- + **Self-assessment.** Fill out this worksheet yourself by selecting a target user and experience, identifying heuristics and biases that may affect this particular interaction, and then brainstorming ideas for redesigning the experience in a way that better addresses people's intuitive mode of thinking.
- + **Group discussion.** Use the worksheet in a group exercise. After each individual completes it, discuss ideas and opportunities for incorporating these heuristics and biases into your design process.
- + **Action planning.** Develop plans for designing experiences that actually reflect how people make decisions and form judgements. For inspiration and examples of how to create interactions that tap into people's *Intuitive Thinking*, read the original report, *Behavioral Guide to Customer Experience Design*.

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Use this worksheet to help you create more engaging experiences by deliberately accounting for people's heuristics and biases in the design of the interaction. First, identify who the target audience is for the experience, then define the specific experience you are focusing on. Next identify which heuristics and biases you think are most likely to influence the target user's perceptions and decisions during the experience. Finally, brainstorm ideas and opportunities for tapping into people's *Intuitive Thinking* to improve this particular experience. For descriptions of common heuristics and biases across the six categories, review the information provided on pages 3 through 7.

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Description of the **Target User**

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Description of the **Target Experience**

<b>Heuristic</b> or <b>Bias</b>	<b>Design Ideas</b> and <b>Opportunities</b>

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## PEOPLE ARE MORE AFFECTED BY LOSSES THAN BY GAINS

People prefer avoiding losses over attaining equivalent gains.

<b>Prospect Theory</b>	<p>People make decisions by evaluating the potential gains and losses of each choice rather than by rationally evaluating the final outcome.</p> <p><b>Example:</b> People prefer low deductibles on mandatory insurance and are unlikely to buy catastrophe insurance, yet they are very likely to buy warranties.</p>
<b>Loss Aversion</b>	<p>People experience the pain of a loss more intensely than they experience the pleasure of a gain—more than twice as intensely by some estimates.</p> <p><b>Example:</b> Many travel sites activate customers' fear of losing out by telling customers that there are only a few rooms left at a certain price.</p>
<b>Scarcity Principle</b>	<p>Loss aversion causes people to fear missing out, so they value things that are uncommon and/or available for only a short time more highly.</p> <p><b>Example:</b> Infomercials will often offer two items for the price of one if you "call right now."</p>
<b>Endowment Effect</b>	<p>People overvalue items or resources they already own compared to those they don't.</p> <p><b>Example:</b> Managers and recruiters tend to value the skills and traits of their current workforce, making them more likely to hire new employees who are identical to people they already have.</p>
<b>Status Quo Bias</b>	<p>People tend to stick with their current situation because they unconsciously weigh the potential losses from changing more heavily than the potential gains.</p> <p><b>Example:</b> Organizations will continue working with vendors they consider merely adequate because it's easier and less risky than finding a new ones... even if those new ones are likely to be better.</p>
<b>Default Bias</b>	<p>People's fear of loss coupled with their preference for cognitive ease means they tend to choose the default option supplied to them.</p> <p><b>Example:</b> When one large investment firm changed their retirement plan policy from requiring employees to opt-in to a 401(k) plan to requiring them to opt-out of the plan, enrollment soared from 53% to 85%.</p>

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## PEOPLE PREFER SIMPLICITY OVER COMPLEXITY

People tend to choose options that are easier to mentally process.

<b>Fluency Heuristic</b>	<p>People like and ascribe more value to things that can be processed quickly and easily (clear fonts, rhymes, etc.). They also find them to be more truthful, moral, and common.</p> <p><b>Example:</b> Studies show that stocks do better in the week following their IPO when the company's name and its ticker symbol are easy to pronounce (i.e. KAG is better than KGH).</p>
<b>Familiarity Heuristic</b>	<p>People prefer familiar stimuli because they are easier to process than novel stimuli. Consequently, when we encounter an object that is easy to think about, we assume that it is familiar, even if it is not.</p> <p><b>Example:</b> When people do something for the first time – like eating in a new area, selecting a new type of vendor, or purchasing a new kind of insurance – they are more likely to select a brand they've seen advertised than one they've never heard of.</p>
<b>Warm Glow Effect</b>	<p>People judge attractive stimuli to be more familiar and therefore more likeable.</p> <p><b>Example:</b> Advertisements use attractive people to model their product.</p>
<b>Paradox of Choice</b>	<p>Too many choices can lead to anxiety, regret, choice paralysis, and decision fatigue. People are more likely to make a choice when they are presented with fewer options.</p> <p><b>Example:</b> In one study, 30% of customers who only tried 6 jams bought one, whereas just 3% of customers who tried 24 jams bought one.</p>

## PEOPLE ARE AFFECTED BY CURRENT EMOTIONAL AND VISCERAL STATES

How people are feeling at a given time significantly influences their decisions.

<b>Integral Emotions</b>	<p>Emotions people feel that are caused by the decision or experience itself.</p> <p><b>Example:</b> People might not purchase health insurance because the process of signing up makes them feel anxious and confused.</p>
<b>Incidental Emotions</b>	<p>Emotions people feel that carry over from some other, unrelated event.</p> <p><b>Example:</b> Stock market performance in 26 countries positively correlates to the amount of sunshine on a given day.</p>
<b>Affect Heuristic</b>	<p>People rely on good or bad feelings experienced in relation to a stimulus to make a decision. So when they have pleasant feelings about a stimulus, they see the benefits as high and the risks as low.</p> <p><b>Example:</b> People are more likely to purchase products from a company with commercials that make them feel happy.</p>

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## PEOPLE ARE HEAVILY INFLUENCED BY THOSE AROUND THEM

People automatically imitate the actions and mimic the emotions of other people.

<b>Social Proof</b>	<p>In unfamiliar situations, people follow other people's behavior and suggestions, especially when the group is large and similar to them.</p> <p><b>Example:</b> Studies show that 70% of customers read user reviews prior to a purchase and these review are 12 times more trusted than manufacturer descriptions.</p>
<b>Imitate the Successful and Experts</b>	<p>People follow the behavior or suggestions of experts and those they view as successful, like a boss, a celebrity, or a popular friend.</p> <p><b>Example:</b> Facebook and Twitter are an effective way for companies to advertise how popular they are within a customer's friend group.</p>
<b>Herding Behavior/ Bandwagon Effect</b>	<p>People tend to mimic the actions of a group, even if individually they would have made a different decision.</p> <p><b>Example:</b> Teams and units inside organizations will often develop "groupthink," where everyone starts to think and act the same, believing their methods, processes, and metrics are the best ones.</p>
<b>Emotional Contagion</b>	<p>People mimic the expressions of those around them, making them feel a reflection of the emotion they observe there.</p> <p><b>Example:</b> Charity ads featuring sad faces lead people to feel sad and donate more money.</p>
<b>Reciprocity</b>	<p>People tend to reward positive actions in kind.</p> <p><b>Example:</b> In one study, when a department store gave customers chocolates for free, customers were significantly more likely to make a purchase.</p>
<b>Halo Effect</b>	<p>We judge peoples' opinions based on our overall impression of them.</p> <p><b>Example:</b> Recruiters often assume that a candidate is good at everything if they demonstrate one or two stand-out skills (even if those skills have nothing to do just the position) or have strong educational credentials.</p>
<b>Inequity Aversion</b>	<p>People have an inherent dislike of unfairness and inequality.</p> <p><b>Example:</b> People think it would be unfair for a hardware company to raise prices on shovels after a snowstorm.</p>

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## PEOPLE MAKE DECISIONS BASED ON CONTEXT

People's choices are strongly affected by the environment in which they are making the decision.

<b>Effect of the Physical Environment</b>	<p>The physical environment affects people's decisions by making some choices more accessible or noticeable than others.</p> <p><b>Example:</b> Grocery stores will often place the items they most want to sell on the right-hand-side of an eye-level display as most people are right-handed and their gaze naturally drifts in that direction.</p>
<b>Priming Effects</b>	<p>When people are exposed to a task or a stimulus, known as a "prime," it unconsciously influences their subsequent choices or behaviors. Primes can be words, numbers, pictures, smells, mental images, sounds, and so on.</p> <p><b>Example:</b> Background music with a fast tempo leads to higher customer turnover and more money spent at restaurants, whereas music with a slow tempo increases emotional feedback and makes customers feel as though waiting times are shorter.</p>
<b>Anchoring Heuristic</b>	<p>A type of priming effect where the first number that people encounter serves as a reference point and affects subsequent judgments about value, even if the later judgments are unrelated.</p> <p><b>Example:</b> A used car salesman can get more money for a car if he initially proposes a high asking price because any price lower than the initial anchor seems reasonable... even if it's not.</p>
<b>Framing Effects</b>	<p>People's preferences can change depending on whether the positive or negative aspects of the same decision are highlighted. When a decision is framed in terms of gains, people tend to avoid risk, but if a decision is framed in terms of losses, people tend to take more risks (this phenomenon is related to loss aversion).</p> <p><b>Example:</b> Patients are more likely to agree to a surgery with a "90% chance of success" than they are to agree with one with a "10% chance of failure," even though they are statistically equivalent.</p>
<b>Decoy Effects</b>	<p>A type of framing effect where people's preference for one option over another option changes as a result of adding a similar but less attractive option. Works as people use comparisons to evaluate choices.</p> <p><b>Example:</b> When offered a choice between a Roman holiday with free breakfast, a Parisian holiday with free breakfast, or a Parisian holiday without free breakfast, people almost always choose the second option.</p>

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## PEOPLE MISJUDGE PAST AND FUTURE EXPERIENCES

People remember past events incorrectly and struggle to accurately imagine their future selves.

<b>Peak-End Rule</b>	<p>People remember an experience based on its most emotionally extreme point and its end.</p> <p><b>Example:</b> Restaurants bring complimentary dessert (i.e. mints, chocolates, fruit, etc.) with the check at the end of the meal to end the experience on a high note.</p>
<b>Duration Neglect</b>	<p>People don't remember the duration of an event. However, the more segments in an encounter, the longer it is perceived to take.</p> <p><b>Example:</b> Customers think it takes less time to resolve an issue if they speak to one agent for a longer period of time than if they speak to a multiple agents for a shorter period of time... even if the latter is actually faster.</p>
<b>Primacy and Recency Effects</b>	<p>People are able to remember the beginning and the end of a series better than the middle.</p> <p><b>Example:</b> Viewers remember the first ads in a commercial break best.</p>
<b>Optimism and Over-Confidence Bias</b>	<p>People think they are less likely than others to have something bad happen to them and are overconfident in their ability to successfully perform a task.</p> <p><b>Example:</b> Smokers tend to think they are less likely than other individuals who smoke to get lung cancer.</p>
<b>Projection Bias</b>	<p>People assume that their current tastes and preferences will remain the same over time.</p> <p><b>Example:</b> More people buy gas-guzzling cars when gas prices are low.</p>
<b>Hyperbolic Discounting</b>	<p>People view their future selves like a stranger and thus choose short-term gratification over long-term rewards.</p> <p><b>Example:</b> Many people choose to spend paychecks immediately instead of saving for retirement.</p>
<b>Availability Heuristic</b>	<p>People make judgments about the likelihood of an event based on how easily they can think of an example.</p> <p><b>Example:</b> People overestimate the likelihood of a plane crashes because each crash is covered so extensively by the media.</p>
<b>Hindsight Bias</b>	<p>After an event occurs, people see it as being predictable.</p> <p><b>Example:</b> After a startup succeeds, people think its success was inevitable.</p>