

AI and Human Interaction: Applying Behavioral Science to CX Tech



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In this whitepaper, we look at some of the ways in which behavioral science can begin to prepare us for this brave new world.

Anyone who’s been following the recent emergence of generative AI will know that it seems to promise the next great leap forward in artificial intelligence. According to Bloomberg Intelligence **the generative AI market is predicted to grow to \$1.3 trillion** over the next 10 years, from a market size of just \$40 billion in 2022.¹

But for any technology to be effective, no matter how innovative and exciting, we need to understand what we, as fallible and non-rational humans, really want from it. And that means first understanding how we really think—and behave.

In this whitepaper, we look at some of the ways in which behavioral science can begin to prepare us for this brave new world.

¹“Generative AI to Become a \$1.3 Trillion Market by 2032, Research Finds,” Bloomberg Intelligence, June 1, 2023.



Why None of Us Think Like We Think We Do

As customers, we constantly make choices about how to interact with a business, whether it's choosing a service provider or completing a purchase journey. And as businesses, we do the same with our customers. Here's the truth though: none of us make those choices like we think we do.

The Nobel prize-winning work of psychologist Daniel Kahneman and his colleagues categorizes decision-making into what he called System 1 and System 2. According to Kahneman, System 1 is fast thinking: instinctive, emotionally-driven, unconscious decision-making. System 2 is slow thinking: rational, deductive, controlled, reflective decision-making.

We'd like to think we make most of our decisions in reflective, rational System 2 mode. But behavioral scientists have proven that System 1's instinctive, fast thinking accounts for the majority of our daily behavior. What's more, there are over 200 different cognitive short-cuts and biases that affect everyday decision-making—usually without us realizing.



Customers Are Not Perfectly Rational Beings

Accordingly the vast majority of decisions we make (whether they're about our homes and families or the products and services we buy) are hugely influenced by non-conscious, human responses like trust, fear, laziness, and even disgust.

Any business that doesn't take advantage of this by trying to understand how people actually make decisions—that are often driven by choices or external factors that they're not even aware of—risks wasting its money.

Paradoxically, while people are largely ruled by System 1 thinking (complete with their own biases), the algorithms that run our world these days are mainly based on logical, rational (i.e., System 2-like) rules.

And so, the human touch is still essential.

There are a whole range of simple queries that people want handled with simplicity, certainty and consistency, as fast and as easily as possible, such as notifying a business about a change of address. All of this is perfect for automated, tech-powered System 2 customer experience (CX).

But there are also complex queries where that kind of rapid, simple response has its limitations. Take financial services for example, where customers might need to have conversations about stressful, emotional tasks (such as struggling to make mortgage payments or the financial aftermath of losing a loved one) for which empathy and the human touch are essential.

When helping customers, other humans are still the best, fastest, most efficient way to understand the primary need state of their fellow humans. The greater the need for empathy, or an appreciation of complexity or uncertainty, the better real people are at delivering that.

Customers will always have uniquely human characteristics that need to be factored in, such as the need to be heard or the innate sense of right and wrong. Customer behavior is also impacted and affected by who (or what) they think they're interacting with.





The New Technological Gold Rush

The rise of generative AI promises to supercharge the wave of automation, similar to the market's previous rush to introduce chat-based technology. It partially reflects consumer trends of moving from offline to online transactions.

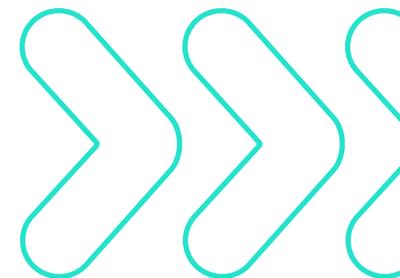
There are, of course, also enormous cost savings to be made by having generative AI freeing up workers to focus on tasks that are arguably more impactful to the business—by handling simple and repetitive tasks. In other words—generative AI should not be used to produce the same amount of work from fewer people. Instead, it should allow the same amount of people to produce higher quality work.

But some businesses are rushing to adopt the latest technologies having been largely sold on the financial benefits, without considering the longer-term impacts on well-being, brand perception, and profitability.

Building a digital solution without first considering the behavioral and human challenges will lead to a solution that prioritizes efficiency over effectiveness. In CX, where meeting the (frequently emotional) needs of customers is key, these challenges are particularly acute.

We have all had experiences where through an inability to find the right information, or comprehension of our query, we've had to revert to speaking to an advisor to get our query resolved to our satisfaction. It's imperative to understand what distinguishes humans from machines, to build businesses that work for both.

Let's look at that difference in a little more detail.



The Human vs. Algorithm Problem

When the artificial intelligence in a driverless car is navigating the streets, it makes thousands of decisions every second, based on predictions about how to safely reach its destination.

Before changing lanes, the car calculates the chances of an accident using a number of inputs (other cars, weather conditions, and so on), combined with algorithms (rules) built from a database of outcomes of similar previous decisions. Superficially, this may *seem* similar to how humans make decisions when driving. But it's not.

As humans, we assess the risks of our actions and predict the outcome based on experience. However, because we don't have similar data processing capacity—and have fallible memories—we often make decisions using simple rules of thumb, known in behavioral science as heuristics. And these can frequently lead us to behave in irrational, unpredictable, and sub-optimal ways.

By contrast, an algorithm, and the machine learning or artificial intelligence that relies on it, can only lead to rational System 2 decisions because of the rule-based, predictable nature of those decisions. An algorithm is simply a rule, and humans frequently break them. Algorithms struggle to cope when confronted with some of the irregularities and irrationalities of human behavior—the very things that make us human.

That's how we ended up with some of the AI public relations disasters of the last few years, where smart technologies “learn” negative or inaccurate information or develop biases from human interactions. Even now, newer generative AI tools like ChatGPT prohibit questions on controversial topics precisely to prevent issues like this.



How Is Generative AI Different?

When writing my book **The Behaviour Business**, on how to apply behavioral science to achieve business success, the chapters on how to understand (and harness) technological advances like AI and bots were some of the most challenging to write. This was because of the complex and dynamic nature of the topic.

With the recent advent of generative AI, the complexity has only increased, as has the potential of this powerful new generation of AI. Up until recently, AI researchers primarily focused on creating basic algorithms that used predefined rules to process information. The results were often limited capabilities that needed a high level of human input.

The introduction of generative models is promising a revolution by creating large language models (LLMs) that enable machines to learn so that they can generate new data, such as images or text, on their own.

Generative AI algorithms are based on deep learning techniques and neural networks that can understand patterns and generate results that can look and feel like content created by humans. This shift promises to unlock almost limitless possibilities for sectors like the creative industries, healthcare, and more.

In light of this huge potential, it can be tempting to dismiss any cautionary comments as Luddite naysaying. This would be a mistake. Regardless of the technology's potential, the same age-old human challenges will continue to exist. That's because any innovation designed and created by humans, however shiny and new, will always have our own millennia-old cognitive and behavioral biases baked in.

Generative AI, for all its groundbreaking sophistication, is no different. It also inevitably bears traces of the input data's own biases.

While the opportunities from LLMs and other AI-based tools are hugely exciting, humans remain human. Businesses need to be aware of the risks of implementing new technologies without an adequate understanding of customer behavior.



How AI Can Directly Impact Customer Behavior

Studies have shown that the nature of interacting with any AI-enhanced CX technology changes customer behavior, irrespective of the type of interaction. This is because dealing with a bot activates a whole range of behavioral biases that don't apply to human-to-human interactions, and vice versa.

For example, when people think they're dealing with AI rather than a human, they're more likely to lie, cheat, and steal. **In one academic study,**² participants were told either a human or an AI would pick a random number from 1 to 10, and they had to guess what it was.

They were told that the number picked was 8 and then asked to disclose what number they had picked (meaning they could lie if they chose to). There was a significant difference in what they reported depending on who they thought they were interacting with, with participants claiming they had guessed closer to the real number when replying to the AI (6.9), than a human (6.0).

In a second experiment, when participants thought they were dealing with AI rather than a human, 50% more of them chose to lie to avoid paying a shipping fee to return a clothing item. When people thought they were messaging online with a human, only 12% gave a false reason for the return. When they thought the bot was AI, that number jumped to 62%.

² "The impact of AI identity disclosure on consumer unethical behavior: A social judgment perspective," Tian-Ge Li, Chu-Bing Zhang, Ying Chang, Wei Zheng, Journal of Retailing and Consumer Services, Volume 76, January 2024, 103606.2023.



How Behavioral Science Can Improve Outcomes from AI-Driven CX

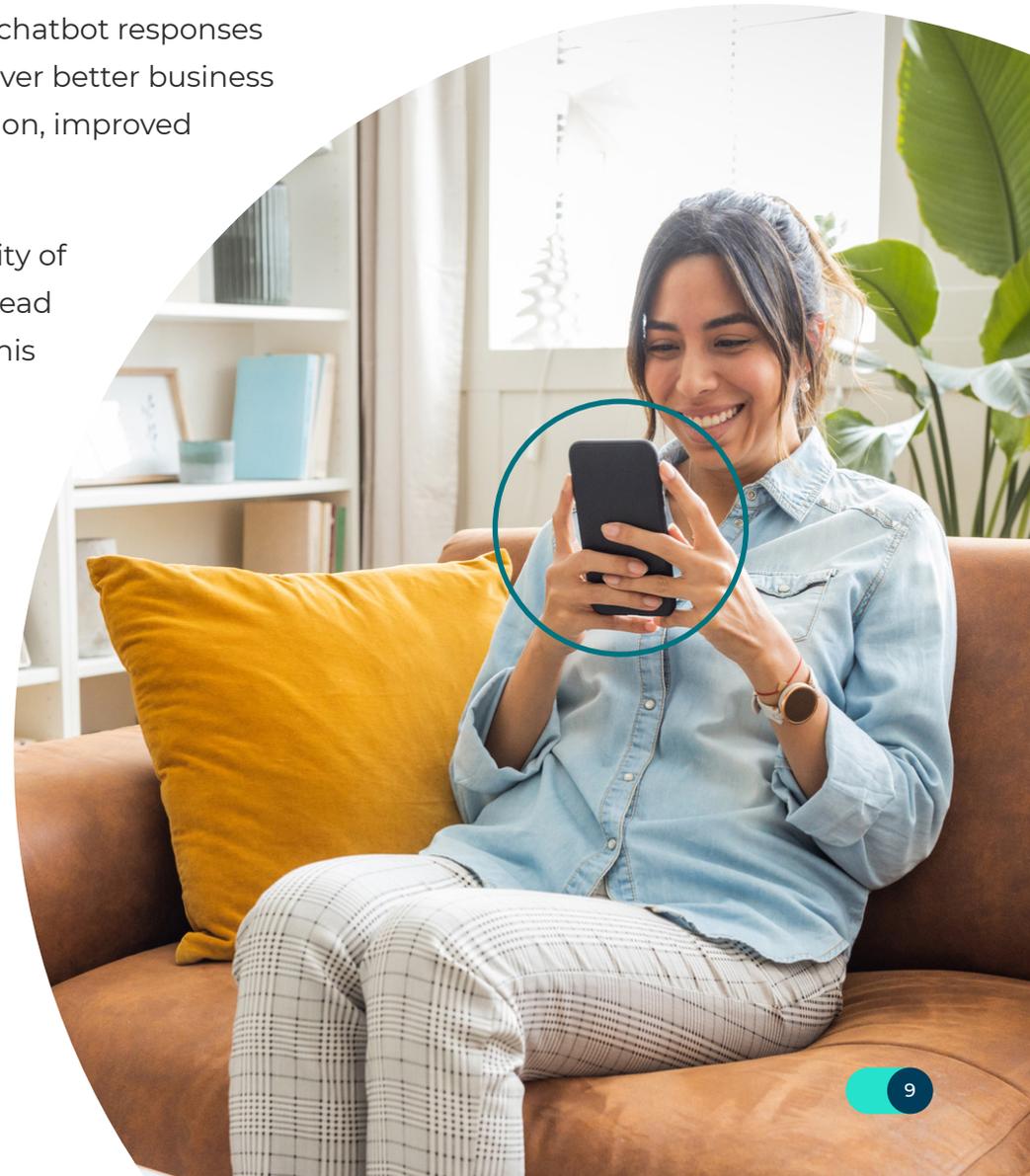
We've looked at how human behavior and decision-making impacts AI and vice versa. As the discipline of understanding human decision-making, behavioral science can play a key role in maximizing the potential return of AI-powered tech investment.

Best practice behavioral science can be integrated into generative AI tools, like chatbot responses based on LLMs, or advisor coaching tools. Driving desirable behaviors could deliver better business outcomes like lower average handling time (AHT), improved customer satisfaction, improved self-service adoption, and increased sales.

Generative AI can also potentially improve the productivity, quality, and scalability of the impact of behavioral science on the customer experience. For example, instead of manually optimizing an app post-launch based on user data and feedback, this process could be entirely automated.

Using generative AI, the app could be optimized in real time, using machine-learning algorithms to update the functionality based on what users were interacting with, creating personalized experiences for individual users.

This is the future for many businesses, where machine learning and AI can provide a way to embed “test-tube behaviors,” and test, learn, and optimize faster and more accurately. Chatbots, for example, can adjust their responses based on what customers are responding most positively to, tailored to the individual customer’s needs, using behavioral insights as well as data on that specific customer.



CASE STUDY

How to Nudge Customers to Digital Channels and Increase Their Uptake

A large financial services outsourcer had been struggling for some time to encourage its customers to use digital channels. Having delivered an initial shift when digital journeys were introduced, digital adoption had largely stagnated and contact center volumes remained high.

Working with our Nudge Practice, the digital journeys, customer conversations, and communications were studied to understand why customers were not choosing digital. A series of nudges, aimed at both customers and contact center advisors, were deployed and the impact was measured (studying behavior over the following 90 days).

We implemented the following nudges:

- A pilot team of contact center advisors was gathered and trained in nudge techniques
- A range of nudges were devised, piloted, and refined, using advisor feedback to make them more natural and easy to adopt
- Following the pilot, the techniques were trained and coached across all 3 contact center sites



“Not only has this delivered great results, but the staff engagement is the best I’ve seen for any project we have delivered.”

—Client Delivery Executive



14%

more customers were using digital channels after 90 days



£1.2M

cost saving over the remaining life of the contract



Many improvements to digital journeys identified, now being designed

Conclusion

To deliver on the promise of generative AI, it's crucial for brands to adopt an approach that puts humans at the center. And understanding how humans think and behave is at the core of it all. Behavioral science provides the most effective training data to build models to inform machine learning and AI technology. And the better your training data, the better your machine is at predicting behavior—and the greater the competitive advantage.



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