



# Embracing the Machines:

## AI's Collision With Commerce



Artificial Intelligence, or AI, is a hot topic. Whether people realize it or not, AI is changing the way we consume information, make choices, navigate the world, and shop. AI has already embedded itself in multiple facets of shoppers' everyday lives and is becoming crucial to brands and retailers as a predictor for both market and shopper behaviors.

Finding a lack of pre-existing consumer or shopper research, The Integer Group undertook an extensive study in the U.S. to understand how shoppers feel about using AI today and how willing shoppers are to have machines shop for them (see appendix for project methodology).

Through a multi-staged research approach, including ethnographies, expert interviews, and a large quantitative study, we aimed to understand the following:

- How do shoppers define AI today?
- What is the potential for using AI to shop?
- How do shoppers want to use AI in the future?
- What retailers are winning in making AI mainstream?
- How do socioeconomic factors influence AI adoption?
- And, ultimately, where will shoppers draw the line when it comes to using AI?

The result is a four-part series that examines Artificial Intelligence adoption today, what to expect in the future, and what it all means for brands and retailers.

#### Part One: AI Today.

Establishes a benchmark of where shoppers are in their relationships with AI: their perceptions, attitudes, and current adoption of AI in shopping and what it all means for brands and retailers.

#### Part Two: AI Tomorrow.

Examines how shoppers expect AI to change within the next five years and even further into the future, how they want to interact with it, what they want it to do for them, how much they'll let AI do for them, and the implications for brands and retailers.

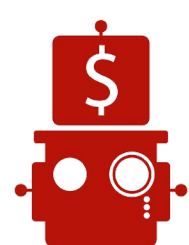
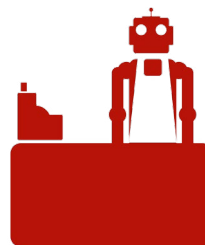
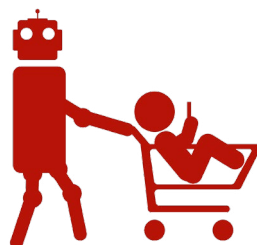
#### Part Three: AI at Retail.

This installment gives insight into which retailers are paving the way to make AI mainstream in shopping. It explores the differences in shoppers' behaviors and attitudes toward AI by which primary retailer they shop.

#### Part Four: The Economics of AI

Our final issue looks at socioeconomic factors that come into play with AI with regard to attitudes, adoption, concerns, and what could happen once AI becomes mainstream.

UP NEXT



# Embracing the Machines

## Part 1: AI Today

### Introduction: The Tipping Point

AI's progression in commerce and culture

AI might seem like a futuristic concept, but the reality is that it's been around for decades.

Consider Electro, the robot of the New York World's Fair in 1939. Electro's 26 motions included the ability to smoke cigarettes, walk forward and backward, count up to ten on his fingers, and recite a speech. He was seven feet tall and made of an aluminum-over-steel-frame. Spectators were in awe of Electro—he gave them a glimpse into the future.

While Artificial Intelligence might have begun as a gimmick to entice people into visiting the World's Fair, in the decades following, it was used to solve math problems, understand language, and even explore the moon. Since the turn of the century, AI's potential for commercialization has accelerated as it increasingly finds its way into shoppers' lives.

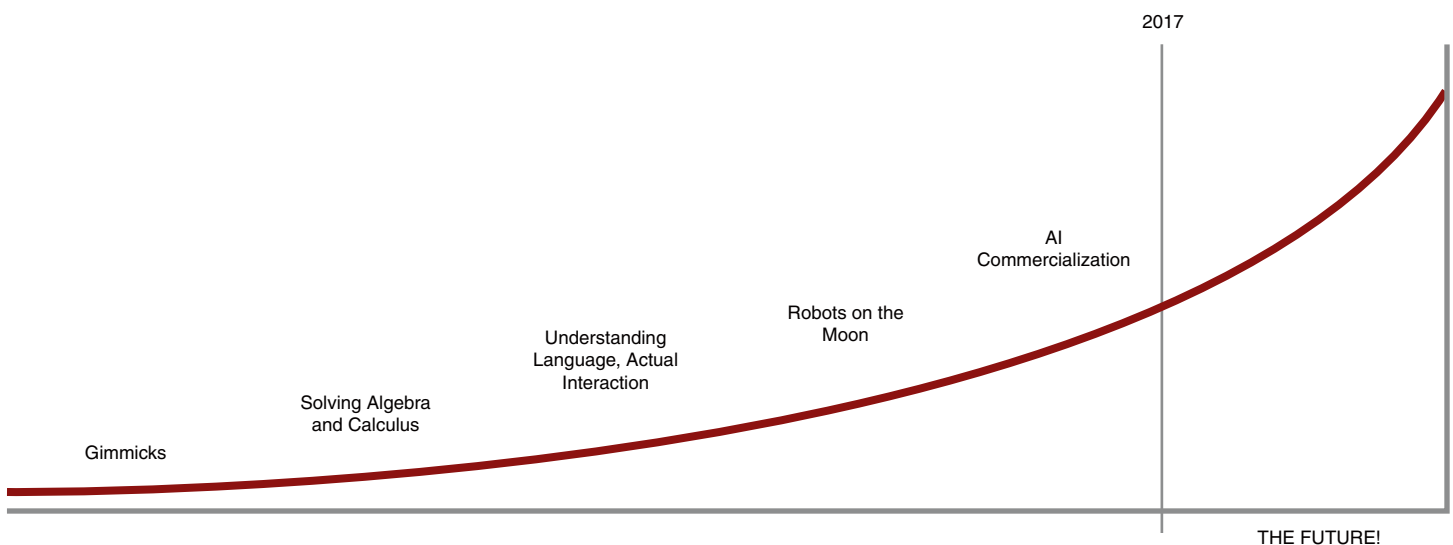
The mining of shoppers' personal data began to gain momentum in 2007; one moment, a person would be shopping for clothes online and the next, they would see the exact same brand being advertised on a completely different page. Shoppers feared that not only was their private information for sale, but anyone could use it to steal their identity, credit card information, and more. What shoppers didn't realize, however, was that these ads were simply products of Artificial Intelligence algorithms.

Fast forward to today, and it seems we're at the precipice of an AI shopping revolution. New AI interfaces are released all the time; they are changing the way shoppers do everything from grocery shopping to ordering pizza. So how do modern shoppers define AI? Do they even consider it? Do they recognize AI when they use it? What are they comfortable allocating to AI? How open are they to AI in their lives?



Scott Schaut / Mansfield Memorial Museum

### Artificial Intelligence is a Progression



## Shoppers' Perceptions and Awareness

Artificial Intelligence is a loaded term that might seem futuristic to shoppers. The Tech Enthusiasts who completed our quantitative study had a much more optimistic view, using words like “interesting”, “smart”, and “helpful” when describing AI. On the other hand, AI Rejectors used words and phrases like “robotic”, “fake”, “scary”, and “confusing”.

AI can seem like science fiction because present-day consumers don't think of AI as being actively involved in their day-to-day lives or shopping habits. Because of this, respondents were unclear about which applications of technology use AI and which do not.

Our results revealed that the newer the technology, the more likely shoppers were to believe that AI somehow powers it. And the more algorithmic the technology is, the less likely it was to be identified as AI. For instance, self-driving cars (59%) and voice-recognition technology (43%) were more likely to be thought of as using AI. The algorithmic tasks like online suggestions and reviews (11%) and search engine results (16%) had the lowest percentage of shoppers attributing them to AI.



### Tech enthusiasts describing AI

(n=3615)

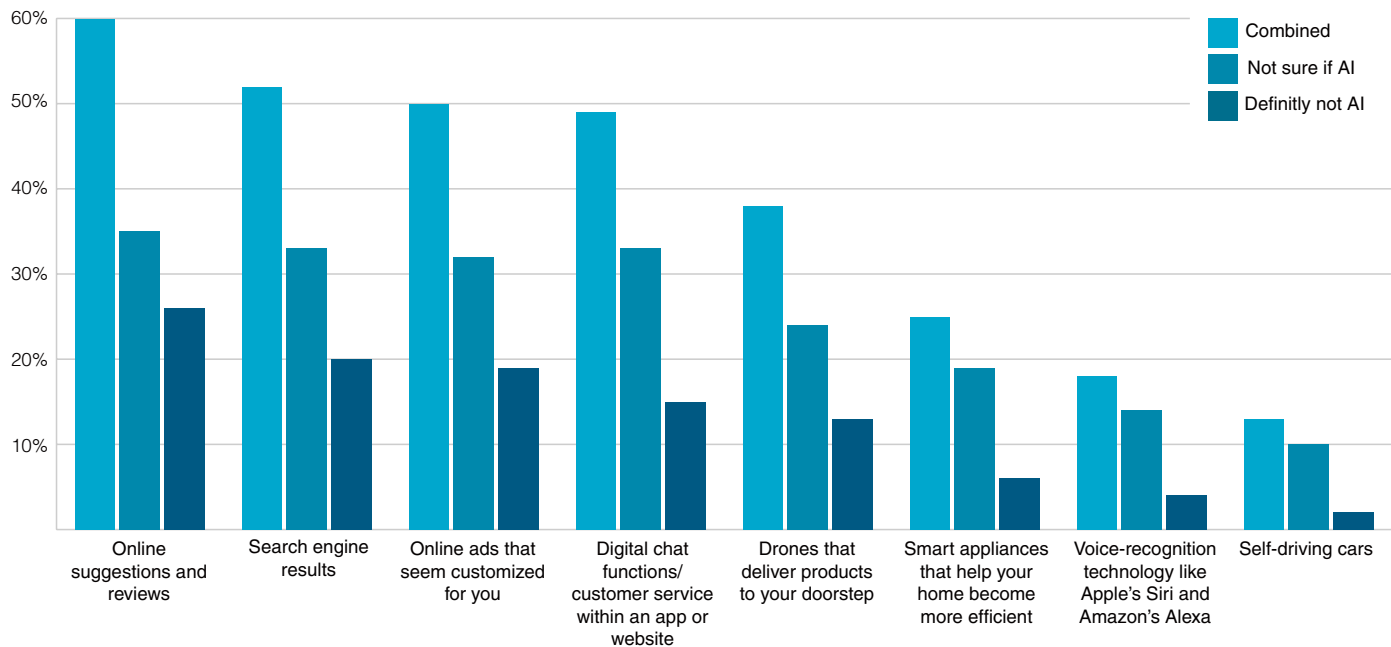


### AI rejectors describing AI

(n=50)

Q5/38. What is one word you use to describe "Artificial Intelligence"?

**Which of the following do you personally NOT consider to be AI?**



Q7: Which of the following do you personally consider to be Artificial Intelligence? N = 3615

***“It’s hard to tell where to draw the line, you know? Is anything that a computer can do considered Artificial Intelligence?”***

- Bruce, 68

This confusion arises among consumers and shoppers because Artificial Intelligence is often humming along unnoticed, unless it is accessed through an actual device, like a Google Home or an Alexa, or via software on another device like Siri or Cortana.

Yet, even when asked directly if Siri or Alexa was powered by AI, many respondents eventually agreed that AI was at work in these applications, but many of them had never considered this before:

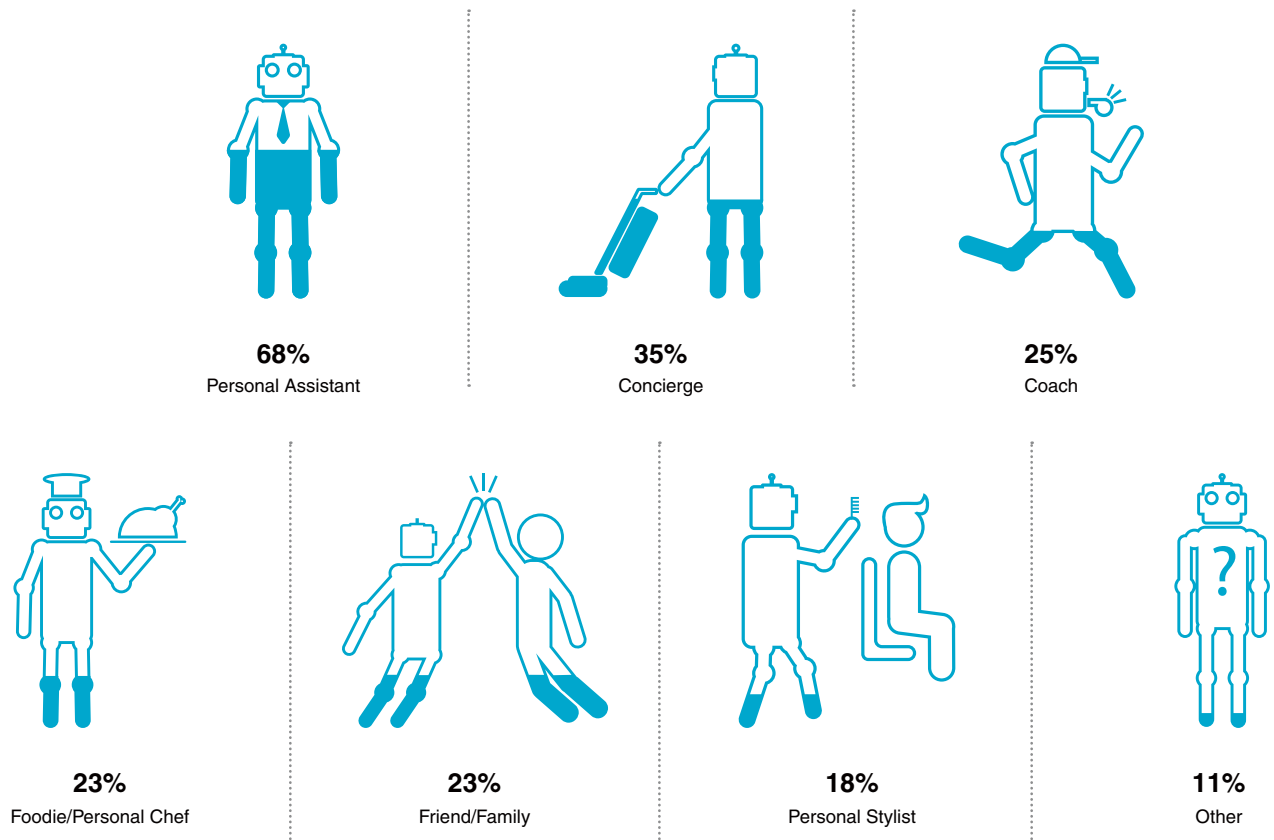
***“No, I don’t think I use AI in my daily life at all. I don’t think so....I suppose Siri’s AI because it can think on its own without the assistance of an actual person, so I guess I would say I would consider that Artificial Intelligence. I’ve never thought of it before.”***

- Dasharra, 24

Virtual Assistants like Siri, Cortana, and Alexa have affected how shoppers have come to expect AI to behave in their lives today. When asked what role AI plays in their lives, 57% of respondents answered it was a “personal assistant” (57%) or “concierge” (35%). However, they had dramatically different answers for how they saw their relationship with AI changing in the future, which will be addressed in our next white-paper series.

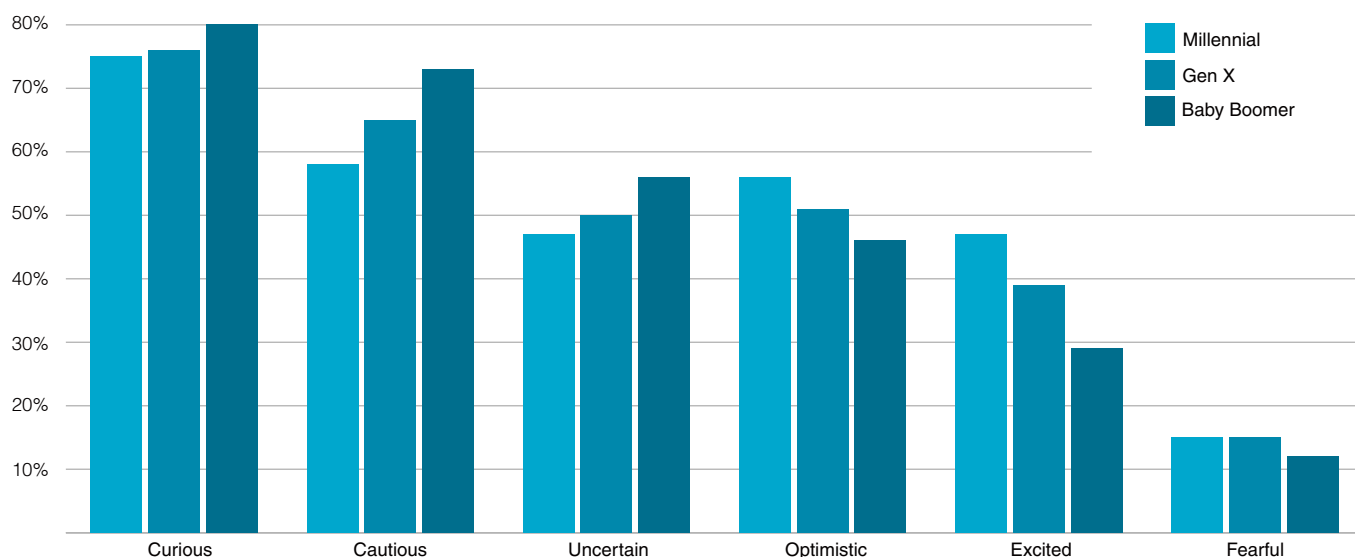
The good news for brands and retailers is that consumers are open to using Artificial Intelligence to shop. Seventy-eight percent of total respondents said they felt “curious” about using AI to shop and wanted to see what it could do for them, but 66% also said they were “cautious” about using AI to shop. Not surprisingly, Millennials were the most optimistic and excited about using AI to shop, whereas Boomers were more cautious.

### **If Artificial Intelligence were a person, what role does it play for you today?**



Q11. If Artificial Intelligence were a person, what role does it play for you today? N = 3615

## TOP 3 Emotions: Which of the following words best describe how you feel about Artificial Intelligence today?



Q10: Which of the following words best describe how you feel about using Artificial Intelligence to help you shop today? N = 3615

### Takeaways and Implications:

1. AI might seem futuristic, but it's constantly humming in the background of life; and shoppers are curious and open to using AI to shop. According to Jeff Dotson, Associate Professor of Marketing at Brigham Young University, shoppers do not fully realize how open they will be to using Artificial Intelligence to shop until they try it. Once they're exposed to it, they might be more likely to yield more decisions to it.
2. Millennials have an open and optimistic attitude when it comes to using AI to shop and they might be the first adopters, but brands and retailers should consider AI solutions that also bring along the other generations so as not to alienate other shopper groups like Boomers. According to Jerry Golub, the Executive Vice Chairman of the Board at Price Chopper Supermarkets, "Early adopters are already finding their own way to use the tools to their advantage, but to get at widespread usage for everyday shopping, the industry will have to make AI user friendly."



# Section Two: My Second Self

## How shoppers interact with AI today

Within our research, people seem to be willing to give Artificial Intelligence a shot when it comes to shopping but say they will abandon AI if it doesn't live up to their expectations. Many view AI as an app they can download onto their cell phones or a physical experience like an Alexa that they can purchase and then return, throw away, or unplug if they're dissatisfied with the product. However, this might not accurately depict how AI is actually integrated into shoppers' daily lives.

***"You're basically going to engage a system in the computer and eventually start arguing with it, and you're going to win... you're going to say, I don't want to use you anymore."***

- Ronald D., 36

Those who are consciously using AI-based devices today are really just skimming the surface. For example, with virtual assistants like Siri or Alexa, shoppers are limiting their use to suggestions, recommendations, or simple tasks via voice commands. Amazon's Alexa has more than 15,000 different skills in 20 different categories; but most people only use their "intelligent assistant" for a handful of simple tasks like playing music or answering cooking questions.

***"I use it when I'm cooking... and I want to know how many teaspoons are in a tablespoon or something like that, I'll ask her."***

- Sheena, 30

In our qualitative research, we found similar hesitation to fully use certain applications of AI. We asked respondents if they would be interested in various hypothetical AI technologies that would pick out clothing, automatically order dinner, or automatically purchase groceries, and we found that, in some situations, the concept of using AI seemed to be more of a hassle than a benefit.

People might not proactively do more with AI because they're just not experiencing enough of a problem to learn how. According to Bob Moesta, President and CEO of the Re-Wired Group, the proposition has to be worth it for shoppers to adopt new ways to use AI or to teach a virtual assistant new tasks. "Think of a Segway," he said. "People didn't struggle with walking. The proposition has to work; more is not always better."

We found that people are more willing to participate in an AI experience that is seamless and solves a problem:

***"I don't know. It seems weird, it's so easily accessible to just go and get your groceries yourself... the grocery store is right across the street. It's usually right on the way, so I usually stop and get everything."***

- Dasharra, 24

***"Netflix is probably a good example where I don't necessarily care where those recommendations come from, but if it makes my life easier in terms of finding content, it is something that I appreciate and I am willing to participate in."***

- Jeff, 59

**54% of shoppers reported using a voice-activated personal device at least once per week. Of those:**

Shoppers ask it to play music



Shoppers ask it to add an item to a shopping list



Shoppers ask it to suggest an item



The real opportunity for AI to be adopted by mainstream shoppers lies in the simple truth that not all shopping is created equal. Shoppers are more open to outsource purchase decisions to Artificial Intelligence if it's a chore for them or a shopping transaction they don't really enjoy. Shoppers were least likely to outsource the shopping decisions that they enjoy or that require more personal consideration: things like vacations, restaurants, and entertainment.

Our results showed that the category shoppers believed they would most likely allow AI to make shopping decisions for them is the same category that they least enjoyed shopping for: everyday household items. However, the actual shopping decisions respondents said AI could do for them were quite personal and distinct. For instance, a shopper might say she would like AI to choose her produce, but not her shampoo.

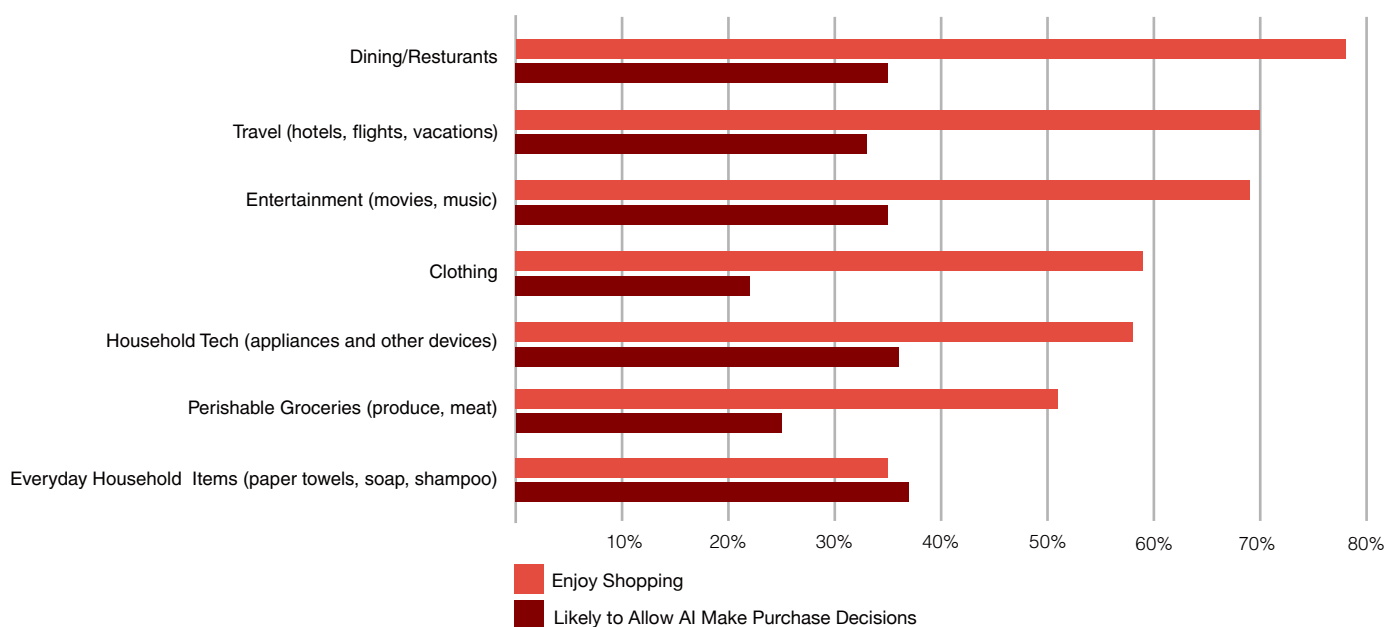
***"I'm picky with produce. I like to be able to feel it... But with a box of pasta, it's a box of pasta. Every single box of pasta is exactly the same on that shelf."***

- Ronald, 36

***"I'm okay AI helping me with grocery shopping, some clothing shopping, not necessarily shoe shopping. Definitely not furniture. Parts of my life, though."***

- Sheena, 30

### Shopping Enjoyment vs. Allow AI Purchase Decision



Q3: Everyday Household items (paper towel, soap, shampoo) - How would you describe shopping for these categories on a scale of 1 to 5 with 1 meaning it's a chore and 5 meaning it's something I enjoy shopping for? N = 3615



## Takeaways and Implications:

1. Today, recognizable AI has a name—be it Siri, Alexa, Cortana, Google, or Watson. As companies continue to develop new AI interfaces, keep in mind that the most successful AI will likely be a part of the seamless user experience. Brands and retailers should strive toward making AI intuitive vs. something that has to be learned and find ways to integrate AI that are natural to shopping. This includes anticipating the process shoppers will experience when they first install or learn to use the AI technology. Brands, device manufacturers, and retailers will need to find ways to remove friction from the equation.
2. People are interacting with AI virtual assistants minimally and through voice commands. Voice is the interface of today: it's what has been offered and how people have been trained to actively interact with AI. Brands should consider developing sophisticated verbal search functionality and storytelling. We will further explore how people hope to interact with AI in the future in our next white paper, *AI Tomorrow*.
3. Unless using AI alleviates some sort of struggle with the “old” way of doing things, shoppers won't proactively go out of their way to install or learn to use it. This means that, for some brands and retailers, AI is just not the answer. Consider if it truly makes the shopper's life easier or solves a problem.

Jerry Golub, Executive Vice Chairman of the Board at Price Chopper Supermarkets, gave the example of the Grocery Channel's Click and Collect programs. These programs are growing because they make the shopper's life easier. Click and Collect might use AI algorithms, but it is not central to its functionality.

4. According to Bob Moesta, President and CEO of Re-Wired, “Shopping happens in two phases: deciding what you want to buy, and then transacting.” In our research, we found that shoppers were more willing to delegate some of the second aspect of shopping to AI, the transactional tasks, but not the type of shopping they deem to require thinking and consideration.

Exactly what type of shopping is transactional and mundane varies from person to person, so brands and retailers will need to keep AI and automation personal and individual. It is important to recognize that one shopper's least favorite shopping chore isn't the same as another's. So the AI must be customized to each shopper's needs.



# Section Three: The Data Exchange Dilemma

## Balancing Resistance and Value Add Privacy Concerns

We found that modern shoppers are caught in a privacy paradox. They expect AI to understand them well enough to make accurate recommendations on music, restaurants, and shopping, but they don't want to readily share their personal data.

Overwhelmingly, shoppers are most concerned about the ability for AI to protect their personal information: 71% are most concerned with protecting their personal information, followed by the cost of AI. (Cost, it turns out, is a major concern, and we explore it in more depth in our upcoming whitepaper on Artificial Intelligence and Socioeconomics.)

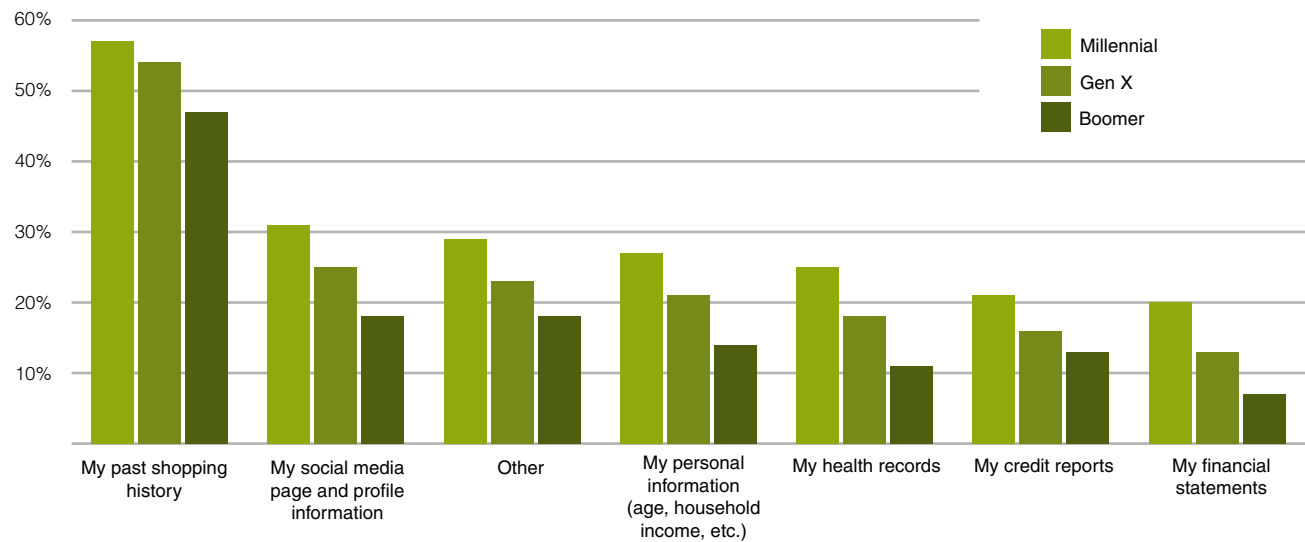
Interestingly, only about half (52%) of respondents were open to sharing their past shopping history. Even fewer were willing to share their medical history (18%), credit information (17%), and financial information (13%) to help power AI.

### Total Tech Users—Ranked top three most important

	Total %	Rank #1	Rank #2	Rank #3
Stay ahead of things vs. being reactive to the past	27%	5%	10%	12%
Be easy to learn how to use	31%	8%	11%	12%
Have a conversation and interact like a human	30%	9%	11%	10%
Truly customize to me and my preferences	37%	11%	13%	15%
Truly makes things easier for me	46%	11%	16%	19%
Be low cost and accessible	55%	16%	21%	18%
Protect my personal information	71%	41%	18%	12%

Q13: What are your biggest concerns when it comes to AI in the future? N = 3615

### Top 2 Box: What data are you comfortable sharing so that an AI can help you shop with customized content and suggestions?



Q14: Top 2 Box: Summary - What data are you comfortable sharing so that AI can help you shop with customized content and suggestions? N = 3615

So, shoppers want curation but they also want privacy. But for AI to work efficiently and continuously improve, shoppers are going to have to share their information. If they were to refuse to allow AI to collect information, how would a shopper expect their tasks to be completed as they wish? It seems shoppers are inflexible or don't realize that data fuels AI.

While many claimed they are not comfortable with sharing data, the current reality is that shoppers are compliant with sharing information in passive data collection. Jerry Golub, Executive Vice Chairman of the Board at Price Chopper Supermarkets, was quick to point out a gap between what people say about privacy, vs. really how much they care:

"It's what they say .... but actually people don't care all that much that Google is able to track their every move...younger customers are less sensitive to privacy issues. They say they don't want to share data but, frankly, they know there's a situation out there where machines are tracking their activity."

While privacy is still possible, it does appear that a trade-off could be required in the future. Bob Moesta of Re-Wired speculated that in the future, "anonymity might become a luxury."

## Takeaways and Implications:

1. In this culture of passive data exchange, brands and retailers should try to be as transparent as possible to maintain a good relationship with their shoppers. Perhaps even spell it out for shoppers that the more information they share, the more personalized the end result will be for them. They should also be responsible in how they are collecting, storing, and sharing data to maintain consumers' trust, it is much harder to repair than it is to build.
2. Companies today are collecting massive amounts of data that might not be necessary or even useful. Brands and retailers should, instead, aim future data collection efforts at identifying the relevant data points they really need to know about their shoppers. Jerry Golub forecasts that brands and retailers will need to work with technology partners to create a "Data Spine"—a collection of various sources and types of information on their shoppers. Eventually, this could raise questions about who ultimately owns the data and how will it be used and shared in the future.

*"I am fine with them taking my information, but if they are going to take it and sell it to a third party...that is, I guess, what I am not okay with."*

- Jennifer, 29

*"Brands don't need all the data, they need the right data."*

- Bob Moesta, President and CEO of Re-Wired



## The Bottom Line

AI might seem like a futuristic endeavor, but it is here and the reality is that it's constantly working, learning, and adapting in the background—and people are open and curious about using it to shop.

The real opportunity for AI to be adopted by mainstream shoppers lies in the simple truth that not all shopping is created equal. Shoppers are more open to outsourcing purchase decisions to Artificial Intelligence if it's a chore or shopping that they don't really enjoy.

We also found that shoppers today are caught in a privacy paradox. Entrapped in the culture of passive data exchange, shoppers expect AI to understand them well enough to make accurate recommendations on music, restaurants, and shopping, but they aren't willing to consistently share their personal data.

But how will shoppers feel in the future? Part two of The Integer Group's white paper on Artificial Intelligence examines how shoppers expect AI to change within the next five years and even further into the future. What is on the edge for shoppers? How far is too far with AI, and what are the implications for brands and retailers?

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## Product Methodology

We deployed a multi-staged research approach to explore levels of awareness, acceptance, and shopper perceptions of AI today, as well as how shoppers think they will change over time:

### Phase One: Secondary Research Deep Dive

We determined how to define Artificial Intelligence and learned how it has evolved through the decades with an academic study of previous studies, articles, and white papers.

### Phase Two: Expert Interviews

We explored the latest developments from tech leaders and experts at the forefront of Artificial Intelligence to inform our hypotheses and develop informed questions.

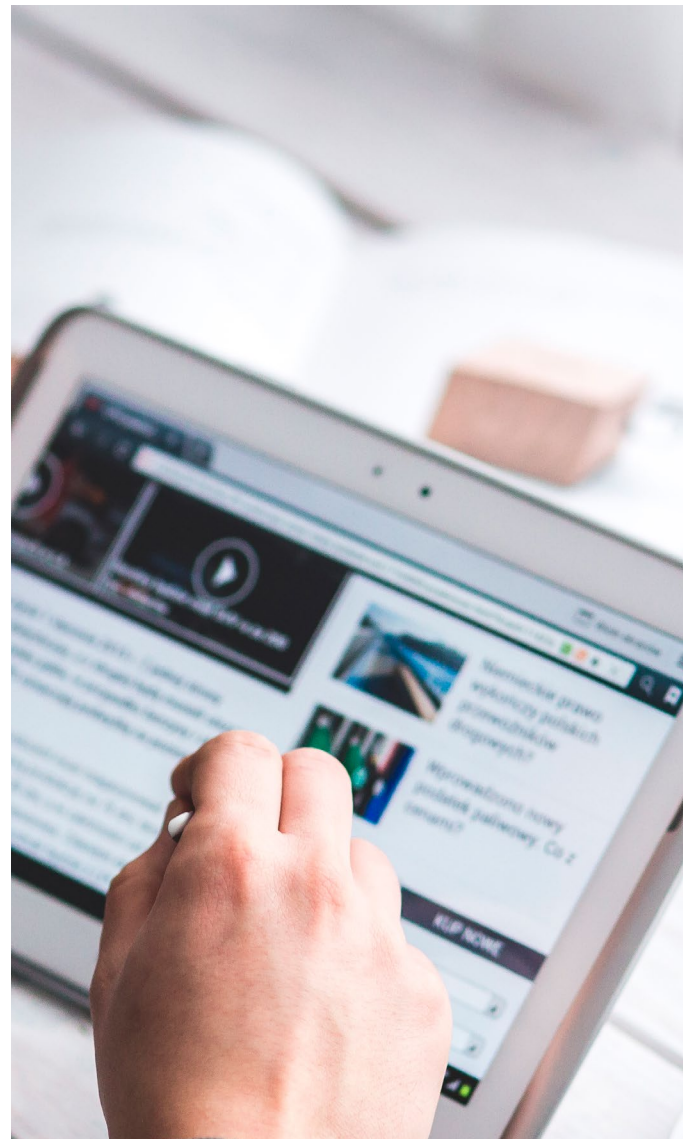
Integer conducted in-depth interviews with Jeff Dotson, BYU Associate Marketing Professor; Jerel Golub, Executive Vice Chairman of the Board at Price Chopper Supermarkets; and Bob Moesta, President and CEO of the Re-Wired Group.

### Phase Three: Qualitative Research

We visited shoppers in their homes to gather rich insights regarding adoption and feelings toward AI. We performed 15 two-hour shopper ethnographies in Denver and San Francisco.

### Phase Four: A Quantitative Study

Finally, we validated our qualitative research findings with quantitative data from an online survey of 3,665 shoppers who use technology and are open to AI.



## We live at the Intersection of Branding and Selling®.

A key member of Omnicom Group Inc., *The Integer Group* is a global, creative-fueled commerce agency that delivers innovative ways for brands and retailers to connect and engage with shoppers, turning moments of receptivity into moments of conversation. We use cultural insights to inspire creative ideas that build brands and accelerate purchase both in and out of store, moving people from living to looking to buying. The Integer Group has more than 1,100 associates in 27 offices across the globe, including locations in Africa, Asia, Australia, Europe, the Middle East, and North and South America.

### For More Information:

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