

A hand holding a smartphone, with a blurred background of colorful bokeh lights. The image is partially covered by a red overlay at the top and bottom.

Embracing the Machines: AI's Collision With Commerce

Part 2: AI Tomorrow
January 2018



About the Study

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 preexisting 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 socioeconomics 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.

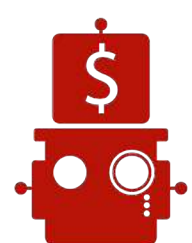
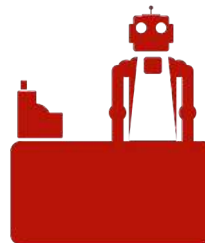
Part Three: AI by Retailer

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 2: AI Tomorrow

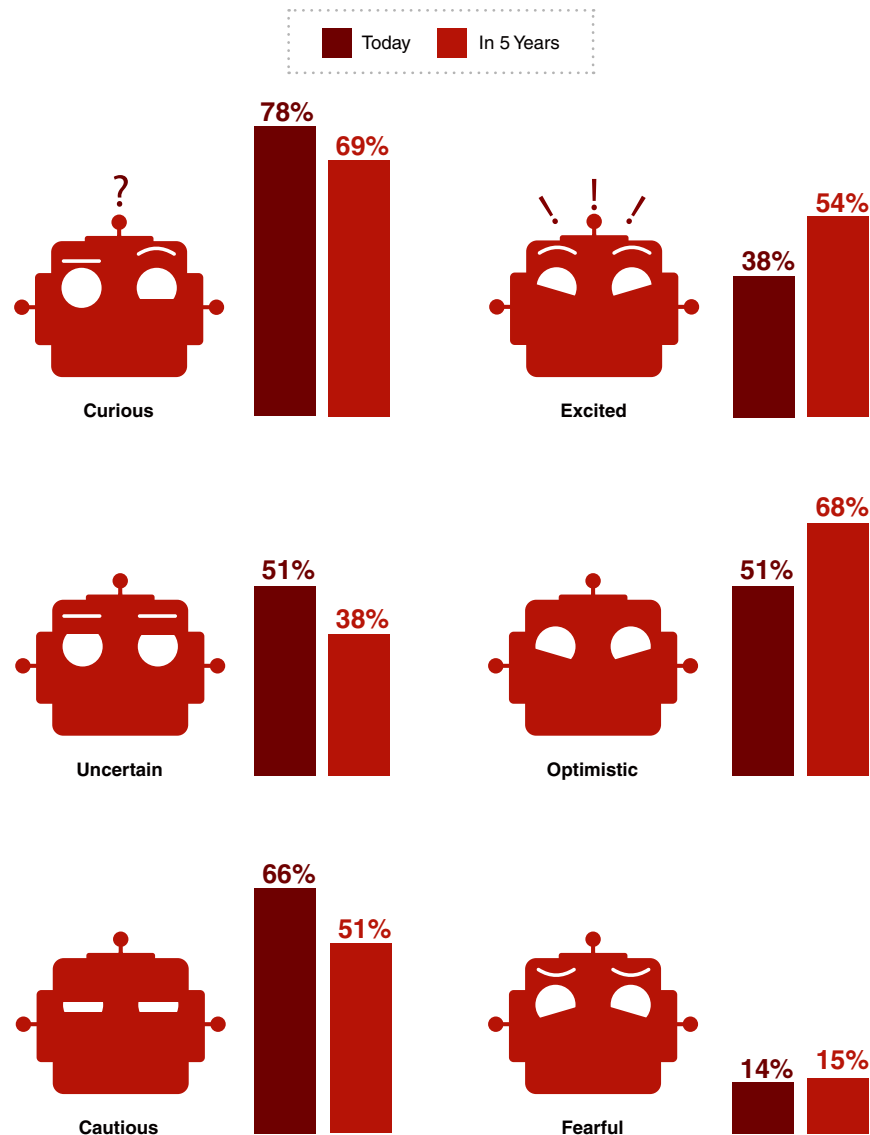
Introduction: Anticipation for What's Next

Our culture, technology, and retail capabilities are changing more rapidly than ever, and feeding off of each other to create innovative shopper solutions that are more custom and immediate for shoppers. In 2017 alone, we saw brands take on hyper-personalization for the masses and an explosion of new delivery models—including Walmart testing delivery straight to your fridge.

Each new wave of innovation (even if it is trial and error) provokes curiosity and inspires optimism about how personalized and convenient shopping may become in the future. And shoppers aren't just looking for more delivery services, they are looking forward to having more personal relationships with AI as a shopping aid in the next five years.

This second part of our study examines what shoppers expect and hope for in a future with AI: how they expect AI to change, the role it will play in their lives, and how much control they will cede to AI. Brands and retailers may want to rethink how they're approaching AI when they realize how prevalent it will be in the future.

How does AI make you feel? (Top Three Emotions)



Q: Which of the following words best describe how you feel about using Artificial Intelligence to help you shop? n = 3,615

Section One: AI, Your Next BFF?

Shoppers' Growing Personal Relationship With AI

In Part 1 of this series, *AI Today*, we discussed findings that most shoppers today think of AI as the personal assistant in their lives—a tool to help with mundane shopping tasks and chores. But in the future, shoppers expect a different and much more intimate relationship with AI.

While some shoppers expect AI take on roles that offer more personalized assistance, becoming more of a concierge or coach (38%), others want AI to have more heart and opinion five years from now—to take on bigger roles as a family member or friend (33%) or a personal chef (44%) or stylist (38%) that can offer tailored vs. canned advice.

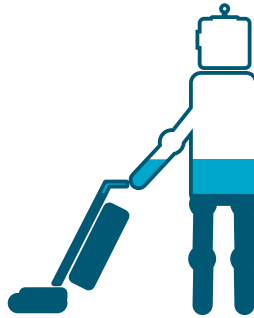
If Artificial Intelligence were a person, what role would it play for you?



Personal Assistant

Today: **57%**

In 5 Years: **64%**



Concierge

Today: **35%**

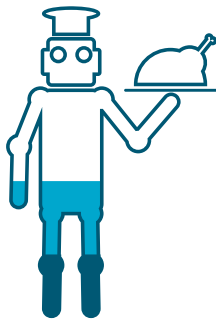
In 5 Years: **50%**



Coach

Today: **25%**

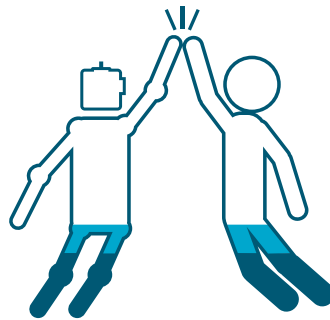
In 5 Years: **38%**



Foodie/Personal Chef

Today: **23%**

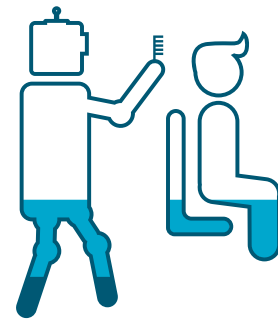
In 5 Years: **44%**



Friend/Family

Today: **23%**

In 5 Years: **33%**



Personal Stylist

Today: **18%**

In 5 Years: **38%**

Q: If Artificial Intelligence were a person, what role would it play for you? n = 3,615

Despite these desires, shoppers will still value the functional aspect of AI, with personal assistant still being the top role they see AI playing five years from now. As a personal assistant, shoppers feel that AI saves them time and gives them knowledge, but the true benefit they seek from AI is to save money. While only 55% of shoppers saw saving time as a key benefit of AI, nearly 80% stated “saving money,” and 74% named “finding the best deals” as the key benefit.

While saving money is a black-and-white shopper need, “finding the best deal” does not necessarily mean shoppers want AI to find them the cheapest options available. Shoppers’ differing and individual value equations means the “best deal” looks different for each shopper.

Shoppers’ value equations are not one-size-fits-all when it comes to things like groceries. For example, when purchasing paper towels, the best deal for one shopper could be an “expensive” pack for half price, whereas the best deal for another could be the cheapest and lower-quality brand sold in bulk. Understanding the needs of shoppers will continue to be a foundational requirement in the age of AI.

For AI to truly provide valuable advice as a personal chef, friend, or stylist or to find shoppers the best deal, AI and shoppers will have to connect seamlessly. The more AI has to consult and get input from shoppers, the less impactful AI becomes.

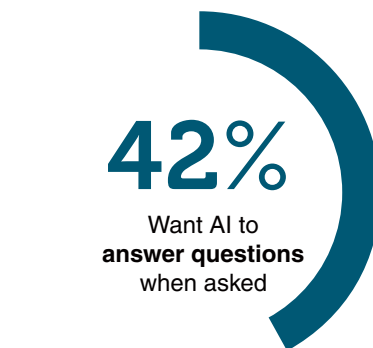
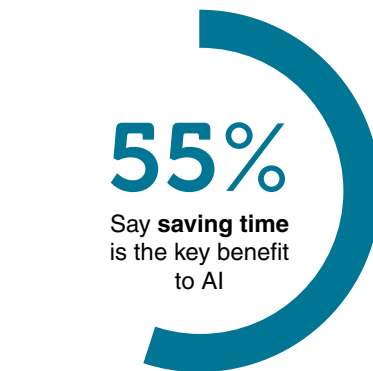
“Any forced interjection of AI would be a drawback for shoppers—it would have to fit into their lives naturally.”

—Jeff Dotson, Associate Marketing Professor, BYU

For example, if AI recommends a recipe that calls for barbecue sauce, it should then be added to the shoppers’ grocery list. Adding barbecue sauce to a grocery list seems simple; most shoppers would simply want either the best option or their favorite kind added to their grocery list. But each shopper has preferences and their preferences might have changed since they last bought it. With many different brands at various retailers and many options of flavors, sizes, sale items, and even the option to go organic or not, it becomes a lot more complex. Unless AI knows exactly what the shopper needs and wants, it will have to go back and ask questions, which is unlikely to be ideal for shoppers.

As shoppers expect AI to play a bigger role in their lives, from concierge to coach to personal chef, they’ll also expect it to know them on a much more personal level—and get everything right. Today, many people already feel attached to their AI. One young female respondent in our study said, “We have friends who also have [an Alexa], but this is MY Alexa...She knows how to run this house, not yours.” If these relationships are already starting to form, one can only imagine where they can go.

Convenience Is Great, But Saving Money Matters Most to Shoppers



Q: What are two things you would like AI to do for you when it comes to shopping today? n = 3,615

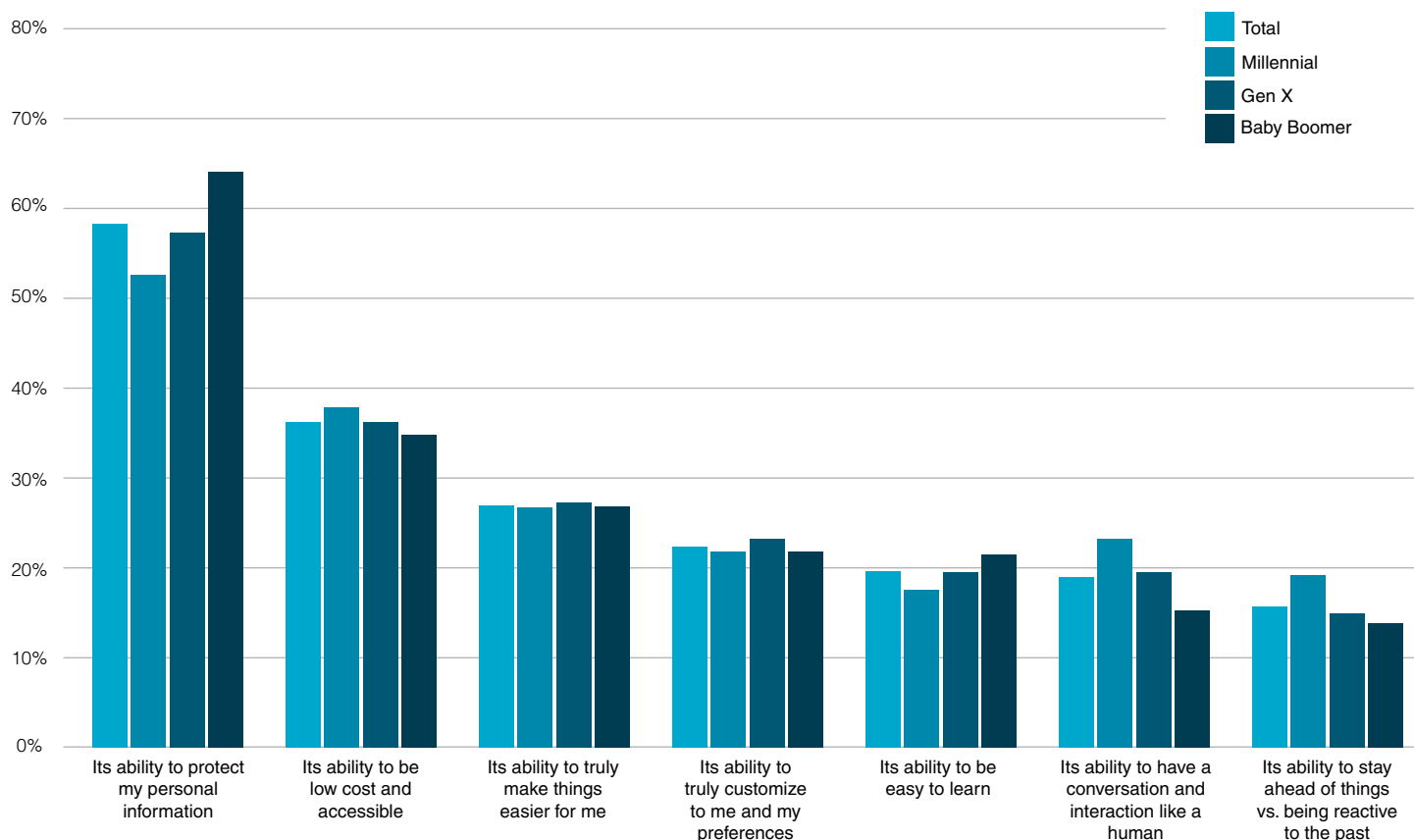
Looking forward to the foreseeable future, however, the tension between personalization and privacy concerns will still exist. Privacy of personally identifiable information is the biggest concern for all, with Baby Boomers remaining the most concerned about safeguarding their personal data (64%) as the graph below shows.

“The thing about Artificial Intelligence that makes me uncomfortable also is that I imagine it being very hackable.... I’m just thinking of the cases of even baby monitors and stuff being hacked, so I fear the ability to gain information and to control things... I’m sure people would be able to have access to that data if they wanted.”

—Neva M., 28

Apart from privacy, other shopper concerns are a reflection of the state of AI today. With so many new uses for AI coming out each day, shoppers are excited but also somewhat skeptical about AI’s ability to deliver truly custom content or make their lives easier. In the end, it is a new way of working, and people are creatures of habit. In addition, price and accessibility of AI is still top of mind and the second biggest concern for shoppers—especially Millennials. Living in a world of Amazon Echos, Google Homes, Siri, and more, it’s hard to imagine a future where AI is free (and obvious to the shopper). Our study will delve deeper into the socioeconomic factors of AI in our fourth white paper, “The Economics of AI.”

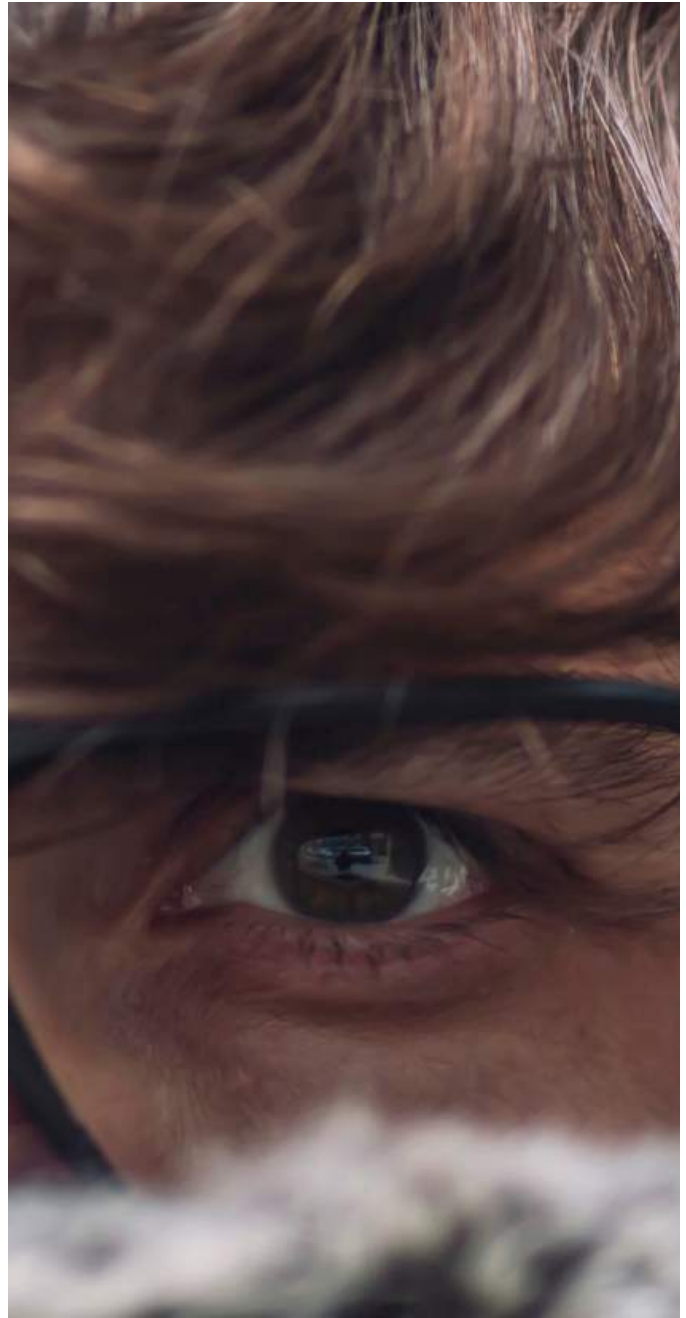
Top Two Biggest Concerns for AI in the Future



Q: What are your biggest concerns when it comes to AI in the future? n = 3,615

Takeaways and Implications:

1. As shoppers expect AI to be more active across different parts of their lives, there will be increased expectation for AI to offer “new services” and get it right on the first try. Therefore, brands, retailers, and tech companies need to get it right. They need to apply AI in the right ways, at the right shopper moments, for the right purposes; they must do this while considering the gaps that exist in accuracy and find ways to create a seamless experience between AI and the shopper. We can continue to expect increased pressure to build more accuracy, intimacy, and personalization into each AI experience. According to Bob Moesta, President and CEO of Re-Wired, “It’s all going to happen one increment at a time. I pulled out an original iPhone and it seems so antiquated. The AI evolution is happening. We’re constantly being pulled into AI technology. The need for AI to learn is brutal.”
2. Shoppers’ biggest desire of AI is not what AI is doing today; most brands, retailers, and tech companies seem to be focusing on offering shoppers AI that is focused on curation, inspiration, and convenience rather than money-saving and deal-hunting. For instance, Alexa has more than 15,000 features as of September 2017 and can perform multiple tasks—from ordering an Uber to ordering a pizza. If brands and retailers start to use AI to help people comparison-shop, they’ll first need to sort out all the details. This can be a daunting task because, as Jerry Golub, Vice Chairman of the Board at Price Chopper Supermarkets stated, “There are so many little details that need to be worked through to truly account for human behavior.”
3. Privacy of personal data will continue to be top of mind for shoppers so it must be top of mind for brands, retailers, and tech companies. For most consumers, it isn’t too clear what type of personal data companies are collecting and exchanging and how it is being used. While some shoppers will lean in and give more data in exchange for getting more from AI, others might opt out altogether. Privacy could become a luxury for some consumers, even to the extent that they are paying to be taken “off the grid.” According to Bob Moesta, “Anonymity will become the new luxury. Everyone is paying for data. It (AI) will automate and get to a point when it knows too much about me.” Brands and companies will have to consider how to reach shoppers and use AI with varying levels of personal data.



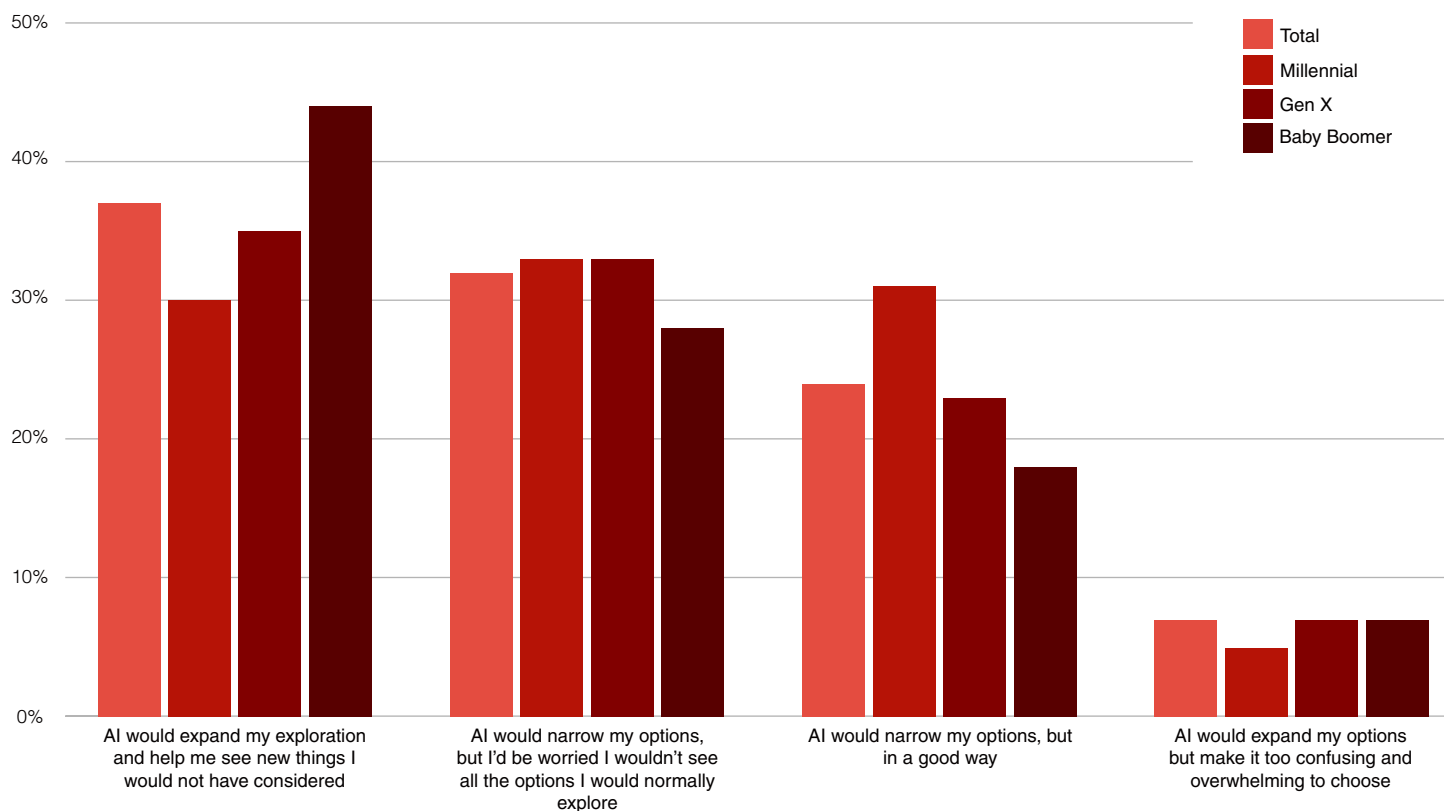
Section Two: Living With AI

How Shoppers Expect and Want to Live and Interact With AI in the Future

In the next five years, shoppers expect AI to be an asset and aid in their shopping experience—giving them advice and suggestions that are far more curated and personal. But will AI's ability to curate be an advantage or drawback for shoppers? When asked, 37% of tech users thought AI would expand their shopping exploration and help them see new things they would not have otherwise considered. Conversely, 31% worried that, in the future, AI would narrow their shopping options.

Reflecting their optimism, Millennial shoppers were slightly more likely to think AI will narrow their options in a good way—bringing them curated and specific items they are interested in and filtering out all the noise. Meanwhile, Boomers were more likely to appreciate how AI might bring them new and different items they aren't aware of but might be interested in.

Shopper Sentiment About AI Curation



Q: What are your thoughts on AI's ability to bring you items to choose from and ultimately buy? n = 3,615

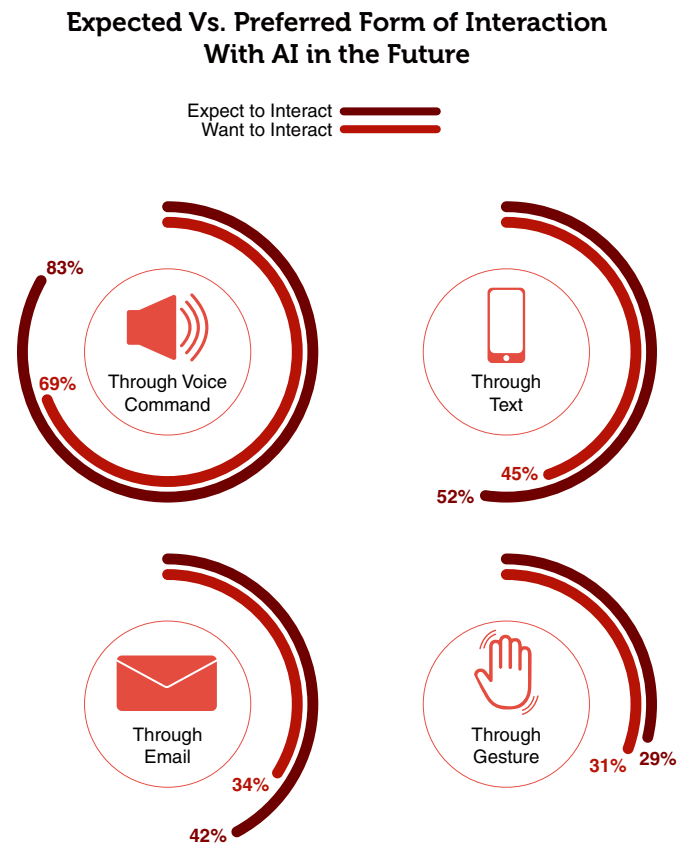
"I just feel like it narrows a person. Whether it be the browser, the app, or news, I just feel like it makes me, or anybody else, seem one-dimensional in the eyes of people making or using technology."

— Mary F., 42

"I think they need to do more. I mean, really, there's always this amazing ... With the phone applications, the communications, the applications are amazing to me. They're always thinking of something new and different that's going to improve and speed up your way to do things."

— Bruce S., 68

When it comes to how AI might take shape in the future, shoppers are open to various forms of interaction but defer to what they know and are comfortable with. Respondents generally expect a similar user experience to what they have today via voice commands and text features. 83% of consumers said they expect to interact, and 69% said they *want* to interact with AI via voice commands similar to how they experience Alexa, Siri, and other intelligent assistants now.



Q: How do you expect and want to interact with AI in the future? n = 3,615

Respondents were also more likely to imagine AI existing in the places it does now; 40% want it to be contained to personal devices like their phone, personal assistant, or computer. However, there is indication that new forms are welcomed; almost 20% said they would want AI hardwired into everywhere they went: public spaces and in every room of their home. Interestingly, Boomers more would want AI hardwired only into their personal devices compared to Millennials (44% vs. 37%).

As with many previous technological innovations, shoppers are not capable of imagining their future. What is clear, though, is that they are, generally speaking, open and accepting.

So, the burden is on brands and retailers to imagine a future that simplifies the life of the shopper, removes friction in the process, and helps curate—while not minimizing—options in ways that are simple and easy to grasp.

Where Shoppers Want AI Integrated in Their Lives

	Total %	Millennial	Gen X	Boomer
Personal Device Only: I would want it only through a personal device that I have with me at all times	40%	37%	40%	43%
Everywhere: I would want it to be everywhere I am. Hardwired into public spaces like retail stores and personal spaces	19%	19%	21%	17%
Home Only: I would want it only in my home, but in every room I see fit	19%	18%	17%	20%
Personal Spaces Only: I would want it in every room in my home and on my personal devices	10%	12%	10%	7%
Only Public Spaces: I would want it only in public spaces like retail stores where I would need help	10%	12%	10%	9%

Q: When you think about the next five years, where would you ideally WANT to interact with AI when it comes to helping you shop? n = 3,615

Takeaways and Implications:

1. Hyper curation is a double-edged sword for AI and shopping. Retailers should take note of how their current AI algorithms are broadening or narrowing shoppers' options and consider customizing or changing them. Consider Kroger's ClickList, for example: shoppers can easily reorder what they ordered last time with a couple of clicks. While features like this are convenient, they make it harder to get new brands or innovations into the hands of online shoppers. As AI evolves, brands and retailers should consider how to maintain the organic exploration that shoppers crave.
2. Voice is the future, but it needs to continually improve to create a seamless experience. Right now, voice commands and voice search are very functional and literal. In the future, they will have to work more naturally with how human beings process and learn to help us find things that aren't easy to articulate. According to Bob Moesta, "Voice is going to be big. But we're always going to have the 'search' problem...The gap of how people manifest new things in their head." According to Moesta, "Sometimes when searching we have to learn what to call whatever we are looking for. We can iterate 4-5 times to get there." He recommends that AI voice search in the future offer up a range of things, because, through contrast, people can find meaning, and sometimes it's easier for people to share what something is not rather than what it is through a process of sorting and elimination.

Section Three: The Edge. How Far Is Too Far?

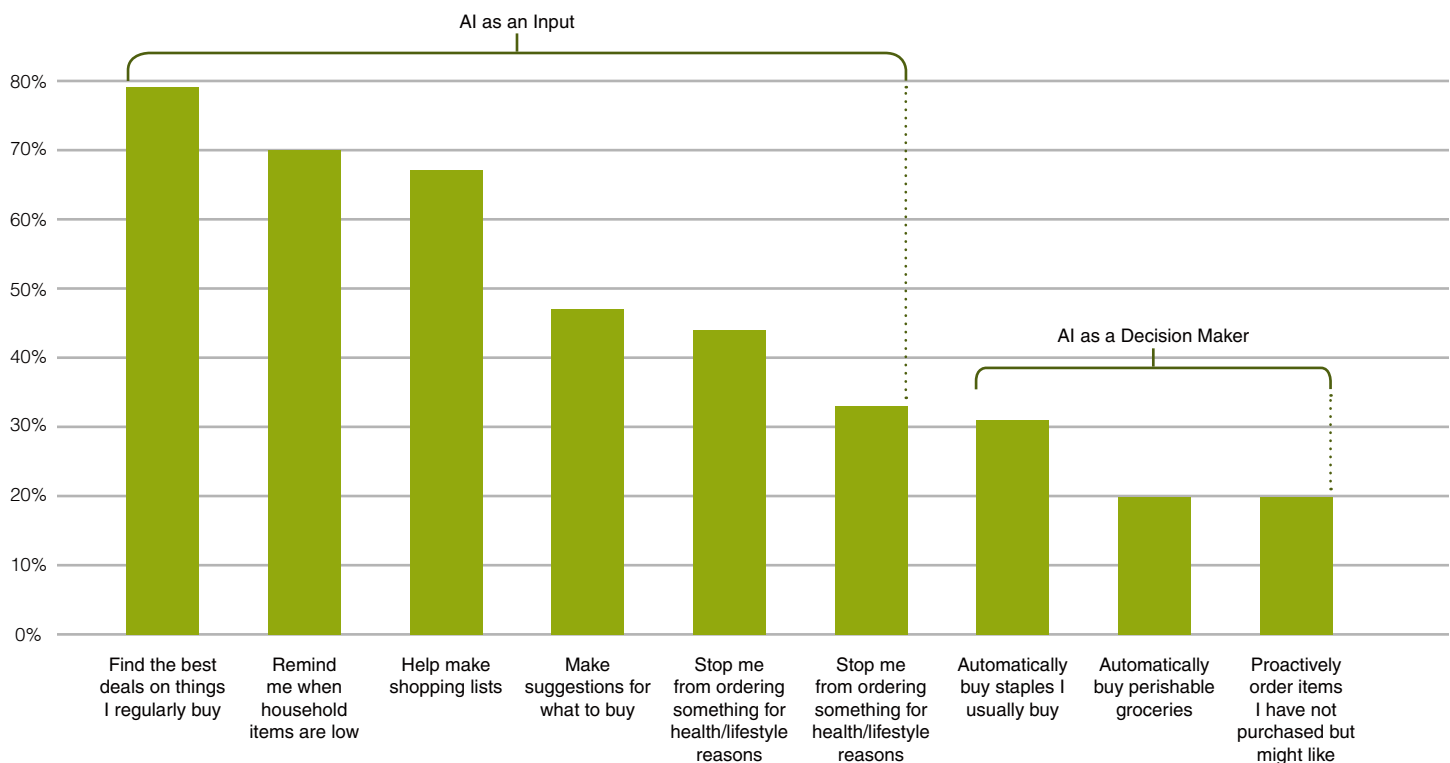
A Look at How Much Control Shoppers Are Willing to Give Up to AI

As AI becomes a larger part of shoppers' lives, our biggest question is: how far it will go? How much control will shoppers hand over to AI, and could AI could become a surrogate shopper for many?

Part 1 of this study reported that shoppers today are more willing to hand off chores or tedious shopping tasks to AI versus tasks they find more enjoyable. When it comes to the next five years, shoppers take comfort with AI being more proactive, “reminding” and “helping” them in shopping. As much as shoppers see AI as a helper, they are hesitant about giving it control in the future. Words like “predicting” and “automatic,” when it comes to AI and shopping go too far and are considered by many to be unsettling and off-putting—especially true for items that are expensive or emotional investments.

Overall, respondents see AI becoming a major input into their shopping habits, but are very unlikely to hand over complete control to AI. When it comes to making purchases, shoppers will let AI make decisions on routine or functional purchases like toilet paper. But, even then, shoppers want to be the gatekeeper or know there is an off switch in the event they change their mind. Even though AI could be a surrogate shopper, people ultimately still want to have some control and participate in shopping for items they care about.

How could AI help you shop for everyday household and grocery shopping needs?



Q: Imagine the role, if any, you'd like AI to have in your everyday household and grocery shopping in the next five years. Which of the following tasks could you see yourself letting AI do? n = 3,615

“That’s what I would hope AI could do for me, I could give it parameters. Here’s my budget, this is when I want it delivered. This is the type of meal I’m cooking, so find the ingredients that will fulfill this dish that I want to cook tonight.”

– Jennifer G., 29

“You feel like you have the power in the decision making, or at least you feel like you have the power... but if it just accesses it, it feels invasive.”

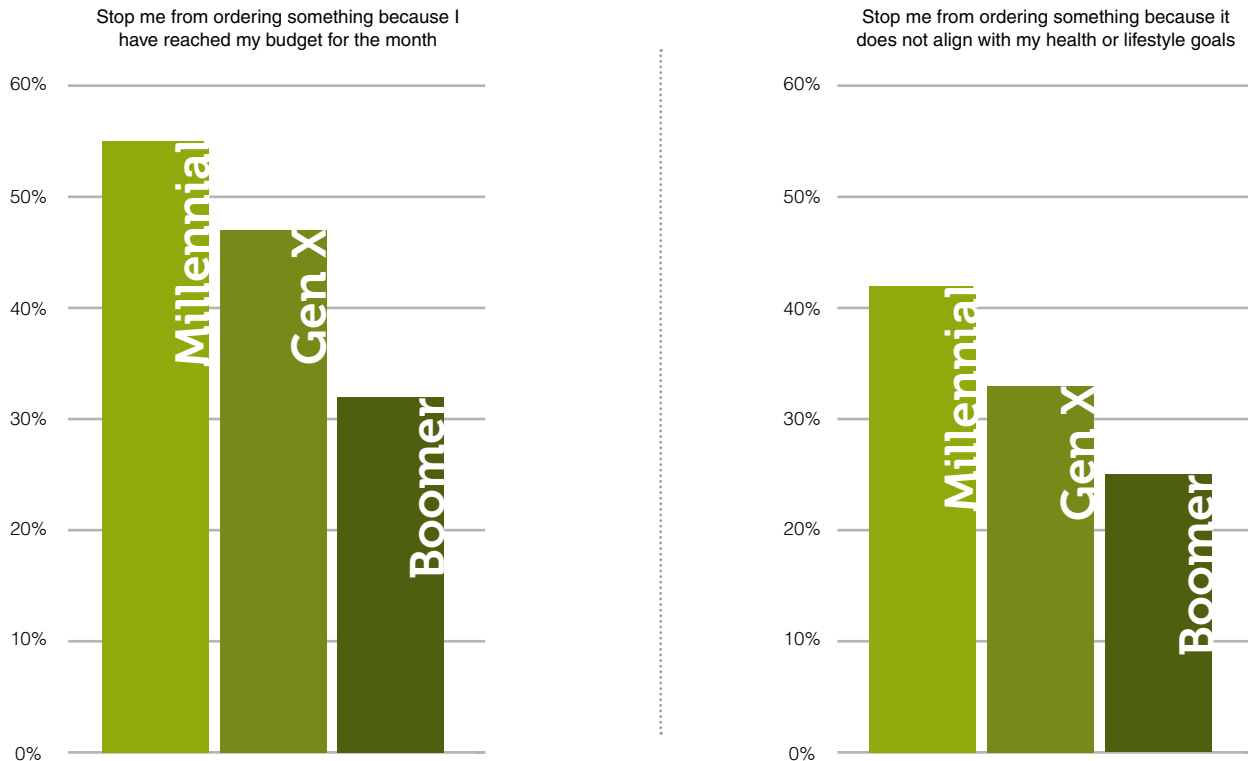
– Tori S., 22

Nuances arise when we examine the edge at the generational level. For example, Millennials are far more open than other age groups to delegating purchasing power to AI for everyday items. When asked if they would let AI proactively order everyday household items during grocery shopping, 27% of Millennials believed they would let AI take on that task. Just 12% of Boomers said the same.

The largest gap between Millennials and Boomers lies in how comfortable they are letting AI stop or police their actions or shopping decisions. Overall, 33% of shoppers would be willing to let AI stop them from purchasing something.

Younger shoppers are more likely to let AI stop them from making a purchase if it's over budget or does not align with their lifestyle goals. For instance, 55% of Millennials and 47% of Gen Xers would let AI stop them from ordering something that put them over their monthly budget. Boomers are more wary of this type of control, with only 32% willing to let AI stop an over-budget purchase.

Where Shoppers Would Let AI Affect Shopping Decisions by Generation



Q: (Top 2 Box) Imagine the role, if any, you'd like AI to have in your everyday household and grocery shopping in the next five years. Which of the following tasks could you see yourself letting AI do? n = 3,615

Takeaways and Implications:

1. The human element of shopping will persist in a world with AI. Consumers are curious, and shopping is an experience. Even with AI, consumers still want to curate and decide for themselves regarding purchases in which they are invested. Brands, retailers, and tech companies should account for the human element as much as the AI influence as technology and retail evolve.
2. Everyday grocery items will be the test subjects for shoppers delegating to AI. Shoppers are more willing to give purchase power to AI for small, routine purchases like everyday grocery items. With minimal risk and emotional investment, shoppers will begin to test AI's abilities and build trust with it as a surrogate shopper. This will mean that brands and retailers in this category will have to find new ways to reach shoppers and create engagement or be subject to a replenishment-based world of shopping.
3. AI should be contained and controllable. With tech evolving so fast, AI is unleashed. But people do not want AI to be everywhere. They want AI to be contained to a personal device and have an off button. Retailers and brands using AI should account for these shopper desires and allow shoppers to maintain some level of control when collaborating with AI.

The Bottom Line

Shoppers are excited and optimistic about using AI to shop in the coming years and expect it to play a greater role in their lives in many ways. This will require greater intimacy and connection between shoppers and AI, which remain at odds with privacy concerns.

Privacy, among other things, is a big reason shoppers are not ready to hand over the shopping controls to AI just yet. While the future is uncertain, we may find that shoppers might never be willing to hand over control to AI because shopping, especially for the things we care about, can be a complicated decision-making process. Each shopper is unique and their context greatly affects how they will receive and work with AI.

Even the simple context of where they do their everyday grocery shopping can affect how they view AI. That's why part three of this series will focus on understanding how AI-receptive shoppers are different based on where they do their everyday shopping. Is the Walmart shopper any different than the Target shopper when it comes to AI adoption and attitudes? How technologically advanced is the Amazon shopper compared to other shoppers? How are leading retailers training shoppers to use AI for everyday shopping and what do brands need to know?

Product Methodology

We deployed a multi-stage 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 3,615 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 26 offices across the globe, including locations in Africa, Asia, Australia, Europe, the Middle East, and North and South America.

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