

What kind of _____ when you hear the word “shopping”?
 _____ through a supermarket _____ ? _____ a mall with
 your family? _____ a salesperson in a department store?
 None of these might exist 10 years _____. In _____ the 20th
 Century, shopping was about walking to the _____ store run by a local family. _____
 _____ were familiar with their _____ and played a key social role in the
 community.

However, with the _____ cars and refrigerators in the mid
 20th century, consumers were able to travel farther and _____ in their
 homes. This _____ the _____ of corner stores with larger retail
 spaces like shopping malls and supermarkets, which offered a _____ selection of
 products at lower prices.

It’s important to remember that _____ never _____. The
 _____ by big-data algorithm, IoT, 3D printing and drones in the
 next decade or two may be much greater than the one by refrigerators and cars. How
 _____ change our experience of shopping?

What kind of scene comes to mind when you hear the word “shopping”? Pulling a cart through
 a supermarket aisle? Hanging around a mall with your family? Consulting a salesperson in a
 department store?

None of these might exist 10 years from now. In the first half of the 20th Century, shopping was
 about walking to the corner store run by a local family. Shop owners were familiar with their
clientele and played a key social role in the community.

However, with the increased popularity of cars and refrigerators in the mid 20th century,
 consumers were able to travel farther and store more goods in their homes. This led to the
gradual replacement of corner stores with larger retail spaces like shopping malls and
 supermarkets, which offered a wider selection of products at lower prices.

It’s important to remember that retailing never remains the same. The upcoming transformation
 by big-data algorithm, IoT, 3D printing and drones in the next decade or two may be much
 greater than the one by refrigerators and cars. How will these disruptive technologies change
 our experience of shopping?

aisle	通路	retail	小売業
hang around	ぶらつく、一緒に過ごす	upcoming	来たるべき
coner	街角	disruptive	混乱をもたらす
clientele	客、常連客		

One of the technologies _____ transform retailing is 3-D printing. When the original 3-D printers showed up in the 1980s, they were slow, expensive, hard to program, and only printed plastic. Today, the machines _____ most of the elements on the _____, and performance has dramatically increased _____. We can now _____ almost anything from _____ to concrete houses, and even organic materials such as _____ and chocolate. What does this mean for the retail industry? The _____ of 3-D printers _____ remove the need for _____ and everything involved. When stores receive an order, they _____ some materials, find the ordered item in their _____ archive, and press the button. They only require the space for _____ materials and the printer itself in stores, and nothing else. In the near future, you probably will not visit _____ a shirt. Instead, you will open the smartphone app and look through the online _____. Everything you see will be in your exact size since the app already has your body-image data produced by 3-D body scanning. _____ will soon be printed at the store and sent to you by _____ delivery. Most importantly, the cost will be less than half of _____ since there will be _____ middlemen, inventory space and delivery workers.

One of the technologies that will drastically transform retailing is 3-D printing. When the original 3-D printers showed up in the 1980s, they were slow, expensive, hard to program, and only printed plastic. Today, the machines have covered most of the elements on the periodic table, and performance has dramatically increased while prices have plummeted. We can now fabricate almost anything from silicon circuit boards to concrete houses, and even organic materials such as cells and chocolate. What does this mean for the retail industry? The on-demand nature of 3-D printers may possibly remove the need for inventory and everything involved. When stores receive an order, they load in some materials, find the ordered item in their blueprint archive, and press the button. They only require the space for feedstock materials and the printer itself in stores, and nothing else. In the near future, you probably will not visit the mall to buy a shirt. Instead, you will open the smartphone app and look through the online boutique. Everything you see will be in your exact size since the app already has your body-image data produced by 3-D body scanning. The shirt you selected will soon be printed at the store and sent to you by automated drone delivery. Most importantly, the cost will be less than half of what it used to be since there will be no need for middlemen, inventory space and delivery workers.

drastically	思い切って、抜本的に	inventory	在庫、商品目録
element	元素	blueprint	設計図、青写真
periodic table	元素周期表	boutique	ブティック、服飾専門店
plummet	急落する	automate	自動化する
fabricate	製作する、組み立てる	middlemen	仲買人、中間業者

When you walk into a _____ - _____ - _____ bookstore, you _____ and _____ your feelings to choose the right book for you. When you visit Amazon’s _____ shop, you will immediately find _____ suggested books that are perfect for you. Sometimes it’s almost even _____. How did they know that you would like these books?

The retail industry of the 21st century will _____ by big data algorithms. Any _____ digital platforms are recorded, and the algorithms use these data to understand your _____ and _____ your future purchases. This information is also used to understand other customers _____ you. For example, the Facebook algorithm can understand your personality traits better than your _____ with only 300 Likes on your facebook account.

Therefore they _____ advertisements that _____ your preference. Devices such as Amazon’s Kindle are able to _____ data on their users while they are reading. For example, your Kindle _____ which parts of a book you read quickly or slowly, and on which sentence you _____ the book. Soon, books will read you _____ you are reading them. _____ you quickly forget most of what you read, Amazon’s algorithm will never forget _____, and _____ Amazon to choose books for you with _____. Steve Jobs said that people don’t know what they want _____ them. In the near future, algorithms will know what you want, and they will show it to you before you realize you want it.

When you walk into a brick-and-mortar bookstore, you wander among the shelves and trust your feelings to choose the right book for you. When you visit Amazon’s virtual shop, you will immediately find a list of suggested books that are perfect for you. Sometimes it’s almost even creepy. How did they know that you would like these books?

The retail industry of the 21st century will be dominated by big data algorithms. Any actions you take on digital platforms are recorded, and the algorithms use these data to understand your preference and predict your future purchases. This information is also used to understand other customers with similar traits to you. For example, the Facebook algorithm can understand your personality traits better than your spouse with only 300 Likes on your facebook account. Therefore they can tune into advertisements that pinpoint your preference.

Devices such as Amazon’s Kindle are able to collect data on their users while they are reading. For example, your Kindle can monitor which parts of a book you read quickly or slowly, and on which sentence you abandoned the book. Soon, books will read you while you are reading them. Whereas you quickly forget most of what you read, Amazon’s algorithm will never forget such data, and it will enable Amazon to choose books for you with uncanny precision.

Steve Jobs said that people don’t know what they want until it’s shown to them. In the near future, algorithms will know what you want, and they will show it to you before you realize you want it.

brick-and-mortar	実店舗の	spouse	配偶者
creepy	ぞっとする、気味悪い	uncanny	不思議な、並外れた
trait	特徴、特質	precision	精度、正確さ

It is fun to walk around a department store to buy a new _____, but buying a replacement for a _____ - _____ is not that exciting. _____ the retail industry by _____ our desire to make minimum effort to _____ shopping _____. For example, Amazon has already _____ the 1-click ordering process and regular delivery of daily necessities to make shopping more convenient. However, we need to realize that the _____ is just _____. In the last several decades, _____ became _____ smaller and _____, while there has been an increase in the number of people accessing the Internet. Today, an increasing number of digital devices _____ sensors and connected to the Internet. This includes everything from air conditioners and _____ to _____. We call this network of _____ smart devices the “Internet of Things” or IoT. By 2030, Stanford researchers estimate 500 billion devices _____ - _____ sensors will be connected to the Internet. _____, our houses will be full of sensors that constantly measure and record anything about our lives.

What will this mean for the future of shopping? When you _____ toothpaste, eggs, pet food or whatever, smart devices will _____ these even before you realize it, and automatically order the _____. They will make very few mistakes because the automated purchase will be based on _____ of consumer purchasing _____ big-data algorithms. Companies like Amazon _____ zero-click ordering. _____ and smart devices, they will _____ for stuff, without the _____ deciding or ordering.

It is fun to walk around a department store to buy a new pair of shoes, but buying a replacement for a burned-out lightbulb is not that exciting. Tech startups have penetrated the retail industry by tapping into our desire to make minimum effort to get a tedious shopping task over with. For example, Amazon has already implemented the 1-click ordering process and regular delivery of daily necessities to make shopping more convenient.

However, we need to realize that the retailing revolution is just getting underway. In the last several decades, sensors became drastically smaller and less costly, while there has been an increase in the number of people accessing the Internet. Today, an increasing number of digital devices are being equipped with sensors and connected to the Internet. This includes everything from air conditioners and refrigerators to gaming consoles. We call this network of interconnected smart devices the “Internet of Things” or IoT. By 2030, Stanford researchers estimate 500 billion devices with built-in sensors will be connected to the Internet. Within a decade, our houses will be full of sensors that constantly measure and record anything about our lives.

What will this mean for the future of shopping? When you run out of toothpaste, eggs, pet food or whatever, smart devices will soon detect these even before you realize it, and automatically order the refills. They will make very few mistakes because the automated purchase will be based on precise knowledge of consumer purchasing patterns powered by big-data algorithms. Companies like Amazon are headed toward zero-click ordering. Leveraging big data and smart devices, they will soon meet your need for stuff, without the friction of deciding or ordering.



The previous sections of this _____ a variety of potential _____ for the future of shopping. If you're feeling _____ all the possibilities, you're not alone. Most people don't like change, and the world is too complex for anyone to _____ the future _____. However, _____ the following two _____ may help you keep up.

One is a strong interest in technology. _____ history, it has always been technology that _____ social changes. Technological innovation _____ change our lives long before _____ discuss it. Another key factor is _____ emotion. We often believe that we are _____, but our purchase behaviors are largely influenced by our emotions. _____ and _____ have _____ that most human decisions are based on emotional reactions rather than _____. Emotion is like a messenger between our _____ . In the face of a certain situation, our _____ quickly _____ survival and _____, and our _____ get the result of calculation in the _____ emotion.

For example, when you find a gorgeous jacket in a department store, your subconscious is _____ the benefit against the risk. The benefit includes better impression from your _____ in mind, and the risk is about possibly _____ survive _____ a lack of money. If you feel courage or _____, _____ that your instinct _____ that you should risk your survival _____ your attractiveness.

Successful consumer businesses effectively _____; we go to McDonald's to _____ our survival instinct; drive around Ferrari for reproductive success; and visit Starbucks _____ our social needs. In the future, how can we _____ technologies to _____ our desire?

The previous sections of this lesson explored a variety of potential scenarios for the future of shopping. If you're feeling overwhelmed by all the possibilities, you're not alone. Most people don't like change, and the world is too complex for anyone to predict the future with certainty. However, cultivating the following two qualities may help you keep up.

One is a strong interest in technology. Throughout history, it has always been technology that drives social changes. Technological innovation inevitably change our lives long before politicians discuss it. Another key factor is astute observation into emotion. We often believe that we are rational animals, but our purchase behaviors are largely influenced by our emotions. Behavioral economists and evolutionary psychologists have demonstrated that most human decisions are based on emotional reactions rather than on rational analysis. Emotion is like a messenger between our instinct and consciousness. In the face of a certain situation, our subconscious quickly calculate probabilities of survival and reproduction, and our conscious selves get the result of calculation in the form of emotion.

For example, when you find a gorgeous jacket in a department store, your subconscious is weighing the benefit against the risk. The benefit includes better impression from your clients or person in mind, and the risk is about possibly failing to survive due to a lack of money. If you feel courage or excitement, it indicates that your instinct has concluded that you should risk your survival against enhancing your attractiveness.

Successful consumer businesses effectively appeal to our innate drives; we go to McDonald's to gratify our survival instinct; drive around Ferrari for reproductive success; and visit Starbucks to fulfill our social needs. In the future, how can we leverage the latest technologies to better satisfy our desire?

Vocabulary List: No. 32~ 41