

The artificial intelligence of fast food

AI and machine learning algorithms will continue to grow rapidly

Well-being, health, great taste, clean labels, and ecological sustainability are today's key drivers influencing food purchase in affluent societies. This is especially true for the under-30-age consumers. Knowing all these wants and needs, the food industry is expected to undergo disruptive transition cycles with no end in sight. Nowadays, winning with words or "storytelling" are the "essential ingredients" for food companies that want to successfully communicate a consumer affinity for products with social or ethical causes. After all, it is essential to recognize the vital marketing rule that "when people are not consciously including, they are subconsciously excluding."

By Henk Hoogenkamp

The food industry is adapting to evolving consumer expectations in an on-demand world. In contrast, more food intake will be substituted by food delivered from virtual restaurants, cloud kitchens, subscription food services, and

grab-and-go pickup stations. Food delivery apps are reshaping the restaurant industry. Let's face it: It is consumer-friendly, and digital-only restaurants need neither a physical storefront in an upscale location nor servers. They only need a platform for reliable and fast delivery. Delivery-only establishments – called "cloud kitchens or ghost kitchens" – are especially *en vogue* to service the "demand generation."

Cloud kitchens – sometimes in the same building with other food specialties such as pizzas – will continue to grow as consumers become increasingly loyal to third-party delivery apps. However, these pose a risk of impacting brand loyalty to individual restaurants.

These cloud kitchens – also called "dark kitchens" – are often situated near the city center. These virtual restaurant brands pool resources and significantly reduce operating costs for meal preparation exclusively for the online delivery market. The benefit for these restaurant brands is that they

can ensure both dine-in consumers for offices, parties, and home-delivery customers. For the latter group of consumers, UberEats is preparing to test its new drone delivery service and, if successful, will launch it commercially in 2025 in select markets. Digital engagement with consumers will be a central focus, especially gathering information for customer-targeted marketing campaigns such as virtual "in-store" shopping concepts.

Virtual restaurants can be accessed using an app inside a cell phone, ready to connect with on-demand delivery services such as UberEat, DoorDash, and Grubhub. These on-demand food delivery services are starting to reshape the huge restaurant industry rather quickly in affluent societies. Come to think of it, the apps are changing the very essential basics of operating a traditional restaurant business. The growing number of

customers ordering from the apps probably have no idea that the restaurant is – in reality – a "ghost kitchen" with no retail or window exposure presence. The real-life consequences may be far-reaching, ultimately (potentially) reshaping the consumer's attitude toward not only dietary preferences but also preferring to order-in food over restaurant visits and self-prepared home-cooked food.

In the US, companies such as McDonald's and Chipotle are seen



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UberEats is preparing to test its new drone delivery service and, if successful, will launch it commercially in 2025 in select markets.

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Chatbot

It is just a matter of time before large fast-food companies introduce features that use generative artificial intelligence (GenAI) for an array of products available on their menu boards. Especially now that OpenAI allows the customer to view a wide range of services, including answering questions about – for example – calorie content, product ingredients, allergy responses, country of origin, protein and fat content, and carbon sustainability. The benefit for customers is to be able to quickly glance at a ChatboxGPT review and thus accelerate the final purchase decision. GenAI is not only a hype cycle but a transition tool that has arrived and stay permanently.

Face and voice recognition

McDonald's feeds about 1% of the global population daily and uses artificial intelligence technology to stay ahead of competitors. It sounds weird, but their objectives are to personalize consumer experience by knowing the customer's order before they know it.

Artificial intelligence is also quickly becoming a strategically essential tool to anticipate a customer's behavioral decision-making. Some examples are the digital ordering boards and camera technology using facial recognition or license-plate numbers and even voice recognition, which allow a fast-food company to define a list of

suggested purchases based on previous visits by considering the weather, time of day, popularity of foods, as well as the length of the wait. Fast-food drive-thru business has taken a page from the internet algorithms and personalization to collect consumer data and use that information to encourage more spending.

As consumers in affluent societies turn to different ordering platforms, including pre-ordering via apps and computerized screen-ordering, traditionally ordered fast-food sales are slowing. In addition, instead of salty and greasy fast food, subtle menu board changes are made, repositioning – for example – its core burger portfolio into green-and-clean offerings. After all, when everything is said and done, in nearly all cases, the core of meal delivery still is the quality and eating enjoyment of the hamburger, chicken tenders, hot-dogs, and pizza. Meat continues to take the central role of eating satisfaction.

McDelivery and Drive-Throughs

In the top six McDonald's markets, digital ordering represents (2023) over one-third of systemwide sales, including ordering McDelivery or automated finger-touch screen kiosks at restaurants. In the US, for all fast-food and coffee shops combined, there are an estimated 200,000 drive-thrus, often causing

congestion and loss of service speed.

Digital orders may make up more than half of McDonald's restaurant sales in some markets. Digital ordering can apply for both restaurant pick-up and McDelivery. This number keeps growing, requiring an advanced food delivery system to ensure customer convenience, including shorter wait times while maintaining human interaction.

Some of the top global McDonald's delivery restaurants generate as much as 40% of their sales from McDelivery. McDelivery has become a highly incremental business as it skews to a younger demographic repeat business, mainly because orders tend to be placed in the evening when restaurants have more spare capacity. In the US, customers in select markets can now order from McDonald's menu for delivery to their home or office through the UberEats app. McDonald's has expanded its food delivery services to more countries, and the move is the most significant expansion ever for the fast-food giant. McDelivery is here to stay, and especially the large mega-cities are rolling out their welcoming carpet to attract more customer traffic. In China, delivery services account for 10% of McDonald's total sales. McDonald's is on a mission to become the global leader in the office and home ready-to-eat food markets.

as the leaders in digital mobile ordering by generating almost 20% of their sales via digital apps. The primary point of contact with customers will no longer be the restaurant front door but rather the "App and the Map" on the smartphone. A little further down the road, fast food restaurants will become a food platform using blockchain and many forms of artificial intelligence (AI) and machine learning data to optimize marketing strategies.

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Overusing AI?

As the fast-food industry grows more competitive, food delivery apps gather consumer information and use Bluetooth devices to track real-time consumer movements. It seems like the large fast-food companies ultimately transform technology platforms into e-commerce that happen to sell food. The bottom line is that the recommendation by algorithms and voice recognitions, built into ordering systems, have generated larger orders, not only fattening the profit but also the waistline of the consumers. After all, looking at delicious food pictures makes it hard to resist the temptation to splurge. Critics of artificial intelligence have long warned that the technology will eventually lead to a dystopian future wherein humans are subordinate to computers. It remains to be seen, but the unintended consequences are potentially dangerous to negatively impact the current obesity crisis further by driving up unhealthy eating.

Fast food disruptions

It is safe to predict that McDonald's will make some regionally-evolving changes to its core menu and possibly introduce fresh (never-frozen) burgers in select markets, as well as serve chicken foods without artificial preservations. They are also committed to cage-free eggs by 2025 and to only serve chicken made from chicken not treated with antibiotics necessary to human medicine. They introduced their McPlant plant-based meat analogs in 2021 with much fanfare. In the US, the introduction of the McPlant Burger failed miserably but can still be regarded as an early-attempt game changer for the rather dogmatic-operated Golden Arches principle: 100% pure beef for its iconic BigMac. The question is, "How much longer can McDonald's profile its 100% pure beef burgers, knowing that of all meat sources, beef is the least environmentally sustainable?"

For example, chemical and unsustainable ingredients can lead to

various issues for consumers' health and the proper interpretation of sustainability. The sustainability issues for most foods are now embedded in purchase decision-making, and it reaches the entire supply chain, from core agriculture to food and meat processing. Increasingly, under-30-age consumers not only want to know what is in a product but also aim to seek out simple-to-understand ingredients and how they benefit their health and well-being. However, sustainability is not just about counting carbon credits; it also encompasses ethical and social values and its role in peer-dominated social media influencers.

Social media health and menu fatigue

Social media has created an overwhelming platform for brands and consumers to interact. The legacy food companies initially underestimated the change in social media dynamics and its effect on purchase decision-making. Social brand engagement mainly targets peer-influenced groups and is designed to make products and services seem fun, cool, and daring. Food companies should not relentlessly promote their least healthy, good-tasting products but instead accept social responsibility and find common ground by introducing healthy alternatives.

Fast food and quick-service restaurants are always in need to combat "menu fatigue" that afflicts their loyal customers, as well as the need to attract new customers drawn in by gutsier menu innovations. As far as animal meat foods are concerned, chicken will continue to be a growth driver for most fast-food restaurants.

"Conscious achievers" who aspire for a maximized life with more to offer than only healthy and tasty food can be characterized as a group of young, digital-savvy consumers who also demand exceptional convenience and, most often, instant gratification, including hassle-free delivery when they want it.

The Starbucks fix

Now that Starbucks has satisfied customers' morning caffeine cravings, it will set its sights on the lunch meal business. Especially in the US, Starbucks and other coffee stores generate about 50 percent of



their business before 11 a.m., and the challenge is to draw non-traditional coffee traffic and entice them to stop by for lunch. From a growth perspective, Starbucks needs to expand the number of sales transactions and move into prepared natural foods and deli meat, eggs, and milk offerings, which is just another example of how much the competitive convenience food landscape has changed: a coffee-house turning into an all-purpose countertop shop.

Fast casual

Americans spend more on food each year and may soon spend more on dining out or ordering than on groceries. Although the economy is rebounding, people are especially looking for "value meals" promotions by fast-food restaurants. These value promotions put pressure on other quick-service eateries as they all fight for the same food dollars. The most likely explanation is that low- and middle-income consumers continue to feel the inflationary pressures throughout the economic infrastructure, which translates into significant food price increases, higher housing costs, and rising healthcare expenses.

It is important that franchised fast-food companies do not stray too far afield with new menu items. Staying close to the core image is important so as not to confuse the consumer. Young adults do not observe the traditional three-meal-a-day routine but rather consume a

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Left: "Make-your-own" hybrid burger 50% beef and 50% plant, including vegan cheddar cheese. Top: Frozen snacks making inroads in affluent countries to offset climate change. Photos: Hoogenkamp

mix of mini-meals and snacks throughout the day. Children, teens, and young adolescents are the biggest "snackers"; hence, fast food restaurants are evolving with this trend by making value-priced smaller portions available.

The younger generation has become a moving target for the fast-food industry. Fast food restaurants try to convey a healthier image in tandem with a remodeled interior that portrays a more contemporary image, decorated with flat screens, free Wi-Fi, sleek furnishings, and ambiance. Roughly half of the eating occasions in the US are now comprised of either snacks or "mini-meals". It seems true that people who are consuming snacks are more likely to overeat as they may not realize or even remember what they have eaten only a few hours earlier.

Low-income consumers are typically heavy users of fast food. In times of economic upswing, the lower-income people have more discretionary money to spend at fast food restaurants, and visa versa. In general, price-conscious consumers are more likely to turn away from casual-dining restaurants and instead choose restaurants for a fast-food meal at substantially lower prices, with the elimination of tipping the service staff as a welcome bonus. Companies like McDonald's, KFC, Wendy's, and Burger King are quietly gaining a share of higher-income customers who are trading down from full-service restaurants.

In addition, middle-income customers are spending less on each order but are visiting more often.

Then, there are also customers who are not willing to trade all the way down to low-cost, fast food but are gradually moving to more casual chains that are focused on serving higher quality burgers with fresher ingredients, which are made-to-order and sourced locally. These casual chain restaurants attract consumers trading down from upscale as much as those trading up from traditional burger joints.

Fast food complexity

Originally, fast food was defined as keeping things simple while maintaining error-free and fast counter-service. However, as fast-food menu board offerings evolved to include more selection options, kitchen assembly line operations have become more complex, which often translated to an increased number of errors and slower service. The danger of a franchised fast-food company is that it is trying to be everything to everybody. For some fast-food companies, operational challenges have slowed down service.

Going forward, streamlining the menu board of fast-food restaurants is the new mantra, and pared-down offerings will eliminate confusion for customers. For example, Globally, McDonald's has added some 100 items since the early 2000s, creating complexity both in operations and in ordering, as well as diffusing brand image. To reboot

the menu choices, a logical strategy will be needed to eliminate items that require extensive preparation time. About 80% of fast-food sales are typically generated by 10% of the menu-board selection options.

In reality, the menu board offerings at some fast-food chain restaurants have become more complex in recent years. This is due to the increased demand for made-to-order alternatives, putting more pressure on traffic flow both in front and behind the counter. Heavy traffic often aggravates grill workers and frontline staff, who are increasingly confronted by impatient customers feeling that their wait for food is too long. Simplifying the menu, improving perceived quality and anticipating the order patterns while speeding up service is the key to increased customer satisfaction.

Keep it simple

Artificial intelligence and machine learning algorithms operating the digital "fast-food economy" will

continue to grow rapidly to accomplish not only greater speed but also cashless transaction ease for customers. These transformative mobile payment services – such as Apple Pay – have brought a new level of digital convenience, allowing customers to order and pay for food with their smartphones. This is not only a welcome advantage for customers but also a bonanza for the fast-food and cashless transaction operators who increasingly will be able to accumulate a lot of "free" consumer data, providing bountiful marketing opportunities in which artificial intelligence will become the driving force.



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