

Chapter 5

How Will Empathetic Design Thinking Influence Food Experience Innovation? A Practitioner Perspective on Food Well-Being



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What we, as design thinkers, have, is this creative confidence that, when given a difficult problem, we have a methodology that enables us to come up with a solution that nobody has before. – David M Kelley, Stanford University

5.1 Introduction

Enhancing the relationship between consumers and food products has been the subject of many innovations. Most of the advancements and innovations came from the supply side as multinational food producers continuously developed and optimized their processes across the supply chain for producing food products and services that ultimately delivered higher returns for their investors and shareholders. For the food consumer, modern innovations have successfully delivered abundance, reasonable prices, and immediate satisfaction in a fast-moving pace of life that is focused on speed and convenience. This perpetual “production-to-consumption” framework required innovations at the speed of consumption resulting in an industry with a high volume of low-nutrient food products.

In charting the path forward for shared producer and consumer value, we can begin by rethinking the producer-consumer relationship by adopting the elements of design thinking – specifically empathy – in delivering innovation across the value chain of producers and consumers. This chapter argues that food innovations that deliver an increase in food quality do not harm the producers’ economic bottom line. Instead, expanding the shared value across the producer–consumer supply

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chain presents an excellent opportunity for a win-win proposition – an expanded market, higher returns, and a healthier population that provides a more extended period of human purchasing power.

5.2 Rethinking the Food Value Chain

For the food producer, the demand for meeting food needs, creating jobs, and increasing shareholder values were objectives that were traditionally met through a narrow focus, driven mainly by quarterly results and appealing products but without much thinking about consumer's long-term health benefits. This narrow focus resulted in missing the broader prospect of creating shared value by balancing the long-term well-being of the consumer against the producer's objectives.

For example, the fast-food industry generates a global revenue of over \$570 billion annually (see [Fast Food Industry Analysis 2020 – Cost & Trends 2018](#)). In the United States, over 200,000 fast-food restaurants are serving 50 million Americans every day in an industry that employs over four million people and grows at a rate of over 2.5% annually. From 2008 to 2018, the industry's revenues increased by \$90 billion, with McDonald's contributing the most to the industry's overall revenues (Revenue of the quick service restaurant (QSR) industry in the United States from 2002 to 2019 [n.d.](#)). The main appeal of the fast-food industry, contributing to its continued growth, is based on three simple factors: consumer experience, consistency, and price. By using extensive data analytics, market research, supply chain optimization, low prices, and process automation, the fast-food industry succeeded in generating good returns for its shareholders while relying on a consumer that wanted immediate satisfaction and a predictable experience. However, the prevalence of convenient, fast, and readily available food products has historically undermined consumers' overall food well-being. Today's fast-food industry is partially blamed for the rise of obesity and cardiovascular diseases. For example, according to the National League of Cities in the United States (Health and Wellness [n.d.](#)), it is estimated that the annual health-care costs of obesity-related illnesses are a staggering \$190.2 billion or nearly 21% of annual medical spending in the United States. Childhood obesity alone is responsible for \$14 billion in direct medical costs.

According to a study published in *PLOS Medicine* (Thiago Veiga Jardim [2019](#)), unhealthy diets account for almost 20% of US health-care costs with diet-related conditions such as heart disease, stroke, and diabetes. Researchers reported that the annual economic burden of health-care costs from cardiometabolic diseases is about \$300 per person or \$50 billion nationally. One of the main dietary factors contributing to these costs is related to the high consumption of processed meats – typically served in fast-food establishments or conveniently packaged and sold at food markets. How can the industry meet its consumer demands for speed and convenience while providing returns to its shareholders and ensuring the long term health of its consumers? The answer is in a concept called shared value that delivers innovations at scale to the producers and the consumers.

5.3 Shared Value across the Food Supply Chain

The concept of shared value (Kramer 2011) is defined as the “policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social condition in the communities in which it operates.” In short, “shared value creation focuses on identifying and expanding the connections between societal and economic progress.” Shared value, therefore, is the connection between a producer’s market success and healthier consumers. By using the concept of shared value – linking food producers and consumers in a value creation chain – we can continue influencing the creation of products that are focused on achieving economic value to the producers as well as healthy diets for the consumers. The concept of value creation is not a zero-sum value – providing healthy food products does not reduce the revenue of the producers. Instead, this value creation approach seeks to expand the economic benefits across the producer–consumer continuum. This concept is not about benevolence to the consumer or good corporate citizenship as it is the creation of another channel to increase the overall economic value for the producers while benefiting the consumers.

While market competition and financial pressures are constant factors in producer’s decision-making, enabling shared value must begin with looking at innovative ways to produce and deliver new, healthier products. Because a healthier consumer is undoubtedly a better source of revenue over an extended period of time, this insight should play a transformative role by shifting producer’s focus from delivering different varieties of the same product to delivering products that sustain the overall health of their consumers. As producers are always looking for new channels of increased revenues and expanding markets for their products, this approach to shared value can undoubtedly play a significant factor in accelerating this transformation. Transformative thinking must begin by shifting the focus from delivering new products that encourage consumers to get more and buy more of the same or similar product. This thinking is driven mainly by market competition and financial pressures from shareholders and investors. However, producers are always looking for new channels of increased revenues and expanding markets for their products. Moreover, a healthy consumer is demonstrably a better source of revenue over a more extended period. Shared value creation can undoubtedly play a significant factor in this transformation.

Several drivers from the supply (producer) and demand (consumer) sides can be viewed as catalysts for food innovations. Myriam Sidibe (2020) argued that producers of various brands “can and must play a critical role in tackling global health issues, from violence to infectious disease to poor fitness and diet.” Producers can repurpose the same market strategies that allowed them to increase their profits to affect positive changes in consumer’s health. Sidibe cites the example of Knorr, a \$3 billion brand owned by Unilever. Recognizing that iron-deficiency anemia is a severe health problem in many developing countries, Knorr reformulated their flagship bouillon cubes to include iron-fortified ingredients. A controlled study following a media campaign of cooking family meals with leafy greens and Knorr’s

iron-fortified bouillon cubes showed the immediate benefit of the campaign when comparing two towns – one was exposed to the messaging and the other was not. Knorr’s long-term benefits were clear: an established market presence and a brand synonymous with family bonding and healthy living. Aligning the challenge of expanding the shared value while focusing on a healthy consumer is a shift that is happening, but it is one that is still in its infancy.

Meanwhile, consumer behaviors are changing from the demand side. A recent article in Forbes magazine (Olayanju 2019) lists “transparency” as the most significant trend driving change in the food and beverage industry today. Food consumers are demanding to know and understand what ingredients are going into their products and what role these ingredients play in their overall health and well-being. Moreover, consumers are becoming more aware of and more inclined to read the ingredient list of any packaged food product as a matter of regular practice before making buying decisions.

One example of such a product that meets the transparency demand is a product called RXBAR. RXBAR’s innovation is related to a simple message: a concise ingredient list that consumers know and which they can relate to and even pronounce. One flavor of RXBAR has the following listed on its package in bold and visible print: three egg whites, six almonds, four cashews, two dates, and no B.S. The RXBAR product, started in a suburban basement around 2013, was sold to Kellogg Co. for \$600 million four years after it started. How did such a short list of ingredients receive wide consumer adoption? Using Design thinking and empathy toward consumers when designing the product were undoubtedly some of the factors that contributed to the product success.

5.4 Empathy in Design Thinking

Empathy is defined by Wided Batat (2019) as the “ability to take the perspective of others, to understand their reasoning and their emotional state.” Design thinking methodology allows us to qualitatively study empathy when taking a human-centered approach to designing products and services. Gasparini (Gasparini, Researchgate.net, 2015) further defines empathy in two main dimensions. The first as an emotional empathy, being an instinctive, affective, shared and mirrored experience. This is when the designer of a product feels what the consumer experiences in using that product. The other dimension of empathy is cognitive, where one understands how others may experience the product from their point of view. Thinking about a consumer’s experience with a product puts the designer in an empathetic and visceral mode to collect and understand the consumer’s thoughts and feelings, and therefore, ultimately design an end-product that caters to consumer’s needs. What makes an empathetic feeling complicated is that feelings (and thoughts) are intangible effects that cannot be quantified in precise measurement tools by the designer.

In the example of the RXBAR, the product designer can measure the caloric content of a single bar, but it will be hard to quantify the consumer's feeling of "this is good for me." Building shared values between food producers and consumers can be achieved at the speed of empathy adoption. By building a culture of empathy with consumers, food producers can embrace a design-centric approach that puts empathy at the center of innovations. Design thinkers use the "walk-in-their-shoes" approach to sense the tangible and intangible feelings of the consumers and predict what will make them have a successful experience. Those conclusions are tremendously hard to express in quantitative language. Instead, organizations that employ design thinking use emotional language (words that concern desires, aspirations, engagement, and experience) to describe products and users. Design thinkers discuss the emotional reverberation of a value proposition as much as they discuss utility and product requirements.

Additionally, Batat (2019) identified two approaches that can be applied to define the elements of empathy: an empathy map (business-based framework) and McLaren's empathy model (research-based applied to business). We can repurpose these two approaches for designing innovative food products.

5.5 The Empathy Map

An empathy map is a collaborative tool developed by David Gray in 1993, the founder of XPLANE, a global consulting agency that provides businesses with a human-centered design toolkit. This map can be tailored and used to answer the following questions to inform the design of new innovative products:

- What would the consumer be thinking, and how would they be feeling?
- What are their doubts and ambitions of better health?
- What might it be possible for their networks, family, and friends to say while consuming our new product?
- What would the customer catch or perceive in these situations?
- What would customers see while consuming our product in their setting?
- What might the consumer be doing while consuming our product?
- How would their behavior be modified in both public and private spheres?
- What are the aspects of the consumer's discomfort facts or worries when consuming our product?
- What improvements might the customer experience need while consuming our product/service?

5.6 McLaren's Empathy Model

This model, developed by Karla McLaren (n.d.), introduces six critical aspects of the empathy model that will help designers build a repository of empathy elements to guide their development. These aspects include emotion contagion, empathetic accuracy, emotion regulation, emotion regulation, concern for others, and perspective engagement.

Building upon the empathy map and McLaren's model, designers can transition their design from a commodity food product (e.g., a candy bar) to a "this is good for me" brand by answering the following questions (see Table 5.1).

5.7 Innovation in Food Experience Through Empathy

Delivering innovation through the empathy element of design thinking methodology requires providing a superior experience to the end-consumer – an experience that is profoundly better than the current one. Improving the current experience and value of food products is achievable through increasing nutritional value and moving the shared value need from satisfaction to societal well-being. For the producer, those innovations must generate incremental economic returns and expanded market share. Further, innovations must also gain full acceptance by the population to achieve a critical mass of benefit and allow for continuous improvements and innovations.

Using Gasparini's (2015) approach to linking empathy to food innovations, we can address three distinct factors to achieve the desired outcome of sustainable, healthy, and innovative food products: human, business, and industrial factors.

The human usability factor considers an entire consumer journey with the innovative food product considering the price, convenience, taste, and wholesomeness. Business factors consider how the potential human design factors relate to the development and marketing of food products from a business viability perspective. Furthermore, industrial factors consider the ingredient supply chain and

Table 5.1 Questions for the empathetic designers

Empathy elements	Food designer questions
Emotion contagion	Does consuming the product provide that special feeling?
Empathetic accuracy	Am I accurately gauging and measuring the consumer's feelings and satisfaction?
Emotion regulation	Can I work with different emotions as leverage rather than suppressing them (as most do)?
Perspective-taking	Can I imagine (rather than feel) the emotions of the consumer?
Concern for others	Does the well-being of consumers matter to you?
Perspective engagement	Building on the previous five aspects of empathy, do I have a holistic view of my consumer's wants and needs?

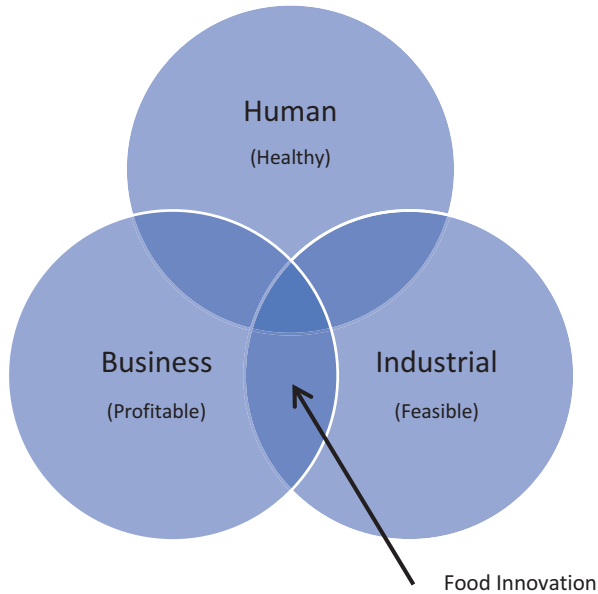


Fig. 5.1 Food innovation in design thinking. (Adapted from Gasparini 2015)

go-to-market feasibility. As depicted in Fig. 5.1, innovations happen at the intersection of the human, business, and industrial factors.

Superior food experience resulting from empathetic design-thinking innovation can be the direct result of following the nonlinear nature of the stages of design thinking. Being empathetic to the food consumer involves two distinct yet interrelated aspects of introducing innovations in food: internal and external empathy. Internal empathy is the experience of feeling the exact emotions of the consumer by the designer. It is expressive of the real consumers' feelings – for example, happy, pleased, entertained, and healthy. On the other hand, external empathy is an analytical expression of perceived feelings based on behavioral science, human psychology, and the human-centered design body of knowledge. It is a simulated model of the consumer feelings following an interaction with the innovative food product. Many disruptive innovations today employed external empathy to derive products that we have dearly adopted and use every day.

Empathy, both internal and external, can be employed to achieve balanced yet innovative food products. The former being a lagging indicator (did we achieve adoption through happiness and a positive experience?), whereas the latter measures the overall goodness, wholesomeness, and benefits of the food innovation on population health and well-being. We can identify gaps in the current food experience by using the empathy approach to understand the food consumer's needs better and drive innovations to meet those needs to deliver value across the entire lifecycle.

In the “what,” “how,” and “why” approach to problem solving, Simon Sinek (2009) explains that the consumer's needs and requirements fall in the “what”

category. Therefore, designers must first understand the current state before innovating solutions. We know that today, a large body of knowledge is pointing to the positive effect of a healthy diet on human quality of life and longevity. Using this insight, we can then design a plan that allows us to use design thinking tools to innovate through the lens of the consumer to achieve the desired state at an acceptable cost/benefit level.

For example, if a food consumer experience shows low satisfaction with the wait time at restaurants, a traditional corrective action dictates a process that shortens the wait time. However, this corrective action might undermine the overall food quality. An immersive experience by the innovator might very well highlight the need to change the consumer's expectations: "allow us the time to give you a meal for a healthier you," or "meals that take longer to prepare are good for you," for example.

Once we have generated enough insights from empathy studies, we can then use ideation sessions to generate innovative ideas. Ideation sessions take inputs from the empathy and need processes to generate ideas for the food products-. During the ideation sessions, it is essential to generate as many ideas as possible without being bounded by any constraints (e.g., "this is a costly idea," or "where is this ingredient to be sourced from?"). In some instances, new ideas might evolve independently and without alignment to any earlier processes. This highlights the iterative and circular nature of design thinking – new ideas are then used as input for the other processes.

Once the designers complete the compilation and vetting of new and innovative ideas, a prioritized list of the ideas becomes the input source of generating prototypes of these ideas. Teo (n.d.) argues that designers should consider a speedy finish of the prototype with lower costs and less emphasis on complete functionality. While the goal of the prototype is to gauge the consumer's involvement, interactions, and satisfaction with the prototype, the prototype also delivers a sense of early achievement and facilitates "hands-on" early testing by the designer and end-consumers to validate the feasibility of innovative ideas.

5.8 What are the Main Implications?

Today's enterprises are undertaking different corporate social responsibility (CSR) initiatives across the world – providing cleaner and more efficient energy, reducing pollution, protecting the environment, and improving public health, among many other similar initiatives. As discussed earlier in this chapter, by seizing the opportunities created by this shared value approach, we can find this shared value at the intersection of public health, market opportunities, and corporate mission. Food producers can turn the creativity of design thinkers and their empathetic approach to healthier products into real market opportunities.

Food products – reimaged. Creating new shared values across the supply and demand continuum of food products require innovations in design thinking and a reconstruction of the value from the bottom upward. Whereas the focus of food

producers in the past has been on meeting the basic needs of the consumers (suppressing hunger) at a profitable threshold, we are witnessing a transition from providing for that basic need to higher levels of meeting the demands through healthier products designed and produced by the concepts of design thinking and precisely the element of empathy. However, in food innovations, it is critically important to understand and apply the learnings from empathetic design thinking transition the empathy in design thinking from an excellent “user experience” to an excellent “user health and well-being” experience. Consider, for example, the two different designs of the famous Heinz ketchup bottle. One design (Bottle 1) is the iconic glass bottle that is immediately recognized across the globe. The other design (Bottle 2) is an upside-down plastic squeezable bottle.

Both bottles provide the same ketchup product through a consistent, recognizable, and well-designed label and visual appeal. Nevertheless, for the Bottle 2, the designers created a superior user experience by introducing a squeezable plastic bottle and making the ketchup readily available by inverting the bottle upside down. This innovation of design was so successful evidenced by a quick look at the supermarket shelves and observing the prevalence of the plastic bottles versus the original glass ones in food service establishments. However, the focus on the consumer’s experience did not stop with the rethinking of the product’s packaging and usability. Many producers have also reconceived their products to become healthier ones.

Using the same example of Heinz ketchup, today we see ketchup products with “no sugar added,” “low sodium,” and “organic ingredients” all packaged within the same inverted plastic bottle that delivers excellent consumer experience. Undeniably, consumer awareness of their well-being is on the rise, but much work remains on the producers’ side. In exploring and identifying shared values, we see design thinking as a critical factor in moving from “making products that people love” into “making good products that people love.”

5.9 Summary

One of the essential attributes of design thinking is the empathy attribute. Food producers can align their production and economic interests with the well-being of their consumers through a comprehensive understanding of empathy and its qualitative parameters. This chapter proposes that designing producing healthy food products through empathetic thinking does not have a cost to the producer or a higher price to the consumer. Instead, a shared value market development can be of great benefit to the producers and consumers alike.

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