

Evolution of the Cultural Perception of Animals and its Impact on Modern Food Business: Opportunities And Challenges

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Abstract

This paper explores the evolution of the cultural perception of animals and its profound impact on the modern food industry, focusing on the emerging opportunities and challenges for businesses. Historically, animals were primarily viewed as resources within ancient societies, serving utilitarian roles in food production and labor. Over time, particularly during the industrial era, this perception shifted dramatically. The commodification of animals for economic purposes, alongside the rise of factory farming, gave rise to ethical concerns about animal welfare and environmental sustainability, ultimately fueling the development of animal rights movements in modern society. The literature review highlights a growing societal trend toward more humane and sustainable food practices. This trend is driven by increasing consumer awareness, shaped by media coverage and high-profile food scandals, which have exposed unethical practices in food production. Documentaries and social movements have played a pivotal role in shifting public perceptions, leading to heightened demand for transparency, ethical standards, and plant-based alternatives. These developments reflect a broader shift in consumer behavior, where sustainability and ethical considerations are key factors in food choices. This research methodology incorporates historical analysis, case studies, and a review of market trends to assess how shifting cultural values influence business strategies. The findings reveal that while traditional food businesses face significant challenges in adapting to this new landscape, there are also substantial opportunities for growth, particularly in sectors aligned with plant-based diets, ethical sourcing, and sustainable practices. This paper contributes to the field by offering a detailed analysis of how evolving cultural perceptions of animals reshape the food industry. It provides insights into how businesses can strategically adapt to these changes, highlighting the potential for innovation and competitive advantage in a more ethically conscious market.

Keywords

Animal Rights; Consumer Behavior; Environmental Impact; Ethical Consumerism; Food Industry; Plant-Based Diets; Sustainability

Introduction

Throughout history, humanity's perception of animals has profoundly transformed, influencing cultural norms and leaving a lasting imprint on multiple industries, particularly the food sector. In early civilizations and pre-modern eras, animals were regarded mainly as indispensable assets for sustenance and survival. However, as society evolved, so did our relationship with animals. The industrial era marked a significant shift, where animals became commodities in large-scale food production, leading to ethical

concerns about their treatment and welfare. These concerns eventually fueled the rise of the animal rights movement.

In recent years, growing public awareness around animal welfare has brought major shifts in consumer expectations. Media coverage, food scandals, and exposés of unethical farming practices have pushed consumers to demand greater transparency, sustainability, and ethical sourcing from food businesses. As a result, the food industry is undergoing significant transformation, with companies exploring innovative ways to meet the increasing demand for plant-based products and more humane production methods.

This paper explores how these changing cultural perceptions of animals reshape the modern food industry, presenting opportunities and challenges. The study highlights how businesses can navigate these shifts, adapt their strategies, and thrive in a more ethically conscious marketplace by examining historical trends, case studies, and market data.

Literature review

How humans perceive animals has evolved significantly, shaping both cultural values and business practices in the food industry. In ancient societies, animals were primarily seen as resources, essential for labor, food, and materials. They also held symbolic roles in religious rituals and culture. As societies progressed, especially during the Middle Ages and Renaissance, animals began to be valued more emotionally and symbolically, although they remained largely viewed as utilitarian.

The Industrial Revolution marked a significant turning point in how animals were treated. Factory farming became widespread, turning animals into commodities bred in mass to meet the growing demand for meat and dairy products. This industrial approach raised ethical concerns about animals' harsh conditions, especially as society became more disconnected from nature. During this time, early voices like Jeremy Bentham began to question how animals were treated, laying the groundwork for the modern animal rights movement.

In the 20th and 21st centuries, animals began to be viewed more as sentient beings deserving of ethical treatment. Public awareness increased, especially through documentaries like *Food, Inc.*, and *Cowspiracy*, which exposed the realities of factory farming and the environmental degradation caused by animal agriculture, highlighting the necessity of ethical consumerism. As consumers became more aware of these issues, they started demanding greater transparency and sustainability in food production, driving changes in the industry.

In response, many businesses have started to adapt, driven by the rise of plant-based diets and the demand for more ethical food options. Consumers today demand more than just products; they want to know the story behind those products. They want to know that the food they consume aligns with their values. This shift has created new opportunities in the plant-based food market. However, traditional food businesses, especially in the meat and dairy sectors, face challenges adjusting to these new demands.

Methodology

This study adopts a comprehensive approach to examining how shifts in consumer perceptions regarding animal welfare and environmental sustainability are transforming the modern food industry. The research focuses on key factors such as the rise of ethical consumerism, the growing demand for plant-based products, and adoption of sustainable practices across the industry. These aspects are explored through an analysis of secondary data and case studies, providing a thorough understanding of the industry's adaptation to new consumer expectations.

The research method includes a review of secondary sources such as academic studies, publicly available data on consumer behavior, and market analyses that track the growth of plant-based alternatives. This data is used to assess how the demand for ethical and sustainable food options has led to significant changes in consumer purchasing behavior and to highlight the impact of these trends on traditional sectors like meat and dairy production.

To explore how businesses respond to these changes, the study examines several case studies of companies within the food industry. Companies such as *Beyond Meat* are highlighted to illustrate how adopting plant-based production methods meets consumer demand for more ethical and environmentally friendly options. Furthermore, the study explores the role of technological innovation in driving the future of the food industry. Special attention is given to lab-grown meat and precision fermentation, both offering promising alternatives to conventional animal farming. These technologies are assessed for their potentials to reduce environmental impact, such as lowering greenhouse gas emissions and reducing land and water usage, while meeting the rising demand for ethically sourced food. The research also includes an analysis of the environmental impact of traditional animal farming, drawing on data about methane emissions, deforestation, and resource depletion. This is compared with the environmental benefits of plant-based alternatives and lab-grown meat, which are presented as more sustainable options for meeting global food needs.

All data used in this study was collected from reliable secondary sources, including academic literature, market reports, and environmental studies. By integrating qualitative and quantitative data, the study offers a comprehensive analysis of how food industry businesses adapt to the growing demands of an ethically conscious consumer base, focusing on both the challenges and opportunities posed by these trends.

Results and discussions

The shift towards ethical consumption

In recent years, consumer preferences in the food industry have shifted dramatically, driven by a growing awareness of ethical issues. Ethical consumerism, where individuals make purchasing decisions based on moral and environmental considerations, is now a dominant force shaping the modern food landscape. Millennials and Generation Z, in particular, are leading this movement, demanding transparency, fair labor practices, and products that do not harm animals or the environment. This growing interest in ethical

practices stems from concerns about animal welfare, environmental sustainability, and the impacts of industrial food systems.

Media coverage has been instrumental in raising awareness of food production's ethical and environmental implications. Documentaries like *Food, Inc.*, and *Cowspiracy* have exposed the realities of factory farming, shedding light on the mistreatment of animals, environmental degradation, and health risks associated with mass-produced food. These revelations have sparked public debate, prompting consumers to seek alternatives that align with their values. As a result, businesses are increasingly focused on transparency, sustainability, and ethical sourcing in response to shifting consumer behavior.

One of the most notable trends arising from this shift is the rapid growth of the plant-based food sector. Consumers are adopting plant-based diets for health and environmental reasons and out of concern for animal welfare. Many are beginning to question the ethical inconsistency of cherishing pets while subjecting animals like pigs—proven to be highly intelligent—to inhumane conditions in factory farms. This growing awareness prompts society to reconsider its relationship with animals and push for more ethical treatment across species.

Plant-based products are also more sustainable, using fewer natural resources such as water and land and producing lower greenhouse gas emissions than meat and dairy. This combination of environmental and ethical concerns is driving the expansion of the plant-based market, with both new and established companies investing in plant-based alternatives and reshaping the food industry. In addition to these environmental and ethical benefits, plant-based diets also offer significant health advantages. Research consistently shows that plant-based diets are associated with lower risks of chronic diseases, including heart disease, diabetes, and certain cancers. According to *The Proceedings of the National Academy of Sciences*, a global shift to plant-based diets could save up to \$1 trillion annually in healthcare costs. This reflects a crucial point: what benefits the planet also benefits human health. The *World Health Organization* (WHO) reports that 60% of known infectious diseases and 75% of emerging ones, such as HIV, Ebola, SARS, and COVID-19, are zoonotic, originating from animals or animal products. Factors like intensive farming, habitat destruction, and wildlife exploitation amplify the spread of these diseases, highlighting the direct link between animal agriculture, environmental degradation, and human health risks.

At the same time, traditional food sectors, particularly meat and dairy, are facing significant challenges. Long reliant on intensive farming practices, these industries are under pressure due to the ethical and environmental issues they raise. Public concern over animal welfare, deforestation, and climate change has forced many businesses to adapt or risk falling behind. A prime example of successful adaptation is *Elmhurst 1925*, a former dairy company that pivoted entirely to plant-based products in 2016 in response to declining dairy demand. Today, Elmhurst thrives as a leader in the plant-based market. Similarly, *Miyoko's Creamery*, founded by Miyoko Schinner, transitioned from artisanal dairy to producing vegan cheeses and kinds of butter, driven by ethical concerns about the dairy industry. These companies exemplify how embracing plant-based alternatives can lead to success.

Ethical consumerism has also placed a premium on transparency in food production. Consumers now expect clear information about how their food is produced, including animal treatment, environmental impact, and ingredient sourcing details. This demand for transparency has prompted many companies to reevaluate their supply chains and marketing strategies. Those who offer honest, transparent information are better positioned to earn consumer trust, while those engaging in "greenwashing" risk losing credibility. Social media has amplified these trends, enabling consumers to share information about ethical concerns and hold companies accountable. Viral campaigns and boycotts are now common tools for pressuring businesses to improve their practices. As a result, transparency and accountability have become critical elements of successful business strategies in the food industry.

The rise of plant-based diets and sustainable food practices reflects broader societal changes, especially among younger generations. Millennials and Generation Z prioritize sustainability and animal welfare in their food choices and are willing to pay a premium for products that align with their values. This generational shift is reshaping the future of the food industry, as businesses must adapt to meet the expectations of a more ethically conscious consumer base. As consumer demands continue evolving, companies prioritizing sustainability, transparency, and ethical sourcing will be best positioned to thrive in the changing market.

The challenges facing traditional meat and dairy sectors

The global food industry has long been dominated by the traditional meat and dairy sectors, which have been central to food systems worldwide. However, these industries are now confronting unprecedented challenges as consumer demand shifts towards ethical, sustainable, and environmentally friendly alternatives. Growing awareness of the environmental and ethical impacts of meat and dairy production has led consumers to question the long-term viability of these sectors. Today, it is estimated that 90% to 99% of animal products found in supermarkets are sourced from intensive farming systems, raising serious concerns about sustainability.

One of the most significant issues facing the meat and dairy sectors is their environmental footprint. According to the *Food and Agriculture Organization* (FAO), livestock production accounts for roughly 14.5% of human-induced greenhouse gas emissions globally, with methane from ruminants like cattle being a major contributor. In addition to greenhouse gas emissions, livestock production consumes vast amounts of natural resources. Nearly 80% of the world's agricultural land is used for livestock production, yet it provides only 18% of global calorie intake. This stark inefficiency, especially compared to plant-based alternatives, underscores the mounting concerns about the sustainability of these industries.

The scale of animal farming is staggering: over 200 million chickens, 3.8 million pigs, 900,000 cattle, and millions of other animals are slaughtered daily. The environmental toll of this production is immense, with methane emissions, deforestation for grazing land, and the cultivation of animal feed crops being significant areas of concern. As a result, businesses tied to traditional meat and dairy production are facing increasing scrutiny and growing pressure to adopt more sustainable practices or risk falling out of favor with an increasingly conscious consumer base.

Opportunities in the plant-based sector

While the traditional meat and dairy industries face significant challenges, the plant-based sector has emerged as a rapidly growing and profitable alternative. The global plant-based food market has seen a remarkable increase in recent years, driven by consumer demand for healthier and more environmentally friendly options. Products such as plant-based meats and dairy alternatives have gained mainstream acceptance, leading to significant investments in the sector.

For instance, companies such as *Beyond Meat* and *Impossible Foods* have revolutionized the plant-based food market by developing innovative products that closely mimic the taste and texture of animal-based foods. Beyond Meat, for example, saw its revenue grow from USD 87.9 million in 2018 to over USD 406 million in 2020. Such rapid growth highlights the immense potential of this sector to capture market share from traditional animal-based products. Moreover, large multinational corporations recognize the potential of plant-based alternatives, with companies like *Nestlé*, *Unilever*, and even meat giant *Tyson Foods* investing in or acquiring plant-based food brands to capitalize on this growing market. In 2020, plant-based food sales grew by 27% in just one year, outpacing the overall food market's growth. Over \$3.1 billion was invested in plant-based and alternative protein startups, a 300% increase from the previous year.

The environmental benefits of plant-based products are significant. Producing plant-based proteins, for example, requires 47% to 99% less land and 72% to 99% less water than beef production, generating far fewer greenhouse gas emissions. These advantages, coupled with growing consumer concerns about climate change and animal welfare, have positioned the plant-based food sector as a central component of the future global food industry.

Despite these opportunities, the plant-based sector faces challenges, particularly in scaling production and reducing costs. Producing plant-based products that replicate the taste and texture of animal-based foods requires advanced technologies, such as precision fermentation and extrusion, which can be expensive and difficult to scale. However, ongoing innovation in food technology is expected to lower production costs and make plant-based products more accessible to a broader consumer base.

The role of technology and investment

Technological advancements have been instrumental in the growth of the plant-based food sector. Companies such as *Perfect Day* use biotechnology to produce dairy proteins through precision fermentation, creating vegan alternatives that closely mimic traditional dairy products. These technological innovations have attracted significant investment from venture capital firms, with funds such as *New Crop Capital* and *Stray Dog Capital* specifically targeting companies at the forefront of alternative protein development.

Another key factor driving the growth of the plant-based sector is the strategic involvement of large multinational corporations. Companies such as *Nestlé* and *Unilever* have launched their lines of plant-based products and acquired existing brands to expand their market presence. These corporations recognize the growing demand for plant-based foods and invest heavily in product development and marketing to ensure they remain

competitive as consumer preferences shift toward more sustainable and ethical food options.

The rise of vertical farming and lab-grown meat is another area of significant innovation. These technologies address environmental concerns and open new avenues for product development. Lab-grown meat, for instance, is being hailed as a potential game-changer in the future of food, offering a sustainable alternative to traditional animal farming without the ethical and environmental concerns associated with livestock production.

Social and economic impacts

The transformation of the food industry toward plant-based and sustainable practices creates opportunities for businesses and professionals across various fields. The vegan and plant-based market expansion is driving demand for roles in supply chain management, food technology, marketing, and consumer research, providing significant employment opportunities. As companies continue to innovate and scale their operations, the plant-based sector is expected to generate substantial economic growth while promoting sustainability.

The shift toward more sustainable food practices is also contributing to broader efforts to combat climate change. Reducing meat and dairy consumption has been identified as one of the most effective strategies for individuals to reduce their carbon footprint. According to a study from Oxford University, shifting to plant-based diets could reduce global food-related emissions by up to 73%, significantly contributing to reducing environmental impacts associated with food production.

Transparency and industry resistance

As ethical consumerism continues to shape the modern food industry, transparency has emerged as a consumer demand. The expectation that food companies disclose their production methods, supply chain practices, and the environmental impact of their products is now widespread. Consumers, particularly Millennials and Generation Z, are increasingly interested in knowing where their food comes from, how it was produced, and whether it aligns with sustainability and animal welfare values. This trend toward transparency has been largely driven by the rise of social media, where information is rapidly disseminated, and consumers can easily share their concerns about unethical practices.

Transparency is no longer a choice for businesses but a requirement for those aiming to build trust and loyalty among ethically conscious consumers. Research shows that consumers are more likely to trust and support companies that are open about their supply chains, even if there are areas for improvement. This expectation extends beyond the ethical treatment of animals to include factors such as fair labor practices, environmental stewardship, and corporate governance. Companies that fail to meet these transparency standards risk facing public backlash, often amplified by social media campaigns and boycotts.

An important example of this pressure for transparency can be seen in the responses to food scandals involving unethical practices. Companies have faced significant reputational

damage when they have been exposed for misleading consumers or engaging in greenwashing—where products are marketed as environmentally friendly without substantive changes to production practices. Greenwashing has become a major concern for both consumers and regulators as more companies attempt to capitalize on the growing demand for ethical products without committing to the necessary changes. Consumers are becoming more adept at spotting false claims, and the availability of information online has empowered them to hold businesses accountable.

In contrast, companies embracing transparency as part of their core business strategy benefit from stronger consumer trust. For example, *Patagonia* in the apparel sector and *Beyond Meat* in the food industry have built their brands around ethical transparency, ensuring that their production processes, supply chains, and environmental impacts are clearly communicated to consumers. As a result, these companies have garnered loyal customer bases who prioritize ethical consumption. The lesson for the food industry is clear: transparency is a competitive advantage in the modern marketplace.

However, transparency is not the only challenge that companies face. There is significant resistance from industry lobbies, particularly within the meat and dairy sectors, that are invested in maintaining the status quo. These industries have a long history of influencing legislation, often working to slow down or block regulatory changes promoting plant-based diets or more sustainable farming practices. Meat and dairy lobbies have historically been powerful in shaping public policy, often receiving substantial government subsidies and support. This financial backing has allowed them to resist market shifts and delay the implementation of more stringent environmental and ethical regulations.

For instance, large-scale lobbying efforts have been instrumental in preventing stricter regulations on methane emissions from cattle or reducing subsidies for the livestock industry. In the European Union and the United States, meat and dairy industry lobbies have pushed back against initiatives aimed at promoting plant-based alternatives in public institutions, such as schools and hospitals. These lobbies often frame their arguments around the economic importance of the meat and dairy industries, particularly in rural areas, where livestock farming supports a significant portion of the local economy. In 2016 alone, the *United States Department of Agriculture* invested more than \$526 million in public marketing campaigns for dairy products, promoting slogans like "Got Milk?", and similarly the *European Union's Common Agricultural Policy*, allocates up to 90.1 million euros per school year for distributing milk across Europe.

But the convergence of environmental urgency, consumer demand, and business opportunity is creating a perfect storm for change. And this change is not only necessary for the survival of the planet, but it also presents an unprecedented opportunity for businesses to innovate and grow. Public sentiment is shifting rapidly in favor of more sustainable food systems, and regulatory changes are beginning to reflect these preferences. For example, the European Union has introduced initiatives to reduce meat consumption as part of its broader climate goals, while cities like New York have implemented *Meatless Monday* programs in public schools to promote plant-based eating. These initiatives represent the beginning of a wider transition toward a more sustainable food industry, driven by both consumer demand and environmental necessity.

The future of the food industry

Looking ahead, the future of the food industry will be shaped by several key trends, all of which are closely tied to the evolving cultural perception of animals and the environment. One of the most significant drivers of change will be the ongoing innovation in alternative proteins and sustainable food technologies. Companies are already investing heavily in the development of new food technologies, such as lab-grown meat and precision fermentation, which have the potential to revolutionize the way food is produced. These technologies aim to provide the same sensory experience as animal-based products but with a fraction of the environmental and ethical costs.

Lab-grown meat, for example, eliminates the need to raise and slaughter animals while dramatically reducing the environmental footprint of meat production. According to research, lab-grown meat has the potential to cut land use by up to 99% and water use by up to 96% compared to conventional meat production while also reducing greenhouse gas emissions by up to 90%. While the technology is still in its early stages, with high production costs being a significant barrier to widespread adoption, advancements in scalability and cost-efficiency are expected to bring lab-grown meat to the mainstream within the next decade.

Another area of significant innovation is precision fermentation, which involves using microorganisms to produce proteins that closely mimic those found in animal products. This technology has already been used to create dairy proteins without cows, and companies like *Perfect Day* are leading the way in this field. These innovations are particularly appealing to consumers seeking animal-free alternatives that do not compromise on taste or nutrition. As these technologies become more accessible and affordable, they are likely to play a significant role in the transition toward a more sustainable and ethical food system.

The plant-based food sector will continue to grow as more consumers adopt flexitarian or entirely plant-based diets. The increasing availability of high-quality plant-based products has made it easier for consumers to incorporate more plant-based meals into their diets without feeling like they are making significant sacrifices. This trend will likely accelerate as plant-based foods become more affordable, accessible, and widely available in mainstream retail channels. The plant-based market is expected to grow at an annual rate of 12.95%, reaching a value of \$74.2 billion by 2027.

The future of the food industry will also be shaped by regulatory changes aimed at addressing the environmental and ethical challenges posed by traditional farming practices. Governments increasingly recognize the need to promote sustainable food systems as part of their broader climate goals. Initiatives such as carbon pricing, reductions in agricultural subsidies for livestock farming, and incentives for plant-based innovation are likely to become more common in the coming years. These policy changes will create both challenges and opportunities for businesses, as those that can adapt to the new regulatory environment will thrive, while those that resist change will struggle to remain competitive.

In conclusion, the food industry is profoundly transforming, driven by changing cultural perceptions of animals, environmental concerns, and technological advancements. The

rise of ethical consumerism and the demand for transparency have reshaped the marketplace, creating opportunities for companies that embrace sustainability and ethical practices. However, resistance from traditional sectors and the need for substantial investment in new technologies remain significant challenges. As innovation continues to reshape the industry, companies that can navigate these challenges and align with consumer values will be well-positioned to succeed in the future food landscape.

Conclusion

The evolution of the cultural perception of animals has profoundly impacted the modern food industry, creating significant challenges and exciting opportunities for businesses. As consumers become increasingly aware of ethical, environmental, and health-related issues, their expectations of food producers have shifted dramatically. Ethical consumerism, driven largely by media exposure and public discourse, has shaped the food market.

One of the most evident trends is the rise of the plant-based food sector. This growth has been fueled by concerns over the environmental impact of livestock farming and the ethical treatment of animals, as well as an increasing desire for transparency in how food is produced. Companies that have successfully embraced these trends by innovating with plant-based products and adopting more sustainable practices are finding new market opportunities and experiencing growth. These businesses are well-positioned to continue thriving as consumer demand for ethical, plant-based, and sustainable food options grows.

However, the transition has not been without difficulties, particularly for traditional meat and dairy producers. These sectors, long established and deeply rooted in industrial practices, face significant challenges in adapting to a more ethically conscious consumer base. From the environmental impact of large-scale livestock farming to the ethical concerns surrounding animal welfare, traditional food companies are under pressure to transform their production methods. Successful transition cases show that it is possible, as some producers have embraced sustainable practices and plant-based alternatives, proving that adaptation can lead to ethical and economic benefits.

Industry resistance, particularly from entrenched meat and dairy lobbies, also continues to slow regulatory and market shifts. Despite this, the momentum toward plant-based alternatives, lab-grown meats, and other sustainable innovations is both necessary and inevitable. Public sentiment is shifting rapidly, and regulatory environments are beginning to reflect the urgency of addressing environmental and ethical concerns in food production.

Looking to the future, the food industry will be increasingly shaped by technological innovations such as lab-grown meat and precision fermentation, which promise to provide more sustainable and ethical alternatives to traditional animal-based products. The ongoing push for transparency and accountability will also play a critical role in shaping consumer preferences and industry practices. As consumers demand more information about the origins of their food and its environmental impact, businesses that prioritize transparency and sustainability will thrive in the future.

In conclusion, the evolving cultural perception of animals is not just a passing trend but a fundamental shift reshaping the food industry. As consumer preferences evolve, businesses aligning with these ethical and environmental concerns will be best positioned to succeed. The future of the food industry lies in innovation, sustainability, and a commitment to ethical practices, offering a clear path forward for those willing to adapt.

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