Designing the Longevity Brand: longevity science, technology, and the consumer wellness industry.

Presented by Maya Glenn

in partial fulfillment of the requirements for completion of the

Evidence and Inquiry certificate and the

Polymathic Scholars honors program in the

College of Natural Sciences at

The University of Texas at Austin

Spring 2026

Thesis Supervisor:

Layla Parast, Ph.D.

Department of Statistics and Data Sciences

The University of Texas at Austin

Second Reader:

Charlee Garden

Impact Lab, College of Natural Sciences

The University of Texas at Austin

Table of Contents

Acknowledgements

I am deeply grateful to my mentors, Dr. Layla Parast and Professor Charlee Garden, whose guidance, patience, and thoughtful feedback shaped every stage of this thesis. I am also thankful to Dr. Rodenbusch, the Polymath Teacher Assistants, and the rest of the honors department who offered unwavering support throughout this entire process. Finally, I want to thank my family and friends for their constant support, reassurance, and belief in me throughout this process. My support system made the more challenging moments feel manageable and the rewarding moments even sweeter.

Abstract

This thesis examines how the rapid growth of the American consumer wellness industry is driven by advances in longevity science and artificial intelligence, and by brands' ability to translate complex, preventative health science into emotionally resonant, personalized, and useful products and services. The United States healthcare system is structurally oriented toward reactive, procedure-based care, leaving preventative health, personalized guidance, and longevity science principles largely outside standard clinical practice. This paper argues that wellness brands have grown by identifying and commercializing that gap, functioning simultaneously as engines of genuine health democratization and as mirrors of unmet consumer demand that they cannot fully resolve. Drawing on secondary sources including peer-reviewed research and case study analysis, this thesis addresses the macroeconomic, cultural, and institutional conditions that accelerated the industry's rise: the COVID-19 pandemic, declining public trust in medical institutions, and the redistribution of health authority onto social media platforms. Case studies of companies like Function Health and Oura illustrate how wellness brands translate longevity science into consumer-facing business models, using AI-driven personalization to deliver the kind of continuous, individualized attention the healthcare system cannot easily provide. The analysis finds that wellness brands have meaningfully democratized access to longevity science principles, a structural shift with lasting consequences for health authority, consumer trust, and equity in access to preventative care.

Keywords: consumer wellness industry, longevity science, preventative healthcare, health authority, wellness branding, artificial intelligence, social media, functional medicine

Introduction

Rock-hard abs, tech-enhanced jewelry reporting a twelve-year-old's biological age, and skin that appears to be aging backwards have become more significant status signals than a black Amex card or a designer bag. The wellness industry has experienced exponential growth, expanding from an estimated $500 billion market in 2007 to a $4.2 trillion industry today, representing 5.3% of global economic output (Grénman et al., 2019). This transformation reflects not merely commercial growth but a fundamental shift in how consumers understand, pursue, and value health and wellbeing.

At the center of this shift is a new kind of company: one that blends science, technology, and lifestyle branding to sell not only products, but a vision of how to live a better, longer, and more optimized life. These are wellness brands. They speak the language of longevity science, the field concerned with extending healthy human lifespan through lifestyle intervention, promise personalized solutions through artificial intelligence, and distribute their message through social media platforms that reach millions (Kaur & Kumar, 2022). But they have also emerged within a specific context: traditional healthcare systems are structurally oriented toward treating illness rather than preventing it, and people are increasingly skeptical of that reactive system and hungry for personalized, preventative solutions.

This thesis argues that the rapid growth of the consumer wellness and longevity industry is driven by advances in longevity science and artificial intelligence, and by brands' ability to translate complex, preventative health science into emotionally resonant, personalized, and culturally desirable products and services. As traditional healthcare systems have failed to adopt scalable preventative care protocols, wellness brands have emerged as convincing alternatives,

using technology, social media, and brand strategy to sell health principles to consumers, while simultaneously raising new tensions around authority, credibility, and medical legitimacy.

This paper is structured in three sections. First, it defines the key players: longevity science, the American healthcare system, the consumer wellness industry, and artificial intelligence in consumer contexts. Second, it examines the different events and conditions that created demand for wellness alternatives, including the real and perceived failures of traditional healthcare, the COVID-19 pandemic, the rise of social media, and the decline of institutional trust. Third, it analyzes how wellness brands have responded to and accelerated that demand, evaluating both the genuine benefits they provide and the harms they risk. Throughout, the central question is what their rise reveals about the structural gaps in American healthcare, the culture of self-optimization, and the changing structure of health authority.

Conceptual Foundations

To understand the wellness economy, start with the context it emerged from and the terms it operates within. Four key actors define this space: longevity science, the American healthcare system, the consumer wellness industry, and artificial intelligence in consumer contexts.

Longevity Science

Longevity science is about living well for as long as possible. The field represents a decisive shift from maximizing lifespan, the total number of years a person lives, to optimizing healthspan, the number of years lived in good health, free from chronic disease and functional decline (Attia, 2023). For most of the twentieth century, medicine focused on extending life through medical intervention. Longevity science reframes the goal: the greatest threat to

wellbeing is not death itself, but extended periods of disease, disability, and diminished quality of life before it. It also reframes the approach: adopt lifestyle and diet habits to prevent disease, rather than waiting to diagnose disease and then prescribing medical solutions reactively.

Peter Attia outlines the four core pillars of longevity science in his book *Outlive: The Science and Art of* Longevity (2023). The first is sleep, which functions as a foundational biological process regulating metabolic, hormonal, cardiovascular, and cognitive systems. Insufficient sleep is a driver of long-term health decline, not the badge of honor that hustle culture makes it out to be. The second pillar is nutrition, which emphasizes metabolic stability, insulin sensitivity, muscle growth support, and the reduction of chronic inflammation, achieved through whole, nutrient-dense foods and the elimination of ultra-processed foods and refined sugar. The third is exercise, widely regarded as the single most effective lever for improving healthspan. Attia (2023) identifies muscular strength, cardiovascular conditioning, and mobility as among the most predictive markers of healthy aging. The fourth pillar is emotional health, including psychological resilience, stress regulation, and social connection, which Attia positions as equally important to the other biological pillars.

These four pillars are grounded in decades of peer-reviewed research. Yet the movement lives on alternative forums, podcasts, within supplement brands, Instagram accounts, and inside consumer subscription services, largely outside the traditional medical system.

The American Healthcare System

The American healthcare system is, by design, a reactive institution. Its infrastructure is built to diagnose and treat conditions after they occur, not to prevent them from occurring in the first place. The fee-for-service model that dominates American healthcare reimburses physicians for procedures and treatments, not for time spent on behavioral counseling, lifestyle guidance, or

the kinds of longitudinal, relationship-based care that preventative health requires (Levine et al., 2019). The system rewards specialists and procedure-based care, leaving prevention structurally undervalued. Compounding this structural problem is a striking gap in medical education: most American physicians receive fewer than 20 hours of nutrition instruction across four years of medical school, well below the minimum of 25 hours recommended by the National Academy of Sciences (Adams et al., 2015). This training deficit has real consequences in clinical practice. When a patient presents with high blood pressure, the trained reflex is to prescribe medication rather than to explore the role of diet, stress, or sleep in driving that condition (Levine et al., 2019). The system is designed for acute intervention, not sustained lifestyle guidance, and the evidence for this pattern is extensive.

Spending on preventive care as a percentage of total national health spending actually declined from 3.7% in 2000 to 2.9% in 2018, even as comparable wealthy nations held steady (Peterson-KFF Health System Tracker, 2020). Meanwhile, preventable diseases cost the United States an estimated $730.4 billion in 2016 alone (Bolnick et al., 2020). The United States ranks last among high-income nations in health outcomes despite spending more per capita than any other country in the world (Commonwealth Fund, 2024). By 2020, only 5.3% of adults age 35 and older received all recommended high-priority preventive clinical services, down from 8.5% in 2015 (Office of Disease Prevention and Health Promotion, 2024).

This is the systemic context in which wellness brands operate. The healthcare system is not simply failing to adopt longevity principles, it is structurally incompatible with them. Longevity science demands continuous and personalized monitoring, prioritizing nutrition and fitness-based interventions over pharmaceutical solutions. The American healthcare system offers infrequent visits, insurance-driven protocols, and reactive treatment. The two systems

operate on fundamentally opposing logics, and that incompatibility is precisely the gap wellness brands have moved to fill.

The Consumer Wellness Industry

The consumer wellness industry is the heart of companies that have grown in the gap between what longevity science recommends and what the healthcare system delivers. It encompasses a vast range of products and services, like wearable devices, biomarker testing kits, supplements, fitness platforms, meditation apps, sleep trackers, and more, that all position health as a lifestyle and an identity, rather than something you think about once a year (Doyle, 2021; Grénman et al., 2019).

What distinguishes the wellness industry from traditional healthcare is its frame. Wellness brands sell optimization. They speak to the aspirational consumer who is not sick but who wants to be better and never be sick: more focused, more energized, biologically younger, metabolically sharper, and ultimately less dependent on the healthcare system altogether. Lupton (2016) describes the emergence of the "quantified self" as a defining feature of this culture: a framework in which individuals use data-driven self-tracking to view health as a continuous, self-driven project rather than a static condition managed through occasional medical visits. In this worldview, health is not dispensed by a physician. It is constructed through informed daily choices, powered by the individual.

Wellness branding reinforces this frame deliberately. Products are marketed as means of self-expression and self-improvement, allowing consumers to signal values such as discipline, knowledge, and future-oriented thinking (Grénman et al., 2019). In this sense, wellness behaviors carry the same social signaling weight as financial literacy or investment savvy, like

picking the right stocks and having an excellent credit score. Health practices become identity practices. The gold-plated tracking device on one's finger, the high sleep score reported from an app, the specific supplements on the counter. These are not merely health interventions. They are cultural artifacts, markers of taste and intentionality. Health, in the wellness economy, has become the new capital.

Artificial Intelligence in the Context of Consumer Wellness

Artificial intelligence has become a central part of the modern wellness industry. In consumer contexts, AI refers broadly to systems that analyze data to identify patterns and then personalize, automate, and optimize user experiences at scale (Gaidhani et al., 2025). In wellness applications, this means personalized supplement and lifestyle recommendations based on biomarker and wearable data, predictive health insights drawn from longitudinal tracking, and individualized content that makes abstract health principles feel immediately actionable (Huang & Grady, 2022).

AI allows wellness brands to deliver the kind of personalized and continuous attention that the traditional healthcare system cannot easily provide. Where a doctor might see a patient for fifteen minutes once a year, an AI-powered wellness platform can deliver tailored nudges, progress reports, and adaptive recommendations daily. This creates an intimacy and responsiveness that traditional medicine has historically struggled to match, giving individuals tools to take meaningful ownership of their own health. Scholars caution, however, that these algorithmic systems raise meaningful ethical questions about accuracy, transparency, and accountability, particularly in health-adjacent applications where the stakes are high and a

credentialed medical professional is no longer the mediator between health information and the consumer (Floridi et al., 2018).

Has Traditional Healthcare Actually Failed?

The wellness industry's central narrative is that the American healthcare system is not enough; that it is incapable of serving the real needs of health-conscious consumers. Wellness brands position themselves as the corrective: the science-backed, personalized, consumer-empowered alternative to a system that cannot keep up. But it is worth pausing to ask whether this narrative is accurate, whether it is overstated, and whether it is, at least in part, a highly effective piece of marketing.

The Evidence that the Failure is Real

The case against the American healthcare system's approach to prevention is substantial and well-documented. As noted above, preventive care spending has declined as a proportion of total health spending over the past two decades (Peterson-KFF, 2020). The system's fee-for-service reimbursement model creates little financial incentive for providers to invest time in behavioral counseling, lifestyle modification, or the kinds of proactive screenings that longevity science recommends (Levine et al., 2019). Healthcare industry experts interviewed across multiple sectors confirm that financial considerations consistently outweigh prevention-focused priorities when organizations allocate resources (Levine et al., 2019).

The health outcomes of this reactive structure are well documented. The United States has the highest rates of preventable and treatable deaths among high-income nations (Commonwealth Fund, 2024). Chronic conditions (most of which are preventable through the

lifestyle interventions longevity science prescribes) account for the overwhelming majority of healthcare spending. People with multiple chronic conditions make up 83% of Medicaid spending (Yu, 2024). Behaviors that longevity science directly addresses, like poor nutrition, physical inactivity, inadequate sleep, or chronic stress, are the leading behavioral causes of death in the country (Mokdad et al., 2004).

One of the most telling examples of this structural failure is the treatment of nutrition in American medicine. Diet-related conditions, including obesity, type 2 diabetes, and cardiovascular disease, are responsible for the majority of preventable deaths and healthcare expenditures in the United States (Mokdad et al., 2004). Yet research consistently demonstrates that the medical system is poorly equipped to address them through lifestyle guidance. A comprehensive national survey found that 71% of American medical schools fail to provide even the minimum 25 hours of nutrition education recommended by the National Academy of Sciences, with many providing fewer than 12 hours across four years of training (Adams et al., 2015). Without foundational nutrition training, physicians cannot reasonably be expected to counsel patients on the dietary changes that longevity science identifies as among the most powerful levers for long-term health. Rather than exploring what a patient eats, how they sleep, or how they manage stress, clinical encounters tend to default to pharmaceutical intervention, treating the symptoms of lifestyle-driven conditions rather than their underlying causes (Levine et al., 2019).

Wellness brands have positioned themselves precisely in this space, offering products and services addressing and claiming to prevent those underlying causes. Popular examples include health tracking wearables, supplements and nutrition support, mental health and mindfulness apps, and functional beverages and food.

Or is it just marketing?

However, the wellness industry's framing of healthcare as comprehensively broken deserves scrutiny. The narrative of total failure can be, and often is, strategically amplified by brands that benefit commercially from consumer distrust of medicine.

Wellness brands have a financial incentive to position the healthcare system as inadequate because the inadequacy is their market opportunity. Without perceived inadequacy, consumers will not think to spend their disposable income on health. When Function Health, a lab-testing and health-data-tracking company, advertises that doctors do not run enough biomarker tests, or when an influencer claims that conventional medicine ignores nutrition, they are making claims that are partly true and partly targeted. Preventive care does happen in the American system: vaccinations, cancer screenings, and cardiovascular risk assessments are standard components of primary care. But it does not happen at the depth, personalization, or frequency that longevity science advocates recommend (Levine et al., 2019). The gap is real, but it is also commercially useful.

This dual reality matters because it shapes how we evaluate wellness brands' authority and legitimacy. When wellness companies cite the failures of the American healthcare system to justify their existence, they are not lying, but they are also not telling the full story and potentially causing unnecessary distrust. The healthcare system has genuine structural limitations. Wellness brands, meanwhile, have genuine structural incentives to emphasize those limitations as starkly as possible. Both of these things can be true simultaneously, and understanding that tension is essential to evaluating the wellness industry honestly.

What Caused the Movement Toward Preventative Health?

The consumer wellness industry was accelerated by a convergence of macroeconomic pressures, cultural anxieties, and institutional failures that created both the demand for alternatives and the conditions under which those alternatives could thrive. Rising rates of burnout, chronic stress, and generalized anxiety about the future made consumers increasingly receptive to products and services that promised control, clarity, and optimization (Grénman et al., 2019). At the same time, the declining performance of the American healthcare system on preventative metrics, documented above, left a growing number of health-conscious individuals without the guidance they were looking for. Three forces in particular accelerated the shift toward consumer-driven wellness: the COVID-19 pandemic, the decline of institutional trust in medical authorities, and the rise of social media as a platform for health authority. Together, these forces created the cultural conditions in which wellness brands could position themselves as a credible and even necessary alternative to traditional medicine.

The COVID-19 Pandemic as a Turning Point

The COVID-19 pandemic made preventive health personally and urgently relevant more so than ever before. It forced an entire population to confront questions of immunity, metabolic health, aging, and biological vulnerability simultaneously and at a worldwide scale (Burns, 2023). Digital tracking tools and wellness platforms saw dramatic uptake during this period: search interest in telehealth, health apps, and digital wellness tools spiked immediately following the World Health Organization's declaration of a pandemic in March 2020 and remained elevated well above pre-pandemic baselines (Mavragani, 2023). Consumers who had previously deferred to the medical system for health guidance found themselves at home, cut off from routine care,

and increasingly turning to social media to learn more about their health and what they could do to support themselves.

The Decrease in Institutional Trust

Compounding this was a decrease in public trust in healthcare institutions, a trend that had been building before the pandemic and accelerated significantly through it. At the beginning of the pandemic in April 2020, 71.5% of American adults reported a lot of trust in physicians and hospitals. By January 2024, that figure had fallen to 40.1%, a 31.4 % decline spanning every sociodemographic group studied (Perlis et al., 2024). The KFF's January 2025 tracking poll found that trust in the CDC had fallen from 66% to 61%, trust in the FDA from 65% to 53%, and trust in state and local public health officials from 64% to 54% (KFF, 2025).

Many things have contributed to this decline of trust. During the pandemic, inconsistent and sometimes contradictory messaging from health authorities on masking, transmission, vaccine timelines, and school reopenings undermined credibility at a critical moment (Udow-Phillips et al., 2025). The politicization of public health made trust in science a partisan identity marker rather than a bipartisan baseline.

This context is critical to understanding the rise of the wellness industry. When trust in medical institutions decreased, people began to seek health solutions elsewhere, particularly on social media, where the wellness influencers, brands, and alternative views that have established authority there.

Social Media and the Redistribution of Health Authority

Social media restructured who counts as a credible health voice and why, and it was able to do so because of its massive distribution power. Platforms like Instagram, TikTok, and YouTube function as both discovery environments for wellness brands and authority-building spaces for wellness influencers, compressing marketing, alternative health education, and community-building into a single channel (Kaur & Kumar, 2022). Research on platform-based health communication concluded that social media's architecture, which is algorithmically driven, community-reinforced, and identity-expressive, creates structural conditions in which alternative voices can build perceived authority at scale, even in the absence of traditional institutional credentials (Kanchan et al., 2023).

The authority that wellness influencers have built on these platforms operates by a different logic than traditional medical credibility (Kanchan et al., 2023, Wellman, 2024). Research on digital health communication shows that perceived credibility in online wellness spaces often depends more on relatability, physical appearance, and platform context than on formal expertise or credentialed training (Eysenbach, 2008). Influencers who share their personal health journeys, speak in accessible language, and present themselves as peers navigating the same anxieties as their audiences are experienced as trustworthy in ways that clinical communication rarely achieves (Wellman, 2024). They position themselves as, in Wellman's (2024, p. 7024) words, "a friend who knows what they are talking about." This is a fundamentally different credibility claim than that of an institution or expert.

This dynamic has been amplified by distrust of formal institutions. As trust in the CDC, the FDA, and individual physicians has declined sharply across every sociodemographic group (Perlis et al., 2024; KFF, 2025), the relative authority of alternative voices has risen in the space

that institutional credibility once occupied. Conrad (2007) described this dynamic decades ago as a movement away from traditional medicalization toward consumer-driven interpretations of health. What he did not anticipate was the scale and speed at which digital platforms would enable that redistribution of authority. Social media has collapsed the distance between health claim and health consumer, creating an environment in which unverified advice can reach millions before any corrective information has time to circulate (Denniss et al., 2025).

How Wellness Companies Have Emerged to Fill the Gap…and What They are Actually Doing

This is the question the wellness industry rarely wants asked directly, so it is worth asking clearly. Social media and the wellness community have genuinely democratized access to health information that was previously restricted to medical specialists, athletes, or wealthy individuals. Products like Oura and Function Health have made continuous health monitoring and comprehensive biomarker testing available to a general consumer market. The proliferation of sleep science, metabolic health education, and strength training guidance through podcasts, social media, and digital platforms has contributed to meaningful public awareness of longevity science principles. For many consumers, engagement with wellness brands represents the first sustained contact they have had with the concepts of healthspan, metabolic health, nutrition, and more, concepts that should have been available to them through their primary care providers and probably never were.

Distilling Longevity Science into Business Models

Wellness brands have succeeded not by inventing new health principles, but by operationalizing existing ones in consumer-accessible formats. Function Health is a strong example. The biomarker tests it offers, covering cholesterol subtypes, glucose regulation, inflammatory markers, and nutrient deficiencies, are not new. These panels have long been available through diagnostic lab partners like Quest Diagnostics, but conventional primary care rarely orders all of them routinely, and patients have historically had no easy path to access them independently (Ghaffary, 2023), or just haven't been told they should. Longevity science has emphasized for decades that such markers can predict long-term health outcomes well before disease manifests, making their absence from standard care a meaningful structural gap. What Function Health did was identify that gap and build a business around it: compiling the tests longevity authorities consider most predictive, packaging them into a subscription-based consumer service, and delivering results through consumer-friendly dashboards and AI-driven lifestyle recommendations that translate complex lab values into actionable guidance (Ghaffary, 2023). In doing so, they reframed preventative biomarker testing from a medical obligation requiring physician mediation into a consumer product anyone can purchase directly.

Wearable technologies, like the Oura Ring and WHOOP, operate on a similar logic, but through continuous monitoring rather than periodic diagnostics. Oura, a company that sells a health tracking ring and an accompanying subscription-based app, centers its value proposition on sleep (the foundational longevity pillar) using biometric sensors to track sleep stages, heart rate variability, body temperature, and circadian patterns, then converting those signals into simplified daily readiness scores (Attia, 2023). AI enables this translation by identifying

individual baselines and adapting recommendations accordingly, so that guidance is personalized rather than generic.

The supplement industry, an industry within the wellness industry, is another revealing case study. Longevity science advocates for nutrient-dense diets and metabolic stability, but modern food systems, dominated by ultra-processed products that strip naturally occurring nutrients, fiber, and phytochemicals during industrial manufacturing, make these goals structurally difficult to achieve (Monteiro et al., 2025). An estimated 95% of American adults and children fail to meet recommended daily fiber intake, a shortfall driven in large part by the dominance of ultra-processed, fiber-depleted foods in the American diet (Quagliani & Felt-Gunderson, 2017). Wellness supplement brands position their products as pragmatic corrections to this broken food environment. The framing matters: supplements are sold not as magic, but as rational responses to a world that makes healthy eating difficult by design. A fiber supplement may help a consumer reach their daily intake target, but it does not address the underlying dietary patterns driving the deficit, and may reduce the urgency consumers feel to restructure their diets around whole, fiber-rich foods. This dynamic, genuine utility paired with potential dependence on commercial solutions, runs through much of the supplement industry and represents one of its core unresolved tensions.

Brand Strategy and Health as a Status Signal

Wellness brands succeed because their products are both effective and culturally relevant. They understand that consumers are not simply buying a product, but purchasing an identity for themselves (Tran et al., 2024). Health practices in the wellness economy function as markers of taste, discipline, and future-oriented intelligence, comparable to the way personal finance literacy

or investment behavior signal social capital in adjacent cultural conversations. In the same way people once signaled status through the stocks they owned, they now signal it through the foods they eat, the supplements they take, and the health protocols they follow. An optimized sleep score, a biomarker dashboard reporting one's biological age, and a curated supplement stack are visible indicators of investment in the self (Grénman et al., 2019). "Health is wealth" is not merely a metaphor in this context; it is a brand positioning strategy.

Core brand strategies in this space include directness, community-building, and science-backed claims (Doyle, 2021). Directness means communicating complex health information in clear, confident, accessible language. Community-building means creating ecosystems of shared identity and practice around products, like day-in-my-life vlogs featuring targeted products or easily-shareable sleep scores. Science-backed claims mean grounding product narratives in real research, such as citing studies, adding doctors to a company's c-suite, or even conducting a clinical trial.

Social proof amplifies all of this. Influencer partnerships, celebrity endorsements, and aesthetic consistency across platforms reinforce both the credibility and the desirability of wellness products, often with more persuasive force than clinical evidence alone (Kaur & Kumar, 2022).

Are Wellness Brands Actually Filling the Gap? Benefits and Harms

There is also a question of who the wellness economy actually serves. The products and services at the premium end of the market are expensive. A Function Health membership, which provides over 160 biomarker lab tests along with AI-driven health insights, costs $365 per year (Function Health, 2025). The Oura Ring 4, a biometric wearable centered on sleep and recovery

tracking, retails for $299 to $499 depending on the finish, plus a $5.99 monthly subscription fee (Oura, 2025). The populations most underserved by the American healthcare system, including low-income, rural, uninsured, and disproportionately communities of color, are the least likely to be reached by, or able to afford, wellness brands (Grénman et al., 2019). If the wellness industry is filling a gap, it is doing so unevenly.

The wellness industry's harms are real and worth examining directly. The regulatory landscape for dietary supplements in the United States is notably weak. Under the Dietary Supplement Health and Education Act (DSHEA) of 1994, supplements are categorized as food rather than drugs, meaning manufacturers are not required to prove safety or efficacy before bringing products to market (Roberts & Goldenberg, 2022). The FDA engages only in post-market regulation, and the FTC, which oversees advertising claims, has acknowledged it lacks the resources for systemic enforcement (Roberts & Goldenberg, 2022). This creates a marketplace in which consumers have limited tools to distinguish science-backed products from sophisticated marketing.

The risks of this regulatory gap were brought to life recently. A 2025 Consumer Reports investigation testing 23 popular protein powders and ready-to-drink shakes found that more than two-thirds contained lead levels exceeding what their food safety experts consider safe for daily consumption, with plant-based products containing on average nine times the lead levels found in dairy-based alternatives (Consumer Reports, 2025). Because there are no federal limits for heavy metals in dietary supplements, these products remained legally on shelves.

Social media amplifies this potential problem at scale. A Nature Metabolism analysis found that social media algorithms structurally favor virality over credibility, enabling nutritional misinformation to spread faster than corrections (“Nutritional Advice on Social Media,” 2025).

A BMJ analysis found that over 70% of young American adults follow health influencers, and more than 40% have purchased products based on their recommendations, without clinical guidance or evidence review (Heiss et al., 2025). Research on wellness marketing content on social media broadly finds it frequently contains misinformation, and that the largely unregulated environment enables brands and influencers to continue monetizing misleading content (Denniss et al., 2025).

Discussion: Implications, Tensions, and Limitations

The wellness industry functions as a mirror of the healthcare gap rather than a complete solution to it. It reveals what consumers actually want from a health system, including personalization, continuity, prevention, and accessible information, and exposes what the current system structurally cannot provide.

Wellness branding has become the primary vehicle for translating longevity science to the public at scale. Wellness companies have succeeded in making preventative health principles accessible, desirable, and actionable to a mass consumer audience in ways that public health institutions have not. This is a structural shift with consequences that extend beyond marketing. When a wellness brand's social media presence reaches more people with sleep science than a physician does in a year of appointments, the architecture of health authority has fundamentally changed. Conrad (2007) anticipated the direction of this shift decades ago, but the speed and scale enabled by digital platforms, AI-driven personalization, and macro cultural conditions have accelerated it well beyond what was expected.

This shift has genuine benefits. Longevity science concepts that were once confined to luxury medical practices, including muscle maintenance protocols, nutrition principles, and sleep

science, are now part of mainstream consumer culture. That democratization of health information represents a meaningful shift in public health literacy, even when it arrives through commercial channels.

The tensions, however, are equally significant. These commercial channels also distribute misinformation, operate without meaningful regulatory oversight in place yet, and prices its most sophisticated offerings out of reach for the populations who need preventative health guidance most. The wellness industry's implicit promise, that consumer products can substitute for a functional healthcare system, is a partial lie. A fiber supplement does not fix a broken food system. A biomarker dashboard does not replace a physician with the time and training to act on what it reveals. And when influencers frame health as a status signal expressed through expensive products, they narrow the audience for that message.

Future Direction

This analysis focuses on cultural and brand dynamics rather than clinical outcomes, which points toward clear directions for future research. The most pressing open question is whether engagement with wellness brands produces measurable improvements in long-term health behaviors and outcomes, or whether it primarily drives consumption among consumers who already maintain healthy lifestyles, making it difficult to isolate the effect of the products themselves from the characteristics of the consumers choosing them. Longitudinal studies tracking wellness brand users over time and comparing their preventative health behaviors and outcomes to non-users would advance understanding in this area. Future research should also examine the equity dimensions of the wellness economy. This thesis documents that premium wellness products are financially inaccessible to underserved populations, but does not evaluate

whether lower-cost wellness tools, including free podcasts, social media content, and community fitness platforms, are reaching those populations and producing benefit. That question would help quantify the net benefit of the wellness industry in the broader health landscape.

Limitations

This analysis has several limitations worth acknowledging. First, it draws primarily on secondary sources, including published research, brand materials, and investigative journalism, rather than original data collection. A more comprehensive study might include consumer surveys, interviews with wellness brand founders and clinicians, or quantitative analysis of health outcome data. Second, the thesis focuses on the American context specifically, and the dynamics described, particularly the relationship between institutional trust, social media, and consumer wellness, may differ meaningfully in other healthcare systems. Third, the wellness industry is evolving faster than the academic literature covering it. Some of the most significant developments in AI-driven personalization and regulatory response are too recent to have been studied rigorously, which means this analysis captures a moment in a rapidly changing field.

Conclusion

The wellness industry identified a problem that already existed, named it clearly, and built a business around it.

The American healthcare system is structurally oriented toward treating conditions after they emerge, and longevity science operates on an entirely different logic: intervene early, continuously, and through lifestyle rather than prescription. Those two systems were never going to overlap on their own. The gap between them is a result of decades of fee-for-service

reimbursement models, gaps in medical school education, and a culture that has historically treated lifestyle guidance as secondary to pharmaceutical intervention. Consumer frustration with this system started to grow, and wellness brands recognized it, echoed the narrative, and put a price tag on it.

The fact that the wellness industry has become the primary mechanism through which longevity science reaches the public is both a genuine achievement and a concern. The democratization of life saving (and enhancing) health concepts to mainstream consumer culture is amazing, but the infrastructure distributing them runs on commercial incentives rather than clinical standards.

The broader implication is that the rise of the consumer wellness industry should be read as a diagnostic. The fact that people are paying out of pocket for other solutions to their health needs tells us that the healthcare system needs to be updated.

From Analysis to Application

This thesis is 25 pages long and will reach a narrow academic audience, which makes it somewhat ironic that part of its argument is that not enough people have access to longevity science principles. This section moves from analysis to application: drawing on the scholarly literature on public health communication design and wellness brand strategy, it proposes a framework for communicating longevity science to a general audience and outlines the single product developed alongside this thesis to put that framework into practice.

Public Health Communication Strategies

Public health communication materials produced by government agencies and clinical organizations have often been text-dense, visually outdated, and distributed through channels that fail to reach the populations most in need of them (Baur & Prue, 2014). The CDC's Clear Communication Index addresses this directly, identifying plain language, visual reinforcement of written claims, a single prioritized message per communication unit, and a concrete call to action as the consistent predictors of whether health information produces comprehension and behavior change (CDC, 2019).

A powerful example of refreshing public health communication strategies at scale is realfood.gov, the federal government's redesigned dietary guidelines platform that launched in early 2026 under the direction of Joe Gebbia, co-founder of Airbnb and the United States' first Chief Design Officer, leading the newly established National Design Studio (National Design Studio, 2026; Weiss, 2026). The main description on the website states "America is the greatest country on Earth. And the sickest. Highly processed food has hollowed out our health, driving obesity, diabetes, heart disease, and early death. The truth is simple: real food restores health." Gebbia replaced decades of abstract nutritional diagrams with a visually immersive, plain-language platform using eye-catching food imagery, visually appealing brand design, and direct messaging. The redesign demonstrates that the same scientific content, when rebuilt in a design conscious way accompanied by direct messaging, can be more effective.

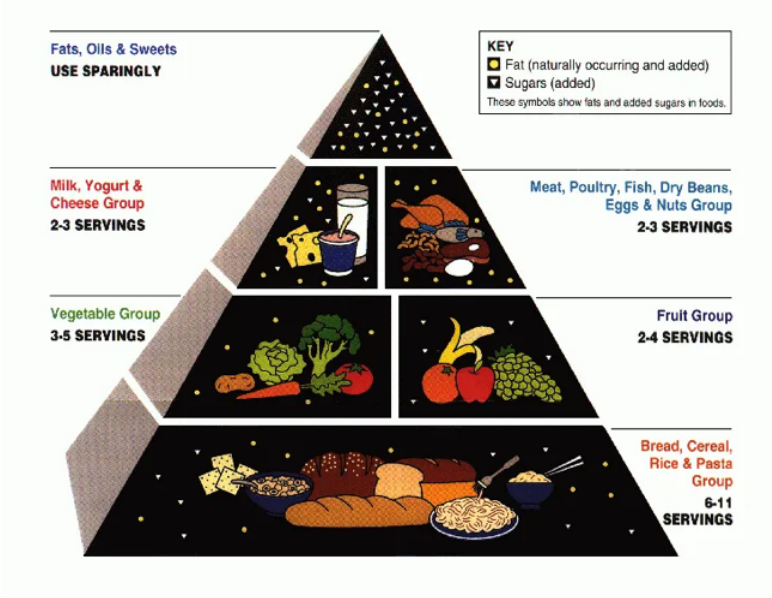

Figure 1

Previous U.S. Government Dietary Guidelines Digital Platform. From "Joe Gebbia Is Making the Government Beautiful Again," by S. Weiss, 2026, *The Free Press* (https://www.thefp.com/p/joe-gebbia-is-making-the-government).

Figure 2

Redesigned U.S. Dietary Guidelines Platform (realfood.gov). From *Real Food: America's New Dietary Guidelines*, by National Design Studio, 2026 (https://realfood.gov). In the public domain.

Wellness Brand Building Strategies

The wellness industry offers a parallel set of lessons. The brand strategies documented earlier in this thesis apply here as well: wellness brands succeed not just because their products are effective, but because they understand that consumers are purchasing into the brand identity and world (Tran et al., 2024). Health practices function as markers of taste, discipline, and future-oriented mindsets in the same way financial literacy or investment behavior signal social capital, and the most effective wellness brands are built around that insight (Grénman et al., 2019). The core strategies based on that are directness, community-building, and science-backed claims: communicating complex health information in clear and confident language, creating ecosystems of shared identity and practice around products, and grounding brand narratives in real research (Doyle, 2021). Social proof amplifies all of it, with influencer partnerships and aesthetic consistency across platforms often carrying more persuasive force than clinical evidence alone (Kaur & Kumar, 2022).

For example, AG1's growth into a category-defining wellness brand in the supplement space illustrates how identity-based positioning, science-adjacent language, and influencer-driven distribution function together as a brand building machine (Tran et al., 2024; Doyle, 2021). The brand scaled not through traditional paid advertising but through trusted figures:

podcasters and health-oriented influencers who positioned AG1 as part of their personal protocol, generating the kind of credibility at scale that clinical communication rarely achieves (Wellman, 2024; Kaur & Kumar, 2022). The brand's visual identity, minimal and aspirational, and its consistent framing of the product as a practice adopted by disciplined, forward-thinking people, reinforced a single coherent message across every channel (Grénman et al., 2019).

Accompanying Product

These two bodies of evidence, public health communication design and wellness brand strategy, inform the framework applied to the product developed alongside this thesis: Longevity Science, Distilled.

Longevity Science, Distilled is a publicly accessible interactive website that translates the four longevity science pillars examined throughout this thesis, sleep, nutrition, exercise, and emotional health, into custom-designed infographics. Each pillar is presented as a navigable carousel of graphics that communicate the science and actionable healthy habits in a visually engaging format. The site also surfaces curated resources and consumer products relevant to each pillar, organized to support further exploration rather than to sell. It is live and freely accessible online at the address product1longevitypillars.vercel.app

The product’s visual identity applies the brand-building principles documented in the wellness brand strategy section: clean, a premium editorial sensibility, and a consistent aesthetic language. Its content applies the public health communication principles documented above: accurate, sourced information rendered in a format that prioritizes accessibility and visual engagement over density.

Longevity Science, Distilled represents an attempt to do what this thesis has argued the wellness industry does at its best: translate real science into a format that people actually want to engage with, and make it accessible to a broader audience than this thesis alone currently reaches.

References

Adams, K. M., Butsch, W. S., & Kohlmeier, M. (2015). The state of nutrition education at US medical schools. *Journal of Biomedical Education*, *2015*, 357627. https://doi.org/10.1155/2015/357627

Attia, P., & Gifford, B. (2023). Outlive: The science & art of longevity. Harmony.

Bolnick, H. J., Bui, A. L., Bulchis, A., et al. (2020). The cost of preventable disease in the USA. *The Lancet Public Health, 5*(10), e1238. https://doi.org/10.1016/S2468-2667(20)30183-6

Baur, C., & Prue, C. (2014). The CDC Clear Communication Index is a new evidence-based tool to prepare and review health information. *Health Promotion Practice, 15*(5), 629-637. https://doi.org/10.1177/1524839914538969

Burns, E. (2023, September 1). What to watch: Wellness: The continued rise of wearable wellness devices. WWD, 12.

Centers for Disease Control and Prevention. (2019). *CDC Clear Communication Index*. U.S. Department of Health and Human Services. https://www.cdc.gov/ccindex/

Commonwealth Fund. (2024). *Mirror, mirror 2024: A portrait of the failing U.S. health system*. https://www.commonwealthfund.org/publications/fund-reports/2024/sep/mirror-mirror-2024

Consumer Reports. (2025, October 14). *Protein powders and shakes contain high levels of lead.* https://www.consumerreports.org/lead/protein-powders-and-shakes-contain-high-levels-of-lead-a4206364640/

Conrad, P. (2007). *The medicalization of society: On the transformation of human conditions into treatable disorders*. Johns Hopkins University Press.

Denniss, E., Whatnall, M., & Patterson, A. (2025). Social media and the spread of misinformation: Infectious and a threat to public health. *Health Promotion International, 40*(2), daaf023. https://doi.org/10.1093/heapro/daaf023

Doyle, L. (2021). 3 Successful Wellness Brand Strategies: From directness to community-building, wellness brands are innovating beyond products and claims. Global Cosmetic Industry, 189(10), 30–33.

Eysenbach, G. (2008). Credibility of health information and digital media: New perspectives and implications for youth. *Digital Media, Youth, and Credibility*, 123–154.

Floridi, L., Cowls, J., Beltrametti, M., et al. (2018). AI4People—An ethical framework for a good AI society. *Minds and Machines, 28*(4), 689–707. https://doi.org/10.1007/s11023-018-9482-5

Function Health. (2025). *How much does Function cost?* https://www.functionhealth.com/faqs/how-much-does-function-cost

Gaidhani, Y., Venkata Naga Ramesh, J., Singh, S., Dagar, R., Mastan Rao, T. S., Godla, S. R., & El-Ebiary, Y. A. B. (2025). AI-driven predictive analytics for CRM to enhance retention, personalization, and decision-making. International Journal of Advanced Computer Science and Applications, 16(4), 552–563. https://doi.org/10.14569/IJACSA.2025.0160456

Ghaffary, S. (2023, October 18). *Peter Attia and Mark Hyman are betting big on preventative health care*. Vox.

Grénman, M., Hakala, U., & Mueller, B. (2019). Wellness branding: Insights into how American and Finnish consumers use wellness as a means of self-branding. Journal of Product & Brand Management, 28(4), 462–474. https://doi.org/10.1108/JPBM-04-2018-1860

Heiss, R., Woloshin, S., Dave, S., Engel, E., Gell, S., & Willis, E. (2025). Responding to public health challenges of medical advice from social media influencers. *BMJ, 391*, e086061. https://doi.org/10.1136/bmj-2025-086061

Huang, S., & Grady, P. (2022, September 19). Generative AI: A Creative New World. Sequoia Capital. https://www.sequoiacap.com/article/generative-ai-a-creative-new-world/

Kaiser Family Foundation. (2025, January). *KFF tracking poll on health information and trust: January 2025*. https://www.kff.org/health-information-trust/kff-tracking-poll-on-health-information-and-trust-january-2025/

Kanchan, S., Mehta, P., & Singh, A. (2023). Social media role and its impact on public health: A narrative review. *Cureus*, *15*(1), e33737. https://doi.org/10.7759/cureus.33737

Kaur, K., & Kumar, P. (2022). Social media: a blessing or a curse? Voice of owners in the beauty and wellness industry. TQM Journal, 34(5), 1039-1056. https://doi.org/10.1108/TQM-03-2021-0074.

Levine, S., Malone, E., Lekiachvili, A., & Briss, P. (2019). Health care industry insights: Why the use of preventive services is still low. *Preventing Chronic Disease, 16*, 180625. https://doi.org/10.5888/pcd16.180625

Lupton, D. (2016). *The quantified self*. Polity Press.

Mavragani, A. (2023). The effect of the COVID-19 pandemic on digital health–seeking behavior: Big data interrupted time-series analysis of Google Trends. *Journal of Medical Internet Research*, *25*, e42401. https://doi.org/10.2196/42401

Mokdad, A. H., Marks, J. S., Stroup, D. F., & Gerberding, J. L. (2004). Actual causes of death in the United States, 2000. *JAMA, 291*(10), 1238–1245. https://doi.org/10.1001/jama.291.10.1238

Monteiro, C. A., Cannon, G., Lawrence, M., Levy, R. B., & Louzada, M. L. C. (2025). Ultra-processed foods and human health: The main thesis and the evidence. *The Lancet*, 405. https://doi.org/10.1016/S0140-6736(25)01565-X

National Design Studio. (2026). *Real food: America's new dietary guidelines*. U.S. Government. https://realfood.gov

Nutritional advice on social media: Clicks over credibility. (2025). *Nature Metabolism, 7*(9), 1715. https://doi.org/10.1038/s42255-025-01385-9

Office of Disease Prevention and Health Promotion. (2024, January). *Prevention is still the best medicine*. U.S. Department of Health and Human Services. https://odphp.health.gov/news/202401/prevention-still-best-medicine

Oura. (2025). *The value of Oura membership*. https://ouraring.com/blog/the-value-of-oura-membership/

Perlis, R. H., Ognyanova, K., Santillana, M., Baum, M. A., Druckman, J., Lazer, D., & Volpe, J. D. (2024). Trust in physicians and hospitals during the COVID-19 pandemic in a 50-state survey of US adults. *JAMA Network Open, 7*(8), e2424984. https://doi.org/10.1001/jamanetworkopen.2024.24984

Peterson-KFF Health System Tracker. (2020). *What do we know about spending related to public health in the U.S. and comparable countries?* https://www.healthsystemtracker.org/chart-collection/what-do-we-know-about-spending-related-to-public-health-in-the-u-s-and-comparable-countries/

Quagliani, D., & Felt-Gunderson, P. (2017). Closing America's fiber intake gap: Communication strategies from a food and fiber summit. American Journal of Lifestyle Medicine, 11(1), 80–85. https://doi.org/10.1177/1559827615588079

Roberts, A., & Goldenberg, D. (2022). Does regulating dietary supplements as food in a world of social media influencers promote public safety? *AMA Journal of Ethics, 24*(5), E411–417. https://doi.org/10.1001/amajethics.2022.411

Rose, D. H., & Meyer, A. (2002). *Teaching every student in the digital age: Universal design for learning*. Association for Supervision and Curriculum Development.

Tran, K. T., Truong, A. T. T., Truong, V.-A. T., & Luu, T. T. (2024). Leveraging brand coolness for building strong consumer-brand relationships: different implications for products and services. The Journal of Product & Brand Management, 33(2), 258–272. https://doi.org/10.1108/JPBM-05-2023-4476

Udow-Phillips, M., Smyser, J., & Bagdasarian, N. (2025). Rebuilding trust in public health and medicine in a time of declining trust in science. *Journal of Hospital Medicine, 20*(7), 787–790. https://doi.org/10.1002/jhm.70086

Weiss, S. (2026, March 4). Joe Gebbia is making the government beautiful again. *The Free Press*. https://www.thefp.com/p/joe-gebbia-is-making-the-government

Wellman, M. L. (2024). "A friend who knows what they are talking about": Extending source credibility theory to analyze the wellness influencer industry on Instagram. New Media & Society, 26(12), 7020–7036. https://doi.org/10.1177/14614448231162064

Yu, R. (2024, December 10). *Preventive care spending* [Science note]. MOST Policy Initiative. https://mostpolicyinitiative.org/science-note/preventive-care-spending/

Author Biography

Maya Glenn grew up in New Jersey and is completing her undergraduate education at The University of Texas at Austin, where she will earn a degree in Statistics and Data Science with a minor in Computer Science through the College of Natural Sciences. During her time at UT, she has been an active leader in Texas Venture Group, the university's premier organization for students interested in venture capital and the startup ecosystem, where she manages partnerships with firms and companies through events and collaborative projects. She will also be completing the Evidence and Inquiry certificate and the Polymathic Scholars honors program, through which this thesis was written.

Maya will graduate in May 2026 and join Palantir Technologies in New York City. A future student beginning a thesis in this program might find it useful to know that this work grew out of a genuine curiosity about an industry Maya observed firsthand through passion for health and wellness practices, and that the most compelling thesis topics are often the ones that the writer lives and breathes outside of school.