Perspectives on Food for Thought and Thought for Food-A Journey through Food and Beyond

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Abstract

This paper decodes the perspectives on food for thought and thought for food and highlights the significance of making mindful choices of our foods as a basis for sustainable social change and future food security. It is a unique blend of interdisciplinary perspectives and a commitment to social good. Impactful programs on higher education awareness, healthcare services, environmental values, water conservation, and sustainable food consumption practices all lead to a notable reduction in environmental damage. Learning from womb to tomb and critical thinking are skills that provide food for thought that impact the future of global food production and consumption.

Keywords: Food for Thought, Thought for Food, Interdisciplinary Perspectives, Meaningful

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INTRODUCTORY PERSPECTIVES

Basic human needs to survive and live a decent life include nutritious food, potable water, clean air, minimalistic shelter, basic education, and affordable healthcare facilities. Food for thought is worth considering or thinking about important topics deeply (Marin, 1997; Boon, et al., 1998; Spencer, et al., 2017; Stano, et al., 2022). Useful information is like food that needs to be digested and the helpful points are like nutrients that can be absorbed. A well-written text on topical topics gives one food for thought. Experiential learning in life and career development offers much food for thought. Food is an essential part of the digestion process that keeps the human body healthy. Thoughts are food to maintain the brain's health through brain energy metabolism. Teaching is the one profession that creates all other professions. Making mistakes is better than faking perfection. A journey of a thousand miles must begin with a single step. Life is a process of continuous learning. Eat your food like medicine or else you will eat your medicines like a food. We are what we eat and how fit we are depends on what we eat. Each day presents a learning opportunity. Once you stop learning, you start dying. So long as you have food in your mouth, you have solved all questions for now. There is no more sincere love than the love of food. The quickest way to reach people's hearts is through their stomachs. These are some famous quotes from great people in the past that provide food for thought. It involves food for the mind or mental nourishment/stimulation. The subject experts' lectures certainly offer much food for thought. Unexpected research results may give food for thought. It makes people think carefully about a topic. It is worth seriously thinking about or considering. Comparing apples to oranges will not provide much food for thought.

Modern science certainly influences our understanding of our foods, their source, and their nutritional value. Fruits, leaves, and nuts high in fiber are associated with protective health benefits. Brain-boosting foods that help fight disease, protect brain cells, and improve mood include avocado, broccoli, blueberries, nuts, pumpkin seeds, and tomatoes. Food production, storage, and consumption in building a more sustainable future involve food processing, artificial additives, and quality testing. The food and beverage industry contributes to the economy in several ways including GDP, and retail market, and employs millions of people. It is essential to promote sustainable food systems that are in line with the sustainable development goals of the United Nations (UN) (https://sdgs.un.org/goals). Food security including availability, access, utilization, and stability determines their access to safe and healthy foods required to meet the nutrient needs of billions of people. There are several food safety challenges including strengthening national food control systems, assessing chemical/microbial risks in food, promoting safe handling, and tackling the burden of foodborne diseases. Many previous studies have linked highly processed foods to poor health, increasing the burden of heart attack, fatty liver risk, and diabetes (Mann, 2002; Mozaffarian, 2016; Juul et.al., 2021; Sinha & Haque 2022;). Consumption of home-cooked foods rather than processed foods is essential to prevent the worldwide obesity epidemic. The factors that contribute to food insecurity include climate change, conflicts, domestic violence, agrarian distress, economic stressors/high food prices, and displacement (Maxwell, 1996; Cole, et al. 2018; Mbow, et al., 2020). The need for nutritious food will increase as the world population grows and it is essential to increase the production of foods rich in vitamins and minerals and enhance bio-fortification efforts to meet this need. Food adulteration involves the intentional/unintentional contamination of food with harmful substances for economic gain. Prolonged consumption of adulterated food can lead to serious health consequences, including organ disorders, organ failure, and even death. Some examples of food adulteration include mixing water with milk, mixing sand/pebbles with pulses, misbranding, and substituting less expensive oils for expensive edible oils (Manning, & Jan, 2014; Bansal, et al., 2017; Choudhary, et al., 2020). Food labels can be misleading and we must read between food labels. No trans-fat does not mean no-fat and low-fat is not low-calorie. A big visually appealing picture of cashews/almonds on biscuits does not mean abundance in it. Food culture is shaped by facts, beliefs, and the opinions and staple foods are often locally available foods. Food is intimately linked to occasions and memories. Some foods like nuts and seeds can help with creativity. Food can be a great conversation starter. Food and cooking new or interesting dishes and food and sustainability involving plant-based foods are other perspectives on food. Social hierarchies can affect food meanings and alter food choices and preferences in community gatherings, social events, food festivals, farmers' markets, fitness events, arts/crafts exhibitions, wellness marathons, and local celebrations.

The scope of the manuscript encompasses a wide range of interdisciplinary topics related to food including production, consumption, cultural significance, and its meaningful impact on individuals and society. It explores the interconnectedness of food and health/sustainability aspects of life. It examines traditional food practices, the link between food and overall well-being, psychological aspects of food, sustainable food systems, food security, ecological responsibility, and food as a subject of inquiry. It is categorized into the following sections; eat green and clean, right food for right thought, thought for food, explore the unexplored, interdisciplinary perspectives, nutrition in a nutshell, holistic human development, and concluding comments.

The qualitative research approach adopted explores the meanings, perceptions, factual distortions, projection of reality, and immersive experiences related to food through texts, images, behaviors, observations, case studies, and content analysis. Focus on meaning and interpretation using non-numerical data involving food experiences in personal and social contexts provides multiple perspectives for human thought processes related to food practices. Understanding the impact of food marketing on consumer behavior, food insecurity, and food-related interventions provides insight into complex food-related issues and generates new research questions and hypotheses for future quantitative studies. Investigating the chemical composition, nutritional value, and safety and adopting responsible food consumption patterns would help address food production, consumption, and sustainable food choices. The article explores the concept of 'food for thought' and highlights the significance of making mindful food choices and rethinking the time for change in the public mindset.

EAT CLEAN AND GREEN

Startups, innovation, and entrepreneurship by harnessing the power of data-driven insights, addressing challenges, and fostering a sustainable food system for future generations are essential. It is a food system that provides healthy food to people while creating sustainable economic, social, and environmental systems. The different aspects of this approach include supporting sustainable agricultural practices, ensuring food security (availability/access/use/stability), nutrition for everyone, and reducing food waste. The courses on sustainable food systems in higher education would help solve problems related to population growth, changing food consumption patterns, urbanization, and climate change. Public health laws and policies provide unique legal perspectives on preventing noncommunicable diseases. Green chemistry principles incorporate prevention, atom economy, less hazardous chemical synthesis, designing safer chemicals, safer solvents and auxiliaries, design for energy efficiency, use of renewable feedstocks, reduce derivatives, catalysis, design for degradation, real-time analysis for pollution prevention, and inherently safer chemistry for accident prevention for making a greener Products/processes/systems (Anastas & Nicolas, 2010). Similarly, 12 principles of green engineering and those of green analytical chemistry must be followed in all green projects as a part of ecological responsibility (Davis, 2005). The second of the sustainable development goals (SDGs) talks about zero hunger. The targets for this goal include ending hunger/malnutrition, achieving food security, improving nutrition, and promoting sustainable agriculture. Other global issues such as climate change and healthcare improvement are closely associated with a bite of inspiration food, and we all can contribute our bit as individuals, businesses, and other organizations to SDGs and build a more sustainable world by 2030. Sustainable farming practices and proper food systems have a strong influence on achieving SDGs. Six themes in the sustainable food system framework are classified as: (i) resilience and resource efficiency; (ii) sustainable and healthy diets; (iii) circular economy; (iv) profitability and efficiency; (v) sustainable supply chains and fair trade; and (vi) transparency, traceability and trust. A healthy, sustainable food system focuses on local, seasonal foods, local economic development, and supporting local producers, distributors, and retailers. It integrates the elements of production, processing, distribution, consumption, and waste management to enhance economic, social, nutritional, and environmental health for all. Thus, food is both a vehicle for economic strength and a catalyst for societal progress. The right to food must protect people's right to live without hunger, food insecurity, or malnutrition. We must promote healthy local food systems, socioeconomic justice, and ecologically appropriate production, distribution, and consumption.

Clean eating involves eliminating ultra-processed foods and embracing whole foods like vegetables and fruits without artificial preservatives, colors, flavors, or added sugars. Green foods include leafy greens, whole grains, berries, and beans that can be part of a clean eating diet. Interestingly, we can control what we eat and how we eat. Reducing trade restrictions, increasing the grain supply on the world market, releasing buffer stocks, and providing economic assistance to the most impacted populations and regions can help reduce the risks of a global food crisis. The corporate world can set a powerful precedent by supporting global biodiversity conservation, consumer awareness of food choices, sustainable supply chains, food waste management, and marketing healthy food products as a part of their corporate social responsibility (CSR) to create a lasting change. Non-profit/volunteer-based organizations can assist in food supply/distribution in case of disasters/accidents.

RIGHT FOOD FOR RIGHT THOUGHT

The food life cycle/value chain from farm to table involves mainly six phases including, production (farming and manufacturing), transport and distribution, processing and packaging, selling and purchasing (wholesale and retail), preparation and consumption (meal and functional unit), and food waste and recovery (processing and inputs to farming). There are several moral implications and thinking dynamics of food choices from production to consumption and from cradle to coffin journey involving one lakh pounds of food. Our physical and brain health depends on the several food choices we make every day. Research shows that proper diet can greatly influence our physical, emotional, and cognitive health (Rogers, 2001; Strasser & Fuchs, 2015; Spencer et.al., 2017; Zavitsanou & Drigas, 2021). It is important to inculcate healthy eating habits in schoolchildren avoiding unhealthy food items/junk foods/processed foods. The aspects of food that involve ethical questions include the suffering of animals, negative environmental impact, expression of cultural identity, consequences of food policy/shortages, and exploitative labor practices. The most effective way to channel our energy is to control obsessive thoughts, perform creative/useful activities, and contribute positively to society. Setting higher goals, concentrating on meaningful pursuits, and engaging in socially useful productive works help shift our focus from immediate sensory pleasures to meaningful achievements. We must give the right thoughts and images to our subconscious mind that controls all our transformative experiences. We must change our thoughts to channel destiny as every thought is a cause and condition is an effect. People could reduce cognitive decline through mental stimulation and eating dark chocolates, avocados, berries, leafy greens, nuts, and seeds can enhance brain health and mental function. The right food for the right thought as a basis of sustainable social change will reduce the negative forces, creating opportunities that reflect the entire society. It is a way of life to feel grateful for the healthy food on our plates cooked with good intentions as an organic link between the provider and consumer. Thought for good food production and love of food fosters fighting hunger with innovation and the subtle art of flavor-making offers a different perspective. Good foods give us good thoughts for a balanced life. A way of thinking about food that considers its ethical, social, political, and artistic aspects involves making choices that support a healthy life for people and the planet. Some ways to think about food include food as an aesthetic object/diet/fuel/commodity/technology. Eating in moderation, avoiding extremes, eating consciously locally available foods, and eating a variety while listening to our bodies are a part of food philosophy (Delind, 2006; Kaplan, 2012; Sweeney, 2017; Mol, 2021). The most common eating disorders include anorexia nervosa, binge-eating disorder, bulimia nervosa, and avoidant restrictive food intake disorder. The contributing factors for eating disorders include anxiety, poor body image, low selfesteem, peer pressure, media pressure, and exposure to people with disordered eating.

A food craving (selective hunger) as distinct from normal hunger is an intense desire for a specific unhealthy food and can occur due to negative mood. It is associated with the anticipation of mood-enhancing effects of food intake and external eating triggered by food images. Mindful eating practice can help improve our relationship with food, reduce stress, enhance enjoyment, improve digestion, and help us make healthier food choices. A broader perspective is to look at food and gastronomic experiences that can transform our thoughts and provide life directions/micro solutions.

THOUGHT FOR FOOD

Food production, transportation, distribution, preparation, consumption, and disposal, all contribute to global climate change by creating human-caused greenhouse gas emissions (26 %). Food security through affordability, availability, quality, and safety is measured annually to reflect in the global food security index (GFSI). According to the World Bank report, 45 % of the world population is food insecure (Gonzalez, 2014). We must reduce greenhouse gas emissions, stop converting remaining forests into agricultural land, and work with nature to produce healthy and sustainable food to feed the growing world population. World Food Day is an international day celebrated every year on October 16 to raise awareness about hunger and malnutrition and to promote sustainable agricultural practices. Several events like contests, outreach activities, or donation programs involving time/money to food charities that provide food to those in need are being conducted. The theme for 2024 is "Right to food for a better life and future". Global food consumption is expected to increase by more than 50 % by 2050. Global population growth, income growth, and trade restrictions make the future global food scenario complex leading to global undernourishment. We must save water and fertilizer, reduce food loss and spoilage, and optimize field production for future survival (Hammond, 2015).

Food product development from start to finish includes the following stages; idea generation and screening, prototype development and testing, product formulation, process development (small and large scale) nutritional evaluation, process testing, feasibility study, shelf-life testing, sensory attributes determination, food safety concerns evaluation, market research, cost-benefit analysis, product specification, commercialization and launching the finished product. Food product development can focus on plant-based nutrition, agricultural increase, improving land management/agricultural research/access production food/nutrition to feed the growing world's population. Food chemistry involves intricate interactions and overall processes of food components and investigates their reactions during processing and preservation. Laboratories examine foods and food by-products to find active biological substances. Food chemistry innovations lead to food technologies such as fermentation of dairy products and sugar/fat substitutes. Biomolecules in food change when exposed to a wide range of environmental conditions (browning of apples due to oxidation). Chemical analyses reveal the changes, mechanisms, and texture of food due to cooking or deep frying. As some nutrients are lost during cooking, it is better to include raw vegetables as salads. Chemical perspectives on food contaminants and agrochemicals and their toxicology contribute to more nutritious and sustainable options. The strictest food quality control standards including the maximum residue limits (MRLs) for chemicals in food must be set and implemented to ensure quality and safety. Microbiological and chemical testing of raw materials and finished products, regular cleaning and sanitizing procedures, regular monitoring of the production environment are necessary for quality compliance. Ingredient specifications include supply sources, grading criteria, and acceptable contaminant levels.

Label specifications must include vital information like ingredients, nutritional facts, and allergen warnings. All food products must meet safety standards and consumer expectations as quality control is the backbone of the food industry.

'Food waste to wealth' is a strategy to convert food waste into valuable products. Multiple perspectives on food waste management include the following; i) creating consumer awareness about reducing food waste by adopting a minimalistic approach, preserving food longer, and recycling food scraps ii) following the food waste hierarchy of prevention, reuse, recycling, and recovery iii) reducing food waste by minimizing food preparation as per requirements, reusing leftovers, and recycling food waste iv) converting food waste into green energy resources such as biogas, biodiesel, and biohydrogen that reduce the negative environmental impact and help cover growing energy demand v) transforming food waste into nutrient-rich fertilizer (anaerobic digestion/biomass conversion/upcycling) to improve soil health and reduce the need for synthetic fertilizers, and vi) understanding where waste occurs in the supply chain from sourcing to retail can help identify proper preventive measures and changing behavior through observation, beliefs/self-efficacy, social norms/cultural influence that help in shaping the behavior. The conversion of food waste into fuels/manure can create employment opportunities in the renewable energy sector. Further, agricultural surpluses/wastes can be converted to wealth (value-added products) in a circular economic model that is financially viable and sustainable to a greater extent.

EXPLORE THE UNEXPLORED

Deep brain stimulation is a type of therapy via surgical procedure using electrodes and a neurotransmitter to send electrical impulses to specific brain areas to treat neurological conditions (Formolo, 2019; Lozano, 2019). It is used to treat disorders like Parkinson's dystonia, dementia, depression, obsessive-compulsive disorder, cognitive impairment, epilepsy, and addiction. It is essential to develop an awareness of health and nutrition about the factors that influence food choices as reflected in eating patterns, learn to analyze the nutritional value of different foods we eat, and understand the nutritional needs to plan healthy eating to have better long-term health outcomes. Food can have many cognitive aspects, including memory, attention, language, mental imagery, and executive functions (de Jager, et al., 2014; Martin, et al., 2014; Zhang, 2019). There are several affective aspects of food including emotional triggers, a food offering, emotional hunger, mood, sensation, and expectations (Letarte, et al., 1997; Hamburg, et al., 2014; Padulo, et al., 2018). The right food shapes our thoughts, intentions, and emotions and keeps us alert and focused. Eating well provides energy and enhances our motivation via brain activity and the meshwork of nerves that extends to the rest of the body. A combination of physical activity and exposure to green spaces could be used as a non-pharmacological intervention for alleviating cognitive impairment symptoms. The use of drugs like cannabis can result in temporary psychosis and chronic psychotic disorders like schizophrenia. Several neurotechnology companies use consumer technology products to address cognitive issues and mental health conditions such as depression. More focus on mental health and social support systems is essential considering the recent rising youth violence reflecting a disturbing societal shift. A weekend hobby such as arts or crafts can reduce stress and encourage mindfulness, enhance focus, and foster a sense of accomplishment. Relaxation techniques or meditation would help reduce stress levels. Practical tips and useful examples, green landscapes, and natural ecosystems -all provide a conducive environment for constructive activities that form another dimension.

The exploration of food chemistry to gain knowledge of the structure and reactivity patterns of complex organic food molecules, extrapolating the reaction mechanisms that provide energy and help our bodies develop, repair, and function, and exploiting results to obtain tailor-made foods. Thought for food expects the most transformative approach to nextgeneration innovation using biologically active chemicals for producing better food systems using minimal processing technologies (Ohlsson, et al., 2002; Allende, et al., 2006; Bansal, et al., 2014). The food exploration perspective includes developing a point of view, cultivating mindful eating habits, and understanding food culture. Everyone has a unique perspective on food shaped, by multiple factors and perceptions. Mindful eating involves engaging all senses, using a slow eating style, and savoring each bite. Further, food culture is influenced by facts, beliefs, opinions, and prejudices. We must travel beyond the known world and explore the uncertainties/irreparable damage we have created by disturbing the delicate relationship between nature and human beings. It is time to recall that the Earth has enough resources to meet the needs of all but not enough to satisfy human greed. We must work towards a more equitable and sustainable world by prioritizing the food needs of all and avoiding excessive greed.

INTERDISCIPLINARY PERSPECTIVES

There are multiple interdisciplinary perspectives on food. Foods are the building blocks of our body, mind, and intellect. Food is a mirror that reflects the decisions that shape who we are. Organic food is not always more nutritious than the conventional food items (Magkos, 2003) Diet culture due to social conditions could lead to unhealthy relationships with food in a multicultural society. To remove the negative impacts of hunger, many governments and non-government organizations are providing healthy meals to school children worldwide that allow them to concentrate on their studies. Some people perceive healthy foods as less tasty and can lead to several deficiency diseases. Natural and locally available foods help improve brain function, boost energy levels, strengthen the immune system, and reduce inflammation. Foods of plant and animal origin (meat, fish, cabbage, carrot) are transformed into finished food products for consumption by humans or animals using a set of techniques. The perspective on processed foods for good health is that they can contribute to obesity and chronic diseases. Ultra-processed foods (UPF) are linked to obesity, high blood pressure, and type 2 diabetes. Thus, the degree of food processing is associated with the development of diseases. These UPFs mostly contain salt, sugar, and fat for longer shelf-life and they also include artificial colors, flavors, and sweeteners but are low in vitamins and fiber. Less-processed foods are healthier than ultra-processed foods and natural foods are certainly healthier than processed foods. Processed foods with various additives like preservatives, colorants, and flavor enhancers pose additional health hazards. Unprocessed/minimally processed foods (MPF) lower the risk of developing the disease. It is better to include whole grains, fresh vegetables, healthy protein sources (beans/low-fat dairy), less sodium (< 500 mg), and meals with low saturated fat in the regular diet plan. The modern nutraceutical industry produces probiotic foods, prebiotic products, synbiotics, functional foods, fortified products, and dietary supplements (El Sohaimy, et al., 2012; Noomhorm, et al., 2014; Aryee, et al., 2014). Fortified foods can improve public health, reduce the burden of micronutrient deficiencies, and prevent malnutrition, leading to growth and development. For instance, foods fortified with vitamin D are cost-effective, easy to consume, and can target specific populations that are at risk. Our nutrition plan must consider foods that act as medicine (highly beneficial), foods that do not harm the blood type (foods allowed), and foods that act like a poison (foods not allowed).

Earth's atmosphere and land which could result in unintended consequences in the entire food chain. Biodiversity loss, water stress, and globalization through the exchange of ingredients and techniques are the global impacts of food. Around one-third of all the food produced is never eaten or wasted due to harvest/storage/consumer losses that impact negatively on the environment contributing to greenhouse gases (Nekola, 2015). Reducing food waste can help preserve natural resources like water and manure.

NUTRITION IN A NUTSHELL

Human nutrition involves the absorption of nutrients for life, health, growth, development, and well-being. A balanced diet must contain all of the following; carbohydrates, fats, proteins, fiber, water, vitamins, and minerals in proper proportions (Folsom, 2000). The functions of food in the human body include energy-yielding, bodybuilding, and protection according to the predominant role they play in sustaining life. Energy-giving foods involve carbohydrates and fats (cereals, sugar, potatoes). Proteins (dairy products, pulses, eggs) are body-building foods, and vitamins, and minerals (vegetables, fruits, milk) are protective foods. It is essential to generate certain happy brain chemicals such as dopamine (rewarding chemical), serotonin (mood stabilizer), endorphin (pain killer), and oxytocin (love hormone) to recharge oneself to experience an intrinsically good pleasure. Adrenaline and cortisol are liberated in the brain in response to stress. Fight or flight response (adrenaline) increases blood pressure and heart rate while fear response (cortisol) cuts off energy to other organs and diverts it to brain muscles. It is always better to incorporate chemistry principles, and philosophy of positive thoughts and follow the ideal of sustainable farming, renewable energy, and water conservation. What might appear today as food shortage in some parts of the world could evolve into a significant regional challenge. Subscribing to the Universal, non-discriminatory human values by almost all countries is a step in the right direction in raising the next generation of human beings. We need to adopt a balanced and entirely sustainable dietary pattern in everyday life and be aware of the negative qualities of processed foods, chemicals in food, and their possible harmful effects. The addition of wholesome foods and the building of immunity through a proper diet matters a lot in keeping us in good health. Complications from lack of food include anemia, bone loss, constipation, dry skin, fatigue, loss of hair, loss of menstrual cycle, muscle weakness, stunting, and shortness of breath. Poor nutrition-induced health effects can impact learning and work in growing children. The recipe for a healthy life includes fruits, veggies, and nuts in our diet, avoiding excess sugar and salt, replacing refined white foods with brown foods, avoiding saturated fats and trans fats, and cutting back on refined starches to create a zero hunger world. Our food and drink undergo biochemical and physiological transformation into body tissues. Good nutrition is always linked to several health benefits including a stronger immune system, lower risk of non-communicable diseases, improved infant, child, and maternal health, and longevity. Eating foods that are nutritionally healthy matters in practicing a mindful diet for vibrant health is the average daily level of nutrient intake sufficient to meet the requirements of all healthy people (Trumbo, et al., 2001; Murphy, et al., 2002). For instance, RDA for salt intake is less than 6 grams and total sugars 90 grams. However, it may not be practical to intake the precise quantities of nutrients recommended, it is better to follow the guidelines for health benefits in a changing health landscape scenario. Nutrition is fundamental in lifestyle medicine, an evidence-based approach to prevent, manage, and even reverse chronic diseases due to the disruption of metabolic processes (Rippe, 2019).

HOLISTIC HUMAN DEVELOPMENT

India is the second largest food exporter in the world and a major producer of agricultural commodities. Holistic food intake focuses on whole, unprocessed foods that are nutrient-dense and minimally altered, such as fresh fruits and vegetables, whole grains, nuts, and seeds. Holistic nutrition involves eating whole, raw, organic foods, reducing sugar and salt intake, avoiding processed foods, and drinking enough water. Indian food system classifies food into three categories, sattvic, rajasic, and tamasic based on Ayurvedic principles of the three states of mind (Rathore, 2020). Sattvic foods (pure and harmonious) include seasonal fruits, vegetables, nuts, seeds, honey, whole grains, legumes, pulses, beans, herbal tea, and dairy products. Rajasic (energetic and passionate) foods include processed foods, spicy products, chili, garlic, peppers, vinegar, sauce, alcohol, citrus fruits, soft drinks, and onions. Tamasic (heavy and dull) foods include stale/reheated/canned foods, fried items, fast food, refined sugars, red meat, and artificial foods full of preservatives. Foods that promote purity of mind, peace, intelligence, and clear decision-making are considered sattvic. Foods that motivate, keep us attached to the ego, and create desires are classified as rajasic foods. Foods that lower our resistance to diseases, cloud the mind, and promote negative emotions are categorized as tamasic foods. It is difficult to think anything but pleasant thoughts while eating homegrown vegetables. We must train our brains to think positively and future food thinking to take action today matters the most. Only the pure in heart can make good food from fresh ingredients and sustainable dining in an ingrained survival mechanism in the future. Eating philosophy considers the relationship between food production and nutrition and that between eating habits and reflection of behavior. Eating real local seasonal foods mindfully and socially with joy is a part of the eating philosophy. It is a concept of food production and nutritional philosophy that matches the food source and health results together. It is better to adopt the 'eat to live' lifestyle rather than the 'live to eat' attitude in life. We must collectively work towards a farm-to-plate approach, active food testing and licensing, and execute food safety policies. Shared ethical values such as love, compassion, justice, forgiveness, and service will solve questions related to secularism, inclusion, and social justice. The recent trend is to consider food as veganism not involving animal flesh/products (Gheihman, 2021). Meat production on a large scale is unsustainable (Smith, 1996). Innovations in research and development (R & D) for lab meat and plantbased meat may contribute to global food systems. Lack of nutrition awareness, poor lifestyle choices, lack of stringent laws, faulty advertising, rampant food aggregators, unhealthy diets, nuclear-working families, sleep deprivation, environmental effects, contamination of food, work/life stress, and food chain with pesticides all have a direct impact on multiple noncommunicable diseases (NCDs). Healthy eating habits, behavioral change, regular physical activity, stress management, quality sleep, positive social connections at the individual level, and stringent quality checks, a national health action plan, early screening programs, and regulatory policies at the national level will go a long way in preventing a rise in metabolic diseases.

CONCLUDING COMMENTS

This paper emphasizes the crucial role of foods in shaping minds and driving sustainable progress. It is essential to cultivate sustainable solutions to food production, processing, engineering, and technology to provide quality and safe foods to feed the future world population. We must consider the carbon footprint and overall water/land use of food. The negative impacts of the food industry on the planet like deforestation and greenhouse gas emissions can be reduced via sustainable practices (Corbera, 2010).

Sustainable food ethics involve animal welfare, fair labor practices, biodiversity preservation, avoiding food waste, supporting local communities, and adopting the farm-to-plate dining concept. Individuals can make healthy food choices while governments and enterprises can support sustainable food systems and practices to improve health and livelihoods and prevent environmental degradation. Encouraging a uniform and holistic food culture promotes a sense of unified identity, good health, and happiness. A multipronged approach involving governments, society, parents, and schools is required to tackle future healthy food issues from the culture, cuisine, and climate point of view. A prompt action using advanced biological knowledge and techniques should be initiated to address issues of affordability and equity in food, nutrition, and health in our efforts toward a more equitable world.

The food industry uses labels to indicate nutrition information and provides more low-fat, low-sodium, and low-sugar options. Food culture is influenced by food facts, personal beliefs, and good opinions. Eating patterns and food relationships can be influenced by structural food issues, personal food choices, and beliefs. Food safety concerns (adulteration and vendor hygiene) can negatively impact personal food choices and diets. Organic foods are more environmentally friendly and fair trade foods are more socially just reflecting the food values. Further, food pictures from a consumer viewpoint can reduce unhealthy food choices. It is essential to follow entirely sustainable diet patterns worldwide to help mitigate the impact of climate change, considering the rise in global overconsumption, particularly of fats and sugars. Each country has to produce enough food domestically for its needs (self-sufficiency) and ensure that households have access to food. A food-centric philosophy perspective includes conscious eating (source/feelings), as a mirror of how we eat (decisions/circumstances), as a diet (lifestyle/tradition), as an economic commodity (market value), supporting local agri-businesses, reducing food waste as a fuel (source of energy), and as technology (production/process). Finally, it is better to avoid fast food, overfeeding, toxic exposure, nutrient deficiency, obesity, laziness, chronic stress, physical stagnation, sleep loss, and inflammation.

A closer scrutiny of different angles in the current body of literature reveals a far more complex web of factors and diverse perspectives on research and innovation. It is important to choose a distinctively supportive role in the formulation of policies using intellectual inputs and their implementation as well as food movement to be sufficiently grasped by the public. International understanding and global engagement require cohesion, resolve, narratives, and broader appeal signalling a high tone pitch for prompt action that change the character of the right food choice trajectory. There is a need to conduct awareness sessions for common public that expose the participants to various technical aspects of food and the psychology surrounding it. An interdisciplinary approach, critical examination of food systems, consumption patterns in cultural context, integration of food literacy, local and global sustainability, intense investigation of diet and brain health, and focus on individual and collective actions are essential to maximize the impact of our thoughts and actions on food systems and the environment. Comprehensive analysis of several crucial facts can offer a unique perspective on food color, flavor and nutrition. Concrete action plans, and priorities rather than go with the flow attitude leads to an enjoyable food experience.

REFERENCES

- Allende A., Tomas-Barberan F.A. & Gil M.I., 2006. Minimal processing for healthy traditional foods. *Trends in Food Science & Technology*, 17(9), pp.513-519.
- Anastas P. and Eghbali N. 2010. Green chemistry: principles and practice. *Chemical Society Reviews*, 39(1), pp.301-312.
- Aryee A.N. & Boye J.I. 2014. Current and emerging trends in the formulation and manufacture of nutraceuticals and functional food products. *Nutraceutical and functional food processing technology*, pp.1-63.
- Bansal S., Singh A., Mangal M., Mangal A.K. & Kumar S. 2017. Food adulteration: Sources, health risks, and detection methods. *Critical reviews in food science and nutrition*, 57(6), pp.1174-1189.
- Bansal V., Siddiqui M.W. & Rahman M.S., 2014. Minimally processed foods: Overview. *Minimally processed foods: Technologies for safety, quality, and convenience*, pp.1-15.
- Boon B., Stroebe W., Schut H. & Jansen A., 1998. Food for thought: Cognitive regulation of food intake. *British journal of health psychology*, *3*(1), pp.27-40.
- Choudhary A., Gupta N., Hameed F. & Choton S. 2020. An overview of food adulteration: Concept, sources, impact, challenges and detection. *International Journal of Chemical Studies*, 8(1), pp.2564-2573.
- Corbera E., Estrada M. & Brown K. 2010. Reducing greenhouse gas emissions from deforestation and forest degradation in developing countries: revisiting the assumptions. *Climatic change*, 100(3), pp.355-388.
- Cole M.B., Augustin M.A., Robertson M.J. & Manners J.M. 2018. The science of food security. *npj Science of Food*, 2(1), p.14.
- Davis A.P. 2005. Green engineering principles promote low-impact development. 338-344.
- de Jager C.A., Dye L., de Bruin E.A., Butler L., Fletcher J., Lamport D.J., Latulippe M.E., Spencer J.P. & Wesnes K., 2014. Criteria for validation and selection of cognitive tests for investigating the effects of foods and nutrients. *Nutrition reviews*, 72(3), pp.162-179.
- Delind L.B. 2006. Of bodies, place, and culture: Re-situating local food. *Journal of Agricultural and environmental ethics*, 19, pp.121-146.
- El Sohaimy S.A. 2012. Functional foods and nutraceuticals-modern approach to food science. *World Applied Sciences Journal*, 20(5), pp.691-708.
- Folsom K. 2000. Nutrition in a Nutshell. iUniverse.
- Formolo D.A., Gaspar J.M., Melo H.M., Eichwald T., Zepeda R.J., Latini A., Okun M.S. & Walz R. 2019. Deep brain stimulation for obesity: a review and future directions. *Frontiers in neuroscience*, *13*, p.323.
- Gheihman N. 2021. Veganism as a lifestyle movement. *Sociology compass*, 15(5), p.e12877.
- Gonzalez C.G. 2014. World poverty and food insecurity. Penn St. JL & Int'l Aff., 3, p.56.
- Hamburg M.E., Finkenauer C. & Schuengel C. 2014. Food for love: the role of food offering in empathic emotion regulation. *Frontiers in psychology*, *5*, p.32.
- Hammond S.T., Brown J.H., Burger J.R., Flanagan T.P., Fristoe T.S., Mercado-Silva N., Nekola J.C. & Okie J.G. 2015. Food spoilage, storage, and transport: Implications for a sustainable future. *BioScience*, 65(8), pp.758-768. https://sdgs.un.org/goals
- Juul F., Vaidean G. & Parekh N. 2021. Ultra-processed foods and cardiovascular diseases: potential mechanisms of action. *Advances in nutrition*, 12(5), pp.1673-1680.
- Kaplan D.M. ed. 2012. The philosophy of food (Vol. 39). Univ of California Press.

- Letarte A., Dube L. & Troche V. 1997. Similarities and differences in affective and cognitive origins of food likings and dislikes. *Appetite*, 28(2), pp.115-129.
- Lozano A.M., Lipsman N., Bergman H., Brown P., Chabardes S., Chang J.W., Matthews K., McIntyre C.C., Schlaepfer T.E., Schulder M. & Temel Y. 2019. Deep brain stimulation: current challenges and future directions. *Nature Reviews Neurology*, *15*(3), pp.148-160.
- Magkos F., Arvaniti F. & Zampelas A. 2003. Organic food: nutritious food or food for thought? A review of the evidence. *International journal of food sciences and nutrition*, 54(5), pp.357-371.
- Mann J.I. 2002. Diet and risk of coronary heart disease and type 2 diabetes. *The Lancet*, 360(9335), pp.783-789.
- Manning L. & Soon J.M. 2014. Developing systems to control food adulteration. *Food Policy*, 49, pp.23-32.
- Marin L. 1997. Food for thought. JHU Press.
- Martin A.A. & Davidson T.L. 2014. Human cognitive function and the obesogenic environment. *Physiology & behavior*, *136*, pp.185-193.
- Maxwell S. 1996. Food security: a post-modern perspective. *Food policy*, 21(2), pp.155-170.
- Mbow C., Rosenzweig C.E., Barioni L.G., Benton T.G., Herrero M., Krishnapillai M. & Diouf A.A. 2020. Food security (No. GSFC-E-DAA-TN78913). *Geneva: IPCC*.
- Mol A. 2021. Eating in theory. Duke University Press.
- Mozaffarian D. 2016. Dietary and policy priorities for cardiovascular disease, diabetes, and obesity: a comprehensive review. *Circulation*, 133(2), pp.187-225.
- Murphy S.P. & Poos M.I. 2002. Dietary reference intakes: summary of applications in dietary assessment. *Public health nutrition*, *5*(6a), pp.843-849.
- Noomhorm A., Anal A.K. & Ahmad I. 2014. Functional foods, nutraceuticals and probiotics as functional food components. *Functional Foods and Dietary Supplements: Processing Effects and Health Benefits*, pp.1-19.
- Ohlsson T. & Bengtsson N. eds. 2002. Minimal processing technologies in the food industries. Elsevier.
- Padulo C., Carlucci L., Marzoli D., Manippa V., Tommasi L., Saggino A., Puglisi-Allegra S. & Brancucci A. 2018. Affective evaluation of food images according to stimulus and subject characteristics. *Journal of human nutrition and dietetics*, 31(6), pp.715-724.
- Rathore J. 2020. Indian Food Patterns and Triguna Theory of Personality. *Int. j Res Humanit & Soc. Sci*, 8, pp.51-53.
- Rippe J.M. ed. 2019. Lifestyle medicine. CRC Press.
- Rogers P.J. 2001. A healthy body, a healthy mind: long-term impact of diet on mood and cognitive function. *Proceedings of the Nutrition Society*, 60(1), pp.135-143.
- Sinha S. & Haque M. 2022. Obesity, diabetes mellitus, and vascular impediment as consequences of excess processed food consumption. *Cureus*, 14(9).
- Smith R.H. 1996. Livestock production: the unsustainable environmental and economic effects of an industry out of control. *Buff. Envtl. LJ*, 4, p.45.
- Spencer S.J., Korosi A., Layé S., Shukitt-Hale B. & Barrientos R.M. 2017. Food for thought: how nutrition impacts cognition and emotion. *npj Science of Food*, *I*(1), p.7.
- Stano S. & Bentley A. 2022. Food for Thought: An Introduction. *Food for Thought: Nourishment, Culture, Meaning*, pp.1-6.
- Strasser B. & Fuchs D. 2015. Role of physical activity and diet on mood, behavior, and cognition. *Neurology, Psychiatry and Brain Research*, 21(3), pp.118-126.

- Sweeney K.W. 2017. The aesthetics of food: the philosophical debate about what we eat and drink. Rowman & Littlefield.
- Trumbo P., Yates A.A., Schlicker S. & Poos M. 2001. Dietary reference intakes: vitamin A, vitamin K, arsenic, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium, and zinc. *Journal of the Academy of Nutrition and Dietetics*, 101(3), p.294.
- Zavitsanou A. & Drigas A. 2021. Nutrition in mental and physical health. *Technium Soc. Sci. J.*, 23, p.67.
- Zhang J. 2019. Cognitive functions of the brain: perception, attention and memory. *arXiv* preprint arXiv:1907.02863.