

Access to adequate nutrition as a global bioethical principle: An uninvited retrospective discourse with UNESCO



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During the development of the Universal Declaration of Bioethics and Human Rights (UDBHR), discussions were held with various non-Christian religions (Buddhism, Hinduism, Islam and Confucianism), as well as the Roman Catholic faith tradition around the content of the UDBHR, while the Protestant faith tradition was glaringly uninvited. If a Protestant delegation had been invited to the discussions on the development of the UDBHR in 2003, representatives could have indicated that the food ethics of UDBHR (access to adequate nutrition) are firmly grounded on biblical principles. Participants in the discussion could have indicated on the basis of a covenantal perspective that scarce, contaminated and toxic food or food that harbours no nutritional value is held by Scripture to be a reality, and that the calling of the church is to promote the availability of sufficient, safe and nutritious food. Along with this, interlocutors could have taken the discussion further to indicate that these matters could be supported from an Old Testament, as well as New Testament perspective (Christological and pneumatological).

Contribution: From a broad Protestant standpoint, it would therefore be fair to claim that this global bioethical principle (access to adequate nutrition) should not only be supported but must also be actively promoted, locally and globally, not only by civil society and the state, but also by the church. Adequate and healthy food is the message of the kingdom of Christ.

Keywords: safe food; nutrition; hunger; food ethics; global bioethics; human rights; UNESCO.

Introduction

In 2005, all the member states of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) accepted the Universal Declaration of Bioethics and Human Rights (UDBHR). The acceptance of this document is a remarkable achievement in the sense that it is the first, and currently the only, bioethical human rights instrument that has been unanimously accepted by all governments of the world, including South Africa (UNESCO 2005). The innovative dimension of the instrument is that all states of the world are now morally committed to adhering to a new list of comprehensive bioethical principles (Ten Have 2017). I was prompted by the particular value of this declaration, which was subject to very little investigation, especially in South Africa, to examine this instrument, and the present article forms part of a series that assesses the UDBHR from a Christian perspective.

The aim of this research is to embed the UDBHR's global food ethics within the context of a Protestant ethical foundation. Macaleer (2014) focuses on the well-known four bioethical principles of autonomy, beneficence, nonmaleficence and justice (as found in the famous Belmont report of 1979). Macaleer (2014:ix-x) describes the concept of theological foundation as follows: 'these principles are based on what they call the common morality. Thus, the principles have no specific theological foundation; this book attempts to give those principles a Scriptural foundation.' Theological grounding of this nature entails the creation and development of theological-ethical foundations or arguments for or against a particular global bioethical and human rights principle.

The UDBHR offers two perspectives with regard to the bioethical issue of food, namely as related to health (Art. 14)¹ and as related to environment (Art. 17)². The environmental perspective is

1. Article 14 Social responsibility and health. (1) The promotion of health and social development for their people is a central purpose of governments that all sectors of society share. (2) Taking into account that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition, progress in science and technology should advance:

- Access to quality health care and essential medicines, especially for the health of women and children, because health is essential to life itself and must be considered to be a social and human good.
- Access to adequate nutrition and water.
- Improvement of living conditions and the environment.
- Elimination of the marginalization and the exclusion of persons on the basis of any grounds.
- Reduction of poverty and illiteracy.

2. Article 17 Protection of the environment, the biosphere and biodiversity. Due regard is to be given to the interconnection between human beings and other forms of life, to the importance of appropriate access and utilization of biological and genetic resources, to respect for traditional knowledge and to the role of human beings in the protection of the environment, the biosphere and biodiversity.

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based on the view that, while producing enough and safe food for a growing world population, agriculture destroys biodiversity, which is why it falls into a vicious cycle (Létourneau 2016; Ten Have 2019). From a theological perspective, Brueggemann (2013) and Hall (2020) also acknowledge this danger. In the present article, however, attention will be paid to the UDBHR's perspective on the relationship between health and food (Art. 14). Throughout history, food has been associated with the promotion or harm of health (Ten Have 2019). Ten Have (2019) confirms that article 14 deals with the food ethics of the UDBHR:

Social responsibility for health (art. 14) is a recently formulated principle of bioethics since its inclusion in the UNESCO Universal Declaration on Bioethics and Human Rights of 2005 [...] Although the pharmaceutical industry is often regarded as the prime target of this principle, it can also be argued that it should equally engage the food industry (p. 180).

Why is it important and even necessary to develop a Protestant theological-ethical foundation for the food ethics of the UDBHR? There are mainly three arguments for this. These reasons have been worked out in depth in different ways as part of an overall project and only a brief description will be given here (see e.g. Rheeder 2017). The first reason is that, during the development of the UDBHR, discussions were held with various non-Christian religions (Buddhism, Hinduism, Islam and Confucianism), as well as the Roman Catholic faith tradition around the content of the UDBHR, while the Protestant faith tradition was glaringly uninvited (IBC 2004; Ten Have & Jean 2009). This exclusion brings the claim to universality of the UDBHR under suspicion (UNESCO 2006, Art. 2a). The present author therefore invited himself to the 'original' discussions with UNESCO with the aim of presenting a broad Protestant perspective on these. Such a conversation could only contribute to strengthening the universality of the instrument, especially in regard to South Africa, where the document has not yet made an impact (Langlois 2013). At present, there is no Protestant perspective on the food ethics of the UDBHR.

Secondly, the UDBHR presents itself as a document of shared values (UNESCO 2006, introduction, par. 10). These shared values are the outcomes of a political process in which consensus has been constructed or even fabricated, while no rational reasons or foundations for the principles adopted are presented as though they should simply be accepted *prima facie* by Protestant believers (Ten Have 2016). From the Protestant perspective, ethical values do not arise primarily from a political process or democratic negotiations, but from the Christian writings. One of the five founding principles of Protestantism is the principle of Scripture alone (*sola scriptura*) as the source of ethics (Nullens & Volgers 2010). That is why the Protestant theologian, Koos Vorster (2015) argues that principles for ethics are provided by the Word of God and that these ethics should be used to test the content of all ethical codes, instruments and declarations (cf. Eks 20:4–6). Douma (1997) furthermore avers that only when global bioethical principles pass the test of the Word can there be a

complete and acceptable Protestant human rights ethic. Although there is theological similarity between the Protestant and Catholic faith traditions (e.g. the use of the Bible), there are also far-reaching hermeneutical differences. Next to Scripture, tradition, magisterium and natural law play a major role in the assessment of global bioethical principles and human rights (Nullens & Volgers 2010). The research question of this study is therefore whether the food ethics of the UDBHR will stand the test of Scripture.

Thirdly, it would appear that human rights worldwide, especially in South Africa, are condemned in various circles as a secular construct that is essentially suspicious and unusable. Recently, Koos Malan (2022), a South African constitutional expert, wrote the following: '*Desondanks word die politieke gemoed van die Suid-Afrikaanse publiek steeds grootliks deur ons sekulêre heilige geskrif, die Grondwet, bepaal*' [Nevertheless, the political mood of the South African public is still largely determined by our secular scripture, the Constitution]. However, various philosophers and theologians assert that human rights will be difficult to internalise and promote without a theological basis (Habermas 2012; Hauerwas 2012; Rawls 1993). The central theoretical statement of this study is therefore that it is possible to provide a broad Protestant foundation for the food ethics of the UDBHR.

Food ethics is a relatively new field of interest that began to evolve with the emergence of global bioethics (Létourneau 2016; Ten Have 2019). Studies examining food ethics from a global perspective are rare (Ten Have 2019). The ethics of food has developed into such an important topic in recent times that the US government announced a national conference focusing on the problem of access to enough and quality food in America (Briefing Room 2022). Irregular access to food is also a growing phenomenon in high-income areas such as North America and Europe, where it affects about 8% of the population (FAO 2020; WHO 2019). These developments reinforce the need for the incorporation of a religious perspective in the discussion about promoting the value of food.

Methodologically, Article 14 of the UDBHR will first be analysed and interpreted to determine the content of the food ethics debate. This article will mainly use UN documents as recommended in the preface of the UDBHR instrument in this regard, while some sources outside the UN will be considered where necessary. Secondly, the information and meaning related to these will be judged in the light of Scripture. But first consider the following question: What is the ethical expectation of the civil and political world community regarding food and health?

The global principle

Promote health

According to Article 14, the state (governments), as well as broad civil society ('all sectors of society') have a social responsibility or duty to promote the best possible health

('highest attainable standard of health') of all fellow citizens ('their people') (Art. 14.1; Létourneau 2016). Ten Have (2019) offers the following comment: 'Ethics is not merely an individual affair but asks questions about the good life, as well as the good society.' Succinctly put, promoting everyone's health is also everyone's social responsibility. The reason for calling for action is that the best possible health is the fundamental right of every human being ('the fundamental rights of every human being' – Art. 14.2) (Létourneau 2016). A fundamental right is generally regarded as a right that deserves high priority and attention. It is noteworthy that Article 14 regards health as a fundamental right, but not the right to food.

How can health be promoted? According to Article 14, it can be achieved through access to quality health care and essential medicines, improvement of living conditions and the environment, elimination of marginalisation and exclusion of people, reduction of poverty and illiteracy and, lastly, access to adequate nutrition and water ('access to adequate nutrition' – Art. 14b) (Ten Have 2019). The broad principle set out in Article 14 is that governments, civil society and the individual have a common ethical duty to help promote the health of their fellow citizens through access to adequate nutrition (Korthals 2016). In this context, this article emphasises the concept of 'promoting access to adequate nutrition'.

How should the following phrase 'access to adequate nutrition' be understood? It would appear that two norms stem from the principle of access to adequate nutrition, namely access to enough food, that is, the quantitative aspect; and food that is safe, that is, the qualitative aspect (Ten Have & Patrão Neves 2021b).

Access to enough food

The *first norm* suggests that adequate nutrition has *quantitative* significance in the sense of enough food (Létourneau 2016; Macer 2016). Quantitative food security entails a stable supply of food, as well as physical and economic access for all citizens so that they can enjoy a healthy life. The four classic dimensions of quantitative food are availability, access, capacity to prepare food correctly, and stability (Ten Have & Patrão Neves 2021b). It is widely accepted that access to enough food is central to promoting and maintaining good health (WHO 2020a).

Why did the political bioethical world community, through UNESCO, consider it necessary to formulate access to designate sufficient food as a global ethical and human rights principle? There are currently about 8 billion people on earth, and it is expected that humanity will have grown to 9.15 billion in 2050 (Ten Have 2019; United Nations 2022). The *Millennium Development Goals* indicated that, since 1990, the percentage of hungry people has decreased from 23.3% to about 12.9% (United Nations 2015). Unfortunately, from 2015, the number of people who did not have access to enough food began to increase (FAO 2020) and Ten Have (2019) described this truth as a moral embarrassment.

In 2019, about one in ten adults on earth was hungry (FAO 2020; Ten Have 2019). About 822 million people are hungry daily and do not have enough food to lead an active life; they live mainly in developing countries (Ten Have 2019; Ten Have & Patrão Neves 2021c). In Asia 513 million, in Africa 256 million and in Latin America and the Caribbean about 43 million people do not have enough food on a day to day basis. It has been demonstrated that more women than men do not have access to enough food (IBC 2010; WHO 2019). Low-income countries rely mainly on scarce staple foods with limited access to vegetable, fruit and animal proteins (FAO 2020). One in seven children in the world is malnourished (Ten Have 2019). Between 2018 and 2020, the number of people undernourished in South Africa amounted to 3.8 million, showing an increase compared to previous years (Statista 2022).

One of the major health disadvantages of limited access to enough food is malnutrition. The effects of too little food are serious in most cases (IBC 2010). Malnutrition occurs when hungry children and adults do not get enough essential micronutrients such as vitamins and minerals. Around 340 million children struggle with micronutrient deficiency (FAO 2020; IBC 2010; WHO 2020b). Micronutrients enable the body to produce enzymes, hormones and other substances that are essential for its health. Iodine, vitamin A and iron are among the most important nutrients and, without these, people's health can be seriously harmed (WHO 2020b). Malnutrition also causes a weakened immune system which, in turn, offers almost no protection for adults and children against curable infectious diseases, diarrhoea, pneumonia, malaria and other diseases (IBC 2010). Malnutrition is the single biggest contributing cause of disease in the world (Ten Have & Patrão Neves 2021c).

What are the reasons for hunger and malnutrition? For a long time, the belief was upheld that population growth was the cause of hunger and famine, because there was too little food. Yet, it would seem that the opposite is true (Ten Have 2019). The contradiction is that the world community produces enough food to feed all the people in the world. As early as 1996, the World Food Summit concluded that the global agricultural community produces enough food for every world citizen (FAO 2020; Ten Have 2019; Ten Have & Patrão Neves 2021c). It observed that, although the world population had doubled in the preceding 30 years, food production had increased even faster. This was confirmed by FAO studies in 2012. Currently, agriculture produces about 2770 calories for every person on earth, while only 2200 calories are needed (Ten Have & Patrão Neves 2021c). In the 1990s it was observed that the majority of malnourished children live in countries where surplus food exists. Despite the fact that the world population is increasing, there is evidence that the production and availability of food is also growing. Countries such as the United States and Australia (and many others) produce more food than is necessary for the nutrition of their citizens, and, in fact, export much of their food (Ten Have 2019; Ten Have & Patrão Neves 2021c).

The general consensus is that hunger and malnutrition are not the result of food shortages, but rather that *access* to adequate food due to poverty, unequal global distribution of food, incompetent and corrupt governments, and the absence of equity are some of the obstacles in the way of sufficient nutrition (Létourneau 2016; Ten Have & Patrão Neves 2021c). Poor people are hungry and malnourished because they cannot afford to buy it (FAO 2020; Macer 2016; Samuel 1995; Ten Have 2019). Hunger increases in countries where economic growth is low or absent. In most countries, where access to food is a major problem, large income inequality exists (Létourneau 2016). Basic food is not affordable or available.

A good example of this is India, where organised agriculture produces large-scale surplus food, while about 250 million informal farmers go hungry (Ten Have & Patrão Neves 2021c). Research shows that many malnourished children live in developing countries where there is a surplus of food (Ten Have 2019). More than 1.5 billion people cannot afford a diet that contains the essential nutrients and over 3 billion people cannot afford a low-priced healthy diet (FAO 2020).

This reality serves as a background for the ethical and human rights call of the UDBHR that access to enough food is imperative. The global ethical call of the first norm of UDBHR is a move away from a call for more food to be produced, and a healthy step in the direction of the ethical duty to promote access to existing food (Ten Have 2019). Ten Have and Patrão Neves (2021c) succinctly formulate the purpose of this first ethical norm as follows: 'Therefore ethical debate on hunger means shifting the focus from food production to better access.'

This first norm therefore points to the responsibility of the state to promote social development that will focus on availability, financial ability, knowledge of use and stability around sufficient food (FAO 2020; Ten Have & Patrão Neves 2021b). The declaration's global aspect moreover indicates that countries and governments should collaborate in solidarity and cooperation (see UDBHR, Art. 13): this should help poorer countries gain access to enough food (Létourneau 2016).

Access to safe food

The *second norm* indicates that adequate nutrition has *qualitative* significance in the sense that food must also be safe and healthy (Létourneau 2016; Macer 2016). It is a recognised fact that access to safe food plays an extremely important role in the promotion of good health (WHO 2020a). Qualitative or safe food is free from chemical or microbial contamination and is stored (in a cold chain where necessary) and transported, labelled, prepared, processed and cooked correctly (Ten Have & Patrão Neves 2021b).

Why did the political world community consider it necessary to formulate this global bioethical and human rights norm? About 600 million people (1 in 10) become ill annually and 420 000 die due to contaminated food (WHO 2020a). Children

under five years of age carry about 40% of the burden of contaminated food, and 125 000 of them die per year. Diarrhoea caused by eating infested food is by far the most prevalent occurrence around this and affects approximately 550 million adults of which 230 000 die each year. Approximately 220 million children get diarrhoea-related illnesses and 96 000 die each year (Ten Have 2019; WHO 2020a). About 1.9 million people, many of whom are children, die annually due to illnesses caused by contaminated food (Ten Have 2019).

This brings into focus that, in 2015, the WHO indicated that approximately 31 different bacteria, viruses, parasites, toxins and chemicals that occur at global and regional level are responsible for foodborne diseases (WHO 2020a), and these are subsequently briefly discussed in terms of contaminated, toxic and malnourishing foods.

Contaminated food

Dangerous pathogens (bacteria, viruses, parasites) enter the body through contaminated food. *Salmonella*, *Campylobacter* and *Enterohaemorrhagic Escherichia coli* are some of the most common bacteria that infect millions of people. *Salmonella* is found in eggs, poultry and other animal products. *Campylobacter* occurs in raw milk, raw or semi-cooked poultry and drinking water. *Enterohaemorrhagic Escherichia coli* is associated with unpasteurised milk, semi-cooked meats, fruits and vegetables. Symptoms of infection by bacteria include fever, headache, nausea, vomiting, stomach pain and severe diarrhoea. The incidence of *listeria* infection is relatively low but has serious consequences when it does occur. It is found in unpasteurised dairy, meat products and ready-to-eat foods, and can survive in extremely cold temperatures. It could lead to miscarriages, as well as the death of new-born babies, and often has fatal consequences for older babies, children and the elderly. *Vibrio cholerae* infects humans through contaminated food and water. Rice, vegetables, millet gruel and various seafoods are hosts for this bacterium. Symptoms include abdominal pain, vomiting and critical watery diarrhoea, which may lead to severe dehydration and even death.

Infected people who handle food often transmit the *Norovirus* that causes nausea, extreme vomiting, watery diarrhoea and stomach pain. The Hepatitis A virus is spread by raw or undercooked seafood and contaminated raw products, and causes severe liver damage (WHO 2020a). Some parasites carried by fish (trematodes) are transmitted by processed products made from fish. Tapeworms (*Echinococcus* or *Taenia solium*) are transmitted through food or direct contact with animals. Other parasites (such as *Ascaris*, *Cryptosporidium*, *Entamoeba histolytica* or *Giardia*) penetrate the food chain through water or soil and can contaminate fresh food (WHO 2020a). *Prions* is a virus that consists of proteins and is associated with specific forms of neurodegenerative diseases. 'Crazy cow disease' (*bovine spongiform encephalopathy*) is a prion disease in cattle and is associated with Creutzfeldt-Jakob disease in humans. Eating meat products contaminated by it affects people's brain capacity first (WHO 2020a).

Who is responsible for contaminated food? There are mainly two reasons for its occurrence. The first is the consumer who does not prepare food correctly (Blanshard 1995). The second is the supplier. Food can become contaminated at any point during production and distribution, and the primary responsibility for avoiding this lies with food producers. Yet, a large proportion of the incidents of illness is caused by food that is improperly prepared or mishandled at home, in food service establishments or at markets. Not all food handlers and consumers understand the responsibilities they have towards, among other things, protecting the health of the wider community (WHO 2020a).

Poisonous foods

In the minds of the general public, the perception exists that all foods found in nature are safe and edible (Blanshard 1995). However, many toxins found in nature, as well as environmental pollution, are major causes for concern (Macer 2016). Toxins found in nature include mycotoxin, biotoxin, cyanogenic glycosides (cyanide), and those found in poisonous mushrooms. Staple foods such as wheat and cereals may contain high levels of mycotoxin such as aflatoxin and ochratoxin which are produced by fungi on the food. Prolonged exposure to these toxins could affect the immune system and normal development, while also causing cancer. *Uninterrupted organic pollutants* comprise compositions that accumulate in the environment and human body. Two well-known compounds fall under this rubric. The first is the group of polychlorinated biphenyls which is a by-product of industry. It is found in coolants and lubricants in transformers, capacitors and other electrical equipment. The by-product is also used in fluorescent lights, microscope oil and hydraulic fluids. The use of the by-product was banned in 1972 in the United States. The second are dioxins, which are produced by various types of waste incineration including that of rubbish in the backyard. These toxins continue to occur worldwide and accumulate in animal food chains. They are highly dangerous and may cause serious reproductive and developmental problems, damage the immune system, interfere with the work of hormones and cause cancer. *Heavy metals* such as lead, cadmium and mercury cause neurological and kidney damage. Contamination of food occurs through light, water and food pollution (WHO 2020a).

Innutritious food

Not only the amount of food produced or the danger of contaminated or toxic food are important, but also its quality, which is vital for health. Food must not only be produced for individual survival and satisfaction but must also be produced in such a way that it promotes health (Ten Have 2019). There is currently a major global transition in eating patterns. Traditional diets such as grains, vegetables and fruit are being replaced with ready-made foods that contain higher degrees of refined sugars, fats, oils, meats and salt content (Blanshard 1995). This transition leads to increases in diabetes, coronary heart disease and obesity. In 2014, more than 1.9 billion adults were overweight or obese and the number is increasing worldwide (Létourneau 2016; Ten

Have 2019). About 38.3 million (5.6%) children under the age of five are overweight (FAO 2020; Létourneau 2016).

Létourneau (2016) makes the very important remark that the way in which food is produced by industries is also an ethical act and should therefore be assessed:

As pivotal actors of the global agri-food system, these industries will have to rise up to their social responsibility. From an ethics perspective, this entails reshaping their whole business ethos in order to put health atop of a blind quest for profitability (p. 1270).

The problem is the unilateral way in which food is produced. Governments, civil society and individuals have had little influence on the composition of food production (Ten Have 2019). Food is controlled and produced by large corporations, transnational agricultural corporations, rural farmers and families.

Along with this, the manufacturers of food shift the debate away from quality and place the onus for poor quality on the choice and physical activities of individuals, for instance in the case of obesity. The emphasis is on individual choices, while the influence of the food environment and easy access to unhealthy foods and advertisements are simply ignored. Marketing strategy is sometimes used aggressively to promote unhealthy eating habits and lifestyles (IBC 2010). The reality is that people are dying from diseases associated with eating excessive amounts of unhealthy food (Ten Have 2019). Even schools are sometimes the objects of intensive advertising for unhealthy foods and soft drinks, while children need a balanced meal to address all their natural needs (Ten Have & Patrão Neves 2021a).

Most consumers do not have the knowledge to determine if food is safe and healthy, and have to rely on others for information, especially the state (Ten Have 2019). Therefore, informative and understandable information about the content of food is an important way to promote individual freedom and health (Korthals 2016; Ten Have 2019). Information includes, among other things, shelf life and the details of the composition of a particular food type (Macer 2016).

This second norm also points to the responsibility of the state to promote social development centred on sufficient infrastructure and measures aimed at promoting safe and healthy food (Ten Have & Patrão Neves 2021b). Due to the global nature of the declaration, it is also intended that a country in solidarity and cooperation (see UDBHR, Art. 13) should help poorer countries with access to safe food (Létourneau 2016).

To summarise: It has been shown here that two global norms regarding food ethics stem from Article 14. The first indicates the responsibility of the state to ensure access to sufficient food for citizens of the country. The second points to the government's responsibility around ensuring access to safe and healthy food (FAO 2020; Ten Have & Patrão Neves 2021b). The global nature of the declaration intends that

countries in solidarity and cooperation (see UDBHR, Art. 13) should help poorer countries with access to sufficient and safe food (Létourneau 2016). These two norms will now be tested against the Christian writings.

Theological basis

Hermeneutics

Kenney (2011:308–309) is correct when he argues that, in Scripture, ‘the readings pertaining to food are varied and not always congruent’. Scripture should therefore be treated with caution in the development of a theological foundation of the food ethics of the UDBHR. This study takes Kenney’s warning seriously, hence employing the hermeneutic or congruent biblical theology of Vorster (2021) in order to avoid the possible challenges Kenney brought to our attention. Vorster’s hermeneutics consists of four directives. The first is based on the view that all readers interpret texts according to their own presuppositions. To counteract this, one’s own interpretations must always be compared with the interpretations of others’ presuppositions (Eph 3:16–19). The second states that the Bible was not only written by different authors, but also consisted of various genres, namely historical narratives, poetry, symbols, metaphors and prophecies, as well as the teachings of Jesus and the apostles. These different genres must be considered, and each must be interpreted according to its own method. The third centres on grammatical and historical exegesis. Scientific methods such as textual criticism, editorial criticism, analysis of the grammatical structure within its context, as well as lexicography must be used. The fourth directive is called the congruent biblical theology or hermeneutics. This directive is extremely sensitive to an atomistic (isolated) use of a single text (see also Douma 1997) and, instead, advocates that the part (such as a text verse in the Bible) should be illuminated by the whole. In these terms, themes from both Testaments such as sin, the covenant, Christology and pneumatology will be used to assess or test the food ethics of the UDBHR.

Old Testament

Food forms part of God’s creative work in the beginning and is described as good (Gn 1:30). From the beginning, it was God’s will that one should have access to enough food. The Garden of Eden carried abundant food (Gn 1:29; Kenney 2011). However, all of this changed after the Fall into sin. Genesis 3 is the narrative that addresses the reality of sin, and it links the existence of sin with food challenges (Kenney 2011). ‘Most notably, sin enters the world in Genesis 3 through an act of rebellious eating’, Gordon (2017:321–322) avers. By its very nature, this statement does not imply that food is inherently sinful, although there are forms of sinful eating such as debauchery (Nm 11:4, Ec 23:3; 1 Pt 4:3). The connection between food and sin indicates that food was affected by the far-reaching influence of the Fall with the result that too little and unsafe food has become destructive realities in a sinful world (Samuel 1995).

The reality and cruelty of famine and a lack of enough food is found early in the Old Testament (Blanshard 1995; Gn 41–42). Brueggemann (2013) notes that the Fall into sin and the consequent lack of food and profound famine are profound events in any person’s life (Gn 41:31); these will even drive people into slavery (Gn 47:13–26). As early as Genesis 47:13–19, a connection is found between enough food and health when it is stated that people had become weak, had fainted and even died due to a lack of food. Job (6:7) acknowledges that certain (unsafe) foods can make one sick. Daniel 1:15 indicates that there is a close connection between (insufficient, unsafe) food and health (Hall 2020). Throughout the Old Testament, the phenomenon of insufficient food or famine occurs (2 Ki 4:38).

The concept of the covenant between God and his people is a prominent theme in the Bible, especially in the Old Testament (Vorster 2021). The covenant centres on the agreement or the relationship between God and the believer. Within the covenant, God is seen as the God of history who carries out his government and care in and through his people. Because God governs and cares for his people, the people also have the responsibility to be obedient to God within this covenant in terms of their hearts and deeds (Gn 17:7–9). Covenant and behaviour (ethics) are closely linked (Vorster 2017). Both Macaleer (2014) and Rusthoven (2014) used the covenant doctrine as a Protestant (reformed) foundation of global bioethical principles of the Belmont report. The ethical question that arises here reads: What would be, to God, the acceptable ethics with regard to sufficient and safe food within the covenant?

Brueggemann (1977) believes that the dominant biblical model for the distribution of or access to enough food is the supply of food in the desert (Ex 16). According to Kenney (2011) and Hall (2020) this narrative indicates God’s power and willingness to provide access to sufficient food. The first observation is that God ‘rained down’ enough food from heaven; this made bread and meat so accessible that they could just walk and pick it up as needed (Ex 16:4, 17). Secondly, what is clear from the Exodus narrative is that access to food is realised in the desert, an environment where people are without resources and extremely vulnerable (Ex 16:2). God provides food for the orphan, widow and stranger (Mackler 2014; Dt 10:17–18). With this, Brueggemann (1977) warns modern society against political and economic processes that make food, especially for poor people, unaffordable. He refers in this regard to the prophet Amos (8:4–6) who warns the people and leaders that they should not make food excessively expensive and therefore exploit folk. Expensive food leads to hunger and poor health and is ethically unacceptable.

The basic premise within the covenant is that food is a gift from God for the purpose the purpose of giving vitality (Gordon 2017; Kretzschmar 2021; Ps 104:14–15, Ec 2:24). All food belongs to God (1 Cor 4:7), is provided by God (Kretzschmar 2021; Ps 136:25; 145:15–16) and, even though mankind is the producer of food (Ez 29:3), it is not the primary property of humanity. Therefore humanity, created

in the image of God (Gn 1:26–28; Lv 25:23), has the calling to ensure access to enough food (like God), especially defenceless people (Blanshard 1995; Gn 2:16, 3; 2; Lv 19:9–10; Dt 24:19–22; Mt 6:25–32; 1 Tm 6:8). God wants people to have access to enough food (Ps 104:27–28) and categorically speaks out against people who eat lavishly, while poor people go hungry (2 Ki 4:42–44, Ez 16:49; Brueggemann 2013). The Old Testament eschatological vision for redeemed mankind in Isaiah 65:17–25 clearly depicts God's care for the hungry where people will plant food and will have enough to eat (Samuel 1995). Samuel (1995) also points to the fact that the believer has a global responsibility for access to sufficient food. In this regard, Samuel (1995) refers to the work of Joseph in Egypt who produced enough food so that, during a global famine, hungry people all over the world could obtain food at a fair price (cf. Gn 41:56–57).

Regarding unsafe and unhealthy foods, Zwart (2000) comes to the following conclusion, as based on his study of Leviticus 11:1–4 and Deuteronomy 14:3–7:

[T]he Hebrew Bible introduces a new and highly significant principle into the history of food ethics, namely the idea that certain food products are to be regarded as contaminated in view of their origin – not because they are unhealthy, tasteless, difficult to digest, or something like that, but because they are unlawful in themselves (p. 116–117; cf. also Blanshard 1995)

These passages of Scripture do not directly link unsafe foods to health, but the idea of contaminated foods is not foreign to Scripture. Kenney (2011) believes that Scripture points out that food is essential, but sometimes also dangerous.

Undoubtedly, the influence of sin not only caused too little food and famine, but also brought about the reality of unsafe or dangerous foods that could make one sick or lead to death. A well-known example from the Old Testament is found in the narrative of Elisha in 2 Kings 4:39–41, where unsafe and even toxic food was gathered (Blanshard 1995). Konkel (2006) explains these events and the concomitant danger as follows:

In the first story (4:38–41), a famine leaves the band short of food, with the necessity of foraging for what they can find. Ignorance results in a 'death pot' that threatens men's health. (p. 17)

The striking thing about the narrative is ignorance about unsafe food. They picked and prepared it without realising the potential danger, non-nutritional value and potential impact on their health (2 Ki 4:39). Verse 40 clearly objects to dangerous food. Not only is unsafe and even dangerous food a reality after the Fall, but also the possibility and reality of food with poor nutritional value. In this regard, Brueggemann (1977) refers to Amos 8:6, where chaff is sold at a high price to poor people. It was sometimes mixed with little wheat or low-quality material and had poor or no nutritional value. Sweeney et al. (2000) describe it, 'useless as food'. Smith (2001) states the consequent injustice as follows:

If all else fails, the merchants can include a little dirt, chaff, or other useless fillers in a sack of grain so that it will not cost so much to fill it with 'grade A' wheat. (p. 303)

This exploitation of people, whenever low-quality food was sold, ignored people's health for the sake of self-enrichment. Clearly, Scripture negatively judges low-quality food.

According to Frame (1988), the sixth commandment expresses a crucial covenant principle in bioethics and calls for solidarity around the protection of physical and psychological integrity (Ex 20:13). People must be protected from harmful, unsafe and malnourished practices and actions that include too little and unsafe food (Blanshard 1995; Ex 21:28–36; 22). This commandment forms the basis of the bioethical principle which says: 'first, do no harm' (*primum non nocere*). Douma (1992) and De Bruyn (1993) regard starvation and unsafe food as forms of mutilation of the body (and mind) that are forbidden by the sixth commandment, which calls on governments, civil society and the individual to promote adequate and safe food.

All in all, it is clear that too little, unsafe and poor-quality food is a reality in this world, and the UDBHR criticises it by formulating a principle to oppose it. The Old Testament covenant furthermore objects to too little, unsafe and poor-quality food, that is, in quantitative and qualitative terms, and even regards it as a form of injustice. It can therefore be inferred that, from an Old Testament covenantal perspective, the food ethics of the UDBHR should be wholeheartedly supported.

New Testament

The theme of access to sufficient, safe and healthy food is continued in the New Testament, where food ethics enjoy a strong Christological and pneumatological grounding and form a crucial aspect in the ministry of Christ (Kenney 2011).

The two narratives in which Jesus fed crowds of people suggest a meaningful argument in this regard (Mt 14:13–21; Mk 8:1–10). Three inferences can be made from the narratives (Samuel 1995). The first is the revelation of Jesus' compassion and care for hungry people (Mt 14:13–21; Mk 8:2). The second is that Christ provides food for the hungry (Gordon 2017; Mt 14:13–21), and the third equivalent of Exodus 16: Christ, like God the Father, feeds people in the 'wilderness' in abundance. It is striking that people have access to the food (that is, food is distributed; Mt 14:19; Mk 8:7) and that enough food was provided to the people; in fact, there were ample leftovers (Mt 14:20; Mk 8:7). Matthew and Mark show that the crowds of people were located in deserted places and did not have easy and quick access to food (Mt 14:15; Mk 6; Brueggemann 2013). Fourth, Christ acknowledges the close connection between enough food and health when he points out that, when people do not eat enough, they may faint and seriously injure themselves (Mk 8:3).

The New Testament focuses not only on access to enough food, but also on good, safe and nutritious food. In the song of Mary (the Magnificat), which forms the theme song of Luke (Lk 1:53), Mary sings of food and that Jesus will provide good things for the hungry (see Brueggemann 2013). The

Greek word for 'good' can also be translated as 'valuable attributes' (Louw & Nida 1988). This would mean that Christ not only gives people enough food, but also good, safe, valuable and nutritious food.

According to Wirzba (2013), the image of Jesus as the Bread of Life (Jn 6) is a critically important metaphorical theme in the debate about food that encompasses its quantity, safety and value. The context of this metaphor is the series of events in which Jesus fed large crowds of people (Jn 6:1–14). The multiplication of food emphasises access to enough food (Mt 6:11), while the metaphor emphasises its value, life-giving capacity and nutritious quality. After all, Christ is the Bread that gives good life (Harper 2016).

According to Coetzee (1990), John consistently refers to eternal life as a life that is qualitatively different from that of the fallen people who are subject to sin and decay (Jn 6:33, 40, 47, 51). The logical conclusion is that Jesus, the valuable Bread, gives himself to be 'eaten' by faith which leads to a quality and eternal life. The ethical and practical implication of the metaphor is that, like Jesus, people must be provided with quality food that contributes to a healthy life of quality. The opposite is poor quality food, which leads to disease and (eternal) death and, in light of the metaphor, it is unacceptable. Revelation 22:1 indicates that life and healthy living (the water of life) flow from Christ. In Revelation 22:2, John indicates that there is a connection between food and health when he writes 'and the leaves of the tree are for the healing of the nations' (Hall 2020). Good vegetal foods promote health. The opposite is food which harms you. Hall (2020:138) remarks, in view of Revelations that, in the 'twenty-first century, the form and amount of food consumed may constitute the biggest harm'.

Hall (2020) believes that the metaphor that the body is a temple of the Holy Spirit (1 Cor 6:19) amounts to an ethical call for food to be safe and nutritious. Grudem (2018) makes the statement that this metaphor provides encouragement to promote health of the body. The body belongs to the Spirit of God. Your body is a temple, a building in which the Spirit of God dwells. If you live in a building that belongs to someone else, then it is your responsibility to act according to the rules of the owner and promote the best interests of the building. Against this background, in his dogmatic discussion of 1 Corinthians 6:19, Heyns (1981) is convinced that that the pericope contains a definite bioethical significance:

In dié verband sal ook die stryd van die mediese wetenskap teen liggaamlike verminking deur die sonde en sy gevolge genoem moet word; eweneens ook [...] die stryd teen hongersnood [en] ondervoeding. [*In this connection, the struggle of medical science against bodily mutilation by sin and its consequences should be mentioned; likewise, [too,] the fight against famine [and] malnutrition.*] (p. 410, [author's own translation])

The new man, who does not belong to him- or herself, will in no way be able to take pleasure in any form of contempt or neglect of the body by means of unsafe and innutritious food. Because humanity is a temple of God and belongs to him,

they will cultivate, prepare and choose their food to the advantage of the body (Douma 1992).

It is therefore clear that sufficient, safe and nutritious food is supported by Scripture in terms of a Christological and pneumatological perspective. The food ethics of the UDBHR, as found in Article 14, should therefore be supported from a New Testament perspective.

Conclusion

During the development of the UDBHR, discussions were held with various non-Christian religions (Buddhism, Hinduism, Islam and Confucianism), as well as the Roman Catholic faith tradition around the content of the UDBHR, while the Protestant faith tradition was glaringly uninvited. If a Protestant delegation had been invited to the discussions on the development of the UDBHR in 2003, representatives could have indicated that the food ethics of UDBHR are grounded on biblical principles. Participants in the discussion could have indicated, based on a covenant perspective, that inadequate contaminated and toxic food or food that harbour no nutritional value is held by Scripture to be a reality and that the calling of the church is to promote the availability of sufficient, safe and nutritious food. Along with this, interlocutors could have taken the discussion further to indicate that these matters could be supported from an Old, as well as New Testament perspective (Christological and pneumatological). From a broad Protestant standpoint, it would therefore be fair to claim that this global bioethical principle should not only be supported but must also be actively promoted locally and globally – not only by civil society and the state, but also by the church. Adequate and healthy food is the message of the kingdom of Christ.

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