

Research Article

## 3<sup>2</sup> in Mathematical Construct: A Framework for African Consumerism

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### Abstract

In many African cultures, hospitality is a deeply ingrained concept that emphasizes the importance of community, charity, and mutual respect. Due to factors including increased urbanization and Western influence, higher incomes, and easier access to technology and education, African consumerism is a fast-expanding phenomenon. Three square meals emerged in Europe during the Middle Ages. Breakfast and dinner were the two primary meals at first, and they were simple. During the Industrial Revolution, workers needed extra food to sustain their energy levels throughout the day, therefore, lunch was introduced as a third meal. The concept of 3<sup>2</sup> meals in Africa is a myth and an illusion when critically considered in comparison with both the idiomatic understanding and the mathematical construct. The general opinion in Africa, as influenced by Western culture, suggests that three square meals is a concept of providing a satisfying and complete daily diet, often-encompassing breakfast, lunch, and dinner. This concept is a far cry from the reality of 3<sup>2</sup> in mathematical constructs, posing a huge risk to cultural preservation and hospitality in Africa. This paper investigates the mathematical basis of the traditional three-square, a concept used to determine African eating patterns. The paper aims to address the question, How does the 3<sup>2</sup> meals concept affect biblical and African hospitality practices? To answer this question, the study investigates whether African consumption practices are consistent with the classical mathematical concept of three squares, taking into account the economic state of the African continent. The paper employs a historical Methodology, combining mathematical modeling, cum literature review to demonstrate and validate or otherwise the assertion of three square meals. The mathematical construct of 3<sup>2</sup> would incorporate formulas, combinatorial designs, graph theory, and network analysis to represent the complex relationships between meals, ingredients, and consumer preferences. This study would use an innovative combination of scriptural, mathematical, and economic models to create a framework for understanding the complexities of African food culture and its consequences for consumer behaviour and hospitality. The paper thus contributes by introducing a novel framework, leveraging on the mathematical construct of 3<sup>2</sup>, to explore, analyze, and predict African consumer behaviour, and to make a clarion call for a return to the practice of true African hospitality as against the 3<sup>2</sup> meals ideology brought to the Africans by the western society.

### Keywords

Hospitality, Mathematics, Consumerism, Meal, Africa

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## 1. Introduction

According to the African Development Bank [1], “Africa's consumer market has experienced remarkable expansion in recent years, driven by increased urbanization, rising incomes, and improved access to education and technology.” Despite this increase in consumerism, John S. Mbiti [2] noted that “It has raised worries about its impact on traditional African cultures, particularly the culture of hospitality. He also claims that hospitality is a deeply ingrained virtue in many African civilizations, emphasizing the significance of giving, respect, and community.”

From the foregoing observations, it is worth noting that as consumerism takes hold, the hospitable ideals of African culture may be undermined and eroded.

In many African societies, meals (food) are an important part of social gatherings, celebrations, and hospitality. Sharing meals helps to establish community relationships and demonstrate respect for visitors. The spirit of hospitality that the African culture has gladly lived and exercised to this day was ingrained in the Church's early traditions. In the book of Acts 2: 42, it was recorded from the practice of the Church that “They were continually and faithfully devoting themselves to the instruction of the apostles, and fellowship, to eating meals together and to prayers” (AMP). Additionally, Apostle Peter in his letter writes, “Be hospitable, be a lover of strangers, with brotherly affection for the unknown guests, the foreigners, the poor, and all others who come your way who are of Christ's body. And (in each instance) do it ungrudgingly (cordially and graciously, without complaining but as representing Him); (Peter 4: 9, AMP). Despite this biblical perspective that served as the foundation for African hospitality, the influence of Western culture on the concept of three square meals aimed at providing a satisfying and complete daily diet, which frequently included breakfast, lunch, and dinner, has gradually eroded African hospitality.

Globalization and urbanization have caused modifications in traditional meal patterns. It has led to the adoption of Westernized diets, which are commonly characterized as three square meals. According to Robert Charles Lee [3], “Three square meals a day is an English idiom that originated during the Industrial Revolution of the 1800s.” He Lee: [3] went on to say that the term “Square meal refers to a full meal in the sense of a satisfying meal, particularly for someone who works physically.” Today, in Africa, it is evident that families have settled for the square meals practice. However, would it be concluded, looking at the understanding of ‘three square meals,’ that an average person eats ‘three square meals’? Samuel Waje Kunhiyop [4] remarked that “The lack of adequate food to eat is gradually forcing people out from one place to another, and worst of all, prompting others to engage in destructive behavior to survive.” Despite the lack of nutritional meals by many African people, it's worth noting that the African food in African culture is more than just nutrition or the three square meals tradition; it is a way to show warmth,

welcome, and cultural heritage even today. In areas where ‘three square meals’ may be difficult to attain, the sense of hospitality in sharing food and celebrating through feasts is still strong. Hence, this research tries to explore the mathematical underpinnings of the traditional ‘three square meals,’ a concept adopted to define Africa's current pattern of meals.

This paper presents a novel framework for analyzing and predicting African consumerism that makes use of the mathematical construct of  $3^2$ . In this paper, I defined consumerism as the consumption of food (meals), rather than only the purchase and sale of goods and services, or the protection of consumer rights. This study tries to employ the mathematical construct ‘ $3^2$ ’ as a framework for African Consumerism, drawing the attention of Christian believers to actual hospitality as practiced by the early Church.

### 1.1. Consumerism: The Word, Concept, and Historical Roots

This section examines the trajectory of the word consumerism and how it evolved in human history.

### 1.2. Consumerism: The Word in Historical Perspective

According to Peter N. Sterns [5], “Consumerism is a social and economic order in which many people aspire to acquire commodities and services other than those required for subsistence or conventional displays of status.” He also stated [5], “It originated in Western Europe before the Industrial Revolution and became popular around 1900.” In economics, consumerism refers to policies that emphasize consumption. It is the consideration that the free choice of consumers should strongly inform the choice by manufacturers of what is produced and how, and therefore influence the economic organization of a society.

The roots of modern consumerism lie in the 18th century, as opined by Sterns [5]. For him (Stem [5]), “From 1800 to 1920, a lot of significant events in the development of consumerism occurred. In 1830, the first department store opened in Paris. By 1850, big department stores had expanded to other major cities in Western Europe and America. Mail order catalogs appeared, and the first advertising agencies were established. A large number of imports and consumer items became available.”

These improvements, along with several shifts in society's psychological makeup, prepared the ground for the subsequent 1920s consumerism explosion. Kanner A. D. and Gomes M. E. [6] stated, “It is far from clear that consumerism occurs naturally or spontaneously in humans.”

According to Ayozie D. O. [7], “American business firms found themselves the target of a growing consumer movement starting in the 1960s.” He (Ayozie: [7]) added, “Consumers

had become better educated; products had become increasingly complex and hazardous; discontent with American institutions was widespread; influential writers accused big business of wasteful and manipulative practice.”

The term ‘consumerism,’ according to Roger Swagler [8], “has several definitions.” In the view of Dwyer R. E. [9], “Consumerism maintains that personal wellbeing and pleasure are mostly dependent on the material goods that a person can purchase.” To that end, Dictionary.com 2000a [10] defines Consumerism as “The theory that a progressively greater consumption of goods is economically beneficial; attachment to materialistic values or possessions.” Ayozie [7] sees consumerism as, “An organized movement of citizens and government to strengthen the rights and powers of buyers in relation to sellers.” However, to Kotler P. [11], consumerism is simply seen as a, “Social movement seeking to augment the rights and power of buyers to sellers.”

According to Sethi J. O. [12], consumerism refers to, “The operations of governments, businesses, and independent organizations aimed at protecting individuals from behaviours that violate their rights and consumption. This perspective of consumerism emphasizes the direct interaction between the individual customer and the business firm.” Additionally, Brian Roach, Neva Godwin, and Julie Nelson [13] opined, “Having one’s sense of identity and meaning is defined largely through the purchase and use of consumer goods and services.” Concerning economic policies, Meenu Mahajan [14] argues, “Consumerism places emphasis on consumption.” On the strength of this definition, the next section considers the evolution of consumerism and three square meals in human history.

### 1.3. Consumerism: And the Concept of Three Square Meals

According to Lee [3], the expression “Three square meals a day is an American English idiom or colloquialism established during the Industrial Revolution in the 1800s.” He (Lee: [3]) added, “The idiom ‘25¢ buys a square meal at any time of the day at the City Bakery’ originally appeared in a newspaper advertisement in 1804.” Lee [3] continued, “Square meal indicates ‘full meal’ in the sense of a satisfying meal, especially ideal for a person who works through hard labor.”

According to Tim [15], in the eighteenth century, “A British sailor’s limited diet consisted of stale bread and water for breakfast and lunch. If he was lucky, the third meal of the day contained meat and was served on a square tin tray. Because of the shape of the plate, they dubbed it their ‘square’ lunch: the only significant meal of the day. Three squares now equal three good meals per day.” Against this background, Tim [15] notes, “Continuously nourishing our bodies with three square meals makes for a happier, more energetic individual.” Furthermore, Tim [15] opined, “The square meal is a nautical phrase from the days of old sailing ships.” While tracing the historical concept of three square meals, Tim [15] went on to

say that any significant meals (generally the last of the day) would be eaten from a square-shaped wooden dish that also acted as a tray. Furthermore, he claimed that a decent dinner on board became known as a square meal. Finally, Tim [15] asserts, “The word is extensively used nowadays in sayings like three square meals a day or three squares.”

Mintz Sidney Wilfred [16] had provided us with helpful insight. He points out, “The concept of three square meals first emerged in Europe during the Middle Ages.” By this reasoning, Meals initially consisted of two main meals: breakfast and dinner. Given this situation, Mintz [16] further notes, “The introduction of lunch as a third meal gained popularity during the Industrial Revolution since workers required more nutrition to sustain energy levels throughout the day.” Against this background, it is pertinent at this juncture to take a bird’s eye view of what hospitality is in both Biblical and African worldviews. To this we turn.

## 2. Hospitality and Meals in Biblical and African Perspective

From an African perspective, Kimpinde M. C. [17] is right to assert, “Hospitality can be considered a traditional and universal concept that is linked to qualities such as compassion, attentiveness, and respect.” On this note, he argues, “While hospitality is universally recognized as a shared value, its interpretation can vary across different times and cultures.” For Alflen C. [18], some mutual elements emerge in response to the question, “When do you experience hospitality?” In response, Alflen [18] states, “People perceive hospitality when they sense a warm welcome, a human touch, autonomy, accountability and the freedom to choose. Hospitality is a sentiment that emerges from interpersonal relationships and is shaped.” In Africa, Alflen [18] notes robustly.

Individuals feel hospitality when they sense a warm welcome, a human touch, autonomy, accountability, and the freedom to choose. An individual’s own experiences shape the emotion of hospitality, which arises from interpersonal relationships. Creating a warm and inviting atmosphere where everyone feels appreciated and cared for is the essence of hospitality, which goes beyond simply offering food or shelter. It entails treating everyone with compassion and love, notwithstanding their differences.

From a historical and etymological standpoint, Kimpinde [17] is on target. He believes, “Hospitality is linked to the welcoming demeanor extended to strangers. During ancient times, hospitality was regarded as a fundamental aspect of humaneness and ethical conduct, and its absence was equated with a deficiency in civilization.”

Vijver H. [19] traces the etymology of Greek and Latin root words associated with stranger and guest. He wrote, “The Greek term ‘xenos’ has dual meanings: ‘stranger’ and ‘guest’.” Similarly, in Latin, these concepts are linked. The Latin

name 'hospes' means 'guest', whereas 'hostis' originally referred to a foreigner." In a similar vein, Anderson D. W. [20] stated that in antiquity, "Hospitality was strongly related to the act of hosting people, particularly foreigners. It was regarded as a religious obligation, with many forms of hospitality described in the Old and New Testaments, including giving lodging, washing guests' feet, preparing meals, and assuring safety." Stockman R. [21] corroborates, "By the fourth century in early Christianity, hospitals were established as residences where pilgrims, foreigners, the sick, and the elderly could find accommodation and care."

During the Middle Ages, Kimpinde [17] espoused, "Monasteries provided refuge for foreigners." On the strength of Kimpinde's submission, it is right to conclude that in Western civilization, Christian communities pioneered organized hospitality practices, providing the framework for the construction of hospitals and senior care facilities. Many healthcare organizations today, including hospitals, nursing homes, youth centres, and schools, can trace their roots back to these early Christian communities. This perfectly explains why Kimpinde [17] argues, "It is also appropriate to consider the ethical aspects of hospitality."

Food, in the estimation of David P. [22], is, "An essential component of the covenant community's connective tissue." He went on to suggest that the Bible begins and ends with a shared dinner: the first being a terrible one-course affair (Genesis 3), and the latter a wonderful wedding party (Revelation 19). In light of this, he contends, In between these events, God delivered his people from slavery and death with a meal (Exodus 12), ate and drank with Israel's elders (Exodus 24: 9-11), and rescued them from annihilation through a series of feasts (Esther). Jesus created the new covenant with a meal (Matthew 26), frequently spoke, made disciples, and performed miracles at the table (Luke 14-15), and even his resurrection epiphany to the Emmaus Road disciples came during the breaking of bread.

David [22] identifies ten feasts described in the Book of Luke that demonstrate the importance of food in the Bible. They include; Levi's Banquet (Luke 5: 27-39); Dinner with Simon the Pharisee (Luke 7: 36-50); Breaking Bread at Bethsaida (Luke 9: 10-17); Mary and Martha (Luke 10: 38-42); Midday Meal with a Pharisee (Luke 11: 37-54); Sabbath Supper with a Pharisee (Luke 14: 1-24); Feasting with Zacchaeus (Luke 19: 1-10); the Last Supper (Luke 23: 7-38); and breaking bread at Emmaus (Luke 24: 13-35) and lastly the feast of the resurrection community (Luke 24: 36-49).

While analyzing scriptural texts such as Matthew 25: 35-40 and Hebrews 13: 2, Sihombing B [23] argues, "The custom of hospitality has been practiced by diverse societies from ancient times and is seen as a sign of a civilized society." For this reason, he (Sihombing [23]) posits, "The Bible and other ancient books contain examples of hospitality extended to outsiders - those who are dislocated, displaced, or ostracized. Hospitality entails treating outsiders with warmth and generosity, making them feel welcome in society or inside a fami-

ly."

Kimpinde [17] contended that "It was customary in the old world to eat meals with family, friends, and clients." As a result, many remarks provide sensible advice or moral philosophical teaching on what kind of persons one should and should not share meals with," (Kimpinde [17]). Kimpinde [17] pointedly declares, "Hospitality is not limited to a specific group of people since being selective goes against our value as followers of Christ."

Echema A. [24] describes African hospitality as "The act of graciously offering without asking anything in return; a consistent readiness to share unreservedly, embracing both social and religious dimensions." This invariably requires a willingness to help, support, love, and bear each other's sorrows without prioritizing profit or incentives as a motivator. Hospitality is thus a basic virtue in African societies that promotes inclusivity and a sense of belonging. Growing up as a young African, my father's open-door approach with friends and family represented this cultural norm. The African proverb, 'The immensity of a forest is known by the number of trees,' emphasizes the significance of respecting each individual for their contribution to the community. Olikenyi G. I. [25] underscores the fact that "African hospitality persists as an important component of life on the continent, despite external influences and modern demands." This view perfectly rhymes with Mercy A. Oduyoye's [26], point. She believes, "Hospitality is inextricably linked to African identity and religious beliefs based on the Bible." Moeahabo Phillip Moila [27] sees African hospitality as, "An essential component of African culture and morality, emphasizing its practical application in everyday life." This submission highlights the broad and pervasive nature of hospitality in African societies, reflecting its deep connection to community, ancestors, and spirituality. Little wonder, Tutu N. [28] emphasizes the, "Interwoven nature of African hospitality through the notion of ubuntu or botho, which embodies compassion, generosity, and advocacy for others, fostering a sense of shared humanity and togetherness throughout communities." Of course, an average African knows that Ubuntu embodies compassion, kindness, and hospitality, as well as advocating for others and accepting vulnerability. It recognizes humanity's interdependence, emphasizing the significance of unity in variety in building Christ's house. Tutu [29] further emphasizes the importance of, "Interdependence, claiming that our humanness is shaped by our interactions with others. This connection is important since breaking this fundamental law of our existence might lead to numerous issues." This then brings to view and necessitates the need to look at economic theory.

### 3. Economic Theory, Budget Line, and Consumerism in Africa

Roach, Godwin, and Nelson [13] opined, "The economic activity of consumption is defined as the process by which



goods and services are put to final use by people.” For me, this rather dry, ivory tower academic definition fails to capture the multifaceted role of consumerism in our lives as asserted by Jackson Tim [28]. Roach, Godwin, and Nelson [13] held, “Economic theory in the twentieth century simply assumed that the vast majority of people act rationally to maximize their utility. Our consumption behavior transmits a message to ourselves and others about who we are and how we fit in with, or distinguish ourselves from, other people.” This stance resonates with the classic postulate of the father of economic, Adam Smith, who once quipped, “Consumption is the sole end and purpose of all production and the welfare of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer.” This position led to the conclusion that the consumer sovereignty refers to the concept that the ultimate economic purpose is to satisfy

consumers' needs and wants, and that the economy is ultimately governed by consumer preferences.

### 3.1. The Budget Line

It was Roach, Godwin, and Nelson [13] who opined, “The decisions we make as customers are yet another example of economic tradeoff.” In this situation, consumers' spending is limited by the size of their entire budget. This can be expressed in a simple model in which consumers can only pick between two commodities. Figure 1 below depicts a budget line that displays the combinations of two commodities that a consumer can purchase. In this case, the consumer, Joshua Matthew, has a budget of N8000. He can purchase bread and yam tubers to feed on. Bread costs N1000 per loaf, while a yam tuber cost N2000 each.

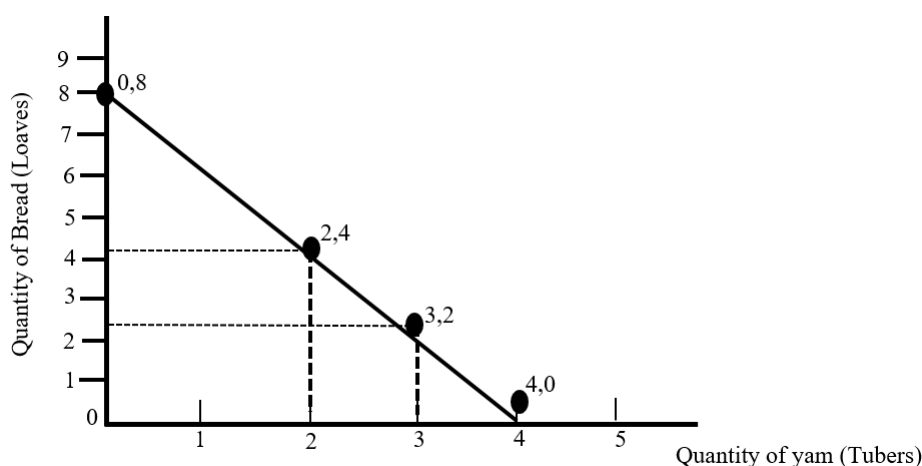


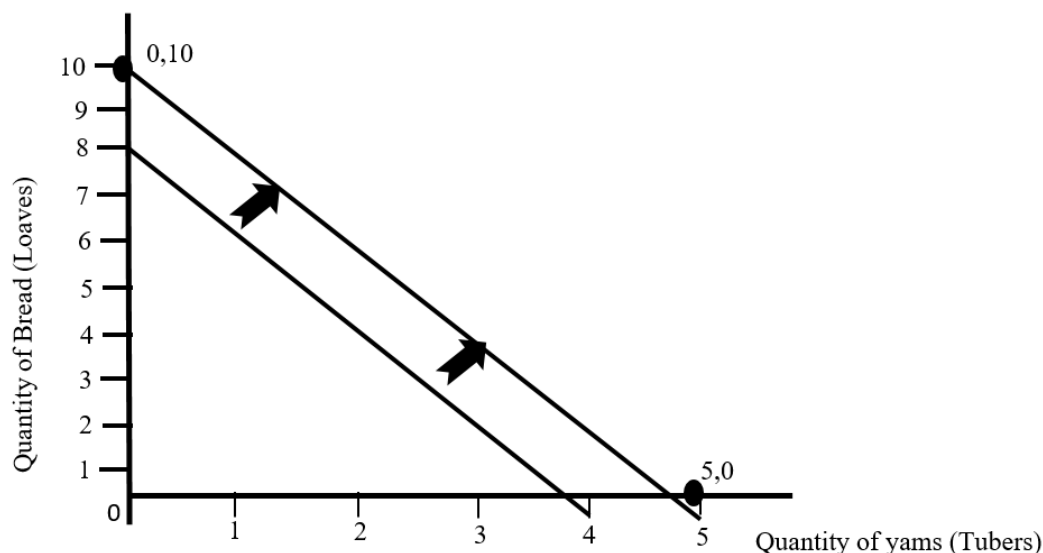
Figure 1. Budget line.

If Joshua Matthew only spends N8,000 on chocolate, he can buy 8 loaves of bread, as shown by the point where the budget line intersects the vertical axis. If he just buys yam tubers, he can buy four of them, as shown by the (4, 0) point on the horizontal axis. He may also purchase any mixed item in between. For example, the point (2, 4), which represents two tubers of yam and four loaves of bread, is likewise attainable. This is because  $(2 \times \text{N}2000) + (4 \times \text{N}1000) = \text{N}8000$ . (We draw the budget line as continuous to reflect the more general case that might apply when there are many more possibilities, but in this case, we assume Joshua Matthew buys whole loaves and whole tubers and not fractions.).

In this paper, I assume that a budget line is analogous to the idea of a production-possibility frontier, which invariably defines the options available to Joshua Matthew. The points above and to the right of the budget line are not affordable.

Points below and to the left of the budget line are affordable but do not deplete the entire budget. In this simplistic model, economists believe that consumers always want more of at least one of the products under consideration. Hence, consuming below the budget limit is consequently inefficient; cash that could have been utilized to meet Joshua Matthew's desires are being wasted. On this basis, economists think that customers will choose to consume at a specific position on the budget line.

The budget line's location is determined by the entire budget (revenue) as well as the pricing of the two goods. For example, if Joshua Matthew has N10,000 to spend instead of N8,000, the line will shift outward in a parallel pattern, as seen in Figure 2. He could now eat more yams, bread, or a generous combination of the two.



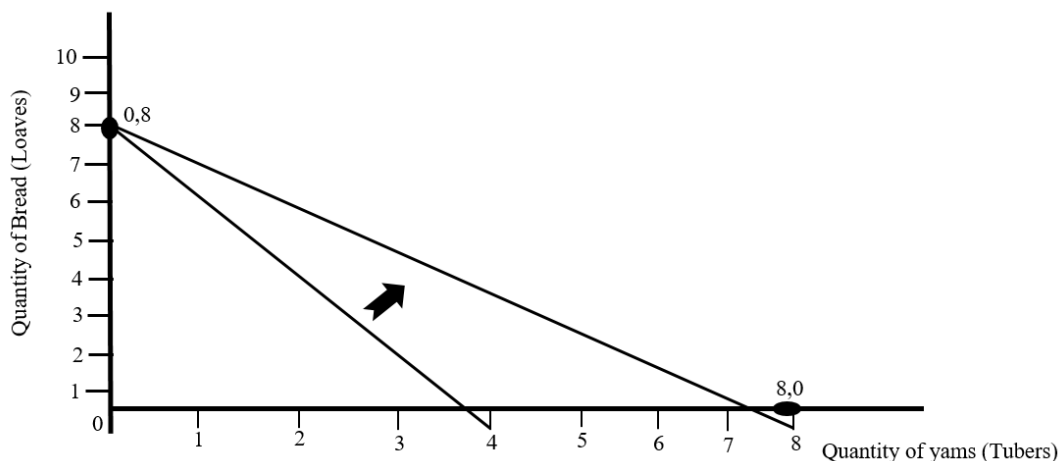
*Figure 2. Effect of an increase in income.*

A change in the price of one of the commodities causes the budget line to revolve around a point on one of the axes. So, if the price of a tuber decreased to N1,000 (and Joshua Matthew's salary remained N8,000), the budget line would rotate out, as illustrated in Figure 3. Now, if Joshua Matthew just purchased yam tubers, he could buy 8 instead of 4. Although the price of yams remained constant, he could only afford 8 loaves of bread.

It should be noted that if both prices change, the budget line

may shift in any way, depending on how the prices change. If both prices changed by the same amount, the new budget line would be parallel to the original, as if income had changed.

A budget line thus indicates the various combinations of purchases, but it does not specify the combination a buyer will select. Going by the argument of this section of the paper, the budget line reflects the difficulty that a customer faces in meeting the possibility of three square meals per day.



*Figure 3. Effect of a fall in the price of one good.*

### 3.2. Consumer Utility

Roach, Godwin, and Nelson [13] revealed that "Utility is the pleasure or satisfaction that people derive from consuming commodities, services, or experiences. Furthermore, we presume that people make purchasing decisions to maximize

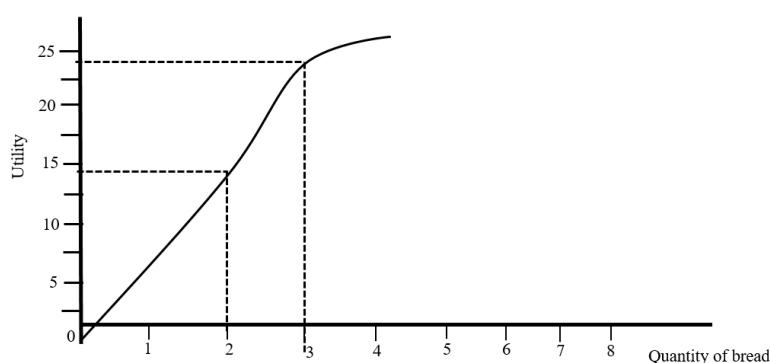
their utility. However, we realize that customers frequently do not make the optimal decisions, because they occasionally act irrationally or are overly affected by specific facts (or misinformation)." Table 1 presents the total utility that Joshua Matthew obtains from purchasing different quantities of bread in a given period, say a day.

**Table 1.** Joshua Matthew's Utility from consuming bread.

Quantity of Bread	Total utility	Marginal utility
0	0	-
1	10	10
2	18	8
3	24	6
4	28	4

Quantity of Bread	Total utility	Marginal utility
5	30	2
6	29	-

We can then plot Joshua Mathew's total utility from consuming bread in Figure 4. This relationship between utility and the quantity of something consumed is called a utility function, or a total utility curve.

**Figure 4.** Joshua Matthew's Utility Function for Bread.

Economists typically focus on the change in utility from one level of consumption to another, rather than total utility. This change in utility for a one-unit change in consumption is called marginal utility, and we can find marginal utility by looking at Table 1. For example, Joshua Matthew gets 10 units of "satisfaction" from eating his first loaf of bread, while his utility increases from 10 to 18 units by eating his second loaf of bread, but his marginal utility of the second loaf of bread is only 8 units, and he gets a marginal utility of 6 units when he consumes his third loaf of bread. In Figure 4 that Joshua Matthew's utility curve levels off as his consumption of a loaf of bread increases. This is generally expected—that successive units of something consumed provide less utility than the previous unit. In other words, consumers' utility functions generally display diminishing marginal utility.

Given the table and figures/graphs above, it is clearly revealed that consumption per day for an average family will depend on the level of income. The more the income, the more the consumption and vice versa. Because of the low level of income by many families in Africa, the African consumerism level is so low below the budget line and making the consumption level relatively low and the practice of three square meals somewhat an illusion.

#### 4. $3^2$ Meals in Africa: An Idiomatic and Mathematical Myth

$3^2$  in Mathematical parlance presupposes  $3 \times 3$  or 3 raised to

the power 3 equal to 9. The usage of  $3^2$  Meals in Africa thus suggests that Africans eat 9 meals per day. Ayozie [7] postulates, "The scarcity of goods and services in Nigeria has given birth to high prices." Given this scenario, he states further, "The persistent increase in retail prices in the face of perennial scarcity has angered many customers, especially with kerosene, fuel, and petroleum, as pump prices continue to rise beyond the reach of the average consumer in Nigeria."

From the foregoing view, African consumerism emerges as a response to severe economic, political, and social disruption. This type of circumstance is distinguished by rising consumer prices and falling real earnings, which the Nigerian economy, in particular, is dealing with these trending economic and social issues. For Ayozie [7], as for every African economist, "The minimum wage problem and oil subsidy strikes are all signs of economic, political, and social instability in Nigeria." It is true, as Roach, Godwin, and Nelson [13] contended, "Because insufficient consumption is more than just having a low household income, cases of absolute deprivation can be seen even in locations classified as middle or high income. Some people, notably young children, the sick, and the disabled, have unmet care needs, which makes three square meals impossible, hence, a myth."

In most developing countries, like Nigeria, Ayozie [7] asserts, A household income of N100, 000 monthly would be considered wealthy. However, in other parts of the world, it may be possible to purchase the essentials of life for this amount, at least in places with low housing expenses. How-

ever, likely, the majority of Africans living in poverty do not feel they can live a normal African lifestyle. They certainly lack the resources to purchase the homes, cars, clothing, and other consumer goods typically seen on African television.

The idiomatic expression of three square meals, as discussed earlier and established in this paper, suggests that three squares equals three good meals per day. How many African families get to have three square meals per day? How nourished and good is the meal consumed by Africans? This suggests that the concept of the Western culture of three square meals is a myth because it's unrealistic for many people in Africa. Similarly, the mathematical construct of  $3^2$  suggests  $3 \times 3 = 9$ , which points to the fact that meals should be consumed 9 times a day, tends to undermine African hospitality. This, for me, is somewhat of a myth because of the average level of income of an African family. For this reason, the next section will consider the effect of this trend on African hospitality.

## 5. Effects of the Three Square Meal Consumerism Concept on African Hospitality

In the words of Kimpinde [17], "The focus of hospitality should be on how one treats strangers." He (Kimpinde: [17]) distinguishes between three viewpoints about foreigners: viewing them as, "Distinct, as possible threats, or as weak people in need." Kimpinde [17] was also keen to state, "Hospitality should be fostered as a cultural value that encourages people to interact with one another and discover themselves." Nouwen H. [30] buttresses this viewpoint by highlighting the need of establishing a friendly environment where strangers can become friends without attempting to alter them. Hospitality is, thus, about welcoming variety and providing freedom for self-discovery. He notes unwaveringly; Hospitality involves creating a welcoming space where strangers can transition into friends rather than foes. It is about offering a place for potential change without imposing it, allowing individuals the freedom to be themselves and explore their identities. This concept of 'welcoming emptiness' emphasizes acceptance and celebration of the stranger's uniqueness, encouraging open communication and mutual respect. Hospitality goes beyond mere accommodation, encompassing emotional support and affirmation of individual autonomy.

Suzuki D. [31] claims, "As consumerism has grown, our global culture has become more and more preoccupied with purchasing goods and services to boost global economies and feel good about ourselves." Restating a slightly different nuance, Brown L. R. [32], contends, "Our culture is so firmly embedded with materialism. With the current consumer mentality, consumption and its detrimental impact on our natural resources will only increase as the population grows." In this case, consumption and population growth are closely

related. This implies that there will be more people consuming goods in areas with larger populations.

Neal D. Emerald [33] makes a pertinent case. He reasoned, "There are several ways that consumerism affects the individual, including hospitality." Mbiti [2] entertained a concern pointing out that the, The growing trend of people becoming estranged from their surroundings through education, urbanization, and industrialization is one of the major causes of stress for Africans who are exposed to contemporary change. As a result, they are left without a strong religious basis. They are caught between the life of their ancestors, which, regardless of what else may be said about it, has strong traditions and historical origins, and the life of our technological age, which, for many Africans, still lacks depth and solid shape.

Ayozie [7] cogently remarked, "Consumerism is important because inflation has made purchasing even more difficult, and rising prices have caused consumers to expect higher quality expectations, which are not met, which further exacerbates consumer frustration."

Thus, consumption expansion tends to lead to some level of global cultural uniformity among consumers, resulting in negative responses to globalization. Because consumer goods in the estimate of Goodman, Douglas J., and Mirelle Cohen [34] are, "Always cultural goods, increased consumption of imported products and services frequently cause an exaggerated sense of panic, of cultural invasion, which, if unchecked, will result in the extinction of the local culture." For Hans Peter Hahn [35], consumers "Were not viewed as customers with their own agency and culturally established habits and preferences." Cultural values, Sterns [5] believes, "Began to shift, consumption grew more widespread, and modern consumerism evolved."

## 6. Theological Implications of Dispassionate Hospitality

Kimpinde [17] makes a relevant submission. Accordingly, he shows that "Dispassionate hospitality denotes open and nonjudgmental hospitality." Quoting Acts 2: 42, he (Kimpinde: [17] maintains, "They (disciples—emphasis mine) devoted themselves to the apostles' teaching and to fellowship, to the breaking of bread and to prayer." Commenting on this verse, Kimpinde [17] opines that this, "Hospitality value appealed to him based on the love, fellowship, and sharing of the bread that was taking place on that rectangular arrangement of tables in that hall."

Alflen [18] is right to contend that "People perceive hospitality when they sense a warm welcome, a human touch, autonomy, accountability, and the freedom to choose." Hospitality is, in a sense, a sentiment that emerges from interpersonal relationships and is shaped by an individual's encounters. Before delving into the various aspects of this phenomenon and the circumstances under which hospitality thrives, it is essential to revisit the past to understand the



historical significance of hospitality and the diverse acts of hospitality that have occurred across different cultures and periods. Hospitality is more than just providing shelter or a meal; it is about creating a welcoming environment where everyone feels valued and cared for. It involves showing warmth and kindness to all, regardless of differences. True hospitality is about making true connections, empathizing with others, and listening to their needs. It encourages community, relationships, and understanding. Embracing hospitality entails remaining open-minded, addressing biases, and celebrating diversity. Ultimately, it has the potential to change lives, facilitate healing, and foster a more inclusive society. Kimpinde [17], whose ideas can never be overemphasized, notes, “Hospitality is an effective tool for fostering connections, breaking down boundaries, and boosting understanding and empathy among people. It is a fundamental feature of human connections that can alter lives, encourage healing and reconciliation, and create a more inclusive and compassionate society.”

Citing the prophecy of the restoration of Israel’s exiles in the book of Isaiah in the Old Testament—how they will feed, Kimpinde [17] observed that Isaiah is clearly anticipating something beyond a mere delicious meal. He is longing for a profound and complete connection between God and his people, a tangible experience of divine presence. This longing is symbolized by God’s act of providing and partaking in a lavish banquet feast with us (Is 49: 9). Obviously, the prophet Isaiah foresees God fulfilling the promises made to David and extends an invitation to the hungry and thirsty, thus, come, all you who are thirsty, come to the waters; and you who have no money, come, buy and eat! Come, buy wine and milk without money and cost. Why spend money on what is not bread, and your labour on what does not satisfy? Listen, listen to me, and eat what is good, and your soul will delight in the richest of fare (Is 55: 12, NIV).

Pitre B. [36] underscores the notion of provision, stating that the prophet Ezekiel predicts that when God sends his Davidic Messiah to shepherd his people, one of his responsibilities will be to provide bread and sustenance (Ezekiel 34: 23-24). In essence, Israel joyously awaits a future in which God and his Messiah extend a divine welcome, salvation, and harmonious relationship to Israel through shared hospitality and intimate fellowship between God and his people (Pitre: [36]).

Jipp J. W [36] says, “By having meals with strangers, Jesus creates a hospitable setting in which they can meet God’s transformational presence, moving from strangers to friends of God.” This, no doubt, was clear in the delight and enthusiasm shown by the event organizers that afternoon. For example, Jipp [37] is convinced that “Jesus’ participation in the ‘big feast’ held by Levi the tax collector represents the mending of Levi’s damaged relationships. Similarly, Jesus’ supper with Simon the Pharisee provides a welcoming setting for the ‘sinful lady’ to experience Jesus’ rescuing presence, leading to her encounter with divine forgiveness, peace, and

acceptance in God’s community and kingdom.”

Kimpinde [17] incisively captures the scene of ecstasy in Zacchaeus’s encounter with the Lord Jesus Christ by maintain that “When Jesus informs Zacchaeus that he must be a guest in his home, it fulfills Zacchaeus’s desire to meet Jesus, and their shared hospitality strengthens this link even further. Hence, Jesus could say ‘Salvation has come to this house today,’ (Lk 19: 9).” Furthermore, Kimpinde [17] paints, “Jesus and Zacchaeus exchanged hospitality, which provided the environment for Jesus to share his presence with the outcast and incorporate him into God’s family as a son of Abraham (Lk 19: 9).” For Kimpinde [17] as for a Bible-believing Christian, he believes that “Dispassionate hospitality, as a Christian virtue, symbolizes unselfish love, compassion, and acceptance of others, reflecting the teachings of Jesus Christ. This activity promotes community, healing, and reconciliation while demonstrating God’s unconditional love.”

## 7. African Consumerism and the Challenges of Three Square Meals Sustainability

Ayozie [7] aptly notes that “Rising incomes and living standards, as well as higher education, have raised customers’ concern for quality of life.” In addition to this, he adds succinctly, “The increasing prices reduce the rise in actual purchasing power, making judicious expenditure important, and post-purchase dissatisfaction unbearable.” By this reasoning, it is not out of place to assert that these rising incomes and standards of living suggest the challenges that even if the concept were rightly understood in the mathematical sense of  $3^2$  presupposing  $3 \times 3 = 9$ , people will find it absolutely difficult to sustain the concept of three square meals. As I believe, when the prices of goods and services are on the increase, it will be difficult for people to eat three nourished meals in a day, let alone 9 meals, which doubtlessly, is not feasible in the present African context. Roach, Godwin, and Nelson [13] say it better. For them, “As social beings, we compare ourselves to others. Our income and consumption levels are among the most essential ways in which we evaluate ourselves relative to others.”

The problem is not only that more spending does not lead to more satisfaction, but that it always comes at a cost. People’s personal and family time are hampered by the increased hours they must labour to generate money which makes three square meal challenging (Roach, Godwin, and Nelson [13]). Richins M. L. and Dawson S. [38] claim, “Materialism is a personal value that represents people’s conviction that owning belongings and material stuff fosters success and pleasure and can play a significant part in a person’s life.”

The Guardian Newspaper [39] reported on March 31, 2024, that “Soaring food costs could exacerbate the public health crisis and starvation.” This position points to the fact that due to the severe economic conditions brought on by the devalu-

ation of the Nigerian Naira and the end of the gasoline subsidy, which have resulted in high inflation and skyrocketing prices for goods like food, many Nigerians find it difficult to eat three square meals a day. Because of this, some Nigerians don't care about the food's quality or healthfulness; they just want their bellies full.

## 8. Mathematical Construct $3^2$ Meal: A Framework for African Consumerism

In the view of Stockman [21], “A fundamental component of hospitality is the concept of ‘welcoming emptiness,’ in which guests are accepted as strangers without feeling compelled to fit in. This method encourages the stranger to express their ideas and opinions in a polite setting while recognizing their individuality. Hospitality extends beyond supplying shelter, adding emotional support and establishing a space for authentic self-expression and comfort.” On this ground, Alflen [18] went on to say that “Hospitality involves feeding strangers wherever possible and fostering a friendly atmosphere where everyone is treated with respect and care.”

Victor Lebow [40], an economist, declared in 1955 that “A highly productive economy requires that consumption is made a way of life.” This shows that consumption is supposed to a part and parcel of any given family. Shi David E. [41] buttresses, Consumerism pervades our daily lives and shapes our daily routines. The values, meanings, and costs of what we consume have become an increasingly crucial aspect of our social and personal lives. Consumerism has become an integral part of modern life. Consumer relations today encompass all aspects of social life, including education, sexual relationships, and political campaigns.

Given this situation, Benjamin S. Orlove and Henry J. Rutz [42], posit, “The significance of consumption extends beyond the act of consuming, which includes the acquisition, use, and disposal of products. Consumption is articulated through various behavioral methods. It is a framework for assigning meanings, standards, and strategies to social norms. Consumption permeates daily life and is vulnerable to a variety of

perspectives.” Kimpinde [17] sums it up right. He opines, “Jesus tells the three parables of the lost sheep, lost coin, and the prodigal son as a response to the Pharisees and Scribes who were angrily complaining about his extension of hospitality to the wrong people.” The Bible narrates, “By this time, a lot of men and women of questionable reputation were hanging around Jesus, listening intently. The Pharisees and religious scholars were not pleased, not at all pleased. They growled, “He takes in sinners and eats meals with them, treating them like old friends” (Luke 15: 12, MSG).

Given that meals are an inseparable part of human existential life, this paper argues that Jesus' three parables are a commentary on the meaning of his invitation to have meals with sinners and tax collectors. When Jesus spends a meal with sinners, it symbolizes the heavenly shepherd's recovery of Israel's lost sheep (Luke 15: 3-7; see also Ezekiel 34: 11-12). His eating meals with marginalized people is the crux of Luke's follow-up to his Gospel, the Acts of the Apostles, emphasizing the tangible presence of the resurrected Lord that continues in the act of sharing meals, providing food, and replicating Jesus' welcoming spirit. The community puts Jesus' teachings by engaging in a form of hospitality and food-sharing that is not based on expecting something in return, fostering a sense of unity among a diverse group of people from different social backgrounds (wealthy, impoverished, widows), cultural origins (Hellenists and Hebrews), and genders (Kimpinde: [17]).

Through and through, this paper points out that if the mathematical construct of  $3^2$  were rightly understood and practiced as a framework to African meal consumption by families, it would mean that 9 meals are expected to be taken by an African family in 24 hours. As a framework, if 9 meals is to be the practice of everyday family, it would mean that meals will be available at all times of the day, thus, resurrecting the African heritage of making meals available throughout the day as a hospitality value system practiced in Africa. The table below shows a better explanation to the understanding of the mathematical construct of  $3^2$  meals for 1 week, should the meals be spread across a day.

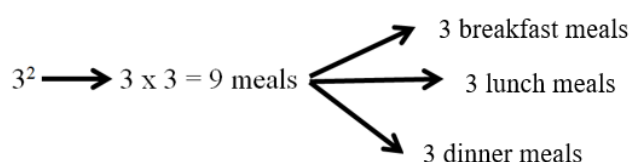
**Table 2.** Showing different meals spread across a day in a week.

Day	Meals per day	Breakfast	Lunch	Dinner
Day 1	$3^2 = 3 \times 3 = 9$ meals	3 meals	3 meals	3 meals
Day 2	$3^2 = 3 \times 3 = 9$ meals	3 meals	3 meals	3 meals
Day 3	$3^2 = 3 \times 3 = 9$ meals	3 meals	3 meals	3 meals
Day 4	$3^2 = 3 \times 3 = 9$ meals	3 meals	3 meals	3 meals
Day 5	$3^2 = 3 \times 3 = 9$ meals	3 meals	3 meals	3 meals
Day 6	$3^2 = 3 \times 3 = 9$ meals	3 meals	3 meals	3 meals

Day	Meals per day	Breakfast	Lunch	Dinner
Day 7	$3^2 = 3 \times 3 = 9$ meals	3 meals	3 meals	3 meals
Total	63 meals	21 meals	21 meals	21 meals

From the above, considering the meals consumed in 1 week, it shows the total number of 63 meals to be consumed by a given family, amplifying the essence of hospitality and making sure that food is readily available at all times.

The formula of three square meals is better illustrated below for a family that consumes different meals per day.



**Figure 5.** Illustration of three square meals per day.

## 9. Conclusion and Recommendations

Reflecting the ideals and ways of life of Western countries, the idea of three square meals has a long cultural past and significance, yet a mirage in Africa insofar as, practically, meals are available throughout the day. Of course, the practice of  $3^2$  Meals is not universal, and the cultural variances show how varied human experiences are. It is crucial to recognize and honour the cultural value of various meal customs as urbanization and globalization continue to influence eating habits. It is on this ground that this paper undertakes to present a novel mathematical framework for understanding the three square meal notion in African consumerism is presented in this research paper. This paper has important implications for food marketing, consumer research, and cultural studies, emphasizing the importance of rightly understanding the mathematical construct of  $3^2$  which, if taken at face value, will mean 9 meals are eaten per day. This of course, contravenes African consumerism, which, because of our hospitable nature, food is available at any time of the day in tandem with Africa's spirit of hospitality, thereby sustaining the African culture of hospitality by providing readily available meals at all times, regardless of economic challenges. I recommend with Ayozie [7] that organizations and/or associations should restrict the ever-rising prices that produce inflation and render the incomes of workers useless, which makes three square meals impossible, even when the practice of hospitality is to be exercised. In addition, Ayozie [7] stated that in the 1970s, the then-Federal Military Government attempted to safeguard consumers by enacting the Price Control Decree of 1970 and establishing price ceilings for petroleum and other products. The Price Control Decree estab-

lished Price Control Committees in each state to oversee the precise pricing allotted to products. The government has imposed a ceiling on the prices of controlled commodities like petroleum to ensure that customers do not pay more than necessary. I would recommend that governments of African nations should be proactive to cater for the welfare of every citizen by making sure that the policies enacted should create a friendly environment for business organizations, which in turn create the possibility of hospitality practicable.

## Abbreviations

AMP	Amplified Version
MSG	The Message
NIV	New International Version
ECWA	Evangelical Church Winning All
JETS	Jos ECWA Theological Seminary

## Author Contributions

Reuben Turbi Luka is the sole author. The author read and approved the final manuscript.

## Conflicts of Interest

The author declares no conflicts of interest.

## References

- [1] African Economic Outlook, Macroeconomic performance and prospects (African Development Bank Shutterstock, 2019).
- [2] Alflen, C. 2008, 'Gastvrijheid in de zorg: management zorgt voor hét verschil', viewed, from <https://www.yumpu.com/nl/document/read/31365095/lees-het-volledige-artikel-facto-magazine> 2008.
- [3] Anderson, D. W., 'Hospitable classrooms: Biblical hospitality and inclusive education', (Journal of Education and Christian Belief, 2011).
- [4] Ayozie, D. O. Consumerism: Problems and Causes (Punch Newspaper, Ibadan, Nigeria, 2002), also see Ayozie Daniel Ogechukwu, consumerism the shame of marketing in Nigeria, challenges to corporate practices, (IPBJ, 2013), 14.
- [5] Benjamin S. Orlove and Henry J. Rutz, ed., The Social Economy of Consumption (Lanham, MD, 1989).

- [6] Brian Roach, Neva Goodwin, and Julie Nelson, Consumption and the Consumer Society, (A Global Development and Environment Institute Teaching Module on Social and Environmental Issues in Economics, 2019).
- [7] Brown, L. R. (2001). *Eco-Economy: building an economy for the earth*. New York, NY: W. W. Norton & Company, Inc.
- [8] David P., Cassidy Alimentary Theology: Notes on Food, Faith, and the King's Feast, retrieved from <https://www.davidpcassidy.com/blog/alimentary-theology-food-faith>
- [9] Dictionary.com (2000a). Definition of consumerism. Retrieved March 30, 2004 from <http://dictionary.reference.com/search?q=consumerism>
- [10] Dwyer, R. E. Expanding homes and increasing inequalities: US housing development and the residential segregation of the affluent. *Social Problems*, 2007.
- [11] Echema, A., 1995, Corporate personality in Igbo Society and the Sacrament of Reconciliation, Peter Lang, Frankfurt am Main.
- [12] Goodman and Cohen, 2004, p. 68. Goodman, Douglas J., and Mirelle Cohen. 2004. *Consumer Culture*. ABC-CLIO, Santa Barbara, CA.
- [13] Hans Peter Hahn, Deciding modern consumer societies, Worlds of Consumption [https://www.grammar-monster.com/sayings\\_proverbs/square\\_meal.htm](https://www.grammar-monster.com/sayings_proverbs/square_meal.htm)
- [14] Jackson, Tim, "The Challenge of Sustainable Lifestyles," in *State of the World* (World-watch Institute, Washington, DC, 2008).
- [15] Jipp, J. W., *My divine visitation and hospitality to strangers in Luke-Acts an interpretation of the Malta Episode in Acts 28: 1–10* (Brill, Leiden 2013).
- [16] Kanner, A. D. & Gomes, M. E., The all-consuming self. In T. Roszak, M. E. Gomes, & A. D. Kanner (Eds.), *Ecopsychology: Restoring the earth – healing the mind*. San Francisco, (CA: Sierra Club Books, 1995).
- [17] Kimpinde, M. C., 'Dispassionate hospitality as a Christian value: A pastoral narrative', HTS Theologiese Studies/Theological Studies, 2024.
- [18] Kotler P. and K. L. Keller, "Marketing Management," 13th Edition, Pearson Prentice Hall, Upper Saddle River, 2009.
- [19] Kunhiyop, S. W. (2008). *African Christian Ethics*. Grand Rapids/Nairobi: Zondervan & World Alive Publishers.
- [20] Lebow, Victor. <http://hundredgoals.files.wordpress.com/2009/05/journal-of-re-tailing.pdf>
- [21] Mbiti, J. S. *African religions and philosophy*, (Johannesburg: Heinemann, 1969).
- [22] Meenu Mahajan, Consumerism: A Globalization Concept, *International Journal of Multidisciplinary Research and Development*.
- [23] Moila, M. P., *Challenging Issues in African Christianity*, (CB Powell Bible Centre, Pretoria, 2002).
- [24] Newspaper advertisement, (The Republican Journal, Wisconsin, Dec 1804).
- [25] Neal D. Emerald, consumerism, Nature, and the Human Spirit, paper r submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree, 2024.
- [26] Nouwen, H., 1986, *Reaching out. The three movements in the spiritual Life*, Doubleday, New York, NY.
- [27] Oduyoye, M. A., *Introducing African women's theology*, (Sheffield Academic Press, Sheffield, 2001).
- [28] Olikenyi, G. I, *African hospitality: A model for the communication of the Gospel in the African Cultural context*, (Steylervlag, Nettetal, 2001).
- [29] Pitre, B., 2015, *Jesus and the last supper*, Eerdmans, Grand Rapids, MI.
- [30] Richins, M. L. and Dawson, S. 'A Consumer Values Orientation for Materialism and its Measurement: Scale Development and Validation', *Journal of Consumer Research*, 1992.
- [31] Robert Charles Lee, What does three square meals mean? Retrieved from <https://www.quora.com/What-does-three-square-meals-mean> February, 2025.
- [32] Sethi, J. O. *Consumerism: The Effects and Goals*, Journal of Marketing, New York, 1974.
- [33] Sihombing, B., 'Hospitality and Indonesian migrant workers', *Mission Studies*, 2013.
- [34] Shi, David E., *The Simple Life: Plain Living and High Thinking in American Culture*. (University of Georgia Press, Athens, GA., 2007).
- [35] Suzuki, D. (1997). *The sacred balance: Rediscovering our role in nature*. Vancouver, British Columbia: Greystone Books.
- [36] Stearns, Peter, *Consumerism in World History* (2nd ed. Routledge, 2006) also Stearns, Peter N. 2006. *Consumerism in World History: The Global Transformation of Desire*. Routledge, New York.
- [37] Stockman, R., 2016, *Brothers of charity: Hospitality as a community of Vincentian heritage*, viewed n.d., from <https://via.library.depaul.edu/vhj/vol33/iss1/7/>
- [38] Swagler, Roger, "Modern Consumerism". In Brobeck, Stephen (ed.). *Encyclopedia of the Consumer Movement*. Santa Barbara, Calif.: ABC-Clio, 1997).
- [39] Tim, Able., Three Square Meals, retrieved from <https://www.linkedin.com/pulse/three-square-meals-tim-able> 2015.
- [40] Tutu, N., *The words of Desmond Tutu* (Hodder and Stoughton, London, 1989).
- [41] Vijver, H., *Ethiek van de gastvrijheid: Een bedrijfsethiek voor de dienstverlening*, Van Gorcum, Assen, 1996.
- [42] Wilfred, Sidney Mintz. *Sweetness and power: the place of sugar in modern history*. New York: Penguin Books, 1985.