



MAURITIUS RESEARCH COUNCIL

**CULINARY ART, ATITHIAN TRADITION
AND BELIEF SYSTEM: AN
ANTHROPOGENIC INVESTIGATION IN
MAURITIUS AND RODRIGUES**

Final Report

June 2017

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Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation in Mauritius and Rodrigues

A Report of the Research Project

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(A Research Project Sponsored by MRC)

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Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation in Mauritius and Rodrigues

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Executive Summary

Section One

In trying to understand the making of the modern food system, it is necessary to be aware of both continuity and change in the social processes which shape the ways in which food is being produced, distributed and consumed.

In the accounts which are focused on the development of the modern food system in the West, there is an emphasis on changes which can be interpreted as progress: the triumph over the difficulties of improving the scale and quality of production; the technological achievements in both preservation and the food distribution network; the extension of consumer choice free from seasonal constraints.

Indeed, the symbolic potential of food and eating is virtually limitless, and food items and food consumption events can be imbued with meanings of great significance and surpassing subtlety, according to the occasion and the context.

Of course, the role of food and food preparation conventions in symbolizing ethnic differences is also significant, given the fact that these conventions are such central features of cultural distinctiveness, and can retain their potency among minority groups for several generations after their physical separation from the parent culture.

These categories are: cultural super foods, the main staples of the society in question; prestige foods, whose consumption is limited to special occasions or to high-status groups; body-image foods, which are seen as directly promoting health and bodily well-being; and, finally, physiologic group foods, which are seen as suitable for specific categories of individuals defined in terms of gender, age and bodily condition related to health, pregnancy, etc.

Section Two

One of the founders of the functionalist school in Anthropology, Bronislaw Malinowski, provided a highly detailed ethnographic account of food production and allocation systems, and the complex patterns of belief and social reciprocity which articulated these systems. Habitus: Habitus in the context of food consumption can be described as a set of unconscious preferences, classificatory schemes and taken-for-granted choices as subcultures pass on food practices and beliefs.

But the habitus can also go backwards in nutritional terms. This seems to be happening with the ever increasing consumption of highly palatable snack and meal combinations, and the use of prepared foods at mealtimes which may not represent a healthy diet. This consumption is cued by the production, marketing and display of new non-nutritious foods, which are more likely to be consumed in large quantities among those of lower socio-economic status.

This process is arguably at work in the transformation of diets and their colonisation by processed foods of varying types and quality, along with highly technical forms of food preparation in the home and even food technology training in schools. In sifting through some of the theoretical perspectives, referred here, to illuminate understandings of food

consumption offered much insight into the process of human consciousness, but did not consider the structuring power of food production, though the forces of commodification in shaping consumption in general.

Section Three

The early Dutch settlers exported ebony wood from Mauritius to Europe where it was used in the manufacture of guns and firearms. These Dutch settlers brought in slaves from Africa and Madagascar for the lumbering. The Dutch also introduced sugarcane and cotton as cash crop on the island.

During the century of Indian immigration and the birth of the Indo-Mauritian population, other ethnic groups in the population - the white, free coloured and slave population, classified as general population after the census of 1846 - barely grew at all. In the 1950s and early 1960s Mauritius experienced very high rates of natural population growth and this was probably because of enhanced economic growth that was being introduced in the country.

The trend of land use pattern follows the universal model, it is more profitable to produce other agricultural products than sugar cane; also the land for urban housing is costlier and more profitable than engaging in agriculture, it is therefore no wonder that the real estate business is booming in Mauritius.

It is not necessarily the more profitable land use because the labour requirements for producing food crops, for example, are much higher compared to those of sugar cane growing. If the level of per capita income, and thereby of wages is high enough, and if the

land is not required for other more profitable activities, then extensive sugar production still is the more profitable land use alternative in the Island nation.

Section Four

In general, the study aims at understanding the determining cultural factors in food habits and related practices in the development of contemporary health problems in the country for establishing a nutritional and health policy by way of insight into people's ideas on food habits and health.

Though focused on daily practices, the study includes investigations into the servings and consumption not only during social celebrations and festivities; but also on day-to-day intake of food by the people of Mauritius and Rodrigues that is determined by the social values and food codes.

This investigation hence aims at deepening further the determining cultural and social factors associated with food consumption practices followed by large a large section of population of Mauritius and that of Rodrigues leading to the development of contemporary health problems in the geographical areas of the study.

The study not only gathered latest information on food choices and practices in Mauritius and Rodrigues; but also the understanding of the other relevant processes social, cultural, political and economic which have been responsible for compelling the people to opt for these choices in diverse situations within a rapidly changing context in Mauritius and Rodrigues islands i.e. the field of the study.

Care has been taken, specially, to identify the senior citizens who have witnessed old food habits and experiencing the modern food ways; for getting the detailed understanding of the changing food pattern in the regions.

Section Five

An overview in food consumption in Mauritius appears to have a different picture of the food ways among the majority population of the island. The economic transition that followed late 1970s had changed the lifestyle of the island residents. Analyses of the narratives recorded and the other data collected during the research has been presented under various sub headings in this section.

It should be pointed out that each ethnic group has adapted cuisine in its food habits from their native place of early immigration to the country and ingredients that were traditionally utilised by the locals among the Island residents. The food that is being consumed as snack called gajak include the following: Fried chicken, fried liver (chicken, mutton), octopus in masala or salad, fried prawns cooked in masala, fried mutton, fried fish, pickles, potato salad with boiled eggs, oily cakes and other light fried snacks including grams, peanuts, potato chips, and fried eggs.

One of the effects of the life style changes in Mauritius and Rodrigues has been the growing cases of alcohol addiction and also practice of synthetic drugs intake among the youngsters. The educated women have been in particular seem to have been adopting to the alcoholic consumption in a situation where divorce and separation are common social problems that is observed in Mauritian and Rodriguean society.

The most recent boom would undoubtedly be fast food, take-away meals, eating out in a restaurant, processed and frozen foods leading to generation of much more solid waste and garbage which has led to increasing environmental. However, the locals, semi-literates, service sector and menial workers have been adjusting themselves with the traditional food vendors supplying Bhajias, gato piment, samossa, gato bringelle, Dhol puri, boulette, halim, among others.

A number of reports including the recent one by the Commission on health and quality of life mention that the high blood pressure, cardio-vascular ailments and obesity have been on an increase in Mauritius and Rodrigues. Different complication related to health observed in urban and rural areas in the region have direct link to the effects of lack of water intake by people in general. This alarming situation, as the report points out, has been due to the changing life style of the residents, in particular the changing dietary practices increasingly adopted by the people in contemporary Mauritius and Rodrigues.

Section Six

One can see a kind of fusion in the culinary practice here which has led to a kind of food specialty of Mauritian and Rodriguean society. Each ethnic group has adapted foreign cuisine in its food structure from other community and culture using ingredients that were traditionally utilised by the earlier migrants among the Island residents.

It is observed that in Mauritius and Rodrigues mostly all foods have white flour in its preparation as shown in the pictures: in breakfast food, snacks, pasta, bread, cereal etc. The most recent boom would undoubtedly be fast food, take-away meals, eating out in a restaurant, processed and frozen foods leading to generation of much more solid waste and garbage which has led to increasingly polluting the environment.

The Mauritians have their own choices of food intake, often distributed over at least three meals per day apart from munching other snacks (supplementary eatables) throughout the day. Most importantly it remains to be seen how this land use pattern can permit the growth of agricultural food and that too through a model that is sustainable.

In view of the research undertaken on food practices prevalent in Mauritius and Rodrigues islands, and analysing various aspects of investigations, the researchers would like to submit the some recommendations for the attention of the concerned authorities. In a broader sense, the recommendation can be classified under three categories:

1. The dietary requirements to be available to the people.
2. Policy intervention for rectification of gastronomical ills developing among the people in Mauritius and Rodrigues.
3. Encouraging basic production of food grains related products for consumption and development of a healthy society.

The dietary requirements:

- Free and safe portable water should be made available to every household, restaurants, schools, public places in Rodrigues and Mauritius.
- Small farmers should be encouraged to have multi -crop cultivation with necessary subsidies for organic farming so that consumption of such vegetables and farm products will be useful in developing healthy environment for human development.
- A strict control of Multinational food products in terms of quality assurance compatible to the needs of the Mauritian and Rodriguan society should be strictly adhered to safety and security and healthy

practices.(cheap Chinese food products available in the market are more damaging to health of the people for instance there has been plastic rice and noodles products. Ajinomoto is another popular component with dangerous health consequences needs to be banned).

- Beverages and soft drinks marketed by Cola Company which has dangerous pesticides content in keeping with the available medical reports affecting health should be banned from the market.

Encouraging Food Cultivation:

- The desire of the people in rural areas of Mauritius and Rodrigues is to have their choice of food cultivation and vegetables as per their likings and choice, it is expected of the government to allow this practice to help people to be occupied and engaged with farming activity.
- Organic produce should be encouraged and subsidised by the government for allowing healthy intervention in the scenario of unhealthy monotonous production.

The Land around seashores and beaches should be made available for profitable farm productions useful for the society especially coconut plantation that should be widespread not only Mauritius but also in Rodrigues.

- Harmful effect of present detrimental practices about available food consumption should be popularised and expected practices should be encouraged.
- The ultimate objective of the food cultivation programme should be sustainable for developing local varieties of food grains and farm products.

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Section One

Introduction

The food system is an incredibly (and increasingly) entangled network of people, organizations, states, regulations/laws, ecosystems, and values/beliefs. Food habits and culinary practices have a lot to do with social and cultural structures of society. One may enquire as to why and how do disparate communities across the world follow certain food practices that are in some ways unique to them? There are several cultural variations when it comes to food. There are differences even in the food eating rituals in societies. And yet, how much do we really know about food? There is the entire invisible web of relationships that connect us to this universe of food. We've become accustomed to seeing food as "just" food (normalised hegemonic idea). This is why a critical examination of this interrelationship is so revealing. (Beardsworth and Keil, 1997).

Given the relentless demands of the body for nutrients, and given the potent and multifaceted symbolic meanings that food can carry; it has become plausible and fundamental a part of human experience. Moreover, enormous amounts of human energy, ingenuity and co-operative effort are devoted to the processes involved in the production, distribution and preparation of food-processes which are absolutely essential to the long-term survival and continuity of any society. What is more, the human food chain, with its myriad interlinked and interacting human and non-human

elements, might justifiably be conceived of as the very foundation of human social organization. The high level of popular interest in this area, the relative neglect of such issues by social scientists and their virtual absence from its intellectual core becomes something of a puzzle that one needs to decipher. (Mahoney, 2015)

For example, the consumption of food and the complex of other activities and relationships which revolve around it are relatively obscured to the general public because of a critical perspective. Of course, for eating to be a mundane activity, for food to be an unproblematic aspect of daily life, one crucial condition must be fulfilled: the food supply itself must be secure. This is certainly the case for the vast majority of people in Western societies. It is frequently only within the confines of the specialized area of rural anthropology/sociology that such issues come under sociological / anthropological scrutiny. Indeed, this effect is mirrored at the domestic end of the human food chain.

In recent years there has been a marked increase in the willingness of some anthropologists to direct their attention towards this much neglected topic addressed to food-related issues. The discipline is now increasingly turning its attention to the social organization of consumption, and to the ideological foundations of consumerism in its multiple pretexts. Such a change serves to push food-related issues up the anthropological agenda, given the importance of food items in any household's expenditure patterns. This shift in the discipline involves the increasing salience of issues relating to the experiences of women, largely as a result of the initiatives taken by writers and theorists informed by feminist perspectives.

Since the purchasing, preparation and presentation of food is still regarded as essentially women's work, such activities have been drawn increasingly into the

domain of anthropological / sociological scrutiny. Furthermore, the concerns are often indirectly (or even directly) linked to the broader political and policy-oriented issues current in the society in which the discipline is practiced. In this sense, increasing interest in food by anthropologists can be seen as a reflection of the increasing importance of a range of nutritional issues in the various policy arenas. Pressure groups, professional groups and the state itself are engaged in a whole series of debates about dietary standards, food purity and hygiene, production methods and standards, animal welfare, the links between diet and health among vulnerable groups, to name but a few key examples.

The environmental concerns almost inevitably entail a consideration of the dynamics of human food chains in all its complexity. The ways in which food is produced and distributed have an enormous impact upon particular ecological systems and upon the environment in general. Conversely, environmental changes (for example, habitat degradation, erosion and various forms of pollution) can have significant implications for food supply and food quality. The increasing willingness of social scientists to focus upon such possibilities has also contributed to a rising awareness of food as a topic.

Modern Food System

In trying to understand the making of the modern food system, it is necessary to be aware of both continuity and change in the social processes which shape the ways in which food is being produced, distributed and consumed. If we were to choose to emphasize continuity, it could be argued that the modern system is merely the most recent attempt of human societies to come to terms with these perennial problems of providing food, and that the only distinguishing characteristic is the scale of the endeavour. However, it has also been argued that the modern food system is, in many respects, radically different from what has gone before. An emphasis on change and

discontinuities draws attention to the main contrasts between the food systems of traditional and modern societies.

Table 1:1
Showing Contrasts between traditional and modern food systems

<i>Activity</i>	<i>Traditional systems</i>	<i>Modern Systems</i>
Production	Small scale/Limited Locally based for all luxury goods High proportion of agricultural intensive activity	Large scale, highly specialised, Industrialised Delocalised / Globalised Maximum people have no relation to agriculture
Distribution	Within local boundaries. Kinship and family ties most important for exchange of food	Highly specialised market
Consumption	Dependent on the vagaries of the agricultural harvest	Food is always available, seasons do not have much say

Source: Beardsworth and Keil 1997: 33

The documentation of the transformation from the traditional to the modern food system has attracted the efforts of social historians, economists and nutritionists using a variety of approaches (Mennell, Murcott and Van Otterloo 1992). They have sometimes focused on one particular feature in explaining the changes observed, such as technology or transport, for example, or have attempted to analyse the entire process. Whatever the focus of any particular contribution to the literature, it is important to bear in mind several points which provide the context for all discussions.

The first is that, writers who focus on the shaping of the modern food system are usually considering relatively recent developments, beginning approximately in the eighteenth and gathering momentum in the nineteenth century.

The second point to bear in mind is that, although many writers document changes, they do not necessarily offer explanations of what happened, and, where they do, such explanations are often the focus of disputes about the validity of the evidence.

Thirdly, even where writers concentrate on one particular aspect of change, it is to recognize the interrelationship between factors responsible for of supply, distribution and demand of food system. Each may have been stimulated by the other and, indeed, by yet other social and economic changes which at first sight may not seem to be linked in any way with food. These accounts and debates in literature could indicate the complexity of the processes which contributed in shaping the modern world and provide a context for its anthropological analysis.

The process of urbanization in the ancient world had already broken the direct links between food production and consumers. However, it was the process of industrialization which altered the scale of urbanization, by creating an unprecedented demand for food supplies and distanced urban populations yet further from the sources of their food. Britain, as the first industrial nation, is one of the best-documented examples of the ways in which such changes took place and provides an ideal case study of the processes which contributed to the development of the modern food system.

The precise turning point for industrial 'take-off' is still a matter of debate (Rostow 1990; Hudson 1992), but there is no doubt that industrialization 'created machines, factories and vast suffocating cities' (Tannahill 1973: 257. This rapid urbanization in the eighteenth century was a major contributor to the commercialization of food markets, since urban living, with its pattern of waged work and separation from the agricultural base, prevented greater populations than ever

before from being self-sufficient in food Oddy (1990: 175). As these urban centres grew, the food demands of such concentrations of population could not be met from local resources.

This precipitated the rapid growth of trade over longer distances in produce such as livestock and vegetables. For example, London as a metropolitan market drew on national and not just local or regional sources for its food supplies. The markets at Smithfield for meat, at Covent Garden for fruit and vegetables and at Billingsgate for fish were renowned for the quantity and range of the produce they handled on a daily basis in response to the demand of the growing metropolis (Burnett 1989: 198).

Such a rapid increase in demand created pressures to produce more, giving all those involved in agriculture an incentive to introduce new techniques and to change the scale of food production. For example, horticulture expanded in areas adjacent to the expanding conurbations (Scola 1992). Deliberate and systematic selective breeding of livestock spread rapidly from the middle of the eighteenth century as well as systematic seed selection for increased arable output and the widespread use of specialized agricultural equipment also spread.

Possibly one of the most significant changes was the move to the use of chemical rather than natural fertilizers (Sykes 1981). Increased yields and improved stock gave landlords a better return on their investments. Land rents were raised, putting pressure on farmers to change the pattern of land use to make it even more productive. One of the by-products of this transformation was to change the appearance of the landscape from open fields to fenced and hedged farms (Turner 1985).

A key element which ensured that these newly expanded food supplies reached their markets was the parallel expansion of methods of transport (Bagwell 1974). Traditional drove roads, along which animals were herded to market, often over long distances, were augmented by turnpike roads and canals in the later eighteenth century. These enabled agricultural produce to be moved in bulk, where speed mattered less than cheap and reliable delivery. From the middle of the nineteenth century the capacity of internal transport was further augmented by a railway system which was rapid, reliable and flexible in bringing food supplies to distribution centres and markets.

By the end of the nineteenth century railways were even able to provide specialized facilities for handling foods such as fresh milk and chilled or frozen meat. At the same time, the rapid transport of fish from trawler catches in the North Sea and the Atlantic was possible. In the case of Britain, fish and chips was said to have established one of the most popular meals of the working classes, (Walton 1992).

Specialized facilities for handling food resulted from scientific and technological advances in preservation. Traditional preservation methods, such as salting, pickling and drying, continued in use alongside the greater use of sugar as well as chemical additives (Roberts 1989; Muller 1991). Until the late eighteenth century, sugar had been a luxury confined to the use of the rich, but mass-production made it available for use in a very wide range of food processing (Mintz 1985). The metallurgical development of cheap sheet steel, covered with a veneer of tin, made canning an economic process with minimal health risks, whilst refrigeration and other types of temperature control mechanisms extended the opportunities to abolish seasonal supply problems (Roberts 1989; David 1994).

New foodstuffs were literally invented (margarine, for example), or manufactured (condensed milk, block chocolate and cornflakes) by food scientists. The life of some foods, such as milk, was extended by pasteurization. Because of improvements in temperature control in transport by sea, bananas became available in Europe for the first time in the 1890s.

By the beginning of the nineteenth century, Britain was a net importer of food and the contribution of overseas supplies to the British larder became ever greater important, particularly from the last quarter of the nineteenth century. In the twentieth century, such was the reliance on these overseas food supplies that Britain continued to import food even during two World Wars when transport by sea was both dangerous and uncertain. The diminished quantities of these supplies led to wartime food rationing (Burnett 1989).

As a particularly powerful and affluent nation by the standards of the time, Britain was able to draw upon food supplies on a worldwide basis: grain from the Midwestern USA; dairy products from Denmark and Holland; beef from Argentina; lamb from Australia; tea from the Indian sub-continent; coffee from Brazil; cocoa from West Africa; sugar from the West Indies. All this was made possible by emerging international agricultural specialization combined with improved transport over long distances. By 1850, an international economy had been established which had transformed the landscapes and the organization of agriculture in the participating countries (Foreman-Peck 1993). Many of these, for example the tea gardens, the sheep pastures and the cattle ranges, remain and are part of the current global food system.

Overseas Market

Trade was often two-way. Countries of the British Empire, together with a number of nations with close economic ties to Britain, such as Argentina, Chile and Uruguay, paid for imports of capital and of manufactured goods from Britain by the export of food (Cain and Hopkins 1993; Saul 1960). Indeed, Tannahill suggests that 'the quest for empire was partly quest for overseas markets' (1973:257).

Studies of trade in specific foods (Hobhouse 1985; Mintz 1985; Solokov 1991; Visser 1986) have drawn attention to the ways in which such trade has shaped international relations. Governments were not neutral in the development of the international economy. In Britain, there were parliamentary debates about the most advantageous policies to pursue in relation to trade with particular consequences for food, the most important debate being that focused on the relative merits of 'free trade' versus 'protection'.

The publication in 1774 of Adam Smith's 'The Wealth of Nations' anticipated by two years the Boston Tea Party, which signaled the determination of the American colonists to have 'no taxation without representation'. Indirect taxes on food levied by the British government have been cited amongst the causes of the American War of Independence (Langford 1989). Once the Americans had secured their victory, British governments moved with hesitating steps towards free trade and the removal of taxes on food and drink. The main opposition came from agricultural interests which wished to retain protection for the cultivation of wheat.

The British government was convinced of seeking the cheapest food prices on world markets by removing all import taxes on food as a direct consequence of the failure of the potato crop in Ireland in 1845, with its terrible consequences of starvation

for large numbers of the rural population. (Salaman 1985: 289–316). Governments had always been concerned to maintain standards in the food market. And, weights, measures and qualities had long been the subject of legislation and intervention (Ministry of Agriculture, Fisheries and Food 1989). However, intervention in cases of food adulteration, which was alleged to have become much more common in the nineteenth century because of increased demand and unsupervised production, proved difficult. The development of scientific analysis, particularly in chemistry, made it possible to have reliable tests for impurities.

In Britain, the prevention of food adulteration was part of the public health movement which culminated in the appointment of medical Officers of health after 1848. Legislation specifically concerned with food and drugs followed once the scientific tests were acceptable to the legislature. It must be noted that the first law to protect consumers from adulterated food took effect in 1875 in Britain (Burnett 1989). During this time there were concurrent developments in the distribution and retailing of food. Consumers in rural society usually had direct contacts with their suppliers at local markets or by regular contact with the dairy or the bakery. Once towns grew beyond a population of a few hundred families the establishment of regular shops became the norm, a process that accelerated with the urbanization which accompanied industrialization.

As supplies to shops became both more regular and reliable, consumers lost contact with processes of production. The number of shops and their range of products increased rapidly with the expansion of retail trade in food. For example, the late nineteenth century was the time when greengrocers, confectioners and other specialist outlets came into separate existence (Fraser 1981). These changes occurred in advanced economies during the nineteenth century. Large-scale production had begun during the eighteenth century with the establishment of larger

breweries, such as Guinness in Dublin and Barclay's in London. A similar willingness to invest in technologies on a large scale to meet the demands of the growing market for manufactured foods gave rise to companies making a wide range of products, from custard powder to margarine.

In Britain, from the middle of the nineteenth century, the use of brand names became an advantage in reaching consumers through advertising. The national market, by the end of the nineteenth century, covered a wide range of branded food products in most lines of grocery and confectionery (Roberts 1989). At the same time as brands replaced locally produced foods or wholly new items became available, retailing itself underwent major changes. The reasons for this were not only a consequence of production methods or the supplies of products from overseas, but also the need to reach the greater numbers and variety of consumers in urban centres. Such consumers included those who wanted value for money and guaranteed quality.

International Inequalities

In the accounts which are focused on the development of the modern food system in the West, there is an emphasis on changes which can be interpreted as progress: the triumph over the difficulties of improving the scale and quality of production; the technological achievements in both preservation and the food distribution network; the extension of consumer choice free from seasonal constraints. However, considered from a global rather than a Western standpoint, a different picture emerges, one which draws attention to the variable consequences of such changes for those not in the 'First World'.

For example, Pelto and Pelto argue that the transformation of world dietary patterns may be characterized using the concept of 'delocalization' in relation to food

production and distribution. By delocalization they refer to the processes in which food varieties, methods of production and patterns of consumption are 'disseminated throughout the world in an intensifying and ever-increasing network of socio-economic and political interdependency' (Pelto and Pelto 1985: 309). They acknowledge that the process of delocalization makes it possible for an increased proportion of the daily diet to be drawn from distant places and that it arrives through commercial channels. However, they also draw attention to the fact that the same process of delocalization has quite different consequences in industrialized societies compared with those which are less industrialized.

In industrialized societies, delocalization is associated with an increase in the diversity of foods available and an increase in the quantity of food imports. Initially, access to such foods may have been for those in privileged positions only, but in the twentieth century they become widely available to most of the population, with the exception of the very poorest. In contrast, delocalization has the opposite effect in less industrialized countries. Where people have been traditionally dependent on locally produced supplies and have distributed food outside the commercial network, the delocalization process draws them into the farming of non-traditional plant and animal varieties, into commercial production of cash crops and new kinds of food-processing on an industrial scale, and into migration from rural to urban settings.

In consequence, there is not only deterioration in food diversity locally but also a loss of control over distribution. In other words, these traditional societies are not in the process of 'catching up' with the West but are caught up in a global system which provides food choice and variety for industrialized societies at the expense of economically marginal peoples.

Nutritional and Cultural Concerns

In biological and behavioural terms humans can be classed as omnivores since they obtain their required nutrients from both animal and plant sources, and do not exhibit the kinds of physiological specializations which identify the dedicated herbivore or the confirmed carnivore. Nutrients can be defined as those chemical components of foods which contribute to one or more of the following vital bodily processes:

1. The production of energy;
2. The growth and repair of body tissue;
3. The regulation and control of energy production and tissue generation.

There are five basic groups of nutrients which we require to fulfil the above functions:

- Carbohydrates which are primarily sources of energy;
- Fats which are also, among other things, important energy sources;
- Proteins which are the sources of the amino acids required for tissue growth, but which can also play a role in the other two functions listed above;
- Minerals which are inorganic substances which contribute towards tissue growth (e.g., in bones and teeth) and the regulation of bodily processes;
- Vitamins which constitute a very broad group of substances which function to facilitate the reactions required for the body's nutritional chemistry.

In a sense, water might also be classed as a nutrient, in that this essential compound plays many roles in the human body, e.g., in the breakdown of food into its constituent nutrients (through hydrolysis) and in the transport of those nutrients in the blood. (Brownsell, Griffith and Jones 1989; Anderson 1993.)

What is particularly striking about human beings, in nutritional terms, is the sheer diversity of the sources from which they can, and do, obtain the nutrients required to keep the body in existence and to fuel its day-to-day activities. Any attempt to list the whole range of plant and animal products that currently contribute to, or have in the past contributed to, the human diet would be a task of such enormity that it certainly cannot be attempted here. What is the case, however, is that this truly impressive nutritional versatility, probably unequalled by any other omnivore, has been a vital factor in the evolutionary success of our species. *Homo sapiens* have successfully colonized virtually every available habitat type and, along with our domesticated symbionts, we have established effective dominance over a high proportion of the land surface of the earth.

Of course, for humans, eating is not simply an activity aimed at obtaining required nutrients. There is clearly much more to it than that. This becomes all too obvious when we consider the fact that all cultures are highly selective in what they actually define as food, that is, as items acceptable for human consumption. In fact, Falk (1991) argues that one of the most fundamental distinctions made by human beings is that between edible and inedible, closely related to more abstract binary oppositions such as us and them, same and other, inside and outside, good and bad, culture and nature. Something edible is something which may be safely taken into the body. However, the cultural sense of inedibility / edibility is not simply a function of some wisdom of the body based upon metabolic processes and nutritional efficiency (Falk 1991:55).

Indeed, any given culture will typically reject as unacceptable a whole range of potentially nutritious items or substances while often including other items of dubious nutritional value, and even items with toxic or irritant properties. For example, the mainstream culinary cultures of the United States and the United Kingdom rule

out horses, goats and dogs from the range of mammalian species suitable for inclusion in the human diet, whereas in other cultural contexts all these species have been, or are now, eaten with relish. (Religious beliefs may also play a role in the exclusion of certain items from the diet, obvious examples being the avoidance of pork prescribed by Judaism and Islam, and the avoidance of beef prescribed by Hinduism.

Conversely, Anglo-American cuisine incorporates large quantities of nutritionally suspect substances like refined sugar, and substances which are actually valued for their irritant properties, like pepper and mustard. Indeed, when we eat, we are not merely consuming nutrients, we are also consuming gustatory (i.e., taste-related) experiences and, in a very real sense, we are also 'consuming' meanings and symbols. Every aliment in any given human diet carries a symbolic charge along with its bundle of nutrients. Thus, our view of a particular food item is shaped as much by what that item means to us as by how it tastes or by its ability to satisfy the body's nutritional needs (although, of course, the latter two features may get themselves incorporated into the aliment's charge of meanings).

In fact, the symbolic dimensions of the foods we eat are of such central importance to us that in extreme instances we might even envisage starving rather than eat technically eatable substances that our culture defines as prohibited. Perhaps the most dramatic example of this is the near universal taboo on the consumption of human flesh. Instances of the violation of this taboo, e.g., in extreme situations of food deprivation, are regarded with a mixture of abhorrence and morbid curiosity. Thus, it is no exaggeration to say that when humans eat, they eat with the mind as much as with the mouth. Indeed, the symbolic potential of food and eating is virtually limitless, and food items and food consumption events can be imbued with meanings of great significance and surpassing subtlety, according to the occasion and the context.

Particular foods and food combinations, in particular cultures, can be associated with festivity and celebration, with piety, religious observance and sacred ritual, and with the rites of passage which mark crucial status transitions in the life cycle. What is more, gifts of food can be employed as rewards or as demonstrations of affection or approval. In Western cultures confectionery has a particular role to play in this context. Closely connected with this idea of the association between food and reward, is the association between certain foods and hedonism. Some foods may carry powerful meanings which go beyond the actual gustatory satisfaction they offer, being charged with overtones of luxury and self-indulgence. However, it is at this point that the darker side of food symbolism may come to the fore.

Luxury and self-indulgence may generate guilt as well as pleasure. Thus, foods such as chocolate may develop ambivalent symbolic charges related to pleasure but also to anxieties concerning the health-related implications of their consumption. Indeed, in a more extreme sense, in specific cultural and historical contexts, particular food items may come to bear a potent negative symbolic charge, carrying meanings associated with the dangers of disease, immorality or ritual pollution. Of course, the reverse is also the case, in so far as other food items may develop associations with health, moral rectitude and spiritual purity.

In a domestic context, the preparation and serving of food for a family can express care and concern although, more subtly, the discharging of the responsibility to prepare food for others may also be seen as an expression of the server's effective subordination to the household's provider or 'breadwinner'. Indeed, in more general terms, food represents a powerful symbolic resource for the expression of patterns of social differentiation. If we consider the underlying dimensions of social differentiation which sociologists seek to analyse and understand (class, gender,

age and ethnicity), it is clear that food can, and frequently does, play a crucial role in symbolizing and demonstrating social distinctions.

Thus, specific foods become associated with a high social class location, with high status or with socially superior aesthetic tastes. Conversely, other foods may symbolize a low social class position, low status or the condition of poverty (economic or aesthetic). There is also no doubt that in many cultures (including modern Western settings) some foods can carry a distinctively masculine or feminine charge. Frequently, this gender charge is centered upon conceptions of strength, with 'strong' foods symbolizing masculinity and the needs of men, and 'weak' foods seen as appropriate to feminine needs and inclinations. Conceptions of this sort may also be implicated in age-related food symbolism. Strong, adult foods are often seen as unsuitable for young children.

Similarly, particular foods or food combinations come to be seen as especially well-suited to children's needs and tastes, and these can take on an 'infantile' identity or association. At the opposite end of the age scale, a similar process may occur, with some foods being seen as especially appropriate for the elderly. These associations may also be linked with conceptualizations concerning differences in the appropriate diets of the healthy and the infirm. Of course, the role of food and food preparation conventions in symbolizing ethnic differences is also significant, given the fact that these conventions are such central features of cultural distinctiveness, and can retain their potency among minority groups for several generations after their physical separation from the parent culture.

Many of the aspects of symbolism mentioned above will be discussed in greater detail in the following sections here in the context of actual empirical studies

in which they are present as salient features. However, significant as the idea is that food can be used to express social differentiation, it is important not to lose sight of the fact that the food options and choices of specific categories or groups also reflect the inequalities inherent in such differentiation. The diet of the poor reflects the economic disadvantages with which they have to cope; the diet of children reflects (to some extent) their subordinate position vis-à-vis the adults who wield authority over them.

Food, Identity and Socialization

So powerful is the symbolic potential of food that it is absolutely central to our sense of identity. However, it is not only true that the eating patterns of a given group assert its collective identity, its position in a wider hierarchy, its organization, etc. Food is central to individual identity. The crucial process here is that of 'incorporation', the act which involves food crossing the barrier between the 'outside' world and the 'inside' world of the body. But the process is not only conceived as a physiologic one. We do not simply think in terms of the incorporation of chemical nutrients into the physical fabric of the body, but also in terms of our beliefs and our collective representations (Fischler 1988: 192).

For example, a widespread feature of human culture is the idea that the absorption of a given food, particularly when occurring repeatedly, can have the effect of transferring certain symbolic properties of that food into the very being of the eater. Fischler cites as a positive example the idea that red meat, with its high blood content, confers strength. As a negative example, he cites the belief among French eaters that consuming turnips induces 'spinelessness' or, literally, 'turnip blood' (Fischler 1988:279–80). Thus, the German aphorism *man ist was man isst* (you are what you eat) has both biological and symbolic dimensions.

What is more, not only are the properties of food seen as being incorporated into the eater, but, by a symmetrical process, the very absorption of given foods is seen as incorporating the eater into a culinary system and into the group which practices it. Both in terms of the formation of individual identity and the transmission of culture from generation to generation, the process of socialization is of central importance, that is, the process through which individuals internalize the norms and values of society, and learn to perform the social roles in which they find ourselves. Socialization begins in infancy through the primary agencies of the family and the school, but is not confined to childhood, and represents a continuous process throughout the life cycle, with many other agencies taking a hand.

Moreover, socialization is not merely a passive process. The individual is also active in socializing himself or herself, and one should beware of accepting an 'over-socialized' view of the human individual, since there is always leeway for a degree of choice, deviance or innovation, and there may be conflicting pressures from different agencies. The socialization of an individual into the food ways of the culture into which he or she has been born effectively begins weaning. At this stage the infant is encouraged to sample what is, at first, a relatively narrow range of solid foods. This range is progressively widened as the child is introduced to more of the food items and preparations regarded as suitable for the young.

Crucially, at these early stages, the child will be taught, and will learn by experience, how to distinguish between foods and non-foods. Young children typically place a variety of objects in the mouth in order to use its elaborate sensory apparatus to investigate their physical properties. Children may also attempt to eat substances which are not actually eatable, and to drink liquids which are not actually potable. Even a small sample of parents could provide an interesting inventory of such

substances, ranging from relatively harmless ones like garden soil, to highly toxic ones like domestic bleach.

Thus, a crucial feature of nutritional socialization involves learning how to reduce the risk of introducing hazardous substances into the body, although such hazards may be symbolic as well as physiological. Thus, the child learns how to recognize food from among a plethora of potentially edible items with which he or she may be surrounded. Humans exploit only a relatively small proportion of the available plant and animal species around them for food, as observed in all cultures, whatever the form of subsistence upon which they are based. In other words, a central part of learning to be human involves learning what humans, as opposed to non-humans, eat.

A whole range of strategies and verbal devices may be employed by parents to exert control over the child's eating patterns and to encourage, cajole or coerce him or her into the consumption of what is seen as a suitable diet (Widdowson 1981). These strategies may include the offer of rewards if the child consumes what the parents regard as desirable foods and the threat or application of punishments if such foods are persistently refused. As the individual's nutritional socialization proceeds, in Western cultures an ever-widening range of agencies, including advertisers, the mass media in general, various professional groups, state institutions and ideological or religious movements, can come to play a role.

The individual goes on to learn not only how to distinguish foods from non-foods, but also how to recognize appropriate preparation techniques, appropriate combinations of food items, and the conventions which govern where and when one eats, and with whom. Furthermore, socialization involves the familiarization of the individual with the food categorization system of his or her culture. There are a range of general categories which underlie the food classification schemes of most cultures

(Jelliffe 1967). These categories are: cultural super foods, the main staples of the society in question; prestige foods, whose consumption is limited to special occasions or to high-status groups; body-image foods, which are seen as directly promoting health and bodily well-being; and, finally, physiologic group foods, which are seen as suitable for specific categories of individuals defined in terms of gender, age and bodily condition related to health, pregnancy, etc. (Fieldhouse 1986: 54).

As such conventions and categories are mastered, the satisfaction of the body's nutritional requirements is given its shape as a complex social activity, as opposed to a mere set of internally driven behavioural responses to the need for nutrients. In this way the physiological and psychological phenomenon of hunger is transformed into the sociological phenomenon of appetite (Mennell 1985: 20). However, appetite preferences and food symbolism are not necessarily static entities, fixed once and for all in the mind of the individual by the socialization process. Individuals may undergo significant changes in their socially formulated appetites or may experience important transformations in the meanings which they attach to specific food items or, indeed, to the whole process of eating.

Thus, in a sense, an individual can be seen as having what can be termed a 'nutritional career'. This career is closely related to the life cycle, as the individual moves through childhood, adulthood and old age, and his or her nutritional practices and preferences change according to changing bodily needs and cultural expectations. In addition, individuals may deliberately initiate changes in their dietary patterns, for a whole range of reasons which they may or may not be capable of comprehending and articulating.

During the last fifty years, modern urban India's food adaptations very often constituted interesting culinary-cultural additions and reconfigurations rather than radical breaks and departures. By the 1980s, multinational agribusiness and food processing companies began to penetrate a much wider world, pulling in village economies and challenging villagers to adapt to global pressures (Gupta 1998). With Liberalization in the 1990s, however, the expanding urban middle classes from Developing countries embarked on the trans-regional as well as transnational foods and food tastes. The metropolitan newspapers and magazines also began to take note of the foreign food tastes impacting the local-regional palates.

As “eating out” became first a middle-class “fashion” and then created room for “fast foods”, those numerous restaurants, coffee shops, and the roadside eateries, mushroomed. These food outlets not only led to a relaxation of the local customary barriers to eating out, but they also prepared the ground necessary for a wider public appetite for, say, the Chinese, American, Italian, Thai, and many other foreign cuisines. However, such new entrants hardly if ever upset the much deeper culinary specialties associated with almost all major places and traditions of religious worship, sacrifice, and the cities of pilgrimage and even the erstwhile regional ruling capitals and major market towns.

Objective of the Study:

This research aims at understanding the determining cultural factors in food habits and related practices in the development of contemporary health problems in the Island of Mauritius and Rodrigues. Its objective is also to gain better insight into people's ideas on food habits and health. It would locate the food pattern of the people in the past which sustained them to preserve their stamina for strenuous work that they had to perform. The study would also attempt to document historically oriented impact of eating the kind of food variety for disease free health of people with an

interdisciplinary approach mediated through sociological and anthropological analysis.

Design of the Study

In view of the set objectives and the analysis of the collected data from primary as well as secondary sources the study has been divided into the following seven sections apart from bibliographic references, field narrative extracts in the appendix, the Executive summary and the acknowledgements:

Section One : Introduction

Section Two : Anthropological Perspective on Food and Eating

Section Three : Agrarian Relations, Land Use and Human Existence in Mauritian Nation

Section Four : Methodology and Data Collection

Section Five : Data Analysis

Section Six : Findings and Conclusions

Section Seven : Recommendations

The outcome of the study of culinary art and atithian traditions associated with prevalent belief system appears to have a multifaceted resonance in Mauritian / Rodriguean society. It is well known fact that the immigrants, who arrived in the country to replace the slaves as indentured labour under British rule, had to face near similar conditions of work and living as those of slaves. Notwithstanding the situation, they had to cope with the hardships natural and / or inflicted upon them by the owners of sugar cane fields. Their physical ailments had to be treated at their own level by controlling the food intake as medicine and source of energy to get back to strenuous tasks. This being the reality of the people in the bye-gone

era; the very fact of recording of such a dynamics will be one of the primary activities of this study.

The data collected during the research will also be prodded from the view point of the present day practices in the country. The fact that the fast food culture and consumption has been a growing practice in Mauritius; and that it has been adversely affecting well-being of the general public giving rise to diabetes, increased blood pressure, kidney failure, cardiac problems, obesity ailments apart from general fatigue and other psychological issues. The findings could possibly become a ready reckoner in keeping with the geographical climatic conditions of the country, and also, the living and working environments of the people of the Republic.

It would be pertinent to for the study to have a closer look at the anthropological perspective in dealing with the dynamics of food practices in general before we come to the understanding of the gastronomy of Mauritius and Rodrigues.

Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation in Mauritius and Rodrigues

(A Research Project Sponsored by MRC)

Section Two

Anthropological Perspective on Food and Eating

This section deals with a broad overview of the various approaches which have been engaged to analyse food systems in terms of their symbolic properties and in terms of the intricate webs of social relationships and social processes which articulate them. These theoretical frameworks explain the larger contours of food and eating practices of communities and even though the data collection and analysis is done at an individual level, it is the community practices that have been taken into consideration. It is important to bear in mind a point that the theoretical innovations in sociology and its sister discipline, social anthropology are not the cues for the total reorientation of the discipline's research activities and intellectual efforts (Goody 1982: 8); unlike its counterpart in the natural sciences, which may well produce revolutionary paradigm shifts (Kuhn 1964).

Rather, they indicate shifts of emphasis between possibilities which are always present in the act of analysis. Such possibilities may be conceived of in terms of binary oppositions, for example: a focus on the subjective world of the social actor versus a holistic focus on social structure; a focus on qualitative versus quantitative methods; a focus on synchronic versus diachronic analysis; a focus on surface structure versus a focus on deep structure, and so on. All this implies that changes in anthropological

/ sociological theory are, in effect, 'repetitive', involving cycles of changing emphasis in relation to the underlying, recurring themes of the discipline. Thus, when we examine a specific area of research like food and eating we might logically expect it to reflect the changing fashionability of the approaches.

There are three main approaches as identified by Goody (1982): the **functional**, the **structural** and the **cultural**. The studies in food and eating can effectively be classified under broad categories of *functionalism*, *structuralism* and *developmentalism*. Since many studies in this area have been empirical in nature or largely policy-oriented, and hence difficult to classify in terms of theoretical approaches. It would be pertinent here examine each of these in turn, analysing its underlying logic, the kinds of questions it poses, and looking at representative examples of its use:

A. The functionalist approach

Functionalist perspectives have exercised a powerful formative influence on sociology and on its sister discipline anthropology. Functionalism is based upon an analogy between a society and an organic system, like a living body. Just as a body is seen as made up of a set of specialized organs, each playing its own unique and indispensable role in the maintenance and continuity of the living system; society is seen as made up of a set of features and institutions which make their own contribution to the cohesion and continuity of the social system.

Thus, society is seen in holistic terms and as having emergent properties which spring from the complex interrelationships and interdependency of its component parts. Functionalist analysis consists essentially of examining particular institutions with a view to describing their functional significance. Functionalist theory makes an important distinction between the manifest function of some feature (i.e., the

function explicitly recognized by members of the society in question) and that feature's latent function (i.e., a function that a feature may fulfil, but which may not be recognized or admitted by the members of society).

Functionalist theory also recognizes that a social system may exhibit dysfunctional features which disrupt that system and lead to states which are analogous to pathology in a living body, i.e., to 'social pathology'. Some of the leading thinkers have made contributions to the development of functionalist perspectives, for example, Davis (1966), Durkheim (1984), Merton (1957) and Parsons (1951). However, the whole functionalist approach has attracted a barrage of criticism. It has been accused of being an essentially static view of human social organization, overemphasizing stability and integration, and poorly equipped to explain the presence of conflict and change in social systems.

What is more, the approach has also been criticized for failing to account for causality for the origins of particular institutions in society, assuming that describing a particular institution's alleged role or effects is, in itself, an adequate explanation for its presence. Perhaps even more problematic is the assumption that we can specify the functional needs of a social system in the same way that we might specify the physiological needs of a living body. Given that social systems have the ability to undergo far-reaching structural changes, the notion of a set of immutable and unavoidable functional needs is somewhat implausible.

The functionalist interpretations remain at the core of much sociological analysis, albeit in an implicit form. It is possible to conceive of a range of questions which could be asked about food and eating from a broadly functionalist perspective.

For example:

- How are the food production, distribution and consumption subsystems organized and how do they contribute to the continuity of the social system as a functioning whole? (In posing such questions, the organic analogy upon which functionalism is based is very much to the fore, in that society might be viewed as analogous to an enormous super organism, feeding itself and distributing nutrients around its 'body'.)

- What are the social (non-nutritional) functions of patterns of food allocation and consumption? How do allocation and consumption conventions act to express and reinforce the social relationships upon which the stability of the whole system is supposed to depend? One expression of such an issue might be the idea that food-related practices may reinforce gender divisions, such divisions being seen as functional for the system in that they could be regarded as forming the basis of the conventional nuclear family, the institution which organizes reproduction and primary socialization.

- Can we identify, in food systems, dysfunctional features, alongside the kinds of latent functions? How do such dysfunctional elements arise? What are their consequences for the social system as a whole? (One might analyse eating patterns which appear adversely to affect the health of the population, or the mechanisms which generate disruptive food-related anxieties and scares.)

Significantly, perhaps, those studies which can most clearly be identified as adopting a functionalist approach to food and eating are to be found within social anthropology. It was dedicated to the functionalist, holistic analysis of traditional social systems. Thus, one of the founders of this school, Bronislaw Malinowski, provided a highly detailed ethnographic account of food production and allocation

systems in the Trobriand Islands, and of the complex patterns of belief and social reciprocity which articulated these systems (Malinowski 1935).

Audrey Richards (Malinowski's students), set out to analyse the ways in which the production, the preparation and particularly the consumption of food among the Bantu (South Africa and Botswana) were linked to the life cycle, to group structures and to the social linkages which constituted them (Richards 1932). In a later study of the Bemba (Richards 1939), she attempted to place the nutritional culture of a traditional people into its broader economic setting. A recurring theme in Richard's study was the symbolic significance of food and of nutritional practices, a symbolism which served to express, for example, vital ties of kinship, obligation and reciprocity.

The functional significance of food and food ways was also highlighted by social anthropologists. While discussing about the Andaman Islanders, Radcliffe-Brown had sought to demonstrate the way in which food-related rituals and taboos were used, not only to impress upon the young the social value of food but also as devices for dramatizing the collective sentiments of the community, hence facilitating the individual's socialization. What is more, the co-operative production of food, and its sharing within the community, were activities which served to emphasize a sense of mutual obligation and interdependence, and hence to reinforce the integration of Andaman society (Radcliffe-Brown 1922: 270).

Another British social anthropologist, set out to document the political and ecological dimensions of Nuer society. He described in detail the relationship between kinship systems and spatial organization. He demonstrated the extent to which the food system of this pastoralist people was based upon a form of 'symbiosis with cattle'

(Evans-Pritchard 1967). In a sense, in a study like Evans-Pritchard's, the functional linkages in a food system are far more visible than in a modern system, where such linkages do not have the same immediate proximity to everyday life.

The functionalist ideas have proved quite resilient, either as explicit neo-functional arguments or as an implicit set of assumptions. Functionalist or quasi-functional perspectives lie behind some of the questions which we continue to ask about the non-nutritional role of food in society and in everyday life. These questions may not be framed in terms of what might be called 'grand theory' functionalism, but they do attest to the continuing significance of this organic analogy, albeit in a partially concealed form.

B. The Structuralist approach

Structuralist analyses of social phenomena differ from the functionalist approach in a particularly important respect. Whereas functionalism seeks to theorize the ways in which the various components of the system interrelate with each other to form a coherent whole, structuralism claims to look below these 'surface' linkages into the 'deep structures' which are alleged to underpin them. Thus, structuralism claims to analyse the very structure of human thought, even of the mind itself (Goody 1982: 17). Of greatest interest to the present discussion is the structuralism of the French anthropologist Lévi-Strauss (1963, 1966a, 1970).

Lévi-Strauss examines a wide range of anthropological material and ethnographic data (notably in relation to myth) on the assumption that the examination of these surface features can lead to the recognition of universal underlying patterns. These patterns are the deep structures, structures which represent the unvarying foundations of the enormous diversity of surface cultural forms which we can observe.

There is assumed to be an affinity between the deep structures of the human mind and the deep structures of human society. Structuralism also rests on an analogy.

In this instance, the analogy is a linguistic one, with cultural surface features seen as generated in the same way that everyday speech is seen as produced by an underlying system of rules (Saussure 1960). The structuralist gaze is directed towards the rules and conventions that govern the ways in which food items are classified, prepared and combined with each other. The assumption is that these surface rules of cuisine are themselves manifestations of deeper, underlying structures. These rules if we can decipher, will tell us much about the organization of the human mind and human society.

Lévi-Strauss uses this analogy directly by referring to the constituent elements of cuisine as '*gustemes*', deriving this term from the linguistic concept of the phoneme. Such *gustemes* can be analysed in terms of certain binary oppositions. These are endogenous / exogenous (local versus exotic), central / peripheral (staple versus garnish or accompaniment) and marked / not marked (strong flavour versus bland flavour) (Lévi-Strauss 1963). Widely quoted example of Lévi-Strauss's structuralist approach to cuisine is his analysis of the transformations involved in the actual cooking of food.

Cooking is seen as a crucial operation, in that a universal feature of human thought involves linking the distinction between raw ingredients and cooked food with the fundamental distinction between nature and culture (Lévi-Strauss 1966b). Thus, in the sphere of eating, cooking is what transforms nature (raw ingredients) into culture (acceptable food for humans). Lévi-Strauss formulates these ideas in terms of his

‘culinary triangle’ (Lévi-Strauss 1966b: 187) which lays out in diagrammatic form the transitions between nature and culture which are associated with food.

Thus, raw food, at the apex of the triangle, becomes cooked food through a cultural transformation. However, cooked food may be reclaimed by nature through the natural transformation of rotting. The transformational operations of cooking can be seen as a kind of language; in the same way that he regards marriage regulations and kinship systems as a kind of language for establishing and regulating linkages and communication between social groups in traditional societies (Goody 1982: 21). Developing the basic culinary triangle, he puts forward a more elaborate triangle of recipes, arguing that roasting is a cooking technique which is closer to the ‘raw’ apex (since it is seen by him as producing relatively little change in meat).

On the other hand, he sees smoking as a technique as closer to culture, since it transforms meat into a durable commodity. He asserts that boiling, which is mediated by water, produces results which are closer to the ‘rotten’ corner of the basic triangle. As Lévi-Strauss elaborates his arguments, the justifications for his assertions appear to become ever more idiosyncratic and even fanciful. What is more, there is a certain circularity in arguing that by analysing surface structures (like culinary practices) we can deduce the deep structures of the mind or of society, and that these deep structures are what ‘generate’ the surface effects we observe (Goody 1982: 31).

Another social anthropologist, Mary Douglas, analyses on the structuralist idea that food can be treated as a code, and the messages that it encodes are messages about social events and about social relations like ‘hierarchy, inclusion and exclusion, boundaries and transactions across boundaries’ (Douglas 1975: 61). She puts

forward a framework of categories for the description of eating (Halliday 1961). The uppermost category is the daily menu, below this is the meal, below this is the course, below this the helping and at the base of the structure is the mouthful, which he regards as the equivalent of the gastronomic morpheme.

These categories can be elaborated in terms of primary and secondary structures so that a complete description of all the elements of a daily menu could be produced using a grammatical format. Douglas applies the basic idea to the analysis of the eating patterns of her own family. In so doing, she was able to provide a fascinating insight into the way in which the same structure appears to underlay most meals in English cuisine, and the ways in which this structure repeated itself over a whole range of meal occasions, from the most mundane to the most festive. While food may be seen as a metaphor, a symbol or a vehicle of communication, it is a life-giving substance, and a meal is a physical as well as a social event (Douglas 1984).

In any discussion of the structuralist approach to food and eating reference must also be made to the work of the French author, Roland Barthes. For him, an item of food constitutes an item of information. All foods are seen as signs in a system of communication. Thus, in theory, the conceptual units for describing food can be used to construct 'syntaxes' (or 'menus') and 'styles' (or 'diets') in a semantic rather than an empirical fashion. Hence, it becomes possible to ask to what these food significations refer. Looking at food advertising as an example, Barthes identifies one theme in which specific foods are used to signify continuity with tradition and the past (Barthes 1979).

A second major theme proposed by Barthes embodies the distinction between masculinity and femininity, and involves an element of sublimated sexuality. A third theme revolves around the concept of health, in the rather specific sense of 'conditioning' the body via appropriate foods with associations like 'energy', 'alertness' or 'relaxation' (Barthes 1979: 171). For Barthes, in the developed countries there has emerged a nutritional consciousness which is 'mythically directed' towards adapting human beings to the modern world, and at the same time an increasingly diverse range of behaviours is expressed through food (for example, work, sport, effort, leisure and celebration).

Certainly, by focusing attention on the idea of food as communication, structuralism effectively rules out the analysis of the crucial interconnections which articulate the human food system as a whole. The links between food production and consumption and the wider economic order tend to fade from view (Goody 1982: 28). What is more, the structuralist analysis of food ways and food consumption patterns has had little to say about the origins of such patterns, that is, about the specific social and historical conditions which give rise to them. However, despite these shortcomings, the structuralist approach, with its use of a linguistic metaphor, has succeeded in highlighting some key themes. These themes continue to inform the relevant analysis of food and eating.

C. The Developmental approach

The developmental approach referred directly (Mennell 1985) and indirectly (Goody 1982) does not really represent an explicit perspective and a coherent body of theory in the same sense as functionalism and structuralism does. Rather, it is something of a residual category into which can be placed a range of approaches which exhibit some common features and preoccupations. The most fundamental of

these common features are the assumption that any worthwhile attempt to understand contemporary cultural forms or patterns of social relations must take into account the ways in which these are related to past forms. Thus, social change becomes a primary focus, in terms of its directions, its processes and its origins.

The developmental theory includes the processes of state formation and the formation of individual personality and conduct, as well. One of the notable effects of these processes has been a progressive shift from the exercise of external constraints upon individuals towards the development of internalized constraints which, in effect, individuals exercise upon themselves (Elias 1982). This switch from external to internal constraints affects many areas of social life, including eating. It leads to 'civilizing of appetite' (Mennell 1985: 20), a concept which has considerable explanatory power in relation to nutrition-related phenomena as diverse as anorexia nervosa and vegetarianism.

In fact, Mennell's work represents an ambitious attempt to apply Elias's figurational or sociogenic approach to understanding the contrasts and similarities of two developing systems of cuisine. How 'figurations', or sets of social, cultural, economic or political arrangements, change over time in the context of the ebb and flow of competing ideas and interests is the key question. Significant changes in a particular set of food ways are shown to be the result of processes of change which are literally occurring on a global scale. Thus, an important part of Goody's analysis is an examination of the development of what he terms 'industrial food', with all the complexities of processing, preservation (through techniques like canning and freezing), mechanized distribution and large-scale retailing (Goody 1982:184).

Indeed, the global perspective which forms a background to Goody's analysis provides the central theme of the study conducted by Mintz highlight crucial role of sugar in the nutritional practices and preferences of the Western industrial working class (Mintz 1985). He demonstrates how dramatic rise in sugar consumption was linked to political and economic processes acting at a global level. A significant contribution to the social anthropological analysis of food and eating has been made by Harris (1986). The symbolic dimensions of food and eating are the overriding ones and that these dimensions can be analysed independently of the nutritional, ecological and economic realities of human life.

In fact, a number of food prohibitions or taboos (like, the prohibition on beef eating associated with Hinduism, the prohibition on pork associated with Judaism and Islam), tend to have an essentially symbolic, moral or religious basis. Such ideas, and the nutritional practices so derived from them, may well have a strong practical logic behind them, a logic which springs out of a society's attempts to adapt to its physical environment and exploit available resources effectively.

The idea, that the traditional rules, norms and meanings which structure human food intake, are increasingly subjected to 'disaggregation'. This disaggregation involves a breakdown of these long-established rules, and crisis thus developed lead to a state that is termed as 'gastro-anomy' (Fischler 1980: 947). This situation arises out of a proliferation of contradictory and inconsistent pressures acting upon the contemporary food consumer (from the food industry, advertising and the state). What is more, the uncertainties and anxieties created by gastro-anomy and the expansion of agroindustry and industrialized food production are seen as generating disturbances in those processes through which culinary culture helps to create and sustain the individual's very identity (Fischler 1988: 289).

There are likely to be individual, of course, and collective attempts to restore order to eating practices and meanings attached to food. Thus, individuals may adopt dietary regimes (weight-loss diets, vegetarianism, etc.) in an attempt to restore some 'normative logic' into their eating (Fischler 1988: 291). The starting point of such an analysis is the concept of the aliment, that is, any basic item recognized as edible within a given nutritional culture. The term 'aliment' is employed in preference to the term 'gusteme', since it is a more general notion and does not carry the structuralist implications of the gusteme concept (Beardsworth and Keil 1992a: 288). Hence, the alimentary totality of a society is made up of the whole range of aliments available during a particular time period. At this point the central concept of the 'menu' can be introduced.

The term 'menu' is used in a more abstract and general sense than its usage in everyday speech. It refers to those sets of principles which guide the selection of aliments from the available totality. Clearly, these menu principles can take a multiplicity of forms, and a range of examples can serve to illustrate the possibilities. Thus, traditional menus draw their recommendations and rules of food choice and combination from customary practice. Such customary practices, and their supporting beliefs, are built up over many generations and derive their authority and their legitimacy from their long-established status. The prescriptions and prohibitions of traditional menus have a taken-for-granted nature for those socialized into their acceptance, so taken for granted that the rules appear natural and immutable.

Violations of these rules are likely to induce consternation, contempt or disgust, as are the rules of other cultures, which, if encountered, may be seen as barbarous or perverse. In contrast, rational menus involve selection criteria which are designed explicitly to achieve some specified goal. These goals may include weight loss, weight gain, and improvement of physical or mental performance, the avoidance of particular

diseases or the generalized promotion of good health among other things. Such rational menus are commonly based upon scientific or quasi-scientific principles and often involve the elements of deliberate measurement and calculation. Closely related to rational menus, we might identify convenience menus, where the overriding goal is the minimization of the time and effort required for acquiring, preparing and presenting food.

Another sub-type of the rational menu group is represented by economy menus where the prime consideration is to keep food costs within a strict budget. In a similar vein, a whole group of hedonistic menus can be identified, based on the goal of maximizing gustatory pleasure. In contrast to these types of menu, a group that can be termed moral menus can be identified, where the food selection criteria are derived from ethical considerations (related to political or ecological issues, or to issues relating to animal welfare or animal rights). One might observe a degree of menu differentiation in any given society, that is, different categories of individuals within the population (defined in terms of gender, age, class, caste, etc.) would be expected or compelled to make characteristically different choices from the aliments made available within a given menu.

The developmental thrust of this whole scheme becomes clear when we note that in traditional societies, characterized by relatively low rates of social change, there may be one traditional master menu, which coincides with the boundaries of the alimentary totality. In contrast, in modern and modernizing societies, with more rapid rates of social change, the exercise of choice between a whole range of contrasting and competing menu principles becomes increasingly possible. Thus, individuals will find it ever more feasible to construct their own personal diets by making more or less deliberate choices between alternative menus, possibly adjusting their menu choices to suit their mood, economic circumstances or the setting in which the eating event is

taking place. This situation can be described as one of menu pluralism, that is, a situation in which many alternative schemes to structure food choice and eating patterns are on offer.

This pluralism is a product of the very processes which have combined to create the modern food system with its globalization of food supply, its industrialization of production and distribution. Indeed, it may well be that the uncertainties of gastronomy are but symptoms of the strains involved in the emergence of a new, more open, flexible and pluralistic nutritional order (Beardsworth and Keil 1992b). This vision of menu pluralism can be seen as having some connections with the concept of *postmodernity* which has gained considerable ground in sociology and other related disciplines within the last decade or so. The term *postmodernity* refers to a phase in the development of capitalism where the location of individuals in the social order, and the formation of personal identity, are less and less a matter of class position and work roles.

Thus, it is clear that, within a setting of menu pluralism, the dietary choices made by each person within the context of an increasing variety of menu principles on offer become ever more important devices for establishing a sense of personal identity and for expressing personal distinctiveness. However, it may be necessary to exercise some caution in applying the broad concept of the ideology of consumerism (whether in its 'mass consumption' or its 'postmodern' form) to the activity of eating. Baudrillard (1988) There are no limits to consumption, since in modern and postmodern societies consumption is essentially the consumption of signs and symbols. It does not literally involve 'devouring' and absorbing the objects themselves. In contemporary society, in effect, one consumes with the mind, and the mind is potentially insatiable.

This argument may sound convincing for not only goods and services (like cars, audio-video equipments, domestic appliances, clothes, holidays, entertainment, etc.), but also, it is applicable to food items. When an individual eats, he or she consumes not only the symbolic ingredients of that item but also its physical components and nutrients. These nutrients can and do produce actual physiological satiety (through ingestion and absorption) in a way that other commodities cannot. Hence, there are always physical limits on the socially constructed demands of appetite. Even if a particular food item (oysters, for example) were seen as conferring high social status and a strong sense of self-worth, an individual could eat these only in limited quantities and with limited frequency before the body itself exercised the sanctions of nausea or even physical expulsion. Thus, while it may be important to understand the changes taking place in the broader areas of consumption and consumerist ideology, it is important to bear in mind the unique features of eating.

D. Reflexivity, Habitus and Lifeworld

Ideas of food production and consumption can help to divulge some of the inherent contradictions in the purpose of eating itself in a given society, and the way individuals are varyingly affected by what they eat. Giddens's writings on *reflexivity* have its influence on both discourse and policy. Bourdieu's concept of *habitus* and Habermas's analysis of the colonisation of the *lifeworld* by external forces take us further in theorising why and how people eat the way we do. Reflexivity is ultimately problematic in the context of diet, health and class. It could explain what drives human action of food eating and how does it lead to social change. Alongside the structuring of classes within the domain of production, the consumption patterns also get influenced by way of class structuration (Giddens 1982: 159).

Structuration theory aimed to bring together the poles of agency and structure, emphasizing the interaction between the two. Structure is reproduced and gradually

modified by individual actions taken in the context of a given structure, which constrains, and yet changes over time, by the collective actions of individuals. So for Giddens, structures are flexible, providing resources upon which actors draw (Shilling 2003: 174). In the context of food consumption, the potential for transforming one's diet for the better is limited when resources are few and / or exposure to and identification with the discourse of healthy eating – and reflexive interaction with it – is limited. New technology in agriculture, production, distribution and packaging may present consumers with new food items, but these tend to be developed and marketed according to existing tastes and patterns of consumption.

Spatial disconnectedness of modern life, impacts the lifestyles of the people as they move through their day in different locations (home, school, work, leisure, errands, and the spaces which connect them). These locations will not only have an underlying unity for a particular class or group, but also, will shape lifestyle options of the people in a given society (Giddens 1991: 83), and thereby have implications on the character of the food supply. Groups of people inhabiting the social realities of their neighbourhoods are likely to have distinct styles of life, behaviours and attitudes (Giddens 1982: 162). This is a phenomenon which consumer firms harness as they target consumers spatially, reinforcing the identification with place and social class. It is difficult to see how individual actions or choices can be seen as free of class influences in such an analysis.

Studies of the psychology of eating show, that, the process of deciding what to eat can be deeply unconscious, with any 'choice' emerging from habitus. However, Giddens cites Freud's diagnosis of the 'compulsiveness of modernity', with compulsion substituting for tradition and remaining distinct from the unconscious (Giddens 1994: 68). This is what behavioural economics and psychology have come to accept, and what has led to 'nudge' theory. Habermas speaks of the colonization

of the lifeworld by such externally introduced compulsions. This is illustrated by the extremes of food consumption in an obesogenic foodscape: compulsive eating can lead to obesity or bulimia, disorders which have emerged as food-related pathologies in late modernity. These are both social and psychological phenomena illustrating the disintegration of tradition in society (Giddens 1994: 71).

The term 'lifestyle' is associated with, among other things, dietary choice, alongside connotations of individual responsibility for such choices. For Giddens, as society becomes de-traditionalised with the advance of modernity, the notion of lifestyle becomes predominant (Giddens 1991: 5). Lifestyle choices then take the place of constraints imposed by class in formulating action (Atkinson 2007: 536). The language of 'lifestyle' can slip into discussions about diet and health all too easily; it is a central plank in the individual responsibility/choice discourse where health is concerned. In fact, the displacement of class by lifestyle as a determinant of social identity is misleading, at times (Warde 1997: 7). The only way to ensure access to this world of opportunity -and a better lifestyle- is 'emancipation from situations of oppression as the necessary means of expanding the scope of some sorts of lifestyle option' (Giddens 1991: 86).

Those living in poverty might be more susceptible to the disintegration of traditional practices than others, making lifestyle choices more fundamental to such individuals. They become 'virtually obliged to explore novel modes of activity' (Giddens 1991: 86). Even so, all such choices 'refract upon pre-existing power relations' (Giddens 1994: 76). Giddens's understanding of lifestyle is connected to the idea of habit. Choice is circumscribed by the force of habit and the limitations of individual lives. Nevertheless, the lifestyle people end up having is an 'integrated set of practices' chosen by individuals (Giddens 1991: 81). Such a concept of an 'integrated set of practices' typifying social groups, derived from detailed market

research, is the basis for consumer marketing; but are these practices really freely chosen? The discourses of free choice and individualism are indissolubly linked, and constitute the basis of consumerism itself (Skeggs 2004: 56).

Individuals form habits, and this gradually becomes a collective process; habits are shaped by forces of commodification in a case of institutional reflexivity (Giddens 1994: 101). To apply this to consumption, trendsetting individuals might start to buy something in a habitual manner and locale. Similar individuals are then targeted with a similar product in similar locales; the habit extends and the product is anchored in the lives of a certain type or group; and their lives are in turn anchored by the repeated purchase and use of the product. Lifestyles are also formed by socio-economic circumstances (Giddens 1991: 82).

The reflexive body: Reflexivity is practiced in a bodily sense: we consciously observe processes of the body, and the influences upon it within the environment. We even become 'responsible for the design of our own bodies' via the adoption of body regimes (Giddens 1991: 102). There is ever refreshed guidance on health matters, as we engage in 'reflexive appropriation of bodily processes' (Giddens 1991: 218). Giddens views this bodily reflexivity as emancipating, despite the pathological preoccupation with body shape among those with eating disorders. He also describes the body as being 'invaded' by the 'abstract systems' of a post-traditional world (ibid.) in language which resembles Habermas's colonisation of the lifeworld. Human bodies are both 'the medium and outcome of human (reproductive) labour' (Shilling 2003: 174).

There are 'foodstuffs purchased with artificial ingredients [which] may have toxic characteristics absent from more traditional foods' (Giddens 1991: 20). Even

dietary advice from experts can be 'disembedding' in that it is 'non-local' and 'impersonal' (Giddens 1994: 85). Authentic expert advice can also be overwhelmed by marketing campaigns promoting certain foods as healthy, when this is not necessarily the case (Herrick 2009). Nevertheless, these kinds of challenges simply prompt a continual revision in our understanding of our lives and identities (Giddens 1991: 20). More often than not the society aspires to operate on the basis of clear, open communication among individuals and between system and lifeworld as freedom balanced by responsibility to the collective – in the form of 'mobilising principle of behaviour' (Giddens 1991: 213).

Society must use some radical measures, beyond improved food labelling and restrictions on advertising, along with health warnings on some food products, to address the 'severe health implications' of current dietary habits. Even 'quite draconian action' against calorie-dense foods would be justifiable (Giddens 2007: 100). Lifestyle change should become the core objective of the welfare state, using both incentives and sanctions. In an approach described as 'positive welfare', 'personal autonomy and self-esteem' should be encouraged. This would enable people to 'adapt to change and to make the most of their opportunities'. There is a need to 'invest in people's capabilities', citing low self-esteem as a block to capability (Giddens 2007: 132).

Habitus: *Habitus* in the context of food consumption can be described as a set of 'unconscious preferences, classificatory schemes and taken-for-granted choices' as subcultures pass on 'food practices and beliefs' (Lupton 2003: 44). People are not necessarily making free choices; the context is given and practice begins in the absence of conscious thought. This recalls Marx's depiction of man finding himself in a set of circumstances which he has not chosen, but with which he must interact. An element of routine is generated by the habitus. Routine was an ontological necessity

which sustained frail psyches in a challenging world. Routine is not something we need so much as something we naturally do; a practical matter, arising unquestioningly out of our habitus and our relationship to the world (Atkinson 2007: 545).

It is not that choices in routine contexts such as eating are entirely automatic, but that those choices, and the capacity for reflection itself, are shaped by the habitus (Crossley 2005: 110). Whatever degree of choice exists, the 'prerequisites of choice cannot be chosen'. Much of the meaning of the term 'habitus' is captured in its definition as 'acquired disposition' (Crossley 2005: 104). This encompasses the notion of behaviour as emerging from the set of circumstances into which we are born and raised; but it also alludes to the tension between structure and agency. Structure shapes the circumstances we 'acquire' through birth, and within those limitations, we are 'disposed' to act in a given way. However, we might acquire resources of one kind or another during our lives which will allow for degrees of departure from inherited habitus.

But such acquired dispositions are not necessarily expansive in a positive way. In the context of food consumption, as agricultural production and food processing technology advanced, particularly since the nineteenth century and accelerating throughout the late twentieth century, snack and meal products emerged which had little or no connection to previous modes of eating. Some have little recognisable connection to original agricultural constituents. People from the lowest socio-economic groups consume more highly processed snack and fast foods and are more likely to experience the health effects of a nutrient-poor diet. Even some of those in higher socio-economic groups may be consuming a high degree of processed snack foods and too many calories overall for optimum health.

The food industry influences (products themselves and the marketing / advertising of them) as phenomena which can be absorbed into the habitus; as this happens, dietary practices shift to absorb the products that the industry is targeting at people. But an altered, increasingly industrialised and highly palatable food supply does not discount early, familial influences on food tastes and practices. Describing the shaping of human action by the circumstances into which one is born (and in a way which recalls Marx), Bourdieu concluded that *“it is probably in tastes in food that one would find the strongest and most indelible mark of infant learning, the lessons which longest withstand the distancing or collapse of the native world and most durably maintain nostalgia for it. The native world is, above all, the maternal world, the world of primordial tastes and basic foods”* (Bourdieu 1984(2010): 71).

Bourdieu believed in the power of the ‘oldest and deepest experiences’ and noted that tastes in food are ‘deeply rooted in the body and in primitive bodily experiences’ (Bourdieu 1984(2010): 73). Thus a taste for sweet, fatty foods established in childhood can remain decisive throughout adult life, even as products containing these elements constantly evolve in the marketplace. Barker’s epidemiological research backdates the role of habitus in diet even further, through his investigation of ‘foetal programming’, and in particular, the connection between maternal ill health, foetal under nutrition and ill health in adulthood (Barker 1998 cited in Graham 2007: 153).

A certain standard of education is generally what equips one to move from ‘merely knowing’ to valuing ‘ways of using knowledge’ (Bourdieu 1984 (2010): 73). This is a useful way of conceptualising what happens for some social groups: their diet evolves as they take into consideration and put into practice information about nutrition. This move from ‘knowing’ to ‘using knowledge’ about food doesn’t necessarily produce a uniform result: one group of people might become (possibly

overly) concerned about dietary health risks, amid ever shifting warnings absorbed by those alert to them; another might more proactively adopt a Mediterranean-type diet rich in fruit, vegetables, fish and olive oil - possibly for health reasons, but also for taste reasons. Such practices presume a certain standard of education.

The educational aspect of the habitus can be the mechanism for enlarging it beyond its earliest or most 'primitive' inputs. But the habitus can also go 'backwards' in nutritional terms. This seems to be happening with the ever increasing consumption of highly palatable snack and meal combinations, and the use of prepared foods at mealtimes which may not represent a healthy diet. This consumption is cued by the production, marketing and display of new non-nutritious foods, which are more likely to be consumed in large quantities among those of lower socio-economic status. A crucial aspect of the habitus is that it is internalised. However, even if it is not consciously experienced by individuals, habitus will be observable in 'categories of perception and appreciation' (Bourdieu 2010: 95).

A habitus imposes societal norms and restraints which may conflict with strong impulses (Crossley 2005: 105). This process may be at work in the clash between the dominant societal norm regarding slimness and the fact that increasing numbers of people do not attain it. Overconsumption of calories, lowered sensation of fullness or satiety, a primitive urge to eat as much as one can, even amid a plentiful food supply; could be some of the factors that might have trumped the widespread desire in the late twentieth / early twenty-first centuries to be thin. Only when this is mediated by vigilant and, to some degree, class-associated ideas of healthy eating and slimness is overconsumption of unhealthy foods avoided.

Culture and class are interconnected in a dynamic relationship. Over time, they create a habitus characterising large social units with shared conditions and inclinations. Bourdieu refers to 'a whole set of agents produced by similar conditions ... different conditions of existence produce different habitus' (Bourdieu 2010: 166). In the context of taste and consumption, 'people who belong to the same social group and who thus occupy the same position in social space tend to share the same tastes across all forms of symbolic practice' (Bennett 2010: xix):

"The practices of the same agent, and, more generally, the practices of all agents of the same class, owe the stylistic affinity which makes each of them a metaphor of any of the others to the fact that they are the product of transfers of the same schemes of action from one field to another" (Bourdieu 2010: 168).

Food lifeworld: The ethical dimension of the lifeworld is constituted by an idea of the good life, and any questions about the good life 'have always already been answered', as individuals perform duties which are 'inextricably tied to concrete habitual behaviour' (Habermas 1996: 190). Such understandings are cultural, given and unproblematic. The lifeworld bears some resemblance to Bourdieu's habitus, and even to Giddens's acknowledgement of the unconscious or programmed nature of social action stemming from accumulated life histories (conceived as primarily a reflexive process). The lifeworld is arguably seen more in the context of the present than the past, and in its broader societal dimension. It acknowledges that the external forces and messages are absorbed into our lives. It is also centrally concerned with language in the form of what Habermas terms communicative action.

The structural influences flowing from market and administrative systems may not be consciously experienced by individuals in their lifeworld; nevertheless they are present, and real. It is these potentially distorting influences on the lifeworld as it is

'colonised'. The 'fusion of validity and social acceptance', characteristic of the traditional lifeworld disintegrates, sooner or later (Habermas 1996: 191). This process is arguably at work in the transformation of diets and their 'colonisation' by processed foods of varying types and quality, along with highly technical forms of food preparation in the home and even food technology training in schools. Such developments have an imposed, unreflective quality to them. Lifeworld is structured and experienced through language. A tacit acceptance of the daily experience of the lifeworld is expressed in terms which are shared among lifeworld participants.

Communication would be meaningless and even impossible without these shared understandings and vocabularies (Habermas 1996: 358). It is this role for shared language and understanding which skilled marketing seeks to tap into, building on existing tastes and concepts to introduce product innovations. At the same time, the discourses of healthy eating and individual responsibility for health are absorbed into the lifeworld of those to whom such discourses are targeted. But one really becomes aware of his/her lifeworld only when challenges arise which threaten their continued existence. Until that point, lifeworld is experienced as intuitive and unproblematic, but lifeworld can fall apart. Societal developments regularly prompt such 'provocative threats' to the lifeworld (Habermas 1996: 334).

When food consumption is concerned, individual becomes aware of the ways in which food 'lifeworld' is constructed for and presented to the society, and begins to see the forces and strategies behind it. Then people would be motivated to test alternatives to it by altering previous, normal, unconscious routines. Habermas's theory accounts for these variations by distinguishing between a cultural tradition which constitutes the lifeworld of a community and is experienced by individuals as pre-interpreted, and, alternatively, one which fosters among its members 'a reflective attitude toward cultural patterns of interpretation' (Habermas 1996: 133). This

reflective attitude occurs when people are able to grasp 'information about law like connections' which has ideological underpinnings; this can begin to transform the 'unreflected consciousness' (Habermas 1996: 99).

Conclusion

In theorising food and culinary practices and their impact on health inequalities, no new theory is required, but rather a 'reflexive revisiting of what is already known'; in other words, 'metareflections, or thoughtful, independent-minded and critical reviews of the theoretical and empirical wisdom delivered by today's dominant paradigm'. The present research attempts to do just this, testing differing theories of class, human agency, consciousness and consumption in the context of food consumption and its implications for health and society. In sifting through some of the theoretical perspectives, referred here, to illuminate understandings of food consumption offered much insight into the process of human consciousness, but did not consider the structuring power of food production, though the '*forces of commodification*' in shaping consumption in general (Giddens 1994: 101).

The food industry and food marketing are key influences, alongside class, on individual 'choice', even if we are unaware of their activities, hence unable to engage with them with full, conscious reflexivity. The ideas of Giddens lend weight to the lifestyles / personal responsibility discourse without illuminating the underlying structural and psychosocial reality. For a more nuanced picture of how habitual behaviour can be altered, Bourdieu's and Habermas's ideas of habitus and lifeworld, respectively, provided greater depth of analysis which takes into account the roles of social class and habit. Habermas's theorising of the colonisation by distorting, disembedding forces can be set and tested in the context of health, food production and consumption, and social inequality.

Bourdieu's theoretical work was closely linked to his empirical investigations of how people of differing social backgrounds live, eat and work, and the ways in which our food practices throughout life are shaped by our social and geographic environments. Habermas revealed the power of manipulation and the linked role of technology in distorting the clear communication of information as this would unfold in an ideal democracy. Nevertheless, his ideas come closest to theorising the power of marketing and help to explain the paradox in which a society which insists on individual responsibility for diet and health is also able to trace food consumption patterns and their bodyweight and health consequences via social strata amid a dramatically altered food supply in recent decades.

Having had a general review of the anthropological perspective on the food system of the society; we shall have a quick look at the land utilisation pattern in the Mauritius Republic in the next Section.

Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation in Mauritius and Rodrigues

(A Research Project Sponsored by MRC)

Section Three

Agrarian Relations and Land Use in Mauritian Nation

In dealing with the anthropological investigation of general food system in Mauritius and Rodrigues, the area of study in this project; it would be pertinent to have at least a jet-view of the present day agrarian relations and land use in the region. Mauritius is located on the southern hemisphere and is the central member of the Mascarenhas group of islands (comprising Mauritius, Rodrigues and Reunion). It is positioned in the Indian Ocean at 20 degrees South latitude and 58 degrees East longitude, about 880 kilometres from the South-east of Madagascar (Barnwell and Toussaint 1949: 13). It has a mix of tropical and temperate climate with a pleasant flora and fauna that is unique to these islands. Of particular interest in this research is the next major island of Rodrigues in the island republic.

Rodrigues is a relatively small island about 18 kilometres long and 6.5 kilometres wide, with an area of 108 square kilometres situated some 560 km north-east of the main island of Republic of Mauritius. This small island, which became administratively autonomous in 2003, had a population of 42,058 in 2015 (CfH 2016: 11). The population is predominantly Creole with an ethnic background similar to Creoles in Mauritius. It is believed that the island was named after a Portuguese explorer called Don Diego Rodriguez. It is also supposed that he was the first European to discover the uninhabited island in 1528. The Dutch and French seafarers

(and colonisers) attempted to settle down on this island (Barnwell and Toussaint 1949: 13).

Initially, Rodrigues served as a refuge island to seafarers from cyclonic storms and bad weather. It also served as a place to refuel and replenish the sea-vessels and ships. The Giant tortoises were especially prized by the seamen as they could survive on the ships for months and even years together; also a flightless bird called solitaire was also hunted for food. However overhunting led to the extinction of these two species (Barnwell and Toussaint 1949: 17). It was however, not until 1735, that the French founded a permanent colony on Rodrigues to exploit its strategic location (Barnwell and Toussaint 1949: 15). This island was to play an important part in the European power-struggle to control the Indian Ocean. The French were determined to settle here and thus established a small settlement at Port Mathurin.

However, as the island was small in size, the settlers were not too keen to continue for long. In the early 19th century as the British conquered Mauritius in 1809, they took the possession of Rodrigues Island for strategic reasons. It may be noted that even when the nationalist movement was gathering momentum in Mauritius in the early 1960s, the inhabitants of Rodrigues were not in favour of independence from England (Vivek 2007: 30). The cultural difference between Mauritian mainlanders and Rodrigues is sharp though they share some socio-cultural similarities. The land here is mostly covered with small mountain ranges (hillocks) on which agriculture are practiced. Varieties of fruits and Vegetables are grown in the fertile volcanic island of Rodrigues (Saddul et al. 1995).

By the late nineteenth century some of the Asians i.e. the Muslim traders from India, Indonesia, Malaysia, Srilanka and the Chinese landed here as transit

businessmen. The Muslim immigrants have remained there as an endemic group whereas the Chinese population seemed to have now embraced Anglicans or Roman Catholic faith. Interestingly most of them now consider themselves as Rodrigueans (North Coombes, 1971). The people in Rodrigues are engaged in fishing, animal husbandry, horticulture and inter-island trading of cattle and other animals. Most of the people in Mauritius consume appreciable quantity of beer and cheap Mauritian wine, known as *du vin laboue* or *du vin casse paletot*. There is hardly any practice of having water to drink as there is depleted water resource in the island region.

Rodriguean society mostly follows matriarchal family system. Women tend to be the decision makers in the household affairs. They also cater for the artisanal items and sell them in the market held every Saturday at Port Mathurin, the capital of Rodrigues. The women grow their own food and very often assist the men in shallow fishing. The young and literate among women folks of Rodrigues inclined to be heading towards Mauritius in the hope of greener pastures of secure employment as maid, labourers or as textile workers. Cuisine in Rodrigues includes fish, other sea food and varieties of vegetables and fruits. They use lots of oil while preparing their food dishes. A lot of pungent chillies are often part of their food content and on top of that there is *mazavarou* of lemon, *orite* etc. their staple food is rice and maize.

Mauritius in History

Mauritius in distant past was visited by merchant ships that sailing from the Middle East and Africa. These Assyrian / African and Arab traders used the island as a transit point for their trade (Barnwell and Toussaint 1949: 13). The first settlers here were the Dutch who began coming from 1638 when the Dutch East India Company sent a group of settlers to the previously uninhabited island. The Dutch East India Company was interested in the lumbering of the largely available ebony trees on the island (Barnwell and Toussaint 1949: 16). By the end of the seventeenth century, it is

estimated; about two hundred Dutch and a thousand or so slaves lived in Mauritius. These slaves were brought in from different parts of the African continent. During the sixteenth and seventeenth centuries the Dutch made two successive attempts to settle in Mauritius (Barnwell and Toussaint 1949: 13).

The first time the Dutch settled here was between 1598-1658, and six years later, again the second time in 1664-1710. In 1598, Wybrant Warvick a Dutch nobleman named this island Mauritius after Prince Maurice of Nassau (Barnwell and Toussaint 1949: 24). The early Dutch settlers exported ebony wood from Mauritius to Europe where it was used in the manufacture of guns and firearms. These Dutch settlers brought in slaves from Africa and Madagascar for the lumbering. The Dutch also introduced sugarcane (from Java) and cotton (from India) as cash crop on the island. The Dutch East India Company had to wind up their business from Mauritius soon as there was sharp decline in the price of ebony wood in Europe and also due to the frequent cyclones storms forced them to abandon the island in 1710 (Vivek 2007: 28).

It was not until the year 1721 that a small French pilot party landed in Mauritius, which they called *Ile de France*. Soon the French East India Company brought more settlers from India, Africa and Madagascar to Mauritius mainly artisans. The most notable French Governor of Mauritius, Mahe de Labourdonnais (1735-1746) provided skills to these artisans by for building fort, barracks, repairing of ships and developed the harbour of Port Louis. It was under his reign and supervision that coffee, sugar, spices, maize, manioc, vegetables, fruits, and livestock were introduced and cultivated in Mauritius. He brought Indians from Pondicherry to work as messengers, and for domestic aid, though African slaves were used as the main labour force (Vivek 2007: 29).

Thus the population in Mauritius started swelling. It was at least one thousand by the year 1735, and included 200 Europeans. By 1797, this figure soared to sixty thousand that included almost 5,000 slaves. It was Labourdonnais who distributed fifteen thousand arpents of land amongst the French settlers and encouraged women from France and Reunion to come and settle in Mauritius. The early years of occupation were fraught with many difficulties. By this time Mauritius had been placed under the direct rule of the Imperial French government and was no longer in control of the French East India Company. This phase witnessed several revolts by the slaves and plantation workers, food shortages and famines (Barnwell and Toussaint 1949: 45).

All this happened while Labourdonnais was expanding the French presence in the Indian Ocean. For instance he annexed Seychelles in 1743. In 1746 he sailed to India and relieved Pondicherry from the British (Burgh and De 1921: 58). Over the period of time he was successful in capturing Madras, an Indian province. The revolt by the slaves forced the French government to pass certain legislations that provided for the constitution of more humane conditions for the slaves and labourers. In pursuance of this objective, the French National Assembly promulgated a law by which all Mauritians regardless of colour and race were made equal, and abolished the slavery system in the year 1794. Nevertheless, the French settlers in Mauritius refused to comply with this new legislation and instead constituted a parallel government (Barnwell and Toussaint 1949: 45).

The period from 1796 to 1803, constituted a phase in Mauritian history which had a totally independent rebel government. However, in 1803, Charles Deacen (re)captured this island on behalf of Napoleon and re-established parliamentary control over the Mauritian settlers. In order to pacify the French settlers, he modified the French National Assembly's promulgation and decreed that only persons of 'pure

blood' could be termed as equals. Thus, slavery and slave trade were permitted to continue. By 1810 the British East India Company defeated the French and captured Mauritius from them. This phase of British administration i.e. first part of the nineteenth century, a form of liberalism in which private enterprise worked incognito and was not under government control (Vivek 2007: 30).

The early period of operation of the contract labour system is an example of the independence with which private enterprise led the way in the formulation of the New Labour System. The first Indian agricultural labourers under contract and "engagement" arrived in Port Louis on 1st August, 1829. It was a group of Indians and Chinese, recruited in the ports of Madras, Calcutta and Singapore by private enterprise and without the participation of government. On disembarking at Mauritius, these recruits were sent directly to the estates of the planters who engaged them. The planters had set up working men's and women's quarters such that the labour of these immigrants can be utilized to its fullest. The residences consisted of thatched huts (Vivek 2007: 87).

Though, the residences of the immigrants were separated from that of the slaves; the immigrants had to toil side by side with the slaves. The immigrants considered themselves more civilized and therefore looked down upon the slaves. Besides they were here on contract labour whereas the slaves were bonded for life. However because they were treated like the African slaves, the "coolies" felt that they had been cheated and protested openly by leaving the fields and resorting to petty thievery for a living. The British government was forced to repatriate these "coolies" sometime soon afterwards. The government also forced planters to fund the expense it had incurred on the "coolies". The spirit in which the experiment was carried out was explained in the memorandum addressed by planters to His Majesty George IV in 1827 (Carole et al 1993: 57).

For the first time colonists proposed the “engagement” system to the government. In spite of the disappointment resulting from that first experiment, scarcity of labour for the development of the sugar industry forced planters to make a second attempt to change. By 1833, it became clear that sugar production was going to be a profitable enterprise, for the sale price of the commodity was increasing yearly on the London market. There was also the spectre of emancipation, and timid landowners, uncertain of the future, sold their lands to the first bidder. The quick transfer of land allowed speculators to infuse new energy into the production of sugar. They adopted new methods of cultivation, modernized their sugar mills and introduced skilled agricultural labourers for the development of their newly- acquired estates (Barnwell and Toussaint 1949).

Extravagant speculation thus became a predominant characteristic of the Mauritius sugar industry. The major problem with Indian labourers recently introduced under contract was their unwillingness to serve the term of their contract in the service of the proprietor who had incurred expenses towards their introduction. To overcome that inconvenience, planters sought the participation of the government. The contract signed before a magistrate by contracting parties thus acquired legal force and the aggrieved party could subsequently have recourse to legal procedure in case of non-fulfilment of promises.

Accordingly, legislations were passed for the introduction of agricultural labourers from India. Administrative arrangements were made to ensure that the recruits were emigrating of their own free will and that they were aware of the terms of their engagement. The success of the new undertaking depended equally on the right selection of recruits, and enquiries were made regarding the type of people to hire, the terms of their engagement, the administrative process to go through in order to bind both parties to the terms of their contract. After much consideration Mauritian

planters settled on the choice of 'Hill coolies' or *Dhangars*. The proposition to introduce Hill coolies or *Dhangars* to work on the sugar estates of Mauritius came from a British indigo manufacturer who had experimented with the use of that class of labourers in his processing plant.

One of the early employers of the "hill coolies" was E. Arbuthnot, who suggested the recruitment of that particular class of labourers. Arbuthnot had spent some time in India before his arrival in Mauritius. He belonged to a family that had established a chain of commercial firms in India. During 1832 he had acquired in association with Hunter, "Belle Alliance" Sugar Estate, a property of 502 arpents in Rivière du Rempart, and in 1833 he acquired another property of about 300 arpents in Pamplemousses called "Petit Bois", whose name he changed to 'The Mount'. It happened that during the month of September, G. Arbuthnot of the house of Gillanders Ogilvie, acting on behalf of Hunter Arbuthnot and Company of Mauritius, entered into an agreement with 36 Hill coolies who agreed to proceed to Mauritius to work as labourers (Vivek 2007).

Hunter Arbuthnot and Company was therefore the first planter to follow the administrative procedure designed to ensure the safe transfer of emigrants to Mauritius and their return to the home country. Hunter Arbuthnot and Company paved the way for the introduction of Indian agricultural labourer under contract. Among the planters who followed Arbuthnot's example, the Tamil planter Inonmondy Anasamy stands out. Hill coolies must have worked to the satisfaction of the planters, for during the years that followed, more Hill coolies were introduced, and consequently local firms specialising in the introduction of labourers multiplied. Those local firms received requests which they passed on to their associates in Calcutta where there were at least 13 firms competing with one another for a share in the lucrative trade (Vivek 2007).

Applications made for permission to introduce Indian labourers in the island became so numerous that the British government was forced on 5th March, 1836 to issue a notice which impressed upon the public the necessity of observing the utmost care in the selection of recruits:

“His Excellency cannot too strongly recommend that special care be now taken to ensure that the persons who may be engaged shall have been known as really agricultural labourers (of the class called Hill coolies when coming from Calcutta) and that they or the Chief of Sirdar who accompanies them hither shall have been mutually known to each other before being engaged” (Vivek 2007: 79).

This made little difference to the life of the island and its people because the French were guaranteed their properties, use of their language, laws and religion. The biggest change came with the abolition of slavery between 1835 and 1839. Large numbers of indentured labourers were brought in from India to replace the freed slaves. From 1851-1861 more than 100,000 Indians arrived in Mauritius. Since that time a majority of the Mauritian population is of Indian origin. The final political change came with the independence of Mauritius in 1968. Already in the late 1940s and early 1950s, mortality had declined considerably, thanks to eradication of malaria and other health improvements. Simultaneously, fertility rates increased even further, resulting in a steep increase in population growth rates, which reached levels of more than 3 per cent per year (Vivek 2007).

This demographic discontinuity, which dominates Mauritian population trends, resulted in a large number of young Mauritians being born in the 1950s. This phenomenon, together with a second remarkable discontinuity of past trends, i.e. the steep decline in fertility during the late 1960s and 1970s, resulted in an unusually large cohort of young people - the youth cohort - that will characterise the Mauritian age

structure over decades to come. Generally the censuses were taken at ten-year intervals, with irregularities during the middle of the last century and since World War II. The censuses also give the ethnic breakdown of the population, which is very useful for understanding the population history of Mauritius (Carole et al. 1993).

Censuses, 1767-1990: Official census enumerations of the population living on the island of Mauritius are available from 1767 onwards. The abolition of slavery in 1834 also brought about a reclassification of the categories. After that year the category “General Population” includes the descendants of Europeans and the freed slave population, whereas separate categories were retained in the census for Indians, Indo-Mauritians (Indians born in Mauritius) and Chinese. Table 1 shows the census since 1767 of the various ethnic groups. During the 18th century, slaves from Africa formed the largest part of the population. A small portion of the population was white European and their descendants. A third group, the free coloured, were about as large as the European population.

Population growth from 1767 (the first year for which we have data) to 1834 (the year of abolition of slavery) was steady and high. The average annual increase was 8 per cent. The available data indicate that very little of this growth was natural; almost all of it was due to the import of new slaves and immigration of Europeans and others. The sex ratio in the majority, the slave population, was about 1:6 men to each woman, and the crude birth rate in that population was accordingly low - estimated at around 25 per 1,000. The sex ratio among the white and free coloured population was more favourable. In the coloured population, it was even 0.8 men to each woman because women who married out of their race were subsequently categorised as coloured.

In 1834 slavery was abolished and, in the same year, the active recruitment of indentured labourers from India began to replace the freed slaves in the sugar cane plantations. The white plantation owners, who were expanding their sugar production, instigated the wave of indentured labour, often misleading the Indians about the conditions they would live and work under. Initially, the labourers were mostly males and were promised a free return passage, but after 1853, the planters decided it was more profitable to bring over men and women and scrap the return passage from the contract, meaning that all labourers who arrived after this date were in fact emigrating from India for good. The Indian labourers were not treated much better than the slaves; the sanitary conditions were terrible and death rates were extremely high (Vivek 2007).

The immigration was enormous, and the population of Mauritius tripled during this time from around 100,000 in 1834 to 310,000 by the census of 1861. The strongest multi-rat immigration decade was 1851-1861, with a total of over 100,000 immigrants. As women began to arrive from India soon after the men, the sex ratio normalised, and the native Indo-Mauritian population was born. Table 1 below, shows that the Indian population, that is, those born in India, Burma and the surrounding countries, began to decrease after a peak in the 1861 census, particularly after the 1881 census. Since we know that almost none of the Indians returned home, the very steep decline of the Indian population seems to be due to very high mortality rates and fewer newcomers compensating the attrition.

The growth rate of the Indo-Mauritian population was initially enormous, 12 per cent annual average from 1851 to 1861, due to the increasing numbers of immigrant Indian parents compared to the small number of Mauritian-born. By 1891-1901, this growth rate had decreased to 2.3 per cent annual average, and in the 1920s and 1930s there was practically no growth. After World War II, the population growth

among the Indo-Mauritians shot up to 2.3 per cent per year again between the censuses of 1944 and 1952, this time almost entirely due to natural increase.

During the century of Indian immigration and the birth of the Indo-Mauritian population, other ethnic groups in the population - the white, free coloured and slave population, classified as “general population” after the census of 1846 - barely grew at all. There were 101,000 general population enumerated in the 1846 census; 100 years later, there were 143,000. The almost zero growth rate of the general population may indicate that intermarriage was not common. In the censuses of 1962 and 1972, the heads of households could classify themselves according to the following categories: Hindu, Muslim, Sino-Mauritian, and General Population. In the census of 1983 no such classification was given. Over this period the total population grew very rapidly from 681,619 in 1962 to 826,199 in 1972 and 966,863 in 1983.

Table 3:1
Showing Population of Mauritius for Census years 1767-1983

Year	Population of Europeans and descendants of Europeans	Free coloured population	Slave population		Total population
1767	3163	587	15027		18777
1777	3434	1173	25154		29761
1787	4372	2235	33832		40 439
1797	6237	3703	49080		59020
1807	6489	5912	65367		77768
1817	7375	10979	79493		97847
1830	8592	18877	69476		96945
Year	General population	Indian population	Indo-Mauritian population	Chinese population	Total population
1840	99450	23490	-	1395	12433
1846	101017	56245	-	1200	15846
1851	101 527	72180	5816	1300	18082
1861	115864	172 425	20209	1552	44767
1871	97497	155367	60891	2287	31604
1881	107323	135595	113398	3558	35987
1891	111 517	99329	156591	3151	37058
1901	108422	60208	198878	3515	37102

1911	107432	35396	222301	3662	36879
1921	104216	17056	248468	6745	37648
1931	115666	7044	261 605	8923	39323
1944	143056	-	265247	10882	41918
1952	148238	-	335327	17850	501
1962	----	658561	-----	23058	68161
1973	----	802115	-----	24084	82619
1983	----		-----		96686

Source: Mauritius Statistical Analysis 2005

Sustainable Development

The early history of the population-environment interaction in Mauritius was characterized by unsustainable development. The rapid extermination of the famous flightless dodo bird during the first decades of Dutch settlement could be a sign of this early period. Other components of the natural resource “management” include the depletion of the ebony stocks of the-island and the introduction of a number of alien species (deer, cattle, monkeys, rats) that took a heavy toll on the island’s indigenous species and ecosystems. A very sparse population characterized the Dutch period starting in the mid-seventeenth century: the population simply did not reach the critical mass that would have been necessary for take-off in the direction of sustainable development (Vivek 2007: 48).

The problem of low population density was aggravated by the frequent cyclones and by the unbalanced sex ratio. The settler community consisted mostly of men for whom the island was a temporary station. For them, there was simply no reason to worry about the future of the state of the resources there. Their immediate concern was to sell the valuable ebony wood as they were not concerned about what would be handed down to their descendants. In the eighteenth and nineteenth centuries, the man- environment relationship in Mauritius was characterised by the classical development patterns of agriculture-based colonies (UNDP 2015). Once the

agricultural economy of the island was established, the motivation to sustain and increase production became evident.

It was worth making investments in land development and infrastructure, even if their pay-off period was longer, because the colonial powers wanted an economically viable and socially stable colony to serve their own interests for a long time. Malaria, hookworm and tuberculosis, unknown in the original Mauritian ecosystem, were brought to the island. Malaria had arrived sometime in the middle of the nineteenth century and became a major killer in Mauritius, especially in the warmer coastal areas (Carole et al. 1993). The resulting high mortality rates kept the Mauritian population from growing, despite high fertility. It was also this disease environment that induced increasing numbers of the Mauritian population to settle in the cooler and healthier highlands.

As described above, the spectacular decline in mortality rates after World War II with continued high fertility boosted population growth to a degree that soon raised concerns about the future living conditions on this small island. The scientific reports of the 1960s showed that unchecked population growth would result in a population of about three million by the year 2000, resulting in the highest population density of any country in the world. These studies strongly recommended family planning efforts, but the concern was not explicitly with the ecosystem, but with the question of extreme poverty resulting from overpopulation. Now that population growth has been brought under control and a booming export-oriented economy has made Mauritius a newly industrializing country.

With the increase in the incomes and social welfare, there arises the question of sustainability of this development. It is an environmental concern. Will rapid

industrialization spoil the fragile natural environment and ultimately decrease the welfare of the Mauritian population, or can policies steer this development in a benign direction? The size and age structure of the population, its regional distribution, education, labour force participation, household composition, and other population-related variables play a crucial role in this search for sustainable development. Mainland Mauritius has been traditionally an agricultural country with sugar cane and tea as the main cash crops. However, setting up of the Export Processing Zone, industrial activities have rapidly expanded to become the major foreign exchange earner of the country.

The economic importance of tourism also increased substantially during the 1970s and 1980s, leading to tremendous increases in catering and hospitality industry especially near the island beaches. Mechanization of fishing industry, use of fishing trawlers and fast speed boat for entertainment & tourism has had a major impact on the terrestrial and marine environment. Rapid development and exploitation of lagoon resources coupled with other economic activities are posing potential threats to the marine environment around Mauritius.

Issues of Pollution

Pollution especially on the agricultural lands in Mauritius has meant high levels of agricultural losses. Even long term growth of sugarcane on the field without crop rotation has led to the soils of Mauritius loose its natural fertility. In order to account for this loss, the farmers here use high levels of chemicals (UNDP 2015). It would be pertinent here to have a synoptic view of the pollutants affecting the general vegetation and cultivation in Island nation.

Use of Agrochemicals: Utilisation of agrochemicals in Mauritius has been highly beneficial to sugar production and other forms of agricultural production especially that of vegetables and now, of ornamentals for export. Agrochemical usage in Mauritius stands at about 600 kg per ha per year for chemical fertilizers and between 1.0 to over 50 kg per ha every year for pesticides. As a rule, average figures do not effectively reflect real field conditions.

The total arable land in the country is around 90,000 ha, of which about 92-93 per cent is under sugar cane, covering a little less than half of the island. The other feature is that for about every 20 ha under sugar cane less than one hectare is exclusively for vegetables. About 5,000 to 7,000 hectares of sugar land belonging to the sugar estates and about twice as much owned by other categories of planters, carrying sugarcane, are sown to other crops, either full stand or interline. Almost all tobacco grown occupies land that at one time or another was under sugar cane. The overall result is that about 25 per cent of the land under sugar cane is also used for the production of other crops (UNDP 2015).

Sugar factories: Mauritius sugar factories are traditionally responsible for a high degree of air pollution. Two types of pollutants contribute to the creation of this pollution problem. On the one hand, there is fly ash, which is mainly produced by the sugar factories when bagasse, the fibres remains as a by-product after sugar juice extraction, is used as fuel for the production of energy. Depending on the strength and direction of the wind, the fly ash can be carried quite far from the factories. The other form of pollutant originates from the unburnt bagasse itself, which can be a nuisance to the environment when it is stored in the open air or when the bales of bagasse are handled prior to their transfer into the boilers (UNDP 2015).

Domestic wastes: It is a common practice in Mauritius to get rid of domestic waste by incineration. This activity produces soot and carbon dioxide. Besides, there is some degree of air pollution from the sugar cane fields during the pre-harvest season. During that period, fly ash is produced when dry sugar cane leaves are burnt to reduce their volume; the reduction in volume of the leaves allows free passage of workers during the harvest time. Atmospheric pollution, therefore, is one of the irritants in the country side of especially Mauritius mainland affecting the young and the elderly at the same time in varying degrees leading to a cause of national concern (UNDP 2015).

Other sources: There are several other sources of environmental pollution in the island nation of Mauritius. The following are not yet commercial establishments emitting huge quantities of pollutants but have all the potential to be one of immediate concerns:

- (a) Pigsties and poultry pens produce a foul smell which can affect the immediate environment;
- (b) Tanneries for the treatment of hides use metal sulphide which may explain the bad smell in their vicinity; and
- (c) Poultry farms and rendering plants. In Mauritius poultry farms and the accompanying rendering plants for the preparation of chicken are known to cause air pollution in their neighbourhoods. Gases like hydrogen sulphide and methane are responsible for polluting the atmosphere.
- (d) Distilleries producing alcohol, beer and wine are other big business ventures in Mauritius producing varieties of obnoxious gases letting out in the thin air polluting the surrounding atmosphere (UNDP 2015: 27).

From the examples depicted here, it can be seen that air pollution is introduced from many sources. The solution to the air pollution problem could therefore be found if an integrated approach is adopted after proper assessment and quantification of the various components in play. This can only be done through epidemiological surveys and other physical monitoring surveys which can help to assess the pollutants separately along with their ultimate effects on the Mauritian population.

Contemporary Mauritius

Mauritius being a small island has one of the highest population densities in the world (some reports put it at about 610 persons per square km). The total population of Mauritius is nearly one and a half million. In the 1950s and early 1960s Mauritius experienced very high rates of natural population growth (peaking at 3.5 per cent per year) and this was probably because of enhanced economic growth that were being introduced in the country. However these rates did not continue for long as there was a steep decline in the fertility rate. One of the reasons for this was high level of modernisation and modern medical services that were provided to the population by the administration. Some studies suggest that the total fertility rate dropped from 6.2 children per woman in 1963 to 3.4 in 1971.

It is estimated that the population growth will continue to be at approximately 1 per cent annually as there is a considerable chunk of youth within this population band. Some scholars have argued that the decline in fertility levels in Mauritius occurred was not because of any economic incentive but rather due to improved female educational status and active family planning programs (Lutz, 1990). In the 1970s gross national product (GNP) per capita gradually expanded as a consequence of improvements in sugar cane yields, which was the primary source of foreign exchange and also of the economic growth. It was not until the big boom in export-

oriented industry, especially textiles that came about in the 1980s, when for some years Mauritius even experienced double-digit growth rates in its GNP.

This growth in turn resulted in a complete overhaul of the economy that now restructured itself in such a way that all labour intensive activities were now replaced by automation. It was in this phase that the tourist sector also expanded rapidly during the past decade. As a consequence of this rapid development in the absence of any land use plan or government environmental policies, questions about the state of the Mauritian environment are becoming increasingly important.

Land Use: In earlier times Mauritius, its forest resources that was the predominant attracting factor for the colonial powers of yesteryears. It was first rediscovered by the Portuguese and later the Dutch who exploited the vast natural forest with boasted of considerable numbers of ebony trees. It was this process of deforestation and clearing of vegetation that first led to the transformation of the landscape of Mauritius. The cleared land was to be used later for sugar cane plantation. Soon enough sugarcane was to be the dominant agricultural crop of this island. So much so, that a huge contingent of indentured labour was to be brought here from India and also from Africa for ensuring its expansion.

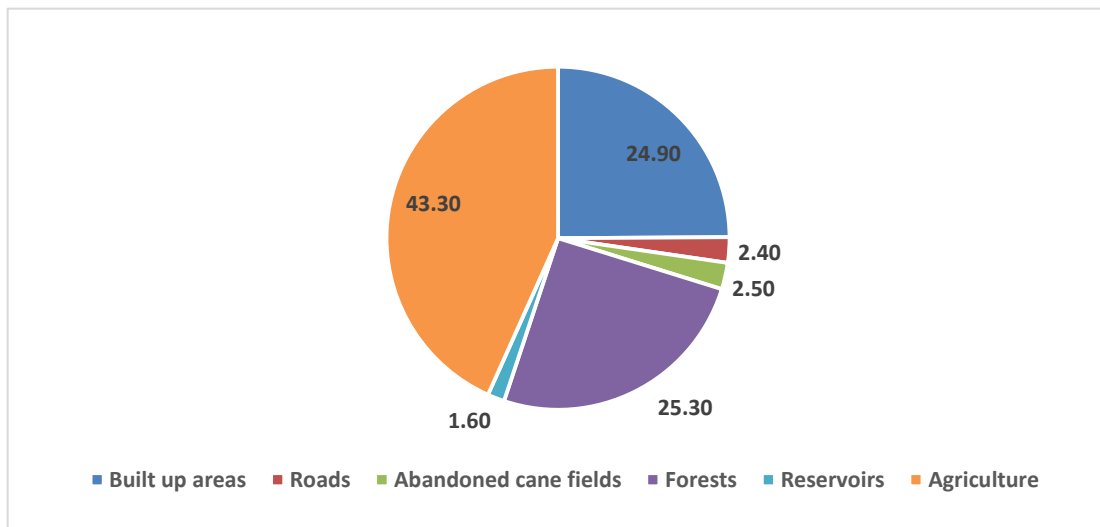
The natural forest land, swamps and grasslands were gradually giving way to the expansion of sugarcane plantation. It is therefore not surprise that by mid 1960s almost half of the total land area was utilised for sugarcane plantation. This ratio is highest for any country in the world. This meant that hardly four to five per cent was left for the growth of other agricultural produce. It was during the colonial period that the flora and fauna of the island were drastically changed. Now with only 4 to 5 per cent of land available for food grains and other food crops, Mauritius had to import it

from other nations. Even the dependent occupations such as poultry farming and livestock were completely neglected in the country.

Since the mid-1960s some tracts of the sugarcane plantations had to give way to the rapid urbanisation that was shaping up in Mauritius. Around 15 per cent of the erstwhile sugarcane land was now used for urban developmental work such as roads, housing and administrative buildings. The total land use also increased to about 215 per cent, thereby significantly increasing its share of the total island land use. Compared to that, other land use changes are minor, although economically significant. Tea production lost one-third of its former area, whereas land used for the production of food crops increased by 50 per cent to 1.6 per cent of the total land area.

The 1980s witnessed a boom in the tourist industry. This meant significant change on the already very scarce land resources and its land use. By late 1980s, tourist industry became the main source of employment and also the primary foreign exchange earner. It is estimated that some 50 hotels on the beach now occupy almost 30 km of the coastline, or about 2.9 square kilometres of land. This is a small amount of total island land space, but not much more of its kind is available. This land use also competes directly with land use for recreational purposes, i.e., public beaches.

Figure 3:1
Showing Utilisation of Land on Island of Mauritius in 2015



Source: UNDP 2015.

Therefore it is not surprising that there is a strong correlation and an implicit assumption inherent in the study of the relationship between population and land use change. This is the existence of a strong, direct relationship between the amount of available arable land available and the number of people that can be supported by the agricultural production of that area. This implies that the major constraint of a society that is preoccupied with hunting, collecting, or growing of crops and livestock for its own consumption face a problem especially if there is population growth. This means that the total land arable is definitely one of the factors responsible for the lowering of the fertility rates.

The only way out of this conundrum is to open its economy to globalisation. This allows for newer ways of sustaining its population. Another way of course is to scientifically increase one's production. This can only happen if there is some kind of a green revolution. This kind of a revolution was achieved in India for instance in the 1960s. However even this boom has a certain slack period especially as the

population increases and the demand on agriculture get much higher. The trend of land use pattern follows the universal model – it is more profitable to produce other agricultural products than sugar cane; also the land for urban housing is costlier and more profitable than engaging in agriculture, it is therefore no wonder that the real estate business is booming in Mauritius.

But it is most profitable to use this land for business and economic production. To illustrate this through an example one could think of other (than sugarcane) types of agricultural products such as oil seed plantation, tea, vegetables, flowers, etc., it is to be noted that this activity yields almost three hundred per cent more in value added per land unit compared to sugar cane. It is not necessarily the more profitable land use because the labour requirements for producing food crops, for example, are much higher compared to those of sugar cane growing. If the level of income per capita, and thereby of wages is high enough, and if the land is not required for other (e.g., urban), more profitable activities, then extensive sugar production still is the more profitable land use alternative.

This form of commercialisation of land has been taking place in Mauritius since 1980s when it became famous as a tourist destination. Land now is being used for road construction, public works, residential buildings, hotels, tourist centres and host of other related activities. The service sector that depends on tourism has also grown by leaps and bounds. This in turn has put pressure on land thereby changing the priorities for the land use pattern. The lands close to beaches and other tourist centres are fetching the highest value and this has meant a changed land use for these lands. Gradually a large chunk of land is being utilised for urban and tertiary projects rather than for food production. This glaring transformation meant that Mauritius has been a net importer of food products since the 1980s and this dependency is rising in contemporary times.

Lack of allied agricultural business like poultry, dairy and animal husbandry has meant that the primary sector (agriculture and not others such as fishing and mining) emerges as a negligible factor while computing the GNP of the country. It is estimated that around 75 to 80 per cent of the value produced or consumed is based on activities that take place on ten per cent of the land area. Only sugar cane production still rates high both in the amount of land used and the absolute value added of its production. Even though the relationship between value added and used land is only a very simplistic and rudimentary indicator of the magnitude and direction of the economic forces driving changes in the land use pattern, it nevertheless points towards a larger universal model.

With the trend now focussing on tertiary activities such as tourism, net agricultural area itself has decreased. With this the support mechanism for such an activity has almost become redundant. Agricultural labour has almost disappeared and those who render their services do it at a very high price. Moreover the skilled labour component in the agricultural production arena has definitely declined rapidly. It is now extremely difficult to find skilled agricultural and horticultural labour. The government of Mauritius has also neglected this sector. It is therefore no wonder that the nation does not have agricultural university and agro-technical institute to promote and produce skilled labour and agricultural scientists.

Even the erstwhile agro-marketing system has been dismantled to a large extent. With the expansion and growing presence of the global markets in Mauritius, the need for such systems itself has become obsolete. Since the medieval and early modern periods, Mauritius did not have a history of subsistence agriculture; in which the society consumed what they produced. Forest and agricultural products such as ebony, sugar, spices meant that the island was always dependent on trade.

Most of the European and some Asian countries traded with Mauritius for these products and in exchange shipped other agricultural goods especially food grains. Moreover other activities such as textile manufacturing and tourist services are activities that attract foreign investments. But these investment needs to be Sugar cane has, since long before the reduction in fertility and the economic growth of recent decades, dominated agricultural land use on Mauritius.

Table 3:2
Showing Mauritius Land Ratio and Utility

Land Utilisation	Area in Hectares	Percentage of the total
Agriculture	80,674	43.3
Sugar cane	72,000	38.6
Other agricultural activities	8674	4.7
Forest, Scrubs and grazing land	47200	25.3
Reservoirs, ponds, swamps and rocks	2900	1.6
Roads and footpaths	4500	2.4
Built up areas	46500	24.9
Abandoned cane fields	4726	2.5

Source: Mauritius Metrological Services 2015

Sugarcane that was produced was converted into sugar and exported to world markets; some brands of refined sugar are not even available in the domestic market. This mechanism that allowed for export-oriented production was to get a valuable asset for use in trading on the world market, thereby importing what otherwise had to be produced locally for domestic consumption. In this sense it is to be noted that the political economy of Mauritius did not push for the direct need for food crops, etc., to feed a growing population that utilises land use patterns on Mauritius, but rather the desire for an efficient market economy that provides ‘*world foods*’ at the domestic market.

In the next Section, it would be appropriate to discuss the methodology adopted for undertaking the study on food practices and the kind of data obtained for the research analysis.

Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation in Mauritius and Rodrigues

(A Research Project Sponsored by MRC)

Section Four

Methodology and Data Collection

This research has attempted to explore whether the emergence of obesity, diabetes, cardiovascular ailments, high blood pressure and alcoholism has anything to do with the food habits and consumption pattern of residents in both Mauritius and Rodrigues, at all? In other words, it investigates what kind of food ways that have been developed in the region? What were the compelling factors that were responsible for the food practices that the Island nation has come to boast as its speciality? What were the historical necessities? What was the role of the colonial episteme in shaping the culinary practices of the Islands? How far have the process of globalisation played / playing a role in deciding about the culinary art and dietary practices in Mauritius and Rodrigues? By globalisation we mean the historical encounters also as Mauritius and Rodrigues are well placed in terms of the global trade route. Can it be possible to trace the trajectory of the food ways consumption practices on the demographic profile of the nation? Answers to these questions will be sought in the form of actual field data during the study.

And, in doing so, this research may identify some corrective measures, if need be, to limit the negative impact on the health and hygiene of the people in the region. This opens a number of questions on the health related issues. There has been voluminous literature published by academia, medical professionals and media in the

form of articles and books. Food practices touch, in fact, fields as varied as culture (gastronomy and culinary patrimony), health (sanitary safety, nutritional prevention) and economics (budgets, food markets, production). All such secondary data have been analysed in corroboration with the primary data collected from the field of study to highlight the socio-anthropological dimension of food habits for understanding the prevalent dietary practices and see how they are connected with ailments.

This study is an amalgamation of both the biological and the socio-cultural perspectives on health and food habits. The study integrates people's comprehension of good health, illness, and, the embodiment of food. Food plays an important role in health throughout the life cycle, starting with foetus. It is in childhood that maximum physical and mental growth is achieved; and into adulthood where weight maintenance is important along with a balanced diet to prevent/prolong the commencement of disease. This study demonstrates the social relations involved in purchase, preparation and consumption of food, showing that what people eat is not only based upon individual choices and preferences, but is formed and constrained by circumstances which are essentially socio-economic, political, historical and cultural in nature.

In general, the study aims at understanding the determining cultural factors in food habits and related practices in the development of contemporary health problems in the country for establishing a nutritional and health policy by way of insight into people's ideas on food habits and health. The research attempts to identify the food practices followed by people to maintain their stamina for strenuous work that they had to perform in the historical past. Another particular objective of the investigation is to document historically oriented impact of eating the kind of food variety on disease free health of people with an interdisciplinary approach mediated through sociological and anthropological analysis.

Nature of Problem Addressed

Medical anthropology and the anthropology of body have largely contributed to the resurgence of the determining trait of socio-economic and cultural factors in respect of health and disease. At the heart of everyday practices, food habits play a fundamental role in everyday life. Focused on contemporary Rodriguean and Mauritian societies, the present research paper explores the economic and symbolic models and stakes associated with food choices in the region. Indeed, the insular population, subject to increasing external influences, is today experiencing a rapid transformation, touching profoundly food ways and which are not without pernicious consequences on health. An ethnographic field investigation may provide valuable data to determine the appropriate public policy with regard to the local situation.

The trail of the Indians from the time of immigration to present-day Mauritius is very intriguing. They have emancipated themselves from their role as 'coolies' to be part of the middle-class of the Mauritian society through social mobility. Consequently, they have reviewed their social /cultural norms and values, their modes of consumption, their food habits.

This study explores some of the social relations involved in purchase , preparation and consumption of food, as mentioned earlier, among the erstwhile indentured Indian immigrants and modern indo-Mauritians, showing that what people eat is not only based upon individual choices and preferences, but is formed and constrained by circumstances which are essentially socio-cultural as well as economic in nature. They re-invented the preparation with the various varieties of food items they cultivated and obtained. The immigrants had different acquired tastes as they hailed from different quarters of India. Taste is deeply socially embedded in affective class cultures and is highly regulated in normative terms.

This is especially true when we discuss the role of caste in the making and reinvention of culinary practices. For instance when we attempt to relate class to caste Rao (1989) argues that the status in caste is determined by two predominant criterion- economic (occupation, property, wealth, land) as well as by cultural, political, ritual, social and educational considerations.

“It is obvious that the source of legitimacy of the caste system in Hinduism is religious. ...This ideology also incorporated a material axis of status manifested in the differential category. In turn, the material inequality among the different varnas is sustained by the religious belief system... at the jati level specific jobs and occupations were associated with sub-castes or sub-sub-castes...The value behind the caste system invested callings and occupations with notions of purity and pollution determining not only ritual hierarchy but also differential allocation of material resources...thus the economic basis of division of labour combined with the ritual status of purity and pollution was responsible for differential access to material resources of production and differential allocation of rights and responsibilities. The production organisation which centered around land at the village level was strengthened by the jajmani system and patron-client relations of service. (Rao, 1989; 25, 30-31).

Thus caste has an important bearing on the way we select food, cook and consume it. However there is ample scholarship that warns us of the pitfalls of comprehending the social category called caste. This is especially true of the immigrants who came as indentured labour during the colonial period. Caste as is understood in India itself is so complex that while applying it to the immigrants, needs to be done with care. For instance Shah (1989) who explores caste

dominance in Gujarat (a linguistic state in the western part of India) recognizes the difficulty in defining caste. He argues,

“One faces similar difficulties in using the term caste. Hierarchy, endogamy, or marriage circle and social commensality together form the main principles of caste. It is relatively easy to identify caste groups, the members of which are bound together by *roti beti vyahar* at the village level. Their status in the village social hierarchy can also be identified. However not all castes are endogamous. Sometimes the levels of hypergamy are so many that one finds it difficult to decide where one caste ends and the other begins. The difficulties are also enormous when one attempts analysis at the level of the state as a whole. Those who claim to be members of the same caste but reside in the different parts of the state do not enjoy the same social status in the different villages in which they reside. They also do not necessarily share the same social customs, occupation a lifestyle. In fact from the point of view of social characteristics they may be closer to the members of other caste groups of the same locality than to those of their caste members living in different parts.” (Shah, 1989; 59)

Having touched on the issue of caste and religion we can now move on to comprehend the role of ethnic identities on food practices in Mauritius and Rodrigues. In modern times, especially, food appears to be an important marker of people's identities. This project elucidates how due to an upward mobility, in the twin processes of “*creolisation*” and globalisation the food preferences have evolved to identify personality traits. Food also divides and unites people. Food selection and intake are increasingly a matter of the socio-culturally determined individual choice. The altered food habits can act as corollary of the disintegration of certain values approved, sanctioned and accepted by the given society (for instance food eating on banana leaves earlier has been replaced by paper sheets and plastic plates). Eating habits are thus the result of both external factors, such

as politics, and internal factors, such as values followed over a period of time by the respective community members. These habits are formed, and may change over a person's lifetime.

This research reveals the discrepancy between ideal conceptions of an alimentary day (in terms of number of meals and structure of meals) and the actual days, obtained by reconstructing the day preceding the investigation. Though focused on daily practices, the study includes investigations into the servings and consumption not only during social celebrations and festivities; but also on day-to-day intake of food by the people of Mauritius and Rodrigues that is determined by the social values and food codes.

Methodological Lens

To comprehend the diverse sociability's of the past and the present we have argued that Bourdieu's (1977, 1984, 1990) concepts such as social capital, habitus, field and practice enable one to circumvent the antimony between the structuralist and phenomenological and ethno-methodological scholarship or the objective versus subjective binary. By invoking Bourdieu's (1990) theorisation one can bring in the component of time and space i.e. together with structural constraints and agency into the argument. I have argued that this enables one to better understand societal phenomenon which is extremely complex and dynamic. The structuralist scholarship maps the societal phenomenon through an objective lens thereby interrogating social interactions through the prism of rules and regulations- giving an impression of a timeless, frozen societal phenomenon. In this research we have asked how dynamics of individuals and social groups can also be examined through the lens of agency i.e. as strategies. Why and how do individuals begin to prefer certain kinds of food? How does power shape the food habits of individuals, communities and large social

groups? What are the strategies through which these habits and practices socially reproduce?

But even before we delve into the notion of how culture is transmitted from generation to generation it would be advisable to firstly lay out the idea of a community whose individual actors share the same kind of culture. According to Lacan (1989) social imaginary may be understood in a broad sense, in which aspects such as images, fantasies, and illusions are seen as relevant to the constitution of subjectivity. It is through this social imaginary a common identifiable cultural illusion is instituted-based on certain common values, norms, symbols, signs, language, laws and ideology. As Parker (1997) surmises

“...an imaginary sense of position from which to experience the real. This imaginary mediation is compounded by the entry into language, into the symbolic order in which there is mediation not only of self-identity but also of the identity of others...” (Parker, 1997:218-219)

In this sense, the subject's identification is related to the 'other', and is not an individual developing outside the social. Therefore, it is not possible to approach the imaginary realm without taking into consideration the symbolic networks that structure it. Social imaginary as elaborated here connects with many aspects of discourse- as discourses include images, texts, and ideas and so on. But more importantly discourses make explicit a political position when it highlights power relationships and thus social imaginings which stem from such discourses may be deemed to be a strategies for political mobilizations- by inventing illusions of 'we-ness'.

To comprehend how food practices begin to concur with the boundaries of social identities such as caste, class, religion and ethnicity (or the we-ness) we have invoked Bourdieu's (1984) concept of 'habitus'. Bourdieu (1990) argues that the earlier approaches in social sciences misrecognise the way social life is organized and thus end up either positing social reality through a structuralist or a phenomenological perspective i.e. either the structure or agency becomes immanent. He posits an alternate perspective that situates analysis in the practical universe of everyday practices and not in a given and bounded objective space but in relational matrix. For Bourdieu (1977, 1990) social behaviour is not to be examined in terms of a code given as a static representation, but as continual and dynamic operationalisation of actions by social actors who strategise in accordance with their practical mastery of social situations and in the given historical contexts. How does he do this? Bourdieu (1977, 1990) proposes a "theory of practice".

"... To restore to practice its practical truth, we must therefore reintroduce time into the theoretical representation of a practice which, being temporally structured, is intrinsically defined by its *tempo*...to substitute *strategy* for *rule* is to reintroduce time, with its rhythm, its orientation, its irreversibility. Science has a time which is not that of practice. For the analyst, time no longer counts: not only because...arriving *post festum*, he cannot be in any uncertainty as to what may happen, but also because he has the time to totalize, i.e. to overcome the effects of time. Scientific practice is so 'detemporalized' that it tends to exclude even the idea of that it excludes: because science is possible only in a relation to time which is opposed to that of practice, it tends to ignore time and, in doing so, to reify practices...practices defined by the fact that their temporal structure, direction and rhythm are *constitutive* of their meaning." (Bourdieu, 1977; 8-9)

In this schema, actors are both a product of social structures and also producers of these structures (the “generative principle” of practice) and thereby situating the analysis within the very movement of accomplishment of any social phenomenon. Such an account makes possible a science of the dialectical relations between objective structures (to which the objectivist mode of knowledge gives access) and the structured dispositions within which those structures are actualized and which in their actualization reproduce them, which he terms as the habitus.

In this context Bourdieu’s (1990) conception of strategies, dispositions, generative principles and schemes i.e. habitus, field, practice and species of capital become pertinent to comprehend how social groups are organized and how rule is organized. His analysis also seeks to explain how various strategies are drawn up and practices organized by individuals to become part of the ruling group. Bourdieu’s (1977, 1990) theory of power is rooted in the logic of cultural reproduction which operationalises through the logic of practice i.e. through the dialectic interaction between the habitus and the fields. The habitus is the mental structure through which people deal with the social world. It can be thought of as a set of internalized schemes through which the world is perceived, understood, appreciated, and evaluated.

Bourdieu stressed that mechanisms of social domination and reproduction were primarily focused on bodily know-how and competent practices in the social world. Bourdieu fiercely opposed Rational Action Theory as grounded in a misunderstanding of how social agents operate. Social agents do not, according to Bourdieu, continuously calculate according to explicit rational and economic criteria. Rather, social agents operate according to bodily know-how and practical dispositions. Social agents operate according to their “feel for the game” (the “feel” being, roughly, habitus, and the “game” being the field) with agents enculturated to

certain dispositions, with certain schemes of thinking and acting that are regarded as the only right way to do things, not in the sense of having been chosen as better than other ways, but as the only way, the “natural” (doxic) way to act. Taken as an entire system of schemes of perception, appreciation, and action, these dispositions constitute what Bourdieu terms the habitus. It is the habitus that lends order to customary social behaviour by functioning as the generative basis of structured, objectively unified practices. (Bourdieu 1977: vii)

“...in short, the habitus, the product of history, produces individual and collective practices, and hence history, in accordance with the schemes engendered by history. The system of dispositions - a past which survives in the present and tends to perpetuate itself into the future by making itself present in practices structured according to its principles, an internal law relaying the continuous exercise of the law of external necessities (irreducible to immediate conjectural constraints) - is the principle of the continuity and regularity which objectivism discerns in the social world without being able to give them a rational basis.” (Bourdieu, 1977; 82)

Instead of analyzing societies in terms of classes (in my case caste), Bourdieu (1977) uses the concept of field: A social arena in which people manoeuvre and struggle in pursuit of desirable resources. According to Bourdieu (1990) a field is a network of social relations among the objective positions within it. It is not a set of interactions or intersubjective ties among individuals. Social agents act strategically depending on their habitus in order to enhance their capital. It is a type of competitive marketplace in which economic, cultural, social, and symbolic powers are used. The pre-eminent field is the field of politics, from which a hierarchy of power relationships serves to structure all other fields. The field of power (politics) is peculiar in that it exists “horizontally” through all of the fields and the struggles within it control the “exchange rate” of the forms of cultural, symbolic, or physical capital between the

fields themselves. A field is constituted by the relational differences in position of social agents, and the boundaries of a field are demarcated by where its effects end. According to Bourdieu (1986) to analyze a field, one must first understand its relationship to the political field and also has to map the objective positions within a field. Finally, the nature of the habitus of the agents who occupy particular positions within the field with varying amounts of species (cultural, social, symbolic and economic) capital can be mapped. It thus follows that fields are historical constellations that arise, grow, change shape, and sometimes wane or perish, over time. (Wacquant, 1998, Bourdieu and Wacquant, 2002)

These agents act strategically depending on their habitus in order to enhance their capital. Bourdieu (1984) examines the social construction of objective structures with an emphasis on how people perceive and construct their own social world, but without neglecting how perception and construction is constrained by structures. An important dynamic in this relationship is the ability of individual actors to invent and improvise within the structure of their routines.

According to Bourdieu (1990) the system of dispositions people acquire depends on the (successive) position(s) they occupy in society, that is, on their particular endowment in *capital*. Thus for Bourdieu (1986), a capital is any resource effective in a given social arena that enables a social actor to appropriate the specific profits arising out of participation and contest in it. Capital comes in three principal forms: economic (material and financial assets), cultural (scarce symbolic goods, skills, and titles), and social (resources accrued by virtue of membership in a group). A fourth species, symbolic capital, designates the effects of any form of capital when actors do not perceive them as such (as when we attribute moral qualities). The position of any individual, group, or institution, in social space may thus be mapped on two planes, the *overall volume and the composition of the capital* (different forms

of capital) they control and the third coordinate, which determines the variation over time of this volume and composition- it records the *trajectory of the social actors/institutions* through social space and provides clues as to their habitus by revealing the manner and path through which they reached the position they presently occupy. But in modern societies, social agents usually do not face an undifferentiated social space. The various spheres of life, art, science, religion, the economy, law and politics, tend to form distinct microcosms endowed with their own rules, regularities, and forms of authority -what Bourdieu (1990) terms as fields. (Wacquant, 1998, Bourdieu and Wacquant, 2002)

In short, two arguments justify the establishment of this research on food practices in Mauritius and Rodrigues Islands:

1. There is prevalence of obesity, high blood pressure, alcoholism, diabetes and heart diseases in the island. These problems are more serious than in any other country. Obesity and diabetes affect children also. This situation is alarming as these ailments tend to impinge upon societal health status in general representing important social and economic costs.
2. The rapid transformation of food intake practices in Mauritius and Rodrigues has shifted to an occidentalised model of food consumption. This occidentalisation assumes the form of a transformation of the eatables in incremental growth of imported products - canned meat, sweet drinks (fizzy drinks), etc. This transformation is the result of the rapid shift from subsistence food stuffs, based largely on local products and logic of self-sufficiency, to a monetisation of food habits giving rise to importation of industrial products.

This investigation hence aims at deepening further the determining cultural and social factors associated with food consumption practices followed by large a large section of population of Mauritius and that of Rodrigues leading to the development of contemporary health problems in the geographical areas of the study.

Activities Undertaken During Research

The study attempted to collect the view on the idea of food items traditionally consumed by the people in Mauritius and Rodrigues especially its preparation, contents and possible effects on the human body by way of participant observation method. Thus collected qualitative data was of vital importance during the investigation as the main purpose of the project was to discover the underlying motive of the informants on the subject matter. Hence, through this method we have analysed the various factors which motivate people to behave in a particular manner or which things they like and which they do not like.

Quantitative Research method is also used in collect information. According to Clifford Woody, research comprises defining, re-defining problems, formulating hypothesis or suggested solutions; collecting, organising and evaluating data; making deductions and reaching conclusions; at last carefully testing the conclusions to determine whether they fit the formulating hypothesis (Woody 2015: 36). The study not only gathered latest information on food choices and practices in Mauritius and Rodrigues; but also the understanding of the other relevant processes – social, cultural, political and economic – which have been responsible for compelling the people to opt for these choices in diverse situations within a rapidly changing context in Mauritius and Rodrigues islands i.e. the field of the study.

An unstructured questionnaire schedule was used to collect specific data on various issues concerning food habits / intake of food in relation to 'healthy body' and also its relations to common ailments confronted by the people in the historical past in the area of research. Case-studies were also recorded from Mauritius and Rodrigues region – (the area of study). A special concern to identify the relationship between private practices of preparation of food items and public consumption of such food items, if any, in the areas of the study, was also undertaken, especially because of the country's position of being "world tourist destination". The research will attempt to identify the possible connection between the claim and the practical reality.

Random Sampling Method:

We use random sampling method for selection of a sample. In this simple random sampling the process of selection of a sample is in such a manner that each and every unit of a population has an equal and independent probability of being included in the sample. This type of data collection method needs direct interaction with the respondents. This interaction involves presentation of verbal communications. The method of collecting information through personal interviews is usually carried out in a structured way. This method was used through personal interview or telephonic interviews. Personal interview requires interaction between minimum two people where one is interviewer. This generally involves face to face contact with direct or indirect personal or group investigation.

Secondary data represents a very powerful tool for us as this research work is carried out on the basis of secondary data also. It is primarily the backbone of research work. Secondary data is the one which has already been collected and analysed by someone else. This analysed data is available in the published form. We have

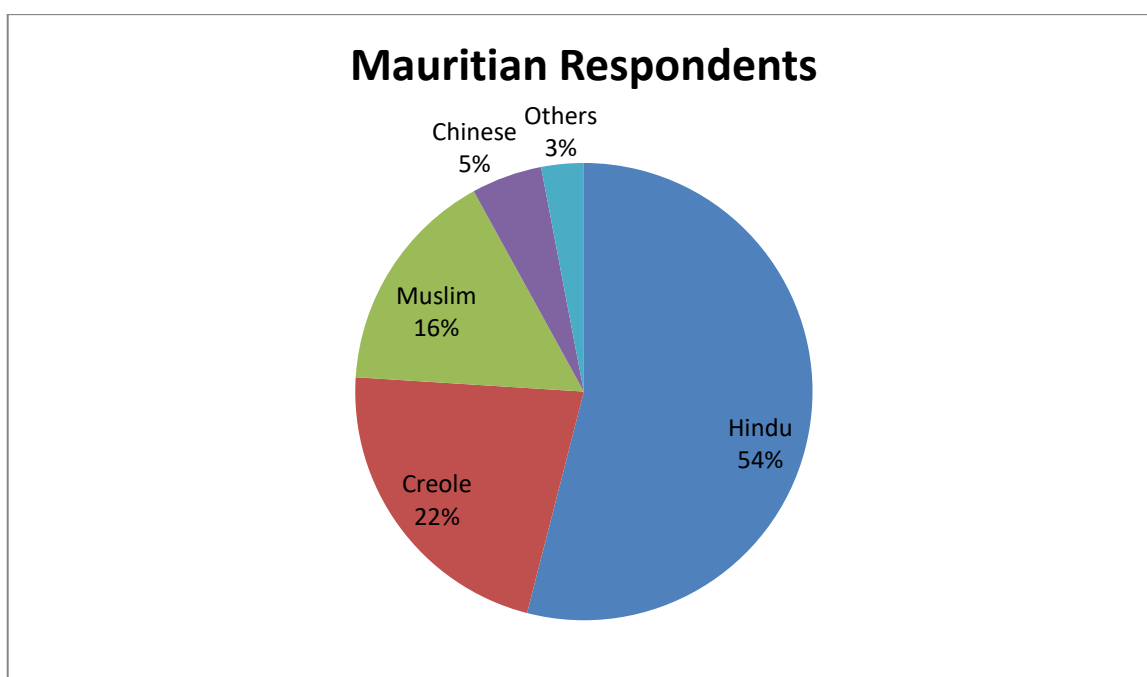
retrieved the information from Statistic Office, Reports on public Health from the Ministry, newspapers, archives, research web sites, Journals and from other sources.

Field visits

An attempt has been made, to have representations of respondents, not only from all sections of society, but also from all regions of Mauritius as well as Rodrigues islands. Care has been taken, specially, to identify the senior citizens who have witnessed old food habits and experiencing the modern food ways; for getting the detailed understanding of the changing food pattern in the regions.

Figure 4:1

Showing Proportionate representative Respondents interviewed in Mauritius



Source: Field data by the Researchers of the Study.

In all, 60 respondents were selected by way of snow-ball random sampling technique from Mauritius and 20 respondents from Rodrigues were short listed.

The selected respondents were interviewed for detailed case -study using open ended, focussed probing questions concerning food system preferences in the region. ¹

Inquiries and contacts were established with the local restaurants/hotels, mobile food vendors and local fast food joints to understand preparation of food preferential items of changing tastes of the population and the kind of clients being served by these outlets.² Representatives of Commission on Health and Quality of life from Mauritius and Rodrigues were consulted in an attempt to probe the common ailments prevalent in the region and understand the epidemic control mechanism effected by the concerned authorities.

The investigators had also visited several villages in Mauritius and Rodrigues not only in the hinterland but also on the coastal regions to identify the food preparation and consumption items. Some fascinating details came to light in

¹ **60 informants were interviewed.** They are residents from different places. Rivière du Rempart, Triolet, Goodlands, Quatre Soeurs, Isidore Rose, St Julien d'Hotman, Sans Souci, Cascavelle, Curepipe, Mauritius-Hermitage, Camp Fouquereau, Flic en Flac, Rivière des Anguilles, Le Morne, Chamarel, Grand Baie, Port Louis, Camp de Masque, Montagne Blanche, Sébastopol, Belle Rive, Petite Julie, Grand Bois, Piton, Cote d'Or, Petit Raffray, Roche Noires, Belle Mare, Caroline, Rose Hill, Quatre Bornes, Vacoas, Phoenix, Riche-Mare Flacq.

20 Rodriguean informants- La Ferme, Citronelle, Port Mathurin, Gravier, Mont Lubin, Riviere Banane, Pointe Cotton, Baie aux Huitres, Grand Barre, Anse Raffray, Riviere Coco, Baie aux Tortues, Port Sud Est, Riviere Corraile, Anse aux Anglais, Montagne Tonnerre, Anse Raffin, Allée Tamarin, Anse Goeland, Grand la Fouche Corail

² **Restaurants and address in Rodrigues-** Chez Mami-La Ferme, Sunset Beach Café-Port Sud Est, La Case Mama-Port Mathurin, Da Tonio-Riviere Banane, Ti Piment Rouge-Terre Rouge, Chez Bridget-Port Mathurin, street vendors and other small food outlets, market place, vegetable and meat stalls.

Restaurants in Mauritius- Restaurant Sanju-St Julien D'Hotman, Sandokan Bar-Lallmatie, Sauterelle-Grand Baie, Grill and Chill-Perybere, Chez Tino-Trou D'eau Douce, Happy Raja-Grand Baie, Sitar Indian Restaurant-Moka, Chamarel Restaurant-Chamarel, Comlonne Restaurant-Nouvelle France

such discussions which have not been available in the public domain or are being neglected.

The data (qualitative as well as quantitative) thus collected was suitably analysed from an anthropological perspective as is seen in the next section. As the research focuses on food habits the methodology we employ is based on historical reconstruction and interpretative sociology. Primary sources include documents within the archives and the public domain (newspapers, pamphlets, diaries, official papers and communications) together with case studies, interviews, narratives and life histories. Secondary sources are review of literature in social sciences, articles published in journals and books.

Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation in Mauritius and Rodrigues

(A Research Project Sponsored by MRC)

Section Five

Data Analysis

This section will have a detailed analysis of the field based data collected for the purpose of the study from Mauritius and Rodrigues islands – i.e. the area of the study of this research project. The data has been analysed from the view point of the Anthropological perspective intersecting the secondary source material treated from the historiographical underpinnings. The attempt here is to analyse of the field data concerning the culinary practices taking into account the everyday life-experiences of the people since the time of the homogenisation of the Mauritian settled population and the evolved remodelling of the cultural setting and social structure, in aftermath of the Indian Indentured immigration, that has come to be identified as “Mauritian food” specialty.

In the first half of 19th century, a large scale Indian indentured immigration was attempted on Mauritian soil to replace slaves. It proved to be a ‘big experiment’ that was successfully followed by the other British colonies. The vessel carrying indentured labour offered a unique experience whereby the workers from different places of origins and of diverse cultural and linguistic backgrounds, worked and lived side by side. Thus, a special characteristic of the Indian diaspora in Mauritius got established by blending socio-cultural and religious practices from the Indian civilization and tradition. Their interactions with the earlier immigrants to the island (the erstwhile

slaves—mainly from Africa) led to the further development of an integration and homogenisation of Mauritian immigrants in the “Process of Creolization”.

The trail of Mauritian immigrants is very interesting. Through social mobility, they have emancipated themselves from their role as ‘coolies’ to be part of the middle class of the Mauritian society. Consequently, they have refined and adopted for themselves social /cultural norms, behaviour, values, practices and conventions including their consumption and eating habits. This study has explored some of the social relations involved in purchase, preparation and consumption of food items among the indentured immigrants and modern indo Mauritians. It is observed that what people consume is constrained by circumstances which are essentially constructed by cultural, social as well as economic conditions.

They created preparations of food stuff for daily consumption with the different varieties of vegetation cultivated and grown by them while interacting with the natural setting and surrounding of their new habitat since their arrival on the island a few generations ago. The immigrants had dissimilar tastes as they hailed from different quarters of India. Taste has always been deeply embedded in social-cultural background of the people, and is often normatively regulated by respective class cultures. The nature and consumption of food has been the prime marker of people’s identities. Eating habits are thus the result of not only the socio-cultural factors but also mores, values and ethos of the given society. These habits are formed and acquired, and may change over a person's lifetime.

Following the works of Levi Strauss and the critics succeeding them, numerous authors (Poulain, 2002; Fieldhouse, 1995; Chiva, 1997; Douglas, 1979), and the data analysis here has reconsidered the culinary triangle in contemporary alimentary

practices in Mauritius and Rodrigues society. In view of this, the present study has analysed the data collected for the purpose from the following point of view: How did the choices and modalities of alimentary decisions change among the indo-Mauritians since the immigration period? Have rules, norms and etiquette governing food habits altered among the indo-Mauritian population to affect the overall ethos of the population in the area of the study? What perspectives do people have about the effect of food intake on the body? What could be the alternative/s, if any, for minimizing the obvious detrimental effects on health generated through food practices on the population of Mauritius and Rodrigues?

The rapid transformation of food practices among Indo-Mauritians and Afro-Mauritians with a shift in food model towards an Occidentalised model assumes the form of a transformation of the register of the eatable with an increase in the consumption of imported products: canned meat, sweet drinks (fizzy drinks), etc. The transformation is the result of the rapid shift from subsistence food stuffs, based largely on local products and a logic of self-sufficiency, to a monetarization of food habits giving rise to importation of industrial products. The data thus collected from the field respondents in person by way of interviews techniques and using participation-observation method from around the rural, urban as well as coastal areas in Mauritius and Rodrigues have been analysed in this section in detail. The investigators went around meeting respondents at their convenient time, spending time in making them talk of their lived experiences concerning food system and practices in the region.

A variety of techniques were used during the process of the study, including open ended, semi structured questionnaires and unstructured interviews with informants. The sample consisted of respondents across the age groups. The researchers undertook participation-observation technique by attending meetings and

other group activities in the rural, urban and coastal areas at times at various locations in Mauritius and Rodrigues (the extracts of the interviews and discussions have been annexed in the appendix). The discussions with the respondents centered on quality and nature of food preparation and consumption, slimming diets and exercise, provision of meals for the elderly and the younger members of the society. A series of observation and short interviews in fast food outlets and restaurants were also carried out during the study.

The growth of urbanisation, industrialisation and technological advancement, coupled with the socio-economic development of the Mauritian and Rodrigueans society has transformed family life, values and traditions, eating habits, cultural and socio-religious conventions attached to food practices and the very socialisation pattern of intake of food in the country. The present data analysis is proposed at analysing the representations, discourses and contemporary practices of food habits and health in Mauritius and Rodrigues, within the context of a fundamental anthropology of food habits and the body. Individual, social, cultural, religious, economic, environmental, and political factors all influence people's eating habits.

A cultural group provides guidelines regarding acceptable foods, food combinations, eating patterns, and eating behaviours. Compliance with these guidelines creates a sense of identity and belonging for the individual. Within large cultural groups, subgroups exist that may practice variations of the group's eating behaviours, though they are still considered part of the larger group. Humans view food as much more than basic sustenance. Many people like certain foods better than others and some people love their ethnic food. Most regional varieties of Indian cuisine are identified by the usage of spices and the use of a greater variety of vegetables than many other cuisines. One cannot neglect the influence of a blend of European

(especially French, British) and of course the Chinese styles the cuisine on the Mauritian and Rodriguean food preparation and eating habits in the country.

Flavours and aromas unlike any other cuisine characterize Indian cooking; and religion, geography and climate influence the cuisine as well. It is observed that there is an overwhelming influence of Indian cooking practices on the overall food culture and cuisine which is now characterised as Mauritian and Rodrigues taste. Over the years, Indians have used a vast range of different vegetables like spinach, tomatoes, cauliflower, potatoes, and green beans to make different vegetarian dishes. Some other popular Indian vegetables include eggplant, okra, cluster beans, beetroot, cucumber and white radish. The basic spices used while cooking any food are ginger, garlic, chili powder, turmeric, cardamom, cinnamon, cloves, coriander powder, and cumin powder. Other items are mustard seeds, cumin seeds, fenugreek seeds, dried red chilies, and curry leaves. Most of these spices are also found to be used by the Mauritians and Rodriguean to add taste to their food preparations.

Food habits in Mauritius and Rodrigues represent the focus of a growing number of queries and questions from the academics, media, medical and business professionals as well. Food practices touch, in fact, fields as varied as culture (gastronomy and culinary patrimony), health and hygiene (sanitation, diseases and ailments, nutritional) and economics (production, food markets, purchasing power) in any given society. The present study has considered many of these issues and in doing so collected relevant data for the purpose of analysis. A number of rituals surround the act of eating. They put into practice the definition of meal, its structural organization, the form of an alimentary day (number of intakes, forms, time, social

contexts etc.), the means of consumption (eating with hands, with sticks, with knife and fork, etc.).

This section analyses and interprets data that was collected for the study. In keeping with the dictum, that “the researcher breaks down data into constituents parts to obtain answers to research questions and to the hypothesis. However, the analysis of the data in its own does not provide answers to the research questions, it needs to be interpreted so that relations to research questions can be studied, tested and conclusions drawn.... When the researcher interprets the research results, he or she studies them for their meanings and interpretations” as observed by (De Vos & Fouché 1995: 78). Data in this research was collected by means of participant observation (as mentioned earlier), and semi-structured interviews with the use of pre-set questions and all such data was recorded by way of field notes mostly and also through electronically.

The study observed the following food items were being consumed by the locals in Mauritius and Rodrigues in the past:-

- water in which rice is boiled, commonly referred to as delo kanz
- bouillon and chatini goyave de chine only
- matha
- bouillabaisse and bread
- bouillabaisse and chili chutney only
- bread and ghee with or without sugar
- rice, salt and ghee only
- matha, chili, salt and rice
- rice which could be accompanied by khokorni and sugar or salt
- rice and oil in which sounouk fish had been fried

- rice, oil from pickles and salt
- rice and chili
- bread and chili
- bread, rice and onion
- rice or farata accompanied with a combination of dhol, coconut chatini, salted fish, a vegetable, or even by only one of those food

The data collected from Mauritius and Rodrigues found that the people follow a kind of consumption pattern in the following varieties depending upon their economic status and in society:

Foods consumed for breakfast

- tea which would be with or without milk,
- boiled arouille,
- tapioca,
- maize,
- violette,
- breadfruit,
- arouille popet,
- arrowroot,
- cornflour,
- greens and semi ripe bananas
- bread or rice
- satwa: a mixture of 7 types of powdered grains together

Baby food consumption: Babies were having foods made from

- grilled flour,
- flour made from arrowroot and cornflour,
- condensed milk.

Foods consumed for lunch

- farata,
- pancake such as crepe (sweet and salty thin pancake made from flour) and litti (salty thin pancake of $\frac{3}{4}$ cm made from flour only or added to crushed rice top, grated tapioca, crushed dhol)
- rice
- There was also the dish of khichri which was when dhol and rice were cooked together.
and
 - a soup
 - if available a vegetable,
 - salted fish, eggs or grilled bomlis

Snacks and dinner: In Mauritius, there has long been the tradition of teatime especially in the afternoon hours. It was found that the meal consumed at teatime would be similar to that of breakfast. In the same vein, the foods eaten during dinner would be similar to those during lunch. However, after dinner and before going to sleep, some people had the habits of drinking a glass of milk.

It is observed that there are some common culinary items consumed during lunch or dinner. It is prepared out of many variants depending upon the socio-economic background of the family and or individual. The following are some of the illustrations:

Curry preparation:- It could be cooked with permutation and combination of the following items:

- grain from laliane pokpok
- grain from bringelle marron
- grain from ripe jackfruit
- rengui, which is a very small tomato in the size of a playing marble
- tapioca, sweet potato, arouille, violette, fruit-à-pain, arouille popet, potato
- vegetables such as pumpkin, the peel of pumpkin, chouchou
- le coeur fanja which would be to cut the tender stem of the fanja plant and putting it in boiled water, removing it from the water and made curry
- ripe and semi-ripe mangoes
- chalta
- arouille and fruit de cythère cooked together
- fresh and/or dry dal bravate
- the fruit of the Vacoas plant, more precisely the supporting stem
- the core of the banana plant
- baba banane also referred to as ponga banane. These were the flowers found at the tip of the bunch of bananas.

Sauté preparation: It found to be a combination of my items out of the following:

- tapioca (kat kat)
- arouille, violette, potato
- greens (martin, chouchou, banpyaj, sweet potato, chansoor)
- green bananas and banana peel

Variety of Soups:

- Bouillon
 - Brède martin
 - Brède chouchou
 - Soured milk
- Bouillabasse soup is prepared out of the water used for cooking rice
- where salt and tomato were added

Chutney Varients:-

- Rengui/tomato
- Mint
- Garlic leaf
- Tamarin
- Chili
- Coconut
- Khataya leaf (begonia)
- Coriander

Chatini types:-

- Potato, sweet potato, arouille, violette
- Tapioca and pipengaille peel
- Pumpkin peel
- Green banana
- Grilled Bombayduck (bomli)

Greens / brede / salads:-

- banpyaj
- Chansoor
- Martin
- Sweet potato

(It must be noted that the above greens were being grown abundantly in the backyard of the households till 1970s, however, it appears that it has not been in the vogue anymore in modern era.)

Pickle varieties:-

- Green mango
- Goyave de chine
- Chalta
- Coeur demoiselle (karamda)
- Green pawpaw

Soft and refreshing drinks:-

- Bigarade
- Passion fruit

- Orange juice was bought from shops only when someone was ill
- Water
- Sugarcane was also eaten during the harvest season when one was hungry or thirsty
- Black coffee
- Tea with/without milk
- Bouillon
- Matha
- Rice water (delo kanz)

Seafood varieties prepared with addition of spices:-

- Fish and others
- Prawns (small and big) from rivers
- Camarons

Fruits used as desserts after lunch or dinner:-

- Guava
- Mango
- Fruit de citère
- Goyave de chine
- Pawpaw
- Other seasonal fruits

Milk and its byproducts :-

- Milk or ghee
- Lait caillé (dahi / curd)
- Lait gate (boiled milk with added sugar or salt)
- Chali -- a creamy layer of milk, and the sticky residue of milk found at the sides and bottom of the pan of boiling milk.
- Khokorni which is mildly burnt brown residue after processing of ghee by churning milk
- Matha, which is the residual liquid after churning milk cream, for ghee that has been stored for a week

The study found that in some of the villages in Mauritius and Rodrigues the food items get stored in bamboo vaults called chonga after spreading salt on it. It was found that people used coconut shells and smaller tin cans as bowls while having food especially in the villages.

It is observed that people of Mauritius and Rodrigues use various ways of cooking their food. Following are some of the ways used by Mauritians and Rodriguean for preparation of their food varieties:

- Tomatoes and bomli (bombay duck) cooked in embers
- Burnt dry wood
- rechaud, la breze (embers)
- burning of dry leaves, wood and coconut shells
- Artisanal oven made of iron sheet and saw mill dust

- Sweet potato and tapioca were grilled and then covered with hot ash and embers. They were then removed after one hour.

Some of the preparations especially the following fruits are simply boiled in water before spicing it for consumption:

- Green, semi-ripe bananas
- Arouille, sweet potato, tapioca, violette
- Arouille popet
- Breadfruit
- Arrowroot, cornflour (red root plant)

It should be recognised that these food practices were in keeping with the physiological requirement necessary for strenuous activities the people had to undertake in the migrant alien climatic conditions. The nature of food content provided necessary proteins, carbohydrates and vitamin A, B, C and D especially for men and women living in the Mauritius of the past. These food items apparently did not have the potent for high cholesterol as noted by some of medical reports.

A look at the food consumption in the country till early 1980s (a couple of years after Mauritius Independence) would give an interesting contrast with contemporary Mauritian and Rodriguean society. Before the obvious effects of globalisation during the early years of Structural Adjustment Program with European countries the people in general were having difficulties in having sufficient food supply. It is important to mention that special dishes like briyani were consumed one or two times yearly during Muslim festivals and special occasions. The Hindus ate meat only once a year at the time of cattle offerings to the Kalimaye during the Baharia Puja. Some affluent people

in each villages would offer kheer, puri and other food like rotee, laddoo (rich in sugar and ghee) to other villagers once a year during Durga Puja.

The use of cooking oil was at the minimum. Very little oil was used to making daily curry for lunch/dinner. Fried potatoes were prepared by constantly stirring the potatoes in the little oil to prevent burning. Tomato (canned mackerel) was a luxury and cooked only on special occasions. Lemonade or other fizzy drinks were used only for the visitors of the house. Salty cakes such as samosas, bhajya, and gateau piment were consumed occasionally. At times one gets to eat cake made from coconut and sugar. Dudh pitti, a sweet dish with flour, sugar and milk has been a common preparation among rural households. Another popular cake was pehra, made out of boiled milk, sugar and elaiti and consumed in dry semi-solid state. Gateau Kolkoté was a delicacy prepared by a mixture of ground rice, sugar and grated coconut cooked in steam. Citronelle leaves supported by bamboo sticks were put in a cooking pan half full of water. The mixture was put on the leaves and the pan was covered and put to cook for about 30 minutes. It was then removed and cut when cold. Lagelée (jam) was made from goyave de chine and guava.

Food Consumption in Mauritius and Rodrigues

Food is central to biological and social life. We ingest food many times across days, seasons, and years to satisfy our bodies if we are to satisfy our emotional as well as physical needs. The Act of eating lies at the heart of social relations, at meals family ties and friendship is maintained by sharing food, tastes, and values.

Table 5.1

Showing Categorised Food Consumption of the Mauritian Population

<i>Eating Time</i>	<i>Hindus</i>	<i>Muslims</i>	<i>Creoles</i>	<i>Chinese</i>
Breakfast	Egg, farata /roti, bread , butter, jam, cheese, cereal, curry* and rice, tea, milk or juice	Egg, farata, bread and curry*, butter, cheese, curry and rice, cereal ,oily cakes, cutlets, tea	Egg ,Bread butter, jam, cheese, cereals, burgers, Juice, tea, fizzy drinks	Hamburger, bread ,butter cheese, egg, burgers, tea juice
Lunch **	Bread and curry, rice and curry, fried noodles, fried rice, boiled noodles, bread and salad/pickle, burgers, fizzy drinks like coca cola, water	Briyani, bread and curry, rice and beef, kebab, fizzy drinks, oily cakes	Bread and curry, bread and salad, boiled noodles, rice and curry, oily cakes	Bread and curry, noodles, sandwich, fried rice, fizzy drinks
Diner time	Rice and curry, meat, potatoes, and other veggies, pulses, salads, fish, farata	Briyani, farata, bread, oily cakes, cutlets, rice and curry,(meat /fish) salad	Rice and curry, bread, meat, salted fish, bombay duck, frozen foods, veggies, burgers, sausages	Soups, veggies, noodles, fried rice, meat, (pork), bread, salad
Anytime	Dholl puri and curry, pastries, sweetmeats	Oily cakes, snacks, peanuts, sweets, fizzy drinks, chips, KFC, Mc Donald, halim, boulette, canned food, folklore food like Bread and sardine with green chillis, corn mutton salad		

Source: Field data during the study 2017.

Note: 1. *Curry preparation made out of chicken, mutton, liver (chicken / mutton), fish, egg, beef, pork, ham all cooking in lots of oil and spices.

2. **Most of the informants mentioned that 80% of residents of Mauritius as well as Rodrigues have their afternoon meal (lunch) from restaurants, fast foods joints and road sides food hawkers and canteen where they work. The food that they eat is with lots of oil content or fried in refined oil.

As seen in the above table 5.1, the Mauritians have their own choices of food intake, often distributed over at least three meals per day apart from munching other snacks (supplementary eatables) throughout the day. It is also noted that the fizzy drinks like Coca Cola, Pepsi, Fanta, Sprite, Orangina, etc. are sipped anytime of the day. These drinks are consumed after having KCF/McDonald brunch packs, or a

heavy lunch or dinner like Briani). The popular belief here is that these drinks will digest the food quickly.

In contradistinction to the popular belief, it must be pointed out here that many of the soft drinks available in the area of the study has been the products of the multinational companies. And if the reports are to be believed then all these drinks have been found to contain a high level of dangerous pesticides in them. For example, the following beverages mentioned here have corresponding percentage of pesticides given in the bracket Coke (13.4%); 7 Up (12.5%); Mirinda (10.7%); Pepsi (10.9%); Fanta (9.1%). A recent investigation published by the Indian Medical Association in January 2017 has revealed these details. If the range of pesticides exceeds 2.1% in any drink, then it is very dangerous to the Human Liver, resulting in Cancer kind of disease, warns the publication [The Hindu 2017: 4]. This habit has more or less stopped intake of potable water by the people in Mauritius as well as in Rodrigues in particular.

Daily food consumption

Some of the food preparations and consumable dishes have come to be identified as typical Mauritian food specialties. One can categorise them as the food consumed by common people on routine basis. These coloured pictures of the food items are presented separately). Some of the popular food preparations (D-pictures) with the annotation and its possible effects on physical and mental health of the people are given below. All these food items are taken any time of the day. It may be noted that the ingredients of some of the illustrated cooked food items have been mentioned in the local creole language.

D1: Dhol Puris

Dhol puri is found in every nook and corner of Mauritius. This pancake-style flatbread stuffed with cooked yellow split peas which have been blended and seasoned, is a savoury treat so simple and handy. They are always served in pairs, and rolled up with bean curry, “achard” (pickle), Mauritian “Rougaille”; a spicy tomato-based sauce made with spring onions, garlic, pepper and ginger. The main ingredient is white flour, oil, and split peas.

D2: Gato frire

“Gato frire” are those snacks that are consumed by Mauritian and Rodriguans daily and they are encountered in every “tabagies” (small shops), street stalls or markets. They are deep fried snacks made from different vegetables. “Gato piment” being the most popular; you will, without any doubt, adore those small balls of yellow splitted peas and chilli. There are other oily cakes like “Gato Arouille” -Taro cakes, made of grated taro and sugar. “Pain frire” (Fried bread cakes), “Gato bringel” (Eggplant fried cakes), “Gato pomme de terre” (Potato Fried Cakes), Samoussas- Triangular shaped cakes stuffed with potato curry or cheese and much more.

D3: Bouillon Petsay

Bouillon petsay is usually a soup made of eatable leaves such as chayote leaves, watercress leaves or bak-choi leaves. It usually accompanies rice and is accompanied by assorted chutneys and pickles. The classics remain the “Chatini poisson-salée”- Salted fish Chutney or the “Chatini Cotomili”- Coriander leaves Chutney. The ingredients are the leaves of petsay, garlic, ginger, salt, and oil.

D4: Curry

The main feature of a curry is the incorporation of complex combinations of spices and/or herbs, usually including fresh or dried hot chillies. They are usually prepared with various bases such as chicken, fish, octopus or even prawns. Curries usually accompanies rice, roti or dhol puri and are generally accompanied by mixed salads.

D5: Chop Suey

This Chinese dish comprises of a chop suey sauce accompanied with stirred vegetables, chicken, prawns and chinese sweet sausages topped with an egg. All of those is assembled in reverse in a bowl which is in turn, turned upside down onto a plate, to reveal the magic combination you see above.

D6: Noodles

Noodles are usually prepared in two forms in Mauritius. You will either find they stir fried with chicken or beef and vegetables or you will find they boiled and accompanied with various sauces or preparations.

D7: Briani

A favourite Mauritian dish: **(briani)** will conquer more than one. Similar to Indian briyani, it's a rice dish made with beef, chicken, fish, mutton or vegetables (as well as yoghurt, saffron and spices). In this dish ghee and lots of oil are used.

D8: Tofou

The ingredients that are added up to almost everything is the local teokon- most usually known as **Tofou**. It is made from soya and can be deep fried or eaten

raw. It is usually added to vegetarian curries or you can find them in the famous “bouillon boulettes”.

D9: Boulette

There are several types' balls (Meat Fish, Vegetable) that are made of minced meat, cornflour, green leaves, fish sauce and soya sauce to make it tastier. Then it is steamed and serve in soup. Garlic sauce is also added.

Popular Food Items in Mauritius and Rodrigues



D1: Dholi Puri



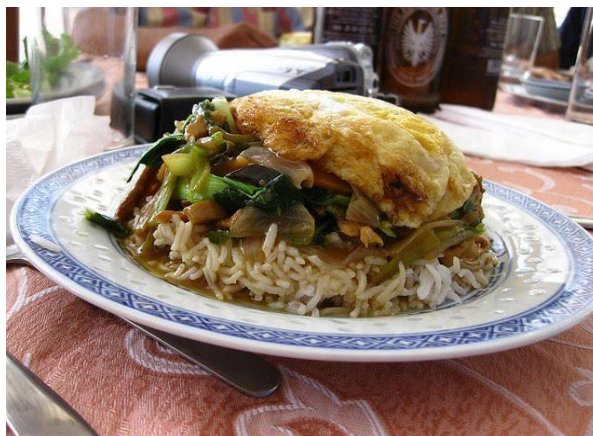
D2: Gato Friere



D3 : Bouillon Petsay



D4: Chicken Curry



D5: Chopy Suey



D6: Fried Noodles



D7: Briani



D8: Tofou



D9: Boulette

Impact on health:

One of the significant aspects observed during our field work was that most of the food items consumed by Mauritians and Rodriguans tend to generate gases in the human body. People have been suffering from headaches, acidity, indigestion, constipation, bloating of the stomach, anal bleeding at the time of defecation, feeling of dullness, sleeplessness and lack of stamina for any physical hard work. These symptoms are common among both men and women in Mauritius and Rodrigues society.

By and large, it is observed that the citizenry of the region (Mauritius as well as in Rodrigues) consume in large quantities of food intake at every occasion, whether they are breaking the fast, having lunch and dinner. The youngsters have developed different tastes of their own and are more inclined towards having fast foods which consist of ingredients that are harmful to health. The oil content of the eatables are much higher. Even for the breakfast, food items are fried in oil. Most of the respondents take sweetened tea or coffee in the morning. There hardly any green

vegetable / salad found in the meals among the population. Even the school going children seem to be having more of junk food/fast food in their tiffin. The water intake is probably on the medical advice only.

Food preservation, processing and distribution is of paramount importance for any society. Continuous supply of food grain also has to be managed especially in the areas of its scarcity and seasonal cultivation. The food items which get exported from Rodrigues and Mauritius in the process has not really allowed the full potential of the agricultural sector in the region. One of the significant issue that has surfaced during the field investigation is that the working hands are more inclined to non-agricultural and service sector activity for their livelihood. This trend has had lopsided consequences on the employment scenario in the region. This trend has encouraged the more of consumer culture in Mauritius and Rodrigues; and neglected the basic food cultivation and manufacturing sector in the society.

Even long before the invention of freezing technics, sea food products were available by drying, smoking, salting or pickling processes. Rapid transport by steamship or airplane, created trade in exotic fresh fruits, making available the other farm produce like mangoes, pineapples, bananas, poultry and animal husbandry products between the two island dwellers. However, the other food items which are imported from rest of the world have been of hybrid nature and developed with the extensive use of chemicals and preservatives. This has also impacted on the dietary practices in the region giving rise to all kind of ailments and health disorders among the people.

In Rodrigues, many people skip their breakfast and have a brunch at around 10.30 in the morning. Some of the informants said that they prefer to have their own

cooked cake. Only if they have manioc then they consume it with tea without milk as milk is very expensive. Rodrigueans have rice, fish and pork as main staple food for lunch and dinner. They also have the other marine food like Octopus, prawns, shell fish and crabs included in their daily dietary menu. Many of the informants mentioned that Rodrigueans hardly eat vegetables for being expensive available sea food. Vegetables and fruits are often shipped from Mauritius to Rodrigues.

This means that the poor people cannot afford to buy these vegetables. One vegetable vendor commented that she prefers to sell them as she has bought it very costly and buy seafood which is cheaper for her family consumption. It is easier to preserve meat and fish and other seafood in the fridge than conserving the vegetables. To get an idea of the price of some main vegetable: ½ kg Carrot Rs.100/-; ½ kg red beans (out of season) Rs.200/-; one cabbage depending upon the size Rs.70 to Rs.100/-; ½ kg tomato Rs.120/-; ½ eggplant Rs.80/-; one cauliflower depending the size) Rs.120-150/-; One beetroot depending upon size Rs.70/-.

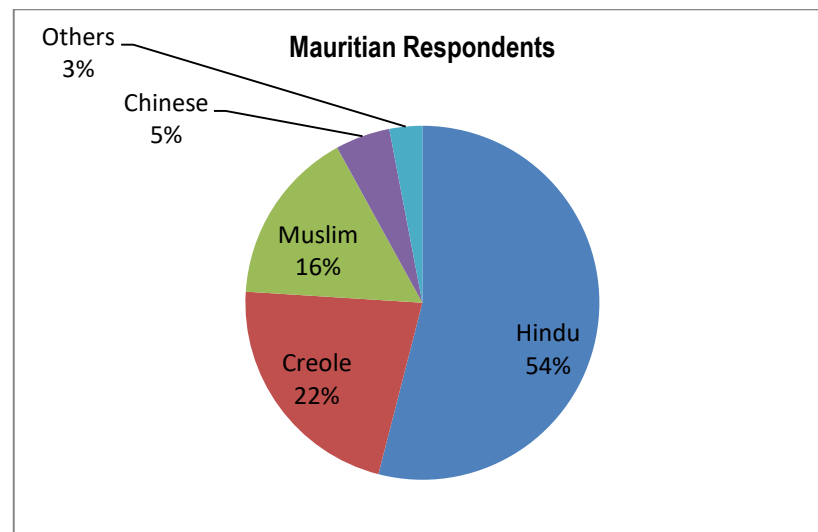
Respondents Interviewed

The study had collected personal narratives by interviewing the resident household representing various sections of the population of Mauritius and Rodrigues islands. There were sixty respondents from Mauritius who were interviewed. Among them were Hindus (32), Creoles (13), Muslims (10), Chinese (3) and Others (2); representing the ethnic composition of the Mauritian population. Care was taken to get representation from all regions of the island. Care was taken to have representation of the women, young adults and the senior citizens among the respondents. In case of Rodrigues, the interviews cum narratives were gathered from twenty respondents, representing the geographical regions of the island apart from rural and urban settlers. (Some of the translated abstracts of the interview narratives

have been given in the Appendix as sample illustration) These interviews were mostly in Creole language and were translated into English later.

The researchers got an opportunity to unravel the dynamics of food eating habits and lifestyles; relationship between food consumption and its effect on human body, habits, activities, aesthetics and fashion during the interactions with the respondents. Not only had it pointed out the growing influence of globalization process on far flung communities; but also it projected a trend of life-style changes to influence the public in the near future.

Figure 5:1
Showing the composition of the Respondents Interviewed from Mauritius



Source: Field data during the study 2017.

Analyses of the Respondents' Narratives

Elaborations of the analytical details of the data collected are being presented under various sub headings here for the purpose of brevity and comprehension:

Mall Culture and food hubs: The economic transition that followed late 1970s had changed the lifestyle of the island residents. The effect was seen in the eating preferences and practices of people. The new lifestyle no longer allowed one to spend hours preparing meals at home. Globalisation has facilitated the entry of the different kinds of processed and canned foods. People were now more exposed to burgers, commercially fried foods and chicken, chips and soft drinks. The most recent boom would undoubtedly be fast food, take-away meals, eating out in a restaurant, processed and frozen foods leading to generation of much more solid waste and garbage which has led to increasingly polluting the environment.

Such an eating practice among Mauritian urbanites has contributed to undesired effects on health of society. The food that is consumed in such a preparation is normally frozen food and tends to have undesired bacterial content affecting the consumer. A number of reports including the recent one by the Commission on health and quality of life mention that the high blood pressure, cardiovascular ailments and obesity have been on an increase in Mauritius and Rodrigues. The report also points out that this situation is the cause of concern for the government. This alarming situation, as the report points out, has been due to the changing life style of the residents, in particular the changing dietary practices increasingly adopted by the people in contemporary Mauritius and Rodrigues.

Mauritius is an example of a multi-ethnic community. It is a country where multiple religion, festivities, rituals, cultures and traditions play a great role. People are

very conscious of their religion, culture, and associations. Every ethnic group has its own culturally based food and food habits. As such, nowadays there is renewed interest in ethnic food and prepared in an authentic and traditional manner. It should be pointed out that each ethnic group has adapted foreign cuisine in its food habits from every community and culture using ingredients that were traditionally utilised by the earlier Island residents migrants. One can see a kind of fusion in the culinary practice here which has led to a kind of food specialty of Mauritian society.

Food and festivities: Briyani, a Muslim dish rich in meat, salt and ghee, is eaten at least once per week. Sometimes it can be more than 4-5 times a week, and is eaten during weddings, birthdays, death rituals, different prayers and gatherings. Briyani is served with Pepsi drink (rich in sugar), pickle (rich in salt and oil), halwa (rich in ghee and sugar), and other cakes like laddoo, jalebi which are also rich in ghee and sugar. The blessed food during a Hindu Puja such as kheer, puri, rote, laddoo, grua which are rich in ghee and sugar are consumed very often. A person usually will not refuse to eat a blessed food even though it may be detrimental to health. Traditions have been influenced, adapted and adopted through contacts with other cultures and ethnicities.

Urbanisation and food: Contemporary Mauritians tend to become more urbanised. Mauritius is becoming an international tourist destination thereby better road transport facilities have emerged , urban housing facilities have increased, more and more areas are becoming urbanised , basic infrastructure like provision of electricity , drinking water , garbage disposal system have improved in Mauritius. This has resulted in mushrooming varieties of malls and departmental stores in modern Mauritius. These outlets have been providing consumer's goods from all over the world. This has also resulted into some special characteristics feature on the population. More and more people are engaged in non-agricultural activities and also

in service sector industry. What is observed is a general trend of not having daily breakfast at home is growing. At times even the main course meal is also being bought from outside or consumed in restaurants.

An overview in food consumption in Mauritius appears to have a different picture of the food ways among the majority population of the island. Burgers, fried rice and fried or boiled noodles, Kentucky fried chicken, pizza, fish balls, Chinese soups, wafers, fried chips, sandwiches, and other fast foods are prevalent among the urban dwellers. People have developed a variety of tastes which were not in direct contrast with the past. As seen earlier there have been migrating and emigrating in and out of the country. A number of younger Mauritians have travelled abroad for higher education and there has been inbound migration specially the business community and vacationed tourists from around the world, east and west. This trend especially since early 90's has brought about the change in the dietary practices in Mauritius.

Mauritius is an example of a multi-ethnic community. It is a country where multiple religion, festivities, rituals, cultures and traditions play a great role. People are very conscious of their religion, culture, and associations. Every ethnic group has its own culturally based food and food habits. As such, nowadays there is renewed interest in ethnic food and prepared in an authentic and traditional manner. It should be pointed out that each ethnic group has adapted foreign cuisine in its food habits from every community and culture using ingredients that were traditionally utilised by the locals among the Island residents. One can see a kind of fusion in the culinary practice here which has led to a kind of food specialty of Mauritian society. However, the locals, semi-literate, service sector and menial workers have been adjusting themselves with the traditional food vendors supplying bhajias, gato piment, samossa, gato bringelle, Dholl puri, boulette, halim, among others.

Rural food consumption: A cursory look at the rural areas in Mauritius and Rodrigues from the view point of the gastronomical investigations, there appears a picture of contrast between urban sector and rural life. People in rural areas are primarily dependent on the local farm cultivation. The food intakes are restricted. People tend to have the tradition- bound food practices as the result of lack of developmental facilities. There seems to be irregular supply of electricity and portable water. In Rodrigues especially people including children do not drink adequate water. As a consequence most of them suffer from improper digestion. The situation is not quite different from village population in Mauritius. This has been the situation irrespective of extension of departmental stores with imported consumer goods and eatables getting spread in rural areas of both Mauritius and Rodrigues. The gastronomical problems observed in rural areas of Mauritius and in Rodrigues in particular has direct links to the after effects of lack of water intake among the people of the region.

Diet and Sickness: Mauritius and Rodrigues have long tradition of dietary provisions during local and routine ailments. The local aliments and its treatment where traditionally taken by the cultural tradition of the people from the places of their distant migration regions; be it from Asian or African location. The indentured labourers or the slave community did not have access to medical facility during the colonial regime their adopted land. Therefore there was a reliance on traditional means of treating ailments by controlling dietary intake and /or herbal medicines. For instance for belly ache, a mixture boiled coriander and mint were used to appease the pain of the sufferer. Body ache was soothed by drinking boiling fenugreek. Bitter gourd was taken for bloated stomach. For common cold, milk and turmeric was taken. For any cut and wound, turmeric paste was applied. In order to maintain stamina “cangy” watery boiled rice was consumed before the day broke. Many such locally available

ingredients including herbs were used either as spices while cooking food or consumed in boiling water.

Alcoholism and food: One of the effects of the life style changes in Mauritius and Rodrigues has been the growing cases of alcohol addiction and also synthetic drugs. One of the explanations of such habit could be elucidated by the life style practices imitation of the erstwhile colonial aristocracy. The creolisation process which got momentum after the discontinuation of slavery and freed bonded labour also tend to have had started getting addicted to alcohol and drugs due to free time and poverty. The inclement weather of Mauritius and Rodrigues especially during the cyclone and anti-cyclone weather could have also led to the easy access for increasing alcohol consumption in the region.

However, the present day situation cannot be compared with the times of the past. The urbanisation effects, influence of European, particularly the French and the British coupled with lack of easily available portable water has resulted in growing practice of alcohol consumption among people in the region. The availability of easy money in keeping with the Structural Adjustment Programme, [the small planters were paid 300% more price for their sugar produce as part of Lome Convention since 1995 (Vivek ,2007)] has also contributed to the development.

The modernisation impact also cannot be denied for increase in the cases of alcoholism and addiction that has affected the society negatively not only the youngsters and the elderly but also women and children of varying ages seem to have been influenced in this life style. Consequently there has been the case of reckless driving leading to accidents, fights have increased and also domestic violence and child abuse are in the increase in Mauritius and Rodrigues. The educated middle aged

women have been in particular seem to have been adopting to the alcoholic consumption in a situation where divorce and separation are common social problems that is observed in Mauritian and Rodriguean society. Alcoholism and drug addiction have caused serious impact on the health of the population. People especially men have been found not eating solid food and thereby not in a position to put any gainful activity in rural areas especially in Rodrigues. It has also led to growing cases of Cholesterol and cardio vascular ailments among people.

Guest Tradition in the island nation: An important aspect of the Mauritian and Rodriguean society in the past was a welcome treatment for the guests. The arrival of guests be it a relative, friend, or a stranger was a welcome and happy occasion in all families in both the islands. The host would bend backward to make the guests as comfortable as possible. The guests will be offered water and some sweets on entry to the house hold. Special preparations of food items would be prepared afresh and served to the full satisfaction of the guests. The latter would add to the flavour of festivities on special occasions. All this was observed apparently till late seventies -- till the time of the impact of globalisation and Structural Adjustment Programme under European Union was felt.

In the subsequent years, as the literacy rate increased, the process of urbanisation and industrialisation got introduced and independence of the island nation got granted; the Atithian culture started diminishing. Consequently, one observes development of individualism getting rooted in the house hold. The earlier practice of guest tradition has almost disappeared. The nuclear family system has further impacted on the guest tradition of Mauritius and Rodrigues. Guests are no more welcome in the households. Individuals, friends and acquaintances are now being invited in way side restaurants, food courts and malls. Easily availability of liquid

cash and modern avenues for entertainment and leisure have greatly contributed to the discontinuation of aged old Atithian culture in the region.

Food and woman: Women's control of food preparation and serving it to the other members (mainly male folks of the households) in both Mauritius and Rodrigues islands. Women prepare food and this gives them great power. It is a power largely exercised over the family members and only occasionally beyond to members to the wider society. Offering food connects women to close relatives through an extremely intense emotional channel; women identified with the food they offer. The mother determines when, what and how much family members will eat. She controls the social mores of the family.

Alcohol Consumption

In Mauritius, alcoholic drinks are more prevalent among the youngsters (male and females). Overwhelming response of the respondents points out that over 70% of the youngsters have developed the habit of consuming alcoholic drinks and surprisingly women consumers of alcoholic drinks are growing at an amazing speed. Apparently it is getting more widespread among female folks from Hindus and creoles communities in Mauritius. The Chinese women prefer to have wine and the males prefer whisky. Women among Muslim community do not seem to have this trend but the male members of this particular community do consume alcoholic drinks. The food that is being consumed as snack called *gajak* are as follows:

Fried chicken, fried liver (chicken, mutton), octopus in masala or salad, fried prawns cooked in masala, fried mutton, fried fish, pickles, potato salad with boiled eggs, oily cakes and other light fried snacks including grams, peanuts, potato chips, and fried eggs. It must be pointed out that these fried varieties of food items are preferred and served with dripping oil. Such an intake of excessive oil consumption is

highly detrimental to the health as the level of fat content is high in the body leady to obesity, cardio vascular complication and hyper tension.

It is also observed Mauritians do not drink enough water. Even several exercises like yoga, jogging, gymnasium, swimming are being advised to people, still the diabetic patients are in the rise. Another fact which has been brought in our study is the consumption of red meat (Beef, Mutton, Lamb) by the Muslims community in Mauritius. This, apparently, has been the primarily cause of high rate cardio vascular ailment among them. In Rodrigues, both males and females are heavy drinkers. It has been observed even during the daybreak, men start drinking rum till late afternoon. The obesity is high among women because of the heavy usage of refined cooking oil in their food preparation and consumption.

Thus having seen the detailed analysis of the data collected in the research project here in this section, it would be appropriate to provide various findings drawn out of this analysis and the recommendations for necessary action, if possible, in the next section.

Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation in Mauritius and Rodrigues

(A Research Project Sponsored by MRC)

Section Six

Findings and Recommendations

Mauritius is an example of a multi-ethnic community. It is a country where multiple religion, festivities, rituals, cultures and traditions play a great role. People are very conscious of their religion, culture, and associations. Every ethnic group has its own traditional food intake and food habits.³ Most importantly it was colonialism that led to territorialisation of people and of course it was in this period that indentured labour force first became operational and of course the earlier slave trade was an indispensable practice of colonial Governmentality. It was after all through the colonial technologies that food regimes were set and traditional practices were disrupted. Similarly, introduction of exotic varieties of flora and fauna was undertaken; plantations such as tea and coffee together with spices became significant for the colonial state. Gradually as the forest lands were being cleared for further commercial agricultural use, the tribals who were the original inhabitants of these territories were

³ Food and culinary practices are definitely embedded in caste and kinship practices. For instance Marriott (1968) has examined in great detail about the transactional “matrices” of the numerous local inter-caste food exchanges that occur in North India. He had documented the food ritual based on the principle of purity and pollution- these are five food types-the “raw”, “water boiled” (*kacha*) or “ghee fried” (*pakka*) foods, alongside the “food remnants” (particularly the eaten “leftovers” or *jutha*), garbage (*kuda*), and faeces (*gu*). The village which he was observing (Kishangarhi) had thirty-six different caste groups and therefore he adopted multi-transactional ranking matrices, rather than the usual binary food exchange scorings (Marriott 1968: 142.-146, 156-158). Dumont (1960) similarly observed that Indian foods and food ways revealed distinct-and indispensable-cultural, linguistic, moral, and material grammars of action patterns, purposes, and meanings (see Khare 1976b: 1-27, 47-80; Khare 1992).

displaced in large numbers. New laws and legislations were passed, together with military and police action in these territories, with the objective of legitimizing colonial rule.⁴

The contemporary food in Mauritius is an amalgamation of many traditions, religions, castes and ethnicities. The basic spices used while cooking any food are ginger, garlic, chili powder, turmeric, cardamom, cinnamon, cloves, coriander powder, and cumin powder. Other items are mustard seeds, cumin seeds, fenugreek seeds, dried red chilies, and curry leaves. Most of these spices are also found to be used by the Mauritians and Rodriguean to add taste to their food preparations. One can see a kind of fusion in the culinary practice here which has led to a kind of food specialty of Mauritian society.

Culinary Fusion

Each ethnic group has adapted foreign cuisine in its food structure from other community and culture using ingredients that were traditionally utilised by the earlier migrants among the Island residents. One can see a kind of fusion in the culinary practice here which has led to a unique food specialty of Mauritian society.

It should be recognised that these food practices were in keeping with the environmental and physiological requirement necessary for strenuous activities that

⁴ New cropping patterns and 'food regimes' were introduced such that the colonial state accrued more and more profits. These new practices ruptured the erstwhile 'Balutedari' system that was being practices for centuries in India. The most affected in this exercise were the artisan castes and classes as their services were no longer required. Some of these communities had to work as indentured labour in other British colonies such as Mauritius, British Guiana, Trinidad, Jamaica, Grenada, St Lucia, Natal, St Kitts, St Vincent, Reunion, Surinam, Fiji, East Africa and Seychelles, to work on sugarcane, tea, spices and rubber plantations. (For details refer to Tinker, H (1974), *A New System of Slavery: The Export of Indian Labour Overseas 1820-1920*, Oxford University Press, London and Torabully, K and Marina Carter (2002), *Coolitude : An Anthology of the Indian Labour Diaspora*, Anthem Press.)

the people had to undertake in the migrant alien climatic conditions. The nature of food content provided necessary proteins, carbohydrates and vitamin A, B, C and D, especially for men and women living in the Mauritius of the past, as mostly indentured labour, brought in to work in the sugarcane plantations of the Mauritian mountainous rocky soil.

Role of Women

It is found that mostly women control of food preparation and serving it to the other in both societies of Mauritius and Rodrigues islands. Women seem connect emotionally to the members of the family and other relatives through the age old practice of offering / serving food. The lady of the household normally has been the decision makers in dealing with the food matters including when, what and how much food to be consumed by the family members. Traditionally, it is the lady of the house who transmits the family values and mores to the members of the family in Mauritius as well as Rodrigues.

It is observed that the citizenry of the region (Mauritius as well as in Rodrigues) consume in large quantities of food intake at every occasion, whether they are breaking the fast, having lunch and dinner. The youngsters have developed different tastes of their own and are more inclined towards having fast foods which consist of ingredients that are harmful to health. The oil content used in the preparation of the eatables is much higher. Even for the breakfast, food items are fried in oil. Most of the respondents take sweetened tea or coffee in the morning. There hardly any green vegetable / salad found in the meals among the population. The school going children seem to be having more of junk food/fast food in their tiffin.

Risk of Health

As a routine practice Mauritian and Rodriguean population appear to be fond of white flour contained food items including bread, samoussas, boulette, bhajias, noodles etc. most of these items are prepared in refined cooking oil. In fact, there are several health problems that are encountered by the Mauritians and Rodrigueans as a direct consequence of their food intake. Informal discussion with medical practitioners on this issue revealed many unknown facts about the consequences of the food practices to the investigators. The following consequences are known to be having adverse impact as a result of white flour usage in the consumption.

White flour results into obesity with blood sugar disorders. The more refined foods a person consumes, the more insulin is produced to manage it. Insulin promotes the storage of fat, making way for rapid weight gain and elevated triglyceride levels, which can lead to cardio-vascular ailment. Over time, the pancreas gets so overworked that insulin production grinds to a halt, giving way to hypoglycaemia (low blood sugar) or diabetes. Either way, the body is getting little or no fuel from the food one eats and tries to convert muscle and fat into energy.

White flour also leads to constipation. It has been called the “glue of the gut”. It was common for our older generation to take flour and water and make paste – that was their “glue”. It is observed that in Mauritius and Rodrigues mostly all foods have flour in its preparation as shown in the pictures: in breakfast food, snacks, pasta, bread, cereal etc. And it all turns to glue in the intestines; the food is without fibre, it clogs the system, slows down digestion creating a sluggish metabolism, and can often be the cause of stress headaches and migraine.

Another grave concern is using lots of oil. Oil is a very essential part of cooking, especially Mauritian and Rodriguean cooking. It is usually the first step of cooking. All

the cakes that are deep fried in oil are harmful to health. It becomes more dangerous when it is reuse and it creates free radicals which cause ailments in the future. These free radicals can be carcinogenic i.e. can cause cancer and also atherosclerosis which can lead to increase in bad cholesterol levels, blocking the arteries.' Diseases like cardio vascular, Alzheimer are the result of the reuse oil.

Impact of Modernisation

The economic transition that followed late 1970s had changed the lifestyle of the island residents. The effect was seen in the eating preferences and practices of people. The new lifestyle no longer allowed one to spend hours preparing meals at home. Globalisation has facilitated the entry of the different kinds of processed and canned foods. People were now more exposed to burgers, commercially fried foods and chicken, chips and soft drinks. The most recent boom would undoubtedly be fast food, take-away meals, eating out in a restaurant, processed and frozen foods leading to generation of much more solid waste and garbage which has led to increasingly polluting the environment.

The Mauritians have their own choices of food intake, often distributed over at least three meals per day apart from munching other snacks (supplementary eatables) throughout the day. It is also noted that the fizzy drinks like Coca Cola, Pepsi, Fanta, Sprite, Orangina, etc. are sipped anytime of the day. The popular belief here is that these drinks will digest the food quickly. This habit has more or less stopped intake of potable water by the people in Mauritius as well as in Rodrigues in particular.

It must be pointed out here, in marked differentiation to the popular belief, that many of the soft drinks available in the area of the study have been the products of the multinational companies. And if the reports are to be believed then all these drinks

have been found to contain a high level of dangerous pesticides in them. For example, the following beverages have corresponding percentage of pesticides [given in the parenthesis]: Coke (13.4%); 7 Up (12.5%); Mirinda (10.7%); Pepsi (10.9%); Fanta (9.1%). A recent investigation published by the Indian Medical Association in January 2017 has revealed these details. If the range of pesticides exceeds 2.1% in any drink, then it is very dangerous to the Human Liver, resulting in Cancer kind of disease, warns the publication [The Hindu 2017: 4].

The modernisation impact also cannot be denied for increase in the cases of alcoholism and addiction that has affected the society negatively. The youngsters, elderly (men and women), and children of varying ages seem to have been influenced in this life style. Consequently there has been the case of reckless driving leading to accidents, fights, increase in domestic violence and child abuse on the increase in Mauritius and Rodrigues.

Culture of Modernity

The educated middle aged women have been in particular seem to have been adopting to the alcoholic consumption in a situation where divorce and separation are common social problems that is observed in Mauritian and Rodriguean society. Alcoholism and drug addiction have caused serious impact on the health of the population. People especially men have been found not eating solid food and thereby not in a position to undertake any strenuous physical activity in rural areas. There is nearly absence of regular agricultural labour in the region. It has also led to growing cases of bad Cholesterol and cardio-vascular ailments among people.

One of the explanations of such habit could be elucidated by the life style practices imitation of the erstwhile colonial aristocracy. The creolisation process which

got momentum after the discontinuation of slavery system and freed bonded labour also tend to have had started getting addicted to alcohol and drugs due to free time and poverty. The inclement weather of Mauritius and Rodrigues especially during the cyclone and anti-cyclone climatic conditions could have also led to the dependence on increasing alcohol consumption in the region.

Tourist Island

Mauritius and Rodrigues are becoming international tourist destinations thereby better road transport facilities have emerged , urban housing facilities have increased, more and more areas are becoming urbanised , basic infrastructure like provision of electricity , drinking water , garbage disposal system have improved in Mauritius. This has resulted in mushrooming varieties of malls and departmental stores in modern Mauritius. These outlets have been providing consumer goods from all over the world. This has also resulted into some special characteristics feature on the population. More and more people are engaged in non-agricultural activities and also in service sector industry. What is observed is a general trend of not having daily breakfast at home is growing. At times even the main course meal is also being bought from outside or consumed in restaurants. It should however be pointed out that in Rodrigues there is a tremendous scarcity of portable water.

Such an eating practice among Mauritian urbanites has contributed to undesired effects on health of society. The food that is consumed in such a preparation is normally frozen food and tends to have undesired bacterial content affecting the consumer. A number of reports including the recent one by the Commission on health and quality of life mention that the high blood pressure, cardiovascular ailments and obesity have been on an increase in Mauritius and Rodrigues. The gastronomical problems observed in rural areas of Mauritius and in Rodrigues in

particular has direct links to the after effects of lack of water intake among the people of the region.

Issues of Sustainability

A major constraint of the Mauritian society is the lack of self-sufficiency in the agricultural production. As we have noted, colonialism had set a food regime pattern of growing only sugarcane that has led to this disproportionate and skewed economic growth. The only way to get out of this cycle is to intervene at the level of production of food grains. In this respect only the State can intervene effectively. The state needs to have long term vision in ensuring that this goal is achieved. At an economic level, the state needs to possibly protect its agricultural sector by ensuring that certain import tariffs are imposed. At the political level it needs to set up a whole new array of institutions- educational, social and cultural that will revamp this sector. Thus institutes of agriculture and allied sciences, agricultural universities, NGOs that are specialising in this field, civil society and general public awareness need to be established.

Land use can be comprehended in another dimension. For instance the same piece of land can be used for multiple purposes. An agricultural plot of land can be used for tourist activity (especially in the lean season) or can be leased out for short term agro-manufacturing (such as sugarcane juice production and sale). Even beach land that is a major tourist attraction can be planted by coconut and other native species of trees or horticulturally pertinent trees that can allow value creation and capital formation. Even in regular agricultural activities one can ensure some form of symbiotic coexistence of crops; like the method of sugar cane production known as interline cropping, whereby full use is made of the rotation land between two cane cycles.

Livestock management

Another sector that needs to be revamped is the animal husbandry. This sector is an allied and ancillary unit to agriculture. For instance India has become the largest producer of milk in the world thanks to the state and community support it received. White revolution in India and the development of milk cooperatives strengthened this sector. Other activities such as poultry farms, goat and sheep rearing, piggery and lately rearing of emu's has been extremely useful to the farmers. These activities do not need separate land and utilises the given land area to its maximum potential. It is now being realised that this twining of activities is probably the best form of sustainable development for the near future. The fallings of the animals provides rich manure for the farm and the waste from the farm provides food for the animals.

Besides a lot of the by-product of the agricultural food system provides us fuel and other chemicals that can be commercially sold at world markets. It is no secret that ethylene is now produced out of sugarcane bagasse and so is alcohol. Another area which needs to be tapped and is interlinked with agriculture is horticulture. Large tracts of barren land, swamps etc. can be used for the plantation of fruit trees or trees whose wood have commercial value such as ebony and teak. There planted areas can also be utilised as tourist spots and commercial activities can be generated from it.

In the near future when the population growth rate increases and net population of Mauritius increases, land will become extremely scarce. In such a situation land use pattern will matter considerably and will become a contentious political issue. Most importantly it remains to be seen how this land use pattern can permit the growth of agricultural food and that too through a model that is sustainable.

Recommendations

In view of the research undertaken on food practices prevalent in Mauritius and Rodrigues islands, and analysing various aspects of investigations, the researchers would like to submit the following recommendations for the attention of the concerned authorities. These recommendations based on our findings are only indicators of the possible situations likely to be developed in both societies. We would like to declare that some of the conclusions drawn on the effects on physiological health are required to be substantiated further with statistical investigation.

Our research was primarily based upon the understanding of the socio-cultural and anthropological dynamics of the lived experience concerning the food ways practiced by Mauritian and Rodriguean societies. It has major component of qualitative research though necessary quantitative data have been referred to. In a broader sense, the recommendation can be classified under three categories:

1. The dietary requirements to be available to the people
2. Policy intervention for rectification of gastronomical ills developing among the people in Mauritius and Rodrigues.
3. Encouraging basic production of food grains related products for consumption and development of a healthy society.

The dietary requirements

- Free and safe portable water should be made available to every household, restaurants, schools, public places in Rodrigues and Mauritius. The present day system does not allow the poor illiterate masses the luxury of bottled water made available in market. The need of the hour is to inculcate the habit of consuming daily required amount of water by every individual for healthy society.

- The quality cooking ingredients which are safe for human consumption should be made available to the common people at affordable rate.
- Dairy products including fresh milk should be made available at an affordable cost.
- Vegetables and fruits should be encouraged in the daily diet of the people. A strict watch on fast food joints in terms of food quality should be ascertained.
- The local fruit production should be encouraged and subsidised for common people.
- New cropping patterns could be experimented with in which crops having high levels of proteins such as pulses, groundnut, sunflower oil, soya beans, etc., can be cultivated on larger tracts of land,
- The importance of organising cooperatives needs to be especially mentioned here. There are three main types of types of agricultural co-operative societies that are in operation across the world. These are-1) Agricultural marketing co-operative society 2) Credit co-operative society and the 3) Agricultural processing co-operative society.
- Mauritius can have a special pact with India which is one of the leading nations in terms of success of the cooperative movement in agriculture. This success story can be emulated in Mauritius and Rodrigues too.
- Sustainable agriculture should be a step forward in creating ample indigenous food supply. Going green should be the guiding principle.

- Land reforms also need to be undertaken. Most of the land that lies with the government can be disbursed or leased to agriculturalists instead of it lying as fallow land.
- The government should subsidise healthy food products and excessively tax other non-healthy fast foods. This will nudge people to choose the right food.
- The government should ensure that there are health clubs, gymnasiums etc. to encourage its citizens to work out every day.
- Animal husbandry must be encouraged by that government that the potential for self-reliance is restored.
- The government can think of lessening work hours so that parents get ample quality time to prepare wholesome food and spend time with their families.
- A robust and a free medical service must become operational in Mauritius and Rodrigues such that its citizens can regularly check their health profiles.
- As Mauritius and Rodrigues is partly populated the idea of using bicycles for travelling to office and schools is not a bad idea.
- The government should ideally document culinary practices of yesteryears as part of its conservation effort of intangible heritage.
- It should promote culinary competitions and food festivals such that the youth are attracted to learn about their intangible heritage through food.
- Most of the food of the indentured labour and the blacks (who came here as slaves) was based on the agrarian cycles and almanacs. The need is to at least contextualise food practices in this manner such that the role of nature over humans is reiterated. There exist so many festivals that revolve around the agrarian cycle.

- The government should provide more funds for such kind of research projects.
- Local, regional and national debates and referendums on food policy of the nation ought to take place regularly.
- Concerted effort should go into creating a symbiosis between the ministry of food, ministry of health and ministry of education.

Policy intervention

- It is expected of the government to propagate healthy food practices through advertisement and also through curriculum development.
- Assured healthy midday meals should be made available in schools. Care should be taken not allow politicisation of the issue has been witnessed in the past.
- It is imperative in the part of the government to encourage cultivation of tropical plants including coconut, cashew nuts along the coastal lines and hill tops as the case may be for better employment prospects and effective utilisation of the land resources.
- Small farmers should be encouraged to have multi -crop cultivation with necessary subsidies for organic farming so that consumption of such vegetables and farm products will be useful in developing healthy environment for human development.
- A strict control of Multinational food products in terms of quality assurance compatible to the needs of the Mauritian and Rodriguan society should be strictly adhered to safety and security and healthy practices.(cheap Chinese food products available in the market are more damaging to health of the people for instance there has been plastic rice and noodles products. Ajinomoto is another popular

component with dangerous health consequences needs to be banned).

- Beverages and soft drinks marketed by Cola Company which has dangerous pesticides content in keeping with the available medical reports affecting health should be banned from the market.

Encouraging Food Cultivation

- The desire of the people in rural areas of Mauritius and Rodrigues is to have their choice of food cultivation and vegetables as per their likings and choice, it is expected of the government to allow this practice to help people to be occupied and engaged with farming activity.
- Organic produce should be encouraged and subsidised by the government for allowing healthy intervention in the scenario of unhealthy monotonous production.
- Land around seashores and beaches should be made available for profitable farm productions useful for the society especially coconut plantation that should be widespread not only Mauritius but also in Rodrigues.
- Harmful effect of present detrimental practices about available food consumption should be popularised and expected practices should be encouraged.
- The ultimate objective of the food cultivation programme should be sustainable for developing local varieties of food grains and farm products.
- Most importantly as in Bhutan a stress free life combined with healthy wholesome food practice should be encouraged by the government.

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**Culinary Art, Atithian Tradition and Belief System: An Anthropogenic Investigation
in Mauritius and Rodrigues**

(A Research Project Sponsored by MRC)

Appendix

Field Narrative Extracts