Nutrition and Diet Research Progress

Food Production and Eating Habits from Around the World

A Multidisciplinary Approach

Francisco Entrena-Duran
Editor

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FOOD PRODUCTION AND EATING HABITS FROM AROUND THE WORLD A MULTIDISCIPLINARY APPROACH

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CONTENTS

PREFACE

GLOBALIZATION AS THE CONTEXT TO UNDERSTAND CHANGES IN FOOD PRODUCTION AND EATING HABITS

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The book presented here brings together a selection of studies written by authors from universities and/or research institutions from every continent. The processes of change in systems of production, commercialization, and consumption of food, as well as the problems and nutritional habits analyzed here, develop within the framework of the technological and socio-productive transformations experienced in many parts of the world as a consequence of the transition from traditional rural societies to the predominantly urban and industrial societies of our time. Many of these societies are affected by the fluctuations, questions, or socioeconomic uncertainties caused principally by what is called globalization, a rather complex phenomenon whose precise genesis, implications, and definition will not be analyzed in detail in this introductory chapter.

Globalization has become widespread and seen considerable intensification since the last two decades of the twentieth century, especially since the 1990s, after the end of the period of the *Cold War*. Nevertheless, the manifestations of globalization date back much further to the extent that both the Spanish colonization of America from the fifteenth century and the colonizations carried out since the nineteenth century by Germany, France, and England may be characterized as different forms of globalization.

These forms of globalization revealed themselves above all as processes of expansion of the norms of European and/or Western societies throughout the rest of the world, that is, as processes of Westernization. However, it is also true that European and/or Western societies themselves began to be modified since the beginning of these processes as a result of their effects. In this regard, our analysis coincides with that of Eric R. Wolf, who, in his work *Europe and the people without history* (1983), shows us that the great transformations that

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occurred in the Western world in the last six centuries can be better explained if, in addition to considering endogenous factors contributing to them, they are related to the changes occurring for the diverse peoples of the world who were the objects of conquest and colonization by a number of European countries. In accordance with this, rather than focusing his attention on the classical interpretation that presents the English industrial revolution as the fundamental factor for the transition to modern European and/or Western urban/industrial capitalist society, Wolf attempts to explain this transition by analyzing the expansion of English textile production, very much decisive in this revolution, in conjunction with the production of cotton in South America and Egypt and the evolution of textile production in India.

Specifically, with regard to the object of study of this book, it must be emphasized that the influence of the colonized peoples on the West was also manifested with particular intensity in the area of food. Thus, one of the most important consequences of the discovery of America was the introduction (in some cases, almost instantaneously, and in others, more slowly) of agrarian products coming from the Americas, which made possible a true food revolution (and also a gastronomic one) in the *Old World*. In this way, products such as potatoes, corn, cocoa, squash, yams, beans, and tomatoes became basic or determinant (even strategic) foods in most diets, first in Europe and later in Africa, Asia, and Oceania.

In the opposite direction, from Europe and later from Africa and Asia, the colonizers brought to America other products, unknown there, which also gave rise to important dietary and gastronomic changes. Among these products were barley, rice, cane sugar, plantains, coffee, oranges, lemons, and olive oil.

The above-mentioned bidirectional flows of food products between the *New World* and the *Old World* show that, in spite of being manifested for centuries predominantly as Westernization, globalization since its earliest phases was also manifest in the influences that the rest of the world exercised on the West, although it was not until the end of the *Cold War* when a new form of globalization began to appear in all its plenitude, no longer characterized by the influence or predominant centrality of the states of the advanced modern European and/or Western societies. Thus, both these states and their respective societies are seeing a gradual reduction of their classic paradigmatic referentiality (in socio-economic, politico-institutional, or symbolic-cultural terms) at the same time that they are entering more or less deep socio-economic crises, together with an incessant displacement of planetary economic hegemony toward new emergent countries from Latin America or Asia, such as Brazil, China, and India.

In these circumstances, as the strong connection between the state and national markets typical of earlier periods in which state-centric models predominated began to crumble, persistent crises, socio-economic volatility, and uncertainty, as well as continuing technological advances and social changes experienced by our agitated world of today (ever more interconnected on the planetary scale) make possible an intense and accelerated circulation, in all global directions, of people, ideas, and commodities. This increasingly complex situation makes it difficult to clearly differentiate between what were traditionally considered to be societies from the center (that is, European and/or Western) and peripheral or semi-peripheral societies with respect to levels of development of the welfare state and socioeconomic stability (Wallerstein, 1984).

As a consequence of the high level of world interconnection existing today, it can be stated that for the first time in human history, practically all societies and countries of the

world have effectively come to be linked with each other. In these circumstances, most interactions between these societies and countries occur on an actually global scale, which has not taken place before in such an intense way. However, although globalization has come in our time to be an authentically 'global' phenomenon that affects the whole world, it is true that its consequences are materialized and felt above all in specific local contexts, in those contexts where, as was the case in the past, the daily lives of the immense majority of people take place. The key difference from what took place in the past is that these lives now are unfolding in ever less localist conditions and in circumstances that are increasingly affected by globalization and connected to its dynamics; that is, they are undergoing a progressive glocalization.

The word glocalization, which comes from the combination of the words globalization and localization, was introduced into the academic vocabulary by Roland Robertson (1994, 1995). Taken from Japanese commercials, this term describes the medium through which multinational corporations can best improve the sale of their products strategically through their adaptation to the tastes of the consumers in different local contexts. Focusing our attention on the agro-alimentary area, the objective of the present book, the first time that the word glocalization was used was to describe how agricultural techniques should be adapted to the new settings into which they are introduced (Khondker, 2004). However, in the area of marketing, this term refers above all to the way in which, for example, McDonald's has had to make different versions of the Big Mac hamburger to adjust it to the palates and cultural particularities of the various parts of the world. There are thus very different ways of understanding and/or implementing glocalization. This is consonant with the fact that the word glocalization is as attractive as it is polysemic, as shown by the various meanings attributed to it by the different authors who have used it, with its areas of use including marketing (Kjeldgaard & Askegaard 2006), political economy (Mendis, 2007), linguistic anthropology (Roth-Gordon, 2007), and the anthropology of education (Jungck & Kajorsin, 2003). With regard to the object of study of this volume, the word glocalization has also been used in specific analyses regarding alimentary changes by Wilk (1999), Matejowsky (2007), Möhring (2008), and Jourdan (2010).

To summarize, although it has often been relegated to the sidelines and continues to be marginalized because it is typically associated with neoliberal ideology, it is true that the use of the concept of glocalization, which does not necessarily mean that one shares in this ideology, has been and continues to be fruitful for authors from quite diverse scientific fields. The principal reason for this is that this concept is very well-suited for reflecting the growing interrelations between the global and the local at the same time that it opens new possibilities for investigating the complexity of the dynamics that such interrelations involve in contemporary situations, which are increasingly glocalized and influence globalization to a greater or lesser degree (Jourdan & Riley, 2013).

Thus, the usefulness of the term glocalization is that it contains two basic dimensions of the dynamics noted above: the localization of the global and the globalization of the local. As a consequence of these dynamics, the local is not conceived of as a sort of originally essentialist situation, but neither is the global seen as an inevitable and unmodifiable situation. Contrary to this, both situations interact and influence each other to the extent that that they are in continual processes of construction, deconstruction, and reconstruction.

With regard to dietary glocalization, the above-mentioned processes occur simultaneously with the strengthening of tendencies toward the homogenization or

standardization of food habits across the entire planet, especially as an outcome of the influx of communications media and transportation facilities for the transnational distribution of agrarian products and/or foods. However, at the same time that this process takes place, local particularities seem to be increasingly reaffirmed (Serra-Mallol, 2013). Thus, as many observers have shown, diet is often the last cultural indicator to provide an open path for the multidimensional influence of the dominant cultural model (Goody, 1985; De Garine, 1996). This observation would explain the fact that, in spite of the indubitable effects driving toward the uniformity of globalization in the area of world foods, food continues to play a leading role in the formation of social identities, although it is true that these identities are increasingly mixed. This mixing should be seen not only as the fruit of the imposition of the global but also, to a very great degree, as the result of choices by individuals that are more or less freely adopted or desired (Corbeau, 2008: 117-118). Consequently, in the processes of dietary glocalization, the action of local subjects cannot be reduced to a simple reaction tending to reaffirm the identity that is constructed based on the defense of the identity and/or the withdrawal of these subjects into what they consider to be their 'proper and authentic sameness'. Moreover, the action of local subjects in the face of globalization is also constructed through initiatives adopted by these subjects in their assimilation and concrete and sensible utilization of what is proposed symbolically and materially to them by the globalized world through their hybrid and evolutionary fusion with the elements of other cultural models. In other words, what is understood here by dietary glocalization implies both processes of indigenization of the urban-industrial modernity dominant on the world scale (Sahlins, 2000) and processes of modernization of local traditions as a consequence of the multiplicity of possibilities of identity reinsertion offered by globalization (Serra-Mallol, 2013).

More than moving to a 'global village' that shares the same global community culture (McLuhan, 1968), globalization involves a movement toward the differentiation of distinct social groups, which leads to incessant construction, deconstruction, and reconstruction of specific collective identities resulting from the global-local dialectics that are experienced in each concrete case. Particularly, with respect to eating habits, this dialectic is at the origin of tensions (so frequent in current increasingly glocalized societies) between trends toward global dietary homogenization/normalization and those reactions to this phenomenon that are manifested as ways to search for the distinction by means of strengthening and/or reconstructing local food singularities.

In the context of these local-global tensions and dialectics those behaviors and dietary processes analyzed by the authors of the chapters included in this book occur. In this context, both the global tendencies toward homogenization and the very diverse and specific local attempts at singularization take place in all parts of the world; that is to say, they are universal. Thus, the search for identity, specificity, or distinction through the acquisition and consumption of foods is commonplace in many of the chapters of the book independent of the part of the world to which their respective authors belong. Similarly, these chapters show a generalized concern regarding the negative effects of the advertising and communications media that often drive patterns of food consumption and provoke desires for ideals of beauty and body forms prejudicial to health. All this occurs in an ever more modernized and globalized world in which, in addition, artificial procedures of production of industrial foods that are quite opaque to the general public become increasingly widespread. In such a world, it is understandable that concerns over the healthiness of foods are increasing, as are the

interests of the population in managing what it considers to be healthy and natural diets. Thus, there has been a gradual development of markets for organic food, as well as the manipulation of social aspirations toward the consumption of healthy products and/or with particular natural qualities. This manipulation frequently takes place through a variety of advertisements that announce a series of industrial foods as supposedly possessing these qualities. A priority objective of these and other advertising strategies is to increase sales of the great transnationals in the agro-alimentary sector in a context of obvious overproduction and oversupply, which in turn is translated into the stimulation of consumption activities among the population. This explains the great development of the typical consumerism of current industrialized societies and, specifically in the case of this book, the interest for the consumer society that is present in the majority of its chapters to a greater or lesser degree.

Oversupply, the promotion of excessive consumption of foods through advertising, and the reduction of time available for cooking because both spouses frequently work outside the home, among others, are factors that contribute to the worldwide increase in concerns over eating correctly and in a healthy way, as well as the awareness of the need for more physical exercise. Simultaneously, there are worldwide trends toward sedentarism, the reduction of physical exercise, and overeating or incorrect nutrition, which are frequently enabled by pre-cooked dishes whose composition and components are not easily controlled and whose potential adverse effects on health are not clearly known.

Having sketched the general distinctive traits of the globalized world context in which the chapters collected in this book were written, we go on to present the fundamental contents dealt with in each of these chapters.

The first chapter shows us that many contemporary rural societies are in a process of deagrarianization, a situation in which, simultaneous with the gradual industrialization of food production processes, socio-economic and environmental problems become worse and concerns over food scandals and/or the healthiness of industrial food increase. However, the growing extension of these deagrarized ‘new ruralities’ does not prevent many rural environments from continuing to be perceived as environmentally and socio-economically sustainable, places where life is good and natural and healthy food is still being produced. Those who hold such views typically participate in a type of idealization of the rural sphere, whose degree of seduction is so high that much of the industrial food offered in large supermarkets makes reference to or alludes to rural elements, nature, and/or health, using them as promotional messages to attract consumers. In these circumstances, at the same time that the predominant industrial forms of food production are characterized by highly complex artificial processes that are difficult to control or that are unknown and opaque to the majority of the population, concerns over food sovereignty are growing in strength.

The following chapter analyzes the process of expansion of greenhouse farming in the region of El Ejido. Here, we have a case study on the environmental and social consequences of agroindustry in southeast Spain, where the city of El Ejido is located. This city has changed considerably since the 1960s, having grown from a small village located in a rural area of traditional subsistence agriculture to a city that in 2013 had 82,983 inhabitants and a surrounding zone with a very prosperous agroindustrial economy of greenhouses. These farms produce fruits and vegetables that are exported primarily to the European Union but also to other countries. Consequently, the society of El Ejido is fully inserted into globalization dynamics, not only because its agricultural products are sold worldwide but also because the huge development of greenhouses has attracted abundant immigrant labor from

all over the world. The huge expansion of greenhouses has brought about significant consequences for both the environment and society. Particularly, in the society, these consequences trigger high degrees of tension, protests, conflicts, and social disarticulation. Hence, one can observe a great fragmentation of the farmers and their subsequent difficulties in mobilization. Furthermore, there are many illegal foreign immigrants who suffer social exclusion and who often cannot mobilize and/or organize together, even in the rare cases in which xenophobic riots against them have occurred.

After, we have a work which offers an overview of trends in the use of agrochemical products in Cambodia, one of the most acute chemically polluted countries in Asia, at the same time that discusses the impacts — particularly on farmers health and food production — and provides some recommendations for policy makers on how to minimize the negative externalities derived from the uncontrolled use of these technological packages. The methodology of this work is based upon the review of secondary data, the current law sources and surveys as explaining factors derived on farm and food consumption consequences. On the other hand, the results from the research can be useful to assist policy makers to improve several controlling rules on these usages related to farming issues, and regarding pesticides and weed control. As obtained in the review, Cambodian chemicals management laws and regulations have big gaps regarding their implementation. Most of the legal instruments have only general provisions and do not clearly define the role and responsibility of the governmental institutions and other stakeholders. Existing chemicals law enforcement is limited. Twinned with the above issues, Cambodia also lacks human resources and monitoring installations, doing an ineffective law enforcement. An agroecological alternative is offered to confront these issues. Based on the last assessments some recommendations on alternatives to the lack of successful policies and laws on pesticides are shown to promote and influence alternative public policies

Next, the impacts of physical activity and psychological factors on eating habits are studied. It is noted that such habits are developed over time. An individual's state of psychological wellbeing can positively or negatively affect his or her eating habits. Psychologically, exogenous (environment, parents, peers, and media) and endogenous (intelligence, personality, self-concept) factors greatly influence an individual's eating habits. These factors differ in severity and in nature in their effect on eating habits; they are not isolated and are therefore multi-factorial in nature. Physical activity, as defined by the World Health Organization (WHO), is any bodily movement that is produced by skeletal muscles and that requires energy. The lack of physical activity has been observed to be the fourth leading risk factor for global mortality. Physical activity cannot be avoided when educating people on their eating habits. It is known to have a positive impact on health and therefore needs to be cultivated by all. In accordance with these arguments, this chapter reviews the major psychological influences that affect eating habits and highlights the contribution of physical activity to improving the health of individuals.

The subsequent chapter reveals that concerns over obesity are reflected in plural actions aimed at controlling body weight, such as prescriptive interventions that are diet-focused and consider weight loss as their primary indicator of success. Despite this growing attention and effort, the prevalence of obesity is substantially rising. Thus, professionals are increasingly interested in non-prescriptive interventions (e.g., based on the Health at Every Size philosophy). Regarding the nutritional care process, nutritional interventions based on nutritional counseling are gaining ground; nutritional counseling uses effective strategies that

focus on behavioral changes and individual autonomy. By exploring these matters in depth, this chapter accesses novel strategies and tools for the care of the obese; more specifically, it investigates how people can learn to rely on hunger and satiety cues, manage different food contexts, and develop a consistent and positive eating behavior.

The increasing cult of the body in contemporary societies is one of the motivations behind people's choices for particular food products and the marketing strategies for these products used by advertising and/or the mass media. This happens when more and more people worry about being healthy, one's self- image or keeping in good shape In this context, the following chapter explores the relationships between sport, self-image and health with the aim of studying the factors which underpin current human practices under the banner of 'body worshipping'. Firstly, the 'cult of the body' is understood as a set of social practices rooted in production and consumer society. Then this society is analyzed from the perspectives of Postmodern and Post-Fordist societies' theories. Next, a well-known Spanish television programme is used as a springboard to reflect on the different manifestations of body worshipping present in contemporary societies. Finally, the authors offer some thoughts about a few of the consequences of the body cult, such as the diversification of sport practices or the tension between the commoditized aesthetic standard of what a perfect body should look like versus the growing obese population. The chapter closes by looking at some examples of state intervention in health promoting policies.

The volume continues with a case study that was conducted in Macedonia, in which its authors state that eating habits as a matter of faith are commonly found in the general population in such a European state. In Macedonia, pork is traditionally eaten only by Christians and not by Muslims, but the relationship of this fact to first clinical ischemic stroke (FIS) is still uncertain. In this context, the authors compare the probability of first stroke episode for two types of diet due to religious beliefs (consumption or non-consumption of pork, typified as 'users' versus 'non-users'). They conducted a study in which, prospectively, 425 participants between the ages of 18 and 87 were tested and divided into the following: the examined groups (EG) consisting of 231 patients with diagnostic entity-FIS (126 male and 105 female; 56 users and 175 non-users) and the control group (CG) consisting of 194 healthy subjects (99 male and 95 female; 57 users and 137 non-users). The lipid profile from a fasting blood sample was measured on admission, and dietary history was noted. Blood samples were collected after signing a written consent form. In this study, significant changes between the groups (EG and CG) in statistical variables were observed regarding the mean values of age and high and low density cholesterol. The odds ratio of FIS disease was 0.77 times higher in the users group; the wide confidence limit showed no significant differences. Consequently, the authors conclude that religious influences on the dietary practices of Muslims and Christians from Macedonia still maintain their individuality and that they do not influence the occurrence of a first stroke episode. There was perhaps a higher risk due to adaptation to a 'Western' diet and/or the combination of multiple co-existing risk factors, more than high levels of a single factor such as consuming primarily meats with high fat content, in particular pork, which has been promoted as a model of inadequate eating in Macedonia.

The following contribution addresses eating habits from the perspective of communications and advertising. The author states that the obsession with attaining a beautiful body, which has taken hold in developed societies, cannot be explained as an isolated phenomenon. Instead, it needs to be framed within a larger context to be understood as the result of a complex process affected by the cult of the physique and the medicalization

of food. These are different aspects of the same phenomenon that has its epicenter in the body. The mass media, in general, and advertising, in particular, are contributing factors to the spread of this new understanding of the body. In accordance with this, the chapter first analyzes the importance that the body has acquired in industrialized societies. Then, the transformation and the medicalization of eating habits are studied. Finally, the medical-scientific aspects of food product advertising are examined.

After that, the succeeding section, whose authors also adopt the analytical perspective of communications and advertising, maintains that, with the aim of repositioning themselves in an increasingly health-conscious society concerned with its dietary habits, food corporations are marketing foods conceived to protect and enhance the health of potential consumers. New low-fat, low-sugar products with nutrients that help to maintain intestinal flora (known as functional foods) now hold a prominent place both on supermarket shelves and in food advertising. The research reported in this section focuses on the analysis of a very specific aspect of television commercials for yogurts, perishable desserts, and dairy products now being sold as functional foods: the inclusion of health claims. The television commercials selected for the study sample were classified according to the categories of health-related claims contemplated under current EU legislation and consequently analyzed to determine the types of claims that appeared most frequently in these spots, the brands that made use of health-related claims in their advertising, and the types of scenarios in which the products being advertised were featured.

The relationships between food, marketing, and culture are studied in the next chapter, in which discourses on food advertising in Spain are examined. The author states that today the advertising message, constituting a specific part of the knowledge of marketing, is central in the promotion of the consumption of any commodity, including food products. The advertising language -dense, aesthetic, agrammatical, rhetorical- becomes the key point that must allow, finally, announcers, on the one hand, and consumers, on the other hand, to meet. Over the last four decades, Spanish food advertising was articulated by the combination of at least six predominant discourses. These are the discourses of tradition-nature-identity, the medical-nutritional, the aesthetic, the hedonist, progress-modernity, and social differentiation. Despite constituting arguments that are slightly different between them, they have a base in common: they are all significant for the consumers who receive them because they transmit ideas referring to consumption, practices, and food values. These ideas are aimed at promoting the consumption of products, and thus, advertising reflects models of reference and legitimate discourses, becoming a good vehicle for expressing cultural images whose objective, ultimately, is to convert into familiar foods, making them edible and, therefore, consumable. Food advertising, through its discourses, ensures that foods are consumed on the basis of what it says they are.

The eating habits in multicultural schools are the subject of another collaboration, which is focused on the fact that the rise in childhood obesity cases in Spain is becoming a serious health problem. Thus, skipping meals and eating too much fast food and too many confectioneries are increasingly common occurrences, leading to eating disorders such as obesity, anorexia, and bulimia, which in turn are triggering chronic diseases at earlier ages. Andalusia is one of the Spanish regions with the highest rates of childhood obesity and, also, of immigration, so most of its schools are now multicultural. The authors take this cultural diversity into account in their research, which focuses on Early Education (three to five years) and First Cycle Primary (six to eight years) schoolchildren. Their study aims to discover

schoolchildren's views on healthy food and their own eating habits, as well as their respect for the eating habits of other cultures. Focus groups with children are the basis of the field work. One finding is that the schoolchildren lack basic awareness of diet and nutrition, yet they can perfectly reproduce the jingles and slogans of food products advertised on television. They are also unaware of the eating habits of their own culture, so no rejection or intolerance problems have been discovered.

The eating habits of children are also the study object of the next chapter, but in this case, Australian primary schoolchildren are the focus. The majority of schoolchildren bring food and drinks from home packed by parents and other care-givers in a lunchbox for consumption during school hours. Although the lunchbox plays an important role in the health status of Australian children, little is known about what, why, and how contents are selected. This contribution presents a two-phase study that aimed to describe and explore lunchbox contents' selection by Australian parents. The results suggest that, although Australian parents are generally well-informed and well-intentioned with respect to their children's school consumption, the contents of many lunchboxes are not nutritionally balanced, with the inclusion of 'extras' being particularly worrisome. These findings are discussed against the background of the etiology of obesity and overweight and in the context of Social Marketing theory.

The ensuing chapter explores the changes in urban food consumption patterns in the case of India. These changes are due to several reasons, such as increased incomes, urbanization, and diet globalization. India produces and consumes more milk, eggs, fruits, and vegetables than ever before. Dietary diversity has significantly increased. However, the average intake of calories and protein has declined over the years across all expenditure classes. Consumption of fats has also increased. The major reason for the augmented intake of fats could be the increase in the consumption of branded processed foods, such as potato chips, noodles, and other street foods that are essentially junk foods. Urbanization and diet globalization since the early 1990s aided the market expansion of branded junk foods to small towns. The growth in employment, albeit in marginal work types, accompanied by the growth in per capita expenditure in real terms, has resulted in the increased affordability of processed foods and eating out. The possible reason for inadequate nutrient intake in terms of calories among the poor lies in the consumption of more processed foods and ready-to-eat cooked foods that are expensive in calories. The same patterns of calorie-adequate consumption may have resulted in the incidence of non-communicable diseases and obesity among the non-poor. An improvement in dietary diversity does not necessarily mean better nutrition in urban India.

The book ends with a study on social changes and transformations in eating habits. These habits are regarded as social constructions of human beings. This means that, similarly to what happens with any other human construction, eating habits are subject to social change. The transformations that eating habits are currently undergoing are seen as a result of the social changes brought about by globalization processes in advanced countries. Particularly, eating habits have shifted from being mostly developed within the family sphere of influence in traditional subsistence societies to becoming increasingly shaped by media and advertising in modern overproduction societies. In these societies, we are witnessing trends toward the individuation of the eating act with its subsequent sociability loss. However, the existence of overproduction does not mean that all people today have the same opportunities in terms of access to food commodities. On the contrary, these opportunities are unequal given the socioeconomic, educational, and/or informational disparities existing between

citizens. Such disparities are major factors for the construction, deconstruction, and/or reconstruction of both people's identities and their degrees of social distinction.

In conclusion, here, the reader has a book that brings together specialists from many different parts of the world and whose theoretical-analytical focuses regarding eating habits are quite diverse. However, independent of their varied perspectives and scientific disciplines (Anthropology, Communication, Economy, Marketing, Medicine, Nursing, Psychology or Sociology), all these specialists are united in their concerns regarding similar food processes and problems. To a great extent, this coincidence is due to the fact that, despite the obvious geopolitical and socioeconomic heterogeneity of the contexts in which they live their lives and conduct their research, the authors of the various chapters of this work all form part of the increasingly connected global society of today. This is why, beyond their local specificities, the dietary problems and habits addressed by the studies included in this volume all have in common the circumstance of being more and more inserted in globalization and affected by it in their effects and dynamics; definitively, they are ever more glocalized, thus indicating the importance of addressing the analysis of the food production and eating habits through multidisciplinary studies with global reach, such as that from the experience of academic collaboration represented by the editing of the volume presented here.

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PART I. FOOD PRODUCTION

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Chapter 1

DEAGRARIANIZATION, THE GROWTH OF THE FOOD INDUSTRY, AND THE CONSTRUCTION OF NEW RURALITIES[#]

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INTRODUCTION

Contemporary rural societies are experiencing processes of growing deagrarianization to the extent that agriculture is ceasing to be the main activity that they perform, while trends toward the broadening and diversification of their functions, each more or less significant according to the individual case, are simultaneously being observed. This process gives rise to what is designated the growing multifunctionality of rural spaces. Therefore, deagrarianization is understood here as a movement away from strictly agricultural-based modes of livelihood in terms of occupational adjustment, income-earning reorientation, social re-identification, and the spatial relocation of rural inhabitants (Bryceson, 2008). In many instances, the impact of the deagrarianization process on livelihoods may be a factor that leads to poverty if it occurs in a disorganized manner. Deagrarianization may ultimately lead to a lack of rural food sovereignty and security. Moreover, it may lead to a decreased level of human security and humanitarian crises, such as famine and socio-political instability (Bryceson, 2000).

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Deagrarianization typically leads to a gradual reduction in the economic importance of the primary sector in GDP, as well as in farm employment and activities related to agricultural labor for income generation in rural settings. These reductions, in turn, typically translate into a progressive decrease in the weight of agriculture and animal husbandry in the life of these environments. Simultaneously with this, we see a progressive growth in different activities that are not related to agriculture. This growth leads to a progressive reduction in cultivation areas, especially smallholdings, and entails significant changes in the social structures of rural environments that result in the collapse of the historical organization of production and labor at the level of both the domestic unit and the regional agricultural labor market (Salas-Quintanal and González-de-la-Fuente, 2013).

Paradoxically, this gradual reduction of agrarian activity simultaneously leads to an intensification of agriculture, which is without precedent in the history of humanity. Today, this intensification is increasingly questioned due to its long-term outcomes for the environment and the socio-economic circumstances of farmers. Soil fertility deterioration, the rising requirement of inputs, and vulnerability to the ebb and flow of market prices are some of the major negative factors related to intensive farming. Moreover, with the aim of maintaining the productivity of their lands, farmers are often forced to augment the quantities of those inputs (seeds, fertilizers, phytosanitary products, etc.) that increase their production costs and worsen environmental conditions. Even the very food security of many growers is frequently affected by this intensification of agriculture, given that oftentimes it entails the transition from a remarkable diversity of products, which is typical in traditional subsistence farming, to the mono-cropping system, which is characteristic of the large modernized farms currently so widespread. Thus, in these circumstances, many families no longer cultivate by themselves the majority of the commodities that they consume and consequently are now increasingly dependent on market price fluctuations.

This is because deagrarianization and the subsequent intensification of agriculture, which are closely related to the progressive technification and mechanization of agricultural tasks, are situated in parallel to the extension of what has been designated the agroindustry. All this happens simultaneously as the ways of life and production in rural societies take the path of socio-economic modernization and capitalist progress. Oftentimes, this transition occurs in tandem with a one-step process, from a relatively autarchic traditional peasantry, to a new social order that is more and more embedded in the dynamics of globalization and intensely affected by these dynamics in its socio-economic functioning; namely, such order is increasingly glocalized. We use the expression ‘relatively autarchic’ here because no peasant society is or has ever been completely isolated and autarchic; thus, we disagree with the propositions of Redfield (1957, 1969, 1989), Foster (1974, 1980), Banfield (1958), and Rogers and Svenning (1973), who share a markedly culturalist vision of traditional peasant societies, which they perceive as isolated, autarchic, and closed.

In contrast to these propositions, we find the approaches that stress the importance of the economic sphere developed by various authors, such as Sidney Mintz (1973), Eric R. Wolf (1971), Ángel Palerm (1980), and Theodor Shanin (1976, 1979a, 1979b), to be more plausible. The positions of this second group of authors are more attuned to reality because, beyond their different shades of interpretation, they consider peasant societies as part of society at large, a society that is nowadays increasingly connected at the planetary scale, and whose transformations are determined by technological and economic factors.

One of the main consequences of capitalism in food production and distribution is that it typically ends up ruining many small and medium-sized farms and local trade. Therefore, the traditional peasant's search for food efficiency in social and ecological terms (which, as we will see below, large agroindustry companies externalize and/or do not take into account) is unable to compete, in purely economic terms, with the cost reductions associated with the large-scale production and distribution of food in industrial agriculture. The economic costs associated with the low-level production of fresh food are considerably higher than those associated with industrialized and processed foods, and this is without even taking into account the costs of the long-distance transport of small bulks. Consequently, the majority of small and medium-sized peasant households cannot participate in the competition with large and globalized food companies. This is the main reason why large numbers of small and medium-sized peasant households, which have been ruined by the food multinationals, are each year forced to abandon the land of their forefathers, expose themselves to the fate of insecurity and labor exploitation, and migrate from the countryside to the cities.

GROWTH OF THE FOOD INDUSTRY VERSUS TRADITIONAL AND/OR ORGANIC FARMING

The currently growing weight of the industrialization of food production processes at the planetary scale is happening simultaneously with the promotion of a range of discourses, typically based on the fact that this way of production allows for greater quantities of food at lower prices, which legitimizes this industrialization. Regarding this statement, in the documentary *Comparison between organic food and Industrial food* (2002) (hereinafter referred to as 'the Documentary'), a comparison is made between organically produced food and its industrial counterpart, of which certain examples and arguments are discussed below.

First, with regard to organically produced food, the Documentary presents the case of Rafael González, an organic rancher who is shown caring for and feeding his chickens, which we can see to be calm and free-range animals, first in the interior of the henhouse and subsequently in the field next to the farm as they peck at some herbs. Rafael tells us:

> "At first glance, the egg yolk is much more compact, dense, and also light. So, you can see this. And as these chickens eat herbs, this directly influences the color and density of the yolk. The herbs give the egg yolk a very large personality. Also, the shell is much harder because the chickens eat many small stones and pebbles, which give them much more extra calcium. So, there are things that can be appreciated at first glance".

After this scene, the Documentary's narrator tells us what is being presented:

> "Organic hens throughout their productive life lay as many as 180 eggs per year. This is a hundred less than the equivalent laid by a hen raised in a cage. Therefore, and because their diet is more selective, a dozen eggs with an organic seal are worth twice as much as a dozen industrially produced eggs".

Again, Rafael González appears and says the following about the organic production of eggs:

> "This type of production is more focused on quality than on quantity. So, because everything is produced based on the main role of quality, this in turn makes the product more expensive. People who want to buy cheap things will not be turning to organic agriculture because doing so is impossible".

In the same documentary, an opinion similar to that of Rafael is shared by Mariano Rodríguez, the Head of Food Safety for the Carrefour supermarket chain. He states:

> "The organic product will always be more expensive than its industrial counterpart due to its production. When a producer is asked to change the diet of his chickens or to change the diet of the trout or bream from his fish farm to a completely natural diet and, on top of that, he is to trace and maintain the natural cycle of any given species, this leads to additional costs. These added costs are paid by us as the costs of quality".

Both because of its low prices and the resulting fact that it is more accessible for the majority of the population (and, therefore, more in demand), industrially produced food remains by far the majority of the food produced in contemporary societies. In these societies, the production of organic food, which nevertheless is a progressively expanding process, is still relatively minor and, furthermore, is more expensive for consumers. However, this is not to say that it is more socially and environmentally expensive to produce, given the immensely lower environmental, health, and production costs compared to the costs associated with the industrial production of food.

In reality, the price of industrially produced food is lower because the majority of its environmental, health, and social costs become externalities (and thus have effects on other costs that industrial production ignores or conceals). Among the environmental costs we find contamination, transport, high levels of electricity consumption, soil deterioration, etc. The health costs include the diseases that affect the workers in the food sector and consumers, especially those at the lowest socio-economic and cultural levels who may not have the capacity to learn about and analyze the make-up and health effects of many industrial foods.

Lastly, for social costs, it is worth noting the ruin and forced emigration of millions of small and medium producers, the overpopulation and overcrowding in large cities, and the high levels of social exclusion that are typically associated with these urban problems.

In sum, the pursuit of maximum profits for the producer at any price, including the consideration and/or externalization of the abovementioned large-scale costs, shows that the criteria that govern industrial food production are manifestly opposed to those that govern the activity of organic farmers. This opposition is well articulated by the organic farmer José María Bernal, who tells us towards the end of the Documentary:

> "For me, a farmer is a caretaker of the land. He is not an industrial producer. In this sense, there are not many farmers left. If a farmer is anyone who produces food, then there are many farmers. But there are not many people who really care for the land".

In chapter 2 of this book, a more detailed analysis is conducted on the costs and impacts of agroindustry found in the region of El Ejido, a Spanish municipality in south-eastern Andalucía. In the present chapter, we only underscore the fact that these costs should not be externalized in the way we have just described and that the authorities should require multinationals to cover these costs, which would most likely lead to a 20-fold price increase for products such as industrially produced tomatoes or yoghurts. The price of organically

produced food is more expensive precisely because it does not have any of the abovementioned hidden environmental, health, or social costs. In fact, the consumption of organically produced foods helps prevent many diseases, and even the sole fact of consuming it may entail sensory and moral benefits. Therefore, we may consider that organic food is always less costly than food produced by industrialized agriculture.

Among the socio-economic and cultural costs of the industrialization of agriculture (which are externalized and thus not included in food prices) is the extraordinary impact of the continuous deterioration, and even destruction, of many traditional rural modes of production and ways of everyday life. Consequently, the knowledge of which crops and livestock are best adapted to a certain area, which from time immemorial had been held by the peasantry, is lost. This knowledge concerns, for example, the biological struggle against pests and the cultivation patterns that are the most mindful of soil fertility and the cycles of nature. All this traditional know-how is being replaced by the production practices of large agricultural companies whose main objective is not producing food with respect for nature and/or adjusting to seasonal cycles, but is instead achieving the highest possible level of economic benefits.

Otherwise, we currently observe signs of increasingly high rates of female labor participation; unfortunately, these rates frequently stem from forced participation motivated by socio-economic circumstances. Moreover, as opposed to demonstrating any supposed female liberation, in many cases, this phenomenon is simply a strategy for family survival (through access to low-skill and low-paying work), given the husband's unemployment or his lower salary. As if this problem were not enough, we must also note how the situation for these women is worsened by the fact that their entry into the labor market occurs in the context of the typically lacking commitment of many men to perform a series of chores commonly assigned to women due to the macho culture that remains strongly rooted in many areas. Thus, we can explain the double work day (inside and outside the household), which must be accepted by many of these working women, as well as the fact that women have increasingly less time to perform the numerous household chores, such as grocery shopping and cooking, that macho stereotypes still consider inherently feminine.

This situation provides the large food multinationals fertile ground for promoting fast food and the processed foods in the market. The consumption of these products has grown substantially in recent decades, alongside all the health problems associated with them due to inadequate food preparation and the saturated fats, flavorings, preservatives, and other types of artificial ingredients and additives they contain. This is another cost that must be added to the industrial production of food. It is a cost that is not reflected in the price of these products because it is externalized and transferred to the health sector, which has observed the growing prevalence of conditions such as diabetes, obesity, and high cholesterol levels. Apart from being on the rise due to the currently predominant sedentary lifestyle, these conditions are largely associated with the consumption of these types of industrial foods, especially among those sectors of the population at the lowest socio-economic and cultural levels who have fewer opportunities to choose healthier and higher-quality food products.

However, this general situation is not only caused by the low purchasing power of a large segment of the population and the undoubtedly great influence that advertising exercises on the configuration of the food habits of the lowest social sectors, but is also caused by the fact that, replacing the traditional peasant production methods with those of the large transnational

agricultural or livestock companies, makes it more difficult for the population to access fresh, healthy, and nutritional food, traditionally and/or organically grown.

In sum, we are faced with a situation in which a considerable portion of the world population does not have sufficient economic resources to procure a healthy diet. Furthermore, many of those who do have such resources do not access this food due to a lack of knowledge, thus not seeing the need to change their food acquisition and consumption habits. Given their lack of a clear awareness of their responsibility as consumers, they neither know what a healthy diet is nor do they desire it, notwithstanding that they may urgently need it. All this, together with the time scarcity experienced by many women who, because of their involvement in the labor market, cannot meet the role still perceived to be inherent to their gender according to macho stereotypes, creates suitable conditions for the current growth in the consumption of fast food and junk food. This leads to increased problems of obesity, which are common in very different socio-economic and cultural contexts throughout the world that all seem to have the same common denominator; namely, situations characterized by poverty and ignorance, which are intimately linked in negative feedback loops.

FROM DEAGRARIANIZATION TO THE CONSTRUCTION OF NEW RURALITIES

In parallel with growing deagrarianization, many contemporary societies experience processes in which the uses, socio-economic functions, and cultural meanings of their rural areas are redefined. These processes lead to the construction of what is known as new ruralities. The most prominent characteristics of new ruralities include current trends toward multifunctionality and socio-economic diversification.

In this context, rural tourism is an expanding activity that generates resources that may be used for developing and conserving the cultural and architectural heritage of the rural areas where it takes place (Condesso, 2011). Tourism activity represents a rediscovery of the rural sphere by the broad urban sectors that are more or less disillusioned with their world, and it takes place simultaneously with these processes of redefinition in the rural sphere. In other words, rural places with a tourism industry see a progressive socio-economic restructuring and symbolic reinterpretation of the inherited collective imagination concerning these places. Therefore, these areas are transitioning, from a general orientation toward agriculture with markedly traditional and localist lifestyles, to a circumstance that is increasingly connected to trends taking place at the global scale; so that they are more and more glocalized, since their social construction and/or deconstruction is intimately linked to the effects of global tourism that visit them, as well as influenced, to a greater or lesser degree, by the growing number of people who are originally from urban environments but decide to permanently relocate to rural regions.

For tourists and new residents, traditional agricultural environments acquire the meaning of ecological spaces. That is, they become spaces for leisure, sports or physical activities (trekking, paragliding, etc.), enjoying the quality and palette of local cuisine (gastronomical tourism), and leading a life that people consider natural and calm. Therefore, the creation of these new meanings results in a type of mythicization of the rural environment (Halfacree, 1995), which is contributed to by companies dedicated to promoting and/or capitalizing on

activities related to tourism and leisure in these environments. All this leads to important transformations in local rural socio-economic structures and the use of landscapes, resources, and facilities.

In line with the process outlined above, new collective images are being configured in terms of what rural spheres are. To a large extent, they are being developed in line with the assertion that the world of the psychological representation of reality resides in the mind of the individual (Baloglu and McCleary, 1999). This is also a representation that is produced in historically established social contexts (Morgan and Pritchard, 1998). Specifically, the representation of the rural sphere, often sought by social actors originally from the urban sphere, who visit as tourists or decide to become residents, is configured in a context in which images of this sphere, which are constructed a priori, always condition the in situ perception of these actors (Andrade-Suárez, 2011: 58).

To a large extent, the fact that the a priori construction of these images occurs is due to the actions of both, tourists and new residents in rural environments, are especially imbued with the expectation of accessing a world that is different from an everyday reality that does not suit them and of entering into contact with something that is distant in space or time or even with something they feel they have lost, either personally or collectively. Taking advantage of these expectations, tourist companies typically condition the places to be visited according to the requirements of accommodation quality and current facilities, without forgetting to underscore the supposed purity of their lifestyles, landscapes, environments, and local customs (Galí and Donaire, 2003: 84), as well as (referencing the issues of diet discussed in this book) trying to emphasize the supposed quality of their traditional foods or the singular nature of the eccentricities of character and taste they possess.

Thus, as stated by MacCannell (2003), tourist destinations tend to create a façade in which the *authenticity* sought by the tourist is presented in such a way that ultimately what the client acquires is not the place but the desired image of the place. Subsequently, this image is a subjective concept (Bigné, Sánchez and Sánchez, 2001; Gallarza, Gil and Calderón, 2002), which analytically implies that it is neither the tourist destination to be visited nor the place chosen for residence that is placed at the forefront, but instead the anticipated perception of this destination or place.

In this regard, there are numerous studies (Baloglu and McCleary, 1999; Yoon and Kim, 2000; Sönmez and Sirakaya, 2002; Kim and Richardson, 2003; Beerli-Palacio and Martín-Santana, 2004; Pike and Ryan, 2004) that consider the image of tourist destinations as a type of mental construct developed on the basis of the beliefs, feelings, and positive or negative valuations that tourists have had the opportunity to develop (in large part with the aid of marketing) regarding the destination that they wish to visit or have visited (Leisen, 2001; Milman and Pizam, 1995). A comparable situation occurs when disillusioned urbanites who wish to live in a given rural context develop mental constructs that idealize this context to a greater or lesser degree.

However, regardless of whether these mental constructs relate to the ideal place of residence or a desired imagined trip, in both cases, these constructs act as references that condition the experiences of the social actors who develop and/or experience them by focusing their attention on certain signs and away from certain others. Therefore, these actors never reach the places they visit or establish residence with a neutral perception. They arrive with an accumulated set of valuations or anticipated images that determine the ways they relate to these places and how they value them (Palou-Rubio, 2006). Nonetheless, the

perceptions or recollections of the rural sphere that reflect these valuations or images frequently fail to correspond to the experienced realities and perceptions of rurality often shown by the secular population of the rural spheres and the shape of their traditional ways of life and production (i.e., peasants and farmers). Furthermore, these concepts are not in line with what specific ruralities tend to be (Barrado-Timón and Castiñeira-Ezquerra, 1998: 38, 41-51).

Frequently, it is advertising or the media in general, together with everyday urban frustrations, which are the factors contributing to the creation or strengthening of the mythicization performed by tourists in rural environments, people who establish residence in them, or simply those who evoke rural environments through the food products they consume. Regardless, as we will see in the following section, this process of mythicization contributes to directing the actions of all these individuals, sectors, or social movements, which are all more or less critical of and disillusioned with urban-industrial society and see the rural sphere as the ideal environment for developing the alternative ways of life and agricultural production they desire.

THE RURAL SPHERE AS AN IDEAL ENVIRONMENT FOR DEVELOPING ALTERNATIVE WAYS OF LIFE AND MODES OF AGRICULTURAL PRODUCTION

The social sectors that manifest this vision of the rural sphere typically search for ways of respecting the interests of peasants with small and medium-sized farms and making agriculture socio-economically and environmentally sustainable. Among these sectors, an important role is played by a growing group of social movements and neo-rural actors who disagree with the production and mass consumption of industrial food. As an alternative to industrial agriculture, they propose and/or lobby for the establishment of modes of production and food requirement satisfaction that are more akin to craftsmanship as a reaction to the vertical, opaque, and exclusionary organizational structures that govern the dominant industrial production system.

These groups work to implement more democratic models of production management and food consumption. Two examples of these models may be found in the agricultural cooperatives studied by Pablo Saravia in his doctoral thesis *Movimientos sociales en Andalucía. Una mirada exploratoria a los movimientos críticos con la globalización neoliberal* [*Social movements in Andalucía: An exploratory look at the critical movements to neoliberal globalization*] (2012). These cooperatives are La Acequia and Hortigas, and they are located in the Spanish provinces of Cordoba and Granada, respectively.

Both cooperatives work to create a food production and consumption network with continuity in time based on the search for what their members consider a different and sustainable agroecological economic model. Their ultimate aim is the attempt to implement a food production system that stands as an alternative to the currently predominant industrial model. To achieve this aim, the La Acequia cooperative identifies the following goals to be met:

1) Creating a network of production and consumption that respects the environment and cycles of nature.
2) Promoting and conserving the agroecological productive function of the land in the peri-urban area of the city of Cordoba.
3) Educating and raising awareness of the environmental, economic and social issues associated with the processes of production and consumption.
4) Promoting a healthy diet based on fruit and fresh seasonal vegetables.
5) Developing a social space for the residents of the city of Cordoba that would promote transformative and creative initiatives (Saravia, 2012: 407).

As for the Hortigas cooperative, its goal is to achieve:

> "Self-management of the diet through the cultivation of vegetables and fruit, as well as by means of relations of barter and/or mutual support with other projects dedicated to food production. [Moreover, this production has to be based on] an agroecological model [aimed towards] constructing from the bottom up new relations between the countryside and the city" (Saravia, 2012: 183).

The productive-economic results of these cooperatives are scarce and not statistically relevant, given that they do not even produce enough for the sustenance of their own members. However, beyond these results, the value of the La Acequia and Hortigas cooperatives is derived from the fact that they may constitute ideal spaces for recovering the ties to the countryside and attempting to conduct the agrarian practices and traditional ways of life that are associated with the social imagination of those who participate in these practices, and all this through work dedicated to creating and maintaining an orchard (Saravia, 2012: 279). Similarly, they aim, through the work of these cooperatives, to learn new forms of participative management and further involvement from the population. Thus, both cooperatives constitute ideal contexts for experimenting and exercising more horizontally participative organizational models that, consequently, are more democratic that those found in highly industrialized production processes, which are more opaque and, consequently, often developed and operated without the knowledge and possibilities of regulatory control by the citizenry.

For the members of the two cooperatives studied by Saravia, one important, contentious issue is the question of livestock ownership in these organizations, and especially the sale and consumption of meat. Regarding animal ownership, cooperative members consider it to be positive because it facilitates work and similarly enables the acquisition of non-meat products, such as milk, wool, and eggs. As for the consumption of meat, there are somewhat opposed positions. On the one hand, opponents allude to political and ideological reasons, such as the fact that, from the perspective of the alternative consumption models they support, meat consumption is incoherent, given that it leads to undue energy expenditures. For example, meat consumption opponents note that to produce a kilogram of veal, 15,000 liters of water and 15 kilograms of grains are necessary. Furthermore, for meat consumption opponents, these practices contradict agroecological principles and are incompatible with the proposals of cooperative members who define themselves as vegetarians. Nevertheless, there are also more favorable positions regarding meat consumption in these cooperatives that require meat consumption to adhere to requirements related to respect and compliance with productive processes in line with the conditions and principles that exist for the other types of

products generated by the cooperatives. That is, it must be made locally by producers with whom links have already been established, and it should be produced using agroecological procedures that are different from the mass industrial conventional methods, respect the animals, and minimize their suffering.

Regarding the possession of animals, in the Hortigas farmer cooperative, agreement has been reached on beekeeping. However, having other types of animals is viewed as impractical due to infrastructure limitations. In this situation, the establishment of exchange networks with other livestock farmers is considered the best option (Saravia, 2012: 253). The fact that a group of cooperative members was strongly opposed to the purchase of a mule for use in certain cultivation tasks is highly significant. Among the reasons for these objections was the fact that the members of the cooperative, from urban backgrounds, did not know how to handle such an animal. Moreover, others strongly argued that he purchase and use of a mule would constitute a form of the historical exploitation of animals by humans. These opponents to the purchase of the mule added that "we should stop seeing other animals as property, we should stop buying them and keeping them as property" (Saravia, 2012: 261). Given this situation, the debate focused on finding mechanical means of production. However, other members of the cooperative noted their concerns with this alternative. Specifically, they indicated that the use of fossil fuel energy and machinery constituted the exploitation of the planet and its people, which has been widely documented.

From the perspective of this study, all these vegetarian pursuits and opposition to 'animal exploitation' are manifestations of the reinvention of the rural world. In general, in the traditional context of this sphere, such attitudes were not observed, and animals were used both for work and meat consumption, which did not constitute a moral problem for the peasants who raised livestock to eat and used animals for farming. Furthermore, in the case of mules, it is known that these animals are horse and donkey hybrids that are unable to reproduce and have been bred precisely for doing various types of farm work. In other words, these animals would not have existed if they were not necessary for agricultural labor.

Therefore, we may argue that the options noted by the neo-rural cooperative members who manage the Hortigas and La Acequia cooperatives constitute a type of mythicization of the rural sphere based on ideas that oftentimes do not correspond to what this sphere actually is or was in the past. To a large extent, this mythicization is sustained by means of *falsifying and/or reinventing* past and present ruralities. This leads to visions of the rural world as an especially ideal environment for the development of social relations that are characteristic of life in a community (Rivera, 2009: 415, 416, 418 and 432). The idea of community that exists in the imaginations of social actors, such as the members of and sympathizers with the two abovementioned agricultural cooperatives, who reinvent and mythicize rurality, is usually associated with equality and horizontal participatory democracy. However, we know that actual rural communities have had and remain to have within them relations of inequality, which are vertical and more or less hierarchical. Ultimately, a community is not necessarily equivalent to symmetry and horizontality. On the contrary, direct empirical observation of many specific communities (regardless of their rural or urban nature) shows us the frequent existence of unequal relations within them. Therefore, we can only state that the hallmark of community, in terms of its social relations, is a system that is not governed by the platforms and rationality of bureaucracy, as opposed to what is found within formal organizations.

Nonetheless, neo-rural people of urban origin, such as the creators and supporters of cooperatives studied by Pablo Saravia, see the rural environment not as researchers, who wish

to understand ‘what it is’, but instead as utopia builders. Therefore, they end up mythicizing this environment and identifying it with what they believe it ‘should be’. In this way, the rural sphere is perceived not only as an environment or a given life context but also, above all, as an ideal environment for developing alternative life projects, such as the project of ‘producing and eating healthy and organic food’.

These idealizing and, on occasion, falsifying visions of rural environments are also frequently shared by rural tourists, by new residents of urban heritage, and, from the perspective of this study, by those who buy organic food produced in accordance with what they understand to be traditional agricultural practices. However, the social sectors that comprise the majority of consumers, who, for various reasons, opt to buy industrial food products, are also steeped, in one way or another, in a discourse that evokes rurality, nature, or health and is disseminated by the marketing of these products, as we will see in the following section.

RURALITY, NATURE, AND HEALTH IN INDUSTRIAL AND ORGANIC FOOD

As the environmental and socio-economic problems of contemporary, predominantly urban societies become worse and these societies are faced with growing concerns over food scandals and/or the healthiness of industrially produced food, the value of ‘new ruralities’ tends to grow in importance. These ruralities are usually perceived, by the social imagination of the disillusioned urban population or presented by the media and marketing of rural tourism, as environmentally and socio-economically sustainable places where you can produce and/or consume natural products and live a natural, good, and healthy life. Paradoxically, we may observe here significant coincidences between the discourses that legitimize the consumption of organic products and the advertising messages or printed informational messages of industrially produced food on the shelves of large supermarkets and in the imagination of consumers who, for different reasons, opt to acquire this type of food. In all cases, diet tends to be associated with rurality, nature, and/or health.

Some examples include the following:

1) On the Tetra Brik containers of the ‘Central Lechera Asturiana’ brand, we find images of cows grazing in green fields, with blue snow-capped mountains in the background. These images evoke the countryside and nature, which is further emphasized by the slogans ‘Naturally the best’ and ‘Milk and nothing else’.
2) Also in Tetra Brik containers, it is possible to find vegetable cream produced by Knorr, a multinational that is part of the Unilever Group. We are here faced with an industrially prepared dish that satisfies the growing demand of a society that has increasingly less time for cooking. In this context, perhaps to counteract the ideas of artificiality and of health problems that frequently arise when faced with this type of food, the packaging includes predominantly green colors and pictures of vegetables from which the cream has supposedly been made. In the same line, the various captions read ‘taste is part of our nature’ and ‘no preservatives or artificial additives’. One of the creams is even sold under the heading ‘Light. All the flavor, fewer

calories' to forge a connection with those who may be concerned with controlling their weight and, therefore, in search of low-fat foods. Thus, the 'light' cream is sold as the 'garden vegetable cream' and is marketed as 'low fat' with only '65 calories per 250 ml portion'.

3) The caption 'natural' or the allusion to being natural also appears on various other products, such as various yoghurts. One of these brands states that the food is 'gluten free', and gluten, as is well known, is a natural product. Therefore, the allusion is to a version of nature that has been manipulated, cleansed, or adapted to maintain its mythicization. The allusion to nature also maintains the 'healthy' image of these products for everyone, which is important because, as we know, not everything that is natural is always good and not everything that is natural is good for everyone. For example, some people are gluten-intolerant. We also see 'gluten free' yoghurts with 'lemon flavor'. In this case, the caption 'natural' is not present, but nature is clearly alluded to in the green tones of the packaging and the attractive images of green lemons.
4) The 'natural' or 'no sugar added' label, which suggests that the product is appropriate for those with diabetes or obesity or may be used to prevent these problems, is also present in various other products, such as 'lemon flavored cookies' or in the soup broths from the 'Gallina Blanca' brand, which are said to be made from '100% natural ingredients'.
5) Examples of the evocation of rurality also appear in the sale of organically produced eggs, which are said to be from 'village hens'. Additionally, chicken from organic farms are sold under the label 'Rural chicken'. In these two cases, it is essentially true that these products are made in the rural sphere and in accordance with the traditional production methods of this environment. However, we have a case here in which the rural sphere is evoked in an attempt to sell industrially produced food in the meat section of the 'Mercadona' supermarket. In various establishments of this chain, the author has found an image that is as far removed as possible from the industrial production of meat, with closed spaces full of animals, which accounts for the majority of meat actually sold in that supermarket. Instead of this image, we encounter various tiled images of a large open field with mountains in the background where the animals, such as a rabbit, a hen, a pig, a cow and a calf, are free to roam.
6) Examples of how the consumption of various food products is linked to the health concerns of the population may be found on the Tetra Brik packaging of dairy milk from the 'Pascual' and 'Puleva' brands. Both packages state that they contain calcium, which is well known to be necessary for maintaining the health of the general population, especially for menopausal women. That is, milk is marketed specifically to this broad segment of the female population that is tasked with the purchase and preparation of food in societies such as ours, which, for the most part, still see these tasks as inherently feminine. As for the 'Pascual' milk, the packaging states that it has 'Natural Calcium'; i.e., it comes from the milk itself. As for the 'Puleva' milk, captions such as the following appear: 'Calcium. No one does it better', 'Efficalcium', 'Phosphorus, iron, Vitamins A, B1, C, D', 'Energy + Growth. Smart Nutrition', and 'Omega-3. Healthy heart'. As is well known, the consumption of substances with 'Omega-3' fatty acids, which are not produced by our bodies, is

beneficial for preventing cardiovascular disease. However, in the case of dairy milk sold in supermarkets, these fatty acids, which are very abundant in certain oily fish, are artificially added to attract increasingly selective consumers and those who may be worried about their health.

Regardless, we must state the fact that, in reality, establishing relations between diet and health has been more or less rooted in the popular culture from long time ago.

Thus, the capabilities of certain foods to fight diseases or to prevent them are now well known. For example, it is widely acknowledged that consuming garlic prevents rheumatism and strengthens the heart and that plums act as laxatives. Indeed, we may state that, since the beginnings of humanity, the awareness that eating is necessary for life has been present and that certain foods in specific circumstances may lead to diseases or cure them. However, it was only at the end of the twentieth century that the awareness of the extent to which a good or bad diet can positively or negatively contribute to peoples' health was reached (Vidal-Carou, 2008).

Meanwhile, during the first half of the twentieth century, the majority of nutritional studies were understood to constitute responses to the historical context, which, for the millennia of humanity's existence, had been characterized by persistent scarcity, given that people lived in rural, subsistence communities whose productive capacities were somewhat limited and cyclically threatened, leading to famines. Therefore, taking this historical context as their basis, the main objective of nutritional studies was the identification of essential nutrients and the quantities (subject to continuous processes of revision) of each nutrient necessary for satisfying nutritional requirements and thus avoiding the risks of chronic diseases. Today, as a consequence of all these studies, we have reference tables on the recommended intake of nutrients and nutritional guides that allow us to easily establish the equivalence between nutritional requirements and the type and quantity of specific foods that must be consumed to satisfy these requirements.

In the last third of the twentieth century, as overproduction made it possible for the vast majority of the population to have a more than adequate food supply, studies conducted in Western developed nations ceased paying preferential attention to problems associated with the lack of nutrients. Researchers were faced with a new situation: in these societies, it began to be observed that the excessive intake of specific nutrients could have a negative impact on health. Thus, the first recommendations for moderating the consumption of fat, sugar, and salt were made.

Simultaneously, it was also being found that our diet may have protective or preventive effects against certain diseases, such as diabetes, cardiovascular disease, and even a few types of cancer, and that, vice versa, bad dietary habits may contribute to the appearance and/or worsening of these types of diseases. Therefore, in the new context of food oversupply in the developed world, for a large segment of the population, the basic problem was no longer the avoidance of nutritional insufficiency. Self-regulation and the control over possible excess dietary consumption, even attempts to improve health through the consumption of certain beneficial nutrients, became the new basic problems and/or worries. Thus, what we observe now is the pursuit of 'optimal nutrition', a phrase of questionable descriptive power from the perspective of scientific rigor, However, it is valid as a depiction of the new perspectives on the relations between diet and health, complementing or superseding the earlier concept of

'adequate nutrition', according to which the main function of our diet is to provide the nutrients necessary for the body to function.

In this situation, the consumption of industrial food that meets certain health functions, including those discussed above is rising. All this food may be specified as functional food, the progressive extension of which must be framed within the context of growing concerns over health that, in turn, increasingly raise the demand for these types of food products. Nevertheless, it should be noted that this demand is induced and maximized by the food industry itself in accordance with its profit-driven interests (Vidal-Carou, 2008).

As we have seen, industrially produced food is frequently presented as natural. However, in general, we may argue that organically produced food is typically closer to nature and/or rurality. Consumers of this type of food, which is generally healthier, still constitute a social minority. Nonetheless, this minority is clearly growing. By contrast, the vast majority of the global population, for various reasons (above all, its socio-economic and cultural levels), opts for industrially produced food. Oftentimes, what they actually buy, rather than specific qualities of the rural sphere or healthy, natural, organic foods, are declarations or perceptions of these qualities, which are part of the agroindustry's marketing strategy.

Specifically, in the Documentary, we see that the evocation or perception of health qualities is notably different when people are confronted with industrial agriculture and organic agriculture. Thus, in the Documentary, the word 'vaccination' is inadequately used by workers at two mass industrial production factories, one dedicated to egg incubation and chicken production and the other to farming trout for sale. In both cases, when mentioning 'vaccination', the two workers refer to procedures (which are completely automated and standardized, as we see in the Documentary) that aim to treat the soon-to-be-born chicks and trout with antibiotics. The stated aim of this procedure is avoiding infections, thus contributing to the prevention of health problems that could be caused by mass deaths, which would lead to a drop in production and decreased profitability of these industrial production facilities. Similarly, as they discuss procedures openly and in detail in front of the camera, what these two workers are trying to do is reinforce in potential consumers the feeling that the healthiness of the food these facilities produce is guaranteed. In the Documentary, feelings related to the healthiness of industrially produced food are also reinforced in the consumer through images that show the apparently sterile conditions and the white or green gowns in which food industry employees work, as though this were laboratory or sanitary work.

To a large extent, both the declarations of the two workers and the sight of these sterile images are aimed at counteracting the fears and concerns that may arise in consumers of industrially produced foods as the degree of awareness on this subject increases, specifically with respect to questions concerning the risk of infection due to the reclusion and massive stockpiling of livestock in closed spaces, the typical opacity regarding how and what the animals are fed, the genetic manipulations to which these animals or the industrially cultivated vegetables for human consumption are subjected, and the exact composition and health risks that could results from the flavor ingredients and other more or less unknown additives that are included in industrial food products.

By contrast, the images of the healthiness of organically produced foods that the Documentary shows share nothing in common with the said images of sterility. In the case of organically produced foods, a group of hens is shown on a farm with regard to the production of eggs and poultry meat. The hens are shown as healthy and living in open internal or

external spaces. Thus, they are not as prone to contagion as the hens crammed into mass cages, which are characteristic of the industrial production method.

Furthermore, the agroindustry even goes so far as to manipulate nature itself, so that what we really see in industrial vegetable cultivation appears to be the production of some type of designed nature. Thus, similar to the forms and distribution of a rationally-planned garden, in the Documentary, we can see how nature is genetically programmed and manipulated and how development and life cycles are altered to achieve products with predetermined forms, colors and/or flavors, such as square bell peppers, perfectly round tomatoes, trout that grow fat quickly, and fast-growing chickens with extremely short legs and a significant quantity of meat in their breasts. Regarding the latter, in the Documentary, José Luis Redondo from the 'Pollos Redondo' company, while placing a chicken in his hand to show us what he is explaining, tells us:

> "The struggle is for the chicken to grow as much as possible in fewer days. Every day, the trend is for genetics to work in achieving the largest possible good part of the chicken, which is the breast, that is, a chicken with a perfect breast. The weight of the animal in relation to the breast is very important. Every day, the length of the leg should be shorter thanks to genetics. I would say that the length of the legs in the last 8 or 10 years has maybe gotten shorter by 3 centimeters. And efforts are being made to round the shape of the chicken's breast".

Meanwhile, the images the Documentary shows us of organic agriculture are more in line with what the rural, natural, or healthy sphere actually is, as opposed to the mere evocation of these images for the purposes of marketing industrially produced food. For example, this is clearly seen in the previously noted case of the organic chicken farm in which hens roam freely, peck the herbs in the field (rural and natural sphere) and also look healthy. Thus, with regard to these hens, the Documentary's narrator tells us:

> "Organic hens lay organic eggs. To receive this seal, the diet of the animals may not be made up of transgenic feed nor may it contain additives or synthetic correctors. Each hen must also have a space of 5 square meters outside".

Once again, in the Documentary, we see the owner of these hens, the farmer Rafael González, who says:

> "I see the difference in how the hens look. Living outside, it's like what happens with us if you spend too much time inside in your apartment or building… or in a mall, which all have their environments controlled; it seems that you have to go outside to breathe, and they have the same conditions. This makes you healthy. Their health is seen in the shine of their feathers, in the redness of their crest, in the way they crow. You can see they are healthy, strong and healthy. If you should see those that just produce in a cage, you will quickly see the difference".

Nevertheless, it is worth noting that among supporters of organic food production, there are also idealizations and/or falsehoods concerning nature, health, or rurality. Thus, while positive aspects of the rural world that had been dismissed by what could be considered as the 'progress drive' are recovered through this mode of production, it is also true that the traditional rural reality typically manifests a number of problems, including backwardness, technological and productive problems, more or less cyclically repeated famines, sanitary

deficits, high infant mortality, low-quality and short life expectancy, and the uncertainty that derives from subordination to the cycles of nature, which, on many occasions, does not show a peaceful face but instead has more or less catastrophic effects due to floods, hail, torrential rain, protracted droughts, and bad harvests, often destroyed by one or more of these disasters. Additionally, in many traditional rural societies, there were usually large masses of landless peasants. Moreover, there were severe nutritional deficiencies, either as a result of the abovementioned catastrophes or because a wide range of foods was produced in each local context[1] and the sale of these foods mainly took place at the local level. Therefore, consumers had a much reduced offer than what they enjoy today, given the conditions of the predominant industrial agriculture in contemporary societies.

The abovementioned technical and socio-productive limitations of agricultural societies were a constant for millennia. It was only with the advent of industrialization and the expansion of the forces of production that it provided that these limitations began to be surmounted. This expansion paved the way from societies limited by permanent scarcity to contexts of relative overproduction and abundance. Consequently, the basic problems of contemporary societies are no longer the almost chronic scarcity and persistent technological and/or productive limitations which were so typical of the traditional peasant world. Instead, our days the main problems relate to production and consumption, the more equitable redistribution of available resources, and the fact that the existing capacities must be adequately regulated to preserve the environment and ensure sustainable development.

In any case, it is quite common that the agro-industrial processes of food production manipulate nature, while they are automatically and artificially produced and away from what they really were in the traditional rural world, in those cases that in such world existed equivalent of them and we are not seeing processes entirely new, which could only occur as a result of industrialization. Furthermore, the mass production and technical complexity of these processes exacerbate the fact that sometimes they escape the control and understanding of the average consumer.

The documentary provides us a sample of the automation, the artificiality, the complexity and the difficulties of controlling and knowing the industrial processes of food production. So, after showing us images of organically raised hens roaming free as they please, the exterior of a white warehouse from which smoke bellows out appears. Around the warehouse are trees in a green field that, by all accounts, is artificial as though it were garden herbs. The meadow is completely empty; no hens peck its surface. The feeling of the hermetic environment of this warehouse is strengthened by the fact that it does not even have external windows. Subsequently, we see the interior of the warehouse, where very long corridors are surrounded on both sides by various levels of cages, inside which hens are crammed, cackling and moving around nervously. Furthermore, there is an atmosphere very close to darkness, which the timid artificial light of the electric light bulbs only underscores. The eggs fall on a type of conveyor belt located to one side of the cages.

Afterwards, we see a worker dressed in a white robe, as though she were working in a laboratory. The image of the worker also provides a sense of cleanliness, even though, in reality, it would be very difficult to achieve, given the crammed conditions in which the hens

[1] This is in accordance with the fact that the life of those societies was mostly characterized by high degrees of localism and autarchy.

live. This worker is María Blanco, Director of Quality at 'Huevos Cantos Blancos'. She tells us:

> "Laying an egg, for a hen, is somewhat superfluous. So, it will lay it with the spares it has. Then, we have to carefully play with all the productive parameters so that the hen is as comfortable as possible because, if the animal is not comfortable, the first thing it does is stop laying eggs. Thus, we have to provide the right temperature, with an adequate program of lighting and with the correct level of comfort for achieving good production".

Then, the narrator continues:

> "Cantos Blancos is the largest Spanish producer of eggs. Everything in its warehouses is automated. Here, a computer controls the life of 125,000 hens. The entire productive process is monitored so that they achieve maximum performance for the year they spend in the cages. In twelve months, the hens lay 280 eggs each. With two million hens, the production is 40 million dozens per year".

While this is being explained to us, we see the long, wide conveyor belt with eggs. Then, the image of María Blanco reappears, and she says:

> "Our production is entirely brown eggs due to market demand. The only difference is the color of the hen. Brown eggs are laid by brown hens, and white eggs are laid by white hens. However, the egg quality is exactly the same. I think that the end consumer associates the brown egg more with – it is a psychological factor – an organic barnyard egg. It is a shame that the white egg is disappearing because it is of the same quality as its counterpart".

We see other signs of the artificialization and denaturalization of the industrial production of food when the Documentary talks about the greenhouses in the southeastern region of Andalucía. Regarding these structures, whose environmental and socio-economic impact is described in chapter 2 of this book, the narrator tells us:

> "The greenhouses are controlled by IT systems. The computer registers hour by hour all the factors that influence the growth of the plants. It does not rain or snow here. The farmer does not have to look at the sky. His crop now depends on the proper functioning of mechanical and electrical systems".

While we listen to the narrator, we are provided with images of more or less complex computers and electronic devices controlled by technicians. Subsequently, the farmer José Luís Moreno tells us:

> "Everything has evolved so much and so fast that it is no longer to plant a crop and wait for it to grow only with a few irrigations; in the past, you did not control so many parameters when cultivating".

Particularly, we find evidences of the said processes of artificialization and denaturalization when the Documentary shows us the design of products based on the market or consumer taste requirements; though in reality, what often is being done is the generation of new consumer preferences and the transformation of his/her eating habits by changing them with the aim they are beneficial to the interests of some industrial food producers.

Regarding the artificial design of certain given food products (in this case, various vegetables), in the Documentary, we hear from Juan Navarro, the Manager of De Ruiter, a Dutch company that owns seed investigation laboratories. He says:

> "There are certain small limits. For example, here we have all our fruit in a square form, we can even say in the shape of a cube, do you see? (He shows us a pepper). We can say that the dimensions are the same in both length and width, so this is practically a cube. What are we looking for? This is one of the main objectives: we try for all fruit to be this way. Not for one to be like this and another like that (he shows us two peppers completely different in size and shape). Just as Coca Cola cans are the same and the consumer has more of those, he also consumes more peppers because they are more attractive when they are completely uniform. Thus, our goal to achieve is that the plant be a factory, producing equally shaped peppers, with the same color, taste, everything".

In the same line of artificially controlling the productive process, the greenhouse farmer Lola Gómez Ferrón, sitting in front of a computer, explains:

> "What is controlled is the entire subject of climate. In what conditions cultivation is done under plastic, the temperature, the relative humidity, CO2 levels, and light levels, let us say, all factors that influence the functioning of the plant at the atmospheric level".

We then hear a comment from the narrator of the Documentary:

> "Hybrid seeds, cultivation without earth, and plants practically capable of growing without limit. It is so awe-inspiring that the greenhouses have become a tourist destination".

While we are told this, we see Lola Gómez Ferrón accompanying and providing explanations to a group of people among the separating corridors of the various greenhouses. As we see her showing this group of people an enormous plant in the greenhouse, Lola tells us:

> "This plant just grew this way. It practically has a mean growth of 12 or 14 centimeters every day. Its growth is very quick. These rails are huge floor heating, there is a red line in each line of cultivation, and it has a double function. These are tubes that are full of water. In winter, we see that there are some boilers that heat the water and a pump that makes it circulate, and the warm water provides heat to the environment. And this has a double function: for heating and for working with cars. We already depend a lot on the market. Normally, the market wants the cucumber completely straight (she shows us a plant full of cucumbers as she speaks). When a cucumber twists, it is curious because, nutritionally and in taste, it is exactly the same, but the consumer, influenced by marketers, is used to acquiring products that adapt to one standard".

FINAL CONSIDERATIONS

In light of the above said, we can see that the truth is far from those advertising messages that associate industrial foods sold in supermarkets with rurality or nature. Often these messages present such foods as appropriate for combating certain health problems that concern more or less to consumers, such as obesity, diabetes, high cholesterol levels, stress, constipation, a lack of calcium, and vitamin deficiencies. Of course, this is not to say that

industrial food is necessarily bad for the health of consumers. However, what is true is that it is produced using processes that, in reality, have nothing to do with the agricultural processes of the traditional rural world. In contrast to those processes, the vast majority of which were immersed in natural cycles, the current industrial food production, which includes the development of the processed foods that are rising in popularity, entails artificial and complex processes that are opaque or beyond the comprehension of the majority of the population. Furthermore, in the industrial processes of food production, preservatives, flavorings, and other additives whose composition and effects are unknown to the majority of consumers are used. Consumers, therefore, have little to no control over these processes in contemporary societies, in which concerns over food sovereignty raise at the same time that we are witnessing an ever-increasing predominance of a series of industries and food marketers with more or less global reach (Machado and Torres, 1987; Mcmichael, 1994).

The complexity of current forms of food production, processing, conservation and commercialization lead us to trust technicians and experts in nutrition and health their management and control. However, for the common person, the language of these technicians and experts is oftentimes not easy to understand.

At the same time that the agroindustry has been replacing the shared craft-like experience in producing and consuming food of traditional populations, a gradual loss of consumer autonomy has occurred. Consumers, together with the majority of small and medium-sized farmers, have increasingly less control over determining their dietary habits. Changes in these habits progressively increase their levels of dependence on the trends established and promoted by the transnational food corporations. These corporations have a great capability to disseminate, when not imposing de facto through advertising and/or their monopoly of food markets, criteria for packaging and design of the image of the products sold by them, at the same time that they seek the establishment of models and production rates consistent with the maintenance of food price levels in line with their interests.

The current trends that reinforce the monopoly of distribution held by the big multinational food corporations are bound up with the fact that consumers increasingly go to large supermarkets to purchase their food. The rise of these types of distribution establishments is due, above all, to the lower prices they offer and to the fact that the price of food is one of the main criteria influencing the purchasing decisions of the vast majority of consumers, with relatively limited buying power. Furthermore, globalization brings about that an increasing number of supermarkets end up in the control of large global food distribution companies. This concentration in distribution leads to the purchase volume of such companies is very high in comparison to their suppliers, which, in turn, implies that they achieve massive executive control over the farmers and even over the small agro-industries, which oftentimes must submit to the interests and directives of these large transnationals.

One of the consequences of these trends is the need for growers to increase the size of their farms, modernize and/or intensify their production with the aim of lowering their costs, given the falling prices to what they have to supply their products to food transnationals. The fact that a considerable portion of small and medium-sized peasant households has great difficulties[2] explains the abovementioned close relation between production intensification, industrialization and deagrarianization.

[2] Consequently, this peasantry is even unable to face the globalization challenges and thus is ruined or forced to abandon their work.

In sum, we may state that the growing preponderance of global food distribution companies is forcing the modernization and increase in size of farms because growers who want to sell to these large companies must have a large production volume to provide their products at very low prices. In this situation, those small growers who are unable to modernize their farms and/or produce at these low prices are excluded from these commercialization channels. Thus, their only remaining options are selling their goods in small stores or in short distribution channels. Finally, those farmers who sell their products as raw materials to industrial food companies are especially affected by the reduction of agricultural prices that these companies apply, frequently pressured, in turn, by the low prices imposed by the large global distribution companies.

In these circumstances, as noted by Mauleon (2001), short commercialization and/or distribution chains become one of the main alternatives for small farmers to find outlets for their products and thus maintain their place in the market. However, what do we mean by short commercialization and/or distribution chains? The truth is that there is no clear and precise definition of the concept. Mauleón understands a short distribution chain of local products as:

> "the form in which the food producer, the farmer or rancher, sells directly to the final consumer. The most important short channels are itinerant street vendors, sales in established markets, direct sales, and sales in the farm establishment. These different ways of selling have the common element of creating a direct relation between the producer and consumer, and, due to this relation, none of these is affected by the interests or decisions of intermediaries (mainly wholesalers and retailers)" (2001: 2).

However, there is no clear and simple definition of what a short commercialization and/or distribution channel can be in terms of its application to the noticeable diversity of situations that may occur in the 27 member states of the EU. The reality is that the short commercialization and/or distribution channel is interpreted differently and flexibly in each territory, with very diverse definitions existing in the literature. Thus, we find both stricter definitions that limit the concept to direct channels between the producer and consumer and broader definitions that admit the participation of other agents if and when they meet certain conditions. This is the case, for example, in the regulations proposal for the European Agricultural Fund for Rural Development (EAFRD). This proposal defines a short commercialization and/or distribution channel as:

> "a supply chain made up of a limited number of economic agents who are committed to cooperation, local economic development and socio-economic relations between producers and consumers in close geographical proximity" (quoted by Pérez-Acosta, 2013: 16).

This supply chain requires limiting the maximum number of intermediaries between the producer and consumer, thus leading us to conclude that a short commercialization and/or distribution channel is one in which the number of intermediaries is equal to or less than one.

In the current situation, which is characterized by growing globalization and the preponderance of large multinationals dedicated to market food products to consumers, the debates on so-called food sovereignty or the self-management of one's diet are increasingly popular. Food sovereignty is understood here in the same sense as the organization *Vía*

Campesina, which defines it as the right of peoples, their countries or unions of states, to establish an agricultural and food policy that avoids third-country dumping.

The concept of food sovereignty, which was developed by *Vía Campesina* and placed in the public debate on the occasion of the 1996 World Food Summit that took place in Rome, attempts to offer an alternative to neoliberal globalization policies. The essence of food sovereignty, according to *Vía Campesina*, is the prioritization of autochthonous modes of production and the protection of local producers against the export policies and trade liberalization that characterize neoliberalism (Entrena-Duran, 2008: 29).

Here, food sovereignty is considered to exist when the determination and supply of the food demands of the population are based on the specific conditions of a given national, regional or local sphere, respecting its productive biodiversity and its socio-cultural pluralism. To achieve this, we must fully maximize short channels of commercialization and agroecological policies and strategies aimed at its consolidation. Very specifically, these include all those policies that favor the work and interests of small and medium-sized farmers and local consumers. In this way, we contribute to the guaranteed access to food that maintains a more balanced relation with the socio-economic, natural, and environmental spheres.

Regarding this situation, specifically in the European Union, we observe a growing interest from the devisers of the Common Agricultural Policy (CAP) in adopting the abovementioned measures. Thus, on April 20, 2012, the 'Local agriculture and short food supply chains' conference was held in Brussels. It was an event with the objective of studying the means of mobilizing and valuing the economic potential of local agriculture and short food supply chains. This conference was an initiative jointly implemented by Dacian Ciolos, European Commissioner for Agriculture and Rural Development, and John Dalli, European Commissioner for Health and Consumer Policy.

Similarly, the reform proposals of the Communitarian Agrarian Policy (CAP), implemented since 2013, contemplate a range of new possibilities that aim to stimulate the economic development of small and medium-sized agricultural enterprises, with a focus on local markets. Regarding the 'Local agriculture and short food supply chains' conference, it focused its attention on the political instruments directed at favoring market access, promoting and/or reinforcing the relations between farmers and consumers and improving the application of hygiene standards in short food supply chains. Specifically, Commissioner Dacian Ciolos insisted on the need for reinforcing the dissemination and understanding of this form of commercialization and rediscovering its advantages. Above all, one of these advantages is that it exceedingly contributes to promoting food sovereignty.

However, in contrast to what many people may believe, the pursuit of food sovereignty is not in contradiction with the productive efficiency. Thus, a growing number of research projects furnish evidence that the agroecological production practices of small farmers are efficient because they help to substantially improve the food security within the various rural economies of local or even national scope (Altieri et al., 2011). Despite these contributions, many researchers still wrongly believe that traditional agroecological systems are unable to produce more due to their low degree of technological development. Thus, hand tools and draft animals prevent exceeding the predetermined low limits of production, which are considered insufficient and typical in self-subsistence economies.

However, contrary to this belief so widespread, it seems obvious that traditional family farms are more productive than large establishments. Above all, this is the case when their

total production is taken into account and not the yield of just one crop. Subsequently, we can state that the integrated models of production, in which small farmers produce cereals, fruit, vegetables, fodder, and animal products, have greater performance per surface unit than the monocultures that are currently growing so much in scale. It is also undeniable that a large farm with intensive scale production may produce more maize per hectare than a small farm in which maize is cultivated as part of a polyculture that also includes beans, pumpkins, potatoes, fodder, etc. Nevertheless, in the polyculture practices developed by smaller producers with traditional and agroecological farming methods, productivity, in terms of usable products by surface unit, is habitually greater than that in monocultures with similar management levels (Dorward, 1999). In other words, better biodiversity and local food supply are guaranteed in this way.

In the current situation, and taking as a basis the aforementioned arguments, options for agroecology and food sovereignty may be understood as expressions of the search for alternatives to production and food distribution with the aim of overcoming the negative consequences of an unfair international trade system that is incapable of resolving the imbalances and other global problems associated with the food supply chain. These problems occur, paradoxically, with certain regularity in developed countries, in which the overproduction and oversupply of food sometime results in the destruction of food supplies to maintain price levels, and this can even be done with the assistance of institutions such as the European Union.

There are many who believe that it is regrettable that this happens while other societies around the world experience famines or suffer more or less severe nutritional deficiencies. Therefore, given the inefficiencies of this wasteful model of industrial food production (fossil fuel energy is wasted and, with a certain regularity, food is even destroyed), policies that tend to support the food sovereignty of populations and/or social attitudes that opt for searching such sovereignty are gaining ground in contemporary societies. To achieve this sovereignty, it is essential to support the autonomy of local markets, short production, and commercialization and consumption chains, and to promote agricultural production methods that ensure the technological and energy self-sufficiency of the communities where this production is based and/or those that are affected by it. Doing so results in the sustainability of these communities and is less harmful to their socio-economic organization and their natural and environmental conditions.

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Chapter 2

EXPANSION OF GREENHOUSE FARMING IN THE AREA OF EL EJIDO: A CASE STUDY ON THE ENVIRONMENTAL AND SOCIAL CONSEQUENCES OF AGROINDUSTRY IN SOUTHEAST SPAIN[#]

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INTRODUCTION: DEEP AGRARIAN CHANGES IN EL EJIDO

El Ejido is a newly constituted Andalusian municipality located in Southeast Spain, specifically, on the western coast of the Almeria province (see map 1). At the start of the 1960s, the zone of El Ejido was a traditional poor, rural setting (one of the poorest areas in Southern Spain); it had disperse housing, it was sparsely populated, and it belonged administratively to the municipality of Dalías (until 1982).

Currently, El Ejido is an independent municipality with 82.983 inhabitants in 2013 and has experienced an enormous rhythm of demographic growth since the 1980s (see graph 1). Although, it is true that some population decline occurred in 2009, likely due to the hard economic crisis suffered in Spain.

The huge changes in the territory of this municipality, whose surrounding area is now the scenery of a very thriving economy, have made possible El Ejido's transformation from a genuinely poor, rural city in the sixties into the present agroindustrial city that has made it one of the richest Spanish municipalities.

[#] This chapter was prepared based on the results of the international research project "Urban pressure on rural areas: mutations and dynamics of periurban rural processes" (Acronym: NEWRUR), performed between 2001 and 2004 and financed by the European Union's Fifty Framework Program. In this project, El Ejido was one of the cases studied. Similarly, the analysis of the social and environmental problems in the region of El Ejido conducted here is based on the theoretical and methodological frameworks developed for the study "Social Diagnostics in the Doñana Natural Space". For this study, financed by the Ministry of the Environment and Rural and Marine Areas of Spain, Francisco Entrena-Duran was a researcher between 2011 and 2014.

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Source: Author.

Map 1. Location of El Ejido in Southeast Spain.

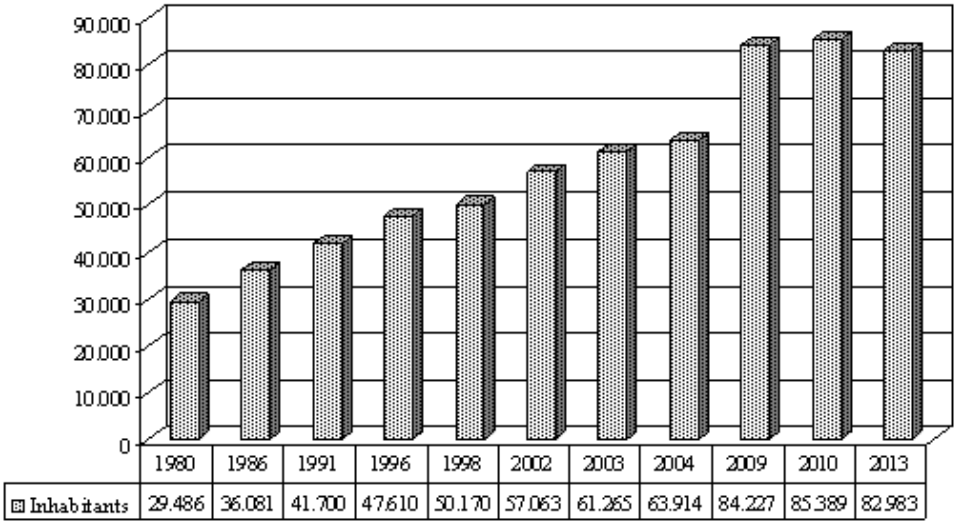
Such economic success has been the outcome of a combination of factors: the climate, the technique of 'sanding' (mixing beach sand with the earth) to fertilize the land, and above all, the introduction of intensive agricultural production methods, based on the adoption of cutting-edge technology, specifically, the greenhouse cultivation of fruits and vegetables for international export (Tout, 1990). In the cultivation of greenhouses, a cheap immigrant labor force has been intensively used. Thus, the spectacular growth in greenhouses farming has happened in parallel with the need for more and more immigrants.

The foreign manpower arrives primarily from North Africa. Many of the overseas immigrants, whose contribution to the vast and quick economic growth has been decisive, are in an illegal situation (Aznar and Sánchez, 2001: 90).

Thus, immigrants are very prone to being exploited and do not have the ability to change this situation, which is shown by the fact that their average salary is 30% below the salary paid to Spanish workers in similar labor conditions (Pedreño, 1999; Martín, 1999).

The cheapness of their labor makes the immigrant workers a very important factor of competitiveness in El Ejido's agriculture, for which they are indispensable (Delgado and Moreno, 2002).

The process of economic growth in the area of El Ejido is a genuine case of deep agrarian change. Maybe the main reason for this fact is the speed and deepness with which this process has happened. In this regard, El Ejido has experienced, from 1974 to 2014, a really spectacular transformation that has entailed the overall mutation of the socioeconomic functions and the look of the surrounding territory under its influence while giving rise to the constitution and very quick expansion of a new independent city, which is the core of such territory.



	1980	1986	1991	1996	1998	2002	2003	2004	2009	2010	2013
Inhabitants	29.486	36.081	41.700	47.610	50.170	57.063	61.265	63.914	84.227	85.389	82.983

Source: Author with data from Ruíz (1999), Municipal Register of El Ejido, Jimenez-Diaz (2005) and the Institute of Andalusia Statistics (IEA).

Graph 1. Demographic evolution of El Ejido.

This city and its district are currently ruled by their own local council, which provides numerous services and facilities, regulates their functioning and draws up plans for their future growth. Nevertheless, although the progress of the municipal policies in this regard have been very substantial in El Ejido, the fact is these policies have not been fully successful in satisfactorily solving some problems, such as the suitable elimination of the abundant residuals generated by the greenhouses.

The enormous proliferation of greenhouses have transformed the surroundings of El Ejido into a peculiar scene, called by many people the 'plastic sea', which alludes to the image of the immense white plain of plastics covering the greenhouses, over which the city is visually placed. The first greenhouses were set up during the 1960s, in parallel with an increasing commercialization of the products from the area in the international markets. This development, during the eighties, allowed for diverse advances to augment productivity, such as improving the structure of the greenhouses, utilizing phytosanitary products and computerizing the farming processes with the purpose of optimizing the use of the scarce water in the area and saving it. For this objective, systems of underground irrigation, trickle irrigation and/or hydroponic cultivation, which permit a more homogeneous distribution of water and the addition of chemical fertilizers, were then put in practice.

The quick and intense mutations undergone by the local area of El Ejido have been possible due to the increasing insertion of such area within the dynamics of globalization; that is, it has become more and more glocalized, as is revealed by the following facts:

1) Agricultural productions are sold internationally, primarily to European Union countries. Therefore, globalization has led to a growing break between production and territory. This break shows, first, that agrarian production has lost its exclusively autochthonous character, as shown by the trend that reveals the same product is grown in diverse parts of the world (for instance, avocados, mangoes or kiwis);

second, that it can be traded over long distances; and, third, that a certain type of farming no longer is decisive in shaping the organization and distribution of the specific local territory where is developed. This is so because of the production processes are usually carried out through the global integration of the nations', communities' or different regions' activities. These processes are increasingly homogeneous, act on a planetary scale and lack evident spatial references in their management, organization and reach (Entrena-Duran, 2000; Entrena-Duran, 2008). Regarding the particular case of El Ejido, an overall consequence of all this is that its local production is inserted within a global network of socioeconomic and financial flows, which have a greater decision capacity over the shaping of its local space than the autochthonous local socioeconomic actors from the zone.

2) The development of modern greenhouse agriculture has occurred hand in hand with an increasing penetration in the area of El Ejido of transnational corporations devoted to the selling of seeds and fertilizers to the local farmers or to the processing and commercialization of their agrarian productions. These enterprises increasingly influence the socioeconomic situations and the lives of family farmers by imposing on them their criteria for cultivation and regarding what has to be understood as the quality of the productions.
3) The enormous agrarian development has dramatically increased the demands of manpower, which has attracted to the area a rising number of immigrants with the aim of seasonally working in the greenhouses when the processes of crop growing require their activity.

In short, the globalization process undergone in El Ejido has given rise to a noteworthy intensification of the local socioeconomic dynamic. However, the consequences, perceptions and reactions regarding this process have been very dissimilar, depending on the social actors who somehow have been involved in or influenced by it. Basically, this is shown when we compare the situation of farmers with that of immigrants; that is, the two main social actors affected by the agrarian changes of El Ejido.

Thus, at the same time that most farmers have undergone and are undergoing significant improvements in their socioeconomic standards and quality of life as a result of globalization, immigrants are suffering from uprooting, poverty and exploitation, among other negative consequences of globalization.

In other words, the dynamism brought about by globalization has caused changes that have affected and are affecting differently the dissimilar socioeconomic actors from El Ejido. Therefore, each of these actors tends to behave differently and to develop specific types of collective protests. The following types of protests are taken into account next: ecologists' complaints, the protests of farmers, exceptional xenophobic riots and the protests of immigrants.

ENVIRONMENTAL EFFECTS AND ECOLOGIST'S COMPLAINTS

One of the most significant effects of the huge agrarian changes undergone in the zone of El Ejido is the environmental problems it has caused. Therefore, this zone can be considered a

very fitting paradigm of what Ulrich Beck (1992) epitomized with the expression 'the risk society', and the said problems may be viewed as one of the prices paid for the vast and often not duly controlled expansion of greenhouses. This is so because the enormous agricultural expansion has been very badly planned; the vastness of the so-called 'plastic sea' is based on the use of clayey soils and sand, which has negative effects on the conservation of ecologically valuable environments found nowhere else in Europe (many beaches have been devoured to feed the sandy soils of the greenhouses), and the ground water overexploitation has produced an increase in salinity in most of the aquifers and/or is exhausting them (Mota et al., 1996). Although the progress in diminishing the consumption of water has been noteworthy, with the introduction of advanced methods for saving it when plants are irrigated, the fact is the increase in consumption has not been stopped from the very beginning of the greenhouse farming, with the ensuing steady drop of the aquifers levels and decline in the quality of the water supply. This manner of farming is strongly criticized from an environmental perspective (Delgado and Moreno, 2002).

Moreover, greenhouses have often been built onto dry riverbeds and mountains of more than 400 meters of altitude, and they have brought about the need to bury tons of wasted plastics and other organic residuals, which continue to be impregnated with pesticides and chemical fertilizers underground.

To a great extent, these environmental excesses are helped by the fact that the extreme competition among the farmers impels them to increase their production and speed up the arrival of the harvest as much as possible to gain the advantages of being the first in commercializing it. Nevertheless, although farmers are losing their maneuvering capacity regarding their decision-making on their plants and their productive process, it is also contributing to promoting more ecological ways of cultivation. This is so because farmers need to sell their production to the great transnational enterprises of the worldwide food market. These enterprises often impose onto the farmers what they have to grow and how to do it, and they demand a series of conditions of traceability, packing and labeling for the products they acquire. Thus, transnational companies act as a sort of quality controllers, and the farmers become pushed to work 'ecologically' without abusing a series of fertilizers and/or phytosanitary products; although, obviously, this is only the expression of an interested respect for the environment.

The worries regarding the negative environmental effects brought about by the intensive agriculture of El Ejido began some time ago, when its detrimental consequences became clear. Thus, since the eighties, different ecological organizations concerned with this issue have considered solutions to these effects. One of the main reasons for complaining is the abundant residuals generated by the greenhouses. In this regard, two of the most combative Spanish environmentalist organizations, the 'Ecologists in Action' ('Ecologistas en Acción') and 'The Greens of Andalusia' ('Los Verdes de Andalucía'), have highlighted that the intensive greenhouse agriculture has become a potential danger for the health of the population (Migueiz and Añó, 2002). According to these organizations, the greenhouses generate in the province of Almeria more than one million and a half of tons of residuals every year. Until now, except for some unimportant actions, which are clearly not enough, the management of the enormous quantity of plastic residuals has been primarily restricted to burying and burning them, which pollutes the underground water, the soil and the air.

These two environmentalist organizations fiercely criticize the widespread practice of gasifying the residuals produced by the intensive farming and using them as combustibles for

obtaining electricity. This practice, which they denounce, is implicitly tolerated by the authorities and is, in their opinion, very dangerous, given that such residuals are contaminated with different phytosanitary products and other chemical substances. Thus, the gasifying unavoidably expels to the atmosphere dioxins and other chemical materials that could have very harmful effects on the health of the population who breathe them in. As an alternative to the gasifying, the ecologists propose composting and biomethanation, which are choices that are more respectful with the environment (EcoPortal.net, 2004).

First, composting is the biological aerobic process by means of which microorganisms act on the organic matter (for instance, residues of harvest, animal excrement and urban waste), which is quickly biodegraded, giving rise to 'compost', an excellent fertilizer for agriculture. Second, biomethanation is the process by which organic matter is biodegraded and, after a phase of fermentation, generates methane, a gas used for producing electricity.

Nevertheless, according to the two aforementioned ecologist groups, these alternatives are far from being put into practice. The current preponderant methods aimed to manage the problem of residuals often lack suitable studies on the environmental effects that they have. Studies should provide information about the following subjects:

- Characterization of the residuals that will be recycled.
- Analysis of the emissions to the atmosphere that will be produced.
- Analysis of the final result of the recycling process.
- Effects of the emissions over the closer zones and, in particular, over the agricultural production of these zones.

The current environmental issues raise a very pessimist feeling among ecologists, who disagree with those who believe that they are exaggerated and warn about the potential threats for the health of the population if the abovementioned environmental problems are not faced and solved.

However, there are some hopeful expectations in regard to decisively addressing the environmental problems in El Ejido. These expectations are based on the fact that there has been, in recent years, an increasing conscience in both the farmers and the politicians in charge of regulating the environment and/or the agriculture about the need to encourage sustainable environmental farming practices. To a great extent, the said conscience is being enhanced by the fact that every day, the awareness about the marketability and economic profitability of ecological agriculture is more strengthened. Such awareness is clearly evidenced in the following words, quoted from a publication of 2009 sponsored by the local Council of El Ejido:

> "Thanks to the massive application of biological control, Almeria's agriculture has developed a quality step in the last campaigns; in only two years, it has developed into a crop reference in the region. The growers have demonstrated a great capacity to answer to the different market requirements, such as the demands for a higher quality in the products and an alimentary security guarantee. These are the greatest requests to the actual agriculture of Almeria, and these will shape the future.
> According to that, during the last campaign 9.183,5 hectares were grown (real area); thanks to the use of the auxiliary fauna, these numbers increased to 11.400 hectares. This information was given by the Vegetables Department of Health to the Almeria Regional Agriculture and Fishing Council. This number has increased in the actual campaign 2008/2009; today, the real

cultivated area with biological control is around 11.221 hectares and at the end of the season it is going to be around 20.000 hectares (including the first and the second cycles). That is going to represent two thirds of the total area. These numbers showed the steps followed by Almeria, using this production method (Revista fhalmeria, 2009: 4).

FRAGMENTATION OF FARMERS AND THEIR DIFFICULTIES FOR MOBILIZATION

To properly understand the occasional mobilizations by the farmers of El Ejido, we have to keep in mind what Tilly has called the 'repertoire of contention' or, rather, the context where such a repertoire develops and affects "the ways that people act together in the pursuit of shared interests" (1995: 41). Well, in this case, such a context is shaped by the continual increase of the agrarian production in the area of El Ejido, with the subsequent enlargement of its offer in the international markets where it is sold. In these markets, such production has to compete with the productions of other countries, with cheaper manpower. For instance, this is the case of Morocco, a country that has recently begun to develop a modern agriculture of greenhouses, whose products are marketed through the same channels that the fruits and vegetables of El Ejido. Many of the farmers of El Ejido think that the production of Moroccan greenhouses harms their interests, which has triggered different protests by them. For instance, in November 2003, there was a mobilization that could be seen as a reaction against the destructive influences exerted by the neoliberal globalization on the everyday lives of local farmers. This is an example of what may be called glocal protests (Köhler and Wissen, 2003). In that case, approximately 3000 farmers mobilized with the aim of pushing the Spanish government to resist making a commercial agreement between the European Union and Morocco that would increase the amount of tomatoes that Morocco could export to the European countries. The mobilization occurred in Madrid with the slogan: 'For the survival of farmers, not more concessions to Morocco'.

Although the majority of demonstrators came from Murcia and Granada, a significant number of them were from Almeria, particularly from El Ejido. It is worth emphasizing that virtually the three main Andalusia parliamentary parties (Popular Party—PP, Spanish Socialist Workers Party—PSOE and United Left—IU) had their representatives in the demonstration, which reveals how there was a consensus among the right and the left political forces regarding these matters.

Thus, these forces, far from fighting among themselves, were eventually united around common objectives: here, in defense of the European markets for the tomato, a product crucial in the economy of the El Ejido territory. To get the public to pay attention to the problem that caused their mobilization, demonstrators announced that they would share agricultural products at the end of their protest. This attracted many citizens of Madrid there, and the demonstrators distributed approximately 20.000 tons of tomatoes, eggplants and zucchinis.

The idea that the development of the Moroccan greenhouses is a potential threat for the economic situation of El Ejido is so ingrained among farmers and other inhabitants of this municipality that it has been one of the key motivations for other diverse unitary mobilizations and actions during recent years. Demonstrations have included blocking the

ports, closing shops, banks and other local businesses, making long walks on foot of approximately 550 kilometers from Almeria to Madrid, and so on.

Certainly, the standpoint of the mobilized farmers from El Ejido is right because the falls in the prices of vegetables, which were the most important causes that provoked their 2002 and 2003 protests, are closely related to the increase in greenhouses in Morocco, whose productions are exported to the European Union at cheaper costs than the productions of El Ejido. However, what is really paradoxical is that a number of the Moroccan greenhouses have been set up and managed by Spanish entrepreneurs. These entrepreneurs were previously in El Ejido and are now attempting to increase their benefits by employing low-cost manpower and keeping away from the rising ecological requirements they face if they remain in El Ejido. In other words, we have here a very suitable example of the current worldwide trends of the delocalization of capital and entrepreneurial activities (Feinberg, Keane and Bognanno, 1998).

Those farmers, who were previously entrepreneurs in the area of El Ejido and now are 'delocalized' in Morocco, exercise a sort of disloyal competition with those cultivators who remain in such area. Their modus operandi represents what might be typified as an 'economic and ecological dumping'; they have lower labor costs and fewer environmental limitations than their competitors still working in El Ejido. Without a doubt, the more negative consequences of this disloyal competition are suffered by the farmers who remain in El Ejido and develop a family or small entrepreneurial agriculture. These farmers have often serious difficulties with properly adapting or reacting to such consequences.

Another key reason to explain the limited maneuverability that small farmers have to respond to the consequences and challenges of globalization is their high degree of fragmentation and individualism.

In the various protests carried out by these farmers, it is evident that there is no genuine class consciousness among them, nor is there the unison of criteria regarding the safeguard of their common interests (Jiménez-Díaz, 2005). This fact diminishes the potential of bargaining of these farmers in the face of both their providers of inputs and the buyers of their outputs. In contrast, such providers and buyers are, as a rule, well organized and coordinated and have a sizeable capacity of exercising pressure, given that they are frequently representatives of large, transnational foreign companies, whose influence has increasingly spread in El Ejido in recent years. Even the process of the greenhouse production is being noticeably handled by foreign capital, with various Dutch enterprises involved in managing a very modern and profitable group of greenhouses.

Ironically, in this context, many small and/or family farmers perceive their failures and problems not as a consequence of the uncontrollable effects brought about by the processes of globalization, in which they are more and more immersed, but, given their individualism and lack of a class consciousness, they tend to blame themselves for the socioeconomic situations that they suffer.

Consequently, they are prone to experience feelings of social isolation and fragmentation, which are central causes of their difficulties in becoming united and organized.

As a result, these farmers are submitted to great social and psychological pressures, which, in some cases, give rise to problems such as depression, drug addiction and even suicide. These problems, of course, are also closely related to the anomic processes and social disintegration brought about by the quick and deep changes experienced in the area (Germani, 1974). Globalization puts small family farmers in an increasingly disadvantageous position

because, in a global system whose competitiveness is in continuous increase, they have to contend with large multinational companies that are currently established in El Ejido.

Furthermore, they depend on the prices, controls and quality standards that large multinational food supermarkets impose on the cultivation, production and marketing of their agricultural products.

All this, given the frequent fragmentation and disorganization of these small family farmers, brings with it a practically vertical integration of them into the global food supply corporations, to whose plans and objectives they have to adapt. Therefore, this is an example of the trend by which small and/or family farmers are the clear losers in their often asymmetrical relationships with the big agro-food transnational corporations, which, in the context of the current globalization processes, are frequently the winners (Bonanno et al., 1994).

SEGREGATION OF IMMIGRANTS AND EXCEPTIONAL XENOPHOBIC RIOTS

According to data from the Institute of Andalusia Statistics (IEA), in 2008, the foreign population represented 33% of the total population in El Ejido. This population has grown spectacularly during recent years, although in 2013, there was a reduction in the number of immigrants, perhaps, due to the economic crisis in Spain and probably also as a result of the increasing greenhouse relocations to Morocco (see graph 2). There are immigrants from all the continents, particularly from Africa, Europe and America. In short, El Ejido has become a paradigm of a multicultural society, which has resulted from a series of socioeconomic changes occurred in a very brief period of time. Surprisingly, in spite of the astonishing magnitude and speed of these changes, only minor clashes among the diverse population have occurred; xenophobic riots have been rare, regardless of when they have occurred, but they have had a major influence on national and international mass media. Such were the cases of the riots that occurred in El Ejido in February 2000 and those that happened in Roquetas de Mar (area of El Ejido) in September 2008. The great public effect of these two riots has contributed decisively to propagating the image of a deep-rooted xenophobia in El Ejido, which is in contradiction with the fact that violence against foreigners has been rare in this area. Nonetheless, the usual harmonic coexistence among the diverse people of El Ejido should not be understood as an indicator of the absence of social tensions. These tensions have long been latently present. In fact, it could be stated that farmers from El Ejido are prone to seeing immigrants as a type of ‘needed invaders’. This means that immigrants are ambivalently seen as those ‘strange others' that inspire, at the same time, contradictory feelings of compassion about their frequent pitiful conditions and occasional fears. These fears are due to (particularly in circumstances of high social tension) a marked tendency to sense that the outsiders could be a potential threat for their interests and ways of life (Rizo, 2001).

The collective shock rose just after the xenophobic riots in February 2000 led to widespread debate on xenophobia. In this debate, Spanish political leaders openly showed their opinions. At the same time, a fleeting discussion took place on the newspapers and on the radio and television channels. Furthermore, different books were published with the aim

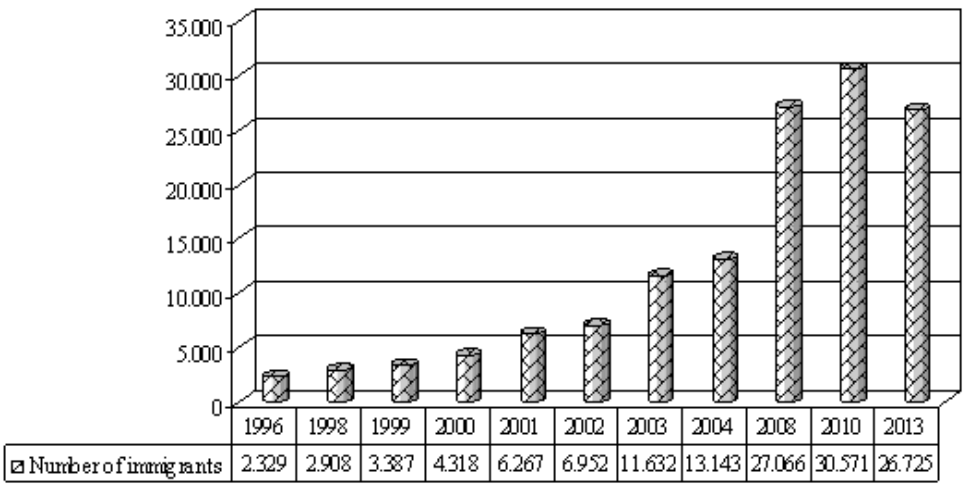
of carrying out more thorough theoretical and/or academic analyses regarding the situation of El Ejido. Books were published by Checa (2001) and Martínez (2001) and edited by the organization SOS RACISMO (2001). These three volumes agreed that the racist and/or xenophobic leanings by people and institutions from El Ejido were the causes of the riots. In contrast to this view, the book written by anthropologist Mikel Azurmendi (2001) asserted that the mentioned leanings rose during the conflict as a consequence of the failures in satisfactorily integrating immigrants in the society of El Ejido.

This second approach seems to be more in accordance with the need to take into account the socioeconomic determinants behind the racist and/or xenophobic attitudes. In particular, concerning the case of El Ejido, such attitudes appeared because many of the immigrants have remained, during the years, in a socioeconomic and spatial segregation, which certainly is recognized and/or stressed by all the authors mentioned above. Undoubtedly, this segregation rebounded in the special virulence reached by the said riots, and it is always a potential source of social tensions.

Xenophobic feelings, which were so strongly evident in the riots, have been particularly focused on the Moroccans. At first sight, a root of this might be the fact that this country has the largest group of immigrants in El Ejido. Yet, the xenophobic attitudes cannot be suitably understood by only taking into account the quantitative criterion of the proportion of immigrants. Instead of this criterion, it is more accurate to bear in mind what might be called the structural sources of xenophobia, i.e., the socioeconomic circumstances that fuel it.

In this regard, the aforementioned disloyal competition exercised by the greenhouses of Morocco is actually one of the factors that eventually could have contributed to feeding the major xenophobic feelings against the immigrants from that country. In addition, these feelings could have been occasionally raised as a result of the alarmist speeches given by some agrarian associations.

This is, for example, what happened on occasion of the mobilization that took place in November 1999 in Madrid at the gates of the Spanish Ministry of Agriculture, Fisheries and Food.



	1996	1998	1999	2000	2001	2002	2003	2004	2008	2010	2013
Number of immigrants	2.329	2.908	3.387	4.318	6.267	6.952	11.632	13.143	27.066	30.571	26.725

Source: Author with data from the Institute of Andalusia Statistics (IEA).

Graph 2. Evolution of Foreign Population in El Ejido.

The General Secretary of the COAG, which was the organizing association of the protest, spoke to the numerous farmers of El Ejido who were demonstrating there in a speech that overstated the importance of the matter by stating that the Moroccan vegetables did not face any type of restrictions in the European and French frontiers. Furthermore, the speaker gave assertions such as the following:

> "You should have seen as I have seen... the extension of thousands of hectares… of endless land, which before was only a desert of palms and where now it is foreseen a strong capital investment in the intensive agriculture... with much cheaper manpower than ours and very low production costs... this wealth can suppose the extension of this type of agriculture along the Arab countries... such competitors can suppose the entire ruin of our agriculture..." [quoted by Castaño (2000: 66)].

Messages such as these have a strong effect in the minds of the El Ejido farmers, whose eyes can still see the image of the orchard arisen over recent decades from the previous barren field that was their territory because of the implementation of intensive agriculture. Otherwise, the speaker did not mention in his discourse the important role that the big agricultural entrepreneurial capitals delocalized from El Ejido are playing in the development of the greenhouses in Morocco. The ignorance or concealment of this fact helps to broaden the satanic image of the threatening Morocco, whose claws cannot be filed in the subconscious of the numerous small and family farmers from the area of El Ejido, who are deeply affected by the contrasts and chiaroscuros that neoliberal globalization imposes on them, which happens, above all, because of they are more defenseless to the sways of the international market than the big transnational agricultural firms settled in the area.

Consequently, a crash of contradictions takes place in the subconscious of these farmers, which might be expressed as follows: We are giving work to the poor Moroccans that are starving when they come here, and their own country wants to take away our wealth.

Another fact that certainly does not contributes at all to counteracting the eventual raising of the xenophobic ideas is the deep socioeconomic and spatial segregations between the local natives and the immigrants. They primarily live in two types of housing that are clearly separated in the territory (Checa and Arjona, 2000: 140 and following; Martínez: 2001, 143 and following). On one hand, there are different dwellings within the multiple local entities integrated in the municipality of El Ejido. On the other hand, there are disseminated nuclei of the population residing in the so-called 'cortijos' (country houses), in warehouses and self-constructions, which are houses disaggregated and spread across the fields.

Both types of housing are low-quality. Thus, most 'cortijos' were built in the sixties, and now they are very deteriorated and lack more essential facilities, such as electricity and running water. The houses occupied by the immigrants in the urban nuclei are basically those that were first inhabited by autochthonous people who later left to live in buildings with better conditions of inhabitability located in areas with higher quality facilities (Checa and Arjona, 2000: 148). Hence, the immigrants who dwell in the urban entities of El Ejido live in older buildings situated in the zones with a major lack of social services and facilities. In short, as Checa and Arjona state, El Ejido is characterized by spatial segregation similar that of some great North American and Central European metropolises. Segregation between autochthonous and immigrant people is not only a result of economic and ethnic factors but also politically perpetuated; it is aggravated by the absence of public strategies aimed to overcome it (Checa and Arjona, 2000: 149).

A consequence of segregation is that many immigrants are living and working in subhuman conditions, which causes frequent misunderstandings and frictions between natives and immigrants because they experience very dissimilar socioeconomic situations. There are two contradictory and clashing collective identities that are built by and/or mutually reinforced against the other. Certainly, the tolerance or passivity regarding the very pitiful living conditions of immigrants, shown in some cases by the authorities, the labor inspectors or the employers' associations, contribute to maintaining the immigrants in the sort of apartheid where they are confined. This fact affects crucial aspects of their lives, such as their spare time or their relationships of transit and everyday sociability in public or residential spaces. The only space where the major interactions between natives and immigrants occur is the labor ambit. However, even in this case, such interactions are limited to a reduced group of the latter and, in addition, they occur in a context fraught with misunderstandings and confrontations given the frequently discordant interests between the employers and the immigrant workers. This circumstance makes difficult the mutual communication and knowledge shared between the immigrants and the people from El Ejido while it helps the emergence and development of discourses and opinions based on stereotypes and prejudices.

In short, we find here a situation very prone to explode just after some event triggers the latent tensions, which is what happened in February 2000, when a Moroccan immigrant killed two natives from El Ejido as a result of what xenophobic riots had sparked. Similarly, in the case of Roquetas de Mar, the xenophobic violence in September 2008 began immediately after a young Senegalese immigrant, who tried to mediate in a fight, was stabbed to death by a Spanish gypsy.

Once the xenophobic riots have been activated for an event such as those mentioned above, different causes could contribute to intensify them. Particularly, in the case of the xenophobic violence that happened in 2000 in El Ejido, we can find evidence of the effects that the propagation of false rumors, regarding the adversary groups, might have in triggering the confrontation or in exacerbating its intensity (Horowitz, 2001). In that case, collective feelings against immigrants became very inflamed due to the dissemination of a story that held immigrants responsible for the murdering of another farmer, which was immediately denied by the authorities. The hate was also exacerbated by means of the diffusion of a malicious story according to which a group of Maghribi had poisoned the municipal tanks of drinkable water.

ORGANIZATIONAL DIFFICULTIES OF IMMIGRANTS AND THEIR OCCASIONAL MOBILIZATION

Immigrants deemed that violence against them and their properties, during the riots of February 2000, had happened with the passivity or even connivance of most of the El Ejido inhabitants, the police and the municipal authorities. Thus, they reacted to it by calling an indefinite general strike to demand new housing for those who had lost their homes, compensation for damages and the legalization of workers without work permits. They continued the strike for a week until the central and regional governments agreed to meet these demands, although the municipal government of El Ejido remained indifferent. An agreement was also signed between the employers' organizations and trade unions in

Almeria, in which they settled to monitor the proper implementation of the farm worker collective agreement bargained for the area. After these commitments, the immigrants called off the protest.

The strike, in which virtually all immigrants in the area participated, entailed some advance in their awareness about the need to fight to improve their often pitiful socioeconomic circumstances. However, unfortunately this was a missed opportunity for strengthening a social movement able to both represent the immigrants and canalize their demands. Therefore, although not everything outlined in the agreement has been fulfilled, except for this occasional protest, no other mobilization of immigrants has taken place, and the truth is an enduring claiming conscience has never been achieved among them, whose frequently illegal situations, labor precariousness and diverse worldwide origins cause them serious difficulties in becoming united and organized.

Maybe these difficulties are the main reason behind the fact that El Ejido has usually had a significant degree of social peace, which is not due to the achievement of a socioeconomic situation just for the majority of its immigrant employees.

The non-fulfillment of the agreements that ended the general strike (primarily, delays in rehousing the immigrants and in paying compensation) has given rise to some tension and divergence among different sectors of North African immigrants. One of the main causes of the said non-fulfillment is the fact that, after the signature of the agreement, the Council of El Ejido refused to assign land on which to build houses for those Moroccans whose homes had been damaged or burned during the violent incidents. Moreover, a series of steps and pressures were taken with the aim of maintaining the residences of the Moroccans out of the urban core in disseminated farmhouses next to the greenhouses, which obviously rebounded in keeping their socio-spatial segregation.

Evidently, this fact has not helped at all to obliterate the widespread stereotypes that connect violence and crime with Moroccan immigrants. In turn, these stereotypes, by emphasizing the untrue idea that these immigrants have a ‘problematic nature’, have rebounded in that since 1999, there has been a trend to gradually replace Moroccans with workers from different Eastern European states, such as Ukraine, Romania, Bulgaria and so on, and from Latin American countries, such Ecuador, Argentina or Colombia. In El Ejido, it is widely believed that these workers are less contentious than the Moroccans.

However, despite the said trend, Moroccan immigrants were still the majority in El Ejido in 2013 (56, 03 %).

CONCLUSION

The effects of globalization are displayed through different glocalization processes, which vary depending upon each specific case. Therefore, it can be asserted that globalization “involves many different modes of practical glocalizations” (Helvacioglu, 2000: 332). In particular, both the intense agrarian changes undergone in the area of El Ejido and the collective protests raised in this context constitute concrete examples of the said modes of practical glocalizations; that is, they happen in a circumstance of progressive insertion of such a local area within the dynamics of globalization.

Any type of social protest is constructed and runs in certain social conditions that propel it, stamp its particular character and compose the background where the contents of its concrete claims are elaborated. Specifically, concerning the ways of collective protests taken into account in the former pages, they have been typified as glocal protests because the circumstance where they have occurred is the rising insertion of the local territory of El Ejido within the dynamics of globalization—that is, its progressive glocalization. This is the key factor behind the strong and quick agrarian mutations undergone in this territory, which has been progressively converted from a relatively localist, rural and traditional scenery into a new landscape whose socioeconomic and cultural situation is more and more modernized and agroindustrialized.

The speed and elevated intensity of agrarian and social changes in El Ejido would explain the high degree of latent or manifest conflicts in this area. As a consequence, many people from El Ejido have not yet suitably built and internalized the cultural bases of the social order in which they live. Consequently, they are anomic or at least more prone to identity crises. Of course, this fact is particularly evident among the immigrants because they are rootless from their foreign geographical and cultural origins, and many of them are in conditions of illegality. However, the family farmers of El Ejido also suffer the abovementioned phenomenon of identity crises and anomic feelings. Such phenomenon, which in this case occurs obviously with lower strength, is primarily due to two reasons: First, the majority of family farmers were also immigrants from other parts of Spain (primarily from the nearby mountainous, poor area of La Alpujarra) and second, the overwhelming speediness and depth of the changes in which the quotidian lives of the farmers are more and more immersed.

The society of El Ejido still lacks a collective identity sufficiently grounded on symbols and community discourses, given both its recent administrative constitution and the intense socioeconomic and territorial dynamics in which it is involved (Ruíz, 1995). This has led to the aforesaid high levels of conflict and the anomic situations and symptoms of social disintegration shown by the behaviors of the diverse people from El Ejido, whose lives and socioeconomic positions have changed as swiftly and drastically as the local agrarian society they inhabit has been modified hand in hand with its progressive modernization and glocalization.

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Chapter 3

EFFECTS OF PESTICIDES ON CAMBODIA FARMING AND FOOD PRODUCTION: ALTERNATIVES TO REGULATORY POLICIES*

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INTRODUCTION[1]

The agribusiness sector in Cambodia is mainly oriented towards subsistence and/or local trade and usually as part of the small household unit (McNaughton, 2002). Traditional family farming systems were predominant in this country, but in recent years a push for fast modernization and the increase in yields are creating collateral effects on farms as productive units, farmers´ health, their local agroecosystems and on Cambodian consumers. These small crops and gathered items are fundamental to food protection, considering recurrent unpredictable weather, droughts and other roots of crop loss, like nematodes, plant diseases, insect pests and the storage problems, due to rats (Marer, P. J., 2000).

The recent over-use of new agrochemical inputs, like fertilizers, herbicides and pesticides are improving the yields and the abundance of cheap amounts of commodities that mostly are exported to Vietnam and Thailand like fruits, rice and other vegetables are creating no expected consequences, never predicted as desirable in this country. 30 years of political problems and economic delay kept a low utilization of these inputs. In this transition period and due to the rush of and on farmers to use these technologies, many strong perverse effects have begun to be developed in an alarming dramatic stage due to the inexperienced usage of these farmers, the lack of consciousness of consumers and the particular use of national resources as a whole.

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[1] *The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with his author, and publication does not necessarily constitute an endorsement by the Editorial.*

Despite infrastructure obstacles like weaknesses in transport services, difficult access to market information and the fact that working capital is already poor in rural areas during the last two decades, Cambodia has moved from a net commodity importer to a net commodity exporter position (McNaughton, 2002). The advance of pesticide imports is explained mainly by aggressive promotions by agro-chemical companies and limited farmer education on other environmentally friendly pest management options (Bhutani, S., 2013). Cambodia also faces parallel problems regarding human capacities, experience, the legal framework, and facilities and mechanisms for handling chemicals and information dissemination (Kimkhuy, K & Chhay, N., 2014). Some current problems include:

1. The low level of chemical awareness upon the part of workers, farmers and traders, who are directed using chemical products, due to their limited education;
2. Cambodia has no clear, accurate accidental data and information for accidents caused by the misuse / wrong use of chemicals;
3. The governmental institutions do not have sufficient ability for chemicals assessment and the identification of chemicals-related problems in the production, trade, storage, use, and disposal of such chemicals;
4. Cambodia experiences a deficiency of good cooperation among laboratories and those stakeholders responsible for managing emission sources of the chemicals and persistent toxic substances.

Non-regulatory mechanisms are focusing on the voluntary actions of private sectors. This kind of mechanism is very popular among developed countries, playing an extremely important role in contributing to the management of chemicals with low or poor support of the governmental institutions. However, the situation changes when the same projects are developed in impoverished countries where rent seeking attitudes have been promoted during decades, spoiling the own initiative and sense of self-commitment of their civil societies towards their requirements offered by their governments.

Cambodia has established regulatory mechanisms for managing chemicals. But not much endorsement of these laws has been put into action, but meanwhile using cosmetic and not regulatory mechanisms, left in the hands of voluntary actions, trying to create public awareness raising, environmental protection through contributions of endowment funds, and several relevant chemicals management campaigns.

During the past years, the country has produced less rice than is sufficient to feed its growing population. Frequently, the use of pesticides is encouraged to protect crops and increase returns. However, the misuse of pesticides may result directly in pest problems where they previously did not exist. Consequently, more than 80% of the population are farmers and most of them use dangerous chemical substances for their factory farm production with ignorance of the menace to their health and the environment (Kimkhuy, K & Chhay, N., 2014).

PESTICIDES IN CAMBODIA

The gravest situation is that many imported pesticides are usually labeled in the language of the source country, which uses to be illegible to Cambodian farmers, and neither basic safety equipment nor controls over the use or extension activities and spread of technical knowledge of the hazards are available to them (op. cit., vi). Likewise, many pesticide residues exceed the maximum (allowable) residue limits (MRLs) raising food safety concerns and jeopardizing exports´ potential. MRLs are standards set by individual countries for trading agricultural commodities according to different types of pesticides. Pesticide residues result from: 1) heavy pesticide use on the growing crop; 2) insecticide used in post-harvest management to preserve food during storage; and 3) the persistence and carry-over effect of residues in the soil.

Different survey studies of pesticide contamination of vegetables in Cambodian markets found products containing residues of organ chlorine (Wang et al. 2011), organophosphate and carbamates (Neufeld et al. 2010), exceeding the established MRLs (op. cit., iv). In just two decades, Cambodia has been ranked first among 13 nations within the region with the highest pesticide residue on vegetables, especially thanks to the production of leafy vegetables from Kandal (Wang et al. 2011). This is the outcome of the irresponsible and indiscriminate use of pesticides by farmers as well as a deficiency of understanding about pre-harvesting intervals. The lack of knowledge and wrong perceptions about pesticides, the underestimation of the risks and easy access to illegal and extremely hazardous chemical pesticides cause farmers serious problems, like reported symptoms of acute pesticide poisoning as a result of underestimating the health effects of exposure to pesticides during handling and spraying (Jensen et al., 2010).

CAMBODIAN RULES ABOUT PESTICIDES

The Cambodian Environment law regulates pesticide sales and their use, especially of Class I compounds. Cambodia is a signatory to the Stockholm Convention on Persistent Organic Pollutants, and is taking part in the interim procedure of the Rotterdam Convention on Prior Informed Consent for Certain hazardous Chemicals in International Trade. Unfortunately, even though there have been a push for the creation of a plethora of laws about pesticides use and control in the last 5 years the situation is that Cambodia largely lacks the institutional capacity to effectively integrate these agreements into inter-ministerial effective policies. The government completely lacks the enforcement or judicial capacity to put into practice the current laws, due to the chaos installed about the definition of what the agency must take care of these matters. Although the Cambodian National Pest Management Program shows these efforts chronologically[2] the reality is that most of these rules have been

[2] [1] 1998 Sub-Decree (No. 69) on Standard and the Management of Agricultural Materials issued 28 October 1998 contains 14 articles mentioning the pesticide management procedures.

[2] 1999 Ministerial declaration (No. 038) on the creation of the Bureau of Agricultural Material Standard issued 21 January 1999.

[3] 2002 Ministerial guideline (No. 245) on the implementation of Sub-Decree No. 69 on the Standard and the Management of Agricultural Materials issued 21 October 2002.

overpassed by the reality and has pushed into an accelerated process of proclamations to cope the snowball of the effects of this lack of concern and practical management during the last decades, that will be discussed in this paper.

In 1998 the article 4 of Sub-Degree 69 in Standardization and Management of Agricultural Materials started by the first time that agrochemicals of all sorts that could be sold in the Kingdom of Cambodia should be filed with the Ministry of Agriculture, Forestry, and Fisheries license, even though they were imported or produced in the state. The Article 6 stated that when the products, goods, or services could harm the health or safety of consumers, their manufacturing and commercialization should be subject to a previous submission of a declaration to the qualified institutions and should have a prior authorization by the competent institutions, following an inspection and an indication of usage.

The storage or disposition of solid waste or any garbage and hazardous substances that contribute to the pollution of water of the public water areas should be rigorously forbidden. The procedures for managing chemicals were divided into four main sections: procedure of importation of chemicals, procedure of exploitation of chemical fertilizers and pesticides, procedure of prohibition of chemical use, and procedure of severely restricted products for use.

These procedures are determined by future laws/declarations/proclamations to ensure an effective management of chemical products without those negative impacts on public health and the environment. The import of chemical products (including the management of products addressed under other technical provisions) should generally comply with customs procedures, but ought to be monitored for their conformity related to quality and safety of the products by the Ministry of Commerce. After obtaining the import application form, the competent authority would control all importation documents; investigate the import company's background, and would verify whether the chemical substances and products comply with internal and international technical regulations and criteria. The one-year period can be extended in cases of reasonable cause. The registration validity is 3 years in cases where there would not be any withdrawal or cancellation. The new authorization with the same period can be received after paying the registration and providing additional data. When a case of failure happens for new registration, the validity would be automatically canceled.

Therefore, we can find that since 1998 every material for wrapping up pesticides to be imported, stocked, sold wholesale and retail should be labeled in Khmer for easy

[4] 2003 Ministerial declaration (No. 064) on Formats of Application Forms, relating to Agricultural Materials issued 27 February 2003.

[5] 2003 Ministerial declaration (No. 598) on the Lists of Pesticide in Cambodia issued 15 December 2003.

[6] 2004 Ministerial declaration (No. 204) on Amendment of Declaration No. 064 issued 12 July 2004.

[7] 2004 Mutual declaration (No. 02/04) between MAFF and MoJ on Formats and Police of Justice for DAL/MAFF issued 26 October 2004.

[8] 2006 Sub-Decree No. 21 on the Trade facilitation Through Risk management (dated 01 March 2006): Custom is a leading agency in border inspection activities.

[9] 2007 Sub-Decree No. 209 on the list of prohibited and restricted goods for import and export (dated 31 December 2007): import export requirement of goods according to customs codes.

[10] Prakas Nº 002 on The List of Maximum Residue Limits (MRLs) of Pesticide in Fruit and Vegetables (2007-01-03).

[11] 2008 Sub-Decree 188 (dated 14 November 2008) on the amendment of the General Secretariat, the promotion of Forestry Administration, Fisheries Administration to the General Directorate, the promotion of Department of Agronomy and Agricultural Land Improvement to the General Directorate of Agriculture and the amendment of General Directorate of Rubber Plantation to General Directorate of Rubber under Ministry of Agriculture Forestry and Fisheries.

comprehension of their users. In order to reach an effective management of pesticides and based on the Governmental Ordinance (Sub-Degree) No 69 on Standardization and Management of Agricultural Materials, the Ministry of Agriculture, Forestry and Fisheries also developed the ministerial ordinances or proclamation (Prakas) No 598 on List of Agricultural Pesticides in the Kingdom of Cambodia. This ministerial ordinance specifically identified pesticides permitted for usage, and those severely strictly forbidden for use. In order to protect public health and environmental quality by avoiding the danger of highly toxic pesticides according to WHO and FAO guidelines on classification of pesticide hazards the Government of Cambodia banned 116 chemical substances and included 9 POPs (Persistent organic pollutant) pesticides. During these decades, the Royal Government of Cambodia has recognized that chemicals-related activities such as transportation, stocking, packaging, distribution, and the very use has caused negative impacts on health and the environment. Nevertheless, each of the governmental institutions has served a limited efficient implementation of their duties in managing chemicals due to a continuing lack of human resources and inadequate equipments for further productive operations. The low income of general governmental officers, which results in a base standard of living has become a critical excuse used by the governmental institutions to justify why they cannot reach to do an effective chemicals management.

The recent updating in Cambodia pesticide regulation following the proclamations released in later years as it follows:

- Procedures for plant quarantine inspection**, Prakas[3] No. 346 (MAFF), 10 May 2010.**

This Prakas intends to determine procedures for plant quarantine inspections regarding export-import, transit plant quarantine inspection for the purpose of preventing the spread of the plant quarantine pests and dangerous pests to protect agricultural production, biodiversity and facilitation of international trade activity. Any legal or natural person, who imports, exports, transits and transports of all kinds of vegetal goods could be subject to plant quarantine.

- **Royal Kram No. NS/RKM/0112/005 dated January 14, 2012** on Promulgation of Law on Management of Pesticide and Agricultural Fertilizer. (L/R/Agr/Khm /2012) (Royal Gazette, Year 12, No. 09, dated February 04, 2012).

On January 14, 2012, the Cambodian legislature promulgated the Law on the Management of Pesticides and Agricultural Fertilizer, which contains 12 Chapters and 119 Articles and provides regulations for the use of pesticides and fertilizer by agricultural producers. Those seeking entrance into the agricultural sector must apply for a pesticide registration certificate (Plentiful Registration and Permanent Registration) and agricultural fertilizer registration certificate from the MAFF. These certificates are valid for a period of three years from the date of registration and can be renewed. The Law also governs patent protection rights for pesticides and agricultural fertilizer, which are lawfully recorded. The

[3] Proclamations (Prakas) are ministerial or inter-ministerial decision signed by the relevant Minister(s). A proclamation must conform to the Constitution and to the law or sub-decree to which it refers.

pesticide protection period is 8 years, and the agricultural fertilizer protection period is 5 years from the date of registration. Those who seek to pursue the import-export, distribution, packaging, and other trade in pesticides or agricultural fertilizer in Cambodia must apply for an approval letter from the MAFF granting a license for specific activities. Individuals and commercial enterprises in the pesticide and fertilizer trade may advertise their products if they deliver an approval letter from MAFF, and abide by the other provisions of this law regulating the advertising of such merchandise. Individuals and businesses may appeal decisions by the agricultural fertilizer and pesticide inspection official by completing a complaint within 30 days of such a decision to the MAFF. The MAFF must decide on a complaint within 45 days of submission of the charge. If that decision affects their rights under the law, they may file a complaint with the court. This law also provides penalties for infractions, such as revoking or suspending the certificate and approval letter as well as fines and/or imprisonment under Article 101.

- **Prakas No. 456 (MAFF) dated October 19, 2012** on Procedure and Standard Requirement for Registration of Pesticide. (L&R/Agr/Khm/2012) (Royal Gazette, Year 12, No. 91, dated December 12, 2012).

On October 19, 2012, the Royal Government issued a Prakas on Procedure and Standard Requirement for Registration of Pesticides, which consists of 10 chapters and 42 articles. The purpose of this Prakas is to ensure the quality, effectiveness and safety of pesticides in accordance with the required standard before any exports and imports. Company registration is required for all business purpose pesticide registrations, where the non-business purpose is not required. Prior the registration of pesticide, the applicants shall request for Confirmatory Analysis and Bio-Efficacy Test at the National Agricultural Testing Department or any Agricultural Testing Department in which must be acknowledged by the Ministry of Agriculture, Forestry and Fishery (MAFF). In the necessary cases, if there are any changes and/or adjustment of conditions, data's and information on pesticides, legal persons and entities holding the pesticide registration certificate must apply for re-registration along with the required documents as stated in article 8 of this Prakas. In no more than 60 days, a result of the testing and changes shall be revealed to the registrar. After verification and scrutiny by the agricultural legislative department, MAFF will issue two different types of approval, which are a completion certificate (valid for 3 years) and temporary certifiable (valid for 1 year), and these can also be surveyed. Legal persons and entities shall transfer its right on pesticide registration certificate to third stakeholders, but they must apply for the previous approval letter from MAFF as mentioned in clause 26 of this Prakas. All forms of pesticides once, firstly acknowledged by MAFF shall provide the right to protest on Bio-efficacy Test Data during a period of 8 years.

- **Prakas No. 120 (MAFF) dated April 11, 2013** on the Procedure of Management of Pesticide for Business. (L&R/Agr/Khm/2013) (Royal Gazette, Year 13, No. 36, dated May 15, 2013).

This Prakas would formalize the management of every pesticide business operation in Cambodia, the agricultural fertilizer business operations and to obtain a license/license before they can operate their pesticide business in Cambodia.

- **Prakas No. 176 dated June 14th, 2013** on Procedures for Checking Agricultural Chemical and Agricultural Fertilizers, inspections on agricultural chemical and agricultural fertilizers.

This Prakas proposes to establish common principles and procedures for agricultural chemical and agricultural fertilizer inspection and promulgates that the Department of Legal Affairs has jurisdiction over all agricultural chemicals and agricultural fertilizer inspection in the whole country. Private enterprises and operators of agricultural chemical and agricultural fertilizers must cooperate with inspectors and will bear all costs for the entire inspection process. Inspectors must give a 5-day advance notice before opening the inspection process though in particular cases the inspection can be conducted without prior notification. The Prakas has also set forth penalties for non-compliance. This Prakas becomes effective on the date of signing.

Therefore, at present many specific policies have been released to place conditions and define measures to put pressure on donor-assisted projects related to chemicals management. The Royal Government of Cambodia has placed high priority on the facilitation and coordination of all grant projects, monitoring the projects' implementation findings and providing advice and recommendations for projects on how the objectives mentioned in these laws could be achieved. But unfortunately, this rent-seeking attitude fails under the speech that the government can delegate its responsibility to the donors to perform the implementation of the grant projects and therefore, showing that it is unable or not willing to carry out all this abundance of proclamations.

Besides this inflation of laws current activities have not fully met all the requirements of the worldwide agreements neither have not attracted the attention of international donors, focused on other more evident problems like hunger, malnourishment, health conditions or education. Many of the chemical concerns are the consequence of an inadequate chemical management infrastructure and human resources incapacity, but likewise, it is preferable to the expectations that only donors can help to face these problems when this is a duty that the government and Cambodia society should handle by themselves.

MATERIALS AND METHODS

In order to test these assumptions, primary and secondary data were collected and processed. About primary data, several questionnaires were sent by email to reduce the costs of time to obtain their answers. In-depth surveys were utilized to establish the connection between research outcome and farm practice. The target group of respondents consisted of individuals living on a farm in Cambodia. The sample was limited to Cambodian respondents aged between 16 and 62 years old. In order to make contact with these respondents, an Internet survey was conducted in the period between the beginning of November 2014 and the end of December 2014.

An Internet survey has both strengths and limitations. A large group of respondents is reached if at the start the email database is well considered. However, a major limitation related to it is that in Cambodia most of the possible respondents have not internet access; although for young generation internet and e-mail are common goods, this is not the case for

the majority of Cambodian people. After pre-testing, the Internet survey was conducted as follows: at the start of the survey period, an email was sent to many stakeholders in the agricultural sector in Cambodia. Taking these limitations into account, the total amount of completed surveys (14) was reduced to 8 completed surveys. Given the complete number of farmers (80% of the population living in rural areas) we may state that we have targeted a rather weak sample of the total population, but acceptable, considering the lack of knowledge, tools and internet access by most of the farmers in Cambodia.

Data Analysis. Data were analyzed using the NVIVO program for utilization of Qualitative data (version 10). The electronic entry for each questionnaire was sent and the answers were collected and validated using the package Monkeysurvey for Windows 8.

DISCUSSION

According to surveyors the main difficulties that farmers are facing to solve problems with pesticides are the use of pesticides for pest control, the knowledge of legal regulations, the dose compositions, the reading of labels and the availability of alternatives to this use, like in the case of integrated pest management. Most of the responders did not know many alternatives, but the use of poultry like ducks or frogs to control certain pests, the mechanical cleaning, the application of traditional plants used to create "organic" pesticides and some types of traps to attract insects out of the crops. They perceive that the main risks for farmers are to live close to the crops, drinking water in the area and the agrochemical storage in the village. Pesticides are most commonly stored in their households and these are very easy to be reached by children and close to food supplies resulting in a potential greater risk of daily unintentional exposure. They stated that when they got daily exposure some symptoms of headache, vomiting, and diarrhea arrived. They do not link abortions to their long term use.

From field observations, it was noted that no masks but some common clothes to protect against the sun were also disposable for pesticide spraying. Many pests do not seriously affect the yield and can be controlled by natural predators, but many farmers do not want to come back to use mechanical methods and rely on pesticides as an easier way to keep plagues under control. Many of them do not know that Integrated Pest Management (IPM) and organic farming can represent safe and economically viable alternatives to current practices. However, they understand the importance of keeping natural predators as in the case of the rice-fish systems. They believe that further actions are needed both from government and local farmers alongside to agrochemical companies. There is an urgent need for the prohibition on foreign pesticides until Cambodia can enforce its laws and farmers understand the dangers to which they are exposed and how to avoid them. A broad-based educational program is required to promote a reduction of pesticide use, risk and dependence.

CONCLUSION

Poor countries lacking in infrastructures and human resources are being used as dumping grounds for such hazardous pesticides, and many of which are banned throughout much of the rest of the world because of the serious threats that they pose to human health and the natural

environment. Cambodia is one of those countries. Nevertheless, this cannot be an excuse to give up working. Having established their dedication to environmental protection, the greatest challenge is the enforcement of its laws through innovative ideas and actions and to stop using old polluting methods (which seem new ones for farmers) to control problems that have been shown as not able to be solved out in conventional ways.

General Recommendations

All relevant parties should:

1. To oppose and combat the presence in Cambodia of pesticide formulations elaborated in third countries till their companies do not label their products with visual codes and in Khmer language.
2. It is necessary to take national and international actions in the framework of next ASEAN (Association of Southeast Asian Nations) single market agreements to stop the entrance of foreign uncorrected labeled products.
3. To impose a hard taxation and bans on the use of these products to make them less attractive.
4. To encourage to those bad paid officials to control and obtain taxations on these products, getting commissions on these control operations under a severe allowance of their performance and permitting the ability to appeal these decisions to producers, users, traders and clients in order to stop and avoid corruption.
5. To promote the creation and/or installation of national or international organic bio-pesticides companies. That can be an alternative to creating less polluting products that should be labeled in Khmer language and would create an alternative niche of a market for the national agro-industry.
6. To help to university departments in order to better enforce present legislation and to have a greater role in future monitoring, rural extension, education and the management of pesticides.
7. To help to rural extension agents to be well prepared and trained to tackle these issues through public investments. These efforts should be included in the curricula of departments and land-grant agriculture universities and professional courses of primary habilitation.
8. To impose a prohibition on pesticide advertisements, and especially on television.
9. To develop mass media (particularly radio and television) campaigns to discourage farmers from unnecessary pesticide practices, such as very early and really late season spraying. If it is possible to promote and show traditional agroecological practices as alternative methods.
10. To increase the training of medical staff in the identification of pesticide-caused symptoms and in the ability to inform victims of the dangers associated with pesticide misuse. To include these concepts in the medicine, agriculture, law and chemistry faculties and professional curricula of these staffs.
11. Increase education about the importance of wild species in maintaining ecosystem functioning and follow this up with greater control of the trade in wild-caught species to children in school and in the media. Promote education about the impact of

pesticides on the natural environment and about those threats to human health posed by consuming pesticide-tainted food or by direct contact.

12. Further, restrict control of pesticide chemicals not covered by the existing domestic sub-decree controlling WHO Class I pesticides. In particular, chemicals such as DDT and endosulfan need to be reduced and better controlled.
13. Take steps to collect and dispose of that all obsolete pesticide can be stocked safely.
14. To create green points to collect these stocks joined to officially awarded shops in every sector or municipality and to collect the garbage of stocks. To incentive them using a disposal of cash for used parcel, folder or container.
15. Introduce a system of market inspection with incentives for inspectors for pesticide residues control as it occurs in Thailand.
16. To encourage Integrated Pest Management and organic methods in rice fields and in other crops.
17. Establish a central office (or designate an existing one) under the Ministry of Agriculture, Fisheries and Forestry to coordinate all efforts to tackle the pesticide problem described herein, including the organization of the various Integrated Pest Management and educational schemes already and prospectively established.
18. Require that those individuals and organizations involved in pesticide trade must be licensed, and encourage farmers to buy pesticides only from licensed vendors by bans and taxations.
19. To build the capacity of inter-ministerial cooperation in all ministries and Education programs and promote that those civil servants depending on the relevant ministries study and understand the importance of these issues.
20. To cooperate and permit than foreign scientists and experts perform direct research into and support of biological control and eco-labeling schemes for organic products.
21. Increase the funding for rural education programs following the valid example of IPM Farmer Field Schools, in parliamentary procedure to educate farmers about pests, good insects, good practice when applying pesticides and alternatives to pesticide usage.

The agrochemical companies should:

1. Ensure that pesticide packaging have clear, concise instructions, using obvious visual symbols for the illiterate and images of the target species. In view of the cross-border movement of chemicals, the addition of basic Khmer instructions would be a low cost and compulsory gesture that would assist in informing users of risks and best practices as well as strengthening product stewardship.
2. Increase efforts to make safer new chemicals available at affordable prices. To promote and attract the installation and even the support for new organic and bio-pesticides industries through lower taxation to be produced and exported from the country to other ASEAN members.
3. To increase efforts to promote the delivery of organic environmental friendly pesticides.

It should not be concluded that Cambodians have no concerns about agrochemical products just because their tools for chemical problem assessment are inadequate. Cambodian

people not only face dangers through direct usage of chemicals, but also in residues accumulated in food products, which can affect to most of their citizen's health. Even so, perverse interests of conventional foreign chemical industry, a rent-seeking attitude by both the government and NGOs, combined with a poor level of education and critical awareness by farmers and consumers have been the perfect cocktail for this Kafkaesque situation. We have had already shown that Cambodia is not a chemicals producer or exporter, and chemicals-related problems in Cambodia generally have little effect on neighboring countries or the region. So Cambodian government must recover its own sovereignty to control its environmental and agricultural policies, meanwhile creating alternative sources of incomes and taxation and tackling and facing crucial problems for its population.

We find in this review that these Governmental policies must be put into action and donors must stop helping to rent seeking attitudes by local and international NGOs. Famers must be favored not by monetary incentives (as being unfruitful made during the last decades) but by strong rules and alternative methods to encourage another sort of business and discourage to polluting foreign interests. Education in agroecological methods should be encouraged by the government as cheap and healthy environmental sound methods that can allow to come back to return the former fertility and abundance of healthy vegetable production that Cambodia enjoyed until the 90´s. Indeed, one solution could be to attract foreign companies to invest in sustainable and organic inputs. Cambodia could develop its agriculture production and become identified as a sound territorial brand linked to one environmentally friendly nation, eager to export healthy products to its neighbors, being an oasis and land of supply for the new ASEAN single market, playing along and adapting the steps of the Kingdom of Bhutan regarding the acceptance of organic farming.

To do so just a few but clear tools should be put into practice. Firstly, it is necessary to attract organic and biological investments and green-oriented companies to locate their industries and label their products in Khmer language. That would be enough to move away the conventional more polluting companies out of Cambodia. Secondly, it should be useful to stop advertising conventional pesticides and to promote organic alternatives through media, university and extension agencies. Thirdly, to increase the prices of conventional pesticides with additional taxes on these products, doing a Copernicus rotation on the perception of shopping conventional vegetables. Fourth, as inspectors are badly paid the measure of obtaining taxes on conventional products (and not by the certification of organic ones) for their work should discourage the use of pesticides, promoting the IPM and the use of organic and traditional and agroecological alternatives. Surely because in a fair world and thinking with an alternative logic the labeling should be imposed to conventional and not to chemical-free, organic or traditional products.

These few actions, and many others left for further researches should be enough to make that Cambodia will be again the country where the tastiest and healthiest vegetables were produced in South-East Asia, as not so long ago it was.

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PART II. EATING HABITS, PHYSICAL ACTIVITY, BODY, AND HEALTH

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Chapter 4

THE IMPACT OF PHYSICAL ACTIVITY AND PSYCHOLOGICAL FACTORS ON EATING HABITS

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INTRODUCTION

Eating habits play a very essential role in the development of individuals. They are habits that are inculcated early in life; from childhood through adolescence into adulthood. Once formed they are stable and long-lasting and many people have difficulty changing eating habits therefore they tend to stick to it for a very long time. An individual's eating habit can eventually affect his/her physical and mental development. The effect could either be positive or negative. Eating habits are formed over a long period of time. In essence, they are formed as a result of people's interaction with other people and also other environmental factors that strongly impact on the lives of the people.

From the description given with regard to eating habits, it can be stated that a person cannot eat without being influenced by any factor. Apart from eating to meet physiological needs, one or two factors may inspire an individual to eat or sway the person from eating. All these constitute the eating habits of the individual.

The factors that inspire an individual to eat or sway from eating can mainly be divided into two. These are exogenous and endogenous factors. Exogenous simply means having an external cause to something or factors that influence an organism outside the body of the organism. Endogenous also simply means factors that influence an organism which is within the body of the organism.

In this chapter, the exogenous factors that will be discussed are the environment, parents, peers, and the media. The endogenous factors will be personality, intelligence, and self-concept.

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Environment

The environment is an area that can influence the eating habits of individuals. In this section we define the environment as the macro and all the factors at the community level, in addition to the legal, physical and policy factors that have an influence on individual and household decisions (Popkin, Duffey and Gordon-Larsen, 2005: 603-613). So in this context, the environment includes but is not limited to how the city is designed, the physical activities present in the city, where places of residence are sited and also the location of other places like the forest. The environment also describes physical infrastructure such as the presence of roads, sidewalks and recreational parks.

So in this regard the environment influences dietary habits in several ways. For example the closeness of food establishments such as fast food joints, restaurants and other eateries can influence a person's eating habits (Popkin, Duffey and Gordon-Larsen, 2005: 603-613). An individual is more likely to consume fruits and vegetables if these are sold close by rather than buying high fat foods that are further off.

Another factor that can be looked at in the environment is the role food prices play in the purchasing power of the people in a particular built environment. The choice of food to be purchased can very much be dependent upon the price. In effect, low priced foods would normally be chosen over high priced foods. Therefore the healthier options could be substituted for unhealthier options because of the price (Popkin, Duffey and Gordon-Larsen, 2005: 603-613).

Exercise

A review by (Courseault, 2011) suggests that exercise will not help individuals to lose weight. Nevertheless, researchers are beginning to show that exercise does have an effect on eating, and the author noted that their results are encouraging. According to Courseault (2011), research shows that people who are overweight have high levels of chemical signals, or noise, that make it difficult for the hypothalamus to assess the body's nutritional status.

The hypothalamus is trying to receive information to correctly manage weight; but then certain molecules in obese patients prevent the hypothalamus from properly reading these signals. In view of that an obese person has more difficulty in controlling eating habits than a lean person, which can contribute to worsening obesity (Corseault, 2011). Corseault (2011) stated:

> "To determine the effect of exercise on eating habits, researchers measured food intake in lean and obese rats after three days of regular exercise. They found that exercise reduced food intake in the obese rats to the levels of lean rats. In addition, the obese rats reduced their total body weight during this period. To support these finding, the researchers further investigated to determine a biological reason for the change in eating habits. Skeletal muscle, believe it or not, also secretes hormones that help it communicate with the rest of the body. When muscle contracts during exercise, it releases a chemical that reduces white noise in the brain and helps the hypothalamus clearly determine the body's correct nutritional status. When this chemical was injected into the hypothalamus of obese rats, they ate less and lost weight. Clearly, hormones released from muscle during exercise have a positive effect on eating habits" (Retrieved from http://www.drgourmet.com/exercise/eatinghabits.shtml).

The studies reported by Corseault imply that exercise plays a very essential role in our bodies. It does more than burn calories. According to the author, this is one of a few recent studies that suggest that regular physical activity can improve one's appetite and reduce caloric intake.

Other studies have shown that eating habits and physical exercise run parallel to each other. This is because good nutrition and plenty of exercise are the building blocks for strong growth, healthy development and lifelong wellbeing for humans.

This implies that as one eats well and exercises regularly, it improves the mental and physical activity of the person. The following are some of the merits of good eating habits and regular exercises:

- Feel better about one's self and their capabilities
- Boost self-esteem, cope with stress, anxiety and depression
- With kids, it will lead to long term healthy behaviours in adulthood
- Helps to build stronger muscles, regulates or control weight and prevents malnutrition

They will help prevent chronic illness such as heart diseases, high blood pressure, diabetes, etc.

Parents

Parents play important roles in shaping the eating habits of their children. This is because the parent makes the choices and decides the kind of food to be eaten in the home. The positive experiences concerning food in the family early in life may go a long way to assist individuals in developing healthy eating habits. Parents who are with their families during meal times create the opportunity to introduce or make certain foods available for the family. According to Neumark-Sztainer, et al., (2008: 17–22), families are able to model and train their children on good practices during meals. This encourages the children to choose healthy foods.

Research also reveals that parents' guide and the presence of parents during food intake of their children reduces their consumption of non-nutritious foods (Klesges et al., 1999: 859–864). Recently, research has also shown that role modelling is an important factor in a child's risk for obesity (Nauert, 2013). Nauert (2013) suggests that a mother's eating habits and behaviour at the table can significantly influence her pre-schooler's obesity risk. It would be emphasized that the consistent monitoring of what a child eats will later in life influence choices of healthy food whether at home, school or at work. This may in turn influence the family the individual sets up in the near future.

Nauert (2013) reported of a research conducted among Head Start Pre-schoolers and Caregivers in a U.S. Department of Agriculture; Agriculture Research Service Children's Nutrition Research Centre Study. The study revealed that mothers who ate though they were already full and also pushed children to finish their meals or withheld meals from their children ended up having children who were picky eaters. Also, mothers who ate based on their emotions had children with a strong desire to eat.

A similar revelation by Klausner (2014), who reported a study by the University of North Carolina at Chapel Hill showed that children's poor eating habit which is linked to obesity are inculcated from the home due to parents poor eating habits and not fast foods. They added that parents do not take time to choose and prepare food for the home. It would be added that though fast food would not be blamed, due to work schedules and little time spent at home, parents resort to fast foods and may not also choose the right kinds of food for their children at the fast food joint.

The findings reported basically reveal that parents play significant roles in the eating habits of their children. If a parent eats poorly or skips meals, there is a high probability that the child also pick that habit up. If the parents do the right thing, the children will pick up the right thing. It would be stressed that good dietary decisions at present will lead to good dietary decisions and good eating habits later in life.

Peers

Peers play a huge role in the lives of people, especially the adolescent. They actually assist individuals in knowing who they really are; whether confident, strong willed, have low self-esteem, timid or shy. They have an influence in every facet of our lives and decisions with regard to food cannot be overruled. A previous study showed that parents and friends were the two most influential factors on the eating habits of the adolescent (Birch and Davison, 2001: 893-907; Story, Neumark-Sztainer and French, 2002: 40–51). During the adolescent stage and even from pre-school to tertiary, the individual is surrounded most of the time with peers. A lot of hanging out with friends will definitely result in eating and other choices to make. A recent study at the Univerisity of Illinois showed that food choices made at restaurants are greatly influenced by peers (Larson, 2013). The study stated that people were happier when they made similar food choices as their peers. This implies that wrongful choices of food learnt at home will be exhibited at the restaurant. Other peers will emulate such choices and keep to that. In the same vein, a study in Ghana among adolescents in Senior High School showed that their peers had a significant influence on their eating habits (Amos, Intiful and Boateng, 2012: 1-7).

It would be accepted that people eat during times of celebration or when they are stressed out and also sad. The lunch outing with peers in school and co-workers may have a negative or positive influence on an individual's eating habits. Due to the adolescent girl's weight control and the desire to be accepted by peers, study shows that adolescent girls will prefer to eat less as compared to their male counterparts (Muir, Wertheim and Paxton, 1999: 259–270). Similar study reveals that adolescent girls who want to maintain a slim figure and those who are overweight eat junk foods and do not consider eating healthy foods (Gleick, 1999). They may even skip food thinking that will result in weight loss instead of exercising.

Also Croll, Nuemark and Story (2001: 193-198) reported that some adolescents with parents who have good choices of food, have significant knowledge of good eating habits but despite that they are unable to make healthy choices with regard to food. This may be due to the friends or peers who may have influenced their food choices.

Due to the influence of peers and lack of knowledge of good eating habits, adolescents tend to skip food and consume a lot of fast foods instead of regular exercises (DeBate, Sargent and Topping, 2001: 819-833).

Media

Eating habits have drastically changed in the past decade. In Africa, eating foods harvested immediately from the farm has now moved from eating highly processed foods in tins and cans as well as foods stored for a long period of time. This phenomenon is mostly found in the urban towns where farming is scarce. Webb and Whitney (2008) argue that consumers today value convenience and a quick way of doing things. In view of that, they (consumers) spend most of their food budget on meals that require little or no preparation. The meals (fast food) are either eaten at the restaurant or brought home by ordering. This has resulted in the increase of overweight children and adults and also increase in eating-related sickness and deaths. This phenomenon is undoubtedly influenced by the media.

In as much as the media serves as source of information for jobs, politics, health, education, etc., it also serves as a major source of information for food and food related programmes. It would be emphasized that the information provided may be good or bad. According to Fettling (2005), a lot of money is pumped into advertisement because it is a very effective mechanism of influencing food choices and habits of consumers.

Due to work and limited time at home, adults and parents resort to quick ways of preparation of food and already-made food (Webb and Whitney, 2008). A study conducted by the Rochester Institute of Technology indicated that individuals have cultivated the habit of having their meals while they sit by their computers rather than on the kitchen table. In addition, they also resort to the social media for information regarding recipes for their meals and most importantly nutrition related information (Rochester Institute of Technology, 2011). The media's message most often portrays foods prepared by the manufacturer as foods high in nutritional value and also with long expiration. This information tends to convince parents and adults who may find it very convenient due to their busy life style. For instance Contento (2010) opined that the media's message to breastfeeding mothers is that formula feeding is the norm whereas breastfeeding is not.

The media advertisement on food influences children and adolescents most. These children and adolescents are exposed to television, internet, magazines, books and radios. They spend a lot of their time around these channels and since most of them are not conversant with nutritional education, they become gullible to the enticing messages sent across. Some of these foods advertised are very high in sugar, salt and fat which are not good for the body when taken frequently and in large quantities. For instance television which has been found to be the most influential with regard to food advertisement (Samour and King, 2011) portray to adolescents that being slim is the norm. Television advertisement consistently show thin bodies which have affected the eating habits of the adolescents especially, girls. This has resulted in the girls eating unhealthy foods (Gleick, 1999).

Research report has another argument that studies conducted revealed that children watch television more. Also, those who are perceived to be living in neighbourhoods less safe for outdoor games are obese due to regular watching of television (foodnavigator.usa.com, 2014). Dube (2011) in Rochester Institute of Technology reported on how smartphones and internet have significant influence on college students' eating habits. Their findings show that students are likely to be found with their phones or behind the internet whiles eating. Also, they used these channels to obtain their recipe and nutritional information.

In addition to the information the media provides, media personalities such as TV presenters and other celebrities who appear on the screens tend to influence the habits of

people especially adolescents. Some of these adolescents tend to model their ideal body perception after the images of their favourite personalities.

Others move a step further to become like them by changing their eating habits to suite their celebrities. This was evident in a study conducted among Fijian adolescent girls. The study indicated that the adolescent girls' interest in weight loss program was as a result of wanting to model themselves after television characters (Becker et al., 2002: 509-514).

Nevertheless, the media do promote eating habits positively. Some of the advertised food products are protein foods such as milk, for kids and wholesome fish and meat and where it can be purchased. Other programmes on food also educate parents and adolescents on nutrition and which food products can provide them with specific food nutrients.

ENDOGENOUS FACTORS

Endogenous according to Soanes and Stevenson (2006) relate to internal cause or origin that proceed or come from within us. Therefore, endogenous factors are the factors that are derived internally from the individual and tend to be psychological in nature. They consist of needs and motive, learning processes and perceptions. Also, attitudes, personality type and self-image can all be discussed as endogenous factors.

Experts believe that many endogenous factors can influence our feelings about food and our eating habits. These include: gender, intellectual ability, personality and self-concept, among others. These same factors can also influence the feelings about food and eating habits among our children. Children aged eight years can distinguish between "good" or "bad" food yet may not have healthy eating habits (Woolner, 1995: 74). For the purpose of this chapter we shall concentrate on intelligence, personality and self-concept as the endogenous factors that may influence children's eating habit.

Intelligence

Individuals differ from one another in their ability to understand complicated ideas, to adapt efficiently to their environment and also to learn from what they have experienced. They also differ in the way they engage in diverse forms of reasoning, in order to overcome impediments by reflections. While these individual differences can be significant, they are never exclusively consistent. A person's intellectual performance will differ on different occasions, in different environments, as perceived by different criteria.

Intelligence according to Santrock (2005) is the thinking skills and ability to adapt to and learn from everyday's life experiences. In other words it is the general mental ability involved in calculation, reasoning, perceiving relationships and analogies. It also includes the ease with which learning is done, storing and retrieving of information, the use of language fluently, classifying, generalizing and getting used to new environments and situations. Although there remains a strong tendency to view intelligence as a purely intellectual or cognitive function, significant evidence suggests that intelligence has various components.

It is generally accepted that intelligence is related to both heredity and environment. Studies done among families, particularly among identical twins and adopted children, have

suggested that heredity is a key factor in shaping an individual's intelligence; but they have also suggested that environment is a critical factor in determining the extent of its expression. For instance, children raised in orphanages or other environments that are comparatively not stimulating tend to show retarded intellectual development. Although a strict definition of intelligence has shown to be elusive, psychologists have maintained that it can be quantified, basically through testing.

The intellectual ability of an individual can influence his or her eating in that, there are positive and negative consequences associated with intelligence which can lead to children's eating habits as "healthy" and "unhealthy." Research results according to Canals (1996: 433-450) found that adolescents with low intelligence are at risk of developing unhealthy eating behaviour, whilst Sanders and Myers (1995) also suggest that adolescents with high intelligence are at risk of developing unhealthy eating behaviour. A probable reason may be that a large percentage of learners with high intelligence have a high socio-economic background and therefore increasing amount of families' budget is spent on food obtained outside the home. In addition O'Conner's (2002: 14-15) study in learners from a high socio-economic background showed that more available money to spend on food was not associated with a healthy diet.

Research again revealed by Questia (2013), suggests that learning and memory as part of intelligence also influence children's eating habit. The taste of a particular food whether good or bad when memorised can determine how much one will eat in the next meal. Questia again, noted that how people see foods being mishandled especially animal foods, emotionally and psychologically become resilient to it. For example, an individual who finds food unpleasant during childhood, may reject it during adulthood.

Foreyt and Goodrick (1992) mentioned that, for many people old eating habits die hard, even when the individuals are aware of the health consequences of a poor diet. In some cultures, children learn from their parents or the elderly as they select and prepare food for the family and whether the food is healthy or not, the children have no control on the type of food cooked or served. Therefore they may be used to those particular foods as they grow up without considering the health consequences of the food.

Personality

Personality is also regarded as one of the potent endogenous factors that influence children's eating habits. Personality according to Santrock (2005) is a pattern of relatively permanent traits and unique characteristics that give both consistency and individuality to a person's behaviour. This means that personality is made up of the characteristic patterns of feelings, thoughts and actions that make a person exceptional or unique. They explained behavioural processes to include thinking, emotion, decision making, physical activity and social interactions. In addition, an individual's personality starts from within and remains fairly consistent throughout life.

Santrock (2005) mentioned that, a number of research studies (Digman, 1990: 417-440; McCrae, 2001: 85-87; McCrae and Coasta, 2003) point toward five factors as important dimensions of personality and these are Openness (independent or dependent), Conscientiousness (careful or careless), Extraversion (sociable or retiring), Agreeableness

(trusting or suspicious) and Neuroticism (emotional stability i.e. secure or insecure). They constitute the widely accepted Five Factor Model (FFM).

These trait approaches have led to advances in the assessment of personality through the development of numerous personality tests. The personality of an individual can influence his or her behaviour towards eating in that, there are positive and negative consequences associated with personality which can lead to children's eating habits as "healthy" and "unhealthy."

Research relating FFM traits to children's diets is sparse. Low conscientiousness has been associated with a high body mass index (BMI) in children (Braet, 2005: 19-23; Braet et al., 2007: 473-483; Datar, 2004: 804-810) and adolescent girls (Batterink, Yokum, and Stice, 2010: 1696-1703). Low Agreeableness combined with low Conscientiousness (i.e., high Psychoticism) was associated with eating unhealthy choice of foods, and low Neuroticism was linked with eating healthy foods in children aged 11–15 years (MacNicol, Murray, and Austin, 2003: 1753–1764).

Jablow (1992) identified dependency as a possible personality factor that might be associated with children eating habits. Dependent children and adolescents tend to experience personal freedom as overwhelming, confusing, and stressful and over-eat or under-eat to cope with the situation. Carson and Butcher (1992) assert that, the psychological attributes of people with eating disorders involve perfectionism and a preoccupation with pleasing others. Hartley (1998) also confirms that perfectionism is a prominent personality characteristic of anorexia and bulimia patients.

Bester and Schnell (2004: 189-193) in their research revealed that the most important personality factor associated with eating habits was social boldness. It appears that the social aspect of a person's life is a variable that should be taken into account when eating habits are dealt with. It shows that a low social self or personality can be linked to unhealthy eating habits.

For children, food consumption is still partly under parental control. Nevertheless, children's personalities may influence and interact with their parents' behaviour, affecting the parents' feeding styles and choice of foods they offer (Gubbels et al., 2009; Horn, Galloway, Webb, and Gagnon, 2011: 510–516). These transactional processes between parents and children concerning food are also likely to influence the child's eating habit.

Self-Concept

Besides intelligence and personality, self-concept has also been implicated to be among the endogenous factors that influence children's eating habits. Self-concept according to Dusek and McIntyre (2003) is the domain-specific evaluations of the self. In other words it is a collection of beliefs about one's own nature, exceptional qualities, and distinctive behaviour. Your self-concept is the mental picture you have of yourself. It is a compilation of self-perceptions. For instance, a self-concept might comprise of beliefs such as 'I eat too much' 'I am easy going' or 'I am pretty' or 'I am hardworking'. Individuals can make self evaluations in many domains in their lives.

Many factors can influence self-concept. This could either be positive or negative and can therefore have an effect on children's eating behaviour. Studies have shown that some factors that typically place the self-concept of children at risk are insecurity, poor body image,

negative mood and depression, feelings of inadequacy, withdrawal, poor adaptability skills, negative attitudes about self-control and discipline (Steinhausen 1993: 221-227 and Button 1997: 39-47).

Most research indicated that negative or low self-concept is regarded to body image or bodily appearance and therefore leading to the development of unhealthy eating habits. These findings were confirmed by Brook and Tepper (1997: 283-288), Hoare and Cosgrove (1998: 425-431) as well as Kim and Douthitt (2003: 272-296) who found that a low self-concept with regard to bodily appearance results in unhealthy eating behaviour. It appears that healthy eating habits of children are associated with a sound relationship with parents known as the family self and also the society known as the social self (Young and Fors, 2001: 483-488 and Wade and Lowes, 2002: 39-45).

Bester and Schnell (2004) in their study, on the relationship between self-concept and eating habits of adolescents focused on six subtests of self-concept namely physical self, family self, personal self, social self, self-criticism and moral-ethical self. It was revealed that, except for self-criticism, all the other subsections of the self-concept indicated significant correlations that were negative with eating habits; suggesting that the lower the self-concept, the higher the occurrence of unhealthy eating habits. The strong relationship between the physical self and eating habits emphasises the importance of the physical self. The physical self does not only contribute to the general self-concept but can be used as an important variable to identify bad eating habits. A probable reason being that, persons with a low physical self, who are not worried about their appearance and do not consider a healthy physical development important, will not bother changing undesirable eating habits.

CONCLUSION AND RECOMMENDATIONS

It is an undeniable fact that the environment, parents, peers, media, intelligence, personality and self-concept play a very significant role in the food choices and eating habits of children and even adults. In view of that, care must be taken in order to help individuals develop good eating habits and make better food choices. It is recommended that parents and significant others in the home as well as the society need to set an example so that children can gain insight into the importance of eating correctly and avoid negative thoughts and feelings that are more likely to give their children unhealthy foods as they depend and learn from them. Also, children whether they experience weight problems or not, should receive guidance with regard to healthy eating habits. Teachers and counsellors in schools can assist but it is primarily the parents' task to provide the necessary information in this area. If parents are unsure, a dietician can be approached to plan meals and structure the eating pattern of the whole family. Children experiencing anxiety or frustration should be advised to seek professional help and should not use emotional, social or personality problems as an excuse for bad eating behaviour.

The following are some measures to help develop good eating habits.

- Plan meals as an individual and as a family
- Eat together as a family and exercise regularly
- Don't force or pressurize children to eat

- Never skip meals.
- Try new foods yourself but do not force it on the children. They should be encouraged to try to taste.
- Meals and healthy snacks should be given regularly
- Food should not be used as a punishment or reward
- Limit the intake of "junk" food in the house and at the fast food joints i.e. foods high in fat and calories as well as sugar and salt.
- Do not snack all day long.
- Drink water often and avoid soda and other energy drinks
- Regular intake of fruits and vegetables should be encouraged
- Eating should be done whiles television is off and parents should encourage the children to eat at the dining table or at the kitchen where there will be no disruption.

Eating regularly and with a variety of healthy foods will help the family to develop great eating habits for life and will definitely have a positive impact on health as well. Healthy food is only beneficial when it is actually eaten, so healthy recipes and meals that appeal to the whole family should be chosen.

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Chapter 5

STRATEGIES FOR THE CARE OF OBESE: A NON-PRESCRIPTIVE NUTRITIONAL PERSPECTIVE

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INTRODUCTION: ARE THE WEIGH-CENTERED INTERVENTIONS DELIVERING THEIR PROMISES?

The World Health Organization (WHO) classifies obesity as a global epidemic. Its global prevalence (evaluated by the Body Mass Index, BMI $\geq$ 30 kg/m^2, calculated as weight in kilograms/height^2 in meters) has increased twofold between 1980 and 2008. The United States has the largest absolute increase in the number of obese since 1980, followed by China, Brazil and Mexico (WHO, 2000; Ezzati and Riboli, 2013: 958). Among Latin America countries, the higher rates of obesity are found in Argentina (7.3%), Chile (7.0%), and Costa Rica (6.2%) (Kain, Vio and Albala, 2003: 78). Aspects that are related with this rise include the rapid demographic and nutritional transition that these countries have undergone, such as the growing ageing population, the decrease in fertility and mortality, the increased intake of foods high in sugars and fats and the increased sedentary lifestyle (Webber et al., 2012: 1).

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In Brazil, national surveys focusing on socioeconomic and nutritional status were conducted between 1975, 1989, and 2003. Aiming to investigate income-specific trends in obesity, Monteiro, Conde and Popkin (2007) assessed data from these national surveys to compare overall and income-specific obesity prevalence rates estimated for men and women. In the first period examined (1975–1989), the rate of obesity increased by 92% for men and by 63% for women; also, increases were relatively higher for people on low incomes. In the second period examined (1989–2003), further increases among men were observed and, in accordance with the first 14-year period examined, increases were more expressive among low-income groups. Regarding the female population, the rate of obesity remained stable. An increase was observed among women in the second lower income quintiles (26%) and a decrease was observed among women in the third higher income quintiles (10%). The most recent national survey in Brazil was conducted in 2010 and it was estimated that 12.4% of men and 16.9% of women were obese (Brasil, 2010).

Concern regarding obesity has reflected in plural actions that aim to control body weight, such as the prescriptive interventions, which are diet-focused and consider weight loss as their primary indicator of success. Despite this growing attention and effort, the prevalence of obesity is substantially raising. And, although diets can lead to a short-term weight loss, such maintenance is only achieved in around 20% of the cases and, commonly, participants regain weight in the long-term (Verhoef et al., 2013: 1).

For example, Due et al. (2008) compared the effects of 3 *ad libitum* diets on the maintenance of the weight loss in non-diabetic overweight or obese women. Before being assigned to the intervention groups, 154 participants were put on a low-calorie diet (800 to1,000 kcal/day) during eight weeks. Subsequently, only participants who lost 8% of their initial body weight were allocated to one of the three intervention diets (n = 125), that depending on the group had a specified percentage of total energy as fat, being respectively: 35 to 45%; 20 to 30% and; 35%. The trial lasted for six months. All groups regained weight after the six-month intervention, being the mean values respectively: 2.5 kg, 2.2 kg and 3.8 kg. Additionally, all groups regained body fat, being the mean percentages as follows: 1.6%, 0.6% and 2.6%. The authors concluded that the diet composition had no major effect on preventing weight regain of the participants. Similarly, Nordmann et al. (2006) conducted a literature review from trials that used a diet low in carbohydrates or a diet low in lipids. The purpose of the review was to compare the effects of such interventions on the weight loss and on cardiovascular risk factors in overweight subjects (n = 447). The interventions included had a minimum 6-month follow-up. After this period, the results showed that the individuals subjected to diets low in carbohydrates had a more significant body weight loss than the individuals subjected to diets low in lipid (mean difference of 3.3 kg; 95% confidence interval: 5.3 - 1.4 kg). However, this difference became less significant after 12 months (mean difference of 1.0 kg; 95% confidence interval: 3.5 - 1.5 kg). The group undergoing diets low in carbohydrates had more unfavorable changes in the blood concentrations of total cholesterol and low density lipoprotein. On the other hand, for the low-lipid content diet, more unfavorable changes were observed in the values of triglycerides and high-density lipoproteins. Both diet compositions seemed to have similar results regarding weight loss within a year, however, the authors concluded that the modest weight loss did not justify the unfavorable changes related to cardiovascular risk factors.

Even when subjects can maintain part of the weight loss, results show that this maintenance is modest.

Pirozzo et al. (2003) undertook a systematic review on six studies (n = 594) in order to evaluate the effectiveness of low-fat diets in achieving sustained weight loss in obese or overweight people. The dietary interventions were characterized by a low fat diet vs. a low calorie or a low carbohydrate or a moderate-fat diet. The trials lasted from 3 to 18 months and had follow-ups that ranged from 6 to 18 months. The authors concluded that no significant differences were seen between low-fat diets and other weight-reducing diets regarding a sustained weight loss. Additionally, the authors found that the overall weight loss at the follow-up in all studies was very small, ranging from 2 to 4 kg. Another study examined sixty-six overweight and obese women that participated in a weight-loss program (Webber and Lee, 2011). The authors aimed to evaluate participants in terms of changes in their diet quality and energy density. In the intervention, subjects were randomized to one of two study groups: standard or motivation treatment. Both groups received separate group sessions during four weeks.

These sessions focused on weight loss and provided equivalent instructions related to diet and exercise. Different from the motivation group, the standard group did not explicitly receive motivational techniques strategies. After this 4-week period, participants followed an internet program, which also focused on weight-loss strategies, diet plans and exercise recommendations. Additionally, participants were instructed to consume a low-calorie and a low-fat diet. In order to assess participants' levels of energy intake, energy density and diet quality, they had to complete dietary assessment at baseline and at follow-up (week 16). Both groups decreased fat intake and dietary energy density, and increased their diet quality scores (e.g., by decreasing the intake of total sugars and increasing the intake of fruits and vegetables) at week 16. Even though, no significant differences were observed in the initial weight in either group over the 16-weeks period (Webber and Lee, 2011). Finally, it is worth mentioning that the weight loss *per se* does not reflect in health gains. A review on studies that aimed the weight loss of individuals with diabetes 2 showed that the initial improvements regressed to the initial values after six to eighteen months after treatment, even when the weight loss was maintained (Ciliska et al., 1995).

Whether there were no risks related to the weight regain and the results of diets were a matter of individual effort and investment, such interventions could be worth doing (Kausman, 2004: 4). Nevertheless, there are serious physical and psychosocial risks involved in them.

Among the physical health hazards, a considerable number of people who enroll in a diet experience the repetitive cycles of weight loss and regain, known as weight cycling. Weight cycling has been reported to reduce the basal metabolic rate, to improve the metabolic efficiency to storage body fat and to increase the proportion of body fat (Robison et al., 2007: 147). Strychar et al. (2009) evaluated anthropometric, metabolic, psychosocial, and dietary aspects of postmenopausal overweight/obese women according to their weight-cycling history; 121 participants were evaluated during a 6-month randomized weight-loss intervention. The authors defined women's weight cycles based on the frequency of going on a diet and losing more than 10 kg per episode.

Participants were considered to have never weight cycled when this lost occurred 0 times, to be a low weight cycler when this loss occurred 1 time, to be a moderate weight cycler when this loss occurred 2 to 3 times and to be a frequent weight cycler when this loss occurred more than 4 times. Respectively, among all women, 15.7%, 24.8%, 33.9%, and 25.6% were non-, low, moderate, and frequent cyclers.

Frequent cyclers were characterized by a higher BMI and percent of body fat mass, a larger waist circumference, and a lower resting metabolic rate/kg body weight than non-cyclers ($P<0.05$); additionally, these women were characterized by a greater disinhibition and a lower body esteem ($P<0.05$). Likewise, moderate cyclers had values of plasmatic adiponectin lower than non-cyclers ($P<0.05$). Overall, the results showed that weight cyclers had more unfavorable outcomes regarding metabolic and psychosocial parameters. Rzehak et al. (2007) investigated the effect of body weight changes on all-cause mortality. The initial sample included a cohort of 1,160 men (40-59 years old) and it was accompanied for 15 years; 505 subjects comprised the final sample. After controlling for age, cardiovascular disease, diabetes, smoking, and socioeconomic status, only fluctuations in body weight had a significant impact on all-cause mortality. Moreover, obese persons who maintained their weight stable did not have an increased risk of mortality. Thus, it is conceivable to suggest that the repetitive cycles of weight loss and regain, and not the weight itself, may also contribute to the mortality rates among overweight and obese individuals and be a risk factor for diseases that are frequently associated with these physical conditions.

Regarding the psychosocial risks involved in diets, aspects that are of great relevance include the precipitation of binge eating and eating disorders, body dissatisfaction and low self-esteem (Have et al., 2011: 669–679; Leske, Strodl and Hou, 2012: 2–3). There are also ethical considerations involved, as the resulting processes of culpability, stigmatization and the reduction of self-freedom (Have et al., 2011). A longitudinal study (n = 2,516) evaluated whether adolescents who reported dieting and different weight-control behaviors were at risk for gains in BMI, overweight status, binge eating, extreme weight-control behaviors and eating disorders five years after the initial assessment (Neumark-Sztainer et al., 2006). At the final assessment, the authors found that participants who presented unhealthful weight-control behaviors at the initial evaluation increased their BMI by approximately one unit more than participants who did not try to control their weight. Also, participants who tried to lose weight were at approximately three times greater risk for being overweight at the final evaluation (odds ratio = 2.7, 95% confidence interval: 1.36 - 5.31 kg for female and; odds ratio = 3.2, 95% confidence interval: 1.86 - 5.50 kg for and male) (Neumark-Sztainer et al., 2006).

Complementarily, D'Anci et al. (2009) examined how weight-loss diets affected the cognitive performance of 19 women (aged 22 to 55 years). Participants were allocated in one of the following weight-loss diets: a low-carbohydrate or a reduced-calorie diet. Before starting the group diets, all participants followed a 3-week standard dietary regimen that included a 1-week period that eliminated carbohydrates. Before beginning the diets and then 48 hours, one, two, and three weeks after starting the diets all participants completed cognitive tasks. They assessed their visuospatial memory, vigilance attention, memory span and mood. Results showed that the first group performed worse on memory-based tasks than the second group, suggesting having memory impairments, and also had a worse result on a test that evaluated participants' sustained attention. Importantly, when normal levels of carbohydrate were reintroduced, the low-carbohydrate group improved their performances. The reduced-calorie group reported more confusion and responded slower during an attention-vigilance task when compared with the first group. The authors concluded that the weight-loss diet regimens had negative, though different, impacts on the cognitive behavior of the participants.

BEING OVERWEIGHT AND HEALTHY: IS THAT A PLAUSIBLE REALITY?

It is possible that some confounding factors have contributed to the association between obesity and health problems. For example, obese people, when compared to non-obese individuals are more likely to lead a sedentary life, to experience the repetitive cycle of weight loss and regain and to access less health care services. Such behaviors are associated with significant health impairments, both for obese and non-obese individuals.

However, considering that these behaviors are more likely to occur among obese people, they may have contributed to the established association between obesity and health problems, at least in part. In this scenario, one could inquire: is it possible to be overweight and healthy? Having a normal weight is *per se* a measure of good health and being over the normal weight values is a signal of poor health? Would it be possible to evaluate other variables that not the weight loss as positive to health or to consider that health problems can be significantly improved by interventions that aim at lifestyle changes regardless the weight loss? Studies are confirming such hypothesis.

From 1977 to 1988, 4,600 participants took part in an intervention that was characterized by a diet rich in dietary fiber, low in sodium and lipids and by physical activity (Barnard, 1991). After the intervention, participants lost some weight, but those who began the study obese finished it obese. For subjects with diabetes, 71% of those who were taking medication to increase the production of insulin could refrain from its use; 76% of those who were not using any medication normalized their blood glucose values and; 39% of those who were taking insulin discontinued the use. For all subjects, the values of total cholesterol, low density lipoprotein and triglyceride concentrations decreased 21 to 38% (Barnard et al., 1992; Barnard, Jung and Inkeles, 1994). The body weight changes had a small but significant association with changes in the values of triglycerides, high density lipoprotein, and systolic and diastolic pressures. However, the reduction in body weight was not associated with changes observed in the fasting plasma glucose and in the values of total cholesterol and low-density lipoprotein, indicating that the normalization of body weight is not mandatory for the reduction or normalization of risk factors (Barnard, Jung and Inkeles, 1994). Recently, Dalzill et al. (2014) evaluated the effects of a lifestyle intervention on body composition, cardiometabolic, and exercise parameters in metabolically unhealthy obese (n= 51) and metabolically healthy obese participants (n = 54). Participants were classified as metabolically unhealthy or healthy based on the criteria for the metabolic syndrome: participants who met 0 or 1 criteria were classified as metabolically healthy; those who met 2 or more criteria were classified as metabolically unhealthy. The lifestyle modification program consisted of a Mediterranean diet, nutritional counseling and high-intensity interval training; the trial lasted for nine months. All participants performed two to three weekly sessions of physical training and had five individual meetings with a dietitian. The parameters were measured at the beginning of the intervention and after the nine-month trial. In the end of the intervention, participants reduced weight, but were still classified as obese. Both groups had similar health benefits, including improvements in the body composition, systolic and diastolic blood pressures, fasting glycemia, insulin sensitivity, peak oxygen uptake, and physical endurance. Interestingly, the prevalence of metabolically unhealthy obese participants was reduced by 17.9% after the intervention.

Considering the relation obesity has with health problems, its prevention and treatment have a major impact on public health actions and policies. As previously stated, weight loss is often the main indicator used to evaluate the success of such interventions; however, several studies reporting results of weight loss programs raise important questions about their impact on health and body weight. Alternatively, lifestyle interventions seem to provide more expressive benefits to health and, therefore, should be considered and importantly valued to the prevention and treatment of obesity.

NON-PRESCRIPTIVE INTERVENTIONS: INNOVATIVE AND TRANSFORMING ALTERNATIVES

Despite the alarming consequences of dieting and its failure to provide sustainable outcomes regarding weight and heath, people can still feel very tempted to diet. Kruger et al. (2004) examined the prevalence of specific weight-loss practices among American adults. Data was collected from the 1998 National Health Interview Survey and the sample was composed of 32,440 participants. Of those, 24% male and 38% female were trying to lose weight, being this attempt more common among overweight or obese people. The strategies to lose weight included eating few calories (58% men and 63% women); eating less fat (49% men and 56% women); and exercising more (54% men and 52% women). Other strategies included skipping meals; eating food supplements; joining a weight-loss program; taking diet pills or diuretics; and fasting for nearly 24 hours.

The reason why people feel impelled to diet, despite its innumerous negative consequences, rely on the current cultural assumption (predominantly in western cultures) that not only dieting will result in weight loss, but in people achieving a better job, a romantic partner, more success and, ultimately, a "better live" (Polivy and Herman, 2002: 679; Kausman, 2004: 10). As Polivy and Herman (2002) interestingly points out, almost every diet succeeds before it fails. The authors argue that before a diet fail, there is a brief period during which it have somehow succeeded. As a consequence, people are given renewed expectations and are willing to try once more. For example, Kirk and colleagues (2014) qualitatively explored the experiences of obese individuals. All participants have tried different methods to manage their weight (e.g., engaging in commercial weight-loss programs, eating more fruits or drinking less soda, including physical exercises in their routines, etc.) with limited or no long-term success. Though describing these attempts as complex and demanding, participants could not identify the reason for their unsuccessful weight management.

They felt extremely discouraged and blamed themselves - and not the weight-management strategy - for not being able to control their weight. Despite that, they were convinced that if they had tried harder, the attempt would have worked out. Illustratively, one participant stated the following— *"most diets work. If you follow them, you're going to lose weight"*— suggesting that if she had other opportunity she would try again. Eventually, people are trapped into an endless circle (Kausman, 2004).

Considering that weight-centered approaches can be really seductive, the need for innovative and transforming interventions - that focus on health and well-being regardless of the body weight and are able to provide sustainable and lasting changes - is urgent. Thus, there is a growing professional interest in non-prescriptive interventions, such as the *Health at*

Every Size® (HAES), *Intuitive Eating* and *Mindful Eating* approaches, which have as major principle the promotion of physical and mental health independent of whether weight loss is a consequence or not of this process (Bacon et al., 2005: 929; Robison, Putnam and McKibbin, 2007). Not only do they give opportunity to change the way one relate to his/her body and eating, but also give liberty and confidence to each one (and not in an external factor, as happens when diets are prescribed). Briefly, intuitive eating-based interventions provide strategies that enhance one's ability to trust in and connect with the inner cues of hunger and satiety. The principle of the approach is that by learning to rely on these cues people are able to better manage their eating. Illustratively, individuals exposed to this approach can determine when and how much to eat and to stop eating when feeling no longer physically hungry. Results of studies that supported the Intuitive Eating approach have found that participants decreased their eating when not feeling physically hungry, had emotions influencing less on their food intake and diminished their preoccupation with food (Augustus-Horvath and Tylka, 2011). Similarly, the Mindful Eating approach provide strategies that help people to make more conscious food choices, to differentiate physical and psychological hunger, and to respond effectively to hunger and satiety cues (Miller et al., 2012). Mindfulness-based interventions use procedures that aim to increase one's awareness regarding physical sensations, affective states and thoughts. The HAES is a philosophy that is emerging as a reference practice. Initially, the philosophy was known as "The Non Diet Approach". By the year of 1996, it was reformulated and presented as the "Health at Every Size", name coined by the Association for Size Diversity and Health - ASDAH (ASDAH, 2003). The ASDAH is an international professional organization composed of members committed to the HAES principles and it aims to promote education and research to improve the health and well-being of the population (ASDAH, 2003). The principles of the philosophy encompass the following aspects: recognize that health and well-being include economic, social, spiritual, emotional, and intellectual aspects. This means to acknowledge that someone's experience with weight and health is part of a complex interplay of these aspects. Therefore, this principle aims to enhance a person's health at his or her current weight under the assumption that "the movement toward a healthier lifestyle will, over time for most people, produce a weight that is healthy for that person" (Kratrina, 2003: 29). Other principles involve encouraging the construction of a positive body image and accepting and respecting the inherent diversity of body shapes and sizes. These principles aim to impact on the current weight prejudice by affirming that someone's worth do not depend on race, color, creed, body weight, shape or size. This does not mean that people will be in a state of denial, passivity or inaction. Differently, is likely that, as people learn to better accept their current bodies, they will be more motivated and empowered to take care of themselves. The HAES principles also embrace promoting an eating that balances individual nutritional needs and that consider aspects such as hunger, satiety and pleasure.

This principle is supported by the evidence that restrictive methods are not successful in promoting a healthy eating and lead to preoccupation with food, weight cycling and weight gain. Otherwise, it is known that hunger, satiety, and appetite signals can be trusted to regulate someone's caloric intake and result in people better managing their eating. Finally, the last principle supports the promotion of pleasurable and sustainable physical activities. Considering that people may have undergone negative physical activities experiences (e.g., being pressured from parents and professionals to perform in an elusive standard, engaging in

programs with an "all-or-nothing" attitude or with unpleasant activities), some of them may feel discouraged to exercise.

Therefore, this principle aims to promote movement proposing alternative activities that are social, playful and pleasurable (Kratrina, 2003: 145). These can include gardening, dancing, taking the stairs instead of the elevator, and etcetera. By simply encouraging enjoyable activities, it aims to help people to reconnect with new exercises and find joy in moving their bodies (Kratrina, 2003: 153). All in all, these principles help people to feel more comfortable when seeking health care, to enhance their health status and fitness level, and to move toward a healthier lifestyle.

Research examining the effects of non-prescriptive interventions found that they improved participants' self-esteem and body satisfaction and, despite showing a modest or no change in body weight, its maintenance lasted more than when compared with weight-centered interventions.

Dalen et al. (2010) did a 6-month of mindful-based intervention to obese individuals. The intervention comprised of weekly group meetings. After that, a further 3-month period with two monthly meetings was provided. The content of these meetings included training in mindfulness meditation, mindful eating, and awareness of body sensations, emotions, and triggers to overeat.

Also, participants were encouraged to increase their general physical activity. Statistically significant increases were observed in measures of mindfulness and cognitive restraint eating. Also, statistically significant decreases were observed in weight, eating disinhibition, binge eating, depression, perceived stress and physical symptoms. Bacon et al. (2005) proposed an intervention based on the HAES philosophy to 78 obese women (aged 30 to 45 years) that did restrictive diets chronically. Two groups were formed and accompanied during six months: 1) the HAES group and; 2) the diet group.

Both had 24 weekly sessions of lectures. After six months, support groups were offered and participants were followed-up for two years. The authors analyzed anthropometric parameters, blood pressure and lipids values, energy expenditure, and psychological and eating behavior aspects. In the HAES group, food restriction decreased, while in the diet group it increased. After the follow-up, the HAES group maintained the weight loss achieved during the intervention and showed improvement in all variables assessed.

Differently, the diet group gained weight and maintained few of the improvements achieved. Later, Bacon and Aphramor (2011) conducted a review on six non-prescriptive interventions. The authors found that these interventions resulted in improvements in the blood pressure, blood lipids, physical activity, disturbed eating behaviors, self-esteem and body image of the participants.

NOVEL STRATEGIES AND TOOLS FOR THE CARE OF OBESE

Regarding the nutritional care process, a growing attention is being given to non-prescriptive nutritional interventions. Specially, nutritional interventions based on the nutritional counseling approach are gaining ground. Shortly, the approach can be defined as a meetingbetween two people to examine carefully, look with respect, and deliberate with prudence and fairness about one's eating (Motta, 2009). It involves a supportive process that

assists a person to deal with food difficulties and enhance personal resources via strategies that foster the responsibility for self-care (Spahn et al., 2010: 880).

In this approach, besides helping the subject regarding the structure and food consumption, the nutritional therapists aim to help the person to relate its eating with feelings and thoughts that might be interfering in his or her eating.

Because of such aspects, the establishment of rapport is a vital and fundamental characteristic of the nutritional counseling. The meaningful relationship between the counselor and the subject by itself is considered part of the treatment and impact on the treatment success. The nutritional counseling uses interesting and effective strategies that focus on behavioral changes and on the individual autonomy. In order to contextualize some of these strategies, the authors will use data from a recent study conducted by our research team, called "Health and Wellness in Obesity Study". Briefly, our intervention aimed to analyze the experiences of obese participants throughout a one-year multidisciplinary program based on the HAES philosophy. The participants (n = 14) performed physical activities three-times a week and participated in bimonthly individual nutritional sessions, which were based on the nutritional counseling. Also, they participated in five philosophical workshops throughout the intervention to discuss matters mainly related to body and eating.

1) Learning to Rely on the Hunger and Satiety Cues

People eat for numerous reasons. Eating certainly involves a physiological need - that is triggered by the hunger feeling - that aims the adequate functioning of the body and the maintenance and promotion of health. Despite a physiological component, food plays roles that go beyond this biological explanation. They include, for example, pleasurable, social and comforting aspects (Alvarenga, Scagliusi and Philippi, 2011). Therefore, it is common that people eat when not feeling physically hungry and this can include behaviors such as overeating, grazing, picking, nibbling and binging (Kausman, 2004: 24). Eating because of a social context or in order to get comfort is part of a healthy eating and should be encouraged. Though, when this non-hungry eating is exaggerated, eating becomes out of balance and might contribute to reinforce a negative experience with food. Additionally, people might no longer be able to identify when they are physically hungry and believe that they no longer can trust themselves to judge the amount of food they should eat. One strategy to change this non-hungry eating is to increase the subject awareness to the hunger and satiety cues (Kausman, 2004: 32).

In our intervention, it was made by using the hunger and satiety scale. It consists of a scale numbered from 0 to 10; the former corresponds to when someone is "absolutely full", and the latter corresponds to when someone is "hungry as a bear". The intermediate notes (5 and 6) refer to periods when a person is "perfectly comfortable" or "starting to get hungry", respectively. Higher notes for hunger refer to the increase of this feeling and lower notes refer to its decrease. The opposite applies to the satiety feeling. The aim of the nutritional therapists was to help the participants to remain in the intermediate grades. Initially, it was recommended that the participants completed the scale freely, by simply giving the note they judged adequate to each feeling. The scale was a component of the food record and was filled in according to each meal. As it turns out, in this initial phase, our participants found very puzzling to identify their hunger and satiety feelings. In order to help them to "reconnect"

with these cues, the nutritional therapists drew the participants' attention to certain situations and proposed strategies that ought to change certain patterns of eating (e.g., eating "just because food was there" or because it was lunch/dinner time or to clean the plate). Subsequently, when participants were more familiarized with the hunger and satiety cues, the nutritional therapists sought to guide them to increase the "accuracy" of their notes. In this process, it was helpful to ask questions such as: how do you know when you are hungry? How do you decide when to start and stop eating? Do you realize different types of hunger (e.g., milder vs. more urgent)? Does your hunger vary from day to day? When do you know you are "full"? And satisfied? What is the difference? What happens to your hunger if you do not eat right away?

This scale can be very helpful to "normalize" certain behaviors; for example, when someone is "hungry as a bear", it is very hard for anyone, and not only for obese, to eat small amounts of food. In this situation it is also common to eat inattentively, quickly or to choose "heavier" foods. Finally, the hunger and satiety scale is important to help people to manage their eating autonomously.

2) Managing Different Food Contexts

It is believed that people better manage their eating when they are confident about what to eat and are able to experience harmony among food desires, food choices, and amounts eaten (Satter, 2007). Considering that these aspects can vary depending on the food context, it is important that people have skills to manage different scenarios that involve food. In our nutritional sessions, initially, the nutritional therapist helped the participants to identify food contexts that were current to each of them; also, participants were encouraged to be attentive to patterns of behaviors that might have been occurring during them. Afterwards, the professionals brainstormed with the participants alternative behaviors so they could be put in practice. Though it can vary, three food contexts can be highlighted: 1) a social reunion; 2) a food memory and; 3) an emotional trigger. Each of them will be explained in the following paragraphs.

The first situation is related to eating in a social meeting. In this context, it is very common that various appetizers are available (e.g., peanuts, potato and cereal based snacks, etc.). In most of the times, people eat this kind of food inattentively, automatically and by taking a lot of small bites of them ("nibbling"). It is also very natural to eat those foods when not feeling physically hungry, being the eating triggered simply by seeing, smelling or hearing about the food. Because of this inattentive behavior, and in addition to the "not-so-nutritive" status of these foods, people can feel guilty and blamed after eating them (Alvarenga, Scagliusi and Philippi, 2011: 405). In our intervention, initially, the nutritional therapists explained that eating in a social context distractively is common and normal. Then, these professionals helped the participants to analyze if they, when in this situations, really wanted to eat the foods available. Whether the participants decided to do so, they were encouraged to serve themselves a small portion of the food and to eat it attentively. This was important to help them to eat consciously and feel they could administer the situation, without feeling regretful or disconcerted later. The second situation is related to a very specific context. It involves a pleasant moment and a desire of feeling a certain taste or enjoying a specific flavor. It can have the context of a food memory and be related with the desire of

experiencing some special food again. In this case, people usually eat the food slowly and attentively, aiming to experience it to the fullest. In our intervention, the participants were encouraged by the nutritional therapists to eat the chosen food with pleasure.

This was important to provide balance between nutrition and desire: once they could eat what they desired, participants, with time, no longer classified foods into acceptable and unacceptable categories, giving room for them to develop a more relaxed relationship with food and to consider the different aspects that food can embrace. Additionally, this new perspectives reflected in the amount of food they ate, diminishing its quantity.

The final situation is related to eating in response to emotions, a behavior known as emotional eating. In this context, people can feel an urge to eat something tasty and also a great amount of food; besides, people can eat impulsively and make unusual taste combinations. As a consequence, the feeling after eating is of "emptiness" and that what was eaten was not exactly what the person was looking for (Alvarenga, Scagliusi and Philippi, 2011: 406), making feelings like shame and embarrassment arise.

In our intervention, initially, the nutritional therapists pointed out the connection between an eating behavior and an emotional trigger, if it were the case, and tried to explore and understand exactly the context involved in the situation. Curious and nonjudgmental questions proved to be extremely helpful; for example: "it seems to me that when you were feeling disappointed you ate more than you usually do. Does it make sense to you? Can you tell me how this moment was for you? Do you remember what happened before it? And after it?" This kind of inquiries demonstrated empathy and openness to understand and also gave information that prompted future actions. Subsequently, our participants were helped to identify what was the real problem and, alternatively, they were encouraged to find alternative behaviors that could help them to rely less on food to comfort them emotionally (e.g., meeting friends, exercising, avoiding negative self-talk, pursuing a hobby, watching a movie, reading a book, etc.). This was important to help them to self-nourish themselves with other means that not always with food.

3) Giving Permission to Eat

Some people have undergone numerous interventions to try to decrease their weight and have experienced different eating plans, many of them consisting of restrictive diets. Consequently, it is likely that some individuals have developed a very negative attitude towards eating. As Satter points out, "motivation to eat a variety of food, including nutritious food, is internal and comes from genuine, learned food preference. When the joy goes out of eating, nutrition suffers" (Satter 2007: 189).

At the beginning of our intervention, participants in general, but specially those who had a very conflicted relationship with food, were given "permission" to eat. This means that in this process, they were encouraged to eat a variety of foods, having pleasure as the principal guide in their food selection. Despite being "allowed" to eat what they wanted, they should first consider if they really felt like having it.

This condition was interesting because it implied a non-judgmental and a non-critical posture: it allowed the participants to eat regardless of nutritional judgments or concerns, but encouraged them to consider if eating that food would be truly pleasurable or if there were other reasons that were leading them to eat something that they did not really want. After

continuous stimulus, our participants eventually shifted from a reaction to a response when facing a situation involving food. It means that they could act with more awareness and sensitivity to a stimulus than simply act inattentively and carelessly.

Concomitantly with the strategy of giving "permission" to eat, the participants were helped with another tool. Instead of prescribing a diet, the nutritional therapists proposed the meal plan. The meal plan was used to help participants to plan and evaluate the amount of food that would be more appropriate for them to consume, but more importantly, it aimed to help them to build a solid and detailed path of how to make the proposed meal plan feasible. Thus, the meal plan also involved planning the grocery shopping, the preparation of the meals, the organizing of the pantry, among other things. It was important to give autonomy to participants, once they were actively involved in its proposing. These strategies were helpful for them to find joy in eating, acquire new food preferences and make more adequate food choices. Another strategy used in our intervention was specifically related to the consumption of confectionery. The overconsumption of confectionery was a source of stress to our participants. In order to help them to eat an adequate quantity of those foods, the nutritional therapists used the following strategies. Initially, the professionals explored what was leading this consumption and brainstormed what could be done before the ingestion of the confectionery. When eating it, participants were encouraged to analyze what kind of confectionery they were willing to eat (considering, for example, characteristics such as the texture and flavor), what time of the day they had the strongest urge to eat it, in which circumstances they ate, and what utensils they used. Regarding this last aspect, for instance, the simple change of a tablespoon for a dessertspoon was sufficient to help one participant to decrease the amount of confectionery she ate. These strategies were helpful because, without restricting the consumption of a pleasurable food, participants were able to better evaluate what they wanted to eat and, therefore, make more conscious food choices.

Eventually, it reflected on their satiety and on the ingestion of an adequate quantity of confectionery. Finally, these strategies were relevant for participants to develop a consistent and positive nutritional behavior.

4) Neutralizing Food

Nowadays, more strongly in western cultures, nutrition knowledge is perpetuated by media and health care professionals in a very simplified manner. As a consequence, food gained a moral label and it seems completely natural to people to categorize food as "good" or "bad", "legal" or "illegal", "fattening" or "unfattening" (Kausman, 2004: 37; Kratrina, 2003). The issue is that this food labeling is of no help when it comes to the development of a healthy eating pattern. Differently, when a certain food is categorized as "junk" or "rubbish", people tend to feel guilty about what they have eaten. Other consequence is that when labeled, foods tend to get more desired and people end up eating more. Finally, it is likely that individuals increase their weight and food obsession and rely less on themselves to manage their food intake (Kausman, 2004: 38; Kratrina, 2003: 88). One strategy to minimize value judgments around food and eating is to help people to return foods to a neutral status. Therefore, in our intervention, some strategies were used to help the participants in this process of neutralizing food. These included the increased awareness to the non-hungry eating, to the hunger and satiety cues, and giving them permission to eat. Related to the

hunger and satiety strategies, the participants were also provided with strategies that helped them not to feel hungry or without any possibility of eating (e.g., by planning snacks that they could carry, consuming smaller and more frequent meals, etc.).

These strategies were important for them to feel secure and with better foods options when they did not have the possibility to access more adequate foods.

Along with these strategies, the participants were helped to increase the period they spent eating. The time spent eating was another component of the food record and was filled in according to each meal. Slowing down the eating period was important because when eating "forbidden" food, people tend to eat inattentively, quickly, enjoying less the food and also end up eating more to feel truly satisfied. When people can eat what they feel like, as a consequence, they enjoy food more and tend to eat less (Kausman, 2004: 43). Additionally, our participants were encouraged to include in their eating routine foods they used to avoid and were helped to change the way they referred to certain foods. That means that instead of calling foods "fattening" or "bad", they would instead call them what they were: a high-fat or a high-sugar food, for example (Kratrina, 2003: 90). In our intervention participants were encouraged to evaluate the impact food had on health, weight and well-being by balancing aspects such as frequency, amount eaten, and the food impact on someone's current physical and psychological health status.

For instance, the nutritional therapists stimulated the participants to compare days with different characteristics and explored with them aspects such as: the way food felt in their bodies, how they felt after eating a different food, how was their energy level, and how long lasted the feelings of satiety, fullness and sustenance (e.g., experimenting one day in which they had a snack during the morning in comparison to one day that the snack was not included).

Initially, some of our participants felt concerned about neutralizing food. They feared that by eating foods they enjoyed they would lose control. Some of them, in a first moment, actually ate a greater quantity of food because it was not "forbidden" anymore. In this process, it was also helpful to tell them that they could choose not to eat if they did not felt like having it. With time, by simply being alloyed to eat or empowered not to eat if they did not felt like, the eventual crave stopped immediately. Participants also feared gaining weight when eating their favorite foods, what was also true for some of them. Eventually, once all foods became a possibility and no longer something to avoid, both the amount eaten and the weight stabilized. Finally, in the process of looking at food as morally neutral, participants learned to eat less food in a certain moment because they knew they could eat more of it later, they enjoyed food better and had a more positive relationship with food, what helped them to develop a healthier eating pattern throughout the intervention and to rely more on themselves to manage their food intake.

CONCLUSION

The authors conclude reinforcing that an increasing body of evidences show that health problems can be improved regardless of weight, that being active is more important than the weight *per se* and that focusing on the weight is unproductive and might be harmful to the health of the ones who constantly "struggle" with weight. Additionally, evidences urge

attention to harms related to diets, being therefore high time to shift the current weigh-centered parameter that evaluates an intervention as successful.

Alternatively, lifestyle interventions are presenting positive and lasting results related to health and well-being. People should be encouraged with interventions that will give them the opportunity and possibility of feeling more energetic and disposal, having health parameters within the ranges of normality (such as blood pressure and lipids, insulin and glucose values) and diminishing some medicaments.

Regarding the nutritional care, it seems that disseminating nutrition information, proposing diets and lists of foods to avoid do not guarantee compliance or behavioral change, being urgent that nutritionists advance in their and shift from a position of a *prescriber* to a position of a *facilitator*. In this regard, the nutritional counseling is an approach that empowers the professional with different skills that enable changes and improved outcomes. It is a collaborative process that focuses on someone's thoughts, feelings and behaviors; it addresses aspects such as motivation, denial, and resistance and identifies issues and barriers that prevent a person from changing. Our experience with the intervention "Health and Wellness in Obesity Study" have given us data to affirm that non-prescriptive nutritional strategies are showing to play a vital role on the care of obese, being a novel opportunity for them to change their relationship with food and to eat autonomously, positively and comfortably, and making important and lasting eating changes.

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Chapter 6

BODY CULT IN CONTEMPORARY SOCIETIES: SPORT, SELF-IMAGE AND HEALTH*

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INTRODUCTION

In the last survey conducted by CIS (Spanish Sociological Research Centre) in 2010 about sport habits amongst Spanish citizens, the respondents were asked for the two expressions that best encapsulated the meaning of 'sport': 52% answered that it was a means to stay fit, followed by 50% who linked sport with health. The other most used expressions to refer to sport were physical training (39%), and one way to get into better shape and/or physical aspect (13%) (Garcia-Ferrando and Llopis, 2011: 61). The same survey included another question referring to body weight: 44% of men thought they could do with some/ a lot less weight. This figure went up to 53% for women. The issue of body image, intertwined with sport habits, has merited the sociologists' attention since the eighties, such as Luc Boltanksy's 'Social Uses of the Body' (1978) or Gilles Lipovetsky's 'Le Crépuscule Du Devoir' (1994).

A Spanish television current affairs space, 'Comando Actualidad' broadcast a programme in 2014 called 'Body cult': sport, surgery, lifestyles, health, beauty and diet were amongst the personal narratives of the subjects that took part in it. After watching this broadcast, one could share Lipovetsky's (1994:102) declaration that contemporary societies were ruled by an ego-tropism of the masses obsessed by their shape, eager to exercise and to eat biological food, keen to use restructuring anti-wrinkle creams, dieting and low calories products.

The Giner et al., sociological dictionary (2001:166-167) affirms that the word 'cult' comes from the Latin 'cultus', which derives from 'colere', meaning to practise or to take care of.

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The words 'cult' and 'culture' are indeed linked: historically the first meaning of 'culture' goes back to agriculture, that is, the care of the land so it provides the harvest (Bueno, 1997). In the same sense that men farm the land, men take care of their own bodies until they flourish with the desired fruits, that is, the modification of their own material being according to pre-established standards, which are understood within a historical and institutional context. In this way the body cult cannot be fully understood without social institutions. Ancient Greeks, the former Soviet Union, capitalist countries and Christianity, all practise or have practised body cult. However, each form of body cult occurs in a specific socio- historical reality, which provides body cult with its different singularities.

Philosopher Gustavo Bueno (2014) has linked sport practices and body cult in Ancient Greece with slave owning mode of production, typical of their city-states of the period. The cult of the body and training prepared citizens to make war against other cities, but above all, it empowered those citizens- a privileged minority, with a physical superiority against the great majority of enslaved people.

The Soviet Union was a society that tended towards body worshipping practices (Valdera- Gil, 2009): sport and physical preparation were put to the service of the new soviet power with the creation of organisations such as 'Ready for Labour and Defence of the USSR', 'Unified Sports Classification System of the USSR', and the 'Voluntary Sports Society of the USSR'. The promotion of sport was intertwined with the improvements in strength, skills, resistance, self-control, perseverance, and with the building up of group conscience- all of which were paramount qualities for the articulation and defence of the new Soviet regime. Like this, the body cult took on a transcendental moral educational dimension to prepare for the advent of the new communist society. Soviet use of the hammer and sickle as their symbols offered peasants praise and placed them at the society's vertebral column. Manual work and physical effort were dignified. The new soviet person was to be literate whilst physically able. The development of these two qualities *would transform* individuals into the *New Soviet Man.* The sculpture of the Worker and the Kolkhoz Woman is an eloquent graphic testimony of the cult of the body: two athletic, slender and well proportioned figures hold and represent at the same time the highest symbols of the State. Both images encapsulate the Socialist Realism beauty aesthetic norm (Valdera-Gil, 2014).

Finally, Christianity has also fostered notions about the cult of the body, which serves transcendental aims to sanctify individuals. Contrary to the monotheist concept of the body as an instrument of sin, in the mid nineteenth century there is a new conceptualisation of *sports sacrifice* as a positive question. Hence the body starts to be seen as a *virtuous machine*, which stems the idea of Muscular Christianity: gymnastic self-chastisement is one way of redemption where the body is the object of suffering[1] (Rodríguez-Díaz, 2008:50-51).

To better understand the body cult in contemporary societies, the next section analyses the institutional and historical contexts in which the cult of the body takes place, namely Post-Fordism and Postmodernity.

[1] In the TV show *The Simpsons* the character of Ned Flanders fits the profile of a Muscular Christian.

POST-FORDISM AND POSTMODERNITY AS THE FRAMEWORKS TO CONTEXTUALISE BODY CULT AT PRESENT

In order to examine the body cult in depth, it is necessary to start offering a brief overview of the structures within which those body worshipping practices do take place. The context is mediated by Post-Fordism in the socio-economic sphere and by the post modern thrust as the new symbolic-legitimising configuration drive. Given that *post* stands for *what comes after* we will look firstly at Fordism and Modernity, to ascertain a better understanding.

Fordism dates back to the times of entrepreneurial tycoon Henry Ford. The term appeared in the USA in the twenties of the last century and reached its golden period in the three decades after World War II (WW2) in the economically developed world. Ford developed the taylorism theory of scientific work management. He revolutionised the automobile industry through the use of industrialised forms of mass production. Ford also defended the idea that his workers should earn enough to be able to afford one of his vehicles. Up to that moment traditional societies were used to produce fewer goods, mainly food related. The majority of the population worked to survive and that process modelled their psycho-social identity (Entrena-Durán, 2001: 32). The triumph of Fordism and mass consumption benefitted from the expansion of longer credit instalment payments destined to finance costly consumer goods, and the proliferation of marketing techniques to help with the sales of big productions (white goods, cars etc). The most significant result was the reduction of pauperism amongst the working classes and the growth of the middle classes. There is therefore a new way of understanding the social reproduction in the capitalist system, that is, throughout large scale production of all sorts of standardised goods and the capacity of the masses to consume them (Katona, 1968).

What about Modernity? A lot has been written about this. It is certainly not our intention to embark on a discussion to explain what it entails. To achieve the aims of this chapter, it is enough to elucidate the ruling legitimisation mechanisms in the modern world. Legitimisation is understood as a process, by which the subjects' experienced reality becomes plausible or admissible in terms of occurrence, and an effective integration of the subjects in society is achieved (Berger and Luckman, 2003: 118-119). The legitimisation process is essential to pass on to the new generations the meaning of the institutional web and to contribute to its perpetuation in time. Table 1 offers a succinct comparison in ideal dichotomy terms between the characteristics of the symbolic- legitimising frame of traditional and modern societies.

Having looked at the concepts of Fordism and Modernity, this section moves on to pay attention to the political context which would determine the transition towards the new societal organisational structures, namely Post- Fordism and Postmodernity. At the end of the seventies, two politicians became the flag bearers of Neoliberalism: Margaret Thatcher and Ronald Reagan. The neoliberal movement is based on the privatisation of public sector services, the commoditisation of wider spheres of social functionings and a deep deregulation of financial markets. One of the first effects of Neoliberalism has been the subordination of the workforces to increasingly more speculative capital movements, which aim to have the highest profits in the shortest space of time and operate globally. In addition, Fordism's integrity capacity is diminishing- not disappearing. Hence the reason why Post-Fordism should not be understood as a total break with the past, but as an extension of the old system

with more individualised and fragmented consumer practices, in tune with the growing segmentation and precarious employment (Alonso, 2006)

Table 1. Overview of traditional versus modern societies by Entrena-Durán (2001: 26-27) with the inclusion of some ideas from Collins (1980)

Traditional	Modern
The legitimising frame has an accentuated religious character. The preponderance of the magic or religious thought tends to substitute the technical lack of human's control over the environment.	The legitimising frame is fostered in the establishment of a Political Constitution and in principles such as people's sovereignty, freedom and equality. The principles are legitimised according to the logic of reason which justifies the institutions, and the ways of thinking and acting of modern societies. Societies value science and public instruction, in which the rationalisation of human lives is marked by the difference between religious and profane thought, and of a moral/ religious pluralism.

A new *cosmopolitan elitist higher middle-class* (Alonso, 2006:68) has appeared due to the growth in managerial jobs associated with technologies, finance and the knowledge economy. This group has a lifestyle based on ostentation and it echoes Bourdieu's account in *La Distinction* (1979). In the middle range good markets, the elements of differentiation of the same product grow stronger, with the purpose of meeting the needs of 'segmented and changing lifestyles' (Rodríguez-Díaz, 2008: 54). During the Fordist era the emphasis of social integration was based on the possession of the new mass production manufactured goods (television, washing machine, car), whereas now the key is in which kind of car, washing machine or television one can own. Hence planned obsolescence, that is, designing a product with a limited planned life span, and the continuous redesign of products that become obsolete prematurely. Finally, there are growing pockets of population excluded from this due to the waves of unemployment or those forced into the 'precariat'. This provokes degraded and defensive consumer strategies, where voracity with no logic and overspending when the situation allows it, reign. According to Alonso (2006: 68), the dismantling of Fordism and social citizenry fosters the appearance amongst the very wealthy of a hedonist and amnesic consumer identity.

Hedonism and hyper subjectivism are intertwined with Postmodernity and with the rise of new legitimising structures. According to its supporters in the modern world, the Enlightenment Trinity based in reason, nature and progress has been overthrown: scientists do not legislate anymore; they are mere opinion holders in their respective fields. Consequently there is a decay of the solid knowledge hierarchies, which brought about science wars. In social sciences this idea translates in the negation of the existence of scientific pillars which would legitimise politics or school of thoughts. Postmodernity entails a deep incredulity towards meta-narratives or discourses that try to explain globally and coherently the different world strands, along with a relativisation of tastes and moral conducts (Lyon, 2000). All these statements are controversial and they are not unanimously accepted by academics. Hence the reason why many openly reject the postmodernity tag and prefer to speak in terms of Liquid Modernity (Bauman, 2000), Risk Society (Beck, 1992), Reflexive Modernization (Giddens, Beck and Lash, 1994). Certainly, as in the case of Post-Fordism, it would be exaggerated to describe the post modernity issue as a social movement which totally breaks with Modernity.

In this case, it could be arguable that the metanarratives or discourses which attempt to frame the reality have disappeared. Instead, the dominant neoliberal ideology is trying to disguise itself as management, or camouflages itself within an economy, which paradoxically claims to be scientific. It is noted that the so called ideologisation loss has not been homogeneous. At the same time that old classic institutions lost momentum (unions, traditional political parties, Churches) other movements came to light (environmentalists, pacifists, feminists, human rights activists). Equally there has been a recent rise in all kinds of religious fundamentalism in more corners of the planet. Likewise, even though it is certain that the cultural and moral relativism is hegemonic, these metanarratives or discourse systems, had already germinated in Modernity. Even nowadays in a relativism period, there are still moral objective limits:

> Do you mean that societies don't have benchmarks any longer and that we are condemned to a full-scale value relativism? Yes and no. It is certainly true that a society free from the imprints of Gods, and which embraces the autonomy of those individuals who live in society, can only conceive an endless debate about the rights they are entitled to and the limits to their freedom... However *socially*, big multitudes, wide opinion units, mend themselves at least regarding certain issues: in principle, suicide, voluntary euthanasia, contraceptive methods are already only stigmatised by minority groups. The post moralist era brings about axiological confusion and at the same time some sort of highest values social equilibrium. (Translated from Lipovetsky, 1994: 98)

The biggest innovation related to Postmodernity has to do with the dominance of the new communications and visual technologies in a context of growing *virtualisation* (Alonso, 2006: 71) and of the simulation culture (Baudrillard, 2007). In this way, social media virtual communities (Facebook, Twitter, Instagram) and the transit of goods via internet appear in the social interactions, and brands become more powerful than the actual represented object. North American Literary critic Fredric Jameson (2001:64) considers Postmodernity as the cultural model of capitalism in its current phase: firstly Jameson supports the idea of the gradual disbandment of the barriers that separate goods from their brand images. On the other hand, advertising companies tend towards the insertion of the products to be sold within the content of the television programmes themselves. The blend is therefore more subtle than in the past where adverts were merely an add on. Secondly, the process of consumption is consumed as a new narrative or prevailing discourse: a new world conceptualisation has been imposed where new information technologies are celebrated euphorically and their aim is to declare the end of social classes, which are replaced in the official discourse by consumers' profiles. Finally TV shows adapt themselves to the competitive logic, that is, they become a commodity as well (Jameson, 2001:212-217).

BODY CULT EXPRESSIONS

After framing the historical context of the body cult phenomenon in the present times, this section explores some of its most relevant expressions. In order to do so, Spanish TV current affairs show *Comando Actualidad* will be utilised as a springboard for analysis of several body cult expressions. Using a broadcast where different characters open up their stories, experiences and practices is a deliberate ploy. In fact, we have tried to use an

interpretative perspective where the self-narrative of its actors is mostly relevant. In such a way, this part aims to explain body cult expressions whilst trying to shed light in the reasons argued by its actors; Blumer (1982:7) argued that 'humans act towards things on the basis of the meaning they ascribe to those things'. Hence the reason why this section *describes what the actors do* and *their narratives about what they do*. This interpretative approach is not at odds with the contextualisation of the social action done with the theoretical conceptualisation in the previous section.

Bodybuilding As a Lifestyle versus the Ludic Conceptualisation of Sports

One of the Post-Fordist society characteristics pointed out in the second section had to do with the flexible organisation of the production, which had influenced labour segmentation. In the same sense, it was noted that enjoyment and hedonism had become the axis for the legitimation process of consumer's activities. In this way, turning to the TV show, the actors who do jogging (fifth story) fit the post-modern conceptualisation of sport whereas the bodybuilders of the first story would sit in a modern paradigm.

Deane and Callanan (2000) studied the UK Athletics Federation and realised the existence of two organizational cultures: the symbolic names of *Octopus and Bambi* were chosen for the organizations. The first one sits within the modern rationality of classical bureaucracy: hierarchical, vertical, centralised and joined through a web of working groups and sub-working groups (hence the use of the octopus as a symbol of its many arms and legs) On the contrary, Bambi fits with an organisational culture more typical of Postmodernity: it is flexible and the love of sport is more important than competition, displaying a horizontal or delayering management organization (Bambi as in the popular Disney character). The bodybuilders of the first story are organised according to the Octopus model, with official competitors, rigid training and dieting routines and control mechanisms to make sure there is fair play. During the competition the journalists ask the organisers if anti-doping controls have been put in place; they answer only at national and international levels, not at regional level as they are not organised as a sports federation yet, but they are aiming for that. That is, they are fighting for the professionalisation of regional competitions so they are included in higher national structures. However, those taking part in jogging do it for the sake of enjoyment '*some because they need to get rid of a few extra kilos, others to wind down or to let off steam after work'.* Some of the runners in this story were preparing for the Spanish city San Sebastian *Behovia* popular race. The Behovia race, like the Madrid *San Silvestre* Run or the New York Marathon, are popular acts where thousands of participants from different age groups, different social classes and a wide range of physical ability, run for an intention that transcends strictly sporting reasons. Participants often do take part to have a good time and to enjoy the company of other participants alike. Hence the reason why some of the protagonists of this story travel with their families to become 'jogging-tourists'. The TV programme shows how the night before the run many of the contestants went out for dinner and some of them ate big steaks. Others are seen having pasta with mushrooms as they wanted to be better prepared for the run. The day of the race family members wait for their love ones at the finishing line. In some cases fathers and sons run together: a man who has run for thirty five years cries next to his son as this is his last time doing the Behovia run.

In the case of bodybuilders the TV programme shows a lifestyle similar to that of the Muscular Christians, as referred to in the previous section. When the journalist asked the bodybuilder in the story if she considered bodybuilding an *effort, sacrifice, pleasure or duty,* she answers that it has become some sort of obligation and her raison d'être. Her mother states she could not bear her daughter's effort. All her daily routine is organised around a tight diet and hard training; as another male contestant puts it *'being a bodybuilder requires ten times more effort than folk would think'.* The female contestant in the TV show takes a black coffee and an eight egg white omelette every morning. Before the competition she takes a bit of chopped chicken with lemon. She cannot drink water. A male in the audience describes his food intake: two and a half kilos of meat a day plus two kilos of fish. He also spends some five hundred Euros per month on dietetic complements. Carlos, the other bodybuilder also explains the economic outgoings related to bodybuilding: in the build up to the competition he has spent in the range of 3,000-4,000 Euros in proteins, vitamins, amino acids etc.

The Commodisation of Body Image

The fourth and fifth stories' discourse narratives complement each other: in one case, a group of youngsters take part in a competition to choose Spanish Mr Universe and Miss World. In the other, two people are having cosmetic surgery. The stories could be seen as complementary since the people willing to undergo surgery are aiming to get closer to the hegemonic aesthetic standards promoted in beauty competitions. This beauty canon framed within postmodern individualisation searches for a body with no imperfections. 'In the social relationships market, the aspired norm is that of someone who is or looks young, strong, smiling, slim, healthy and assertive. A well proportioned body is perceived as a social achievement' (Rodríguez-Díaz, 2008: 54). One of the Miss World beauty contest participants makes the observation that a *nice looking person finds it easier to find a job.* Another participant affirms that *he hopes to make money with his body image one day.* In this sense, people from lower social classes can tap into their body image and sport to experience upward social mobility. A male Mr Universe contestant explains that he has worked really hard and put a lot of effort and sacrifice to get such a body and he has *even cried at the gym whilst doing press ups.* Beauty contests legitimise a new image meritocracy, where the accumulation of *body capital* (Bourdieu, 2008:188), gained through personal effort helps to be successful.

One's image becomes a very highly regarded commodity, since the hegemonic aesthetic norm is associated to the sales of all sorts of goods, not just clothes, perfumes or cars. Other products end up following the aesthetic trends, for example, Spanish Cruzcampo beer changed recently its logo to adapt better to modern times. The beer brand used to portray a middle aged man with a robust and well formed beer belly in its logo, whereas now it has a slimmer younger person holding the beer jar with a happy face. Spanish cleaning product *tenn* advert, first acted by British actor Peter Bland where he played one of the many fifty year old bald butlers over five decades, has been replaced by a very handsome and younger gentleman. It should not be surprising that in a visual dominated world, the image rights of some footballers bring them benefits as high as the ones obtained in the football stadiums: David

Beckham, Cristiano Ronaldo or Neymar, amongst others, have lent their body image to underwear advertising campaigns.

Going back to the relationship between beauty contests and cosmetic surgery, Jameson (2001) noted how one postmodernity characteristic was *the consumption of sheer commodification as a process*. A similar logic underpins this case: the ruling aesthetic norm helps to promote and sell all sorts of goods, whilst being consumed as a visual commodity at the same time. This explains the rise in the cosmetic surgery markets and anti-ageing treatments. According to the cosmetic surgeon taking part in the broadcast, Spain is the first consumer of cosmetic surgery in Europe and fourth in the world. Surgery has an important economic cost, but allows humans to treat themselves to a slimmer stomach, bigger breasts or to stretch their facial skin. Postmoderns affirm that in this way, humans portray an image where artificial and natural traits are fused into a new reality shape. As the surgeon recognises, *anyone's image could be transformed in only five minutes.*

Healthy Eating and Body Care

David is the character of the second story of the TV show. He is a middle aged male who suffers from morbid obesity and is trying to lose weight. David works in IT and spends long hours working sitting in front of his computer. His sedentary lifestyle and bad eating habits made him put on more weight. At some point he realised that his situation was untenable. The broadcast shows how he started to worry for his health after he met his partner and became a father, in his own words, *'I have decided to take care of myself because I hope to be around for my son'.* David's worries for his body sit apart from the people in the other stories. David does not want to lose weight to adapt to the predominant aesthetic standards as the man undertaking surgery; neither does he see his body as a *rock to be sculpted* to reach the perfection threshold of the bodybuilders. He is not trying to sell his image nor enjoy the fun associated with taking part in sports. As Rodolfo Sciammarellas' tango goes, *there are three things in life, health, money and love,* David has a good job, has realised his affective needs with his better half and son, and finally is willing to improve his health to square off his personal happiness. Improvements in his eating disorder will enable David to gain quality of life, defining quality of life as the situation in which humans are able to control their own lives, as well as their close environment, that is, the circumstances surrounding one's own existence (De Pablos-Ramírez, Pascual-Martínez and Gómez-López, 1999: 43). Human's sources of satisfaction come from the effective capacity of humans to exercise that control over their environment, not just through the deployment of some resources. David did not control his food intake, rather, food ruled him; he ate large meals twice a day compulsively. After his intragastric balloon surgery and the observance of a healthy diet, David is losing weight. David has regained ownership of his environment, he feels better, he has become more agile so he can now practise climbing, his favourite sport, and his family life has improved. In David's case, it can be affirmed that his raised awareness was pivotal for his body care.

FINAL THOUGHTS

Body Cult in the Post-Fordist Logic

The TV programme has elucidated many forms humans can deploy to take care of their bodies: sports (bodybuilding, jogging, climbing); specific diets to gain muscle, lose weight or keep fit; medical surgery to shape bodies (cosmetic surgery, intragastric balloon). The body cult market, in logic with Post-Fordism, is also becoming fragmented and evolving. The CIS survey (2010) confirms this reality regarding the sports practised by Spaniards. In 1995 the survey included a total of 25 federated sports; in 2010 the list went up to 46 (García-Ferrando and Llopis, 2011:87). The most widely physical activities practised by Spaniards were regular exercise and guided physical activity (34,6%) followed by football (24,6%). The first category includes pilates, aerobic, spinning, body pump, aqua aerobics, aqua fitness, aqua gym, gym- jazz, belly dancing, hip hop, capoeira, yoga, tai-chi and aikido. Secondly, football comprises four different ways of practising that sport: futsal, (five a side/ soccer/indoor football); futbito (five a side in an outside pitch/ more informal); 7 a side football and football played in a big field. Post-Fordism differentiations fully affect sport activities: on the one hand there is a rise in variety, with the entries of new sports that share similar components (beach sports, water sports, snow sports) and on the other, the range of sports widens up from just one – football and also its wider spectrum (Rodríguez-Díaz, 2008:57).

Postmodern Contradiction between Ideal Image and Real Obesity

Daniel Bell (1977) argued in his work 'The Cultural Contradictions of Capitalism' that social structure is underpinned by three layers: techno-economic, political and cultural. Each layer answered its own logic, a fact that led to a contradictory imbalance between the roles humans should play. For example, the social structure emerging from the techno-economic layer is hierarchical and bureaucratised, whilst the political paradigm is based on equality and participation.

A postmodern contradiction is observed in the tension between the hegemonic perfect body and the reality of a population which is becoming more and more obese. David's case, the male looking to lose weight in the TV show, is not an exceptional case. The Spanish national 2011-2012 health survey (Spanish National Statistics Institute-2013) shows worrying figures in this respect. 17% of the Spanish population over 18 (18% male, 16% female) suffer from obesity. The illness has not stopped growing since 1987 when the first health survey took place. Back then, 7,4% of the over 18 Spanish population was in the threshold or over the body max index. In 2012 the percentage went up to 17%. When combining obese and overweight percentages, 53,7% of the over 18 population was to be affected by this. When referring to child obesity/ overweight issues (2 to 17 years old), it is noted that 28,7% of youngsters are affected. Poor diet habits and a sedentary lifestyle- 41,3% of the population does not exercise, are behind many weight related health problems, causing other conditions such as hypertension, diabetes and high cholesterol. The tension between the ideal/ looked after situation and the reality are behind other eating disorders such as anorexia and bulimia.

The postmodern cultural paradigm makes a particular minority aesthetic standard appear to look the norm for the majority; this so-called aesthetic norm becomes more and more difficult for the masses to consume, as they are destined to become overweight due to the new life and work conditions. Social exclusion can be transferred to *one self's image impoverishment*, hand in hand with health poverty. It is not a mere coincidence that public health surveys point out that obesity figures go up the further down social class people are. Turning to another European capital city, in Glasgow, United Kingdom, statistics show the cruel reality for many people in Scotland: a male born in Bearsden, Milngavie, Lenzie, Clarkston or Kilmacolm (wealthier areas) can expect to live to over 80, according to data for 1998-2002. But a journey to the eastern side of Glasgow finds life expectancy plunging by two decades due to deprivation (Nelson, 2006). In 'Chavs, The Demonization of the Working Class' (2012) Jones speaks of the changing boundaries of social class in a Britain where everyone seems to want to label herself/himself as 'middle-class' due to the rhetoric of aggression towards the working class values. Jones describes how demonization promotes the belief that inequalities are rational, 'an expression of differing talent and ability' (Jones, 2012: 13) and indoctrinate society to believe that poverty and unemployment are personal failings rather than social problems. In the same sense, this neoliberal discourse, which bounces the responsibility of inequalities back to the poor, also blames the obese as the only ones responsible for their obesity. UK prime minister David Cameron stated: 'we talk about people being at risk of poverty, or social exclusion: it's as if these things- obesity, alcohol abuse, drug addiction- are purely external events, like a plague or bad weather. Of course circumstances (...) have a huge impact. But social problems are often the consequence of the choices people make*'*. As the paper *Daily Mail* headline put it 'Fat or poor? It's probably your own fault, Cameron declares' (Boden, 2008).

State Intervention: Health and Education

Obesity, overweight issues and eating disorders are taking on a global dimension and are becoming important public health problems. For the first time in history there are more human beings in the world suffering from overweight problems (2,100 million) and obesity (670 million) than malnourishment. The economic cost due to an overweight population accounts for some 153,000 million dollars in the USA according to the consultant company Gallup. In Europe the figure rises to 160,000 million according to Bank of America-Merrill Lynch (Gualdoni, 2014).

The health costs and the growing social concern have forced authorities to start taking action. Regarding eating disorders, some governments have tried to limit advertisement campaigns. In France and in the UK proposals have been discussed to make it compulsory to inform about cosmetic surgery taken by celebrities or politicians. This is the clearest example of visual simulation, since visual representations which help to set up the aesthetic standard for millions does not match the reality, although it is camouflaged as real (García-Gómez, 2009). However state intervention has geared its actions mainly towards education. In Spain, health and education authorities in collaboration with the regional governments of Andalucía, Canarias, Castilla and Leon, Ceuta, Extremadura, Galicia, Melilla and Murcia have implemented the pilot programme called PERSEO (2006) focused on making school pupils exercise in order to fight obesity. The regional government of Andalucía (2011) states in is

website 'this pilot programme consists of a set of easy interventions in schools which aim to promote healthy lifestyle habits amongst pupils, involving their families, taking simultaneous action at school canteens and the school environment to facilitate the choice of the healthier options'. Other European governments have made health and wellbeing a national priority, as is the case in Scotland.

Scottish liberal educational initiative known as *Curriculum for Excellence* (CfE) could be argued to delve into the values that citizens need in order to be equipped for a life full of virtue, and that is not narrow. CfE has identified four capacities around which learning and teaching is organised in schools for 3-18 years old, defining the aims of the Scottish education and society for the 21st century. These capacities are successful learners, confident individuals, responsible citizens and effective contributors. CfE encapsulates the values on which Scottish society is based: wisdom, justice, compassion and integrity, which are the values engraved in the Scottish Mace kept in the Scottish parliament. CfE makes three areas of the curriculum a responsibility for all teachers: literacy, numeracy and health and well-being. Policies such as Get It Right for Every Child (Scottish Government, 2007) make an explicit demand on teachers to pay attention to caring and the health and well-being of pupils. CfE is an outcomes based curriculum and the transferability of skills across different areas of learning is paramount. It recognises 5 main skill areas: literacy; numeracy; health and wellbeing; employability, enterprise and citizenship; thinking skills (SQA Skills Framework, 2013). It is however noted that health and wellbeing takes on a more holistic position: 'This is the ability to take care of yourself and others, and to be responsible for your learning and welfare. It includes managing your feelings, developing a positive and active attitude to life, and building relationships with others' (SQA Skills Framework, 2013). The health and wellbeing skill strand is divided into five further categories: personal learning; emotional wellbeing; physical wellbeing; planning for and making choices and changes; relationships. The policy document describes the meaning of physical wellbeing as *recognising the importance and benefits of healthy and active living and practising skills to make the most of positive aspects of activity, such as enjoyment and challenge*.

School intervention policies have their own limitations which make its aims more difficult to attain: promoting healthy lifestyles might have little impact if the learning is confined to the school walls only, and if parent/carers do not have enough time to lead and or reinforce the message learnt in schools at home. In order to shake the situation, an integral solution might be needed: governments should take a holistic approach and not only intervene with education policies but with fiscal and labour policies alike. It could be very difficult indeed to embark in a fight against obesity whilst companies don't actively support weight loss programmes by for example, redesigning work places (gyms, canteens, vending machines with healthy products etc) (Gualdoni, 2014). Tax breaks advantages for fruit and vegetables whilst higher taxes in unhealthy options, as in the case of alcohol and tobacco, could lead to more immediate effects than educational policies against obesity.

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Chapter 7

EATING HABITS, FALLS AND STROKE RISK

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INTRODUCTION

Ischemic stroke (IS) the most common type of stroke accounts for 70% to 88% of all stroke events (Ayala et al., 2002: 1197-1201; European Stroke Organization, 2008: 457-507; Brott et al., 2011: e464-e540; Chen et al., 2013: 91-95). As the commonest neurological disease, ranking only behind heart disease and cancer represents the third largest cause of death and leading cause of long-term disability (Allen and Bayraktutan, 2008: 105-116; Planjar-Prvan, 2010: 3-8; Furie et al., 2011: 227-276). Before menopause women more rarely suffer from stroke, but difference among the elderly become blurred (Thom et al., 2006: e8-e151). IS most often occurs in the seventh and eighth decades of life, whereby about ten percent of IS occurs at age of 45 (Nedeltchev et al., 2005: 191-195).

According to the American Heart Association, 795.000 people experience a new or recurrent stroke each year in the United States (Go et al., 2013: e6-e245). It is common for the patients who experience an IS to have both modifiable and non-modifiable risk factors for stroke (Khan et al., 2009: 62-7) because evolution of atherosclerosis and IS as clinical events are related to several modifiable and non-modifiable risk factors and that lowering levels of these factors result in benefit. Also, the blood lipid categories include a comprehensive list of lipids known as factor that can accelerate evolution of atherosclerosis (Ding, 2008: 27-31) or are protective and, lower the cardiovascular disease risk (Cuevas et al., 2000: 143-8; Brown and Hu, 2001: 673-86). Atherosclerosis is most frequent reason for the non-cardio embolic ischemic stroke (80%), while 20% from ischemic stroke are cardio embolic, and most frequent reason for their appearance is atrial fibrillation (European Stroke Organization, 2008: 457-507; Brott et al., 2011: e464-e540). In the general population and patients cohorts, risk factor profiles changed with increasing age (Andersen et al., 2010: 2768-2774; Berry et al., 2012: 321-329). A review from 2012 (Gayle et al., 2012: 244-250) reveals that nutrition can

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impact factors that increase the risk of stroke. Similarly to that, in a guideline (Furie et al., 2011: 227-276) and a case-control study (O`Donnell et al., 2010: 112-123) a healthy diet, could substantially reduce the burden of stroke (European Stroke Organization, 2008: 457-507) particularly making simple lifestyle modification (Allen, and Bayraktutan, 2008: 105-116) and/or with effective risk factor management (Gordon et al., 2004: 1230-1240; Furie et al., 2011: 227-276; Gayle et al., 2012: 244-250). Therapeutic lifestyle modifications to reduce high blood lipids and thus decreased stroke risk are based on decreased consumption of saturated fat and cholesterol (Gordon et al., 2004: 1230-1240) including moderate consumption of red meat, sausages and processed products (Lichtenstein et al., 2006: 82-96).

It is recognized that changing dietary habits of ethnic groups in Europe (Penelope and Santosh, 2008: 203-15) from a public health perspective are the basic intervention measures in concept of an integrate approach for prevention of main no communicable diseases such as cardiovascular disease, including stroke (European Public Health Monitoring, 2011). In Finland the diet (particularly fat consumption) has changed and these changes have led to a major reduction in population serum cholesterol, blood pressure levels and ischemic heart disease mortality (Puska et al., 2012: 245-251).

The Former Yugoslav Republic of Macedonia (henceforth Macedonia, or the Republic of Macedonia proclaimed its independence in 1991 when the transition period officially started was one of the poorest republic in former Yugoslavia and now is one of the poorest countries in Europe (Shukarov, 2011). In the current situation the Republic of Macedonia (RM) is a particularly significant example of the redefinition of the state`s economic role with disastrous socioeconomic results. As a result, present contrast between the local structures and a nation state-centric viewpoint of society, the effect of diverse socioeconomic policies, administrations, and/or organizations as elements of a system give rise to reflect the dynamic nature of the consequences of less power to regulate socioeconomic processes (Gjorgjev et al., 2006: Shukarov, 2011; Trenchov, 2012: 1-12). In general the transition period in Macedonia was considered to cause changes in lifestyle and health risk behaviors among Macedonian people (Macedonian Health Ministry, 2014: 1-30). An unhealthy diet as consequence of a transition in lifestyles that leads to increased risk of no communicable disease was noticeable (Macedonian Health Ministry, 2004: 9-10). Actually, dietary habits and physical activity levels monitoring as basis for new health promotion strategy to reduce non communicable disease mortality in Macedonia were prominent themes throughout the several investigations (Kosevska, 2004; Simovska-Jarevska et al., 2012: 370-374; Simovska-Jarevska et al., 2013: 20-30). In the background of the health determinants (Macedonian Health Ministry, 2014a), the results obtained from the national "cross-sectional" studies in the Republic of Macedonia with the aim to analyze and evaluate data for monitoring of eating habits in 2011 (Simovska-Jarevska et al., 2012: 370-374) and data on eating habits related to socioeconomic status of the participants in 2012 (Simovska-Jarevska et al., 2013: 20-30), indicate changes in eating habits (Simovska-Jarevska, 2012: 370-374) and socioeconomic difference (Simovska-Jarevska et al., 2013: 20-30) in educational levels and income of the consumption of the main health related foods of population aged 10 to 64 years. Regarding consumption of meat and meat products, most of the study participants consumed chicken and pork, less fish, little lamb and veal; too participants with higher education and higher income, more frequently used fish and beef meat (Simovska-Jarevska, 2013: 20-30). In literature, a differences in eating habits as matter of faith also was observed; Christian believers have experience stroke more frequently than Muslim believers as results of pork meat consumption

(Kosevska, 2004; Ejub et al., 2004: 33) and/or the type of fats in meats (Petrovic-Oggiano et al., 2011: 5-11).

On the basis of these findings of this literature review, the aim of this prospectively case-controlled study was to compare the possible adverse health effects of two different diets due to religious beliefs (consumption or not of pork meat, converted simply "users" versus "non-users") on stroke risk and to determine whether the changes in blood lipids levels in patients who had an acute phase of first-ever ischemic stroke disease (FIS) and normal control subjects were different between users and non users in both study groups.

MATERIAL AND METHODS

Participants

The study was conducted in Tetovo region in RM, including eligible 425 participants aged from 18 to 87 years of age, with a clinical assessment, a physical examination and with determination of lipid profile from a fasting blood sample measured at entry and dietary history was noted. The protocol was approved by the authority at Clinical Hospital Tetovo. All participants gave written informed consent. The participants who withdrew before completion of the study or who did not have all the required data to derive a response status were classified as no responders and didn`t take part in the present study. The clinical study conducted according to good s. All eligible participants were randomization was performed centrally according to a computer-generated scheme and was stratified by age, gender, religion, eating habits and blood samples collected on admission. In an exploratory analysis, accessibility participants based on the initial examinations (the clinical features and neuroradiological findings) were grouped into two study groups: patients with acute FIS (EG) and normal control subjects (CG), but analysis was done by dietary habits stratification. Disparities in eating habits as matter of faith was defined as the differences in pork meat consumption based on religion dietary restrictions. For objective assessment of the probability of first stroke episode for two types of diet due to religious beliefs assessment of dietary habits was conducted using self-designed questionnaire for the purpose of our previous study (Kamberi and Kamberi, 2012: 181-8) and a physical and neurological examination. Considering the popularity of lifestyle risk factors for IS to simplify the expressed results of our study, according the assessment of the frequency of consumption of various meats: beef/pork, regular consumer of pork meat were the first "users" subgroup included respondents who were once every day, once a week, once a month or once upon a time, whereas regular consumer of beef meat were the second "non-users" subgroup included respondents who never before consume pork meat. Detailed description of the design and methods and of its recruitment procedures and main results has been published (Kamberi et al., 2011: 68-75; Kamberi and Kamberi, 2012: 181-8).

In brief, the present study included a total of 231 patients (126 men and 105 women with an average of 65.7 years) with clinically and imagining verified diagnosis of acute first-ever ischemic stroke disease (FIS) at the Department of Neurology within Clinical Hospital in Tetovo, a secondary care teaching hospital, who were hospitalized between September 1, 2008 and August 31, 2010. The control group consisted of 194 randomly selected healthy subjects with similar gender representation without clinical and anamnesis data for stroke and

related clinical entities. Patients were verified with acute FIS using a detailed taken anamnesis, clinical detailed neurological examination and by means of computed tomography (CT) and/or nuclear magnetic resonance imaging (MRI) of the brain.

Data Analysis

Demographic and baseline characteristics of participants were summarized by descriptive analyses stratified by age, sex, religion and cohort of the frequency distribution of beef and/or pork meat in relation to FIS onset. Also, lipid profile was a priority measure in this study.

The fasting lipid profile was evaluated within days after the stroke onset or at entry and consisted of plasma concentration of total cholesterol (total-chol) (< 5.2 mmol/L, > 5.2 mmol/L,) triglycerides (Trig) (<1.70 mmol/L, >1.70 mmol/L, low density cholesterol (LDL-chol) (< 4.1 mmol/L, >4.1 mmol/L) and high density cholesterol (HDL-chol) < 0.9 mmol/L.

The type of eating habits of participants due to religious beliefs dichotomized as consumption or not of pork meat, typified as simple "users" versus "non-users" and the consumption of pork meat was analyzed by randomization strata into "Yes" and "No".

The age, gender and religion of participants were the statistical independent variables. The age of participants were coded into five groups less than or equal to 49, between 50 and 59, from 60 and 69, between 70 and 79 and equal or greater than 80. The participant`s doctrine were divided into the categories Muslim believer and Christian believer.

Data analysis was carried out using SPSS statistical software, version 17.0. Numerical data was expressed as mean ± SD. Patients and control subjects variables were compared by t-test for independent samples and unpaired test for univariate analysis. Confidence intervals were computed for all variables. Statistical differences were determined mainly through comparison of confidence intervals to assess consistency of associations and correlations were considered statistically significant if the p value was < 0.05. All statistical tests were two-tailed.

Study Limitation

In this selected cohort, data were weighted to reflect the selected characteristic of population in Tetovo region. According to the official census figures of 2002, Macedonia`s population consist of a majority of ethnic Macedonians (64.18%, predominately Orthodox, with a small Muslim minority), followed by ethnic Albanians (25.17%, predominately Muslims, with a smattering of Catholics and Orthodox), plus other ethnic minorities (Macedonian State Statistical Office, 2005). There most of Macedonian`s ethnic Albanians were and are concentrated in the western part of the country, and in certain municipalities (principally around Tetovo and Gostivar, an administrational area of Pollog). There Albanians represent the majority population (Trenchov, 2012: 1-12).

RESULTS

During the two years period, data were collected from eligible 425 residents from Tetovo region as study participants. The gender of the patients was presented in 126 (54, 55%) men and 105 (45, 45%) of patients were female. We found statistically non significant differences (Pearson Chi-Square = 0.523, p = 0.470) between patients and control subjects in the

performance of the gender (Table 1). The age at which FIS occurred was no significantly higher in men (66.17±9.48 years) compared to women (65.14±10.097 years). The mean age of the patients was 65.70 ± 9.76 years. Normal control subjects were in the group whose average was the youngest, 52.09 ± 14.49 years. These differences in the average age among participants normal control subjects and patients was confirmed statistically ($t = 11.35$, $p = 0.000$), so we can conclude that the age of patients with FIS has significant impact on onset of disease.

The study participants were dichotomized into "users" and "non users" and observed after dividing they into age subgroups presented in Table 2. The youngest patient was 37, and the oldest was 87 years old. The mean (median) value indicates that 45 (19.48%) of patients were in the age group of 50-59 years, 172 (74.46%) of patients were older than 60 years, while only 14 (6.06%) of patients were in the age group of 18-49 years.

As depicted in the table 2, regarding consumption of meat beef and/or pork at the 425 participant, most of the study participants consume beef and never before pork 312 (73.41%). Study results showed that 113 (26.59%) of participants from all age groups regularly consume pork meat, most of them 39/113 (34.51%) were from 50 to 59 years. With aging, the frequency of users decreased, 19/113 (16.81%) were from 60 to 69 years and 27/113 (23.09%) were from 70 to 79 years, while 7/113 (6.19%) were over 80 years.

Compared with the results obtained in all age groups, a great part of patients with FIS were users in the age group of 50 to 59 years 14/231 (6.06%), from 60 to 69 years were 12/231 (5.19%), and 21/231 (9.09%) were from 70 to 79 years, while 5/231 (2.16%) were over 80 years.

Table 1. Distribution of the study groups by gender

	Control	Patients	
Gender	subjects	with FIS	Total
	(n, %)	(n, %)	(n, %)
Male	99 (51.03)	126 (54.55)	225 (52.94)
Female	95 (48.97)	105 (45.45)	200 (47.06)
Total	194 (100)	231 (100)	425 (100)

Table 2. Dividing the study groups into age subgroups

Age	Control subjects		Patients with FIS	
Groups	Total	Users	Total	Users
(years)	(n, %)	(n, %)	(n, %)	(n, %)
18-49	79 (40.72)	17 (8.76)	14 (6.06)	4 (1.73)
50-59	65 (33.51)	25 (12.89)	45 (19.48)	14 (6.06)
60-69	26 (13.40)	7 (3.61)	83 (35.93)	12 (5.19)
70-79	20 (10.31)	6 (3.09)	72 (31.17)	21 (9.09)
80 >	4 (2.06)	2 (1.03)	17 (7.36)	5 (2.16)

Table 3. Sample characteristics relating to pork consumers

Variables	FIS`s disease		Total
	Yes	No	
Users (n, %)	56 (24.24)	57 (29.38)	113 (26.59)
Non-users (n, %)	175 (75.76)	137(70.62)	312 (73.41)
Total (n, %)	231 (100)	194 (100)	425 (100)

Table 4. Estimates of the relative risk between two study cohorts

Type of study	Value	95% Confidence limits	
Case-Control (Odds Ratio)	0.769	0.500	1.184
Cohort FIS	0.884	0.716	1.09
Cohort CG	0.8677	0.923	1.439

There were 79 normal control subjects whose age was less than 49 among them, 17 (8.76%) were users. The age of 65 normal control subjects was between 50 to 59 years of which 25 (12.89%) were users. There were 26 normal control subjects with age 60-69 of which 7 (3.61%) were users. The age of 20 normal control subjects was between 70 to 79 years of which 6 (3.09%) were users. There were 4 normal control subjects with age greater than or equal to 80 among them 2 (1.03%) were users.

To compare the probability of first stroke episode for two types of diet due to religious beliefs (consumption or not of pork meat, dichotomized into "Yes" and "No") between patients with FIS and normal control subjects according to food frequency data, all analyzed participants were categorized into users and non-users, while an about equal number of users. The contingency Table 3 displays the frequencies for each exposure.

In both groups dominate frequency of non-users. For these differences in the disease onset were presented in Table 3 we calculated odds ratios for the association of ischemic stroke with selected dietary habits; employing Chi-square test (table 4).

The odds ratio, show in table 4, provide an estimates of the relative risk. This estimate indicates that the odds ratio of FIS disease was 0.77 times higher in the users group; but the odds ratio was low with tightly confidence limits (95% CI = 0.500-1.184).

The participants with Christian believer were 122 and among them, 113 (92.62%) were users, while 9 (7.38%) were non users. The participants with Muslim believer were 303 and among them, not have users. Association between the consumption of pork meat and faith of patients with FIS is shown in Figure 1. The odds ratio from example analysis of crosstabs by chi-square statistics has a value (OR = 0.23, 95% CI = 0.009-0.061) suggesting the relative risk. FIS` disease was with more number of users in Christianity cohort, but according to the low value of OR with tightly confidence limits we can conclude that the association between these two parameters was weak and statistically insignificant ($p > 0.05$).

Additional analysis was performed to compare the lipid profile between patients and control subjects. The fasting lipid profile was evaluated within the level of total cholesterol, triglycerides, low density cholesterol and high density cholesterol in patients compared with control subjects which was dichotomy as users and non-users.

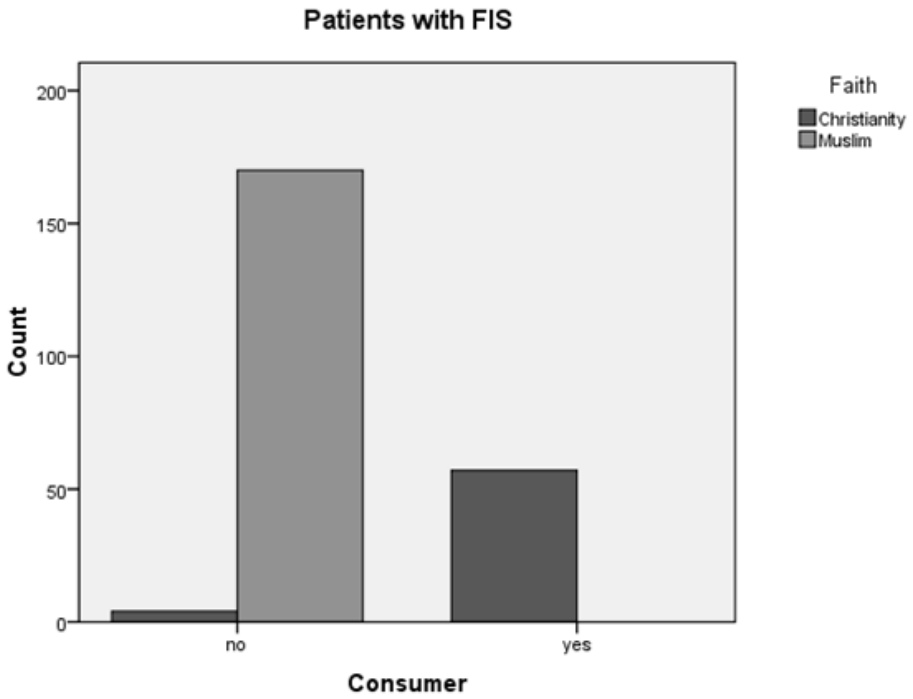

Figure 1. Association between the consumption of pork meat and faith of patients with FIS.

Table 5. Laboratory lipid profile results: comparison between patients with FIS and normal control subjects

Variables	Groups		
	Patients with FIS (n = 231)	Control subjects (n = 194)	Statistical analysis*
Trig (mmol/L)	1.65±0.66	1.70±0.79	0.526
LDL-chol (mmol/L)	3.87±0.87	3.18±0,92	0.000
HDL-chol (mmol/L)	1.06±0.25	1.19±0.44	0.000

***** Test for independent samples. All values are Mean ± SD and data are based on available measurements, including triglycerides (Trig), low density cholesterol (LDL-chol) and high density cholesterol (HDL-chol).

The plasma lipid profile was similar in users and non-users in both study groups except for the level of HDL-chol, which a significant difference in the level of HDL-chol was only observed in controls subjects between users and non-users.

Table 5 shows the distribution of respondents by normal control subjects and patients in terms of obtained results of lipid profile.

When the mean values of plasma lipid profile was compared between the patients and controls, significant changes were observed regarding mean values only for HDL-chol and LDL-chol. In patients with IS, the mean level of HDL-chol tended to be higher with a significantly higher mean level than in control subjects (1.19 ± 0.44 vs. 1.06±0.25 mmol/l; p

= 0.000), whereas in control subjects, the mean level of LDL-chol tended to be higher with a significantly higher mean level than in patients with IS (3.87 ± 0.87 vs. 3.18 ± 0.92 mmol/l; p = 0.000).

DISCUSSION

Analysis was done by the European Public Health Monitoring 2011 the main non communicable disease such as cardiovascular disease, type 2 diabetes mellitus, cancer, and obesity with their co-morbidities classified in category of nutrition-related disease and in what manner these represent the enormous public health problem (European Public Health Monitoring, 2011).

Recent data on the possible adverse health effect of changes dietary habits (Penelope and Santosh, 2008: 203-15) and attention on a number of factors inherent in modern diets (De Roos et al., 2001: 1233-7), including more fat in the diet (Cuevas at al., 2000: 143-8; Brown and Hu, 2001: 673-86) rather than less has brought increased attention to our work. Prospective studies of red meat consumption (including pork meat) and risk of IS (Misha et al., 2010: 2271-83; Kaluza at al., 2012: 2556-2560) have provided inconsistent results.

Consuming primarily meats with high content of fats, in particularly pork meat, that has been promoted as a model for inadequate eating in Macedonia was associated with cardiovascular disease, including stroke (Kosevska, 2004; Ejub at al., 2004: 33). However, obtained results of our two clinical studies disprove this view. To illustrate the disease effects of eating pork meat we examine the religion dietary restrictions characterized by consuming primarily pork meat in Muslims and Christian`s believer from Tetovo region. In the premier study (Kamberi and Kamberi, 2012: 181-8), we measure at baseline contribution of homocysteine levels and meal with high-fat content, particularly pork meat, as variant of traditional dietary fat habits in the acute phase of first-ever ischemic stroke due to the different dietary habits. Conclusion was that meal with high-fat content did not have an impact on homocysteine levels, whereas the limiting pork consumption due religion did not have an impact on stroke frequency. Of all the patients that experienced ischemic stroke, 24.24% were users; suggestive that clear only pork consumption rate was not a risk factor which eventuates in an ischemic stroke event.

The present secondary analysis also examined adherence of their diet`s effect on stroke risk by way of exception whether their meal with high-fat content, particularly pork meat, as variant of traditional dietary fat habits as a common and increasing habit may precede high blood lipid levels allusive association with atherosclerosis (De Roos et al., 2001: 1233-7), which eventually link with stroke event independently from traditional risk factors (Furie et al., 2011: 227-276; Gayle et al., 2012: 244-250). The eating habits of these two groups of participants were compared with lipid profile from a fasting blood sample measured on admission. Those who ate pork meat presented a risk of IS occurrence lower than those who never do. This report also concluded that there is insufficient evidence linking eating pork meat with meats with high content of fats and increased risk of IS (Siri-Tarino et al., 2010: 535-546).

Interestingly, Mediterranean populations referred to eat little meat than industrialized nations that eat more meat and have a low cardiovascular disease risk in comparison to their

Northern European counterparts (Vine et al., 2000: 640-4). The primary reason is the so-called Mediterranean diet (Chrysohoou et al., 2004: 152-8; Esposito et al., 2004: 1440-6).

American and European dietary guideline advocated moderate consumption of red meat, sausages and processed meat products (Lichtenstein et al., 2006: 82-96; European Stroke Organization, 2008: 457-507). And yet, from time to time choice is limited by marketable (Dietary guidelines for the Americans, 2010). The dietary guideline established by the Macedonia`s Ministry of Health in this year was bearing this in mind (Macedonian Health Ministry, 2014a). This guideline recommended, for example, benefits of the Dietary Approaches to Stop Hypertension (DASH) diets.

In view of the prevailing controversy about the role of eating meat and lipid composition of the meat, no significant association was found between the risk of total stroke and consumption of proteins, including the type of fats (Rosner et al., 2010: 39-45). The results of this study were fully compatible with our obtained results. So, the fundamental difference between Muslims and Christians in Balkan was that the first one has a unified eating habits and the second one a divided different fat meat source that could be solved with their faith because doctrine was involved in their eating traditional sources (Kamberi and Kamberi, 2012: 181-8). Concretely, the characteristics weakness of the type of fats in meat (Petrovic-Oggiano et al., 2011: 5-11) and/or pork meat consumption (Kosevska, 2004; Ejub et al., 2004: 33) were identify as one of the main reasons for important effects of the rise the risk of coronary heart disease, stroke and cardiovascular disease. Traditionally, pork was eaten only by Christians and not by Muslims, but for these authors (Kosevska, 2004; Ejub et al., 2004: 33; Petrovic-Oggiano at al., 2011: 5-11) only Christian believer would be threatened.

In this study, the previously mentioned traditionalism carried out by nature of the pork consumption as traditional eating habit in feeding of subjects for religious reason do not increase risk of first stroke episode in Christians believer. FIS`s disease is with high percentage of patients non-users.

The most consistent evidence for this correlation risk estimate by Ch-Square test from contingency table is provided by the comparison of disease rate between Christian`s believer who eat pork meat daily or rarely, and Muslim believer, who never eat pork meat.

With regard to the age and results of lipid profile, we found that significant changes between these two groups (EG and CG) were observed regarding mean values of age, high and low density cholesterol. Our results indicate that the disease starts frequently around the sixth decade of life and were similar to finding in more homogeneous populations (Nedeltchev et al., 2005: 191-195; Allen and Bayraktutan, 2008: 105-116).

We analyze possible sex difference in patients suffering FIS because controversy persists regarding gender differences in stroke incidence. Any studies regarding sex difference in patients with IS show the greater prevalence of IS in male (Forster et al., 2009: 2428-2432) but some studies emphasize the importance of stroke in female (Roquer et al., 2003: 1581-1585; Rothwell et al., 2004: 1925-33; Reeves et al., 2008: 915-26). However, other studies do not identify gender difference (Carlo et al., 2003: 1114-9; Sturm et al., 2004: 1327-33). In the presented study we not found a significantly higher incidence of FIS in women. Age of our stroke patients was no significantly higher in men than in women, with an average difference of about one year. According to other authors, women were significantly older than men at their first-ever stroke (Rodica et al., 2009: 1032-1037).

A group authors found that the frequency of consumption of beef and/or pork, increased in the male stroke patients more than in the females (Park et al., 2003: 622-634). In our study,

pork consumption rate also was more frequent in the male stroke patients than in the females of Christian believe. Except these, all fats by nature tend to increase cholesterol, triglycerides, the low-density lipoproteins and the higher-density lipoproteins in the blood. In other words, evidence was accumulating that the high levels of low-density "bad" cholesterol can accelerate evolution of atherosclerosis (Ding, 2008: 27-31). Whereas the higher ratio of the HDL-chol was protective and, lower the cardiovascular disease risk (Cuevas et al., 2000: 143-8; Brown and Hu, 2001: 673-86) so that few studies have compared the lipid profile in patients with IS and controls, but correlation between hyperlipidemia and IS remains controversial. One reason for this was that association was not uniform across the different studies since the lipid fractions probably vary and exerted probably a different influence on stroke risk (Wannamethee et al., 2000: 1882-1888; Iso et al., 2002: 2086-2093). In several studies, IS was associated with total cholesterol (Tirschwell et al., 2004: 1868-1875; Kurth et al., 2007: 556-562), with hypercholesterolemia (Sacco et al., 2001: 2729-2735; Koren-Morag et al., 2002: 993-999), with a low level of HDL-chol (Wannamethee et al., 2000: 1882-1888; Sacco et al., 2001: 2729-2735; Tanne et al., 2001: 2892-2897; Iso et al., 2002: 2086-2093; Koren-Morag et al., 2002: 993-999), or with hypertriglyceridemia (Tanne et al., 2001: 2892-2897; Iso et al., 2002: 2086-2093). However, not all studies reported an association with total cholesterol (Amarenco at al., 2008; Zhang et al., 2012: 1768-1774), or hypercholesterolemia (Iso et al., 2002: 2086-2093), and with hypertriglyceridemia (Wannamethee et al., 2000: 1882-1888; Sacco et al., 2001: 2729-2735). Although one study was show that hypertriglyceridemia was significantly associated with cardioembolic stroke compared to controls subjects (Dahl et al., 2000: 110-117), in another report authors have reported a significant association between hypertriglyceridemia and extracranial arterial atherosclerosis, but not with lacunar infarction or cardioembolic stroke (Iso et al., 2002: 2086-2093). In one study (Cerrato et al., 2002: 653-655) there were no found statistical difference for levels of total-chol, LDL-chol and triglycerides. Similarly, like this study (Cerrato et al., 2002: 653-655) our results do not demonstrate any evidence for an association between the fractions of lipid profile and IS.

Result up until now from the meta-analysis of prospective epidemiologic studies (Siri-Tarino et al., 2010: 535-546), conclude that there was no significant evidence for concluding that dietary saturated fat was associated with an increased risk of coronary heart disease, stroke and cardiovascular disease. Similarly review affirmative participants that following the DASH diet had significantly higher HDL-chol and lower LDL-chol levels compared with the control group, but this diet did not have an impact on triglyceride levels (Gayle et al., 2012: 244-250).

From another point of view, between a numbers of environmental factors that changes dietary habits of ethnic groups in Europe (Penelope and Santosh, 2008: 203-15) and a number of factors inherent in modern diets (De Roos et al., 2001: 1233-7; Hu, 2002: 3-9) consuming primarily meats with high content of fats, in particularly pork meat, and dairy products made of it that has been promoted as a model for inadequate eating in Macedonia (Kosevska, 2004; Ejub et al., 2004: 33) and in Republic of Kosovo (Petrovic-Oggiano et al., 2011: 5-11). A high fat diet is also typical for Finland, Austria and Greece, but in comparison with France, these countries maintains a high rate of coronary heart disease, whereas yet the French have a lower rate of coronary heart disease than many other western countries (Vine, 2000: 640-4). This coincidence has given rise to the fact that unhealthy diet (The report from the United

Nations, 2011) was also not absent in Macedonia (Macedonian Health Ministry, 2004: 9-10; Macedonian Health Ministry, 2014: 1-30).

Conclusive lead of social stratification with higher unemployment rates, deteriorated and unsafe living conditions were and now considered effects of the long time transition process in Macedonia which favored change on the diets of Macedonian people.

The consequence of this modernization modality meal with high-fat content (Kosevska, 2004) and "fast food" in fast food chain (Simovska-Jarevska et al., 2013: 20-30) were cognizable a sign of westernize as well as a common and increasing habit in RM. In the investigations conducted in Macedonia, contribution of the disparity in some of the poorest regions (Kosevska, 2004; Ejub et al., 2004: 33; Simovska-Jarevska et al., 2012: 370-374), the disparities in eating habits as matter of faith (Kosevska, 2004; Ejub et al., 2004: 33; Kamberi and Kamberi, 2012: 181-8), differences in food consumption based on education and/or occupation/income in population (Simovska-Jarevska et al., 2013: 20-30), an unhealthy diet consequence of a transition in lifestyles that leads to increased risk of no communicable disease (Kosevska, 2004; Ejub et al., 2004: 33; Simovska-Jarevska et al., 2013: 20-30) from among authors were interesting and prominent, but still unconvincing. Among other things, there how both socioeconomic changes and westernization impact on the diets of Macedonian people remains unclear.

In this regard, a single report (Shukarov, 2012) explores how the transition changes were still very sensitive question. He presents from citizen`s views and perceptions, effects of transition process and economic crisis in Macedonia. There was dissatisfaction, especially among young people and an overall dissatisfaction of the public with the social protection policy in the country. Apart from the problems typically attributable to the transition processes there were the overall deterioration of living conditions. The transition period additionally intensified poverty scale, the Macedonian population in general became more socially vulnerable, as the new poor (unemployed, redundant workers, internally displaced, disabled in the conflict and members of their families). The poverty has a serious impact on the health status of the population, in the case of RM specifically, on the accessibility of health services (Gjorgjev et al., 2006: 1-98). A group authors presents how availability of whole grain bread and eliminating "fast food" are intertwined with most important radical change in the food market and food production (Simovska-Jarevska et al., 2012: 370-374). They also indicate that the promotion of health through improving physical activity and dietary habits should be focused on younger age groups and adults over 50.

Data of this study noticed that the prevalence of consumers was decreased with the increasing age, which means the younger ages are more inclined toward consumption of pork meat. At the same time, in our participants of both study groups, an acceptance of westernize lifestyle was noticeable. These results were not surprising for those familiar with the Macedonian economy and was not experiencing a continuous social unrest.

Thus, in more general terms, the conclusion of our previous (Kamberi and Kamberi, 2012: 181-8) and recent study indicate that the increase risk of IS in individuals from Tetovo region comes indirectly from probability important cumulative effects of role and influence of the daily adaptation in "western" diet, and probability its effect on the major modifiable risk factors for stroke (Gayle et al., 2012: 240-250; Furie et al., 2011: 226-276), that may precede high blood lipid levels and are associated with atherosclerosis (Ding, 2008: 27-31), independently from traditional risk factors (Gayle et al., 2012: 240-250). Moreover, a more detailed description about extension of the westernize Macedonia lifestyle could not be solved

with the faith diet traditional sources and it wouldn`t be a bad idea to follow other countries way of doing such.

CONCLUSION

Results of our study show difference of stroke rate hospitalization in genders that difference was paralleled by differences in age of stroke patients.

In conclusion, this controlled study show that as the age increases, frequency of patients with FIS increase at individuals from Tetovo region, while frequency of pork meat consumers decreases. Those individuals not having a different plasma lipid profile although were more expected since to use pork meat in comparison with than those who no consume pork meat. Also the analysis exposes that lipid profile was not associated with IS.

From a religious perspective, Muslims and Christian believers from Macedonia still maintain their individuality. Maybe there was a higher risk from adaptation in "western" diet and/or by the combination of multiple co-existing risk factors, above than high levels of a single factor like consuming primarily meats with high content of fats, in particularly pork meat, that has been promoted as a model for inadequate eating in Macedonia. The process by which stroke risk was induced by adaptation in "western" diet as modifiable behavior, in Macedonia needs further study.

This study recommends promoting the lifestyle and health risk behaviors among Macedonia populations because the demographic, economic and social implications of long transition period were enormous which resulted in poor quality of life and health for an average subject in Macedonia. The impact of these factors has engendered some new phenomenon, not evidence before the 90s, such as tobacco use, physical inactivity, consumption of alcohol and unhealthy diet, four primary behaviors risk factors which were consider to cause a disturbing increase in the lifestyle transition. Also, Macedonia to go by through demographic transition, participation of elderly from 65 years to increase from 7.3% in 1991 to 11.9% in 2012 year. In 2011, 27.7% of population shacks up 75 US dollars monthly, whereas data from 2013 showed a high unemployment rate (31%) from workforce (Macedonian Health Ministry, 2014: 1-30). Literature was in the consensus that respondent`s education and occupation/income played a significant role in socioeconomic difference in eating habits (Simovska-Jarevska et al., 2012: 370-374). In populations` lifestyle exist serious problems and these data also provide inside into ways to shape a public health response. As a result, modernity, there`s a change in eating habits between tradition and modernity; a new example of the trend nowadays was that a large number of individuals were interested to "fast food". However, a considerable number of them are engaged in health risk behaviors. We need to change the way society view and treats the westernization impact on the diets of Macedonian people.

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PART III. ADVERTISING AND DISCOURSES ON FOOD

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Chapter 8

BETWEEN HEALTH AND BEAUTY: FOOD ADVERTISED AS MEDICATION

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INTRODUCTION

The obsession with attaining a beautiful body, which has taken hold in developed societies, cannot be explained as an isolated phenomenon. Instead, it needs to be framed within a larger context. This determination to achieve beauty must be understood as the result of a complex process affected by the cult of the physique and the medicalization of eating. These are different aspects of the same phenomenon that has an epicenter in the body. Mass media, in general, and advertising, in particular, are contributing to the spread of this new understanding of the body. Mass media is contributing to the extent of this new vision for the body, by reporting on it, but also by providing role models indirectly. Examples of it can be found in fashion and in advertising, and, to a lesser extent, in films.

On screens, catwalks, and advertisements, there is a constant parade of extremely thin girls and muscular boys, whose bodies have become the ideal for young people who dream of attaining the perfect body —a dream that often ends in personal and familial tragedy. This chapter, then, focuses on the field of advertising and addresses the medical issues currently introduced in food advertising and their connection with the widespread desire for a beautiful body, a body that must conform to the ideal model.

This chapter is organized into three sections. The first section outlines the aspects relating to the importance that the body has acquired in industrialized societies, a significance that finds its roots in healthism, the health consciousness movement, which emerged in the early 1900's, and the prominence that the new vision of beauty achieved by the end of the twentieth century. The second section addresses issues pertaining to food, either from the point of view of changing food habits, or their relationship to medicine and science. In the third section, the

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medical-scientific aspects of food advertising are analyzed. In addition, the vast corpus on which we have worked is comprised of advertisements that appeared in the Spanish press, taken from both newspapers and magazines, between 1900 and 2010. The combined volume of advertising messages (five hundred) gives a fairly accurate idea of the evolution of food advertising and its relationship to medicine in Spain.

THE OBSESSION WITH THE BODY

The obsession that modern man has for his own body is such that many psychiatrists have cataloged this excessive concern as a new pathology: *somatocentrism*, a word composed of the terms *soma* (body, in Greek) and *centrus* (center, in Latin). The cult of the physique is not new, but it has increased in the transition from the twentieth to the twenty-first century. The discovery of classical antiquity makes the Renaissance man realize that, in addition to a soul, he also has a body, which was considered to be its prison in the Christian tradition. Modern man begins to appreciate his body in the eighteenth century, fueled by the excavations in Italy by the German archaeologist Johann Joachim Winckelmann. The discovery of sculptures of heroes, goddesses, nymphs, and athletes, all of them young and beautiful, had a huge impact on the rethinking of the body (Mosse, 1996: 79). In this early stage, it was an elitist view that gradually spread to other sectors of society through a series of factors, such as increased leisure time, the overvaluation of material issues, the loss of the influence of religion, the appearance of the hedonistic spirit, and especially, "the vision of the body not as something degrading, but as a sign of beauty and a source of pleasure" (Díaz Rojo, 2001: 111). Apart from these social factors, health-care factors, such as improved nutrition and improved living conditions, the extension of health care, increased living standards, quality of life and the rise in life expectancy must also be taken into consideration (Elbow and Senne, 1993). Media, through film, television, fashion and advertising, have also had an impact upon it (Pérez Gauli, 2000, King, 2008).

The fact that the rediscovery of classical antiquity takes place in the late eighteenth century, just at the beginning of the Industrial Revolution, has led several researchers to link the appearance of the obsession with the body to the development and expansion of capitalism (Gracia-Arnaiz, 2007: 236; Juárez, 2007: 3). Both Gracia-Arnaiz, in her anthropological study of the medicalization of eating behavior, and Juárez, in her analysis of advertising of functional foods, agree that the preoccupation with the body is closely linked to capitalist society; more precisely, they link it to the implementation of the consumer society and the pathologies that it generates in the food sector. The fascination with the body dates back to the concerns of Renaissance and Enlightenment Western men, but it intensifies in the late twentieth century. In 1986, Pascale Weil, director of a research agency, published a book with an expressive title: *Il nuovo narciso: comunicazione pubblicitaria e individualismo*. This volume features an examination of individualism, social fragmentation, trivialization of consumption, symbolic consumption, hedonism, and higher status products as characteristics of the emerging consumer society. In the 1980's, the cult of the physique is established, and somatocentrism becomes a psychosis of contemporary man. As inseparable categories, beauty (exterior) and health (interior) are to be treated in the advertising-medical field. As two goddesses, beauty and health stand in modern man's pantheon. As such, modern man

becomes a fervent convert who ends up turning into a modern Narcissus, whose only horizon is a mirror where he can just contemplate his own body.

A) *A healthy body*- An advertising researcher feels that with food product advertising, "one has the impression of entering a laboratory" (Capanaga, 2003: 45). "The *Puleva Omega 3* oleic and omega-3 fatty acids act against triglycerides," "the new *Flora Pro-Activ Tension* contains dairy peptides, an ingredient in milk that helps to lower blood pressure," or "a spoonful of mayonnaise *Calvé* provides antioxidant vitamin E, omega 3 and 6, and no more than 5% of total calories." Such advertising vocabulary refers to "acculturation of scientific knowledge," a concept developed by Davo-Dardet and Alvarez (2003: 61). According to these authors, each society has its own health culture, which over time is transformed due to the introduction of scientific discoveries into popular knowledge. The acculturation of scientific knowledge consists in its popularization, and its outreach beyond the scientific community. In this sense, the concepts of "hygiene," created by the miasma theory and the nineteenth century healthism movement, and concept of "healthy living," created by chronic disease epidemiologists, have become commonplace in contemporary society. And the layman, like an expert, speaks of a "healthy lifestyle," "keeping in shape," "healthy food," or "*light* beverages" (Davo and Alvarez-Dardet, 2003: 64).

Current advertising has some elements that owe much to Protestantism. The notion of purification of the soul is now transferred to the body, which is subjected to a historically unprecedented attack on cleaning, grooming, and debugging. The objective now is to be clean, that is to say, outwardly healthy. As Diaz Rojo points out, "healthist advertising was a result of the emphasis on the culture of health by nineteenth-century American Protestant ideology" (2003: 218). This drive is not only a result of the Protestant concern with hygiene, but it is also a result of twentieth century hygienist sensibilities that, in addition to worrying about the prophylaxis of the body, also focus on food. Food now must be governed by the principle of the healthy and based on naturopathic precepts. The objective is to provide a lifestyle that improves and maintains health (Diaz Rojo, 2001: 112). From the perspective of public health, the body goes on to become the subject of a type of care and attention hitherto unknown. The body is presented as a whole that must be cared for on the inside (nutrition) and outside (hygiene). These are the foundations for a conception of the body--increasing its social relevance, extending it to the entire population and incorporating new scientific developments--that has come down to us today. This is the concept promoted by advertising: yogurts acting against cholesterol, dermatologically tested bath gels, toothpastes that prevent decay, sunscreen lotions, etc. Yet as far as body care is concerned, there has been a noticeable change. Today, caring for the body is not only a public health interest, but also, and especially, it is a personal one. In this sense, there has been a substantial transfer: the public interest has been privatized, from social welfare to the individual interest. And the body, which was the priority of public health care institutions, has become the object of attention of the individual, who is now concerned with his own wellness. Herein lies the great shift, by superimposing the individual concerns of consumer societies to the nineteenth century public health authorities' concern for the body. An "alliance between healthism and consumerism" has emerged from this combination, "a typical phenomenon of our society… closely related to the current narcissism" (Díaz Rojo, 2003: 218). In this sense, somatocentrism is also another aspect of individualism.

B) *A beautiful body*. - According to the tenets of scientific acculturation to which advertising contributes, the individual is now responsible for his own body, both internally (blood pressure, cholesterol, intestinal transit) and externally (silky hair, radiant teeth, moisturized skin). But healthism is not enough any longer, since the body must now also respond to a canon. Feeding it properly and grooming it conveniently is useless if the body does not conform to a standard paradigm. Somatocentrism has reached its peak; the slogan of modern man now could be "healthy on the inside, beautiful on the outside." Consumer society has regained the myth of Narcissus, the individual who falls in love with himself and has only himself to worry about, but whose referent is not himself, but the canon established and accepted socially, to which he must inexorably conform. Advertising has discovered that beauty, along with health, is a powerful selling point. As such, they have become absolute categories, so that one leads to the other. One does not exist without the other. According to the inference established by advertising, the person who drinks mineral water stays in shape. Staying in shape is beautiful because it conforms to the canon. It is not enough to eat well; one has to eat that which gives him beauty. Healthism provides not only health, but it also gives beauty. In this sense, as Diaz Rojo notes, there has been a major conceptual shift, from the notion that "what is healthy is morally good," to "what is beautiful is healthy." Advertising tries to persuade its target audience to "consume beauty to attain health" and tries to convince its recipients about the goodness of products that "will make them healthier because it makes them more beautiful" (2001: 119).

Unlike what happened in the past, in consumer society, health is not the manifestation of correct ethical behavior, but a goal in itself, a goal achieved through healthy eating. As is the case with food, the current concept of health is the result of a long medical-social process that began in Europe in the late eighteenth century, a time in which the body--understood solely as manpower--is subjected to observation and medical interventions (Vigarello, 2010). This brought about what Vallone called "health consumption" (2009: 98) to refer to a kind of health that has become itself a consumer object. Health is, therefore, the source of healthism and narcissism. In developed societies, health is so linked to other elements and has become so complex that it exceeds the strict health framework to become a "bio-psycho-social" phenomenon of health and life, health and self-esteem, and health and social acceptance (Bimbela Pedrola, 2003: 440). In this regard, we must not forget that the evolution of medical and public health principles run parallel to their aesthetic counterparts. Both are the result of the Enlightenment. And if the sculptures found by Winckelmann were beautiful bodies, they were also strong and vigorous. In other words, they were healthy. It is from this point on that exercising starts to be considered a form of body hygiene activity that tones muscles and strengthens the body, so as to make it suitable for both the fledgling industry and the national army (Mosse, 1996: 99). However, fitness indirectly presupposes a harmonic body, which is to say, a beautiful body. This is how health and beauty are intertwined. This connection is subsequently strengthened and accentuated by the medicalization of food that occurs in advanced societies.

THE OBSESSION WITH FOOD

From the earliest times, food has been an obsession for men. In the past, this was because it was scarce and its lack caused famine and disease; today, it is because it is excessive and uncontrolled, and also causes disease. In consumer society, waste has replaced scarcity, and overfeeding has replaced a subsistence food economy. Food, which was something biological for the vast majority, has become "a complex and multidimensional phenomenon," in which, in addition to biological factors (hunger, appetite, taste), others factors are involved, namely, economic (income, prices) social (culture, religion, family) and psychological (mood, stress), knowledge (about food and cooking), and even attitudes, beliefs, and values as well (Contreras and Hernández Gracia-Arnaiz, 2008: 155). The implementation of consumer society has triggered changes in both the consideration of food and of nutrition itself.

The increase in production from the Industrial Revolution caused less disparity in food distribution. This more egalitarian distribution of food increased after the 1929 crisis and continued to grow after World War II to reach what has been termed as the "democratization of food" (Martínez Álvarez, 2008: 9), a stage in which food is no longer a problem of accessibility but of symbolic consumption. It is during this lengthy industrial process, which begins in the late eighteenth century and continues to the present day, when the so-called "civilizing of appetite" occurs, due to a series of food reforms accompanied by a set of external (economic, symbolic, environmental) and internal (healthist, and hygienist) requirements. In Europe and the United States, both areas of Christian descent, many dietary recommendations become moral issues. The aim is to avoid the sumptuous elite consumption, the origin of many diseases, while simultaneously providing adequate nutrition to the workers. The current "balanced diet" ("an eating pattern based on the restriction or promotion of certain foods aiming to 'achieve a nutrition free of health risks'") is the latest manifestation of the civilizing of appetite (Gracia -Arnaiz, 2007: 238).

Great changes have occurred in the affluent society regarding food. First, technological changes have affected the food industry, from processing, preservation, and preparation of products, to the development of household appliances to facilitate daily-feeding chores. Also, there have been social changes, such as the transition of women into the labor market, the increase in people living alone, the reduction of physical demands required for work, and more leisure time, all of which require new types of food and new forms of eating. Finally, there are changes affecting the individual, such as a growing sense of individualism, hedonism and the importance of personal image, all of which also require specifically adequate healthy food (Oliva et al., 2008. 508). All of these changes have affected food decisively. As Martínez Álvarez highlights, "the changes in the mode of eating taking place in the last fifty years in developed countries have been greater than in all previous centuries" (2008: 9), a thesis which confirms the excellent research done by Gracia-Arnaiz (1997).

In Spain, the great "transformation" takes place between 1960 and 1990, as it moves from an agricultural to an industrial society, or rather from an almost self-sufficient to a throwaway society. Yet, in this gradual shift, distinct phases can be established: after a long and impoverished post-war (1940-1950), there is a period of industrial development and economic expansion, which ends up with the emergence of consumer society (1980 onwards) (Oliva et al., 2008. 507). In each phase, gradual changes in eating habits have led to what some authors call "food modernity," "a concept that, since the beginning of the twenty-first century, is a

recurring reference in the social sciences to discuss food consumption in societies with food overabundance" (Díaz Méndez and Gómez Benito, 2008: 247). This modernity refers to a type of society in which "the central food question is no longer to eat but, what to eat?" (Contreras and Hernández Gracia-Arnaiz, 2008: 156). And when the problem is oversupply and overconsumption, new problems and new questions arise, i.e., new pathologies and new eating habits, habits that sometimes cause disease and other times prevent them. It is precisely at this time of food overabundance when food and medicine come into contact.

A) *Food and Medicine*. - The relationship between food and health is as old as humankind. The Ancient Greeks already understood the connection as it was clearly portrayed in their medical treatments, which always contained the following maxim: let food be your medicine. The history of medicine is full of examples where food and health and, also, nutrition and disease have been linked, since "for years there has been scientific evidence on the relationship between eating and health" (Juárez, 2007: 31). Nowadays, this connection has exceeded the medical field to become commonplace in advertising. Due to the acculturation of scientific knowledge, it has become a practice that advertising exploits regularly. In consumer society, food has become "nutrition" due to the preponderance of medical discourse and scientific acculturation. Today, people do not eat any longer, they are nourished instead. The scientific aspects take precedence over the social, the symbolic, and the cultural aspects of food. The conceptual shift that takes place during the second half of the twentieth century, evolves from "addressing hunger and maintaining the body healthy," to "providing the body with the necessary nutrients and supplying hygienically safe food, which will not act as vectors of disease" (Arpe Muñoz, 2008a: 35). The fact that biomedical interpretation emphasizes physiological aspects at the expense of social aspects responds to a logic that is built to the beat of the medicalization of food. Thus, the growing medicalization is due in part to the relevance that the medical discourse has reached in Western societies, where there is a long tradition of "providing information and advice on the amount and proportion of healthy food, and on weight regulation and disease prevention" (Gracia-Arnaiz, 2007: 238).

Even though some scientists attribute the medicalization of advertising discourse to a "therapeutic ethos that characterizes modern advertising" (Díaz Rojo, 2003: 218), this medicalization is mainly due to healthism and the hygienist trends of the past two centuries. Therefore, the medicalization of advertising is a consequence of the medicalization of society. This does not preclude that advertising, always ready to disseminate new ideas and to sell new products, has also contributed to this medicalization (Scott, 2008: 157). The fact is that today food is more medicinal than ever, and modern man is obsessed with health. It is convenient, however, to clarify the type of health that advertising talks about. According to experts, health has three dimensions: objective, subjective, and social. The objective dimension "is the scientific concept" and "is based on morphological, physiological and etiological criteria"; the subjective "refers to the personal experience of the individual, the feeling of being healthy, their sense of psycho-organic wellbeing"; and the social dimension "is related to the ability of the person to comply with the expectations that society has deposited in him" (Díaz Rojo, 2001: 116). Advertising exploits the subjective view of health because "it conceives it not as the absence of clinically diagnosed disease, but as a personal experience related to the quality of life and also, the social dimension, as it connects it to the

natural environments, the vitality and the ability to forge social relationships" (Díaz Rojo, 2003: 222).

There is, therefore, a correlation between the medicalization of society, food, and advertising. In this sense, the language of food advertising increasingly resembles scientific language, as it is often in a cryptic language, laced not only with acculturated technicalities (cholesterol, protein, nutrition, vitamin complex) but also with terms unknown to the public (bifidus, isoflavones, prebiotic, sterols, peptides), a language which aims to give the recipient an "illusory knowledge" (Fazio, 2008: 28), and supplies the text with a pseudo-scientific aura to make the recipient believe that the purchased product contains the elements needed to prevent illness or stay healthy.

B) *Food and Science*.- Functional foods represent the ultimate example of the medicalization of food. According to Martinez Alvarez, president of the Spanish Society of Dietetics and Food Sciences, functional foods are "foods that provide non-nutritional beneficial physiological effects that can benefit the health of consumers" (2008:24). These "non-nutritional" foods do not nourish but still provide certain benefits to the health of consumers. The concept of "functional food" is recent. Its appearance and use is due to the Japanese, who in the mid-nineties began to develop various products, which incorporated lactic bacteria and oligosaccharides (Martínez Álvarez, 2008: 24). However, the current functional foods, also called designer foods, therapeutic foods, pharmafood, or nutraceuticals by its close association with medicine and pharmacy (Murcia et al., 2008a. 139), are the result of a long process that began thirty years ago in the context of the food industry. Three distinct stages can be distinguished in this process. In the seventies, the population was mainly interested in "foods with little processing", e.g.: yoghurt, fresh fruit juices, etc. The eighties observed a concern for "natural foods, characterized by being modified in fat and sugars," products rich in fiber and low in calories, fat, and sugars. The third stage of this process began in the nineties with the concept of "functional properties," which has promoted a formulation of products with specific characteristics, such as phytosterols, prebiotics, and probiotics (Sedo Masís, 2002: 97).

In the transition from one century to another, supermarkets were filled with foods that were "high in certain fatty acids or sterols, bioactive peptides, antioxidants, phytoestrogens, probiotic carbohydrates, as well as mineral fortified or fermented dairy products using prebiotic bacteria" (Juárez, 2007: 31), that is, products with medical functions, products more typical of a pharmacy than a supermarket. Currently, the dominant topic in food advertising is health (Capanaga, 2003: 53), and as such, a margarine company proclaims it as follows: "Because Flora is health. Just as it sounds: pure health" (1980). Examples of these are enriched and fortified foods (Arpe Muñoz, 2008a), probiotics (Arpe Muñoz, 2008b), foods with fiber (Gómez Candela et al., 2008), foods with omega 3 fatty acids (Urrialde Andrew, 2008), with prebiotic components (fontecha, 2008), with antioxidants (Murcia et al., 2008b) or polyphenols and flavonoids (Murcia et al., 2008a).

BEAUTY THROUGH FOOD

In food advertising two obsessions of developed societies converge: the preoccupation with the body, and the preponderance of the medical-scientific discourse. This combination has given way to new eating habits and to the emergence of new sports (jogging, aerobics, fitness), in both cases, aiming to make the body conform to the prevailing canon of beauty (Aranceta Bartrina and Serra Majem, 2006). In return, new pathologies result from this conjunction, such as bulimia, anorexia, orthorexia, and vigorexia (Díaz Rojo, 2001: 112). Focusing on the issue in a broader social context, it can be said that the subjects of developed societies, influenced by the media, tend to consider generally that their bodies do not conform to the established canon; they would like to conform as much as possible, because this adjustment would help them to achieve self-esteem and social acceptance. This goes to show that these individuals suffer, to a greater or lesser degree, some of the pathologies listed above. Since they have no real conception of their own body, they seek the solution in foods with medical properties and feel safer if their bodies conform to the official canon. If we also consider the medical axiom that people with eating disorders respond to a "dissatisfaction with their own bodies" (Martínez-González and Irala, 2003: 347), then it can be argued that modern societies are pathological, corporally speaking. They reject their own bodies in search of an unattainable model. In order to reach this goal, they look for food converted into pharmacopoeia. Advertising discourse has contributed to this process from its beginnings, although one can distinguish two distinct stages: a first stage, covering most of the twentieth century, and a second, which was born and developed in the last decades of the previous century and extends through the twenty-first century.

A) *Old Advertising.* - The influence of medical discourse in advertising is not new. Already in the early years of the twentieth century, children's product advertising with medical undertones is developed. This can be seen in the following announcement: *Nesfarina* baby formula is a "complete food high in phosphate, a highly nutritious product that makes children grow healthy and strong" (1920). In a time when access to food is scarce, tonics are an effective remedy for diseases related to poor nutrition. *Revalenta du Barry* is "a perfect food for convalescing individuals and for delicate boys" (1915). In this context of undernourishment, meat extracts play a fundamental role: meat extract *Dr. García Valdés* "is the best restorative tonic for anemia and convalescence, the most natural and effective tonic; containing the nourishment of three kilos of the best beef in Uruguay, yet it contains no drugs harmful on the stomach while it tastes pleasantly" (1930). It even helps you keep fit, to "keep in shape while eating." Mineral waters are very close conceptually and functionally to restorative foods, as seen in this ad: "Mineral, natural, sodium bicarbonate alkaline water. It is very effective for rheumatism, diabetes, stomach disorders, liver and spleen. Great at the table, preventing disease and infections, as it emerges at 60 degrees Celsius and, therefore, it is free of microbes" (1915). This ad could be inserted into any modern day newspaper, given the close link established between medicine and food. This connection is also very typical of the early twentieth century, i.e., La *Trappe* chocolates, "processed according to a formula approved by the Madrid's Municipal Chemical Laboratory" (1910). Yet, it is the next ad where the link between food and disease can be best observed. The threat of disease is used as a selling point, an argument that is still used today (with cholesterol, constipation, and high

blood pressure): "Moms, did you know that the health of many thousands of children is considerably weakened or lost, in some cases, if raised on milk from cows suffering from tuberculosis? Do not run that risk with your children and raise them with *Glaxo* milk, the best food for raising children, guaranteed to be free from the germs of tuberculosis" (1925).

The target audience to which the products are intended is very minor. It is intended for a kind of consumer who lacks in nutrition, is sick, or malnourished: *Maguilla* is a "special food for convalescent children and the elderly" (1905); *Chapoteatu* "nourishes anemic convalescents, tuberculosis sufferers, pregnant women, nursing mothers, the elderly, and any person showing a lack of appetite" (1915). However, food advertising today is aimed at a wider target audience, almost the entire population. Individuals in consumer society are obsessed with a and, to achieve it, lead a healthy life. This necessarily includes a healthy diet, namely, one that conforms to the principles of the "balanced diet" (Gracia-Arnaiz, 2007: 238). It is interesting to see how we have moved from a very medicalized advertising oriented to a minority (in the early twentieth century), to, in a little more than sixty years, a very medicalized advertising but now one that is oriented to the majority. If the minority to which advertising was directed at the turn of the century suffered any pathology, then one could infer that the increased medicalization of food at the end of the century implies that most of the population has sickened. In a way, this is what has happened. Today's society has solved the problem of access to food, but the solution has generated various pathologies. Some of them are of a serious nature (anorexia and bulimia) and affect a minority. However, others are of a lighter nature (the obsession with obtaining a canonical body) and affect the most people. Therefore, it is a society that some analysts have diagnosed with a mild psychopathology in which its origin is the obsessive preoccupation with the body, and consequently, for food.

In the case of Spain, the current psychopathology is the result of a process that can be divided into three phases. Its boundaries are fuzzy, but in general, they can be placed at the beginning, middle, and end of the twentieth century. In the first phase, early in the century, advertising emphasized the effect resulting from the consumption of the product: *Horlick* provides children with "a healthy and vigorous constitution" (1915). This philosophy, confined to infant feeding, circulated throughout the century: "So that your baby continues to grow healthier and stronger" (*Nestle*, 1995). In the second phase, mid-century advertising emphasized the causes, that is to say, on properties that the product had. This is a transitional phase, between the war (1940) and the establishment of consumer society (1970), when the industrial, economic, and social foundations for consumer society are established. It is also a period in which advertising begins to have a strong presence. However, since it is still a society anchored in the past, with eating habits attached to tradition, the new products "are presented as an inexhaustible source of new sensations for the palate," so as to "avoid the population's rejection toward industrial food." Thus, it can be said that advertising served to "introduce modernity through consumption" (Díaz Méndez and González Álvarez, 2008: 109). One way to avoid rejection, and incidentally to modernize eating habits, was to insist on the properties of the new products. At this point, the magic word was "nutritious." Although the word has been used in previous decades, it was at this point when it becomes persistent: the *Tulipan* margarine has "a powerful nutritional value" (1950); and *Artiach* cookies are "authentic concentrated nutrition" (1970). During the third phase, in the last decades of the twentieth century, advertising resorts to arguments related to both: the effects produced (since a canonical and healthy body can be attained) and the causes (these are healthy products,

medicalized). In a sense, it is the emphasis of certain trends that appeared in the second phase, boosted by the media, which have led to an obsession with food and with the body.

B) *Modern Advertising.* - Viewers, listeners, and newspaper readers receive a pseudo-scientific informational cascade on food products advertised on a daily basis. The health concerns that food advertising currently shows are embodied in the Spanish dairy company *Pascual*'s slogan: "The quality and your health, our reason for being" (1995). Many other brands have similar slogans: *Actimel* "(scientifically-proven to) helps support your kids' defenses," *Flora* "keeps your heart healthier," *Pascual* "helps you stay slim and keep fit," *Danacol* is "your daily heart ally (against cholesterol)" *Activia* "helps regulate intestinal transit time," *Flavia* (with soy isoflavones) "contributes to the relief of menopausal symptoms," *Bimbo fiber* has "lipoactive effect" and Yosport is "your fuel, with phosphorus, magnesium and calcium." The latter masterfully exemplifies the current consideration of food as fuel. However, this concept is not new, but dates back to Hippocratic theory, which considered food as medicine, passed through the mechanistic sieve of the eighteenth-century. Mechanistic doctors, influenced by the incipient mechanization, regarded the body as a machine for which the fuel was food. Hence, mechanistic doctors gave great importance to the diet, as they understood that food was the source of many diseases (Vigarello, 2010: 117).

What follows is a sample of "medicalized" products to show what has been stated about the medicalization of food advertising. Although dairy products are the most medicalized ones today, this trend affects, to a greater or lesser extent, all food products. One of the first advertisements in which medical arguments are used as a selling point is with the Spanish virgin olive oil:

> Natural supply of energy. The virgin olive oil *Coosur*, protector of the circulatory and digestive system is the first plant fatty food 98 percent biologically assimilable, rich in energy and vitamins (A, E, K, B). Coosur says much about the dietary value of a good Spanish oil (1975).

As indicated, baby food has traditionally been the one that has resorted to a medical sales pitch--an argument that continues today, albeit with the scientific terminology that modern times require:

> In order for your baby to continue to grow healthier and stronger, you have *Nestle Growth* milk, the complete formula that nourishes and satisfies. *Nestle Growth* is a purée made from thin cereal flakes previously selected and from milk of the highest quality, *Nestle* milk. It is also enriched with vitamins and minerals (calcium, phosphorus, and iron), with the correct sugar content and a pleasant taste (1990).

Pasta, traditionally a food for people of poor means, suddenly becomes one of the best foods:

> One of the world's most complete foods. Almost all of the protein you need, 15 vitamins and 9 minerals. For all of these reasons, many dietitians recommend pasta for weight maintenance. Combine this with the 68 different varieties we make at *Gallo*, and the hundreds of ways in which to prepare them, and you will see that, not only is it one of the most complete and healthy foods available but, certainly, one of the most varied. Noodles nourish

> as well and are as healthy as meat, fish, milk, fruit, and vegetables. Rotini with vegetables: more fiber, less than one gram of fat, no cholesterol, and no weight gain (1995).

The medical benefits not only appear on local products. The introduction of products from other cultures in the daily diet is due to their health benefits:

> The new *Vivesoy* is not a drink, it's a food. Discover a new healthy and balanced way to feed your entire family with Vivesoy desserts, a wholesome food, one hundred percent vegetable and no cholesterol, which helps to take care of your heart. In addition, all *Vivesoy* products are suitable for the lactose intolerant and are made from modified soya. How you live today will protect you tomorrow (2010).

Even products lacking the medical health aura such as margarine or mayonnaise have joined the healthism movement because "in industrialized countries today, being fat has become being sick" (Gracia-Arnaiz, 2007: 239):

> One tablespoon of mayonnaise makes you feel better than you think. Besides enlivening your dishes and making you enjoy them even more, a tablespoon of mayonnaise gives you antioxidant vitamin E, omega 3 and 6, and no more than 5 percent of the calories you need in your daily life. Put it on, it will be good for you (2010).

The obsession with health also extends to the manufacturing process, as shown in the following listing:

> Nobody puts as much on a milk carton as *Pascual* does. 1) Select cattle. Our milk comes from the best cows, fed with natural grasses and sanitary control. 2) Automatic Milking. This system prevents contamination risks caused by hand milking. 3) Tank cold. The milk goes directly from the milking parlor to the cooling tanks. And bacterial growth is prevented. 4) Tank laboratories. Daily milk is collected in isothermal tanks; authentic rolling laboratories that analyze milk in origin. 5). Reception control. The only milk admitted in our dairy processing plants must pass exhaustive quality controls. 6) Ultra-High Temperature Heating System offers the most modern treatment to extend our milk's shelf life, unsurpassed by any other brand in the dairy sector. 7) Packing in cartons. Cartons prevent the slightest alteration of milk by the action of light and offer great advantages. 8) Final quality control. Once packaged, milk is given rigorous testing to ensure the highest quality (2005).

The following advertisement, as shown below, represents the ultimate example of medicalization. In it, the product works almost like a drug:

> One a day helps lower blood pressure. The new *Flora Pro-activ Tension* contains dairy peptides, an ingredient in milk that helps to reduce high blood pressure. A F*lora Pro-activ Tension* per day, alongside a varied and balanced diet and a little exercise, will help you to enjoy a better quality of life. *Flora Pro-activ Tension*. Your heart is asking for it. For people who want to follow a varied and balanced diet to reduce high blood pressure (2010).

Nevertheless, this obsession with science itself conceals a contradiction common in developed societies: industrialization is an improvement in food, but also a departure from nature. But now, the natural has again become fashionable, as seen in the demand for products that combine the industrial and the natural. This is the reason for the "increase in

demand for functional foods with the sensory attributes of traditional food" (Juárez, 2007: 31). In other words, a traditional cheese, but with all the chemical ingredients that science can supply, that is to say, a drug with flavors and smells of grandma's kitchen: "Enrich the juicy summer dishes with authentic traditional flavor" (Kraft mayonnaise); "You control your shape without giving up the true taste of the best cheese" (Bonsi). Even in an excessively caloric product such as jam, a paradox exists: "Much pleasure, low calories" (Heros Diet). The resolution of the dilemma is offered in pasteurized milk Cunia: "With all the taste of real cow milk, and all its natural properties, you get nutritional value and quality".

CONCLUSION

Paradoxically, in industrialized societies where a traditional lack of food has been resolved, the problem now is one of overeating. But this abundance runs parallel to the concern with the body, more precisely by adjusting the body to the current social canon—an obsession that derives from a narcissism that is prevalent in advanced societies. Thus, modern man is torn between a huge food supply and the strict monitoring of the body shape. This dilemma has been resolved by advertising, with the help of medical discourse, transforming food products into pharmafood, that is to say, in food designed to maintain health, to prevent disease, and to provide a model body. Thanks to the consumption of medicalized products, the consumer attains a canonical body, that is to say, one that is harmonious, beautiful, and by all means, healthy. However, it should be noted that at no time have these products ceased to be advertised and promoted as food, as food bought in supermarkets: yogurt, milk, cheese, etc. Yet these are no longer traditional products, as they have been enriched, fortified, and ultimately modified. In this sector where food is both food and medicine at the same time, there is a new complication, as these modified, medicalized foods adhering to eco-fashion must contain the "classic" smells and tastes. The ideal product is a yogurt with the taste of fresh milk, one that provides both the calories necessary to stay in shape and the nutrients needed to prevent the rise of cholesterol.

It follows then, that in this field, the pathology of modern man is twofold. On the one hand, there is the rejection of his own body, which, through nutrition and exercise, he tries to conform to the prevailing canon—an unattainable canon which forces him to constantly fight to attain a shape that is more reminiscent of the world of ideas than the real world. On the other hand, modern man is caught trying to find a food that provides both health and beauty at the same time. Unsatisfied, he searches for a magic potion that will protect him from inclement weather and illness. It is unquestionable that scientific acculturation and the medicalization of society have led to this healthy product consumption psychosis, yet the fact remains that advertising has contributed to it by spreading messages that promote sculptural bodies, and at the same time, provide the elements needed (i.e. the proper nutrition) to achieve a similar body to that depicted in ads. Ultimately, these model bodies and the desire to imitate them is not just an advertising issue; it is much more. It is an economic issue with strong social, psychological, and cultural implications. This goes to show that advertising is very attentive to what is happening in society—a society that, with varying degrees of idealism, reflects the discourse of advertising and is also subjugated by it.

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Chapter 9

HEALTH AS A HOOK IN FOOD ADVERTISING

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INTRODUCTION

The emergence of newly coined terms such as "persecutory health" (Castiel and Alvarez-Dardet 2007: 464)[1] reflects society's growing obsession with the cult of the body, which has expanded beyond mere physical appearances and is now increasingly focused on health.

Echoing the findings of a study conducted by Vinizus, Young & Rubican, Monerris (2000: 52) has pointed out that people today strive not only to live longer, but to live better as well and associate quality of life with a healthy lifestyle. Attitudes have evolved over time. Whereas people once passively defined being healthy as simply not being sick and tended to perceive health as be a question of genetic predisposition, they have since developed an active interest in good nutrition, exercise and preventative science.

Whereas we bought low-fat (light) foods in the 1990s, we are now seeking foods that not only help us keep in shape but also offer health benefits. Such products are defined as functional foods.

One of the first countries in which the potential health benefits of functional foods was Japan, where they were defined as "foods for special dietary use" (Walter, 2009: 253).

FUFOSE (Functional Food Science in Europe) established a European position on the subject in 1999 by stating "a food can be regarded as 'functional' if it is satisfactorily demonstrated to affect beneficially one or more target functions of the body, beyond adequate nutritional effects, in a way which is relevant to either the state of well-being and health or the reduction of the risk of a disease".

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[1] These authors also make use of this term in Castiel and Alvarez-Dardet (2010).

HEALTH AS A NICHE MARKET

People in industrialised countries whose basic nutritional needs are provided for are increasingly demanding "(…) functional foods that have the physical characteristics of traditional foods but also offer the possibility of improving their health or lowering their risk of disease" (Juárez, 2007: 31).

What goes into today's shopping carts is proof of consumers' concern for their health: people with a previous penchant for low-fat, low-sugar, low-carbohydrate foods that were delicious, nutritious and helped them to control their calorie intake are now consuming more and more functional and health foods (González-Díaz, 2013).

Food companies have taken note of this trend and have progressively learned to exploit it to the maximum as a business opportunity. Monerris (2000: 53) points out that health has not only been used by food companies to position themselves in the marketplace; it has also become a powerful branding strategy. The market for healthy foods has generated entire new product categories in the sector: low-fat and no-fat foods, organically grown or bred foods and functional foods. There has been an incessant proliferation of functional foods throughout the industry during that last few years.

A study conducted by Braverman (as cited in Sédo-Masís 2002) has left no doubt regarding the boom that has taken place in this type of food production over the past thirty years. This author has studied the growing market for these products from two different angles: consumer behaviour and the industry's response to consumer demand.

During the 1970s, consumers became increasing interested in knowing whether products contained natural fruit ingredients. A second wave of functional foods became popular in the 1980s with the introduction of industrially modified low-fat and sugar-reduced foods marketed as "light". Braverman points out that the food industry began to focus its technology and production capacities on bringing a wide range of new modified foods to market during this decade. Throughout the 1990s, food companies began to place a sustained emphasis on the functional properties of food, an area of research the sector has continued to pursue and that has led to the development of new products with specific characteristics that feature probiotics, prebiotics, phytosterols and fibre.

However as González-Díaz (2013) notes, it's not enough for companies to simply develop new foods and introduce them to the marketplace; they must also make consumers aware of them through advertising campaigns that stress the potential health benefits that set their products apart from those of competitors.

THE REGULATION OF FOOD ADVERTISING

The regulation of functional foods in Europe was established by EU Regulation 1924/2006. Current European legislation covers two types of food-related claims: 1) nutrition claims (EC 2006, Art. 2.4), which are claims that state, suggest or imply that a food has particular beneficial nutritional properties, and 2) health claims (EC 2006, Art. 2.5 and 2.6), which are claims that state, suggest or imply that a relationship exists between a food category, a food or one of its constituents and health.

Claims relative to the healthy properties of foods are addressed in articles 13 and 14. Art. 13.1 contemplates the substantiation of claims on the basis on generally accepted evidence. Commission regulation (EU) No 432/2012 establishes a list of permitted claims covered by this article.

Art. 13.5 contemplates additions to existing claims on the basis of newly developed scientific evidence and/or which include a request for the protection of proprietary data. Art. 14 covers reduction of disease risk claims and claims referring to children's development and health.

It is also worth mentioning Article 4 of this document, titled "Conditions for the use of nutrition and health claims", which states that by January 2009 the Commission "Shall establish specific nutrient profiles, including exemptions, which food or certain categories of food must comply with in order to bear nutrition or health claims" and the conditions for their use. The inclusion of this measure in EU 432/2012 is considered to be of special relevance, given that it establishes the regulation not only of the use of nutrition and/or health claims, but also of specific characteristics of products for which claims are made in terms of their nutritional composition. This stipulation enables the regulation of the use of claims made for foods that contain nutrients or other substances such as fats, sugars, trans-fatty acids, salt and sodium that may be harmful to human health if consumed in excessive quantities[2].

As Juárez (2007: 32) has asserted, "Without a doubt, this regulation […] constitutes an important advance in the regulation of the advertising and labelling of foods".

Chapter VIII of Spanish Law 17/2011, of 5 July, on Food Safety and Nutrition addresses food advertising and states that commercial messages related to food must comply with:

> […] Law 3/1991, of 10 January on Unfair Competition; Law 34/1988, of 11 November (General Advertising Act); Royal Legislative Decree 1/2007, of 16 November, which approved the revised text of the General Law on the Protection of Consumers and Users and other supplementary laws; Law 7/2010, of 31 March on General Audiovisual Communication, and other special legislation that regulates and is applicable to activity in this sphere.
>
> 2. Likewise, food advertising actions carried out in any communications media or format must comply with applicable legislation and specifically to Royal Decree 1907/1996, of 2 August on advertising and the commercial promotion of products, activities or services with claimed health purposes (Law 17/2011 on Food Safety and Nutrition; Art.44.1 and Art.44.2).

In addition to following the guidelines set out in EU Regulation 1924/2006, which contains restrictions on the use of certain health claims in direct or indirect advertising or promotion, advertisers in Spain must also comply with applicable national legislation, which specifically prohibits:

> a) Advertising that attempts to use testimonials made by real or fictitious health professionals or scientists or real or supposed patients as a way of eliciting consumption of the product or suggesting a medical or scientific endorsement.
> b) Advertising that promotes the consumption of a given food as a substitute for a normal dietary regiment or common practices of good nutrition, especially in the cases of maternity, nursing, childhood or advanced age.
> c) Advertising that makes reference to the use of a product in health centres or its distribution by a pharmacy (Spanish Law 17/2011 on Food Safety and Nutrition; Art.44.3).

[2] http://aesan.msssi.gob.es/AESAN/web (accessed 22 August 2014).

STUDIES ON FOOD ADVERTISING AND HEALTH AND NUTRITION CLAIMS: A BRIEF SUMMARY[3]

Academics first began to address this topic in the 1980s. It was during this decade that the findings of research studies conducted by Colford (1984, 1985)[4] and published in *Advertising Age* documented a marked increase in the number of nutrition and health claims contained in advertising messages used to market food products. A few years later, Lord et al. (1987: 3) carried out another important study of advertisements placed by food corporations in a sample of twenty-one American newspapers[5], which concluded that nutrition and/or health claims were increasing being included in advertisements for food.

The number of studies devoted to this topic has increased over the past few years. Some of the most outstanding work that has focused on the inclusion of nutrition and health claims in advertising in different parts of the world includes the research carried out by Argarwal et al. (2006) and Abbatangelo-Graig et al. (2008) on television advertising in the US, studies of food advertising on Australian television conducted by Williams and Ghosh (2008), advertising in mainstream Australian magazines by Williams et al. (2007), and the content of Australian food companies' websites by Dragicevich et al. (2006). Research in this area has also been carried out by Joo Choi and Kuy Kim (2011), among others, in Asia.

In addition to the work of these pioneers, which continues to be an invaluable reference for ongoing research on health claims used by food companies in their advertising, other academic studies have analysed both the use of health claims in corporate food advertising and consumer perceptions of and reactions to these advertisements. Some of the most outstanding studies in this category have been those carried out by Moorman (1990), Golodner (1993) and Craig, Burton and Netemeyer (2000). The following is a brief review of some of the most interesting observations shared by these authors:

1. Consumers are more receptive to nutritional information in advertising when it is presented in a clear and simple manner (Moorman, 1990: 362).
2. Consumers tend to be confused by the use of the term "healthy" in advertising (Golodner, 1993: 130).
3. Consumers are prone to purchasing products that have been advertised as being good for their health or as containing nutritional ingredients (Craig et al. 2000: 35).

One of the first academic studies on food advertising in Spain was carried out in the early 1990s by Rodríguez-Zuñiga and Soria (1990). Among the academic articles focused on nation-wide food advertising campaigns in Spain, several worth mentioning include those by Díaz-Rojo (2003) and Díaz-Rojo et al. (2005), which focus on the characteristics of food product advertising claims, and another by Mariné and Piqueras (2006: 11) in which the authors established that Spanish consumers put greater stock in advertisements touting the nutritional value of a given food than in nutritional information contained on its packaging. Also of interest is "Alimentación, consumo y salud" (Food, consumption and health), a

[3] This section draws upon a review of the literature on food advertising and health claims carried out by González-Díaz (2013).
[4] Research cited in Lord, Eastlack and Stanton (1987).
[5] This study did not cover advertising for alcoholic beverages, soft drinks, juices, baby foods or pet foods.

foundation report edited by Díaz-Méndez and Gómez-Benito (2008), which provides an in-depth analysis of the subject that takes into consideration the food industry, the products it markets and advertising. Another interesting article was authored by Cuevas-Casado et al. (2012), whose line of research went beyond the basic analysis of health claims contained in advertising to include the study of the nutritional profiles of products for which claims had been made.

In the last instance, it is important to mention the findings of a study conducted by Rey-Fuentes (2012) that analysed health claims contained in popular Spanish newspapers and magazines during the period 1900–2005[6].

This author observed that while certain advertising approaches are employed at seasonal intervals, others are used throughout the year (Rey-Fuentes: 148-149). This author has noted that while health claims have been a recurring motif in food advertising in Spain since the beginning of the twentieth century, the nature of claims made has evolved in tandem with changing perceptions of what constituted a healthy appearance from one period to another. One can therefore assume that an emphasis on health has been a fairly constant element of food advertising, variably expressed in terms of a connection between consumption of a product and physical attractiveness, a product's inherently healthy characteristics or scientific evidence of the health benefits it offered:

> The relation between advertising and food [in Spain] can be summed up in the counterpoint between two period advertisements for dairy products: one for La Lechera and another for Danone. The first (1920) features an image of a proud mother showing off her son and the text "Look how handsome he is! That's how children raised on La Lechera condensed milk turn out. Try it on your son and you'll see just how nice and chubby he becomes". In contrast, a more recent advertisement (1990) depicts svelte men and women taking a dip at a spa under the slogan 'Danone Bodies'". Health has been a recurring theme in [food] advertising throughout the century. However, its viewpoint and focus have changed notably from one period to another. These two advertisements say it all. In one, health is associated with chubbiness, whereas in the other it is associated with slimness (Rey-Fuentes, 2012: 138).

To round out the examples from the 1990s provided by the above author, we offer a few slogans used in television commercials aired in Spain in 2006 documented by González-Díaz (2013) in which the concepts of health and science are linked to highlight the health benefits of functional foods: "Ayuda a sus defensas" (Boost your defenses) (Actimel); "con Bifidus Activo" (with active bifidus) (Activia); "Reduce el colesterol y mantiene su eficacia" (Reduces your cholesterol level and keeps it in check) (Benecol).

Rey-Fuentes (2012: 128) once made the apt observation that in contrast to their colleagues in English-speaking countries, few academics in Spain have carried out research on functional foods. Intended, in part, to remedy this situation, the research reported here was undertaken to provide an analysis of the messages contained in food advertising in Spain that focused on 1) the use of health as a central theme in food advertising as compared to the use of other thematic elements and approaches; 2) the brands that made the greatest use of health as an theme in their advertising; 3) the types of claims featured in advertising spots as per

[6] The sample for this study was compiled by dividing the 105-year period under study into 22 separate 5-year periods and selecting 33 representative advertisements from each period. A total of 666 advertisements were analysed.

classifications established by regulations in force; and 4) the context in which the product was presented in an advertisement.

METHODOLOGY

The methodology applied in this study was content analysis, which is defined as "a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (Berelson, 1952: 18). It follows from this definition that in order to objectively and systematically quantify the content of a sample of texts, one must first create a system of categories that facilitates the accurate coding of the various elements of the message that each text contains.

The chosen subject of this analysis was the television advertising spot, understood for the purposes of this study as "a short film with a duration of between 10 and 90 seconds […] that is normally broadcast between television programmes or during commercial breaks in a single programme" (Ortega-Martínez, 2004: 121).

Pilot testing was carried out on a sample of 33 advertising spots[7] for food products classified as dairy products, yoghurts and perishable desserts by Infoadex[8]. These spots had been aired in 2013 by Spain's main television broadcasting networks.

Data coding is one of the most important phases of research, given that the quality of the results of any analysis is contingent upon correct coding. However, researchers do not always carry out this phase of their work with due precision. There are many reasons why researchers commit errors in the coding of audiovisual material, but the most common errors can be attributed to:

1. A coder's lack of familiarity with the variables of a study that has been designed by another person.
2. Arbitrary and subjective decisions made by a coder who may have created a set of variables for the study he or she is conducting but lacks a standardised set of instructions designed to ensure that all audiovisual material to be analysed is coded coherently.

To reduce the probability of coding errors, a manual for recording data that clearly defined each of the variables to be used was prepared prior to screening the spots chosen for analysis. Once the coding manual had been compiled, SPSS.22 statistics software was used to prepare a template that could be used during the screening and data coding process.

Both authors participated in the screening and coding of material to be studied. Disagreements that arose during this process were resolved by consensus.

[7] The purchase of spots from INFOADEX was made possible thanks to funding from the University of Alicante for an emerging R&D project titled "Estudio de la presencia de los mensajes de salud en la publicidad de alimentos" (A study of the presence of health claims in food advertising GRE12-18) directed by Cristina González Díaz.

[8] http://www.infoadex.es.

RESULTS

The following is a summary of the results of this study. Of the 33 advertising spots coded for analysis, 11 (33,3%) fell into the category of yoghurts and perishable desserts and 22 (66,7%) into the category of dairy products[9].

A. A Thematic Analysis of the Advertising Spots Selected for the Study Sample

For the purposes of this study, a maximum of three themes were identified in the spots analysed, given that "Thematic focus in advertising is variable and thematic elements are not always conveyed in the same manner. Some constitute the central theme of an advertisement while others are rarely or never featured alone but rather as part of a conceptual package. They normally appear in clusters of two or three" (Rey-Fuentes, 2012: 131).

The classification system used in this study was based on prior systems developed by González-Díaz (2013) and Rey-Fuentes (2012: 130-131).

Themes were tabulated in the order that they appeared in an advertising spot. Findings show that of the 12 types of advertising themes established as variables for this study, the presence of 7 was detected in the material analysed: "health", "exclusive flavour", "ecology", "price point", "novelty", "tradition" and "other". Conspicuously absent from the advertisements viewed were allusions to: "originality" (references to a product's uniqueness); "beauty" (links made between consumption of a product and beauty); "packaging" (focus on particular characteristics of product packaging); "status" (references to supposed connections between consumption of a product and a specific social group) and "convenience" (descriptions of the ease with which a product could be consumed and/or prepared).

Table 1. Thematic variables in advertising spots analysed

Thematic variables in advertisements	Key advertising themes
	1. Health
	2. Uniqueness
	3. Beauty
	4. Exclusive flavour
	5. Ecology
	6. Price point
	7. Packaging
	8. Status
	9. Convenience
	10. Novelty
	11. Tradition
	12. Other

[9] As this was a pilot study, it covered the analysis of all advertising spots in the dairy product category, but only some of the spots categorised as yoghurt and perishable dessert advertisements.

Table 2. Frequency distribution in percentages for theme 1

Type of advertising theme	Valid percentages
Health	75.8%
Price point	9.1%
Novelty	3.0%
Tradition	3.0%
Other	9.1%
Total	100%

Table 3. Frequency distribution in percentages for theme 2

Type of advertising theme	Valid percentages
Exclusive flavour	12.5%
Ecology	6.3%
Price point	12.5%
Novelty	62.5%
Other	6.3%
Total	100%

Table 4. Frequency distribution in percentages for theme 3

Type of advertising theme	Valid percentages
Ecology	25%
Price point	50%
Other	25%
Total	100%

Allusions to health, which appeared in 75.5% of the advertising spots analysed, was by far the most frequently detected motif, followed by a focus on a product's novelty and innovative characteristics (62,5%) and appeals based on the affordability of a product, offers or promotions.

B. Brands Represented in the Sample and Health Claims

The companies responsible for the bulk of the 33 advertising spots analysed were Danone (33.3%) and Central Lechera Asturiana (27.3%). These were followed by Puleva (18.2%); Pascual (12,1%) and Nutrexpa, Nestlé and Kaiku, each of which accounted for 3%.

The brand name products featured most frequently in these spots were Actimel, Activia con Bifidus Actirregulares, Danacol and Densia Forte – all of which are manufactured by Danone and each of which accounted for 6.1% of the overall sample – and Leche Asturiana (9.1%) and Leches Ligeras (12.1%), both of which are produced by Central Lechera Asturiana. Advertisements for Puleva's Omega 3 milk were also prominent, representing 9.1% of the spots in the sample.

In terms of the use of health as a motif in the food advertising spots analysed, all the food companies covered in this study touted their products as being healthy. Danone, which

accounted for 8 spots, was the firm that focused the most on this theme in its advertising, followed by Puleva and Central Lechera Asturiana.

C. Type of Health-Related Advertising Claims as Defined by Current Legislation

The television advertising spots that focused on health were analysed to determine what kind of claims they most frequently contained. Categories for these variables were based on the definitions established in EU Regulation 1924/2006 mentioned earlier in this text: 1. nutrition claims and 2. health claims.

A third variable was established to cover advertising spots that might feature both types of claims.

More spots contained claims based on the nutritional values of the product being marketed than health claims as defined by EU 1924/2006 (40%). However, a fairly large number (36%) featured claims that linked consumption of the product with health benefits. Fewer of these advertisements (24%) employed both types of claims.

The table 6 provides a breakdown of the health- and nutrition-related claims contemplated in European legislation and the articles of EU 1924/2006 in which they are specifically addressed. Of the 33 spots analysed, none was classified as containing claims of the type contemplated in Art.13.5.

Thirty-six percent of the spots in the sample featured claims included in the list referred to in Art.13.1. The same percentage featured claims covered by Arts. 8 and 9. A smaller percentage contained the reduction of risk claims or claims referring to children's development and health contemplated in Art. 14.

D. The Context/Scenario in Which a Product is Presented in Advertising

We applied a classification system used in prior research conducted by González-Díaz to divide the range of contexts in which products were presented in the advertising spots into eight specific categories:

1. A protagonist is shown eating and enjoying the product with friends
2. A protagonist describes the product's characteristics
3. Action taking place in the spot has no relationship with consumption of the product
4. The spot features only an image of the product being advertised
5. A protagonist recommends or offers the product to another person
6. A protagonist describes how the product solved a problem
7. A protagonist points out the product's positive attributes
8. Other

The same procedures used to categorise and tabulate the types of claims present in the spots were applied in the categorisation and tabulation of the various contexts in which products were presented in these commercials. A maximum of three contexts/scenarios were identified in each commercial.

Table 5. Number of spots by theme and brand[10]

		Theme of advertising spot					Total
		Health	Price Point	Novelty	Tradition	Other	
CENTRAL LECHERA ASTURIANA	Number by category	6	0	0	1	2	9
	% within category	24.0%	0.0%	0.0%	100.0%	66.7%	27.3%
DANONE	Number by category	8	3	0	0	0	11
	% within category	32.0%	100.0%	0.0%	0.0%	0.0%	33.3%
KAIKU	Number by category	1	0	0	0	0	1
	% within category	4.0%	0.0%	0.0%	0.0%	0.0%	3.0%
NESTLÉ	Number by category	0	0	1	0	0	1
	% within category	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%
NUTREXPA	Number by category	0	0	0	0	1	1
	% within category	0.0%	0.0%	0.0%	0.0%	33.3%	3.0%
PASCUAL	Number by category	4	0	0	0	0	4
	% within category	16.0%	0.0%	0.0%	0.0%	0.0%	12.1%
PULEVA	Number by category	6	0	0	0	0	6
	% within category	24.0%	0.0%	0.0%	0.0%	0.0%	18.2%
Total	Number by category	25	3	1	1	3	33
	% within category	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

$P = 0{,}001$, $\chi^2 = 56, 036^a$

[10] The data presented in this table are based on actual incidence.

Table 6. Study variables for claims and their basis in current EU legislation

Type of claim	Relevant article of EU Regulation 1924/2006
1. Nutrition claims	Art. 8 and 9
2. Health claims	Art.13.1, which contemplates a list of permitted health claims established in (EU) Nº 432/2012.
	Art. 13.5 Health claims based on newly developed scientific evidence and/or which include a request for the protection of proprietary data
	Art. 14 Reduction of risk claims and claims referring to children's development and health

Table 7. Results for first context identified for each advertising spot

Context	Valid percentages
Protagonist shown enjoying the product with friends	15.2%
Protagonist describes the product's characteristics	48.5%
Action has no relationship to consumption of the product	12.1%
Spot features only an image of the product being advertised	3%
Protagonist describes how product solved a problem	21.2%
Total	100%

Table 8. Results of the second context identified for each advertising spot

Context	Valid percentages
Protagonist shown enjoying the product with friends	22.7%
Protagonist describes the product's characteristics	4.5%
Action has no relationship to consumption of the product	9.1%
Protagonist recommends or offers the product to another person	45.5%
Protagonist describes how product solved a problem	9.1%
Protagonist points out the product's positive attributes	4.5%
Other	4.5%
Total	100%

Table 9. Results of third context identified for each advertising spot

Context	Valid percentage
Protagonist shown enjoying the product with friends	55%
Protagonist recommends or offers the product to another person	20%
Protagonist points out the product's positive attributes	15%
Other	10%
Total	100%

Table 10. Contexts/scenarios in which products were presented

			THEMES USED IN ADVERTISING SPOTS				
			Health	Price Point	Novelty	Tradition	Total
In what type of context is a product is featured?	Protagonist and others shown enjoying the product	Number by category	4	0	1	0	5
		% within category	22.2%	0.0%	100.0%	0.0%	22.7%
	Protagonist describes a product's characteristics	Number by category	1	0	0	0	1
		% within category	5.6%	0.0%	0.0%	0.0%	4.5%
	Action has no relationship to consumption of the product	Number by category	0	2	0	0	2
		% within category	0.0%	100.0%	0.0%	0.0%	9.1%
	Protagonist recommends/offers the product to another person	Number by category	10	0	0	0	10
		% within category	55.6%	0.0%	0.0%	0.0%	45.5%
	Protagonist describes how product solved a problem	Number by category	2	0	0	0	2
		% within category	11.1%	0.0%	0.0%	0.0%	9.1%
	Protagonist points out the product's positive attributes	Number by category	1	0	0	0	1
		% within category	5.6%	0.0%	0.0%	0.0%	4.5%
	Other	Number by category	0	0	0	1	1
		% within category	0.0%	0.0%	0.0%	100.0%	4.5%
Total		Number by category	18	2	1	1	22
		% within category	100.0%	100.0%	100.0%	100.0%	100.0%

$P = 0{,}001$, $\chi^2 = 47, 422$.

The context most frequently employed in these spots was a scenario in which a protagonist was depicted as enjoying the product (55%). The second and third contexts identified were those in which the characteristics of the product were described (48,5%) and in which one person recommended or offered the product to another.

In terms of advertising spots that contained health claims, scenarios in which someone recommended or offered the product to another person (55,6%) and in which the protagonist and other people were depicted enjoying it (22,2%) were the most common.

Scenarios in which people enumerated the problems these products solved for them (11,1%) or in which the characteristics of the product were described (5,6%) were employed to a lesser degree.

CONCLUSION

The majority (three-quarters) of the television advertising spots analysed contained some kind of health-related claim. This finding coincides with the results of earlier studies. Authors such as Coldford (1984, 1985)[11] detected this trend in food advertising in the 1980s, a period in which the food industry first began to develop foods enriched with nutrients or other substances that would eventually be denominated functional foods and "light foods" that contained less fat, both of which were of interest to people seeking to maintain a healthy diet.

The findings of a study carried out by Rey-Fuentes (2012: 146) on food advertising in Spain from 1900 through 2005 revealed that health claims had been used continually to promote food products in this country for more than a century. A study conducted by González-Díaz (2013) regarding television commercials aired in Spain in 2006 confirmed the continuity of this trend. On the basis of the findings of this study and the cited contributions of previous authors, we can conclude that health claims have been used to promote food products throughout the twentieth century and for more than a decade into the twenty-first century and that they are currently used more frequently than any other theme to promote products in this category.

The findings of the current study demonstrate not only that health is the predominant theme of today's food advertising, but also that the majority of health-related claims made focus exclusively on the nutritional values of a product rather than specific health benefits that may be derived from its consumption. This confirms the results of the study carried out by Lord et al. (1987: 13) in the 1980s.

In terms of the context in which products were presented in the television food advertisements analysed, two scenarios stood out for the frequency with which they were employed: 1. situations in which a protagonist recommended or offered the product being advertised to another person; and 2. situations in which a protagonist and others ostensibly enjoyed consuming the featured product. These advertisements had an emotional, rather than a rational, appeal. However, advertisements that contained some sort of health-related claim were crafted to have a more rational appeal. The most frequent contexts for product presentation in this category of spot were scenarios in which a person related how a product proved to be the answer to a problem or described a product's characteristics. Spots featured scientific or rational arguments for the effectiveness of the product being endorsed less frequently than other types of appeals.

This study set out to identify the various types of themes used in food advertising in general and those that employed health-related claims in particular. During the viewing of the spots that made up the analysis sample for this study, it was observed that an increasing number of foods are being promoted as what authors such as Rey-Fuentes (2010: 166) and Murcia et al. (2008: 139) refer to as "alicamentos"[12], which they define as foods purported to offer health benefits that are marketed in the language of medical community.

According to Rey-Fuentes (2012: 136), "The volume of scientific terminology contained in [some] food advertisements makes them practically identical to instructions provided for

[11] Studies cited in Lord, Eastlack and Stanton (1987).

[12] "Alicamentos" is a portmanteau word that combines the Spanish words for food (alimento) and medicine (medicamento).

prescription medicines". The affect is such that Capanaga (2003: 45) describes it as a feeling of having been transported to a scientific laboratory through the magic of advertising.

As González-Díaz et al. (2012) have pointed out, the discourse employed in advertisements that link functional foods to human health threatens to blur and break the fragile boundary between food and medicine in the minds of consumers.

Mariné and Piqueras (2006: 12) have already raised a voice of alarm concerning the limitations of current consumer protection in this particular area. Although EU Regulation 1924/2006 establishes the types of messages related to health claims that can be used in advertising, it would make sense to strengthen this legislation further by adding specific guidelines regarding the style of language that advertisers may employ and the type of information they may provide in their descriptions of the characteristics of the products they are marketing, which in any case should be appropriately geared to consumers who may have little or no medical or scientific training[13].

We strongly encourage other researchers working in the field to conduct further studies that focus on the identification and documentation of the presence of health-related claims in food advertising. In addition, we recommend that any such endeavours not only include an analysis of how the topic of health is addressed in the advertisements studied, the type of information they provide, how this information is presented, etc., but also a close examination of consumers' ability to understand the information offered. This is of the utmost importance, for as González-Díaz (2013) has stressed:

> This line of research is essential to the determination of, first of all, the level of influence that advertising containing health-related claims has on consumers relative to that exerted by advertising for the same types of products that does not contain such claims: Do consumers have a greater preference for products marketed using health claims? If so, why? Secondly, it is important to explore the extent to which consumers understand the messages contained in this type of advertisement and the health benefits the product featured may offer. Are advertising messages that describe the particular characteristics of these products understandable to the average consumer? Are they couched in language that is excessively specific or technical? The third and final consideration is whether the information provided throughout each advertisement studied leads the consumer to overestimate the supposed health benefits of the product being marketed and even crosses the line of ethics by presenting it as a form of preventative medicine rather than a healthy food (González-Díaz, 2013).

In closing, it is appropriate to mention the argument asserted by Arpe-Muñoz (2008: 52-53) that the purchase and consumption of enriched and fortified food products is only necessary in specific circumstances such as pregnancy and lactation. In the light of this fact, pertinent authorities should mount public service campaigns designed to educate the public about the benefits of natural foods and inform them that a healthy diet rich in natural foods obviates the purchase and consumption of manipulated food products.

[13] EU Regulation nº 1169/2011on the provision of food information to consumers, which was enacted to amend prior Regulations (EC) nº1924/2006 and (EC) nº 1925/2006, marks an advance in this area. This new regulation addresses a number of issues related to consumer protection and the right of consumers to adequate product information.

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Chapter 10

FOOD, MARKETING AND CULTURE: DISCOURSES OF FOOD ADVERTISING IN SPAIN

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INTRODUCTION

Advertising is understood as a cultural artefact linked to a particular historical context that has the capacity to generate and recreate social ideas and practices. A diachronic analysis of food advertising[1] clearly shows what role it plays in the capitalist economy, its principal characteristics as a marketing tool and the effects it has on consumers. From an anthropological perspective, in-depth study can be conducted into both the particularities of advertising communication, by analysing the technical resources that it uses to represent cultural imaginings, and the very models that it generates. During the communicative act, that is, the process by which advertisers attempt to connect with their intended public, advertising promotes various types of consumptions, practices and values, legitimizing some and invalidating others.

FOOD ADVERTISING: BETWEEN PRACTICE AND DISCOURSE

The modernisation of the food and agriculture industry has been carried out with the intention of satisfying specific needs which have been emerging in the western countries (Goody, 1984: 251-257), and improving productivity, unfolding as wide and varied as

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[1] To this end, we analyse the content of a sample of food adverts from the period when the industrialisation of the Spanish food sector was reaching its peak. A part of the results that I present here are from a previous study (Gracia, 1996; Gracia, 1997) that I carried out on a representative sample of Spanish food advertising from 1960 to 1990 and which includes an analysis of more than 500 adverts taken from newspapers, magazines and television of different groups of foods and drinks. To this sample I have added a total of 100 adverts dating from 1991 to the present day (Gracia-Arnaiz, 2013).

possible production on the capitalist market. This process has been carried out at the margin or even independently of the demands of the population. The economic system, however, depends on consumption and has to create sufficient expectation to ensure it. In this context publicity is today more indispensable than ever. As a promotional tool, together with other procedures of marketing, it tries to maintain the constant relationship between the production and acquisition of goods (Sánchez-Guzman, 1982; Briz, 1990 and Qualter, 1994).

For the food industry, inserting publicity in the mass-media is a costly business resource, although profitable to judge from its ascending evolution[2] especially when it comes to giving an outlet to great quantities of articles whose destiny is a numerous and socially heterogeneous public. How else though, if not through such publicity can one differentiate and personalise the merchandise and the trade marks in a market which, like that of food is characterised by great competition of articles, which on the other hand are, very similar to each other? Moreover, what alternatives are there to encourage the purchase of articles whose use is not exactly unlimited? Certainly, we human beings limit the amount of food we ingest daily. We eat a determined quantity of food throughout the day divided into different ingestions, more or less structured, but we have a threshold of satiation which acts as a kind of biological limit, regulating and advising us when we have eaten sufficient. Although Harris (2011:273) and Fischler (1995:372-373) suggest that in industrialised countries the contemporary eater does seem to recognise clearly this limit, he is however encouraged by his greater buying power and pressured by industrial marketing into compulsive buying, he eats in a disorganised way more food than necessary to satisfy his calorific and nutritional needs; its seems unlikely that the increase in advertising investment will necessarily be translated into an unstoppable increase of this biological limit and, in consequence, of the quantities of food ingested. On the contrary, dieting is also a market today and, coinciding with both authors, food regulation and restriction are also for sale. In consequence with the selfsame limitations of food consumption, the industry has an even greater need to promote itself by both placing its merchandise in a very competitive market, and ensuring that these are purchased finally by the consumers.

Now, in what way does the food and agriculture industry ensure that its articles reach such a large number of people who are so different from each other? How does it manage to convert them into consumers of the new products that incessantly appear on the market? The *raison d'être* of marketing and advertising is precisely in the resolution of these answers, that is to say, in managing to introduce and maintain the food products both in the lines of the centres of provision and in the basket of the majority of the buyers. The specialists in sales struggle continually to assure and tighten the links between the industry and its merchandise on one hand, and the diffuse category of *consumers* on the other. This continual effort requires a preparation, knowledge and a specific technology that enables the specialists to convert into something familiar and close, merchandise, events, places and people that are often foreign and distant. In any commercial department, marketing is simply a form of knowledge, a recognised social and cultural ability which permits an expert system, according to Giddens (1991:18), interpret and

[2] By 2006, advertising expenditure had doubled with respect to the previous decade to reach a total of 14,590. 2 million euros. This trend has only been reversed by the deep economic crisis that has affected Spain since 2008. In 2012, advertising spending fell significantly to 10,858.8 million euros (Infoadex). The food sector today occupies seventh place in terms of advertising spending with 385.8 million euros in 2010. The first company in the advertising rankings was the Danone Group, which spent 59.9 million euros on advertising in 2010 (Mozún, 2012: 43).

use the discourse, information in a way that it be recognised as their own and useful (*how to*) (Lien, 1997; Malefyt and Morais, 2012).

This *how* is today central when it comes to promoting the consumption of any merchandise. The advertising message, constituting a specific part of the knowledge of marketing will, by making use of the technical procedures propitiate and facilitate the economic operations between the people and entities that respectively find themselves in the situation of offering merchandise and the others of purchasing and making use of them. Now, advertising constitutes a sort of communicative practice in which diverse ideas are presented and promoted which go beyond the objective characteristics and functional attributes of the product advertised. It spreads a specific ideology not only regarding its function, use or benefits, but about what the ideal behaviour of the consumers is with respect to different questions such as work, the family, gender, free time, education, care of the body or health, to give just some examples. In this way, it is true that advertising has as its principle aim circulating or spreading the news of things or facts and, in this sense informing. On the other hand it must do so by persuading, in such a way that, at the same time it favourably attracts the target public or those that have influence over purchasing decisions (Briz, 1990; Leiss and Botterill, 2005). This means that the advertising mesh promotes its principal objective; to motivate consumption, also favouring operations of an ideological and symbolic character which legitimate the use of the merchandise and its attributes at the margin of their material functions. Thus defined, the double economic and social aspect of advertising is better demonstrated, and makes it easier to identify it with a determined system of production, the capitalism of consumption.

Along this line, the objectives of the advertising message are closely tied to the central position which consumption acquires in the contemporary industrialised countries. In the societies of mass consumption (Alonso and Conde, 1994: 95), the basic or primary requisites are, in general assured, and numerous acquisitions of goods and services, including those which seem to respond to primary biological requirements, as is the case of food products, incorporate objectives different from the simple satisfaction of material necessities. One is speaking, then, of the satisfaction of desires or needs of another order - psychological, social or symbolic - which, in the last analysis, do not have the guaranteeing of human survival as a purpose. In these cultures a different symbolic function appears associated with the act of purchase and consumption. As Baudrillard (1974) points out, this responds to a logic of symbolic exchange (desire, identification, social differentiation) even before that of an economic character. *To Consume* becomes a carrier and generator of meanings, in a language through which values and specific behaviour are expressed. It is also a space for activity, work and social relations. This characterisation posits the acts through which we consume as something more than the exercise of tastes, urges and rash purchases (as the moralisers would have it) or individual attitudes, as is often found in market surveys (García Canclini, 1995). At par *being a consumer* implies not only acquiring, but also replacing, substituting or increasing the patrimony of goods and services contracted; manifesting, through this exercise, a form and standard of living and, even a way of understanding it.

As a consequence of the former, marketing publicity became a useful technique in at least two senses: a) for the functioning of the market by obtaining, for example, the creation of the need for a product and the displacement of supply/demand in one or another sense, for promoting a good company image, for reinforcing the widening of the commercial networks of distribution or for diminishing the sales of products considered harmful for society and b) for the reproduction and/or construction of cultural image, diffusing models of behaviour and

specific values concerning consumer goods. For this reason, it has been said that that publicity is also a factor in the modelling of society because, as well as influencing the dynamics of consumption, it recreates social attitudes that influence the conception of the models of basic reference (Qualter, 1994).

In relation to advertisements for food this process is evident. On the one hand there appear, albeit not constantly, references to products advertised in relation to their basic characteristics and, on the other, the ways to acquire, prepare or consume them are shown, making reference to specific situations or people. Thus, the articles advertised do not usually reach the public isolated, just as they are, but surrounded by cultural representations and universes that serve as vehicles for their promotion. In consequence, a part of *how*, that dedicated to the public presentation of the products, is resolved using familiar scenes that are in some way attractive for the possible consumers, adorning the products and their uses with bonding meanings and endowing them with a function which identifies them as a necessary or desirable consumption for such and such an occasion. Therefore, the *how* in food advertising depends on both establishing a valid strategy in the selection of the channels or mass-media used to make the messages reach the target public, and looking after that which is communicated and promoted concerning food. To denominate, classify and identify the foods of industrial origin as consumable is today one of the principal tasks of marketing publicity. In particular, advertising has, perhaps now more than ever, the mission of placing in our food universe, products which are hardly recognisable or recognisable only with difficulty as part of our cuisine given that, as I pointed out previously, many of these articles have suffered a process of absolute de-territorialisation or de-identification, since many of these articles are not produced in the immediate environment and their origin is unknown, their composition is unknown or the methods of preparation are not trusted. Moreover, the food industry knows that the contemporary eater not only hopes to obtain from the foods the nutritious substances which are to allow him to subsist and assure the equilibrium of his organism, but also the symbolic contents associated with the foods which serve him to identify himself individually and socially and, consequently, an important part of its messages are going to revolve around the need that we humans have to build ourselves through food (Fischler, 1995).

This is how the resource of advertising, basically by providing a context, becomes indispensable for the conversion of the transformed and scarcely identifiable foods into edible entities. Advertising takes shape then as a highly specialised knowledge, expert, capable of converting the multitude of goods and services available on the market into objects of attention and attraction promoting, at the same time, the material and symbolic need for their consumption. From this perspective, the very objects and the trade marks end up functioning, helped by the logic of this medium (Baudrillard, 1974), almost as totemic systems, some of them even converted into cult object. On revealing that in any society, including the capitalist, material possessions are always accompanied by social meanings and they have the capacity to transmit communication symbolic order (Douglas and Isherwood, 1979; McCraken, 1988; García Canclini, 1995) and on revealing also one of the dimensions of the exchange often forgotten, the oneiric, the advertising industry finds a motive for making its professional revolution and thus achieving the legitimacy in a society reticent to linking, shamelessly, business with culture.

Advertising knowledge is basically an interdisciplinary knowledge (Gracia, 1996). In effect, in the work of advertising professionals coming from different areas and activities intervene, given that such work encompasses processes of very different natures: the market,

the brand image, taking decisions, the change of attitudes. In relation to advertising practice, for example, the emotional reactions of individuals to the perception of the messages can be studied, the patterns of behaviour of the consumers can be known or it can be seen how the advertisements are interpreted according to the socio-cultural context of the receivers. Throughout the history of recent publicity, the publicists have been collecting the different contributions made by different disciplines in relation to theoretical and methodological approaches, above all from psychology, the economy or communication science, but also from sociology, philosophy or anthropology. For some decades these contributions have become indispensable both to assure their technical effectiveness and to justify their necessity within the strategies of marketing. Thus, for example, the attempts of Adorno (1967) to describe through psychoanalysis the mechanisms of collective irrationality, of autosuggestion or of identification as opposed to the mass-media helped the advertising praxis to create techniques of hidden persuasion, integrating in his procedures psychoanalysis and motivation.

Neither has anthropology escaped this interest. On the one hand some studies coming from the school of Culture and Personality, of cognitive and symbolic anthropology had provided advertising with a battery of useful concepts with which to operate "primary institutions", "personality de base", "lifestyles"; on the other the publicists have been collecting specific methodologies and cualitative techniques of analysis to help in the ideological and symbolic codification/de-codification of the contents of their messages. The publicists rapidly open a channel of systematic study of the "lifestyles" of the population segmented according to variables such as the level of income, age, gender and professional category or the level of education. The said "lifestyles", which are going to serve both to orientate the ideal channels for the commercialisation of goods and to articulate the content of the messages, are understood as an amalgam of beliefs, tastes and attitudes pertaining to a society or social group resulting from a system of values which must be known given that it constitutes the base for the quotidian behaviour. In this way, the publicists establish relations between the different lifestyles which appear clearly defined and the *consumers*, that is to say, those persons who acquire for different reasons, not always rationally and functionally as the liberal economist approaches depict, the total of the goods produced by the system.

Unlike in former decades, in the seventies *consumers* began to be spoken of, thinking less of a homogeneous mass of persons, than of individuals with the capacity to choose, with their own desires and tastes. Under this consideration, the liberal notion of "individual taste" which has to *be recognised* to control and manipulate is overcome, going a little further, and understanding consumption as a dynamic and variable experience, a process which gains sense according to the context in which it is produced according to who participates. Thus, consumers do not respond in the same way to the homogenising and standardising effects of the global economic action nor constitute groups with the same interests or objectives, but part from individual experiences and knowledge, participate in different lifestyles and respond to different stimuli according to their social and individual condition and according to the finality they pursue around consumption (Miller, 1995; Lein, 1997).

These new perspectives leave behind the energetic debate begun at the end of the fifties between apologists for and critics of advertising (Fowles, 1996), which confronted those who considered it positively given its informative and educational condition with those that criticised it openly for its capacity to create ideal worlds difficult to reach for the majority of the population and generating all kinds of frustrations, desires and superfluous necessities. For these last, advertising, as well as deforming the reality of the very objects promoted, contributed to

homogenising the patterns of behaviour annulling the capacity of personal decision and choice and reinforcing the dominant ideology around the possession of material goods and the stereotypes of gender, race or social class. However, from the eighties on, one of the lines of discussion which had given rise to the greatest debate during this period, the supposed social hyper-homogeneity propitiated by the capitalism of consumption, the mass-media and advertising, begins to be questioned by different theorists. This is the case of Yonnet (1988:196) or Lipovestky (1990: 177), for example, who sustained the idea of the heterogeneity of democratic consumption of the masses, as against the consideration of homogeneous and unique of the super-systems, maintained in previous decades. The consumption, amongst which must be considered the food products and services, are not imposed upon a manipulated social corps by a group of conspirators nor do they impose an alienated hegemony, as Packard, Marcuse, Séguéla, Baudrillard, Merton or Debord have maintained in different works. On the contrary, consumption is invented within a very specific ideo-social context: the context of a free expression of individual wills. The development of multi-varied little differences, of diversity, is a direct reason for the strengthening of the great social difference, so that the first are in inverse function to the second. Today, it is possible to say that production flexibility favours the de-standardisation of consumption and the multiplication of preferences and options.

A vision of consumption in the long term permits us to see, that in terms of food, although recognising the existence of the commercial interests of the industry for standardising territorially the tastes of the populations, the cuisine is much more varied today and that numerous foods are more within reach now than before (Mennell, 1995: 338). In the same way, the consuming process, interpret and incorporate the media and advertising information in function of the differences noted previously. Their choices are, finally, complex and they are constrained by social circumstances (age, gender, income, family structure, etcetera.), by the influence of other people or by the same subjective identity and emotions (Moreno and Luque, 2014: 59). In the case of food, the consumers seem to negotiate their knowledge of health and the food security, and their diets, in interaction with other people both in a micro context (of their immediate social networks) and in a macro context (of the food production and the information of the systems of production) (Miller et al., 1998: 248-249).

THE TRANSFORMATION OF FOOD CULTURE THROUGH PUBLICITY

It may be said, therefore, that through its statements, advertising validates certain dietary practices and reflects transformations in production, forms of consumption and social life. The fact that the themes used in food adverts vary according to socioeconomic and cultural circumstances and are constituted from these same circumstances suggest that, although advertising works with representations and models that are frequently idealized, it connects with reality, on the whole it is 'nourished' by reality. Adverts establish a relation between the represented context (the combination of real and imagined situations shown in the advert) and the real context (objectifiable daily situations) which leads to the question, to what extent social nature of a product coincides with or is independent of the use and value that people place on it. Advertising sanctions changes by blending various discourses to encourage a substitution and/or alteration in the consumption of certain products. Over the decades we have gone from the 'traditional' baguette to sliced bread, from homemade broth to stock

cubes and soup in a sachet, from sugar to sweeteners, from soda siphons to fizzy drinks, from bread and chocolate to industrially produced cakes, and from mother's milk to infant formula and processed baby food, among others.

The statement that advertising is a form of communication that reflects the changes in food culture is based on a diachronic reading of the content of adverts in relation to the types of food products, their uses and functions, the context and the target audience[3]. Although this chapter will not focus principally on the discursive function of advertising, certain changes are highly significant. In terms of the types of product advertised, for example, the increase in advertising spending during the first two decades coincides with the highest level of industrial food processing, packaging, marketing and availability.

During this period, the agrifood industry[4] has become increasingly diverse in terms of the products offered. These are foods that vary according to the degree and type of technology applied to them and the way they are packaged. If on one hand some foods increasingly incorporate more "services" and "technology" to facilitate conservation, preparation and cooking (e.g., canning, freezing, peeling, cutting, washing, vacuum packing, irradiating, etc.), other foods place greater emphasis on local production in an attempt to combat the globalization of the food industry.

The product brand, regardless of coinciding or not with the name of the company, becomes an important target for advertising, which constructs images to increase awareness of the product, introduce it to the market and maintain its market position. In a context where very similar products compete with one another, it is vital for a product to be recognised for its apparently unique qualities. Even so, various products with no brand name are also promoted. These are, on one hand, campaigns by central and regional governments and the various industries and, on the other hand, generic brands by the big distribution companies which, due to their lower cost have grown spectacularly since the start of the financial crisis in 2008. During the 1960s, there were campaigns on products such as potatoes, lemons, coffee, chocolate and wine. Some of these generic products represent a response by the agricultural sector to the introduction of new products into the market threatened to substitute them in one way or another. This is the case with instant coffee and chocolate drinks. Currently, locally produced food occupies a specific place in the sector and is a response to efforts by the Common Agricultural Policy since 1992 to diversify production and expand technical practices (Contreras, 2003). The Spanish authorities support key products from the food sector such as vegetables, fruit, fish, olive oil and wine and, as in other European countries, promote the consumption of products that are legally protected by certificates that recognize their geographic origin or production quality.

Advertising provides evidence of important changes not only in relation to the foods offer but also regarding the given uses of a particular food or drink and the contexts in which it is consumed. The cases of beer and wine provide good examples of this (Gracia-Arnaiz, 2011). It is interesting that at the beginning of this period these alcoholic drinks should be promoted for family consumption. In the 1960s, beer was advertised as 'the drink that nourishes'. At this

[3] A broader analysis of this relation can be found in Gracia (1997: 287-309). Other studies have shown the close relationship between changes in the Spanish food system and the discursive strategies of food advertising (Díaz-Méndez and Álvarez, 2013).

[4] The agrifood industry increased its advertising spending at the same time as the massive restructuring of the sector that occurred after Spain had joined the EU (Albisu y Gracia, 2005). The sector continues to play an important role in Spain's economy. According to data from the Spanish Federation of Food and Drinks Industries (FIAB), the food sector accounts for 8% of overall GDP and 14% of industrial GDP.

time, wine was also a 'national, popular and healthy' drink. Neither was there any hesitation in systematically associating alcohol consumption with escape, enjoyment, pleasure, personal achievement and sex. Nowadays, however, no advertiser would dare use the concepts of health-nutrition or alcohol as bases of their campaigns, first of all because beer is not drunk for its nutritional value and above all because it remains an alcoholic drink and as such shares, albeit to a lesser extent, the stigma associated with the excessive consumption of alcohol. Not even *light* beers are openly promoted as being healthy.

As we said earlier, the social validation of consumption in general, and of the consumption of foods in particular, comes both from the characteristics of the very products, that they are easy and rapid to make, appetising or cheap, as the axis of the line of argument used in the construction of the advertising message, of the ideas associated with these products or, in a wider sense, to the food behaviours. Advertising communication, whose specific function consists in motivating the receiver through its messages, resorts to different mechanisms of persuasion. It can offer data about the product detailing the price, the value and the nutritional content, the ingredients, the applications and the forms of use, etcetera. However, only a small proportion of food advertising is purely informative. The majority incorporate ornamental elements to retain the interest of the consumer and also the majority supply little or no objective information about the product, above all when the article is already familiar to the consumer. This type of advertising is denominated *puffery* or superficial by Leet and Driggers (1990). Within these ornamental elements all those concepts which contribute to reaffirm the status and material and symbolic values of the advertised products are introduced discursively[5]. Effectively, the advertising messages are no more than that: a sum of ideological discourses disposed in an attractive form and without apparent contrariety, so that, once, implemented the marketing strategy which takes the product to the market, to the lines of the centres of supply, the effort of the specialists is placed in reconstructing them and placing them in the multi-media plane, choosing the most appropriate channels to diffuse their ideas. In this way, the advertising language-dense, aesthetic, a grammatical, rhetorical - becomes the key point which has to allow, finally, that announcers and consumers meet.

The Discourses of Food Advertising

Throughout these four decades, Spanish food advertising was articulated by the combination, of, at least, six predominant discourses. These are the discourses of tradition-nature-identity, the doctor-nutritional, the aesthetic, the hedonist, that of the progress-modernity and that of social differentiation. Despite constituting arguments slightly different between them, they have a base in common: they are all significant for the consumers that receive them, and this is so because they transmit ideas referring to consumption, practices and food values. We are dealing, however, with a biased message, in the sense that it pursues a finality of a target public. This finality is centred on promoting the consumption of merchandises and in divulging the whole of ideas which sanction the said promotion. In order to get this, advertising reflects models of reference and legitimates discourses, becoming a good vehicle to express, through the food fact, cultural images, whose objective, in the last instance, is to convert into *familiar* foods, making

[5] Barthes (1961), Châtmet (1976), King (1980) and Fieldhouse (1986) had established different typologies about mean topic used in food advertising.

them edible and, therefore, consumable. Food advertising, through its discourses, makes it so that the foods are consumed for what it says they are.

Let us see next some examples of the principal discourses of Spanish food advertising.

Discourse of Tradition, Nature and Identity

By *tradition* we understand a wide concept referring, on one hand, to the words and images which link the food with the craft labours of the countryside and the earth and which identify the rural with values such as *nature*, *authenticity* and *purity*. *In this* discourse the myth of the rural is exalted, which in turn, negates all that is urban and industrial; in such a way that the tasks identified as traditional (agricultural, marine, stock breeders..) become a synonym of handicraft, craftsmanship and effort as against artificiality, manipulation, and the technology of industry[6]. On the other hand, they also include references to the home and the conventional family, as well as the food practices associated with the ambit of the house and domestic work (supply, storage, preparation, consumption and care). Lastly, it also incorporates references to the popular customs in matters of guests, table manners, festive celebrations and rituals, as well as the values that refer us to the collective identity. Defined thus, the discourse of tradition-nature and identity has an important presence in food publicity. On the one hand, the attributes of the natural, fresh, homely, original, from the countryside or the earth are properties which appear in the majority of cases already in the sixties, although they increase in the following decades. Precisely, this increase is produced when the technical application and the industrial manipulation affect a larger number of products, and when they are made less than ever in the home.

The text of the advertisement for Avecrem of 1964 unifies three lines of argument of this discourse: the role of the housewife-mother, the naturalness associated with the ingredients and the collective identification, in this case, with the state. *It's natural! Madam, your children need a food which is healthy, nutritious and ... natural. Your greatest satisfaction will be to offer them with AVECREM a tasty first course, made entirely with natural products carefully selected with the guarantee of Gallina Blanca "The cuisine of Spain".*

The reference to Spanish cuisine as a symbol of nationality is also manifested in other examples of the Franco era: *traditional Spanish sangria* (Fanta, 1970)[7], *the first (No. 1) champagne in Spain* (Codorniu, 1964). The denomination, the origin, the country, the earth are aspects which pretend to transmit, for their part, a certain cultural identification. Following nationalist Spain of Franco years, is plural Spain of democracy, in which are going to be promoted, above all, the consumption of local products. Two examples of campaigns elaborated in the second half of the eighties claim the origin, the collective identity but now already distant from the former idea of the single and patriotic Spain: *From each land, its people; From each man, his labour; from each labour, its fruit; from each fruit, the best … Foods of Spain. The flavor is ours.*

A *plural* Spain, with foods of different origins: olive oils, wines, champagnes, cheeses, legumes, bananas, cured ham, dried fruit ... Spain of the autonomous regions. An example of

[6] The myth of the rural as opposed to the urban has been much used, or by restorers that, in a more or less artificial way, try and recover supposedly local cuisine or by the same producers of food who, advised by the advertisers, opt for forgetting in their messages the absolute mechanization to which the majority of their products are submitted (Bonnain-Moerdyck, 1972; Stern, 1992).

[7] Henceforth, the content of brackets refers to name / brand of the advertiser and the year of broadcast/publication of adverts.

the promotion of local/regional products is the campaign launched by the Junta de Andalucía, promoting different products. One is that of wine: *Sol I want you happy.* This campaign recuperates the figure of the famous Andalusian poet García Lorca, also parodying a poetic language to remember the wines of Andalusia with denomination de origin: Xeres-Sherry, Manzanilla-San Lúcar, Montilla-Moriles. The campaign signs *Foods of Andalusia. Green I want you green.* Since Spain has entered the EU, it has promoted not only the "products from the land" that have been certified for their origin or quality, but also numerous local food producers. A recent campaign conducted in collaboration with food cooperatives promoted products that form part of the celebrated Mediterranean diet, such as olive oil *"Extra virgin olive oil: 100% olive juice"* (2007). Another campaign ran under the slogan *"The Mediterranean diet: Our diet, our greatest legacy"* (2011) after the diet had been declared Intangible Cultural Heritage, 2010. In the same way that the rural or Mediterranean is vindicated, the Ministry of Agriculture, Fisheries and Food - M.A.P.A - (Fund Regulation and Organization Products Market Fisheries and Mariculture - F.R.O.M., 1991) promotes the sea and hard work which fishing represents to advertise fresh fish*: Now the mackerel. Bon appetite. Early this morning, our boats as of always, have set sail from the Spanish coast heading for the blue banks of the mackerel* ... Because of the importance of the fish sector to the Spanish economy, the Spanish Ministry of Agriculture, Food and the Environment has tirelessly promoted the consumption of fish, including that caught using methods that enable less wasteful catches than fishing with nets. This is the case with the campaign to promote the consumption of line-caught Bonito: *"Northern Bonito: good for you, good for the sea"* (2007).

Fresh products such as fruit also reiterate the adjective "natural". This is the case of the institutional campaign of the lemon: *Natural Lemon. A treasure for health,* which also links the naturalness of this product to the rejection of exotic imported drinks. That is why the foods which are believed most natural also stress their freshness: *Fresh strawberries ... Harvested, picked and selected with the care of expert hands in the privileged climate of Palos de la Frontera* ... (Fresón de Palos, 1990). The supposition of naturalness and originality is also a feature of mineral waters in the sixties: *From the Massif of Montseny to your home* for Font del Regas mineral water. Even typically traditional scenes such as Christmas are related in the case of the water of San Narciso. Purity, as a quality, is attributed in the same way to products with a more complex composition. It is the case of Artiach biscuits (1968) *a quality based on the purity of foods, on their naturalness and the care in their preparation.*

Many products which make reference to the origin and the source resort, in their communication, to reminding us that they are what they are and they are made how they are made. An advertisement by Knorr emphasises that the stock is from the hen, and shows it in its image, whilst it observes that the soups are made in the home-cooking style. And they demonstrate it by the presence of a kitchen *chef*: *Swiss-Knorr has arrived ... Will provide you with the most exquisite and substantial base for all your home-made soups.* The resource of the cook as a sauce of experience is commonly fallen back on to give prestige to the daily and ordinary work of the housewife or to legitimate it.

Emphasising that the preparation is done with great care and using traditional and laborious procedures is often used to promote in numerous types of products. As in the case of Espuña ham, *the handmade sweet ham. Made into an art form according to the traditional preparation of the county of York* ... (1975). For this reason also, the evolution of the years

associated with the passing of time is highly valued as a symbol of custom and tradition: *Malaga Virgin. A wine of years with no hours ... Intense flavour of pure and mature wine* (Malaga Virgin, 1970). The slowness of the process, together with the tasks that those products avoid for women, becomes a symbol of quality: *On a low flame. It is that tasty. Fried tomato Solís. Is made on a low flame ... to give you many appetising and quick to prepare ideas ...* (Solís, 1970). That is also why, on many occasions, the resource of the date is indicative of that value: *Famous since 1890* (Chocolates Torras, 1960) or *More than one hundred years ...* for Carbonell oils (1964) and some years later the 125 *years Anniversary.* In any case, the repeated use of terms such as "always" suggests its usefulness for emphasizing culinary processes that have not changed over time, even when this is not true, for example*: "Broth made by the traditional way"* (Aneto, 2005).

We said that, as the technology of food advances, the axis of tradition/craftsmanship is reinforced. Sometimes, the products are already on their own count traditional, like the nougats or the champagne eaten at Christmas, although they boast little in the way of craftsmanship: *Two and a half centuries of professional experience to offer you an out of the ordinary nougat* (Turrones, 1880, 1975), *... prepared with craftsmanship since over 250 years ago ...* (El Lobo, 1980), *Nougats cared for one by one in purely craftsmanship form ...* (La Casa, 1985). But it is not necessary to coincide with determined popular customs to gather this idea, industrial bakery and confectionery also promote the same: *Unique for making a Plum Cake ... that you receive taken recently from the oven. That is made with eggs, flour, milk, sugar ... That you can eat at breakfast, as a snack, between hours ...* (Bimbo, 1975). A cake, then, recently made, that really invites you to nibble - any time is good for its consumption - arguing the ordinariness of the ingredients composing it. They are duplicated attributes, old and new concepts. This duplicity is used by many products. The text of Nutrisol rices is a good example: *The old and new taste of the natural with all its properties ... go back to the natural* (1980). The vegetable, the integral also appears as a synonym of the authentic and, therefore, of craftsmanship and tradition.

Now, everything is natural. In the same way rice, sugar, olive oil, pâtés, cream of cocoa, frozen goods, refreshments, the prepared dishes or baby food pots are natural, that is to say, the majority of the products are natural independently of the grade of industrial processing to which they have been treated[8]. And everything is as good as before. It concerns an extremely gratuitous attribute. What makes us think that foods were better before, of better quality? Naturalness is basically a nostalgic feeling, it seems that times passed were better, as romantic as confused, although sensitive. The flavours of many products, processed or natural, are not the same. At a time when the population is loosing sight of the process of production and transformation of foods and has certain doubts about the processes followed in their production, it is logical that the manufacturers demand that advertising message fill this gap, referring to the origin, the very process. The Frudesa frozen foods in the year 1974 use the idea of having a vegetable garden at home to promote their vegetables. Vegetable garden, wickerwork baskets or countryside are elements of the rural which contrast with urban

[8] Natural foods constitute another diffuse category, similar to the health foods, which in our legislation, as in that of other industrialized countries, does not have a legal description. Leet and Driggers (1990) point out that, generally, a natural food is that which contains no additives to increase its lifetime, nor emulsifiers to prevent the separation of the ingredients, nor synthetic colourings and flavourings to improve the taste or appearance. The label can also mean that the product has been minimally processed, as in the case of using whole flours and not refined for example.

pressures. The dried fruits of the Granja San Francisco are *good things from the countryside* (1980).

As we enter the decade of the eighties, the resource of natural/home-made/crafted refers to the products which can even ridicule the resource of these adjectives. This is the case of the Nomen pre-cooked seafood paella (1990) which says in its title: *REAL! As you make it at home, but easier*. It concerns not only substituting the work of the housewife in the kitchen, but her very maternal and marital dedication, a traditional and natural value *par excellence*. The calming aspect of the purity of the ingredients, then, is insisted upon. There is no end to the examples for infantile food. As that of Milupa (1980) when they advertise their baby food pots: *Natural cooking in the preparation: without preservatives, or flavourings ... Milupa thus offers complete tranquillity for the mother*. It is the age of the *without* in two senses: as a symbol of the annulling of the chemical additives (the referred to additives) and, therefore, of naturalness, and as a symbol of health care.

Medical-nutritional Discourse

The relationship between the natural/traditional and the healthy or beneficial appears on numerous occasions and serves to introduce another commonly used line of argument in advertisements for food - the most often used overall being the medico-nutritional discourse. We define this discourse beginning with the use of the facultative figures and medico-nutritional -dietetic terminology, which incorporate food prescriptions and sanctions of a supposed scientific character. The medico-facultative discourse persists throughout the last four decades, as well as the vocabulary used, each time more specific. It is a discourse based on criteria of efficiency, authority and safety that situate the biomedical sciences and those that carry them out (chemists and specialist doctors, above all) as the prescribers of the correct food. The label "sold in chemists" to denote guarantee and safety already appeared in an advertisement of Milupa in the 60s, the same as the reference to the paediatrician is very soon to be found on baby food pots (Beech-Nut, 1968). This corporate allusion is a necessary line of argument for introducing this type of infantile food. It concerns the feeding of the smallest. The scientific appears as the paradigm of the rational and the convenient.

Its frequent use supports the idea of a progressive medicalisation of food. The function of many foods is medical (preventive or therapeutical): *"if your problem is lack of hunger, the olive will stimulate your appetite"* (Alisa, 1968). Mineral waters resort frequently to the medicinal power of their product. The most outstanding case is the line followed by Font Vella between the years 1975 and 1990. As we will see further on, it speaks of the diuretic action of the water, of avoiding renal overcharges, or of facilitating the digestion. In fact, many advertisements basing their principal emphasis on this discourse are dedicated to diffusing knowledge of nutrition, even if only in a partial way.

The abuse of *para-scientific* references, more controlled over the last two decades, is more obvious in advertisements for food and slimming complexes, such as Toddy (66) or Anfivirasa (1980): *It is a scientifically measured out food for generating energy, strengthening the bones and muscles, increasing the red blood cells and using the brain* ... But, it is also in the products directed to the infantile public. The Cola-cao of the sixties was a *reconstituting and nutritious* food, attributes often used when referring to chocolates throughout the period which occupies us: *healthy and digestive* (Elgorriaga, 1965). Nocilla also tries to link their communication with this line of argument. In 1980 they were saying *nutritious power and healthy energy*. Twelve years later, this product continued maintaining those characteristics, but moreover they reinforce

them with conclusions taken from a study by the Spanish Institute of Nutrition: *Its high contribution of glucides converts it into a food especially suitable ... Bread with Nocilla has higher nutritional quality than little cakes and does not contain cholesterol ...*

The nutritional explanations, which diffuse facultative knowledge, normally brief and taken out of context, are widening with the passing of time. They begin speaking of being *rich in vitamins and carbohydrates,* like Maizena baby foods (1964) and end explaining what proteins, gluten or cholesterol are as in the advertisements for Nutribén baby food pots (1992). The new Koipe oil (1993) gives lessons of good and bad cholesterol or the Biscoitto biscuits that, in 1971, are dedicated to explaining the nutritional contribution of vitamins B1, B6, PP, C and D2 contained in their product.

The advantage of some of these products is that they surpass the reality of any food, because where they do not contain it themselves, the industry adds it: *a food ... elaborated with milk, selected cereals and enriched with calcium, phosphorous and vitamins ...* (Nogalda, 1985). The manufacturers add the ingredients nutritionally recognised as necessary (vitamins, minerals, fibre), while they reiterate the harmful (sugar, fats, stimulants ...). In the same way that many products use the label natural, now we see that almost all of them nourish and feed: pâtés, fish, industrial confectionery, baby foods, dairy products. And many because they nourish are healthy, which is slightly different. All the products labelled *without* are ascribed the healthy-beneficial term (alcoholic drinks, sweeteners, refreshments, bread, margarine and fats) or *low in* (pâtés, low fats, dairy products, toasts, jams), as well as the energy foods (sugar, stocks, cocoas, oils, margarines, caramel creams, cream, biscuits, condensed milk) or complete (whole milk, cheese), the cereals and vegetables (rice, legumes, fruits, juices, pastas, pizza, potatoes, dried fruits) or condiments (mayonnaises, sweeteners). This observation questions, at least, the veracity of many of these assignations. The *ekology to which* the instant EKO makes reference, on the one hand, to the naturalness and purity of the cereals, and on the other, the healthiness of the same affecting the organism. The value of the natural is shown, then, as a synonym of healthy, creating thus the concept of *health food*[9]. Unlike the products created industrially, *health foods* count with the force of contrast between the natural and the healthy and, that which is not, which is the artificial and adulterated. In this sense, the imagery associated with the *healthy* products revolves around the axis of that which is *natural* and, at the same time, *traditional.*

The use of this discourse presents a certain particularity. On the one hand, at the beginning of the sixties, had more presence (this was more present) than any other discourse and its concern was directed above all at children, to infancy. Food to stimulate study, to be stronger or to have more red blood cells. This concern is maintained throughout the next decade. An advertisement for fresh cheese emphasises this idea: *100 gr. of G fresh cheese contains up to 585 mg. of calcium. Your children absolutely need it for their bones ... The highest equilibrated concentration of proteins, calcium, phosphorous and vitamins A and B (*Gervais, 1975). Once having solved the possible deficiencies of this population group by the increase in the living standard experienced since the 60s, the medical discourse is also translated with force to the

[9] The term health food is very vague and in few countries there is a widely accepted legal definition. Leet and Driggers (1990), referring to the USA, comment that despite "health food" being an undefined and indefinable concept, advertising continues to widely use it because the consumer maintains the belief that this term is synonymous with better quality. However, the fact that this type of product is special for diets or nutritional supplements, does not mean either that they are free of additives or that they have not been cultivated with pesticides, which would contrast with the label health food.

adult sector, without abandoning, however, the children: energy and nutrition for theses last, equilibrium and control for the first. Many food products resort to using technology when it comes to validating consumption, which after application is healthier. Already by 1961, a food complex, Metrecal, publicised decaffeinated coffee as an advantage. After being without caffeine and cholesterol, being without sugar is then emphasised ... In this sense, technological manipulation is not hidden, on the contrary, to speak of *enzymatically hydrolysed cereals* to refer to an infantile papilla affirms the high quality of its nutrients and adds certain scientific rigour to the product (Puleva, 1988). For its eminently prescriptive character within the whole of the discourses of advice and prohibitions, the medico-nutritional axis is that which best defines the food guidelines to follow and, therefore, transmits a determined model in relation to what must be a correct food. Thus, it reflects what is understood by complete alimentation in the sixties or by an equilibrated diet in the nineties. During the first decade of the 21st century, foods became increasingly functional in the sense that, according to the producers, their foods went beyond being a source of nourishment to provide additional health benefits. The best examples of this are those products that are said to improve health. In this regard, the launch of various products by the Danone group has not been without controversy. Some of the most polemical have been the dairy product Actimel *"Activate your defences"* (2003), which was strongly criticised for the supposed benefits that the bacteria lactobacillus casei is supposed to have on the immune system, and Activia yogurt because of the alleged positive effects of bifidus on gut flora *"Feeling good starts on the inside"* (Activia, 2014).

In the following point we will return to this argument because in the last two decades, many of these advertisements, are mixed with another discourse, the aesthetic. Often the cult of the body is a physical and a mental cult. This is the insinuation made by the low-fat yoghurts of Danone: "*Because my body is unique"* (Vitalinea, 2013) and the low-calorie cured meat by Pavofrío: *"For that real woman who deserves to be looked after"* (2010).

Aesthetic Discourse

Following a similar line of evolution to that of the tradition/identification discourse, the aesthetic discourse appears with special force above all beginning in the period from 1975 to 1980. Once the problems of malnutrition by default have been overcome within the wide majority of the population, the effects of malnutrition by "excess" begin: principally obesity and overweight. However, the model of beauty based on slimness/thinness is so strong that that the preoccupation for the health is subordinated to the preoccupation for body and its form. The cult of the body, which reaches its decisive point in the last decade, revolutionises the food and agricultural industry, although we have doubts if the reverse does not happen: the technological advance promoting certain food behaviour, certain models, which coincide with the consumption proposed. La veneration/preoccupation for the physical aspect is closely linked with the promotion of certain consumption, above all low in simple sugars and saturated fats, the *light* foods, as well as the dietary food complexes and the products that are in themselves low in calories. It concerns consumption that theoretically coincides with the nutritional recommendations and which advertising is in charge of exalting. That is why many times the ethical discourse is at the same time, a medical discourse and, in as much as it appropriates this discourse, it compares itself, gratuitously or not, with the line of the healthy foods, when in reality enough *light* products are consumed, not because they are healthy, but because theoretically they fatten less.

Already since the decade of the sixties, we find certain types of products positioning themselves clearly in relation to the aesthetic discourse. Skimmed milk is publicised with aesthetic ends at the beginning of the decade: *Ram skimmed milk, without fat, added vitamins, indispensable for diets and slimming regimes* (1965). As time passes, the slimming regimes promote an ideal form: slimness. The skimmed dairy products become, par excellence the products most propitious to follow these diets and achieve a slim figure. Natural yoghurts, which appeared in the sixties as the stimulators of study and correctors of digestive disorders, on being skimmed, tend to synthesise in a unique idea: achieving the perfect body. As in the advertisement for *Danone bodies* (1985), which are accompanied by feminine and masculine figures, slim, thin and, therefore, beautiful. The skimmed dairy products become the paradise of the aesthetic values and facilitators of the perfect weight. *Pascual Skimmed UHT Milk ... helps to not get fat* (1990). Why do de-fattened milk, cheeses and skimmed yoghurt *help us to not get fat?* According to some texts they have less fat and, therefore, fewer calories. The fats, from the beginning, begin to be presented as enemies of the slim body, of the healthy body.

Normally, aesthetic products are also healthy. Pascual Skimmed Milk points out that it has the same vitamins, mineral salts and hydro-soluble proteins as whole milk (1984). Some years later, Puleva points out that that the milk, on being skimmed, loses its lipo-soluble vitamins A and D and takes the opportunity to present itself as the first skimmed milk that does have them. On the other hand, these products cannot say that they slim. In this sense, during the last decade of the study a greater advertising self-discipline is detected; in such a way that these articles are presented as the facilitators, as the most indicated channels for the maintenance and care of the body or accompanying slimming diets: *to look after the figure* in Molico skimmed milk (1980), or *a very practical form for caring for yourself or to set the standard* in light cheese Bonsi (1990). In recent years, even greater emphasis has been placed on the consumption of fat-free products to help people to stay healthy, a discourse which has been accompanied by the promotion of daily physical exercise as the only healthy lifestyle: *"In line with your health"* (Pascual skimmed milk, 2013). If dairy products stand out as those which reduce their fats, other articles like pâtés, mayonnaise or margarine claim their condition of light because they diminish that type of nutrient. That is why they incorporate in the advertising texts the aesthetic idea. The Lightness of Calve mayonnaise is an example because already in the eighties it emphasises *with half the calories, it cares for your figure.*

In the same way that skimmed products were publicised in the 60s, products without sugar begin to be evident in the same decade. And also with aesthetic ends: *Among more than one hundred classes Artiach, 3 biscuits Without Sugar ... Soda. Fine puff pastry. Without sugar. A beneficial alternative to bread, in meals and as canapés, non fattening American creation ...* (1959). In relation with this substance, we find that during this period fruits or juices are also advertised as products linked to the aesthetic, this is the case of the grapefruit juice Vida which *allows you to keep your figure, your skin soft and smooth ...* (1963), that is to say, beauty. In the last decade, the tendency is, in as much as many types of fruit have a high sugar content, that of emphasising their nutritional, health and taste values rather than their purely aesthetic ones. The battle against consumption as one of the principal enemies of the slim body, of the healthy body, generates different fronts and is accentuated in the middle of the '70s. Against it is that it does not maintain the figure and contributes to generating illnesses: obesity and tooth decay, amongst others. And those arguments are taken advantage of to artificial sweeteners low in calories, which also insist on their good taste. Thus, in an advertisement of 1975 Natreen states: *There are people who have reasons of weight to prefer sweetening with Natreen with a fine*

sweetness ... it does not have energetic value. It only sweetens ... The war against excessive calories is already served and, with it all the wide range of sweeteners looking for their market share. As they assert when they publicise their product it *not only cares for the figure,* but what is more, they say that *watching over the ingestion of calories will secure a healthier life* (1980). Or like sweetener Mesura who maintains: *you like it and so does your figure* (1987). Later on, some insist on the quality of their natural product also as opposed to the synthetic sweeteners questioned for their possible inconvenience, as in the case of saccharin. Thus, sugar-free sweetener says: *Taste it. The natural taste that won't weigh you down ... (1990). Or sweet taste without calories by Canderel ... with a base of aspartame: a derivative of natural proteins, like those of cereals, fruit, cheese, etceteras* ... (1991). Currently, most products emphasize the fact that they retain the same flavour but with fewer calories. A brand of fruit juice remarks: *Granini Light. All the flavour from the best fruit* (*2012*).

The producers of sugar try to defend themselves from all these attacks by controlling three axis: calorie content, pointing out that it only contains 16 calories per spoon, healthfulness, underlining that its consumption is necessary for the functioning of the brain, and tastiness, reminding consumers of its unique taste. *With Azucarera life tastes better* (2012).

If the sweeteners want to substitute sugar, the dietary complexes are even more ambitious and try to suppress complete ingestion. They reinforce the idea of slimming, and what is more, of a balanced and complete diet. At the beginning of the sixties, a type of product appears publicised which not being very habitual are perfected throughout the period studied. In 1961, Minvitin says: *Slim with Minvitin Try the COFFEE flavour! And vanilla and chocolate as well.* In the form of milkshake first, these products pursue an aim which, thirty years later, they have not achieved: to substitute, with a high frequency, the traditional foods, although their consumption has been diversified and increased.

These products are widened to biscuits, sandwiches, salted purées and some of them, as in the case of the slimming product Biomanán, insist on explaining why they can be substituted by a meal with all the guarantees of health and with the advantage of losing weight: *You'll end up gaining in health and in beauty. Lose weight ... But be careful not to damage your health. Biomanán is the solution … is a concentrate of proteins enriched with vitamins and mineral salts, very efficient for controlling the weight without causing deficiencies in the contribution of basic substances* ... (1980). During the last decade, this brand has shifted its focus away from its nutritional attributes and onto its usefulness in weight-loss diets: *"Food substitutes. Proven efficacy"* (2012).

A constant tied to the cult of the body and which is found in the images of all the advertisements cited here, more than in their texts, is physical exercise. Many models appear in sporting clothes or in surroundings related to activity. The gymnasium as a measure to achieve or conserve the figure. Even though the object of the publicity is ice cream. In this case, sports (swimming, weights, bicycle) appear as the ideal antidote against the overdose of calories which the ingestion of creamy ice-cream generates. Physical exercise or a slim body is used as the communicative axis in the publication of mineral waters. It concerns a product which on not having calories, is recommended in the doctor's consulting room and has a more agreeable taste than that of domestic supply in cities like Barcelona - its consumption increased extraordinarily. Principally, water is associated with values of its natural origin (springs) and is offered as a spring of health. Mineral water is presented as a medical recommendation par excellence. Lots of water has to be drunk, they say. All brands remind us that it is good, it is healthy. In 1964, Fontenova showed in its publicity the attribution of certain therapeutic properties: *"*...

Fontenova increases vitality, improves the digestion, keeps the figure ... makes your most agreeable moments complete ... Rich in lithium. Ten years later the same Font-Vella ventures to attribute to its water *the power to eliminate excess weight,* not only maintaining the figure. This company had to rectify the content of its message for not being sufficiently accurate: water can do little when a person consumes many more calories than necessary. At the end of 80s, Font-Vella speaks in less miraculous terms: *Try to eliminate everything you don't need ... healthier and lighter food, a little gymnasium and F.V. water every day, will help you avoid it (1989).*

Mineral water shares its effectiveness with many other variables, whilst combining two discourses, the facultative and the aesthetic. Likewise, products that would have been difficult to relate with healthy lifestyles only a few years ago have now started to make nutritional recommendations and emphasize the importance of physical exercise in their advertising. For example, Coca-Cola light soda asks whether we should all unquestioningly follow social norms with the slogan *"Do you always do what you are told?"* (2013), whereas traditional Coca-Cola takes up the fight against obesity and sedentary lifestyles with *"Change the statistics"* (2013).

We have seen in some advertisements that, together with the idea of looking after the health and the physique, looking after the brain/mind is linked. It concerns achieving general welfare through food. This introduces the fourth line of argument.

Hedonist Discourse

Around the hedonistic discourse we include some very concrete axis of argument. It concerns those references that allude to the obtaining of pleasure as an aim, regardless be it physical or psychological, through the consumption of the proposed product. On the one hand, we have taken into account here the advertisements referring to the flavour, their exquisiteness, in as much as they directly produce the satisfaction of the sensation of taste. This theme appears in more or less constant form throughout the last three decades, and although the tastes may be social and individually very variable, the majority of the articles offered have to satisfy in some measure the palate, have good taste or be good.

It is precisely the stocks and soups offered in the first decade that underline the line of taste, of the flavour of dishes. Starlux advises you to *savour it, rich, rich to the palate* ('60), Knorr *is flavour* (1966), Starlux *is double flavour* (1968). This line of products continues this way until the 90's, emphasising its value as a condiment and, therefore, as taste. Starlux says in 1991 *Occult flavours and cult of the taste,* whereas the food enterprise Gallina Blanca emphasizes the importance of flavour: *"To your taste"* (2003). During the first period, the three principal axes of argument are the references to the medical-therapeutic, the "naturalness" of the new food fashion and its result: the better taste. All these highly processed products insist on emphasising the attribute of taste, with more force than that of saving time. Tasty, exquisite and appetising mayonnaise (Solís, 1960), delicious fried tomatoes which enhance the taste (Solís, 1966), very tasty olives (Alisa, 1969), delicious and very good margarine (Marianne, 1965).

It is interesting to observe how the insistence on emphasising the taste is translated to new foods. During the 70's, artificial sweeteners and *light* products reiterate above all, together with other discourses of reference, the properties of their extraordinary flavour, which has nothing to envy for sugar or articles with all their substances. Like Ligeresa mayonnaise (1980) or the concentrated stock low in calories of Maggi (1993) that coincide in their slogan: *with all the taste.* The substitutes for sugar pressurise to make believe that the taste is better because, as well as being as good to the palate as sugar, the result of its consumption proportions fewer calories and, therefore, feel good with yourself: *"You are like that. M. Is your way of feeling like that ...*

Mesura is for you and you like yourself like that ..."(Mesura, 1987). It concerns less abstract values that, moreover, are always linked with feminine and masculine models in good physical and mental shape: cheerful, happy, good looking. The case is to be fully comfortable with oneself and enjoy that state with full satisfaction. To taste, to enjoy a sweetener means to enjoy the *authentic flavour* (Midy, 1990), but also its effects: calories are hardly consumed. Likewise, the sugar-free version of Fanta, Orange Zero, is promoted for its *"great flavour, zero sugar"* (2013). It seems that these *light* products have nothing to envy from the sweet little cakes or titbits with sugar which from the end of the 60's until now also emphasise the taste and the flavour, as well as the fun and enjoyment. It concerns trying to introduce consumption by way of the satisfaction that foods that are rich or good provide. Along this line, all the advertisements are good: sauces, marmalades, rice, biscuits, standard loaves, pâtés, pizzas, flours, cereals, legumes, butters and olive oil, potatoes, dairy products, fresh fish ... They all emphasise the enormous virtues of their tastes. This axis is also resorted to by the less transformed natural products: *strawberries to enjoy in a thousand and one ways, that delight you* (Fresón de Palos, 1985), or French cauliflowers whose slogan closes the advertisement saying *a pleasure in all (the) senses* (Prince de la Bretagne, 1991). This attribute is also emphasized in those foods that are enriched by the addition of other substances, even if this significantly changes the original flavour, as is the case with milk by the Central Lechera Asturiana: *Soya tastes great!* (2004).

However, in our understanding the other part of the hedonistic argument, which appears not to be so linked to taste as to other senses and values associated with food; such as welfare, pleasure, success, seems to be more interesting. It could be said, at the same time, that other lines of argument exist, such as the aesthetic or that of differentiation which also have a hedonistic constant: to have a *perfect* body to be satisfied with oneself, or to be the only one, the best, to feel good. A fact to consider is the ascendant evolution of the hedonistic recourse. As the period advances it is used more frequently, so that while the motives related to taste are maintained, the more abstract and subjective notions related with the obtaining of pleasure, of feeling good and happy, are increased. In an attempt to play on people's emotions regarding the economic crisis that Spain has suffered since 2008 and to foster a sense of optimism, Danone has adopted the slogan *"Feeding smiles"* (2013), which encourages people to participate in charity campaigns by donating its products to food banks.

To eat, in our culture, is a pleasure that can become a sin. A sin of gluttony or of transgressing the precepts of dietetics. The campaign for the autonomous products of Castille y León characterises its food as authentic sins: *The temptation comes from Castille and León. Seductions made without hurry and favoured by the climate. Earthly Morsels that are a provocation. Iberian pork, sausage from Cantimpalo, cured ham from Guijuelo ... the pleasures of the flesh … A tiny bite of very cured sheep cheese. Impossible to say no. If you try them, you give in to their charms. But there are sins ... which are natural.*

As we enter the last two decades, the use of the hedonistic discourse is still identified more with that achievement than enjoyment resorting to some comparisons even more sensual, above all in relation to the products classifiable as "treats", snacks and bites[10]. Lindt chocolates (1992) conquer our senses, make us surrender to the pleasure with their proposal: *To resist is useless.* Our body has to be content and the snacks, chocolates or sweets can provide this satisfaction:

[10] Lupton (1996: 36) relates these meanings with the idea that the European people had about certain products, as the chocolate: "Advertisements for chocolates routinely depict them as part of a scenario of young heterosexual love, as in the advertisement for Baci (Italian for kisses) chocolates using the slogan 'One kiss and you'll fall in love'.

"Give your mouth delicious Bocabits. From mouth to mouth ... Your mouth is asking for it (Matutano, 1987). Enjoy for the sake of taking pleasure: *Because today is today. Without any other special reason I am going to try the delicious sweets* ... (Nestlé, 1980) or *"the world is a box of kisses. You get more than you give"* (Nestlé, 2013). Even infant food is *full of flavour* (Prodial, 1985). The littlest also have to enjoy eating: *so that every afternoon is different, with a different flavour, with the flavour of the fruits, with Nutribén baby food pots every snack will be a pleasure* (Nutribén, 1991).

Escape, evasion, relaxing, parties, happiness, company, love or sex are special attributes linked to drinks, above all alcoholic ones and the combinations. The hedonist discourse reaches a special meaning in relation to these products, although determined values associated begin to be controlled towards the 80's. As we have already commented, their publicity ends limiting itself in the supports of maximum audience. In a country with a high index of alcohol consumption it is hardly prudent to attribute to those drinks the attainment of states of mind of personal transcendence or of evasion. In the decade of the sixties wine is presented as the *habitual, national and healthy* drink and the whisky Dyc *compensates your effort.* En 1975, Magno publicised its brandy as the solution to the problems of the economic crisis: *It seems that the crisis is going to end. You end it right now. The crisis is very much psychological. Everything is going badly ... A glass of Magno and while you savour it, reflect.*

Leaving this specification aside, another of the aspects strongly linked to the hedonistic discourse and alcoholic drinks is sexual pleasure. Sometimes this is more evident than at others and, normally it satisfies the man: *I'll wait for you at home* says the pretty girl who appears in an advertising of the liqueur Marie Brizard to someone sitting on a comfortable sofa with a glass in his hand (1985). Five years later this announcer continued using the same communicational axis. Drink seems to speak to a beautiful model in the mouth of a third person: *"Pour him one of course. Because you are sweet, transparent, unmistakable. Because you know how to be in my atmosphere and alternate with my friends. Because you are vital in the day and romantic at night. I love you, Marie".* Who is Marie, the woman or the drink?

On the other hand, together with food and sex, in our cultural context, the company associated with the party is also the object of fun and pleasure. The cava of Castellblanch of the 60's already tells us: *Don't let happiness escape.* And this is because alcohol is associated with the atmosphere surrounding dining, sharing and fun. A Malaga Virgen of the year 1970 reminds us that: *It is time to live ... They are moments of agreeable friendship. The afternoon changes the home into the ideal place to spend a pleasant evening* ... In the same way, the values of friendship, of the couple enjoying themselves together, become ever more frequent and not only in relation to drinks of this type. Bacardí rum publicises itself next to Coca-cola in a double sense: *The glass of company* (1980). Chivas whisky also reminds us of *"those magical moments"* (2005) and the wine producer Campo Viejo stresses *"the authentic pleasure"* to be had from drinking a glass of wine (2003).

From this analysis we can deduce that everything has flavour and in as much as that flavour is agreeable, it produces pleasure. Now, we wish to emphasise, above all, one idea: foods do not produce pleasure only because of how good they are, but for the benefits that are to be derived from their consumption which, on occasions are even more important. A clear example of this is the line of prepared products presented to substitute consumption, but also work processes, at the same time as they offer variety and sophistication. The information guarantees us the exquisiteness of the product, but also pleasure, the pleasure of not having to prepare it. Comfort and ease appear as springs of enjoyment. That *delicious* paella of seafood that is *real, but easier*

(Nomen, 1990), or *the "a la Carte cuisine" so easy to prepare for enjoying right now* (Findus, 1990). Or as the advertising about the brand of jam Hero says *for many people cooking is not a dish of good taste. That is why Hero has put on its apron ... So that you discover the pleasure of not cooking ...* (1990). It concerns satisfying the palate, of satisfying the body at the minimum possible cost.

Discourse of Progress and Modernity

Commodity, ease or pragmatism are benefits and advantages that are found reiteratively in another type of discourse: that of progress and modernity. In this case, we refer to those images which underline the change in reference to processes, attitudes, practices and values associated with food. We are speaking of the advertisements which emphasise the technological process in as much as it brings advances, of those that save time, tasks, money, and that give as well as service, diversity, originality and individuality.

The evolution of this discursive line is not exempt of peculiarity either. In fact, the use of advertising claims based on modernity has been related to the rationality of the uses of the time that consumption brought in the context of the first Fordism. Alonso and Conde (1994) compare the value attributed to modernity in the advertisements of the decade of the sixties - the artificial the plastic/the technology - with the idea of the naturalness that is recovered in the eighties. The artificiality is equivalent to the new products of consumption - artificial entities whose principal function is to technologically facilitate the life of the users - which incorporate an important symbolic value: the break up and overcoming of the previous tradition. Effectively, from a strong presence during the two first decades for many types of product, in recent years, when technological application is superior in products overall, this theme is hardly used in relation to a type of very specific articles, prepared foods; not even in a generalised form. During the decade of the 60's there are many things to explain in relation to the foods offered: where to buy them, how to prepare them or in what way to include them in the habitual consumption. The change is seen from another perspective, valued positively as a symbol of progress, of going forward. Different products appear, packed, in different sizes and for different uses. At that time even the products with a long presence on the market resort to claiming their adaptability to the new times. This is the case of Albo fish conserves: *"on the beach, camping ... Albo adds pleasure and easiness to breakfasts, snacks, lunches ..."* (1962). The ideas of technological revolution are manifested as well in frozen fish brands, like *fresh cod revolutionises Spanish cuisine ...* (Pleamar, 1975). Years later, high technology applied to ultra-frozen fish or to artificial products dress themselves up in tradition and exoticism, not with technical progress. It is preferable to speak in a veiled way of its practical use: how tasty they are and how easy to prepare.

Technology is included to publicise supposedly new products and ways of doing or not doing things. The word "new" has a particularly positive consequence in an epoch which has just overcome the shortages of the post-war and the limits imposed by rationing. The population is open to consumption, to shopping. The novelty signifies contact with the exterior, opening of frontiers. In food, the adjective new usually comes argued with the explanation of originality, of practicality. Like the *new cuisine* of the brand or rice Nomen, whose slogan also responds to that modernity: *We are up to date* (1990). Or the food enterprise Gallina Blanca with *Cuisine of today* (1994).

The technological advances appear in manifest form when it concerns underlining positive aspects, like greater hygiene, less adulteration, greater sanitary control or longer shelf life.

Determined processes, like vacuum packaging, are emphasised because, like sterilisation, they express the absence of contaminating air and bacteria and, therefore, guarantee the non-toxicity and long life of the product. During the first decade, the idea of hygiene and quality control is a value that recurs frequently. The packaged, surpasses other forms of supply (loose, home delivery) which cannot offer the same guarantees as the hypothetical industrial control. Artiach brand biscuits emphasises the care in the elaboration of their biscuits, which are *clean f*ollowing modern technology and rigorous controls of quality and hygiene (1968). All brands of baby foods also makes its harmlessness clear, by offering guarantee: *rigorous hygienic and sanitary controls* (Blevit, 1974), which are the fruit of *a labour of research* (Infiviasa, 1980) or they are *first quality, packed with modern, specialised techniques* (Prodial, 1985). The potato purée Pfanni does not say that it is dehydrated with antioxidants and other additives, but that it is the *First vacuum packed purée. We leave the air for the balloons* (1980). Equally, at the same time, the advertising about Hero explained us how it prepared its jams and how the sterilised glass, the hermetic seal, the low temperatures and the rigorous quality control followed guarantee, amongst other things. At present there are still streets in Barcelona which have milk shops with cows. ¿What then does publicity say of packaged milk? That it is not necessary to boil it, that it has been made hygienic and exempt from tuberculosis, that it keeps indefinitely and that, thanks to the distribution network of the product of a modern organisation, it is bought in numerous establishments. That is how brand of milk Ram communicates it in 1960.

Milk and the lactic derivatives have been substantially transformed by industrial technology. Until then, it concerned products with problems of durability in the larder. The powder or natural caramel creams which were normally prepared at home are now found ready for consumption in shop windows. In 1975, Dhul makes an apology of the packaging used in the presentation of its product: *Dhul caramel creams deserved this ... more hygienic, easy to transport and carry, multi-use* ... Technology is presented as at the orders of the consumer, at the service of the population, to facilitate and make the tasks more comfortable. When in the decade of the 80's different collectives (consumers, professionals, associations) begin to wonder about the consequences of so much technology, the course of argument is changed and the harmlessness of the technological process is emphasised. For example, in 1987 a corporative campaign of *tetra-brik* packaging explains to us what Ultra-high temperature processing (UHT) consists of and the advantages of this system of packaging for keeping the milk fresh.

Determined savings, closely linked with the technological process, are also presented as positive aspects. The advantages of "in any place and whenever" appear in the first years of the 60's and have still not been abandoned. The little cheeses presented in portions have already been adapted to the needs of the snack out of the home or to the Sunday meals: *easy to carry and share (and repartir)* (El Caserío, 1970), as well as the individual ingestion. Shortly after cheese slices appear *wrapped individually so that you quickly make 8 hot or cold sandwiches* ... (Ziz, 1975). It is the service offered by these products, be it for housewives, or for whomsoever. Stereotypically, the "efficient housewives" always appear very busy. And that is a problem to be solved. They need to value the saving of work. That is what the brand El Caserío shows in an advertisement in which the diary of a housewife appears full of domestic work to remind her how much those *good allies* help (1980).

Also the economic value, of saving, penetrates publicity of food during this period, coinciding moreover with the crisis of the beginning of the 70's. Saving is generalised, and not only of work. It is understood as a virtuous attitude of women. That is why it is correct to save in energy, in money ... Even little cheeses in portions permit the housewife in 1975, *to save in*

her daily shopping and, of course, in energy. The idea of business, of profit is not often resorted to, although sufficiently to contrast the original idea that many of these processed products are more expensive. To take the most advantage, to benefit becomes a good watchword; that is what the brand Pescanova of pizza maintains: *Round off your benefits* (1990), in exchange, that yes, of always offering *the best.* In this sense, the brand of canned-stew fish Albo suggests *so that you save ... prices sky-high.* The oil Coosur emphasises its *guarantee of saving* because it spreads more, while Nomen rice presents its paella: *"proves a better price than if you buy those ingredients at home"* (1990). Some years later, and referring to the current economic crisis, some advertisements remind us that although *"Everybody here keeps talking about the crisis … and there have always been bad times",* Danone is *"Feeding smiles"* (2013) whereas supermarkets drop their prices and thus *"Go to great lengths, so you don't have to"* (group Día, 2014).

Furthermore, the value of saving is also translated to the tasks and the time needed to carry them out. If this type of saving is emphasised it is because it is included in the product. Tomato or tomato sauce is sold as *the quickest and most economic way of cooking* (1980). Cannelloni pasta El Castillo said in 1985 that you only have to fill them because the pasta *comes boiled to a turn*, or Findus pizza explains, when launching its frozen products, how easy it is to make a meal: *A few minutes in the oven and you will have a complete meal on the table* ... (1980). In general, with fewer steps in the culinary process, there are more advantages. We said before that Albo stew emphasised the cheapness of its cost. In the same advertisement it underlines: *the stew that you know how to make, Albo gives it to you, already made. So that you save the journeys to the shops ... and the hours in the kitchen ... it is really convenient ... Albo thinking for your fast life* (1975).

Through the analysis of these advertisements, we get the idea that time is a scarce commodity and, seeing that there is not too much to dispose of, everything that contributes to saving it is welcome. Tulipán margarine relates its product to the hustle and bustle of modern life and the advantage it brings to the housewife who can easily spread it on bread without having to wait for it to soften (1980). This is presented as a saving of jobs and not because the housewife does not feel like doing anything. We have said that it always begins with very busy women. To acquire the service offered responds to the practical sense of the housewife, as the brand of olive oil Carbonell says (1964) or to common sense that makes them buy *Natural Lemons* (1965) or the Nestum cereals (1965) *without the need to cook* ... As the decades pass, *the pleasure of not cooking* is openly reclaimed (Hero jam, 1990).

The easy associated with the comfortable constitutes another benefit to take into consideration during the whole period. Including products which do not incorporate more service than in earlier stages, as in the case of rice commercialised in the 60's as easy to prepare. Toasted bread is convenient, potatoes are easy to cook and strawberries can be combined with everything. One of the sectors which resort to this argument quite frequently are the products of infant food. The Milupa baby foods emphasise in 1960*: they are prepared in a moment* or Bledine: *they are made in a moment.* Everything is a question of short minutes. They are practical, convenient products. And, moreover, as it concerns a sector which is specialising daily it offers a considerable variation, which is also another important advantage. The food and agriculture industry, which at the beginning of the period being analysed presented a scarce variety between the different products, does not need to invite to eat always the same. Now the children get bored and it has to be done, as the Nutribén baby food pots say, *every afternoon should be different* (1990). Variety is related with enjoyment, originality and surprise, and there

also appears a value related to the healthy, with the varied diet. In the last decade, the food market specialises in innovating not so much the type of products as the varieties of the same. For that reason, the most appreciated are the products which comprise the saving of tasks, ease of preparation, rapidity, low cost and possibilities of variation. Thus, the pre-cooked dishes, the instantaneous and the food complexes are an optimum response to all those criteria. The Maggi potato purée is *comfortable and easy to prepare at the same time that it offers many possibilities* (1990), the fried food of Campofrío that *makes it easy for you in comfort ..., flavour ... and innovation ...* (1990). Or Blevit purées that after a mother are also *the best solution* (1990). The slimming product Biomanán allows you to eat *comfortably anywhere and at any time ...* (1990). The possibility of improvising, of quickly solving ingestion, underlies all these articles, which are also supported by the kitchen gadgets and appliances which have helped people throughout this period to preserve, prepare and cook food. This is the case of Moulinex microwave, which states *"Coooking is easy"* (1995) or Balay refrigerator, which goes in *"For a world that is more comfortable"* (2003).

Discourse of Distinction and Difference

When we speak of this discourse, we refer to those lines of argument that base their communication in the expression of clearly differentiating factors with respect to different questions: ethnic, of prestige and status, of exclusivity or of knowledge. From this discourse, which appears with relative frequency, we are interested in emphasising the paradoxical value of selectivity that it includes. And we said paradoxical value because it concerns products of great consumption, destined to the majority of the population. Sometimes an attempt is made to identify the product with a specific origin, because the origin is prestigious (the best or principal producers of that article, for example). This is an aspect which we have already emphasised in the discourse of tradition, naturalness and identity. Others are concerned in linking their consumption with the élite classes or the haute cuisine with the aim of stimulating the social imitation and the differentiation. On other occasions, it concerns emphasising only the superlative value of the unique, of the best, of the most sold.

It is not necessary to say that the quality of the articles publicised, when not explicitly expressed, is supposed. However, many insist on pointing it out; that is to say, they emphasise that value of quality associated with the product and the brand, adding an attribute of personality and concrete guarantee. Sometimes such importance is given to creating a trademark and so to speak of the product is the least of it. If the brand connotes quality, the products are good and well made. Thus, any food has to be of quality, from the packet soups, passing through the sausages and arriving at the pre-cooked. Some examples show us the importance that the advertiser attributes to this value. In the 60's, the Potax stock cubes equated their product to the works of art of the del Prado Museum, Gallina Blanca defines its stock cubes as of *extremely high quality* (1957) and the brand Starlux, devoted to a similar food production, underlines that its products have *personality* (1968). The differential factor between some products and others, the desire to distinguish themselves from the competitors - of products that are very similar to each other - makes them emphasise their position of leader in the ranking or to use the superlative adjectives. *The genuine flavour that conquers* for Starlux (1971), *out of the ordinary or that has the highest sales in the world* like Planters peanuts (1980). To be the *most famous in the world* is a resource which, to judge by its high recurrence, must transfer value to the products. It concerns positioning oneself at the summit, being the first. Like the Nutriciela bay foods: *one of the first firms in the world* (1974).

The axis based on the difference tries to transmit to the target public the guarantee that the manufacturers are always working with the best ingredients to obtain the best products, because it is their way of working: *quality as philosophy* (Hero, 1990). Quality for chocolates, nougat, cocoas, coffee, infant food, olive oil. In reference to these last this attribute is always emphasised. Some like the firm Koipe elevate its use to the needs of a *great cuisine* because their oil is *5 star, 5 fork* (1987). Fish also include the idea of quality associated with their freshness. The Ministry of Agriculture, Fish and Food speaks of *recommended species* to promote the consumption of tuna, trout and muscles ('86). The pâtés many times referring to the traditional foiegras, emphasise their difference with phrases such as *of high quality and sophisticated* (La Piara, 1985) or the Tarradellas pâtés that *are only found in the best delicatessens* (1985). The uniqueness and the different are also reflected in the lactic derivatives as cheeses, milk with fruits and butter: *"experience original flavour in every bite"* (Bifrutas Pascual, 2011). It is the case of Philadelphia cheese which is made *to give a singular touch to the unique and exquisite flavour* (1989), of the La Lechera milk cream which speaks of the *delicious difference in the dishes of the haute cuisine* (1990) or of the 1880 nougat which compares itself to a process of wine-making selection: *"numerated and limited production. 1880 the most expensive nougat in the world"* (1975). Likewise, Avecrem emphasizes how its broth can be used as a flavouring with the slogan *"it's unique, and you can tell it is"* (2014).

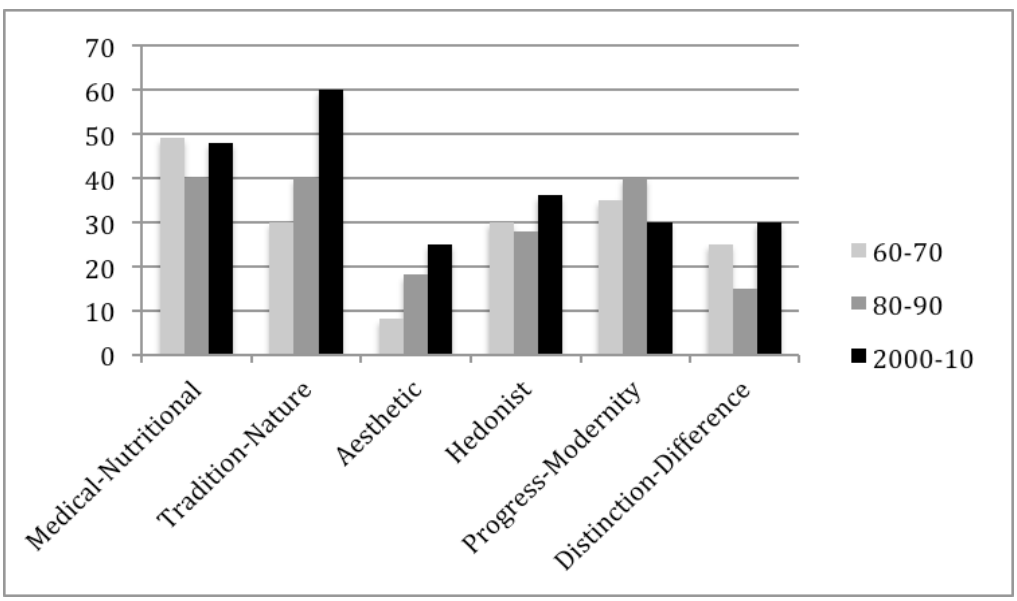
It is during the last two decades when greatest allusion is made to advertised products that remind us of the gastronomic as a symbol of art and the élite: *"the best tables do not always have to be reserved"* (whisky Chivas Regal, 2005). Diverse products allude to the traditional culinary know-how so popularised during recent years through books on cooking or journalistic articles: the institute of education in hostelry Cordon Bleu and haute cuisine. The most interesting thing is that many of these associations are made between products prepared industrially. The pre-cooked products bring onto the market different dishes, of haute cuisine and also exotic. The *Cuisine a la carte* of frozen products of Findus offers a type of *exclusive* recipe: fish a la crême de moutard, hake a la provençal, fish with garden vegetables, noodles au fromage, spirals a la sauce de setas and spaghetti a la creme de bacon (1990). Or the jam Hero prepared dishes that also offer a certain variety of *appetising, special and* exotic alternatives: goulash, roast, chickens a la moutard, vegetable panache (1990). In this way, the publicity facilitates, more and more, the phenomena of the internationalisation of certain dishes and products attached, supposedly to other autochthonous cuisine, accentuating the values, effectively, of exoticism and differentiation.

Alcoholic drinks also emphasise within this discursive line. And their arguments are lavish with prestigious comparisons: topazes, brilliant, black label, blue band ... The adjectives *unmistakable, real, authentic* are all symbols of status. Some use French in their texts, like the Perelada cava in the 1968 *connoisseurs et gourmets.* Others use their own ascendance, like the Scotch whisky William Lawson's, to stress *the exceptional* of the drink and *its intense personality* (1974). Black & White is another whisky that signs *with style* (1980), whereas the wine company Faustino promotes its wine for its *"recognisable character"* (2003). It concerns ways of emphasising the difference through the form of symbolic resources, with meanings, adhering to the élite classes, as is the *Financial Times* in an advertisement of the brandy Magno or the use of English as a symbol of prestige in whisky brands: *"Cross the black line"* (Ballantines, 2005). The alcoholic drinks, in general, often recur to that communicational axis, to the associated values of status and superiority. Like the cocktails of Bacardí Rum and Coca-

cola: *original unbeaten mix* (1990) or the Diplomático brand of rum: *"the rum that has won more prizes than any other in the world"* (2010).

We have pointed out in the discourse of tradition and identification that the publicity emphasises, sometimes, the place of origin of a product to also add a referential value. That same reference may also be considered a symbol of difference and prestige. Let us recall the advertisement of the Rioja wine of Castillo de San Asensio that says: *the cognac of France, the vodka of Russia, the wine of la Rioja* ... If this style is very frequent in the alcoholic drinks, it is also so in other food products. As Saxa and Cerebos publicise their salt: *the quality of English salt* (1965), as La Cigala rice uses a Chinese man (1965). In the last part of the period studied there appear, often, large texts which write about the exotic origin of their ingredients: *Cane sugar, from the Indico ... fruit of the long and hot summer of the Mauritius Isles. Ideal for sweetening bitter flavours, like tea* ... (1989).

For their part, the whole products become fashionable coinciding with the ecologist boom and are also related to certain genuine, authentic and cultural origins. It should be pointed out that in recent years various products have stressed their commitment to the environment, as the case with Rietvell's whole grain rice and pasta: *"Respecting the environment"* (2014). Even so, during this period, more than a few advertisers made use of humour or apparent exoticism to promote various products. Nomen argues: *Rice ... grows in the wild: From there its name of wild - in the rivers of Minnesota and Wisconsin, and for several centuries it was the food most appreciated by the Chippewa Indians. It is said that it is 'the caviar of cereals* ... (1990). Other references, also exotic, are those related to primitive man. In this case, the advertisements usually state that everyone consumes the products publicised, including *the others*. It is possible to resort to the formula in a humorous tone to show us how the Indians of the amazon jungle discover ice creams or how the cave-man does not know how to eat, he only devours the meat, because he does not know Campofrío sausages (1985).



Source: Elaborated by the author using data of her food adversiting archive.

Graph 1. Evolution of food advertasing discourses.

The evolution of Spanish food advertising discourses may be appreciated in table 1. Although in this chart they appear separately, discourses are usually presented as linked. Often, the medical and aesthetic discourse appear together (health and the cult of the body), or that of tradition and progress (the new and the old).

In the last years, the tendency to correlate distinct themes increases - tradition, gastronomy, hedonism, health, exoticism, aesthetics, ecological - which confirms that, more and more, publicity is a sum of discourses and that the advertising messages absorb, without a doubt, everything that may be significant in a given time. And, in this way, attracts the consumers to the lines of the centres of distribution. The advertising language, still producing eclectic and contradictory messages among themselves, identifies and nurses the new foods which come onto the market, presenting them as the only and best solution to satisfy food need and/or desire. Advertising minimises the costs of the promoted articles by maximising their advantages and benefits, making them desirable, edible and, finally consumable revealing with this that, today more than ever, effectively, the food which is *good for selling is the food which is good for eating* (Harris, 2011). *Light and health food* products, functional foods, whole or trans-genetic, products of third or fourth range, it does not matter, they are all a sum of perfection - healthy, natural, comfortable, quick to make, flavour some, slimming, stimulating, nutritive, regulatory, all are apt for consumption and all end up being for the consumers that which, finally, the advertisements tell us that they are.

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PART IV. CHILDREN'S EATING HABITS

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Chapter 11

IDENTIFYING EATING HABITS IN MULTICULTURAL SCHOOLS THROUGH FOCUS GROUPS WITH CHILDREN

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INTRODUCTION

Nutrition or eating habits are not only a biological necessity, but also a social and cultural activity, strongly influenced by peer groups. People make eating an activity that transcends the purely physiological facet, and transform it into a social event (Benarroch, 2013).

When choosing foods to eat, a number of factors are taken into account, for example, availability. This may be influenced by the economy, climate, geography, agricultural production techniques, politics, communication infrastructures, etc. Furthermore, given that eating is a physiological, social and cultural event, other factors will also have an influence, some of them related to physiological needs (e.g., age, sex, etc.), and others related to sociocultural and ideological factors, including traditions, taboos and beliefs, cross-cultural influences, religious convictions, etc. What we eat, our diet as a whole and what we do not eat, i.e., dietary requirements, dislikes or taboos, are indicators of identity and reveal membership of a particular sociocultural group.

Therefore, we should bear in mind that diet helps shape the identity of each social group. As a result, cultural traditions, taboos or beliefs should be taken into consideration. In fact, while there are foods that are 'off limits' in our society, they might not be in other countries. This may be the case of insects (which are consumed in Latin America, Asia or Africa), frogs (which are often eaten in Spain, France and Asia, but not in certain European countries or North America) or bats (only eaten in Vietnam), to name just a few. Religion also has a bearing on dietary restrictions. For example, Hindus cannot eat beef or any cattle by-products (except for milk and dairy products, as cows are considered sacred); Catholics limit the

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consumption of red meat during Lent; and Muslims cannot eat pork or its by-products, as well as other restrictions, etc.

Meanwhile, there is one factor which, unlike previous ones that tend to protect culinary traditions and promote cultural identities, adds aspects of other cultures to one's own, in other words, cross-cultural influence. The epitome of this is found in globalisation, which causes the exact opposite effect: it standardises and homogenises diet by adopting brand-dictated habits, which leads to less dietary diversity and makes food become monotonous (Benarroch, 2013).

So, if we look at culinary history (Flandrin and Montanari, 2004) we can observe that eating habits have changed from prehistoric times to the present day, from one culture to another, and from one age to the next. In today's society, despite the diversity of cultures in coexistence, there is an increasing adaptation to what has been called the "McDonaldisation" of eating habits. This is a form of culinary globalisation, which itself has roots in the economic globalisation that characterised the second half of the twentieth century, and has been accompanied by a change in family structure, consumerism, the power of advertising and marketing, the obsession with having a perfect body or being slim, etc.

Therefore, diet in general, and children's diets at home and school, have evolved at the same time as society has. Traditional and natural diets, and even our very own Mediterranean diet (De Cos, 2001, Asociación para la promoción del consumo de frutas y hortalizas) have been replaced by fast food and ready meals, which respond to the fast pace of our daily lives. At the same time, food advertisements use expressions such as natural, home-made, traditional ('like grandma used to make' is very common in Spain), locally-sourced, etc. These expressions make an impression on families and children. Therefore, schoolchildren are able to repeat television adverts by heart (Buckingham, 2002), as they are specifically designed to be retained in their memories.

Junk food, an excess of pastries and confectionery, the lack of a full breakfast, and the substitution of water for soft drinks, smoothies and processed fruit juices are just some of the eating habits that are leading to an increase in childhood obesity rates (16%) (Diabetes Foundation, 2006). This is associated with a number of chronic diseases such as diabetes or cardiovascular disorders, which are already being observed in children. We must also draw attention to the rise in anorexia, bulimia and other eating disorders starting at an increasingly early age (Hawks, 2000). As a result, some schools, under guidelines published by the Spanish Ministries of Education and Health (2006), have reduced or eliminated the supply of foods with high sugar, fat and salt content. What is more, some foreign governments are considering labelling unhealthy foods with a health warning and increasing their prices (WHO, 2002). It seems that politicians are increasingly concerned about problems arising from unsuitable eating habits. On this subject, the Spanish Ministry of Health created the NAOS strategy (Nutrition, Physical Activity and Obesity Prevention) (2004). The goal behind this project is for society to realise that a healthy lifestyle is easy-to-achieve and fun.

This study asked schoolchildren about their eating habits, as well as their ideas and concerns about healthy eating. After considering the various possibilities existing in qualitative research in general (Cohen and Manion, 1990, Cook and Reichardt, 1986; Goetz and Lecompte, 1988, Patton, 1980, 1987, Walker, 1989; Woods, 1989, etc.), we decided that discussions with children were the best way of obtaining data which requires dialogue, explanations, etc.

These discussions have a similar structure and methodology to focus groups and were the basis for planning and conducting this study. As Callejo (2001) notes, "the current boom in group behavioural patterns has resulted in various practices which, due to their different goals and evolutions, are hard to assimilate (...) Different practices are even covered under each of these names (i.e. group interviews, focus groups, etc.) This is what happens to focus groups with children, a denomination which involves considerable technical diversity". According to Colas (1997), "the school environment, be it the classroom, staffroom, departmental office or meeting room, is home to human and social relations which produce a variety of discursive genres". In keeping with this, for this study we perceived focus groups with children as the most appropriate technique to gather the required pupil-focussed information, as this study is part of wider research (Merino, 2006) which sets out to analyse eating habits on all levels, starting from the government and policy-making, down to school administration, school meals and even eating habits at home. The study analyses all aspects connected to eating habits, such as the cultural characteristics of individuals in schools today (different places of origin, different religions, different traditions, etc.) (Brea and Castro, 2002; Serra, 1998). Our schools have an ever-increasing immigrant population and, as a result, cultural (and therefore culinary) diversity will become ever greater.

Callejo (2001) argues the following about the technique used in this research: "At most, we can say that this is a microsocial situation with macrosocial applications. As such, it should be emphasised that group discussions are a means of identification and not an end" (Callejo, 2001). In this context, we believe that a focus group with children is the qualitative approach which is best suited to Early Education and First Cycle Primary schoolchildren, who are the focal point of this study.

The main reasons for our choice to use this approach derive from the prior need to analyse schoolchildren's views within the school environment. This contextual assessment forms part of wider research, as previously mentioned, which was principally conducted via the combination of quantitative tools (three questionnaires issued to teachers, school administration teams and families) and this qualitative tool, as well as further qualitative techniques including observation, photographs and document analysis. On this note, Callejo (2001) argues that "the group is created as a complementary element to the survey. Its origin is connected to attempts to relate survey-with-questionnaire situations to real life"(Callejo, 2001).

The goals we aimed to achieve with this qualitative technique consisted of researching schoolchildren's views on healthy eating and the dietary customs of other cultures, identifying their eating habits and detecting the level of education in this area.

METHODS

Participants: Formation and Selection of Focus Groups

We selected groups which were homogeneous, in that the members of each group were in the same context (same school), yet heterogeneous, in that they belonged to different educational levels (with varying ages) and different cultures. Thanks to this diverse composition, the group would then produce dialogue which would allow us to gather as much

information as possible. We conducted a total of four focus groups in two primary schools with meals service and Breakfast Club amenities, which in turn belonged to the group selected for the wider research project: The College of Early Childhood and Primary Education –Colegio de Educación Infantil y Primaria- (CEIP) Príncipe de España, in the city of Huelva (Andalusia, Spain), and CEIP Hermanos Pinzón, in Palos de la Frontera (Huelva, Andalusia, Spain). We decided to choose a city-centre (Huelva) and a suburban (Palos) school, taking into account that both schools have a high percentage of students from other cultures.

To select students, we first telephoned the headteacher of each school, and then met with the administration team and the heads of Early Education and First Cycle Primary. At these meetings, we discussed the research goals and also gave the year heads authorisation forms for the parents and/or mothers to sign allowing their children to be filmed during the study. Each year head then asked the class teachers to choose the children who would participate (not the entire class, but a selected group). They were asked to select a group of children who regularly used the school meals service, actively participated in class and belonged to different educational levels. In addition, they were requested to form groups with approximately 50% of the members from non-majority cultures (i.e., non-Spanish).

Four focus groups were conducted in November 2004, two with Early Education pupils and two with First Cycle Primary pupils (one group per school and per cycle). These school years were chosen as they cover the age range when eating habits are formed, in other words, the most suitable period of intervention before unhealthy habits or misjudgements are adopted.

We would also like highlight the reason for our decision to conduct four focus groups. We wanted the chosen sample to be as representative as possible of children in Early Education and First Cycle Primary at state-run primary schools with meals service, at which there are also pupils from other cultures, in the city of Huelva and its suburban area. Regarding this, the CEIP Príncipe de España is the school with the highest number of students from different cultures in the city of Huelva, as is the CEIP Hermanos Pinzón in the suburban area of Huelva, so we decided to organise an Early Education and First Cycle Primary group at each school. As for the number of focus groups, as González del Río (1997) states, “the number of groups needed to conduct research does not need to be very large. In fact, efficient research can be performed with relatively few groups. Two similarly-formed groups produce monotonous and superfluous discourse, with saturation occurring whereby the second group adds nothing new to the first one. Once the groups are appropriately formed, one is sufficient to conduct research” (González del Río, 1997).

With regard to the size of the group, in this case the exact number of pupils was decided by the coordinators of each cycle, Early Education and First Cycle Primary, with a total of six or eight pupils suggested for each group. This number was maintained, except in the Early Education group at CEIP Hermanos Pinzón, as the coordinator considered that the three non-Spanish pupils selected would provide a great deal of information. In fact, it was one of the groups in which discussion flowed the most. The choice of pupils was made by teaching staff because they are responsible for the children at their respective schools, and therefore have a greater and wider variety of information about the characteristics of each child.

Aspects Analysed

When preparing the data collection tool (the guide notes of the discussion group), and also when analysing collected data, it is more practical to have a classification based on the different aspects that are analysed. Therefore, the following were selected: breakfast, eating habits, awareness of healthy eating, advertising, cross-cultural influences, and meals service. For each of these aspects, a number of categories were established, as can be seen in Table 1.

Construction Process and Application

Although this is an open-ended technique, there were a number of circumstances that prompted us to pre-prepare well-defined and specific questions to encourage discussion in the group. The following aspects were considered: (1) the young age of the participants (3-8 years old); (2) the classroom provided for the focus group was the venue for the Breakfast Club and was full of toys, which easily distracted the children; (3) no staff members were present to guide and supervise the children; (4) the participants came from different classes and levels, so they did not know each other very well; (5) normal class routines were disrupted to allow for participation in the focus group.

These circumstances led to some difficulties in maintaining the children's attention. As for the previously mentioned guide notes, although the subject matter or the order in which ideas were to appear were not closed, a certain number of questions had to be prepared in order to gain their attention and to encourage discussion. To address these issues, we pursued the following alternatives: (1) we posed the questions like a game, and when we noticed that attention levels were slipping, we interrupted the discussion to play “I spy with my little eye”; (2) we had asked the class teacher, or failing that another teacher, to remain in the classroom whilst the discussion was underway, but this was not possible as there were no teachers free; (3) we showed the students different types of food (fruits, smoothies, sweets, chocolates, etc.) in order to gain their attention and allow them to see and touch everything under discussion, thus better adapting to their age and level of education; (4) in one of the schools, the Breakfast Club had an area with no toys, so we sat down and conducted the group in this space, as this favoured the children's concentration (as opposed to distraction).

Interpretation and Analysis

All the data collected in the focus groups underwent the following stages prior to coding and subsequent analysis. First of all, we read through the data obtained. After gaining an overview of the information, we performed a second reading in order to develop a first draft of categories, according to the aspects mentioned above. After coordinating this categorical system with Health Education professionals and Early Education and First Cycle Primary teachers, we finalised the categories and codes required for the subsequent content analysis.

The final category system was divided into the 6 aspects mentioned above, which were then subdivided into 22 categories to which we assigned different codes, as shown in Table 1. We considered it appropriate to use the findings proposed by Rodriguez, Gil and Garcia (1996) to analyse data from focus groups with children, i.e., around a theme-based approach.

FINDINGS-DISCUSSION

We should first highlight some possible limitations of the study. We would like to note that this tool carries the risk of a potential lack of honesty from the schoolchildren, and even more so at such a young age, when boys and girls have a great deal of imagination, or may want to say the same as the others for fear of responding poorly (social desirability), because prior to the focus groups, their teachers mentioned that the researcher was another teacher who was going to spend some time with them in another classroom.

Table 1. Aspects, categories and codes of focus group with children

Aspects	Categories	Codes
a) Breakfast	Time	ABTIE
	Who with	ACCON
	What they eat	ADQUE
	What they eat at morning break	AEREC
	What they like eating	AFGUS
b) Eating habits	Who with	BACON
	What they like eating	BBQUE
	Number of meals	BCNUM
	How often they eat sweets	BDCHU
	How often they eat fast food	BERAP
	Activities whilst eating	BFACT
	Which foods they like the most and the least	BGGUS
c) Knowledge of healthy food	Which food is healthy	CAQUE
	What it is for	CBPAR
	Who teaches them	CCQUI
d) Advertising	Healthiest foods shown on TV	DASAN
	Favourite foods shown on TV	DBPRE
e) Cross-cultural influences	What their classmates from other countries eat	EAQUE
	Who they sit with at lunchtime	EBCON
f) Meals service	What they eat	FAQUE
	Where they prefer eating	FBDON

We would also like to clarify that the presence of a video camera seems not to have interfered with the responses, as it was set up on a tripod in a corner of the classroom, in such a way that all the participants could be filmed. At first, they asked what the camera was for and they were told it was to take a photo, so once they posed for the photo, they forgot about it (out of familiarisation).

Below are some thoughts and conclusions about the data collected via the technique used, in keeping with the aspects previously described. Some of them are explained in greater depth than others, because although all data are significant, some of them were considered to be more relevant:

a) Aspect 1: *Breakfast*. Some children skip breakfast and most others just have a glass of milk or cocoa, whilst a few participants said that they eat something solid (toast, biscuits, sponge cake, etc.). They said that their parents do not force them to eat a more substantial breakfast. Most usually have dinner around 9.00pm and go to bed early, so they could get up a little earlier to eat a proper breakfast. They usually have breakfast alone or with their mothers, which suggests, as some of the children actually mentioned, that breakfast is a rushed affair whilst the fathers and/or mothers are getting ready to go to work or leave the house, with this rushed feeling being passed on to their children.

It would be healthier to make breakfast time more relaxed, so parents could set an example and start the day calmly and as a family whilst enjoying the most important meal of the day, especially for growing children who are about to attend class during the morning.

b) Aspect 2: *Eating habits.* They were asked about different types of food. Most do not like fish, saying it is because of the bones and being difficult to eat. As for fruit and vegetables, they tend to prefer fruit. Almost all of them love pizzas, burgers and fries (cf. the "McDonaldisation" mentioned in the introduction). They often eat whilst watching TV instead of conversing with the family, which is linked to obesity (Coronado Rubio, 2007; Martínez-Aguilar, and Aguilar-Hernández Gutiérrez-Sánchez, 2011). The majority refer to their mothers, who presumably continue to be responsible for feeding the children, even though almost all of them are working mothers. They particularly like sweets, yet realise they are detrimental to dental hygiene and so consume them with caution, mentioning also that they tend to eat them most often with their grandparents.
c) Aspect 3: *Awareness of healthy eating.* We should clarify that although there are not healthy and unhealthy foods as such, as all can be eaten in moderation, the question was posed in this way to avoid any possible confusion. They do not know how to define healthy food, and when asked they tend to respond by naming a particular food (e.g., tangerine). When they are asked why that food is healthy, they usually reply that it helps growth and contains vitamins. They are virtually unable to name someone who could explain what healthy eating is (González Lucini, 1998), except in some cases when they hint that their mothers could do so. They do not know how to correctly classify foods into their respective groups (fruits, vegetables, etc.). Some mothers, whilst feeding their children, could seize the opportunity to teach them about food, which means they also convey skills and habits, as this knowledge is based on family practices and attitudes about food.
d) Aspect 4: *Advertising.* Even though they are unable to read or are just becoming literate, they can quickly identify food brands by the packaging (Puleva, Actimel, etc.) and can perfectly reproduce their advertising messages (e.g., "contains milk", "vitamins to help you grow", etc.). They know the brands Telepizza, Burger King, McDonald's, etc., but when you talk about them, they tend only to mention the toys they give away. On the other hand, we were surprised that they show greater enthusiasm about the burgers and pizzas that their own mothers make for them, but this happens rarely.

e) Aspect 5: *Cross-cultural influences.* Pupils with non-Spanish parents said they had visited their home countries on several occasions to see family, but they cannot see differences between the food and diet in Spain and their home countries, except for a couple of cases when they mentioned a typical dish from their country which is not commonly eaten in Spain (couscous). The same applies to Spanish pupils, who cannot see a difference in their non-Spanish classmates' diets, but do realise that the latter do not eat certain foods (e.g., pork in the case of Muslims). However, they think it is because they do not like said food (as opposed to cultural issues), and the same goes for classmates with allergies, as they also believe that they do not eat a certain food because it is not to their liking (as opposed to health issues).

At the two schools where we conducted the focus groups, we found that non-Spanish pupils are fully integrated with the rest of their classmates, although we should clarify that the purpose of this study was not to discover the level of adaptation, so this information should be analysed in further studies. It can be confirmed that there are no differences in eating habits and food awareness between Spanish and non-Spanish pupils. This illustrates the homogenisation mentioned in the introduction, as opposed to the preservation of culinary traditions and customs from different cultures and/or religions.

f) Aspect 6: *Meals service.* Most, except for some pupils, eat lunch at school, as both the mother and father are at work. Some like having lunch at school because afterwards they can play with their classmates, but others complain that the food is cold or that they have to wait too long to go home and rest.

In summary, it could be said that on the whole, except for two specific cases, the children who participated in the study have little knowledge of food. There is a growing consumption of fast food and/or ready meals, as well as a gap in the teaching of healthy eating habits. This could be due, amongst other factors, to the parents' lifestyle, as they struggle to achieve a work-family balance. This type of fast food helps achieve said balance, although it is not the kind of food that you would want to give to your own children. Companies in the industry are very clever, using marketing and advertising to sell these products as if they were actually healthy, hence the slogans mentioned earlier in this chapter (e.g., natural, home-made, 'bio', etc.).

Following on from this project, there has been further research into all the aspects that influence eating habits, both at home and at school, which has helped us to design an educational project on this subject. Its aim is to place responsibility on the educational community for ensuring healthy eating habits at all levels (R Dixey, 2000; REEPS, 2007), from government to the school itself and families. Likewise, the importance of healthy eating education in a multicultural context must be underlined. This approach can be two-fold: to raise intercultural awareness amongst pupils involved by covering diet-related issues, and to encourage healthy eating habits.

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Chapter 12

INSIGHTS INTO CHILDREN'S LUNCHBOXES: UNDERSTANDING THE ISSUES IMPACTING THE SELECTION OF CONTENTS BY AUSTRALIAN PARENTS

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INTRODUCTION

Childhood obesity and overweight are among the most serious global health challenges of our time. Once considered a 'rich' country problem, childhood obesity is now widespread and increasing at an accelerating pace in many low and middle income countries. While there is evidence that growth in childhood obesity and overweight has slowed or stabilised in some OECD countries, there is no sign of convergence in prevalence rates and no sign of retrenchment of the epidemic.

The aetiology of obesity is highly complex and requires suitably complex approaches if current prevalence is to be reduced and future incidence prevented. A body of knowledge about the effectiveness of obesity prevention programmes is emerging in high-income countries with results of meta-reviews becoming available and evaluation components increasingly included in interventions. Although much remains to be learned about specific types of intervention, the evidence strongly suggests that programmes that include coordinated elements in multiple settings are the most likely to succeed in the achievement of outcomes. Most recently, the WHO Working Group on Science and Evidence for Ending Childhood Obesity (2014) emphasised the importance of a systems-based and multi-sectoral and multi-jurisdictional approach for addressing childhood obesity. This approach is influenced by the life-course model of child development (WHO, 2013) and understands health outcomes as products of individual, family, community, and broader food and physical activity environments in interaction.

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Social Marketing

A consensus definition of social marketing was reached in late 2013 to assist the social marketing profession to communicate clearly what is social marketing (and hence what is not social marketing). According to the consensus definition, social marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good. Social marketing practice is guided by ethical principles. It seeks to integrate research, best practice, theory, audience and partnership insight, to inform the delivery of competition sensitive and segmented social change programmes that are effective, efficient, equitable and sustainable. Similarly to commercial marketing, the essential elements of social marketing are exchange and the marketing mix (product, place, promotion, and price), which are applied in a competitive environment. However, in contrast to commercial marketing, the focal outcome in social marketing is social good, not financial gain, which alters fundamentally the nature of its essential elements[1]. The eight benchmark criteria that define social marketing are outlined in Table 1.

Table 1. Social Marketing Benchmark Criteria

1.	Consumer orientation - Focuses on developing a robust understanding of the audience using a mix of data sources and research methods and feeds it into the intervention mix.
2.	Behavioural goals - The intervention has an unambiguous focus on influencing specific behaviours, and is based on specific behavioural goals.
3.	Theory based - Uses theories to understand behaviour and inform the intervention.
4.	Insight - Customer research identifies pieces of understanding - including barriers - that will lead the development of an attractive exchange to underpin the intervention.
5.	Exchange - Considers benefits and costs of adopting and maintaining a new behaviour, maximizing the benefits and minimizing the costs to create an attractive offer.
6.	Competition - Incorporates a robust competition analysis to address all direct and external factors that compete for the audience´s time, attention, and inclination to behave in a particular way.
7.	Segmentation - Relies on a developed segmentation approach, going beyond more simple targeting approaches, and avoids the use of generalization.
8.	(Marketing) Methods Mix - Examines and uses an appropriate mix of (marketing) methods to bring about behaviour change. Does not rely solely on raising awareness.

Source: http://www.dh.socialmarketing-toolbox.com/sites/default/files/benchmark-criteria-090910.pdf.

Recent research indicates potential for the application of social marketing to combat obesity (Carins and Rundle-Thiele, 2014). To date, the application of social marketing to obesity prevention remains dominated by individually focussed message promotion (social advertising) aimed at raising awareness. However, while important, awareness alone is not generally sufficient to engender lasting behaviour change. Social marketing interventions have been found to be most successful when they are driven by customer insight and address

[1] For a fuller description of social marketing, interested readers are directed to Hastings G. and Domegan C. (2013) *Social marketing: From tunes to symphonies* available from http://www.amazon.com/Social-Marketing-From-Tunes-Symphonies/dp/0415683734.

in a targeted manner the costs and benefits associated with behaviours at various environmental levels and use all elements of the marketing mix (Carins and Rundle-Thiele, 2014; French, 2011).

This Chapter

Australian childhood obesity and overweight prevalence rates are high and the quality and quantity of food consumed by Australian school children needs to change. An important avenue for change is via food consumed at school as it has been estimated that more than one-third of their daily energy intake is obtained from foods consumed in school hours during school term (Bell and Swinburn, 2004; Briefel et al., 2009).

This chapter presents the results of research into the factors and issues that impact Australian parents' supply of school food and beverages to primary school children in a lunchbox. The school 'lunchbox' plays an important role in Australian children's dietary intake. For the majority of children, the source of food and beverages consumed during school hours is the home, with parents providing the contents of lunchboxes. Therefore, behaviour change is required of those who are responsible for packing primary school lunchboxes (e.g., parents and other carers).

For parents, the performance of lunch-packing behaviours during the school year is an important aspect of their food related roles and behaviours, particularly those of providers and controllers. It is likely that factors impacting lunch-packing behaviours have a pervasive effect on children's diets, as well as obesity and overweight rates in Australia. Understanding what, how and why parents select foods and beverages for their children could contribute to the development of social marketing interventions aimed at reducing obesity and overweight and improving the diet of Australian children.

METHODOLOGY

The research consisted of two phases. In the first phase, a review of the contemporary literature was undertaken to identify research into childhood obesity and overweight, nutrition, the role of parents in the aetiology of obesity and overweight, and school food consumption and practices. In the second phase of the study, a survey of primary school children's parents was designed and conducted which had descriptive and exploratory aims.

PHASE 1: LITERATURE REVIEW

A search of contemporary literature was undertaken using key databases with a pre-determined set of key terms designed to gather the maximum number of publications possible. The databases and key search terms were based upon a previous systematic

literature review project in healthy eating (Carins and Rundle-Thiele, 2014) and market potential studies undertaken by the research team.[2]

The initial results were limited to articles published between January 2000 and October 2013. All records from the searches were downloaded to EndNote and duplicates removed, leaving 486 titles and abstracts. To ensure that the most relevant records would be analysed for the literature review, exclusion criteria were established to remove records pertaining to non-Australian contexts and/or that met one of the following criteria:

- Records for references with a methodological focus
- Records for references with an intervention/evaluation focus
- Records for references of an exclusively medical content
- Records for references of a primarily commercial content
- Records containing only references to dissertations and abstracts (e.g., not journal articles)

Following the application of exclusion criteria, backward and forward searching was completed by examining the reference lists of journal articles for further sources that may give additional information regarding childhood overweight and obesity in Australian children and the role of parents in its aetiology.

Childhood Obesity and Overweight in Australia

Rates of childhood obesity and overweight prevalence in Australia continue to warrant attention and remain a major focus for preventative health efforts. Recent data indicate that in 2011-12, 18.2% of children aged 2-17 years were overweight and 6.9% were obese (Australian Bureau of Statistics (ABS), 2013), measured in Body Mass Index (BMI), with very little variation across children's age groups (refer to Table 1).

The practical significance of this data is that one in four Australian children are at increased risk of significant physical and mental health disorders in childhood and adulthood. Obese and overweight children more frequently have asthma, Type 2 diabetes, cardiovascular conditions and certain cancers. Children who continue to be overweight or obese into

[2] Databases consulted:
Euromonitor
AC Nielsen
Australian Bureau of Statistics
Australian Institute of Health and Welfare
EBSCO e-journals;
Emerald;
INSPEC (Web of Knowledge);
Medline;
Proquest Central;
PsycINFO;
Sciencedirect;
Taylor & Francis; and
Web of Science.
Key search terms: health* OR eating OR nutrition* OR diet*; school lunch* OR school meal* OR school food*; child* OR primary; preference* OR choice* OR habit* OR pattern* OR intake* OR consumption*; australia*; review*.

adulthood are at increased risk of coronary heart disease, diabetes, certain cancers, gall bladder disease, osteoarthritis and endocrine disorders. In addition to physical health problems, overweight and obese children frequently experience discrimination, victimisation and teasing by their peers. This may contribute to poor peer relationships, school experiences and psychological wellbeing, particularly among older overweight or obese children (Australian Institute of Health and Welfare (AIHW), 2012).

Aetiology

High international childhood obesity and overweight prevalence rates have prompted extensive research into understanding obesity's causes as well as investment in prevention and intervention programmes. At a most basic level, overweight and obesity represents an energy imbalance between calories consumed and calories expended (Baur et al., 2008). Rising levels of childhood obesity are fundamentally linked to diets shifting towards increased intakes of energy-dense (high in fat and sugars) nutrient-poor (low in vitamins and minerals) foods, and trends towards decreased levels of physical activity. However, there is not one unique explanation as to how and why an imbalance manifests itself in some children and not others. Rather, the aetiology of obesity is an exceedingly complex question involving genetic, hormonal, neural, metabolic, behavioural, societal and obesogenic[3] factors (Procter, 2007). Such complexity is reflected in the recent literature which hypothesises a role for multiple individual (e.g., food preferences) and environmental factors (aspects of the home, the school, the community, and society) in the determination of dietary behaviours and outcomes (Anderson and Butcher, 2006; Pescud et al., 2012; Procter, 2007; Russell and Worsley, 2013). One conceptualisation of the multiple factors and interactions that may be at work in the aetiology of obesity and overweight is the obesity systems map prepared for the UK Government Office for Science Foresight Report (Butland et al., 2007)[4].

Table 2. Weight status of children by age group (percentage)

	2-4	5-7	8-11	12-15	16-17
Underweight (BMI less than 18.49)	4.4	5.0	4.2	6.1	6.0
Normal range (BMI 18.50-24.99)	72.8	70.9	69.5	67.4	69.0
Overweight (BMI 25.00-29.99)	17.8	15.5	19.6	19.5	17.4
Obese (BMI 30.00 or more)	5.0	8.5	6.7	7.1	7.6
Overweight/Obese (BMI 25.00 or more)	*22.8*	*24.1*	*26.2*	*26.6*	*25.0*
Total measured	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

Source: Australian Bureau of Statistics (2013).

Within the context of a multi-factorial aetiology of childhood obesity and overweight, the precise roles of specific factors and their inter-relations are not universally understood. Indeed, several authors have conducted literature reviews with the aim of clarifying the

[3] Obesogenic environments are defined as 'the sum of the influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations' (Egger and Swinburn, 1997, p. 477).

[4] This obesity systems map is available on the Web: http://www.shiftn.com/obesity/Full-Map.html.

evidence and have reported varying conclusions. For example, Procter (2007) concluded that high amounts of sedentary time, snacking, skipping meals, portion sizes, energy density of foods and meals and potentially high sugar consumption were strong predictors of obesity. Swinburn and colleagues (2004) concluded that sedentary lifestyles and energy-dense but nutrient-poor food were "convincing" risk factors for obesity, while "probable" risk factors included heavy marketing of energy-dense foods and fast food outlets; sugar-sweetened soft drinks and fruit juices; and adverse social and economic conditions in developed countries, especially for women. A different conclusion was drawn by Pate and colleagues (2013) who found evidence to support a role for genetic factors and low physical activity in overweight and obesity prevalence in children aged 5 to 18 years. Their review reported mixed evidence for the contribution of sedentary behaviour, dietary intake, physiological biomarkers, family factors and the community physical activity environment; and the evidence as a whole regarding social cognitive factors, peer factors, school nutrition and physical activity environments, and the community nutrition environment was also deemed inconclusive.

The Role of Parents in Children's Dietary Practices

Parents have a pervasive influence in the dietary practices of their children, especially young children, through several food related roles and behaviours. As food providers, food consumption models, and controllers of the eating environment parents have a significant influence on child eating habits. In addition, food socialisation practices and food-related parenting styles are factors known to impact child eating (American Dietetic Association (ADA), 2008; Marshall et al., 2011; Pettigrew and Roberts, 2007; Wyse et al., 2011).

In their role as food providers, parents control which food products are kept in the home and in what quantities food is made available to children. There is evidence that availability and accessibility are strong predictors of food consumption, particularly that of fruits and vegetables (Blanchette and Brug, 2005; Pescud et al., 2012; Wyse et al., 2011).

Parents model food consumption, and create opportunities for observational learning and there is evidence for an association between what parents and children eat (Pearson et al., 2009; Wyse et al., 2011). As controllers of the eating environment, parents influence meal patterns and practices. There is growing evidence that frequency of family meals and television watching at meal times are related to children's intake and resilience to obesity (ADA, 2008).

In the everyday performance of their roles as food providers, role models and controllers of the eating environment, parents also communicate social, cultural and psychological meanings of food, thus socialising their children to food. Parenting styles influence how these roles are performed, and there is some evidence that permissive, disengaged, and coercive parenting are more likely to be observed among fathers of overweight/obese pre-schoolers (Wake et al., 2007) or parents of obese children (Morawska and West, 2013).

It is generally believed that an appropriate level of parental control and monitoring of food choices is associated with positive outcomes in children (Marshall et al., 2011), however the definition of "appropriate control" is elusive in the absence of systematic longitudinal data. The American Dietetic Association (ADA) suggests that the role of parents and other caregivers in feeding is to provide positive structure, age-appropriate support, and healthful food and beverage choices (ADA, 2008). Indeed, rising international obesity prevalence rates

and evidence that the diets of many children are sub-optimal nutritionally are viewed by many as symptomatic of parents, particularly mothers, failing to exercise control over children's diets (WHO, 2000). Among the possible causes for parental failure to achieve control over children's diets are an insufficient knowledge of nutrition, a lack of motivation to ensure children eat well, and an inability to control children's food consumption (Pettigrew and Roberts, 2007).

Available research indicates that Australian parents are generally well informed and aware of the importance of providing children with healthy nutrition (Bathgate and Begley, 2011; Hesketh et al., 2005; McLeod et al., 2011). Nevertheless, parents report challenges and barriers in the course of everyday life that impact their knowledge, such as distinguishing between more or less healthy packaged snacks among the ever-growing options on offer (Hesketh et al., 2005). Similarly, parents' motivation to ensure their children eat well is challenged by lifestyle pressures, including time constraints, which increase reliance on convenience foods, and "pester power" or child pressure regarding preferences for less healthy foods (Hesketh et al., 2005; Pettigrew and Roberts, 2007).

School Lunches

Australian children attend school five days a week, generally from 9 AM to 3 PM, and are estimated to obtain more than one-third of their daily energy intake from foods consumed in school hours in the school year (Bell and Swinburn, 2004; Briefel et al., 2009). Therefore, the quantity and nutritional value of food that children are eating at school is important for healthy development. Knowledge of foods and beverages consumed at school is an important indicator of children's eating patterns (Kremer et al., 2006). This, together with the relative ease of accessibility to schools relative to other significant environments in children's lives, make them ideal settings for implementing and evaluating policies, and conducting research targeting childhood overweight and obesity (Clarke et al., 2013).

Until relatively recently, there was little data about Australian children's school eating behaviours (Cleland et al., 2004). This has changed somewhat in the past decade, with the greater focus on school food environments fuelling research into school children's tuckshop purchasing practices, the contents of children's lunchboxes, and influencing factors. One study on energy intake of children aged 5-15 years in and out of school found that the top five food groups contributing more than 50% to energy intake at school were breads, fast foods, fruit/cordial drinks, fat spreads and biscuits and crackers, whereas the top five food groups contributing to energy intake out of school were mixed dishes, leftovers or staples, fast foods, milk, bread, meat and desserts were fifth equal (Bell and Swinburn, 2004).

Under the auspices of the National Healthy School Canteen Project, all state governments have introduced policies that address the provision of food and drink in school canteens, tuckshops and vending machines in government schools. Generally, confectionary and soft drinks have been banned and the proportions of items available on the menu are based on a "traffic light" system of food classification. In addition to policy measures, nutrition education modules have been introduced into the curriculum and individual schools may have initiatives aimed at increasing healthy eating and physical exercise. The literature indicates that implementation of and compliance with government policies in Australia vary both across and within states (see, for example, Chellappah et al., 2012; De Silva-Sanigorski et al.,

2011; Dick et al., 2012; Drummond and Sheppard, 2011; Pettigrew et al., 2012). In addition, isolating the impact of government-initiated school food and nutrition policies and interventions on children's eating behaviours is methodologically challenging particularly amongst primary school age children.

The School Lunchbox

In Australia, food consumed at school is predominantly from home, with 80 to 85 % of children aged 5 to 15 years bringing food "packed" in a 'lunchbox' for consumption during the school day (Sanigorski et al., 2005). For the remaining 15 to 20% of children aged 5 to 15 years, the primary source of food consumed at school is the school tuckshop or canteen. This is unlike the situation in other countries which may be comparable on social economic cultural dimensions and overweight and obesity rates but differ in that children have extensive access to cafeteria style lunch menus.

Recent research on the lunchboxes of primary school children found the foods and drinks most frequently consumed during school hours to be bread, fruit, fat spreads, biscuits, muesli/fruit bars, and packaged snacks (Brennan et al., 2010; Sanigorski et al., 2005). With some variation reported across studies, a typical school lunchbox included one sandwich, two biscuits, a piece of fruit, a snack of either a muesli/fruit bar or some other packaged snack, and a drink of fruit juice/cordial or water (Sanigorski et al., 2005) and there was little variation in the contents during the school week (Brennan et al., 2010).

Of note is evidence of an over-consumption in school hours of 'extras' or 'junk foods" - foods that are low in nutritional value and/or high in added fat, salt or sugar (such as biscuits, cakes, muesli/fruit bars, packaged snacks, and chocolates/lollies) - and an under-consumption of vegetables (Brennan et al., 2010; Sanigorski et al., 2005). This pattern of consumption is most apparent among younger primary school children, whose lunchbox contents represent higher energy intakes possibly due to the greater proportion of extras, particularly sweet contents, than older children. A tendency for younger children to consume extras during school hours was also reported in a study by Kelly et al. (2010) on the contents of pre-schoolers' lunchboxes. In their sample, 60% of lunchboxes included one or more serves of extra food or drink.

The inclusion of extras in lunchboxes is of concern as more than half of children appear to consume most or all of the daily maximum quantity of extras advised by the Australian Dietary Guidelines (National Health and Medical Research Council (NHMRC), 2013) during school hours (Brennan et al., 2010). Therefore, unless any further extras are avoided during the remaining hours of the day, there are risks of over-consumption of extras and of excessive caloric intake (Kelly et al., 2010).

PHASE 2: THE SURVEY

The results of the literature review had highlighted that knowledge on the contents of Australian school lunchboxes was dated and was based on observational research. Furthermore, research addressing how and why parents select the contents of their children's lunchboxes in the Australian context was scarce. At the time of writing, the researchers could locate one qualitative study (Bathgate and Begley, 2011) that explored the process of selecting lunchbox contents and identified three themes: being a good parent, making compromises, and the impact of the school environment on eating behaviour.

In order to overcome these apparent gaps in the literature, an on-line survey was conducted in phase 2 of the study with the aim of describing and explaining parents' lunch-packing behaviours. The survey included items in multiple choice, rating scales and open ended formats.

Measures of behavioural determinants were informed by the Theory of Planned Behaviour (TPB) (Ajzen and Madden, 1986). The Theory of Planned Behaviour is well established in the discipline of psychology and provides the conceptual framework for analyzing the processes and contingencies underlying parents' current selection of lunchbox contents. TPB conceptualizes behaviour as the relationship between attitudes, subjective norms, intentions, actual behavioural control, and perceived behavioural control. These elements act as facilititators or barriers of actual and potential behaviours. The Theory of Planned Behavior (TPB) (Ajzen, 1991) has been demonstrated to effectively explain and predict a wide range of health-related behaviours (see Godin and Kok, 1996). The UK National Social Marketing Centre's benchmark criteria of theory use recommends employment of existing theory in formative research to identify modifiable behavioural determinants to inform social marketing intervention planning (Evans, 2006; Lefebvre, 2011). Employment of more of the social marketing benchmark criteria has been shown to increase the effectiveness of interventions encouraging healthy behaviour (e.g., Carins and Rundle-Thiele, 2014; Gordon et al., 2006) to combat obesity. Understanding the processes and contingencies underlying behaviours is required to create exchanges that are able to motivate the target market to adopt the behaviour needed by providing the target audience with benefits that are perceived to outweigh costs (French and Blair Stevens 2006).

Attitudes towards lunchbox food were measured with a semantic differential scale (e.g., Healthy/Unhealthy; Pleasant/Unpleasant; Expensive /Inexpensive). Intentions were measured on a 7 point Likert scale (1 = strongly disagree; 7 = strongly agree). Motivations guiding lunchbox food selection (e.g., Nutritional value; Cost; Ease of preparation) were measured with a unipolar 7-point scale adapted from Sharifirad et al. (2013) for the school lunchbox context (1 = Not important at all; 7 = Very important).

The packed lunchboxes´ contents were measured with a self-report questionnaire based on the School Food Checklist ((SFC), Sanigorski et al., 2005; Kremer et al., 2006), an observational measure of school food with well-established reliability and validity characteristics (Brennan et al., 2010; Kremer et al., 2006; Mitchell et al., 2010). The SFC was originally a single-page observation checklist designed to estimate children´s average energy intake at school with observations collected by researchers in the school setting. Individual items captured serves included in children's lunchboxes from 20 food and beverage categories. The foods and beverages were categorised into groupings based on their energy

density and serve sizes based on standard serves (Sanigorski et al., 2005). Specific foods in each category were included based on frequency of consumption by primary school-aged children in Australia reported in the 1995 National Nutrition Survey (Kremer et al., 2006).

In the present study, the SFC was adapted for delivery in an on-line survey environment and required completion by parents themselves. Changes were introduced to the original checklist to address cultural diversity influences in food packed by parents (e.g., inclusion of pulses, noodles) which increased the number of food categories to 27. Similarly to the original SFC, the on-line adaptation included specific descriptors of food (e.g., white or brown bread, plain or reduced fat).

Participants

Potential participants were invited to take part either directly by email or indirectly via online newsletters, blogs and posts which included a link to the survey. A total of 572 valid responses from parents in the Australian state of Queensland were included in analysis. The children who were the subject of the survey attended public (state operated), private catholic or private independent schools, were evenly split between genders, and were predominantly in the younger grades of primary school. Survey respondents were predominately female with at least high school education, living in households with at least average household income in relation to OECD countries[5].

RESULTS AND DISCUSSION

The vast majority (96.5%) of parents in the sample prepared a lunchbox for their child 5 days (81.2%) or 4 days (15.3%) per week, a result that is consistent with other research in the Australian context (Sanigorski et al., 2005).

Table 3 gives the percentages of parents who had had packed 0 to 3 or more serves of specific items in their children's most recent lunchbox.

More than two-thirds of lunchboxes packed by parents (67%) included one serve of *bread* - that is equal to two slices of bread; a high percentage of parents (45.1%) reported including at least one serve of some type of *spread* for the bread (i.e. butter or margarine); one serve of *meat/seafood/fish/egg* was the most frequent (38.7%) filling for the bread, followed by one serve of *cheese* (31.1%) and one serve of *Vegemite/Marmite* (20.5%). Fruit was reported to be present in most lunches as 37.1% and 36.6% of parents included one and two serve/s of *fruit* respectively. Approximately one in ten (10.6%) parents reported packing three or more servings of fruit in their children's' lunchbox. The frequently reported scarcity of vegetables in lunches previously reported in the literature (Bell and Swinburn, 2004; Brennan et al., 2010; Sanigorski et al., 2005) was again evident in the current study with one in five parents (21.7%) reporting putting one serve of vegetables in their child's lunchbox. Foods commonly named in the literature "extras" were frequently included and one serve of *packaged snacks, biscuits and crackers* and/or *muesli and fruit bars* was reported to be present in respectively 27.3%, 34.9% and 27.5% of packed lunches. It is important to note

[5] http://www.oecd.org/australia/OECD-SocietyAtaGlance2014-Highlights-Australia.pdf.

that levels of extras reported in the study exceed the recommended maximum of 3 serves per day for some children. Finally, in regards to drinks 15.8% of parents reported packing one serve of fruit/juice drinks - 83.3% packed none - and the majority of parents (58.9%) packed 1-2 serves of water.

Table 3. Food recorded in the SFC by parents

Food groups	Number of serves		
	1	2	≥3
	%	%	%
Bread	67.0%	11.3%	2.5%
Spread for bread (butter/margarine)	45.1%	8.0%	3.2%
Filling (meat/seafood/fish/egg filling)	38.7%	6.0%	1.6%
Filling (cheese)	31.1%	3.7%	0.7%
Filling (salad/vegetables)	14.9%	5.7%	2.1%
Filling (pulses/beans)	0.4%	0.2%	0.0%
Filling (Vegemite/Marmite)	20.5%	2.1%	0.7%
Filling (peanut butter)	5.5%	0.0%	0.2%
Filling (honey/jam/Nutella/frosting)	11.2%	1.4%	0.5%
Extras (sauces/chutney/pickles/other)	14.5%	0.5%	0.2%
Mixed dishes/Leftovers	11.2%	1.2%	0.0%
Noodles	0.7%	0.0%	0.2%
Packaged snacks	27.3%	2.0%	2.0%
Biscuits and crackers	34.9%	13.1%	3.9%
Chocolate and lollies	2.5%	0.0%	0.4%
Cheese, eggs, dried fruit and nuts	30.8%	5.7%	1.6%
Muesli and fruit bars	27.5%	1.2%	1.4%
Cakes and buns	17.0%	2.3%	0.4%
Pastries	0.5%	0.0%	0.2%
Desserts (icy poles/ice cream/other)	1.1%	0.2%	0.2%
Yoghurt	36.0%	1.4%	0.7%
Fruit	37.1%	36.6%	10.6%
Vegetables	21.7%	3.7%	2.0%
Milk	6.6%	0.4%	0.4%
Soft drinks	0.4%	0.0%	0.0%
Fruit juice/drinks	15.8%	0.2%	0.7%
Water	36.1%	22.8%	14.2%

Almost half (42%) of the parents surveyed would like their children to eat foods other than those provided in the lunchbox while at school. The types of food parents would like their children to consume more of at school were vegetables, fruit, salad, dried fruit and nuts, meats and dairy products. Parents gave a variety of responses regarding their non-supply of desirable foods including child characteristics, such as 'fussiness', laziness, or stubbornness. Fussiness was attributed in some cases to sensory processing disorders such as difficulty chewing, taste and texture sensitivity (10%), but for the most part was explained in terms of children's dislike of some foods, or an unwillingness to try new or different foods (food

neophobia). Other reasons for not supplying 'desirable' foods were preparation time; lack of appropriate refrigeration or heating facilities in schools; and children's food allergies.

In terms of importance, the greatest motivators for parents in the selection of lunchbox items were food's nutritional value and likelihood of remaining fresh for consumption, followed very closely by the likelihood of the food being eaten by the child, and food safety (Table 4). For the most part, the rankings of factors were the same for parents independently of type of school attended. Statistically significant differences were observed between parents of children attending catholic schools and those attending public schools on cost and school policy factors. Parents of children in catholic schools gave slightly greater importance to school policy and less importance to cost relative to parents of children in public schools.

Table 4. Motivating factors in food selection

	Public (n=375)	Catholic (n = 116)	Independent (n = 74)	Total (n=565)
Factor	M (SD)	M (SD)	M (SD)	M (SD)
Nutritional value	6.4 (1.0)	6.5 (.9)	6.6 (.8)	6.4 (1.0)
Remains fresh (for example doesn't melt or became stale/soggy)	6.3 (1.0)	6.4 (1.0)	6.3 (1.0)	6.3 (1.0)
Likelihood of being eaten	6.2 (1.0)	6.4 (.9)	6.2 (1.0)	6.2 (1.0)
Food safety	6.2 (1.3)	6.2 (1.2)	6.1 (1.5)	6.1 (1.3)
Child preference	5.7 (1.3)	5.9 (1.0)	5.9 (1.3)	5.8 (1.2)
School policy	5.4 (1.7)	6.0 (1.3)	5.6 (1.5)	5.5 (1.6)
Energy value (calories)	4.9 (1.8)	5.0 (1.8)	5.1 (1.7)	5.0 (1.8)
Ease of preparation	4.9 (1.8)	4.7 (1.8)	5.1 (1.8)	4.9 (1.9)
Time for preparation	4.9 (1.7)	4.7 (1.8)	5.0 (1.8)	4.9 (1.8)
Cost	4.8 (1.8)	4.2 (1.8)	3.9 (2.1)	4.5 (1.9)
Packaging size	4.2 (1.8)	4.4 (1.8)	4.0 (2.0)	4.2 (1.8)

Analysis of qualitative comments on the factors influencing their selection of lunchbox contents indicated that the quality and origin of food are important factors in the selection of lunchbox food. The absence of additives, including colourings, flavourings and preservatives, and a preference for foods low in processing or for foods that were home-made were mentioned frequently as important considerations. Other factors mentioned by parents were the availability of food in the household.

Attitudes towards home packed lunchboxes were on average positive, with parents considering lunchboxes as important, healthy, good and beneficial. Parents also had positive intentions and plans regarding the provision of more healthy lunches to their children. This result was consistent with the finding that parents in this sample reported expectations from their personal and family networks, as well as from the school community, to provide healthy food and contribute to healthy schools. This was particularly so for parents in Catholic schools.

The importance of several other factors suggested by the literature to impact parental provision of healthy school lunches was assessed. On average, parents in this sample did not consider peer pressure to be a significant issue in packing school lunches, although it was a

significantly greater issue for parents in public schools relative to those in catholic and independent schools. On average, packing a lunchbox was not considered a hard task and parents were somewhat satisfied with the selection of healthy lunch foods available for purchase in supermarkets.

Overall, the results of our study support previous research indicating that Australian parents are generally well informed and aware of the importance of providing children with healthy nutrition (Bathgate and Begley, 2011; Hesketh et al., 2005; McLeod et al., 2011) and have positive intentions regarding provision. In packing the lunchbox, parents report they are trying to select food that is nutritional, remains fresh, is easily consumable in the school grounds, and liked enough by the child to be consumed. However, in attempting to meet these different criteria, parents are often excluding vegetables and opting for pre-packaged snacks and this was particularly evident in the self-report data (reported in Table 3).

Although parents did not, on average, report that they consider the task of packing a healthy lunchbox to be difficult, our results showed that lunchboxes were not healthy on average. The results of this study are particularly relevant to discussions on school food consumption by younger children in Australia who are known to be consuming excessive numbers of extras even as pre-schoolers (Kelly et al., 2010).

Prior research suggests that parents' motivation to ensure their children eat well is challenged by lifestyle pressures, including time constraints, which increase reliance on convenience foods and "pester power" or child pressure regarding preferences for less healthy foods (Hesketh et al., 2005; Pettigrew and Roberts, 2007), which may explain the results of the current study.

CONCLUSION

Combating obesity is no small task and multifaceted interventions are needed to simultaneously change individuals, along with the important others and environment surrounding the individual. This chapter has outlined a study that sought to examine school lunches packed by parents and to gain insights into the processes and contingencies underlying lunch packing behaviours. This knowledge is essential for understanding how meaningful offerings can be made to parents to motivate them to pack healthier lunches. The results of the current study indicate that survey research seeking to identify the underlying attitudes and future behavioural intentions can extend our understanding of what is packed in children's lunchboxes. Employment of existing theory in formative research, namely the Theory of Planned Behaviour to identify modifiable behavioural determinants to inform social marketing intervention planning (Evans, 2006; Lefebvre, 2011), assists social marketers to understand how and why healthier lunches can be packed. In the current study parents reported high positive intentions to pack healthy lunches and they exhibited very positive attitudes to packing healthy lunchboxes. Yet, an examination of lunchbox contents indicated that foods considered in the literature as "extras" were frequently included in children's lunchboxes. Of concern was that the level of extras reported in the study exceeded the recommended maximum of 3 serves per day for some children in just one meal. Barriers to packing a healthy lunch were uncovered yielding the insights needed to inform future social marketing intervention planning and implementation.

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PART V. CHANGES IN EATING HABITS

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Chapter 13

CHANGING URBAN FOOD CONSUMPTION PATTERNS IN THE CONTEXT OF GLOBALIZATION: THE CASE OF INDIA

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INTRODUCTION[≠]

Over time, the diets of the poor and the rich do change. Diet transformation involves two distinct processes—income-induced diet transformation and diet globalization (Prabhu Pingali and Yasmeen Khwaja 2004). We may add a third dimension that influences diets—urbanization. Per capita income growth is expected to shift the diet patterns from high cereal, less-diversified diets to low cereal and more-diversified diets but confirm to local tastes and preferences. Affordability influences the consumption of milk, vegetables. and fruits and improves diet quality. Diet globalization refers to consumption of a more pronounced western diet high in animal products, refined carbohydrates, and sugars while low in whole grains, fruits, and vegetables. Diet globalization increases the consumption of soft drinks and fast foods, which are not good for health. Consumption of processed foods is also a part of diet globalization, bringing non-traditional processed foods such as noodles, pasta, sauces, soups, biscuits, bread, and other bakery products into the diets of the people. Urbanization increases the consumption of purchased foods from the informal sector as well as formal sector. The shift into less healthy foods due to both urbanization and globalization is popularly referred to as nutritional transition. Nutritional transition is commensurate with economic, demographic, and epidemiological changes. In developing countries such as India, obesity is seen among the urban rich who consume foods high in calories and low in nutrients.

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Strictly speaking, the shift to less healthy foods is only one of the five chronological stages of nutritional transition originally observed (Popkin, B, 1993). The first is the hunter-gatherer stage and the second is the stage of scarcity and famine as population increases. The third is the receding famine stage in which fruits, vegetables, and animal proteins increase in the diets and starchy foods become less important. The fourth stage is the focus of nutritional transition, the situation where the diets have more fats, refined carbohydrates, and sugars and less fibre. This stage leads to obesity and is a degenerative stage of disease onset. The fifth stage is behavioural change to prevent degenerative diseases by consuming better foods and changing sedentary habits. The fourth stage is also associated with the age pyramid (fewer children and more old people), urbanization, sedentary lifestyles, a reduction in infectious diseases, and an increase in non-communicable lifestyle diseases. Thus increased affordability, nutritional transition, demographic transition, and epidemiological transition go together.

Dietary diversity is presumably a proxy for dietary adequacy and improvement in diet quality (Ruel, M. 2002), but does not measure the degenerative nutritional transition. Generally, a 1% increase in dietary diversity leads to a 1% increase in per capita consumption and a 0.7% increase in per capita calorie availability (Hoddinott and Yohannes 2002). For poverty groups, diversification normally is an indicator of a possible increase in calorie intake. In India, dietary diversity per se becomes an unreliable indicator of nutrition quality and adequacy. Dietary diversity can increase for the poor over time without increasing the diet quality or calorie adequacy. Authors such as Gaiha et al. (2012) argued that the type of diversification that has taken place has led to reduced calorie consumption over a period, especially for the urban poor. In an Indian urban setting, especially for those consuming adequate calories, higher dietary diversity improves the diet quality in general but does not preclude excess sugars and fats and their associated health risks.

Is India undergoing a degenerative nutritional transition? If so which segment of population is likely to be affected? Many believe that India is undergoing such transition, albeit prematurely, at low levels of prosperity. India has not passed through the third stage of transition where diet changes lead to adequacy and better quality. India obviously avoided the second stage of famines during population increases as the cereal production kept pace with population growth. The influence of urbanization and globalization seem to have brought in the fourth stage.

The fourth stage essentially is a stage of adequate calorie consumption. It is not applicable to those with diets inadequate in calories. The coexistence of inadequate calories for some at the bottom and the burden of obesity at the top was the focus of the literature on the double burden of malnutrition in India. The combination of a demographic transition (fewer children), a nutritional transition (more fats and animal proteins in the diet), and an epidemiological transition (fewer communicable diseases and more lifestyle diseases) seems to go hand-in-hand in India (Shetty P.S 2002, Popkin et al., 2001), resulting in the emergence of multiple health burdens. Beyond any doubt, India's health burden and risk of disease increased on several counts, not only due to dietary changes, but also due to food safety concerns.

India has gone past the stage of very high infant mortality rates and very low life expectancy for men and women. India is at a stage of coping with under-nutrition in terms of stunting and underweight children, a low body mass index (BMI) in men and women among the poor, and a high BMI among the rich. A degenerative nutrition transition is an added

problem in India. Non-communicable diseases (NCDs) now account for 54% of total deaths in India and 44% of disability-adjusted life years lost. Many of these diseases are traced to excessive intake of carbohydrate-based foods, fatty foods, and sedentary habits (Mohan S, Reddy K.S, et. al, 2011).

The special aspect of India's NCD burden appears to be deaths in younger ages. Obesity also seems to be on the higher side in urban India, with 28.9% of women and 22.2% of men as compared to 15% and 12% in rural India (NFHS-3, Fact sheet 2007). The levels of obesity have risen over time in urban India for women, from 10.6% in 1998-99 to 14. 8% in 2004-05. National Sample survey data for 2009-10 has shown that the calorie consumption of the lowest 10% in urban India is as low as 1585 kilocalories per capita, compared to 2855 kilo calories per capita for the top 10%. Thus, the urban food consumption changes seem to impose a double burden of calorie inadequacy for the poor and unbalanced diets for the not so poor.

This paper consists of three parts. The first part looks at the changes in the urban dietary patterns such as calorie intake, protein and fat intake, dietary diversification, and diet quality. This section looks at the average diets as well as the diets of the poorest 5% and the richest 5%. The second part explores possible reasons for the observed changes in term of affordability, livelihoods, type of urbanization, and the level of diet globalization. The third part looks at the formal and informal food processing industry in India, with the pitfall of food safety and concerns regarding misinformation.

CHANGES IN THE URBAN DIETARY PATTERNS

Over a couple decades, average calorie consumption has been declining in India, contrary to the expectations that in a poor country additional income goes to consumption of more calories (Table1). The more puzzling aspect is that calorie intake has been falling not only among the top income groups but also among the bottom income groups (bottom expenditure quintiles) (Table 2). The calorie intake appears inadequate for the lower deciles (Table 3). The obvious reason was the reduction in the intake of cereals that was not adequately compensated for with other foods in calorie terms. For the poor, a low calorie intake results in underweight people and a low BMI. According to the national family health survey, in 2004-05, 19.8% of urban women and 17.5% of urban men reported having a low BMI. In the same year about 37.4% of the children below the age of three were stunted and about 30% of the children were underweight for age (IIPS 2007). However, it is difficult to judge absolute adequacy in calorie terms as it depends upon the age, sex, and level of physical activity.

Table 1. Per capita calorie intake (Kcal) per day

Year	Rural	Urban
1993-94	**2153**	**2071**
1999-00	**2149**	**2156**
2004-05	**2047**	**2020**
2009-10	**2020**	**1946**

Source: NSS0 2011.

Table 2. Calorie intake of Lowest Quantile (Urban)

Year	Calorie Intake
1993-94	1637
2000-01	1630
2004-05	1597
2009-10	1678

Source: NSSO 2011 .

The reasons for the reduced calorie intake among the poor despite the increase in real incomes are not clear. At present several authors tend to agree with the view first expressed by Rao, C. H (2000), that mechanization may have reduced the number of calories required for labour (Deaton and Dreze 2009). A shift from the consumption of coarse cereals to fine and less nutritive cereals, such as rice and wheat flour, was cited as the other reason for reduced calorie intake in the rural diets in India (Kumar et al., 2007).

The average urban diet in India shifted from cereals, pulses, nuts, and sugars to essentially fruits, vegetables, fats, milk and dairy products, and other miscellaneous foods between 1993-94 and 2004-05. However, due to high prices in 2009-10, the shares of vegetables, meat, eggs, and fish in the total calories consumed declined. Essentially the long-term shifts are from 1972-73 to 2004-05, a period of 3 decades (Table 7). This is commensurate with an increase in per capita incomes. The shifts have been away from cereal calories and towards calories from protein foods, vegetables, and fruits. There has been an average increase in fat intake of 5 grams per capita per day, (Table 5) which increased the calories from oils and fats over time (Table 4).

Table 3. Calorie consumption per day 2009-10

Percapita Deciles	Percapita Intake		Per Consumer Unit Intake	
	Rural	Urban	Rural	Urban
1	1619	1584	2007	1969
2	1795	1773	2229	2184
3	1901	1872	2351	2305
4	1994	1964	2454	2410
5	2072	2029	2555	2491
6	2131	2134	2625	2609
7	2247	2195	2756	2686
8	2315	2311	2847	2819
9	2473	2511	3043	3065
10	2922	2855	3591	3482

Source: NSSO 2011.

Table 4. Percentage calories derived from various food groups (Urban)

Food groups	1993-94	1999-2000	2004-05	2009-10
Cereals	58.53	55.05	56.08	55.01
Roots and tubers	2.54	2.90	2.82	2.60
Sugars and honey	6.21	6.15	5.69	5.66
Pulses, nuts and oilseeds	6.05	6.85	6.68	5.94
Vegetables and fruits	3.26	2.94	3.17	2.62
Meat, eggs and Fish	1.02	1.12	1.05	1.00
Milk and Milk products	8.00	8.23	8.61	9.37
Oils and fats	8.79	11.24	10.58	11.93
Miscellaneous foods	5.60	5.52	5.32	5.87
	100.00	100.00	100.00	100.00

Source: NSSO 2001, 2007, 2011.

The dietary diversification index throws more light on the process of diversification occurring in urban diets. The consumption data available from the National Sample Survey report does not enable us to separate the nutrient contents of purchased, processed, and street foods consumed. Even with the unit level data, it becomes very difficult to assess the exact nutrient composition of the ready-to-eat foods consumed.

Some insights are possible from the diversity index and a cursory look at the quantity of some of the food items consumed. A simple dietary diversification index[1] has been calculated by taking the expenditure shares of the twelve to thirteen major food groups chosen from the data. These food groups are more disaggregated than the five groups normally used and are a more appropriate source with which to identify the health foods. A higher diversity index value represents higher level of diversification. The data shows the average increase of the diversification index over nine periods as the share of cereal expenditure fell.

The food items consumed and the expenditure spent on them tell us preferences as well (Table 7). The expenditure share of cereals fell significantly more than their calorie share. Decline in protein (Table5 and Table 6) is due to the reduction of cereals and pulses in the diet that is not compensated for with milk, meat, eggs, and fish, which are far too expensive. Expenditure shares of milk and dairy products, vegetables and fruits, fish eggs, and meat increased over time steadily. Most of the remaining diversification is shared with a variety of purchased foods and processed foods. The dietary diversity index increased steadily from 5.3 in 1972-73 (excluding processed foods) to 6.9 in 1993-94 (including processed foods) to 9.6 in 2011-12 (including processed foods). The food expenditure was more evenly spread across major food groups in later periods. The preference for traditional cereals and pulses prepared at home gave way to a variety of foods.

As expected, diversification was high for the top 5%, who spent an average of Rs.2859/- per capita per month compared to the lowest 5% of the urban population, who spent an average of 415/- per capita per month. However, for 2011-12, at 6.6 the diversification index was higher for the lowest group than the average for urban areas for 1972-73 at 5.3. The

[1] The share of each food group in the total food expenditure squared and summed up across the groups. One divided by the sum gives diversification index.

diversification index of the top expenditure group was 10.1. The urban average index was 9.6.

Table 5. Average per capita intake (Urban)

Year	Protein (Gms)	Fat (gms)
1993-94	57.20	42.00
1999-00	58.50	49.60
2004-05	57.00	47.50
2009-10	53.50	47.90

Source: NSSO 2011.

Table 6. Source of Protein from various foods – Urban

Food item/year	1993-94	1999-2000	2004-05	2009-10
Cereals	59.41	57.03	56.16	56.39
Pulses	11.54	13.10	11.00	11.31
Milk & Milk Products	11.66	12.43	12.33	13.75
Eggs, Fish & Meat	5.29	5.98	5.47	5.59
Other Food	12.1	11.46	14.98	12.96

Source: NSSO 2011.

Looking at the shares of expenditure and quantities of consumption in the bottom and top groups allows us to assess the quality shifts. The consumption of food grains (cereals and pulses) is similar for both the rich and the poor. The rich consume about 9.5 kg per month and the poor consume about 9.6 kg per month. The poor pay less for cereals than the rich, probably due to quality differences (Table 8). What is important to note is that even in this lowest group, the expenditure on milk, eggs, vegetables, and fruits together at 40.4% exceeds the expenditure on cereals and pulses put together at 37.4 %. The poor also spend 7.1% of the food expenditure on processed foods and beverages. Expenditure shares of some food items, such as fruits at about 16% and egg, meat, and fish at about 9%, are higher than the expenditure shares on these items by the top expenditure group.

However, the actual quantities consumed are almost negligible with respect to the lowest 5% of the urban population. The quantity of milk consumed is about one litre a month, egg is one a month, and meat about 200 grams a month. About 500 grams of nuts and fruits are consumed per month. Vegetables are consumed in adequate quantity at about 5 kg, a month (about 166 grams a day (NSSO 2014b)). If we go by the norm that if any food item consumed is less than 5 grams a day, it is negligible for calculating diet quality, (US AID 2008), milk and meats do not even count. Fruit consumption is inadequate at about 16 grams. Thus, consumption of protective foods (foods that contain adequate amounts of vitamins, minerals, and high quality proteins and thus protect against development of a deficiency disease) is negligible despite the high expenditure share for the poor. In addition to the food grains, calories come from sugars and fats. About 23 grams of fats and oils and 14 grams of sugar are consumed per day. Thus, excepting vegetables, all the other food items are consumed at a level well below recommendations. For the very poor consumers, dietary diversity does not mean diet adequacy or a better diet quality. The urban poor in India do not get much rice or wheat from the public distribution system, the quantity being as little, as 2.5 kg per capita per

month on the average. The urban poor faced high prices after the 2008 food inflation. Inferior diet quality of the urban poor could be due to the high price per calorie of protective foods (NSSO 2014b).

Table 7. Expenditure Share for each Food Group over 9 time periods with their Dietary Diversity

Item	1972-73	1977-78	1983-84	1987-88	1993-94	1999-00	2004-05	2009-10	2011-12
Cereals	36.35	34.34	33.05	28.37	27.85	28.03	23.76	18.36	17.27
Pulses	5.30	6.03	5.45	6.69	6.18	6.48	5.30	5.60	5.33
Milk	14.51	15.91	15.67	16.97	18.77	18.37	16.45	13.61	15.74
Milk Products				2.11	1.94	2.34	2.24	2.00	2.57
Edible Oil	7.64	7.71	8.18	9.40	8.12	5.93	8.16	3.09	6.96
Egg, Fish & Meat	5.15	5.86	6.13	7.42	7.32	7.75	6.39	6.02	9.54
Vegetables	6.86	7.37	8.52	8.01	7.99	9.07	11.20	8.20	12.09
Fruits fresh	3.12	3.35	3.58	3.57	3.65	3.57	4.18	12.81	6.91
Fruits Dry				0.38	0.78	0.39	1.13	5.73	2.05
Sugar	5.62	4.36	4.26	4.96	5.21	5.21	3.56	1.42	2.99
Spices	3.59	4.52	3.58	3.06	2.57	3.49	2.95	5.00	6.33
Beverages	11.86	10.55	11.58	5.58	6.02	6.16	14.66	18.16	6.22
Processed Food	-	-	-	3.47	3.60	3.21	-	-	6.00
Dietary Diversity Index	5.3	5.6	5.8	6.9	6.9	6.9	7.4	8.2	9.6

Source: NSSO 2000, 2007, 2011, 2014b.

Table 8. Food expenditure shares of bottom and top classes (Urban)

Item	Bottom 5% Share (%)	Top 5% Share (%)	All Classes Share (%)
Cereals	30.1	10.9	17.3
Pulses	7.4	3.7	5.3
Milk	9.2	16.6	15.7
Milk Products	0.5	3.7	2.6
Edible Oil	4.2	2.0	3.0
Egg, Fish & Meat	8.8	5.0	7.0
Vegetables	6.1	9.7	9.5
Fruits fresh	15.8	9.6	12.1
Fruits Dry	2.3	11.8	6.9
Sugar	0.5	3.9	2.0
Spices	8.0	4.5	6.3
Beverages	3.9	8.7	6.2
Processed Food	3.1	9.9	6.0
Dietary Diversity Index	6.6	10.1	9.6

Souce: Based on NSSO (2014 b).

In the top expenditure group, the share of expenditure on food grains (cereals and pulses) is as low as 14.6%. Milk claims the highest share at 16.6%. Dry fruits claim about 11.8%. Except for a few food items that have an expenditure share of less than 3%, the balance of the expenditure is more or less evenly spread among the remaining food groups.

The quantities of food consumed give us more insights into diet quality. Per person, the rich consume daily about 350 grams of milk (10.5 litres a month) about 300 grams of vegetables (9 kg a month), 166 grams of fruits and nuts (5 kg a month), about 38 grams of meat (in addition to 5 eggs a month), 41 grams of sugars, and 41 grams of fat. Thus their diets contain an adequate amount of protective foods, though the animal protein food consumption is on the lower side. Pulse consumption is at about 90 grams (NSSO 2014b). The food provides adequate calories. Unlike the case of poor, the dietary diversity seems to improve calorie intake as well as diet quality. Except for meat and poultry, all the foods are consumed at a rate above the recommended daily allowances (RDAs) of the Indian Council of Medical Research in 2010. The consumption of both fat and sugar appears to be about 33% higher than the recommended levels. The dietary diversity of the rich is closer to the average dietary diversity.

Dietary diversity no doubt indicates improvement in calorie intake and diet quality across deciles in the same year (Table 10). However over a period of time, as prices change, a higher share of expenditure need not necessarily mean higher quantity of consumption. The expenditure shares of the poor tend to be concentrated on quality foods such as milk, vegetable, and fruits, though the quantities consumed are lower and below the levels recommended.

The next important aspect to examine is the quantities of purchased foods and processed foods. Unfortunately, the data on the quantities of such foods are not available. Only the expenditure shares are given. The expenditure share of processed foods doubled over a decade from 3.21% in 1999-2000 to 6% in 2011-12. The share of cooked and served foods purchased appears to be high at about 5% of the expenditure share in the lowest expenditure class to a high of 27% in the top expenditure class (Table 11).

Table 9. Percentage share of calorie intake from food items- Urban

Item	1993-94	1999-2000	2004-05	2009-10
Cereals	58.53	55.05	56.08	55.01
Roots & Tubers	2.54	2.9	2.82	2.59
Sugar & Honey	6.21	6.15	5.69	5.66
Pulses, Nuts & Oilseeds	6.05	6.86	6.68	5.94
Veg & Fruits	3.26	2.94	3.17	2.62
Meat, Eggs & Fish	1.02	1.12	1.05	1.00
Milk & Milk Products	8.00	8.23	8.61	9.37
Fats & Oils	8.79	11.24	10.58	11.92
Misc. Food	5.6	5.52	5.32	5.87

Source: NSSO 2001, 2007, 2011.

On the whole, the average calorie contribution from milk products, including ghee, fats, and oils, increased, and the contribution of vegetables, fruits, and flesh food in the diets

declined (Table 9). Accordingly, we can find an increase in the calorie consumption across deciles in India (Table 10). Higher dietary diversity means higher calorie intake. Higher dietary diversity and higher calorie intake may also mean an increase in the intake of milk, vegetables, and fruits, which improves diet quality in absolute quantities, at least in the higher deciles. Higher dietary diversity also means an increase in the food consumed outside the home and consumption of processed foods, both of which are expected to be high in carbohydrate, fat, and sugar. Foods that are almost ready-to-eat and very easy to prepare have been included in the processed foods category. Table 11 includes foods processed at the secondary and tertiary levels that require a shorter time to cook (noodles, soups etc.,) or ready-to-eat foods such as potato chips, bottled drinks, bakery products, prepared sweets, and savouries. Obviously the decline in cereal and pulse consumption is replaced by consumption of refined cereal (carbohydrate), sugar, and fat-based products from the formal sector as well as the informal sector. At the average level for all classes, 17% of the food expenditure is on ready-to-eat cooked and processed foods in 2011-12. For the top expenditure class, the expenditure share is as high as 39%, and for the bottom expenditure class it is at 8.4% (Table 11).

Table 10. Calorie consumption per day 2009-10

	Percapita Intake		**Per Consumer Unit Intake**	
Percapita Deciles	**Rural**	**Urban**	**Rural**	**Urban**
1	1619	1584	2007	1969
2	1795	1773	2229	2184
3	1901	1872	2351	2305
4	1994	1964	2454	2410
5	2072	2029	2555	2491
6	2131	2134	2625	2609
7	2247	2195	2756	2686
8	2315	2311	2847	2819
9	2473	2511	3043	3065
10	2922	2855	3591	3482

Source: NSSO 2011.

At this juncture it is important to pay attention to eating out and consumption of cooked and served foods. This category mainly consists of meals and snacks from road side eateries, street vendors, and restaurants. It has already been established in the literature that about 34% of the population eat out and spend large amounts of money. Eating out is common even among the urban slums and lowest income categories in urban areas. About 22% of those eating out belong to lower income classes and 78% belong to upper and lower middle classes (Gaiha, R, et al. 2012). Some of the prepared foods sold tend to be rich in fat, sugar, and refined carbohydrates. Even cups of tea and coffee may be sweeter than need be. Reduced expenditure by lower expenditure classes doesn't necessarily indicate reduced quantities of food eaten, but simply that some street foods and roadside eateries are cheaper than restaurants. More research is needed on eating out, the type of food eaten, and the fat and sugar content of the foods.

Table 11. Expenditure shares of some processed foods 2011-12

Processed foods (ready to eat)	Lowest Exp. Class	Top Exp. Class	Average of All classes
Rich in Carbohydrate sugar and fat	3.35	9.73	5.97
Cooked and served food	5.07	27.67	10.09
Beverages excluding cofee & tea	0.10	2.15	0.94

Source: NSSO 2014 b.

On the average from 1993-94 to 2009-10, however, the calorie contribution of pulses, vegetables, fruits, and animal protein foods (excluding milk) declined. This happened when the average dietary diversity increased substantially (Table 9). The actual average quantities of food items consumed increased for milk, vegetables, and edible oils. For others food items such as eggs, fruit etc. the quantities consumed are not adequate. However in 2011-12 there seems to be an improvement in the consumption of quality foods such as milk, vegetables, fruits, eggs, and meat almost to the recommended levels. However this increase does not compensate for the reduction in calories from cereals and pulses.

Slowly but steadily the average urban diet is improving in diet quality while declining in calories. Hence, for those consuming adequate calories, improved diet quality should help. This should reflect in the long run in a better BMI for men and women and a lower incidence of stunted and underweight children. (The latest Global Hunger Index (2014) by International Food policy Research Institute (IFPRI) shows a decline in the child underweight rates in India).

Table 12. Quantities of Consumption of Selected Foods: All classes

Item	Quantities		
	1993-94	2009-10	2011-12
Cereals & Products (Kgs)	9.6	9.4	9.3
Pulses & Products (Kgs)	0.8	0.8	0.9
Milk (Ltrs.)	4.9	5.4	5.4
Ghee (Kgs)	0.1	0.0	0.1
Milk Products (Kgs)	-	0.1	0.1
Edible Oil (Kgs)	0.5	0.8	0.9
Eggs (Nos.)	1.5	2.7	3.2
Meat (Kgs)	0.4	0.6	0.6
Vegetables (Nos.)	1.2*	1.7*	2.1*
Vegetables (Kgs)	3.2	7.1	6.8
Fresh Fruits (Nos.)	4.9#	8.3##	8.5##
Fresh fruits (Kgs)	0.2	0.7	0.8
Fruits Dry (Kgs)	-	0.1	0.2
Sugar & Products (Kgs)	1.0	0.8	0.9

* Lemon; # Banana and Coconut; ## Banana, Pineapple, Green Coconut, Orange.
Source: NSSO 2001, 2014 b.

The increase in diversity is also due to shift towards processed foods. The major implication of this type of dietary change is a boom in the food business. It is difficult to say which sector benefited more, informal or formal. The unorganized sector accounts for the consumption of street foods, pickles, salted snacks, prepared sweets, etc. Soft drinks, potato chips, and bakery products come under the organized sector. Some of the prepared foods, such as burgers, pizzas, donuts, fried chicken, etc., are also part of the organized sector. A number of processed foods, either from the organized sector or the unorganized sector, are unhealthy if consumed regularly. They may contain high levels of sodium, trans fats, sugars, refined carbohydrates, or a combination of all these. These foods increase the risk of non-communicable diseases. Unhealthy foods from the organized sector are popularized by providers packaging them in small affordable quantities. They are also advertised as healthy foods as they are fortified with vitamins or iron or zinc.

Hence dietary diversity in India gives confusing signals of dietary improvements and dietary adequacy as well as degenerative nutrition transition. The truth of the matter is that people of all expenditure classes increased the consumption of both quality foods and the degenerative unhealthy foods. Dietary diversity is pushed up by the quality foods as well the cooked and processed foods. The impact on the low expenditure classes is one of reducing the total calorie consumption without much improvement in diet quality or diet adequacy. On the other hand, for those consuming adequate calories, the diet quality improvement helps to escape an under-nutrition trap at younger ages, making them less stunted and taller, but increases the risk of non-communicable diseases later in life. The conclusion may seem conflicting, but this trend is seen in the statistics of reduced stunting and fewer persons with low BMI on one hand and increased incidence of non-communicable diseases on the other. Equally puzzling is the point that those who recognize the value of quality foods such as milk, fruits, and vegetables can be oblivious of the harmful nature of junk foods. Urbanization compulsions, work conditions, illiteracy, and lack of awareness about the health risk result in the type of dietary patterns observed.

AFFORDABILITY, LIVELIHOODS AND URBANIZATION

The Indian economy had a fairly high rate of growth in gross domestic product at about 8.6% in 2009-10 and 8.9% in 2011-12. The growth rate decelerated to 6.7% in 2011-12 and further to 4.4% in 2012-13. Affordability has improved over years at the average levels in urban India. From 1993-94 to 2011-12, the real monthly per capita expenditure increased by 54%. Between 2004-05 and 2011-12, the real per capita expenditure increased by 27%. This indicates improving average affordability in the urban population (NSSO 2014 a). The level of urban poverty also declined over time. Poverty declined from 31.8% in 1993-94 to 25.7% in urban India in 2004-05 and further declined to 13.7% in urban India in 2011-12 (Planning commission, 2013). Commensurate with improvement in the affordability, there is a change in the consumption of food items in terms of quantities consumed per capita per day. There is an increase in the average quantity of edible oils, vegetables, and milk. The quantities consumed are above the recommended daily allowance thresholds (Table 12). There is also an increase in the consumption of fruits, eggs, and meat, though the levels are not adequate. The average expenditure on processed foods doubled from 1993-94 to 2011-12 (Table 8).

People shift to where the jobs are. The sector-wise employment shows the structural shifts taking place in Indian economy. Here again the employment shifts are not the usual type in India. Employment-gain in non-agriculture appears to be in the construction sector. There are several ups and downs in the growth of the workforce in India. There were periods of no growth in employment (2004-05 to2009-10.); there were periods of a spurt in employment (2009-10 to 2011-12). These uneven changes appear to be a combination of the demographic structure of falling birth rates in the previous periods, progressively reducing the new entrants in to the labour force and the shift of people from agriculture to newly created jobs (Mehrotra S, et al. 2014).

Another important aspect of employment is that 28.4% of all workers are marginal workers who work for six months in a year or less. Job security is reduced in many occupations. Women's work participation declined in urban areas (Census of India 2011). The implication to dietary pattern is obvious. There is an increase in the consumption of quality foods such as vegetables, fruits, eggs, meat, and fish when employment is high and the consumption of these quality foods is stagnant or declines when employment is stagnant. The implication for the future is that the lower deciles may reduce their consumption of quality foods if there is a deceleration in GDP growth. Further, a decline in the calorie intake by the lower deciles may have adverse health outcomes.

The next issue is the level of urbanization and the pattern of urbanization. About 29% of the population lived in urban areas in 2001 and that number increased to 31.16% in 2011. The compound rate of growth of urbanization in India was higher at 3.09% between 1981 and 1991and decreased to 2.73% between 1991 and 2001. It was slightly higher at 2.76% between 2001 and 2011 (Census of India 2011). However variations exist across the cities. As per the analysis of the past studies, metropolitan cities grew faster than the class one cities, and the growth was lower in smaller towns between 1991 and 2001. Rapid diet globalization started in the early nineties with the liberalization of the economy, increased exposure of the Indians to global foods, and entry of multinationals into the Indian food markets. For example the consumption of potato chips, soft drinks, and tomato sauce increased many fold due to the entry of global players such as Pepsi in to the Indian market. Better packaging technology, and aggressive marketing has successfully pushed the informal players out of business in the big cities. The market for biscuits also grew during this period. Bread and bakery products of the organized sector established and may have pushed many informal players out of business.

In the decade ending in 2011, big metropolitan cities grew more slowly, while the class one cities with more than 100,000 people grew faster. The population of mega cities grew slowly. Some of the global foods such as potato chips, biscuits, sauces penetrated to semi-urban and rural diets a decade ago. However, further growth of the organized sector could have been slower during this period. Growth of small towns and increased incomes lead to an increased demand for a variety of processed foods from the informal sector such as pickles, sweets, savouries, and foods that suit the Indian tastes.

India's urbanization has links to the structural change. Over a decade and a half the contribution of agriculture to GDP fell roughly from 24% to about 14%, that of manufacturing remained around 26%, and that of services increased from 50% to about 60%. Simultaneously the share of agriculture in the labour force fell from 58% to 49%, the share of industry remained around 24%, and the share of services increased to 27%. The share of Industry in the GDP and its share in labour force remained around 27% (Planning Commission 2014).

Urbanization of the developing world appears to be different in the sense that it seem to be taking place at much lower levels of prosperity in terms of per capita incomes. Hence a large number of people in urban areas also earn less, cannot afford housing, and live in slums. The question often asked was "Does it mean a distress migration to urban areas?" As the famous "Todaro model explains, distress migration to urban areas is due an expectation of higher wage based on the wage gaps that exist, leaving a number of people with subsistence wage resulting in the urban slums urban sprawl."

However, many economists refute the theory of distress migration and cite the example that poverty actually has been falling in the urban areas. Falling urban poverty rates are cited by Mohan et al. 2005 to say that India has so far managed the urbanization well, though urban India has a great resource crunch. Lack of significant relationship between population density and population growth for the densely populated cities would mean that the location and geographical factors, as well as agglomeration economies that shift the industries, are more important for non-agricultural work opportunities. The urban growth pattern between 2001 and 2011 in India suggests that mega city (the top four cities with a population exceeding or close to ten million) growth has decelerated but that of the cities in the middle level of over hundred thousand in population have grown fast.

FOOD PROCESSING SECTOR AND DIET GLOBALIZATION IN INDIA

The Indian food processing industry is one of the largest in the world in terms of production, consumption, and growth prospects. As the food processing industry gets more sophisticated, it develops capital-intensive, technology-intensive processing. Earlier food processing was largely confined to food preservation, packaging, and transportation. As new markets emerge, cold storage facilities, food parks, packaging centres, value added centres, irradiation facilities, and modernised abattoirs gain importance. The Indian food processing industry still has a long way to go in the area of food processing technologies and food safety.

All the same, with a billion plus population in India, the food processing industry is quite big in terms of value. Food processing is normally divided into three levels of processing—the primary, secondary, and tertiary levels. The primary level consists of milling of cereals and pulses, grinding of spices, extracting fruit juices, preparing dried vegetables, pickling fish and vegetables, and so on. There are many small players in the food processing at the primary level. Most of them belong to the unorganized sector. The technologies used may lead to some amount of nutrient loss in some cases. It is in the secondary level of processed foods that food items undergo substantial transformation and are converted into products that need relatively less cooking.

In India, most of the affordable processed foods vigorously advertised and claimed to be healthy are nutritionally inferior. They contain sugars, trans fats, and sodium bicarbonate. Some studies (Nasirullah and J. Marry et al., 2013) show that Indian bakery products such as biscuits, wafers, cookies, bread, cakes, rusk, sweet buns, and pizza follow food safety standards but are nutritionally inferior due to the presence of trans fatty acids. The labelling laws in India are not strictly enforced and advertising sometimes spreads misinformation. For example, noodles sold by a multinational company do not specify the amount of sodium contained in the processed food. It only mentions the presence of a raising agent. Frequent

consumption of processed food rich in carbohydrates, fat, and sodium could increase the risk of cardiovascular disease.

The Indian food industry was valued at USD 135 billion in 2012 (ASA & Associates (2013). The food processing industry is expected to grow at a compound annual rate of growth of 10% to about USD 200 billion by 2015, according to a report by KPMG, a private sector financial and business services company. Indian agricultural and processed food exports during April-May 2014 stood at USD 3,813.63 million, according to data released by the Agricultural and Processed Food Products Export Development Authority (APEDA). In 2013-14, the total processed/value-added agricultural products exported and the foreign exchange equivalent earned there stood at Rs 4,627.99 crore[2] (USD 752.39 million) as compared to Rs 3,689.26 crore (USD 599.89 million) during the previous year. The branded quick service restaurant (QSR) market in India, which has attracted international brands such as McDonald's, Subway, Nando's, Domino's, and KFC, currently stands at USD 13 billion and is set to get bigger with new emerging players. The foreign direct investment (FDI) inflows in food processing industries during April 2000-July 2014 stood at USD 5,949.21 million, as per data released by Department of Industrial Policy and Promotion (DIPP). The contribution of food processing sector to the GDP in manufacturing is about 9%. The growth rate fluctuates based on the demand, which in turn depends upon the affordability of the people (Table 13).

Table 13. Status of Food processing Industry in India

Year	GDP growth (%)	Employment (lakh persons)	Value (Crore)
2008-09	5.3	15.64	60,378
2009-10	-2.7	16.06	58,752
2010- 11	14.9	16.62	67,508
2011-12	21.6	17.77	82,063
2012-13	3.0	N.A	84,522

Source: GOI 2014.

On the other hand, the unorganized sector competes with the organized sector in all these food items. The products are equally unhealthy and also unsafe due to poor hygiene and poor packaging that makes them susceptible to damage due to moisture absorption and bacterial infestation. Pickles, which are popular and suit the Indian traditional taste, also use excess sodium and preservatives. Street foods eaten by the low-income population tend to be unhealthy and unhygienic. Use of over-boiled oil for frying increases its viscosity and the attendant risk of cancer. The risk of non-communicable diseases such as diabetes, heart attack, and cancer have increased in India. Illiteracy, inadequate knowledge of nutrition, misinformation, weak enforcement of food labelling laws, and food advertising norms make the situation worse.

Commensurate with the changing dietary habits, there was a visible shift in food production towards non-food grain crops and animal foods between 1990-91 and 2009-10.

[2] A Crore is an Indian numbering system equivalent to 10 Million.

The share of livestock products in the value of total agricultural output increased by 5%, the share of horticultural crops increased by 4%, and the share of fisheries increased by 2% over the same period. Pesticide residue in the vegetables, fruits, and pulses poses a significant problem. Urgent policy initiatives are needed in India in the specific areas of food safety, enforcement of food labelling norms, and nutrition awareness among the consumers.

SUMMARY AND CONCLUSION

India is facing the problems of under nutrition among the poor and obesity among the urban rich. The occurrence of non-communicable lifestyle diseases is on the increase. Further, the declining calorie consumption across all expenditure classes despite an increase in per capita real incomes is not an expected behaviour in a developing country. The increase in fats in the urban Indian diets has been highlighted in earlier studies. The analysis concluded that the very same factors that push the dietary diversity of the top expenditure classes also push up the dietary diversity of the lower expenditure classes as well, but with opposite outcomes of under nutrition for the poor and obesity for the rich. Higher levels of dietary diversity among the poor lead to a shift into high value foods and junk foods that are expensive per calorie. A reduction in the intake of cereals and pulses and an increase in the intake of purchased foods reduced the calorie intake of the poor. The Indian urban diet seems to be prematurely diversifying into expensive junk foods, expensive processed foods, and foods prepared outside the home even before fully benefiting from expensive, better quality foods eaten at home, such as milk, eggs, fish, meats, fruits, and vegetables.

One has to make a distinction between the declining calorie intake in the same expenditure class and the improvement in calorie intake and diet quality across the expenditure classes. Decline in calories in the expenditure classes that have reached calorie adequacy is not of much concern. The average quality of diet in India improved to the extent that the consumption of milk and vegetables improved and almost reached recommended quantities. This is reflected in the reduction of under nutrition levels among children cited by the Global Hunger Index. Since 2008 food inflation may have slowed the move towards balanced diets. The prices of all foods, including that of quality foods, processed, and ready-to-eat foods, increased, rendering their consumption inadequate among the lower income groups. Consumption of quality foods increased in the diets of the lowest 5% of the urban population, but the quantities of only vegetables was adequate. All the other quality foods consumed were inadequate, with a further fall in calorie intake. Consumption of junk foods is common among the urban poor as well as the rich. The urban rich normally turn to processed foods of international brands, the symbol of westernization.

Urbanization reached the megacities first in the decade ending 2001 and then spread to smaller towns in the next ending in 2010. Urbanization induces the consumption of processed foods and the habit of eating purchased meals. Diet globalization, especially into biscuits, potato chips, aerated drinks, and semi-cooked noodles, started in the early nineties with liberalization and penetrated into all megacities and small towns effectively by 2010. Packaging of small quantities at affordable price for lower income groups has been the strategy of market penetration. Local processed foods from the informal sector, such as

pickles, prepared sweets, and savouries, although less hygienic, also increased with urbanization. Eating out also increased with urbanization across all expenditure classes.

Secondary-level food processing was equally shared between the unorganized sector and the organized sector. Food safety and hygiene are the major concerns of the unorganised sector in addition to the concern of saturated fats in the foods. Law enforcement being slack, labels on processed foods do not give all the nutritional facts. Advertising creates a wrong impression that the food is good for health, despite the fact that it comes under the category of junk food. Lower levels of education and lack of nutritional awareness make the situation worse, increasing the incidence of non-communicable diseases among the middle class and high income class, while keeping the poor hungry.

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Chapter 14

SOCIAL CHANGES AND TRANSFORMATIONS IN EATING HABITS[#]

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PRELIMINARY CONSIDERATIONS

For thousands of years, the family has been the primary economic and socializing institution for humans. However, the advent of modern societies entailed a process of progressive social and institutional differentiation that has given rise to a number of roles traditionally played by the family institution to be also performed by other institutions. For example, the socialization of individuals is shared by the family with educational institutions that one hopes will perform well in teaching knowledge and the life guidelines that are essential to a person's upbringing. In this sense, one hopes that particularly primary education will provide an appreciation of and knowledge regarding the body while contributing to individual development by teaching appropriate eating habits and other behaviors that encourage well-being, quality of life, and happiness. Secondary education should also pursue these goals while raising awareness regarding the benefits of physical exercise, hygiene, balanced nutrition, and healthy living (López, 1999: 7).

In addition to formal education, the mass media play an increasing socializing role in advanced societies (Marín, 2006). That is, the production and reproduction of eating habits are increasingly conditioned by entities outside the family institution. For example, the communications media are used by transnational agribusinesses to execute publicity and sales strategies and play a decisive role in the social formation of individual eating preferences (Harris, 1985). What we term the social formation of these preferences (both that certain foods are viewed as appetizing and desirable and that others are disliked) must be understood

[#] This chapter is based on a research on Changes in Eating Habits that was performed at the University of Granada between 2011 and 2014. That research was conducted as part of the activities of the Research Group "Social Problems in Andalusia (Ref Sej-129)," which is financed by the Andalusia regional government (Spain).
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as the result of socially constructed attitudes toward food. In fact, these attitudes are acquired and shared in social interactions. Thus, in addition to being supported by the supposed nutritional qualities of what one eats, these attitudes are supported above all by cultural meanings that individuals have learned to attribute to food and eating through specific eating socialization processes as a function of the sociocultural and/or territorial context in which these individuals have developed. That is, eating attitudes may be understood as an essential part of the development of 'technologies of the self' in the sense of Michel Foucault, i.e., as an aspect of practical human thinking that enables

> individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection or immortality (Foucault, 1990: 48).

What one society considers to be 'normal food' or even 'very tasty' food, another culture may view as 'repugnant' or 'unacceptable'. This phenomenon occurs because the act of eating is a social one that is configured by those eating preferences that individuals have acquired culturally over the course of specific socialization processes inherent in the particular society or culture in which they have shaped their personalities (Restrepo and Maya-Gallego, 2005: 141-144) and by Foucault's technologies of the self. Thus, many Africans, Asians, Europeans, or Americans appear to enjoy and consume animal milk. However, the Chinese rarely drink it. Lobsters, crabs, and shrimp are valued as delicacies by many Europeans and North Americans but considered repulsive by many Africans and Asians, particularly those who live far from the ocean. The French eat horse meat. However, generally, the English do not. For many individuals, monkey, snake, dog, and rat meat as well as certain insects are exquisite. Many others judge these foods to be highly unpleasant. Religious beliefs prohibit the consumption of certain foods and even oblige fasting during certain times of the year, for example, among Muslims during the month of Ramadan or among certain Catholics during Holy Week. Similarly, Muslims and Jews may not eat pork, and Hindus do not eat beef and are often vegetarians. Thus, within the variety of foods available, each social group selects a particular diet. The factors that affect this selection may include the following: place of residence, political choices, economic situation, climate, transport, media influences, education, or personal tastes (Guerrero, Campos and Luengo, 2005). However, food socialization cannot be understood without considering that human beings, as subjects who occupy unequal social positions, follow varied life paths, and manifest different individual and collective identities, are likely to display a variety of perspectives or attitudes that are more or less critical of their acquired eating habits and predispositions. As we will observe in this chapter, this likelihood of being critical is not evenly distributed. Rather, it is distributed to different degrees according to social stratum. In addition, the particular peculiarities of individual subjects, their biographies, and the daily social environment that they experience, identify with, and internalize through their individual socialization processes are unequal and vary (Schütz, 1974).

METHODOLOGY AND OBJECTIVES

This chapter, whose analytical method, bibliography, and argumentation have been substantially enriched by the contributions of co-author Jose Francisco Jimenez-Diaz, is based on a thorough collection, discussion, and analysis of bibliographical references, announcements from print media, television, and radio, and specialized publications, reports, and articles on eating habits. This research, which was performed between 2011 and 2014, involved the main author of this study and a group of his students at the University of Granada (Spain). The aim of the study was to provide students the material, theoretical framework, and professional skills to improve their ability to understand and analyze the influence of media on transformations in the production and reproduction of Spanish eating habits. Moreover, it was possible to increase the level of civic awareness and education among the students who participated in the study with respect to their own eating practices and strategies.

In addition to increasing awareness among the participants of the necessity of adopting sustainable and healthy eating practices, a key objective of this study was to train the students to understand and analyze the social aspect of human eating as social scientists. Therefore, one goal was to continually emphasize for the student that although we eat out of biological necessity, human eating habits are produced and reproduced through socialization processes. The media play an increasing role in these processes, offering new alternatives even as the key role played by family slowly becomes less important.

Another key aim was to increase the ability of the students to critique food consumption. This goal involved promoting reflexive/reactive learning that is not limited to simply accepting content and concepts but also involves the student in changing values and 'the rules of the game' and thus in the struggle to overcome social, economic, political, or health problems inherent in consumption.

As a result of this approach, the considerations of this chapter regarding food consumption do not only represent theoretical-interpretive abilities of its writers. It is important to acknowledge that these abilities were improved by the reflections and texts written by the students who participated in this study.

BETWEEN 'DISTINCTION' AND 'NORMALITY'

The least economically favored social strata tend to be uncritical in their opinions regarding eating. Thus, they are more easily influenced by marketing messages. In contrast, more economically favored social strata appear to be more critical in this regard. This greater skepticism is explained by the larger purchasing power and intellectual training of these strata, which provide their members more opportunities to access specialized media, such as weekly magazines or certain scientific journals, with more elaborate messages and discourses regarding eating and what is considered to be a healthy life. This explanation has been confirmed by a number of empirical studies, such as a study on Chilean youth and their different views on advertising. Advertising is perceived by youth who belong to upper socioeconomic strata as an aesthetic experience whose value is most connected to its creativity, its ability to persuade, and the insights used. In contrast, in low socioeconomic

strata, the evaluation of advertising appears to be less critical. That is, attention is focused on the informative aspect of the advertising with respect to price and sales discounts.

Today's developed societies have left behind the famine cycles that resulted in a substantial number of deaths. Greater or lesser difficulties in obtaining the necessary supply of food have ceased to be a differentiating factor between the 'poor' and the 'rich'. Nowadays, this differentiation is primarily manifested as an asymmetry in the level of economic, educational, or informational resources. This asymmetry, which occurs with worrisome frequency, is too great and tends to worsen during socioeconomic crises, such as the one we are now experiencing in Spain. Such crises place individuals in unequal positions with respect to accessing better or poorer quality food goods. Thus, whereas the low social strata tend to suffer greater obesity levels because they are more likely to eat cheaper and fattier 'junk food', in middle and upper social sectors with greater socioeconomic, cultural, and purchasing levels (and thus more choices), tendencies toward a gradually increasing concern with food quality and self-actualization can be observed. This concern is reflected in how important food purchasing and consumption habits are increasingly influenced by what could be thought of as post-materialist values and attitudes (Inglehart, 1990).

Regarding the social sectors with higher incomes, food habits act as cues for differentiating and constructing individual or collective identity in daily life, thus contributing to the greater or lesser level of social, class, or status distinction within these sectors (Bourdieu, 1988; Restrepo and Maya-Gallego, 2005: 142).

However, whereas lower income social strata also demonstrate these indications of seeking distinctions, what is generally more prevalent in these strata is the standard mass pattern of mainstream food consumption as practiced by the vast majority of the world's population. This pattern is followed in a particularly intense manner by the most vulnerable or easily influenced social sectors, such as children and adolescents (Hidalgo, 2003), and by those with lower socioeconomic and/or educational levels, such as the long-term unemployed, temporary and precarious workers, single-parent families, or immigrants with fewer resources (Alonso, 2002).

REGARDING THE IDEAL BODY AND FOOD INDIVIDUATION

Ecology and health concerns are spreading more and more these days. This happens whereas publicity, continuous advertising campaigns, and the mass communications media tend to transmit highly similar images regarding the ideal body and a desirable lifestyle. At the same time, tendencies toward what one could think of as a 'homogenization' of eating repertoires can be observed (Contreras-Hernández and Gracia-Arnaiz, 2005: 426-435). However, these repertoires do not occur uniformly among all social groups but distinctly according to social class or income group. Each of these groups develops different eating habits and considers specific body images to be desirable in accord with their specific lifestyle and expectations (Bourdieu, 1971). For example, it has been demonstrated that in England there are notable differences in food spending norms and in the types of products consumed according to working class or middle class status (Warde, 1997). This phenomenon concerns social differences in the production of food taste, which is often based on flavor preferences that are socially learned at an early age (González-Turmo, 1995: 309).

Individuals who possess more choices because of their sociocultural status do not make arbitrary food choices. They eat that which they believe is connected with a desirable lifestyle or the body image with which they identify with that they hope will represent their outward image. Their aim is to define their appearance with respect to those who observe their daily activities (Goffman, 1959). This body image is different according to age group and gender. Thus, whereas girls tend to exhibit a normalized body mass index and boys suffer from overweight and obesity, the obese self-image is more often observed among girls (Ramos, Rivera and Moreno, 2010).

The perception of the ideal body is closely related to contemporary social discourses on this ideal and representations of it and of health that appear in the media and other dominant information sources. Thus, discourses spread by these media help promote different body care practices and eating styles in today's world (Martínez-Barreiro, 2004: 148). These practices and styles are significantly different for each social or income group (Shilling, 1993). For example, the high and middle classes desire not a robust but a healthy body, which they understand to be thin. To possess this type of body and to maintain it amounts to true 'self-care' or "feeling concerned, restless by oneself" (Foucault, 1990: 50) and requires substantial austerity in eating and regular physical activity, which involve constant sacrifice and self-control. Evidently, these care practices are connected to modern social control strategies that extend throughout a number of intimate life spheres of social subjects through

> the techniques of power oriented toward individuals in order to continually and permanently govern them (Foucault, 1990: 98).

This situation can result in extreme cases, if one supposes a subordination of these subjects to a tyranny of success that molds them according to a specific aesthetic canon that involves stereotyped, unnatural body images that are difficult to achieve (Corti, 2005).

In fact, this subordination to the tyranny of success is more characteristic of the better educated middle and upper classes and less so of the lower classes, whose preferred body image tends to be connected to the greater physical effort required in the jobs that they desire given their lower purchasing power. For example, the idea of feminine beauty in Argentina as noted by Aguirre is

> for low income sectors that of a woman with rounded hips, who is 'strong.' They are the girls that […] are not scrawny but also not fat: they have boobs, ass, something 'to grab onto' (quoted in Flichtentrei, 2006).

According to Aguirre, this ideal is based on the demands of the labor market:

> Why wouldn't poor people want a strong body, if the jobs available to them are labor intensive? A longshoreman or a construction worker cannot be skinny or puny. Because the boss will choose the 'strong' body. And the women in this social sector work in domestic labor where the employer will not chose a puny girl, but rather a tough, strong woman.

Based on this thinking regarding what a body should be and the functional needs that it must satisfy, Aguirre states that

> it's not that poor people 'eat poorly': they eat according to poverty survival strategies they develop and which for all intents and purposes keeps them alive, satisfied and, while with some shortcomings, nourished. And they do not see this 'fatness' as dysfunctional. How are you going to tell that woman with generous hips that she's undernourished? From the perspective of her surroundings, that is the body that she needs to have (quoted in Flichtentrei, 2006).

Similarly, it has been demonstrated that older lower-educated working-class housewives in Andalusia (Spain) activate a series of schema when evaluating their bodies, their eating, and family health, including 'not looking at oneself too much', 'knowing how to enjoy oneself', and 'having a good mouth'. Among younger mothers with more cultural capital, a good mother above all attempts to be informed and aware and possesses more knowledge to discipline her children's eating (Martín-Criado and Moreno-Pestaña, 2005: 44).

However, regarding views on the act of eating, different attitudes among distinct social sectors appear, which is demonstrated by Aguirre when she relates visiting houses to perform interviews, and when lunch time arrived, those interviewees who belonged to lower-income sectors tended to invite her to eat with them. In contrast, discomfort appeared at approximately 12 o'clock or 12:30 at the homes that she visited in middle and upper income sectors. These interviewees would not consider inviting her to eat. As Aguirre herself suggests, the members of lower-income sectors tend to think that everything in the home can be shared during mealtime, such that

> a poor person's food ends up being very functional because it can be extended: you can always add more a little more water to the pot, a few more noodles (quoted in Flichtentrei, 2006).

However, for the middle class, the act of eating is a private family affair that one may attend only if previously invited. Additionally, for these cases and particularly for the most elevated social classes, Aguirre observes that eating is an individual act in which concerns regarding health play a primary role. Thus, it could occur that a family table would present four separate meals: the father's low-cholesterol diet, the mother's green salad to keep her thin and beautiful, the daughter's macrobiotic meal, which included brown rice, and that of the son, who practices a competitive sport (quoted in Flichtentrei, 2006). Thus, according to their employment, expectations, or particular situation, each individual eats a personalized diet that is more or less controlled by nutrition specialists (Golay, 2000).

In addition, disparate working hours prevent different family members from eating together on a regular basis except during certain celebrations or vacations. Instead, they must eat alone. Independently of the reasons for this behavior, what is certain is that eating alone breaks with our ancestral tradition as a species. In the end, we became humans when we gathered and shared food together as a group. Thus, millions of years ago, omnivorism required our ancestors to gather food in groups. Without claws or lion's teeth or the speed of monkeys, the way to obtain proteins was based on group cooperation.

Eating as a group not only serves the primary function of providing necessary nutrition. In addition, is an act with sociocultural meaning that generates and strengthens the bonds of sociability.

Thus, the anomie of the typical lone diner in the globalized modern world is a characteristic symptom of the times and one of the causes of the contemporary psychosocial malaise. Therefore, to the world crisis that has resulted from deep inequalities and obstacles that prevent access to food and that causes the suffering of hunger and malnutrition among a substantial number of humans, one must add this other human crisis of the anomie that results from the neglect of the social act of eating, which used to bring families together around the same table. This crisis, which has been termed "gastro-anomie" or "destructured eating" (Contreras-Hernández and Gracia-Arnaiz, 2005: 441-451), is motivated in large part by the loss of this social occasion that, when it was more common in traditional families and societies, contributed in particular to the inculcation of more deliberate and generally more healthy and proper eating habits.

Gastro-anomie could result in a lack or weakening of the guidelines and sociocultural criteria used in choosing what to eat (Fischler, 1995). Thus, this loss in eating sociability means a decrease in interest in following a series of rules, such as not sticking one's elbows out, sitting up straight, not taking a bite from a loaf of bread, and not drinking or speaking when one's mouth is full or while one is chewing. These guidelines helped make meals a calm act that was fulfilled of sociocultural meaning, in contrast to what currently occurs, when an increasing number of individuals eat mechanically and in a rush, simply because 'one must eat in order to live'.

The said guidelines for eating could be connected with the previously mentioned techniques of social power aimed at constantly controlling and governing individuals (Foucault, 1990). But, from another viewpoint, one of the negative effects of eating alone and hurriedly is the aforesaid gastro-anomie, which, at family level, could be shown as a loss of parental power and authority, with the result that many children eat haphazardly whenever they wish and without following any of the internalized manners that they were taught.

Additionally, without following nutritional guidelines in accord with the type of eating that proper development requires, these children eat whatever they like, including, above all, sweets and food high in carbohydrates and low in proteins and vitamins. This type of eating can result in the reproduction and future transmission of bad habits to new generations (Bolaños, 2009: 962).

FOOD DEFAMILIZATION AND DETERRITORIALIZATION UNDER GLOBALIZATION

A gradual defamilization of the production and reproduction of human food habits is occurring. Here, the term defamilization refers not only to the family's displacement as the fundamental socializing institution in teaching nutrition and food purchasing habits, but also to the incessantly increasing influence of the media and global information, whose impact on daily life is rising more and more. Thus, currently, for most individuals, television and publicity (Botey and Murillo, 2006), or 'prestigious' publications, play an increasing role in class or status training that was previously exclusively guided by the family institution or other primary groups.

Under these circumstances, different studies demonstrate how children are much more easily influenced than adults to adopt eating changes promoted by the media and are the first

to cease eating fish in favor of eating more beef (Rizo, 1998: 31). This phenomenon explains how after compulsory education is completed, 62.8% of students regardless of gender will exhibit average or low adherence to the Mediterranean diet. This fact is manifested above all in the progressive abandonment of traditional eating habits, including the consumption of plant-based proteins, such as those provided by legumes (Ayechu and Durá, 2010: 40).

However, it is not appropriate to magnify the effect of media. Whereas the media can induce a high degree of emotion and possess a high seductive capacity, it is much more difficult for the media to change attitudes and behaviors (De Aguilera and Pindado, 2006: 15). In fact, to analyze that change, it is not enough to only focus on the role of media. Other factors, such as the increase in the number of families in which both parents work and thus must increasingly replace traditional, home-cooked food for the so-called fast foods and precooked meals, also play a role in this worldwide standardization of eating habits.

This standardization is closely related to the development of transnational trade exchanges and is resulting in a situation in which diets have ceased to be limited to the produce of a single country or local area. The socioeconomic globalization that enables the said exchanges has produced a rising deterritorialization of eating habits, a de-seasoning of diets, and the extension of consumption habits that are increasingly similar worldwide. As a consequence of all this, we are witnessing contradictory effects on eating. On the one hand, there is a rising worldwide homogenization of diets and related sociocultural attitudes (Díaz-Méndez and Gómez-Benito, 2001). On the other hand, there is a search for diversity, which tends to increase as a reaction to this homogenization. In any case, the homogenizing consequences of globalization reflect the increasing uniformity of methods of growing, processing, and selling food around the globe. This process would be impossible without the influence of globalized media, information, and transportation. Thus, in addition to the large agrifood multinationals, the communications media play a decisive role in establishing and spreading worldwide guidance on food production, packing, and presentation, which tends to be associated with a gradual waning in food sovereignty in local populations.

Food sovereignty exists when the determination and supply of a population's food demands are based on the specific production within an established national, regional, or local setting in a manner that respects productive and cultural biodiversity. To guarantee food sovereignty, it is necessary for that setting to possess autonomous control of food production and sales as well as the promotion of farming practices and technologies that assure the preservation of biodiversity and the protection of local, regional, or national production. Similarly, it is essential to establish agrarian policies that can create the socioeconomic and regulatory conditions necessary for equitable access to water, land, energy resources, and markets. In Latin America, the failure to meet these conditions and the neoliberal globalization imposed in the region during the last decades of the 20^{th} century have substantially contributed to several countries having developed their export-focused agriculture while simultaneously having to import considerable amounts of basic foods required for daily consumption (e.g., beans and corn in Mexico) that were traditionally produced self-sufficiently. Therefore, these countries are suffering a progressive reduction in their food sovereignty, and the food supply for their populations is increasingly controlled by transnational corporations.

In these circumstances and in light of worldwide trade liberalization, economic adjustment policies are being applied in Latin America and other regions that are destroying or seriously threatening the productive capacities of local, regional, or national societies and

causing a global spread of hunger and poverty. In response, an increasing number of national, regional, and local populations are demanding measures to defend biodiversity and food sovereignty. These demands reflect the awareness of many that it is necessary to implement proper collective means and controls to secure self-sufficiency and food security. Regarding self-sufficiency, these controls would help avoid problems such as the overexploitation of marine species and the subsequent exhaustion and disruption of trophic chains and water depredation. Concerning food security, it is important to note the importance of devising food production system controls (Arribas, 2005). Such systems represent one of the best strategies to decrease the risk or spread of illnesses related to food production methods, such as the use of agrochemicals that contaminate aquifers (Beck, 1993; Fereres, 1993; Vera and Romero, 1994; Altieri and Nicholls, 2002).

Demands for transparency and traceability in food production are highly necessary, particularly when production processes become too complex for the population to understand and oversee. This complexity is characteristic of the increasingly industrialized and globalized agrifood systems (Machado and Torres, 1987; Mcmichael, 1994).

However, in contrast to the neoliberal orientations of the corporations and transnational economic interests that currently guide globalization, other forms of globalization that benefit a majority of individuals are also possible. Thus, whereas technological advances that facilitate globalization have intensified contact among different peoples and cultures and between highly different socioeconomic situations, the dominant role of the communications and information media should not be (as many now consider it to be) to promote the 'monolithic thinking' and homogenization that enable planet-wide generalization and the imposition of neoliberal policies. Instead, the media should educate regarding multiculturalism and the coexistence of cultures (Martínez-Salanova, 2009). To achieve this aim, means to promote dialogue among different cultures is particularly necessary. In addition, the global homogenization that is resulting from the imposition of certain cultures over others should be resisted. Thus, we must

> use everything we have. One of the saddest things that could happen to our society would be for us to only use a limited proportion of the possibilities available to us (Martínez-Salanova, 2000: 49).

CONCLUSION

Eating habits may be considered to be social constructions that condition and are conditioned by the intellectual, psychological, cultural, and sociohistorical development of individuals. That is, analogous to what occurs with other human social constructs, these habits and their processes of production and reproduction vary from one sociocultural context to another and from one time period to another, at the same time that they are subject to social changes and modify in response to them.

One of the primary goals of this chapter has been to analyze the transformations that the production and reproduction of eating habits have undergone as the societies in which these processes occur undergo globalization. In particular, the chapter has discussed how the social production and reproduction of eating habits have evolved from occurring primarily within the family sphere (above all in traditional societies in which subsistence economies dominate)

to being increasingly influenced by the mass media and publicity in globalized modern societies. The overproduction of these societies generates the need to develop publicity strategies that are directed toward persuading consumers of the necessity to consume more. In the more advanced phases of such overproduction (when production problems have been resolved and there is a general availability of goods for most of the population), these strategies shift to promoting and encouraging the purchase of unique products whose acquisition or consumption furnishes a particular level of distinction (Bourdieu, 1988).

A priority goal is to ensure that the media not only serve the interests of transnational food corporations but also support civic education on eating through imaginative and seductive campaigns, such as the ones they use to attract consumers (Ávila and Linares, 2006: 36-37). For example, it is necessary to create informative prevention strategies that present alternatives to the body images that encourage extreme thinness and to disseminate these strategies on television, in advertisements, and in fashion magazines. These strategies should help provide children and adolescents with the cognitive habits and tools that they require to resist and proactively manage the media messages they receive regarding the ideal body. At least, the public media in democratic countries should be able to help citizens reflect on and become more aware of the need to seek help and advice and provide them with information on facilities and specialists they can visit to overcome eating disorders and related problems that result from their subordination to unrealistic body images that are nearly impossible to achieve (Behar, 2010: 330).

Fortunately, the idea that 'not everything goes' in publicity is gaining increasing acceptance and support with respect to applying restrictions on publicity. This change is primarily the result of pressure from democratic citizenry. One example is how the European Parliament has endeavored to restrict advertising targeted at children of foods that are unhealthy because of high levels of fat, sugars or salt. This effort was based on the parliament's concerns regarding an increase in childhood obesity. In this regard, it is worth mentioning that involving public governments and citizens (e.g., through consumer organizations) could contribute to increased levels of control and surveillance aimed to verify that food labeling offers correct, clear, detailed and intelligible information, so that the majority of consumers can easily distinguish the contents of a packaged sold food and their proportions.

One of the most important current challenges is to train individuals from childhood and adolescence to consume intelligently and responsibly. Moreover, it is necessary to train citizens to differentiate between the often seductive imaginaries appeared in publicity for food products and the intrinsic qualities that these foods possess (Gajitos, 2006). To support these efforts, political regulations should prevent all forms of deceitful advertising, such as advertising that seeks to persuade us of the supposedly extraordinary qualities of 'magical ingredients' in certain foods, which are presented as containing substances that are 'natural' and that possess a long tradition as healing foods in ancient cultures (Moreno, 2006). Particularly regarding children, because of their special vulnerability, efforts should be concentrated on avoiding all types of advertising that exploit the natural naiveté of kids by showing them products that provide them some type of 'super power' or encourage unhealthy eating habits and sedentary lifestyles that result in obesity (Pérez-Salgado, Rivera-Márquez and Ortiz-Hernández, 2010).

Similarly, it is highly necessary to support all measures and policies that would help consumers choose rationally and be able to react reasonably to excessive advertising,

including helping individuals to develop those attitudes that empower them to act as active and conscious consumers (Callejo, 1995). One sign that these attitudes have begun to emerge is the appearance and spread of a series of civic, political, and social concerns that have been expressed in preferences for products and brands that, for example, do not rely on child labor, unjust hiring practices, or depressed salaries and do not threaten safety, jobs, or the environment (Barber, 2001: 112).

Of course, these civic and political concerns reflect the attitudes of a minority of specific interest groups. Thus, they represent more or less symbolic choices. Establishing food consumption as a civic act, even if only for that portion of the world population that is able to determine its own eating habits, and reestablishing healthy eating requires not only a broader spread of nutritional education for all citizens (and particularly children) (Ayechu and Durá, 2010: 40-41), but also a notable change in socioeconomic and political structures. This change would enable eating to be viewed not only as a social act but also as a strategy to promote an imaginative retaking of collective spaces as well as the interest by the public sphere. Thus, such consumption would be perceived as a useful and sensible expression of thinking and acting meaningfully and in a renewed way about sociopolitical life (García-Canclini, 1995). In any case, this should be a legitimate aspiration in democracies, whose institutional requirements include free and equal access to political resources, free expression, access to alternative information sources, and freedom of association (Dahl, 2012: 100-101).

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