Suggested New Design for Nutritional Facts Label

Found on Lebanese Products

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A thesis submitted in partial fulfillment of the requirements

for the degree of masters of Arts in Design

in the Department of Design,

of Notre Dame University - Louaize

Supervisor: Dr. Farid Youness

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SUGGESTED NEW DESIGN FOR NUTRITIONAL FACTS LABEL FOUND ON LEBANESE PRODUCTS

Sarah Hamwi

in partial fulfillment of the requirements

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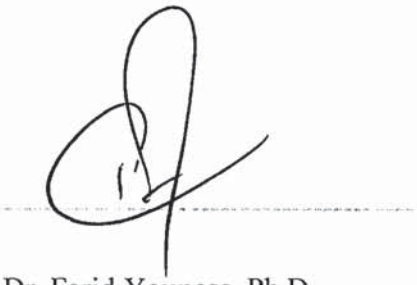

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Abstract

The issue of health is a major concern for most people; therefore, I have chosen a field that combines this concern with my discipline, namely, design. This project will tackle the issue of nutritional facts label design, which has a direct correlation with consumers' health, since, according to the Food and Drugs Administration (FDA), the nutritional facts label is the source of information that communicates the serving size and lists the weights of the macronutrients (fats, carbohydrates, protein) of the recommended dietary allowance of a 2000-calorie diet (the average of calories required per day for an adult person).

The Lebanese traditional lifestyle is changing at a very fast pace, and the phenomenon of globalization has had a great impact on our food habits; Lebanese traditional cuisine that is characterized as being healthy, with some exceptions, is now being westernized. Thus, the Lebanese diet has changed into a pattern described as unhealthy, which is causing a higher risk of non-communicable diseases, such as obesity, cardiovascular disease (CVD), diabetes, and hypertension.

(1a) Moreover, there are problems related to the consumer's knowledge of interpretation of the nutritional facts label, which is causing him to take no notice of it.

(2a) Another factor related to the shopper is the shortage of time, since we are living in the age of rush, and the nutritional facts label requires time to be recognized and analyzed.

(1b) Here comes the problem associated with the nutritional facts label. First its graphical presentation, in terms of typography, iconography, placement on the package and legibility.

(2b) A second problem is the math that is required to get the needed numbers to

evaluate the products' relevance to consumer requirements.

Consequently, my main target is to develop a nutritional facts label that takes into consideration all those problems, keeping in mind that the main context is Lebanese people; therefore, a suggestion for a Lebanese nutritional facts label to be placed on the Lebanese products will be made.

Thus, if the nutritional facts label were more recognizable, then it would contribute to the amelioration of Lebanese people's health.

This suggested label would be realized by borrowing aspects of many designs being used, such as the FDA nutritional facts label, the Guideline Daily Amount label (GDA) and traffic light label, and Mc Donald label, and employing them to my own design.

From the FDA label, I will get the scientific aspect, from the GDA label the idea of quick and easy snapshot, from the traffic light the color coding concept, and from the Mc Donald label the idea of using signs. After borrowing the appropriate aspects of each, a multi-disciplinary study will be done in the field of food anthropology and semiotics, to come up with signs based on the Lebanese culture. Claude Levis Strauss argued that food serves as a system of signification (Lehrer, 1972), from this concept; I got the idea of using a traditional Lebanese cuisine menu as a basis for the intended nutritional facts label. Subsequent to this, Micheal Owen Jones (2007) stipulated that all aspects of foodways are subject to symbolism, and this initiative could be applied to the presentation and structuring of meals. Consequently, I will borrow this idea, and apply it to the latter to represent the nutritional facts label as a symbol created originally from the traditional Lebanese meals. Accordingly, four design options will be generated for different nutrients and tested to choose the suitable one, keeping in mind the above-mentioned Lebanese aspects. The test will follow the shopping mall intercept

(sampling), which is the most widely used market research data-gathering technique. A questionnaire will be circulated among the consumers of two supermarkets, at the entrances of each one, at different times of the day, week and month. The design set of the nutrients selected by the majority of the interviewees will be refined and elaborated on for the final layout.

On a later stage, this label was applied on some products as a show case.

Some ads were done in the same context, taking a famous Lebanese proverb to convey its message, and to introduce the Lebanese nutritional facts label to the Lebanese audience.

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This thesis would not have been possible without the guidance and the help of several individuals who, in one way or another, have contributed to an extended their valuable assistance in the preparation and completion of this study.

First and foremost, I extend my utmost gratitude to Dr. Farid Youness for his supervision, advice, and guidance from the very early stage of this research as well as giving me insight into extraordinary experiences throughout the work. Above all, he has provided unflinching encouragement and support in various ways. His truly scientist's intuition has made him a constant oasis of ideas and his passion for his discipline has exceptionally inspired and enriched my growth as a student, a researcher want to be. I am indebted to him more than he knows.

I gratefully acknowledge Mrs. Maya Farah, assistant professor of business management at the Lebanese American University in Beirut, Lebanon, for her advice, supervision, and invaluable contribution, which made her a backbone of this research, and by extension, of this thesis. Her originality has triggered and nourished my intellectual maturity; I will benefit from that for a long time to come. Maya, I am grateful in every possible way and hope I can pay back in the future.

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Words fail me to express my appreciation for my husband, Issam, whose

dedication, love and persistent confidence in me has taken a load off my shoulder. I owe him for having unselfishly let his intelligence, passions, and ambition collide with mine. My baby boy, Ibrahim, has been my joy and cause of encouragement.

I would also like to thank the editor of this master's thesis, Rima-M. Fakhry, adjunct faculty member in the sociology department at American University in Washington, D.C, for her meticulous revisions and for patiently reading the initial drafts and offering invaluable suggestions.

Moreover, special thanks to my manager Mr. Peter Gharios at Al Hayat newspaper who was extremely supportive and flexible, which allowed me to keep going to work while pursuing my studies.

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Abbreviations

CFSAN: Center for Food Safety and Applied Nutrition

CVD: Cardiovascular Disease

EASO: European Association for the Study of Obesity

EU: European Union

FAO: Food and Agriculture Organization

FDA: Food and Drug Administration

FDF: Food and Drink Federation

FSA: Food Standards Agency

GDA: Guideline Daily Amount

HHS: Health and Human Services

MAFF: Ministry of Agriculture Fisheries and Food

MEDA: Mesures D'Accompagnement

NCD: Non-communicable Disease

NLEA: Nutrition Labeling and Education Association

NSG: Nutritionist Steering Group

RDA: Recommended Dietary Allowance

WHO: World Health Organization

Introduction

Health is increasingly raising both social and medical concerns, especially with the current change in our lifestyle, which is becoming very stressful.

The phenomenon of globalization is having an undeniable impact on our eating habits. According to the World Health Organization (WHO), Technical Report Series (TRS), No. 916, "these changes in dietary and lifestyle patterns, chronic Non-Communicable Diseases (NCD), including obesity, diabetes mellitus, cardiovascular disease (CVD), hypertension, stroke, and some types of cancer – are becoming increasingly significant causes of disability and premature death in both developing and newly developed countries" (WHO, 2002).

The domain of nutrition has always been of interest to people since it is related to their health. Centuries ago, Hippocrates said, "When more food than is proper has been taken, it occasions disease" (Hippocrates, 1846: p.42).

More recently, the field of nutrition has been a matter of concern for many people, who are becoming increasingly more concerned about their health condition. As Green Facts (2001–2012) states, "As a result of changes in the way we eat and live, some chronic diseases are increasingly affecting both developed and developing countries. Indeed, diet-related chronic disease –such as obesity, diabetes, CVD, cancer, dental disease, and osteoporosis- are the most common cause of death in the world and present a great burden for society".

In fact, WHO and the Food and Agriculture Organization (FAO) have signaled concern about the increasing prevalence of chronic non-communicable diseases (NCD) linked to diet, such as diabetes mellitus, CVD, hypertension, strokes and some types of cancer (WHO/FAO, 2003). However, in Lebanon, no official statistics on diet-related

disease prevalence were available at the time of this study.

The Lebanese traditional cuisine has long been known for its healthy content, with some exceptions related to fatty recipes based on various meat cuts, such as stuffed intestines and dishes made of feet and brain, and a variety of sweets. The food choice of Lebanese people is increasingly being westernized, is becoming unhealthier. In effect, "recent studies on food consumption patterns of the Lebanese young and adult population showed a shift in the food consumed toward increased intake of fat, milk, and animal protein and decreased intake of whole wheat bread and cereals" (ronald, Hwalla & El Khoury, 2008: pp493-498), which changes the Lebanese diet to one which is high in saturated fat, sugar, and refined foods low in fiber - changes that are causing a higher risk of non-communicable diseases.

According to Dr. Najah K. Farah, a Lebanese specialist in endocrinology, diabetes, and obesity, "many cases of diabetes and overweight in Lebanon are due to a food style that contains a lot of fats and carbohydrates". During an interview held with Dr. Farah, she raised the issue of kids and adolescents who are suffering from these types of health problems, highlighting the importance of encouraging them to have a more balanced diet.

Based on this increasing problem, I got the idea of combining the field of nutrition with my discipline, namely design, this initiative came from the basic role of graphic design, and because vision so dominates our learning experiences. It has always been a major factor in communication and thought (Laseau, 1986). Moreover, design can be viewed as a problem-solving process, regardless of whether the aim is artistic or strictly utilitarian; it is the process of problem- solving that characterizes the act of design (Faruque, 1984), and therefore this process of design seeks to generate a number of possible solutions and utilizes various techniques or mechanisms which will be the

cause of encouragement to think creatively (Ambrose & Harris, 2010:11) in the pursuit of innovative solutions, intended after all to develop an approach aimed at improving Lebanese people's health. The nutritional facts label is the information presented to the consumer on most food packages. It communicates the serving size and describes the weights of macronutrients (fat, carbohydrate, protein) in one serving and the percentages that these macronutrients represent of the daily Recommended Dietary Allowance (RDA) based on a 2000-calorie diet. It was the Nutrition Labeling and Education Association (NLEA) that mandated that all packaged foods carry nutrition labeling information presented as standardized "nutrition facts" to provide accurate and truthful information on food products (Patterson, Kristal, & Neuhouser, 1999). The latter is a useful informative tool to consider when making food choices and comparing quantitatively the nutrient content of the products considered. The Foods and Drug Administration in USA (FDA) has also required that most of the repacked foods include the nutritional facts labels in a specific graphical format.

As for the Lebanese law, the nutritional facts label is mentioned in the third chapter of the Lebanese consumer's protection, information for the consumer, article 7, although there is no detailed explanation of its format or content.

المادة 7: يجب أن تدرج على لصاقات السلعة أو التوضيب المعلومات التي تحددها الإدارة المختصة، تبعاً لطبيعة كل سلعة، وخصائصها ووفقاً للمواصفات المعمول بها.
تشمل المعلومات المذكورة أعلاه على سبيل المثال لا الحصر:
طبيعة السلعة ونوعها، عناصرها و/أو تركيبتها أو مكوناتها.
الوزن الصافي للسلعة أو حجمها أو عددها.
مدة صلاحية السلعة.
بلد المنشأ، أو جهة المنشأ بالنسبة إلى إتحادات الدولة المعترف بها.
إسم المُصنع أو المحترف وعنوانه.
المخاطر والمحاذير الناجمة عن إستعمال السلعة.

The focus of this research project is on the design or revision of a 'nutritional facts label'. This project will tackle the latter as it is believed to have a direct correlation with consumers' health condition, as the nutritional facts label found on food products

is the main source of information for consumers, informing them about the serving size, the weight of various macronutrients (fats, carbohydrates, and protein) and their percentage based on the recommended dietary allowance of a 2000-calorie diet. The study will mainly identify the design problems of the nutritional facts label, such as layout, color, shape and placement, found on Lebanese products. It will not deal with the packaging design elements of products generally intended for marketing purposes or the health claims usually included on food labels, such as the claim that a particular food product would reduce the consumer's risk of developing disease.

The project is both health and design-related. As far as health is concerned, the research is mainly focused on the presentation of the nutritional facts label that is supposed to be in direct correlation with consumers' well-being. It is important to note that this relation is usually based on the consumer's knowledge, his interest in the nutritional facts label, and the time s/he spends to get information from the label. Since the label is the consumer's main source of information about the nutrients contained in the pre-packed food, it is believed to "assist consumers in maintaining healthy dietary practices" (Nutrition Labeling and Education Act, 1990). It is noteworthy that other factors related to the label itself, namely, its legibility, clarity, simplicity and communicability; affect the relationship between the label and consumers' general health.

From a design perspective, the FDA has required that the nutritional facts labels have "uniform design, typographic style, color scheme, and standard placement of information regulated according content" (Keller et al., 1997: pp. 256-269). Although some improvements have been made to the nutritional facts label standards since its initiation in order to increase people's usage of it, still, Kristal et al. (1998) have found that most consumers expressed their need for labels that are easier to understand (as

cited in Misra, 2002:306)

Accordingly, this project intends to investigate and propose a method that will increase the effectiveness of the nutritional facts label presentation.

The main question that this project proposes to address is related to the Lebanese consumers' lack of knowledge in terms of what nutrients per product they are purchasing. This knowledge is directly related to the nutritional facts label, whose main function is to present the numerical figures of nutrients per serving. Accordingly, two issues need to be considered:

(a) The hectic lifestyle of today's consumers, who barely have time to take care of their daily chores, let alone time to spend in the supermarket comparing between products' composition and nutrients content.

(b) The nutritional facts label available on the Lebanese market, how it is presented and placed, its clarity and legibility for everyone in the Lebanese society regardless of age, education and social background, in addition to the label's characteristics in terms of typographic, iconographic, legibility and graphical notions, as well as layout and placement view.

Moreover, many products in the Lebanese market do not carry any nutritional facts label while others have a label but do not abide by any of the known nutritional facts labels regulated by the Lebanese government.

As a socially responsible designer, I believe that I can positively contribute to the Lebanese people's health enhancement by proposing a nutritional facts label that takes into consideration all the factors that cause them not to pay attention to it on a regular basis, such as lack of time, misunderstanding, illegibility, and hidden placement.

Hence, the main objective of this research is to benefit from the design problem-solving process, and make use of it to solve the "problem" of nutritional facts labels.

This would be achieved through dividing it into a number of steps, and then consciously or unconsciously, this series of smaller problems will be arranged into a sequence of steps, and as Omar Faruque (1984) has put it, "It is through this act of problem- solving that he (the designer) arrives at a certain solution or solutions and thus "creates" his masterpiece. He goes through the process of problem seeking and then resolving those problems that he has conceived in his mind. But whatever the aim, the designer translates it into or envisions it as a series of problems and then tries to solve each one. His arrival at a specific design is the result of a problem-solving process". (Faruque, 1984:35). The resulting design, or the result of the problem-solving process, would be a nutritional facts label remodeled in a way that makes it more visible and less difficult for the Lebanese customer to understand. In fact, information is more likely to be attended to and processed when it is easily legible and personally relevant (Levy, Fein, and Schucker, 1996:1-15). Accordingly, my main aim is to develop a Lebanese food label that tackles all the above-mentioned concerns.

Therefore, it is hypothesized that if the nutritional facts label is better graphically represented and easily recognizable, then it can contribute positively to the enhancement of Lebanese people's health.

In deciding on the topic for this project, I have sought a subject that I am not only interested in but one that I am also particularly keen on exploring. After some reflection, I thought that my concern about health and diet could be the topic that I would introduce into my field of study, namely, graphic design, which is a field based on images that have the ability to convey ideas and information very quickly. As we all know, a picture paints a thousand words, so it is worth spending adequate time on image selection and presentation. Images can be used to communicate messages in many different ways as they are very versatile and their reading can be conditioned by other

factors at play during their presentation. Images can have different cultural and social interpretations and these can be shaped by the contexts within which they are used (Ambrose & Harris, 2010).

Aside from the ever-attracting domain of nutrition in today's society, food labeling is an area where I can use both my educational and work experience in the field of health and diet. In fact, during my university years, I worked as a part-timer in a shop for macrobiotic food. This experience roused my curiosity and need to investigate what is found in every food I eat, and how it may be beneficial to my health.

The primary purpose of the food label is to "give consumers the power to compare foods quickly and easily so they can judge for themselves which products best fit their dietary needs," says Barbara Schneeman, Ph.D., director of FDA's Office of Nutrition, Labeling and Dietary Supplements (FDA, 2008). The "old" food label is being questioned, and "[t]he Food and Drug Administration is working with food manufacturers to not only update the nutritional labeling on the back of packages, which right now is written in small bar codes which are indecipherable and have not been updated in 20 years, but also to move to a front-of-package labeling strategy," said Kathleen Sebelius, secretary of Health and Human Services (HHS) (Mora, 2010). Moreover, Levy and Fein (1998) found that consumers were able to use food labels effectively only when the task did not involve much mathematical skill (as cited in Misra, pp. 306-309), yet currently available food labels generally require some mathematical operations to provide the needed information. Accordingly, consumers would appreciate the use of new food labels that do not require much effort and time to comprehend.

This master's thesis is based on a 1996 research study designed and conducted by Levy, Fein, and Schucker (1996) to evaluate the characteristics of seven formats of

nutrition labels. Multiple performance tasks were applied in the study to assess a range of possible label uses intended to evaluate the performance characteristics of nutritional facts label formats. A set of tested formats was developed to allow for comparison between specific features intended to help consumers better understand and use the label. The objective was to measure different factors, including time, accuracy, health-rate, nutri-claim, diet-math and balance-diet. For this purpose, the sampling was taken according to the shopping mall intercept method (Bush and Hair, 1995, pp. 73-83) to obtain a geographically and demographically diverse sample of shoppers. The interviewer gave an introduction to the subject before performing the experimental tasks, which consisted of different types of data collection methods.

The following variables constitute the focal points of this study:

1) The nutritional facts label defined previously by experts, such as the FDA, is the independent variable.

2) Lebanese people's health, which is believed to be in direct correlation with food intake, and therefore with the nutritional facts label, is the dependent variable.

A review of the different types of nutritional facts labels found in the market provided a general idea for the "Lebanese nutritional facts label". From each label was grasped a feature, from the FDA label was the scientific aspect, from the GDA label came the idea of placing the nutritional facts label on the front of the package, from the traffic light came the proposal of color coding, and from the McDonald label came the idea of representing the nutrients as pictograms.

Once borrowing the suitable feature of each type of existing nutritional facts label, a multi-disciplinary study was done in the field of food anthropology and semiotics to come up with signs based on the Lebanese culture. Claude Levis Strauss has argued that food serves as a system of signification and communication in cultures

and Fernandez has stipulated that food is a lens into the whole cultural package forming a central area that ties ethnic identity notions of memory. Moreover, Michael Owen Jones (2007) initiated the idea of food symbolism, which could be applied to the presentation and structuring of meals. All the above-mentioned theories opened the prospect of using the traditional Lebanese meals as a starting point for the intended nutritional facts label.

Based on Michael Owen Jones' concept of food symbolism I decided to delve deeply into the study of the field of semiotics. The study of signs, what they are made of and what laws command them, is named after F. de Saussure's semiology (semiotics). The graphical representation requires a systematic problem-solving process, which necessitates various levels of abstraction, whereby symbols are a very high level of abstraction, and can be hugely effective. (Faruque, 1984: p.42)

The thought of symbols added to the latter idea of traditional Lebanese food, resulted on the foundation of the intended Lebanese nutritional facts label.

In order to achieve this mission, and keeping it in the Lebanese context, an interview was conducted with the Lebanese nutritionist Carine Murad, to decide on the Lebanese dishes that could be representative of the four nutrients, namely,, "lahme nayee" for protein, "Maamoul" for carbohydrates, "fawerigh" for fats and "olives" for sodium, respectively.

Then these dishes were illustrated in four different sketches, and were drawn in a questionnaire for the survey.

In the first stage of the research, the geographical scope of the study was determined by choosing two megastores located in Beirut, namely, 'Spinneys' (Jnah) and ' Charcutier Aoun' (Jbeil), to interview shoppers at random.

The interviews were divided into two parts, namely, a short introduction giving

a briefing on the subject and a quick questionnaire unveiling the respondents' reaction to the nutritional facts label in order to assess the shoppers' response to its usefulness for their dietary regimen, and their suggestions for a new label that suits their needs.

Finally, based on the results of the interviews and the observational stage conducted, the chosen sketches were revised and abstracted to come up with the suggested design for a Lebanese food label that suits Lebanese people's lifestyles, fits their routine shopping behavior and contributes to the amelioration of their health, taking into consideration the required standards for the nutritional facts label.

Besides this introduction, this project consists of seven other chapters, each of which is briefly outlined below.

Chapter 1 reviews the history of food labels. The review of literature consists of a summary of the food label evolution.

Chapter 2 introduces the different types of labels, namely, FDA, GDA, Traffic light label, and the McDonald label. Drawing on the description of each type of label as well as the criticism of each, the chapter discusses a few selected features. By exploring the various label types available in the market, this chapter complements the first chapter by outlining the background as to how and why the research topic was selected.

Chapter 3 discusses in greater detail the deficiency of each label style and explains the limitations of each.

Chapter 4 compares some Lebanese products with the legalized nutritional facts labels to determine whether they abide by any of those legalized labels, and to look for any deficiencies in labeling.

Chapter 5 presents the new proposal with a discussion of a selection of features that could be adapted to a new Lebanese food label.

Chapter 6 consists of a multi-disciplinary study of the fields of food anthropology and semiotics to set the basis for the Lebanese nutritional facts label and delineate the design process with the first design phase, along with the sketching design process, and color choice.

Chapter 7 describes the methodology adopted by the researcher for the research design and the data collection. It describes in-depth the McDonald method, the development of the research method adopted and the post-design testing stage. The chapter consists of a detailed discussion of the data collection procedure and the data analysis, as well as the results that led to the development of the new label. After getting the results, the second phase of the design consisted of giving the final layout of the Lebanese nutritional facts label.

Chapter 8 gives a recommendation for an advertising campaign to promote the Lebanese nutritional facts labels in order to make them popular among consumers.

The concluding chapter elaborates on the findings of the study with respect to the newly-proposed nutritional facts label. A conclusion is drawn and recommendations are outlined both for further research and for business producers and marketers.

Chapter1: Food Labels

1.1 History of food labels

In 1990, the American Nutrition Labeling and Education Act (NLEA) authorized the Food and Drug Administration (FDA) to require all packaged foods to bear nutrition labeling and all health claims for foods to be consistent with the terms defined by the Secretary of Health and Human Services (SHHS). The Nutrition Labeling and Education Act (NLEA) mandated all packaged foods to carry nutrition labeling information presented as standardized "Nutrition Facts" to provide accurate and truthful information on packaged products (Food and Drug Administration). The FDA also required that most of the repacked foods include the nutritional facts labels with a specific United States format, which is basically the nutrition facts label in its current form.

In 1991, nutrition facts, defined as basic per-serving nutritional information, were required on foods under the NLEA of 1990. Food labels had to list the most important nutrients in an easy to understand format.

In 1996, the Food and Drink Federation (FDF), the voice of the UK food and drink industry, started the guideline daily amount (GDA) initiative to be used by the United Kingdom (UK) Ministry of Agriculture Fisheries and Food (MAFF) (FDA, 1996). It was initially set for fat, saturates (saturated fat), sodium, sugar and fiber (in grams per day for men and women).

In 1998, a set of GDA labeling criteria was developed to communicate the government's nutrient intake recommendations in a way that could then be used as part of the nutrition information on the back of all food packages. Accordingly, in 2005, the

largest UK retailer, 'Tesco', began to explore options for nutritional signposting on the front of packages.

In 2000, an Act of Parliament set up the Food Standards Agency (FSA) as an independent government department in the UK. The FSA developed a labeling system using traffic light colors to give at-a-glance information to consumers on the amount of fat, saturated fat, sugar and salt contained in a given food. A red light means that the product contains a high amount; amber light means medium and a green light mean low.

Finally, the McDonald Company initiated its own labeling system. Although it is not a governmental institution, the company took the initiative to create a new nutritional facts label for the benefit of its consumers. The idea was based on creating a visual nutritional facts label, whereby each nutrient was presented as an icon, with the percentage based on the GDA chart.

The main purpose of creating nutritional facts labels and mandating that the food factories use them, was to provide consumers with a useful tool to make an informed choice and to compare quantitatively the nutrient content of all products.

In fact, nutritional facts labels have evolved from the FDA labeling, which had as its main slogan "protecting and promoting your health" (FDA, 2008), with Dr. Barbara Schneeman, director of the FDA's Office of Nutrition, Labeling and Dietary Supplements, asserting that the primary purpose of the food label was to "give consumers the power to compare foods quickly and easily" (Food Labeling Guidance Regulatory Information, FDA, 2008), so they can judge for themselves which products best fit their dietary needs, based on the McDonald Company's commitment "to do the right thing". The goal has been to make "the visuals so obvious that a five-year-old could understand them", as recalled by Stuart Ruff, company art director (as cited in Hoffman, 2007, para 1).

1.2 Types of food labels

After delineating the chronological evolution of the nutritional facts label, this section will discuss the differences between these types of labels in terms of content, layout, and placement, which are constantly changing, in an attempt to create a label targeting consumers' benefits.

1.2.1 Food and Drug Administration Label (FDA)

in the United States of America

(Code of Federal Regulations - Title 21, "Food Labeling")

The FDA label was the first nutritional facts label recommended by the FDA in 1990 to be placed on most food packages. Below is an illustration that shows an example of the graphics that the FDA uses to display the nutrition facts label, with a summary of the regulations.

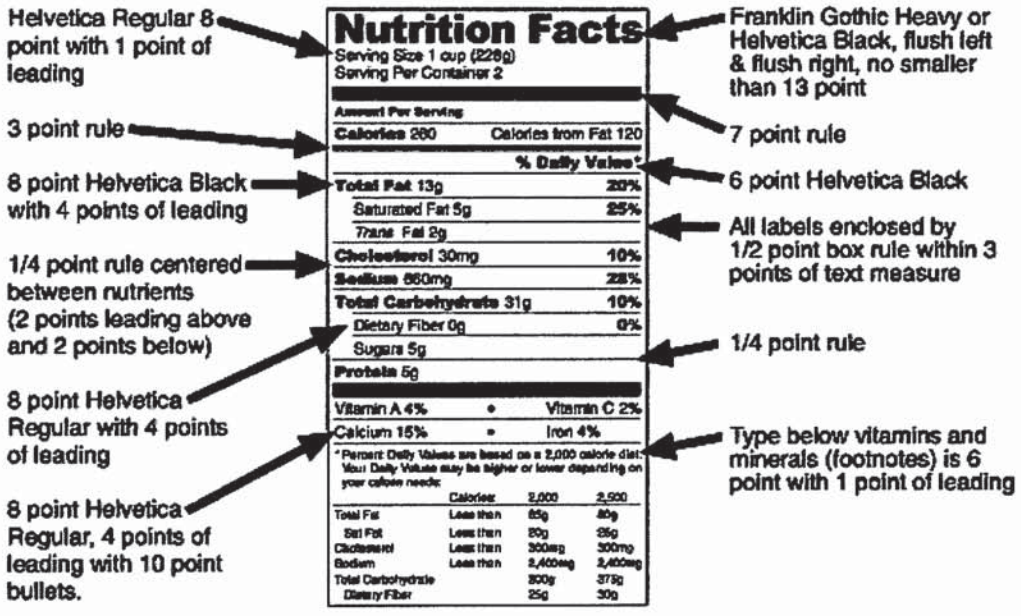


Figure1: Nutrition Facts label regulated by the FDA

Graphical interpretation: the label is in the form of a rectangle, where the serving size and serving per container is mentioned, followed by the nutrients per serving in grams and percentage, starting with the calories and moving to total fats (saturated and trans), cholesterol, sodium, total carbohydrates (dietary fiber and sugars) and protein, and finally, the vitamins and calcium.

The nutrients are written in the Helvetica style, or any legible type.

A simplified format can be used regardless of the amount of available label space, and the type size and layout requirements are the same as those required for the full format. It's made of one color, usually black.

1.2.2 Guideline Daily Amount label (GDA)

(Food and Drink Federation, 1996)

The Guideline Daily Amount (GDA) label was initiated by the Food and Drink Federation in 1996; it reflects the quantity of nutrients as percentage of your GDA.

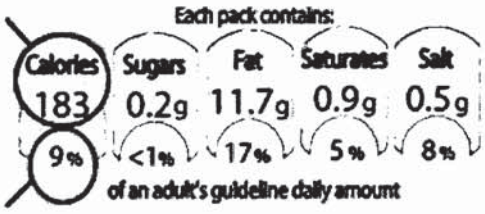


Figure2: GDA Label

Graphical interpretation: The label consists of 3 parts; the upper and lower parts are text, and the middle one is made of ovals containing the needed information for each nutrient.

(a) The top line of text on the label tells the reader the portion of food that the information presented relates to. On different products, you might see explanations,

such as "each pack contains", "each slice contains", or 'per bar' and 'per 50g portion'. It is important to read this line in order to know how much of the product the information on the label corresponds to.

(b) Next, each pictogram / oval provides information either about different nutrients or about the number of calories. At times, pictograms for different nutrients, such as fiber, are included on food packages, but generally, labels contain five pictograms, corresponding mainly to calories, sugars, fat, saturated fat and salt – always appearing in the same order. Text within the icon should be black or darkest available pantone.

The GDA icon for each nutrient should be at least 8mm wide and 12mm high.

A single color should be chosen for the icons, the Red, green and amber should be avoided, and to avoid additional colors being introduced into artworks, tonal values may be used – provided there is a significant contrast.

The key line around the icon should be white unless the pack color is white, in which case the key line should contrast with the pack color.

(b-1) The top numbers refer to the amount of each nutrient in one portion of the food.

(b-2) The bottom half of the label shows how much a portion of the food contributes to the GDAs. GDAs are the total, or one hundred percent (100%) of the recommended number of calories, and the recommended maximum amounts of sugars, fats, saturates (saturated fat) and salt that an average adult should eat in one day. The consumer does not need to know how to make calculations because they are already done for him and shown clearly on the GDA label. The consumer only needs to check and compare the numbers and choose which product best suits his/her needs. Background of % bubble should be white.

(c) The bottom line of the label indicates that the numbers correspond to 'an adult's guideline daily amount'. A few products, designed specifically for children, contain information based on children's GDAs, so it is important for the buyer to check this line to make sure s/he knows whose GDA the label corresponds to. Text above and below the icons should contrast with the background pack color.

1.2.3 Traffic light label

(Food and Drink Federation, 2011)

The traffic light label placed on the front of packages shows the consumer at a glance the healthier choice between two similar products.

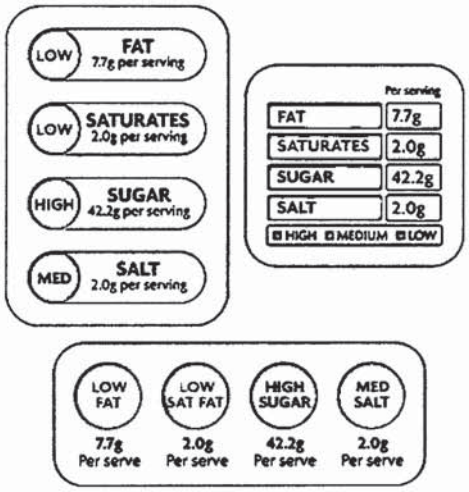


Figure 3: Traffic light label

The traffic light label shows four elements, namely, fats, saturate, salt and sugar. Graphical interpretation: this label is based on the colors' connotation inspired by the road traffic lights namely, red, amber and green. These colors serve to indicate whether the product is high, medium or low in each element.

a) The red light indicates that the food is high in something that the consumer

should be trying to cut down on. It is fine to have the food occasionally, or as a treat, but it is a must to keep an eye on how often a consumer chooses these foods.

b) The amber color implies the food is neither high nor low in that nutrient; accordingly, this is an acceptable choice, but the consumer might prefer the green color for that particular nutrient at times.

c) The green color means the food is low in that nutrient. The more green lights there are, the healthier the choice.

In addition to traffic light colors, the label will also show the number of grams of fat, saturated fat, sugars and salt in what the manufacturer considers as a 'serving' of the food.

Many of the food products with traffic light colors found in shops will have a mixture of red, amber and green. Accordingly, when the consumer is choosing between similar products, s/he should try to go for more greens and ambers, and fewer reds, if that consumer wants to make healthier choices. The traffic light colors on the front of food packages are a quick and easy guide; however, when one has time, and is particularly interested in finding out more, one can check the back of packages for more information where he can find the nutrition panel, GDA information and the ingredients list.

1.2.4 McDonald's

Hoffman, 2007

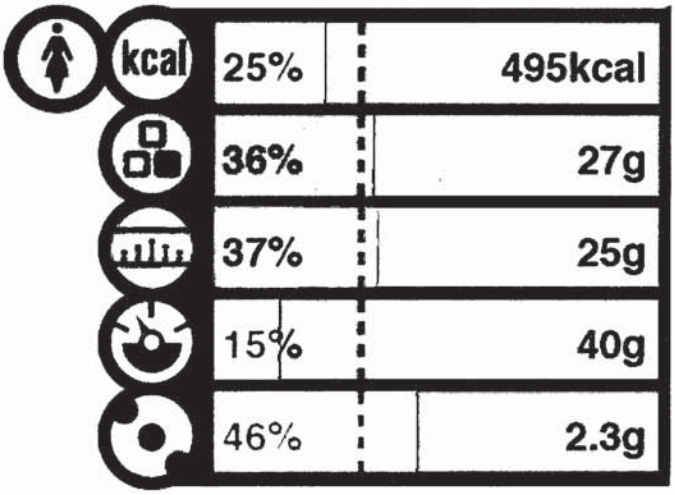


Figure 4: McDonald nutritional facts label

The McDonald chain of restaurants has sent to the market a new label, with the intention of providing the consumer with the nutrition information that is both accessible and easy to understand.

Lisa Wolfe, director of Balanced Active Lifestyles Research at the McDonald's Global Consumer and Business Insights Department, has stated, "We knew that simply replicating existing packaged foods formats wouldn't be enough, that our customers are expecting meaningful innovation in this area."(Hoffman, 2007, para.1).

McDonald's new label is a bar chart that provides information on a menu item's nutritional value and how it relates to the daily nutrient guidelines, representing every nutrient by a pictogram that enables customers to grasp at a glance how the food can fit into a balanced diet.

The format focuses on the five elements that experts agree are most relevant to

consumer understanding of nutrition, namely, calories, protein, fat, carbohydrates and sodium/salt. For each of these elements, the percentage of the daily-recommended intake the product provides is indicated.

The format is icon-based, and icon is defined in the book, Design Thinking, as a graphic element that represents an object, person or something else. It can be a photograph and it can be diagrammatic or illustrative. An effective diagrammatic or illustrative icon seeks to reduce the subject to simple and instantly recognizable characteristics, perhaps by applying the laws of parsimony or Ockham's razor, which is to not include too much detail (Ambrose & Harris, 2010); it was designed in a way to be understood independent of language. Although it provides a global model, the format is flexible enough to adapt to local needs, customs, menus and regulations.

The icons in the McDonald's label are based on a pure scientific aspect related to the functioning of each nutrient, whereby the protein is illustrated according to the protein's main function as muscle builder which gave it the shape of building blocks.

1.3 Problems and deficiencies of each label style

Throughout the evolution of the nutritional facts labels, diverse problems and deficiencies were noticeable, thus necessitating modifications on the part of liable organizations in order to make existing labels adaptable to consumer needs.

Sixteen years after the request made by the NLEA to include the nutrition facts label on packaged foods, the FDA has recently proposed to conduct an experimental study aimed at quantitatively assessing consumer reactions to potential options for modifying the nutrition facts label format. In fact, according to the FDA commissioner, Dr. Margaret Hamburg, "[i]t will be important to re-establish a science-based approach to protect the public" (Silverglade, 2001: 9).

The purpose of such a study would be to help the FDA understand consumers' comprehension and acceptance of the modifications made to the nutrition facts label format, and whether these modifications could help consumers make better-informed food choices.

In a report entitled, "Food Labeling Chaos Report: The Case for Reform", written by Mr. Bruce Silverglade, director of Legal Affairs, and Ilene Ringel Heller, senior staff attorney, at the Center for Science in the Public Interest, the following three main recommendations for the above – mentioned food labels were made:

1) The Nutrition Facts panel needs to be improved.

2) Ingredient labels need to be modernized (Silvergrade, 2010:9).

3) Health-related claims need more stringent regulation.

Drs. Tim Lobstein, Jane Landon and Paul Lincoln wrote a report, entitled, "Misconceptions and Misinformation: The Problems with Guideline Daily Amounts (GDAs)" (Lobstein, Landon, Lincoln, 2007:17), for the benefit of the National Heart

Forum. The report was a review of GDAs and their use for signaling nutritional information on food and drink labels; it assessed the use of GDA on packages as a means of conveying nutritional information. The study found several areas of concern and concluded that GDA signals are not the optimal method for helping consumers make quick, informed choices for at least six main reasons:

1) The GDA values do not distinguish maximum, minimum and average recommended amounts.

2) The GDA values for adults and for children are used inconsistently, and adult GDAs are sometimes used on child-targeted products.

3) The GDAs used for labeling are based on values which are not the most suitable either for public health policy or for individuals.

4) The GDA displays are based on arbitrary portion sizes.

5) The GDA signals for different nutrients are sometimes included or left out in an arbitrary and confusing manner.

6) The standard GDA signals lack color-coding for quick consumer appraisal and interpretation.

In addition to the above-mentioned problems regarding the label, other problems are related to the consumer himself. In effect, the consumer's knowledge of what is being purchased in terms of nutrients per product is directly related to the nutritional facts label that presents the numerical value of nutrients per serving.

Two factors need to be considered in that respect: (a) the hectic lifestyle preventing consumers from spending enough time at the supermarket to compare the nutritional figures before choosing groceries, and (b) the label itself, its legibility and ease of understanding.

Chapter 2: Nutritional Facts Label in the Lebanese Market

2.1Examples:

After studying both the different types of nutritional facts labels and the details of their required design, a comparison with the nutritional facts labels placed on select Lebanese products could now be done to determine whether the label abides by any of the requirements.

For this purpose, I have chosen some Lebanese products to observe and do the comparison. Among those products, some carry nutritional facts that respect the rules of the nutritional facts label while others give the nutritional facts but do not stick to the rules, and still others do not carry any nutritional facts label at all.

- Examples of products carrying nutritional facts labels that respect the nutritional facts label rules set by the FDA and adopted by the Lebanese government:

Figure5: Corn flakes from 'Poppins' carrying the nutritional facts label following the FDA norms

- Examples of products not carrying any nutritional facts:
    - 'Chtoura Garden' is another Lebanese brand that has produced preserves since 1936. Below is one of its products, 'Fava Beans' that lists only the ingredients without listing any quantity of each ingredient or any nutrient information.
    - Same for the 'Foul Moudammas' from 'Al Wadi al Akhdar'

Figure 6: Foul Moudammas from 'Al Wadi al Akhdar' & Fava Beans from 'Chtoura Gardens'

Figure 7: Beef luncheon meat from 'Al Mouna'

- Examples of products that do not carry any nutritional facts

labels:

Figure 8: Ayran from 'Rawabi Taanayel'

2.2 Gandour case study

I have chosen one of the leading companies in Lebanon, namely, 'Gandour', to analyze its products. 'Gandour' is a producer of cocoa-based products, bakery, confectionery, as well as food and beverage products, like fruit drinks, chocolate drinks, vegetable oils, and a variety of medium and long grain rice (www.gandour.com)

Since 1857, 'Gandour' has been providing consumers with "ingredients for happiness". Having started out as a manufacturer of hard-boiled candies and marzipan, 'Gandour' has become a leading producer of different types of food goods using a variety of ingredients and flavors, thus providing consumers with various choices.

Since the start of its food operation back in the 1920's, 'Gandour' has endeavored to establish a line of food and beverage items; today, this line includes an assortment of cooking oils, a variety of medium and long grain rice as well as fruit and chocolate drinks.

While going through the packages of 'Gandour' products, it was obvious that the nutritional facts information displayed on some packages does not follow the standards set by the FDA and the GDA.

Below are some examples of the 'Gandour' products nutritional facts labels:

The product 'Dabke' carries a nutritional facts label that follows the format of nutritional facts label standards set by the FDA, but its size is smaller than the one set by the FDA. Therefore, the font is smaller. In addition, it is placed behind the fold of the paper in a manner that makes it difficult to see.

Figure 9: 'Dabke' package from 'Gandour'

- The other products Safari, Tofiluk and Yamam, have the same problems as Dabke concerning their nutritional facts label.

Figure10: Packages of Safari, Tofiluk and Yamama from Gandour

- Unica is another Gandour product that does not carry any nutritional facts label, and the ingredients are listed on the back of the chocolate wrapping. Moreover, the text is not clear because of the color of the paper and ink used.

Figure 11: Unica Package from Gandour

- The same is true of the Tarboush product, the chocolate previously known as 'Ras el Abed', which everyone in Lebanon has probably tasted since his early years. It has no nutritional facts label; it just carries a list of the ingredients on the wrapping paper, and it is "very hidden", and not even legible when one tries to read it.

Figure12: Tarboush Wrapping from Gandour

Chapter 3: Proposed New Nutritional Facts Label

0.1 Selected features

Initial nutritional facts labels were mandated on the food package and approved by the FDA, through The Center for Food Safety and Applied Nutrition (CFSAN), which is one of six product-oriented centers, in addition to being a nationwide field force that carries out the mission of the FDA. The FDA is a scientific regulatory agency responsible for the safety of the nation's domestically produced and imported foods, cosmetics, drugs, biologics, medical devices, and radiological products. The center provides services to consumers, domestic and foreign industry and other outside groups that engage in field programs, agency administrative tasks, scientific analysis and support, and policy, planning and handling of critical issues related to food and cosmetics. Accordingly, the FDA nutritional facts label is a reliable scientific base serving the purpose of a new label development.

The GDA labeling system has presented the idea of a quick and easy snapshot, with a new label design, placed on the front of the package, which makes it easier for the consumer to compare different products. It has reduced the number of details found on the FDA food label, allowing the purchaser to make an informed yet quick choice.

The managing director of Mr. Kellogg Greg Peterson has confirmed that GDAs are now displayed in 27 European states, and that this labeling system used by Kellogg on its packaging was the favored choice of the majority of the food industry. According to him, 60% of consumers use GDAs to ascertain a product's nutritional content. Of those, 96% said the system had helped them choose a product lower in fat or salt.

The traffic light system introduced the idea of color-coding for the purpose of making it easier for the consumer to make an at-a-glance choice of the suitable product. In a study carried out by 'The European Association for the Study of Obesity' (EASO), findings have shown that "consumers who were shown the traffic light labels were five times more likely to identify healthier foods than those shown a single color version of the percentage daily intake label and three times more likely to do so than those shown a color-coded version of the daily intake label" (European Association for the Study of Obesity, 2009).

Finally, the label introduced by McDonald's has introduced the idea of presenting the nutrients as icons/signs to make the label accessible for different consumers with different backgrounds.

Signs are known as a powerful communication device, which can be easily recognized and can convey complex concepts in a simple fashion. Images can contain different signs. Signs convey meaning through processes of semiotics, denotation and cognition. Signs are commonly used to communicate short, important messages in a simple way. As he investigated how people make sense of the world around us, American philosopher Charles Sanders Peirce proposed that signs could be grouped into three categories: icon, index and symbol. (Ambrose & Harris, 2010)

In fact, Prof. Louis Sullivan, former U.S. Secretary of Health and Human Services, and member of McDonald's Global Advisory Council on Balanced, Active Lifestyles, has explained: "McDonalds is taking an important leadership role on behalf of its customers. The new approach is a creative, scientifically sound solution that communicates complex and sometimes confusing information in a clear and accessible way. This will make it easier for people around the world to understand the information and apply it to their daily lives" (Sullivan, 2003:3).

Moreover, Prof. Gary Wittert Mortlock, member of McDonald's Global Advisory Council on Balanced, Active Lifestyles, has noted that "it's appropriate for a company with a market penetration such as McDonald's to take a leadership position to provide information about balanced lifestyles and nutrition to consumers" (Sullivan, 2003: p3).

Taking into consideration the above-mentioned weaknesses of the labels found on the market, this study tackles the strength features of each, in order to borrow some of these for the development of the intended nutritional facts label of this study.

After studying the four different types of nutritional food labels found on the market, the researcher has decided to select from each the features that best suit this proposal. As mentioned earlier, the aim of this project is to generate a nutritional facts label which is suitable for the Lebanese consumers based on the conditions previously mentioned, such as education and shortage of time.

As a first step, the FDA labeling system would be the source of the scientific part, which indicates the nutritional information that could be mentioned on the nutritional label, such as calories, protein, carbohydrates, sodium, fat, cholesterol, and Trans fats.

Based on the GDA labeling system, the idea adopted will be that of limiting the nutrients to just five main elements that scientific experts and representatives from the food chain and the Food and Drink Federation (FDF) have approved. These elements are protein, carbohydrates, sodium, fat and calories. Another aspect of this system would be related to the placement of the label on the front of the package to make it more visible and easier to scan.

The traffic light system could be useful in terms of color-coding. Color-coding could be adapted based on cultural color meaning not necessarily the same colors used by the traffic lights colors.

Finally, from the McDonald system, the concept of making icons for the nutrients used could be borrowed to make it easier to recognize by different categories of people who differ in education, age, and cultural background.

In sum, the nutritional facts label would consist of five main nutrients, namely, protein, carbohydrates, sodium, fat and calories, each of which would be represented as an icon in a specific color.

These broad headlines related to the nutritional facts label will guide the design of a set of icon suggestions that answer the objectives of this project. The icons must be:

(a) Represented as visuals

(b) Communicate the desired meaning

(c) Not carry negative or inappropriate connotations (politically, culturally or socially)

(d) Be printable on all media (packages)

0.2 Lebanese features

As part of the framework of the MEDA project (Mesures D'Accompagnement), a strengthening quality management, capabilities and infrastructure program in Lebanon, 'Qualeb', was hosted at the Ministry of Economy and Trade in collaboration with the EU. This program, funded by the EU, is intended to support the Lebanese companies to increase their goods and services exports to foreign markets. It also aims at increasing the level of quality and safety of products distributed in the Lebanese market in order to better protect the health of the Lebanese consumers.

Qualeb published a series of booklets, entitled, "An ABC guide on EU food packaging and labeling requirements", in June 2008. The fourth booklet contains a section devoted to nutritional labeling.

"Nutrition labeling" is defined in the Qualeb booklet as any information on the label that relates to energy values present in significant amounts for the following nutrients: protein, carbohydrates, fat, fibre, sodium, vitamins and minerals.

The information on the nutrition labeling consists of either Group 1(for a nutritional claim relating to energy, protein, carbohydrates, and fat (four elements to list)) or Group 2 (for a nutritional claim relating to energy, protein, carbohydrates, sugars, fats, saturates, fiber, and sodium (8 elements to list)).

Here was the initiation look at the Lebanese legalization of the nutritional facts label in the Lebanese consumers' protection law enacted by the parliament. In the third chapter, "Information to Consumer", article 7, there was no clear, specific or detailed explanation pertaining to the format of the nutritional facts label, nor its content.

Since the aim of this project is to choose easier-to-read nutrition labels for the Lebanese consumer, the researcher has selected the option that has fewer elements to list. Thus, Group 1 for the listing of nutritional facts label was chosen.

0.3 Anthropology of food

Since we are dealing with food in the Lebanese context, there was a need to study the role and history of food in culture, which led to the study of food anthropology. In addition, the idea of representing food through signs and symbols accompanied the revision of semiotics. This interdisciplinary study of food anthropology and structuralism, and its joint implementation in the Lebanese culture, will result in the desired "Lebanese nutritional facts label".

What is food? Jon D. Holtzman (2006) suggests that we should not undermine this question. The study of food has a long history in anthropology, beginning in the nineteenth century, with Garrick Mallery's paper, "Manners and meals" (Mallery, 1888) and William Robertson Smith's lecture on the religion of the Semites (Smith, 1889). It has been argued that "the study of food and eating is important both for its own sake since food is utterly essential to human existence and because the subfield has proved valuable for debating anthropological theory and research method" (Mintz & Du Bois, 2002).

In recent history, Claude Levi-Strauss (Lehrer, 1972) and Mary Douglas (Douglas, 1966) have contributed to the vision of food in a structural manner, where food was studied to serve as a system of signification in cultures. Structuralism, as a school of thought (semiology and semiotic fields) has been developed under Ferdinand de Saussure (linguistics), Roman Jacobson (literary studies) and Claude Lévi-Strauss (anthropology) in the 1930s. It is a way of thinking in terms of structures and looking at culture as a system of structures.

Lévi-Strauss advanced structuralism frameworks and argued that food is a system of communication, a language with rules not unlike grammar. As for Douglas,

she assigned a particular concentration to specificity "small scale social relations", which inspires thinking about food "as a structure that imposes order on everyday life and identifies universalisms at the expense of difference" (Dusselier, 2009:10).

It has been argued that food knowledge is inseparable from social, political, historical, economic, and cultural contexts (Mintz & Du Bois, 2002). Food as a lens into the "whole cultural package" recapitulates Fernandez's culinary outlook (Kirshenblatt-Gimblett & Fernandez, 2003). It is from her perspective that cuisines reveal and shape social relations and connect the past with present concerns and future possibilities. Many studies consider the creation of nations through the invention, standardization, or valorization of a national cuisine, often drawing on Anderson's (Anderson, 1983) conception of the imagined community and Hobsbawm's (Hobsbawm & Ranger, 1983) conception of invented tradition. Murcott (1996) considers food a symbol for creating imagined communities of nations in Europe. It is often used explicitly in the invention of national identities, consequently forming a central arena that ties ethnic identity to notions of memory. Fernandez points us in the direction of relating food to memory and identity formation. Shoba Narayan's, Monsoon Diary, addresses issues of identity grounded in food, place, and concerns of the environment. Her narratives of visiting localities and consuming regional specialties are endless, and remind us that foods are important identity builders. Therefore, by making and consuming food, people are active creators of culture, which is preserved through foodways, that is, employed to build collective identities (Dusselier, 2009).

Michael Owen Jones (2007) stated the condition that "if food-related symbolism is complicated, then the relationship between food and identity is no less problematic". The relationship of food to ethnic identity has long been a staple of folkloristic documentation, analysis, and presentations. As Jones has put it:

> *Virtually all aspects of foodways are subject to symbolization, from the phenomenon of food itself to production and procurement (Dubisch 1989; Egri 1997; O'Brien 2003); preservation (Martin 1979); planning and structuring meals (Douglas 1972; Douglas and Nicod 1974; Nicod 1979); preparing items (Brown 1981; Cicala 1995; Goldman 1981); patterns of service and presentation (Allison 1997; Graham 1981; Shuman 1981); placement of diners and the nature of their interaction (Bossard 1943; Hum-phrey 1988; Whitehead 1984); performance of consumption or manners and eating styles (E. Adler 1981; Cooper 1986; Mori, Chaiken, and Pliner 1987); participants in food events (Georges 1984) and their philosophy or beliefs (Devine et al. 1999; Pros-terman 1981) as well as their personal food systems (Smart and Bisogni 2001); and even the proscription against food intake as, for example, fasting used for political purposes (Gold and Newton 1998; Levine 1993) and in instances of anorexia.*

Jones has gathered in this condensed paragraph all aspects in which foodways could be symbolized, beginning with the production, placement of diners, consumption, and food events, up to the proscription against food intake and anorexia. This gathering of symbolization of foodways, specifically the structuring of meals and its preparation, were the most significant for this project.

3.4. Semiology

After stipulating the relationship between food, culture, ethnic identity and memory, it was necessary to study the patterns of service and food presentation as a certain attribute in food culture. The 1991 article by Anne Allison, entitled, "Japanese Mothers and Obentōs" was a significant source to revise the codes of food preparation and their aesthetic arrangement. Allison mentioned that "food is coded as a cultural and aesthetic apparatus" (Allison, 1991:4), and extensively described the visual arrangement of food, which contribute in the construction of the cultural symbolism and ideological

meanings whereas Jones argued that the physical characteristics of foodstuff can be emblematic.

The introduction of food representation and illustration necessitated the study of its representation as signs, and therefore opened the space of study in the field of semiology, which is a systemic study of signs, literally called "words about signs" (Asa Berger, 1999).

F. de Saussure, a respected linguist of his time who challenged the very foundations of his field (1915) maintained that, since language was a system of signs, linguistics should be enveloped by a larger science of signs within society. He gave the simplest definition of the sign, namely, the unit of structural linguistic research, as follows: "The linguistic sign unites, not a thing and a name, but a concept and a sound image" (Saussure, 1959). Saussure called that science semiology, i.e., the study of what signs are made of and what laws command them. He defined a linguistic sign as a wholly arbitrary relationship between a concept, that is the signified, and a sound, that is the signifier.

From Saussure's perspective, the relationship and interaction between words take precedence over individual words when meaning is formed or derived. According to his chessboard metaphor, moving one piece alters all the relationships between the pieces on the board.

Thus, Saussure's chief contribution to the study of signs lay in shifting a long-standing philosophical emphasis on the nature of things in and of themselves, to a relational worldview whereby meaning derives from the priorities human beings construct and perceive among signs in a system. The sign is not arbitrary in the sense of allowing any speaker to use any combination of sounds he chooses as a signifier. "The signifier, though to all appearances freely chosen with respect to the idea that it

represents, is fixed, not free, with respect to the linguistic community that uses it" (Saussure, 1959). The sign is a social event in that speakers must use the linguistic conventions established by a community of speakers. These conventions include phonic and lexical items and syntactical rules. The sign is the unit of the speech chain (the syntagm) which draws its substance from the paradigms of a given language (la langue). Behind Saussure's theory of the sign is an assumption of considerable importance, namely, that language is not directly the product of subjective intentions. Even the sign articulated by an individual is formed with reference to social conventions. Thus, Saussure's idea of arbitrariness has two dimensions: (1) Signs are arbitrary insofar as they are social conventions. (2) They are arbitrary insofar as they are composed of elements (a concept and a sound image) that have no necessary or natural connection to each other.

This whole concept of signs could be applied to this project. The arbitrary relationship of signifier and signified will be implemented in the Lebanese context, whereby the signifier would be the Lebanese food and the signified will be the sign representing those meals.

Locally, the Lebanese people share a convention about the rituals of Lebanese food structuring and preparation. After defining the sign and the arbitrary relationship between signifier and signified, the signifier is illustrated in a graphical manner, which raises the problem of graphical representation of the foodstuff. As previously mentioned, the design can be viewed as a problem-solving process; all design efforts are about systematic problem-solving. They are all cyclical and iterative, and they all have a finite beginning and end (Dominick, Demel, Lawbaugh, Freuler, Kinzel & Fromm, 2000).

Omar Faruque, in his book, Graphic Communication As a Design Tool, brought up the requirements of the problem-solving process, which necessitates various levels of abstraction, and thus various types of graphic communication. The latter occurs at either one level of abstraction or another. Each type of graphic communication depends on the content of visual thought, the audience to whom it is communicated, and the purpose of such communication. Abstraction is defined as a process of reduction or simplification, and signs are considered a very high level of abstraction. This kind of abstraction is a natural and continuous process: our mind is continuously receiving visual stimuli and making visual abstractions out of them (Faruque, 1984). Circles, squares, and other geometric shapes are used to represent various entities, such as an activity, node, or area. William J. Bowman, in his book, Graphic Communication, considers these kinds of symbols as basic "vocabulary" in graphic language (Bowman, 1968). The use of signs in design requires the designer to think carefully. Signs can be highly effective, as testified by the plethora of instantly recognizable global logotypes. In these cases, something unique has been created based on a thorough understanding of a company or product, their history, composition and values.

The study of food anthropology, along with semiology, draws the basis for the intended Lebanese nutritional facts label, where I will be taking the Lebanese traditional meals and dishes and working on a design process to create an abstraction, and therefore signs that are based on the conventional traditional Lebanese meals.

3.5. 1st design phase

For the purpose of matching the Lebanese traditional dishes with the relevant dishes, an interview was conducted with Ms. Carine Murad, a Lebanese nutritionist, where she was asked about the Lebanese dishes that could represent the four different nutrients, namely protein, fats, carbohydrates and sodium.

Her response where as follow:

For protein, she indicated that the Lebanese dish of 'lahme nayee' (raw meat) has the higher quantity of protein among Lebanese dishes.

For carbohydrates were Lebanese sweets, mainly the 'maamoul', which is considered to have an elevated quantity of carbohydrates,

For the fats category, she pointed to the dish of 'fawerigh' (beef intestines) as having the highest amount of fats.

As for sodium, she mentioned that olives, an integral part of Lebanese cuisine, have the highest amount of sodium.

The representation of the calories was inspired from the Lebanese clay plate.

After receiving those answers comes the phase of illustrating the said elements. For this purpose, I started off by taking photographs of each dish, and worked on illustrating each one to come up with four different visuals. Note that some photos are original whereas others have been selected from the internet.

Those representations will be used in the questionnaire intended for the survey to determine which illustrations the interviewed people would choose.

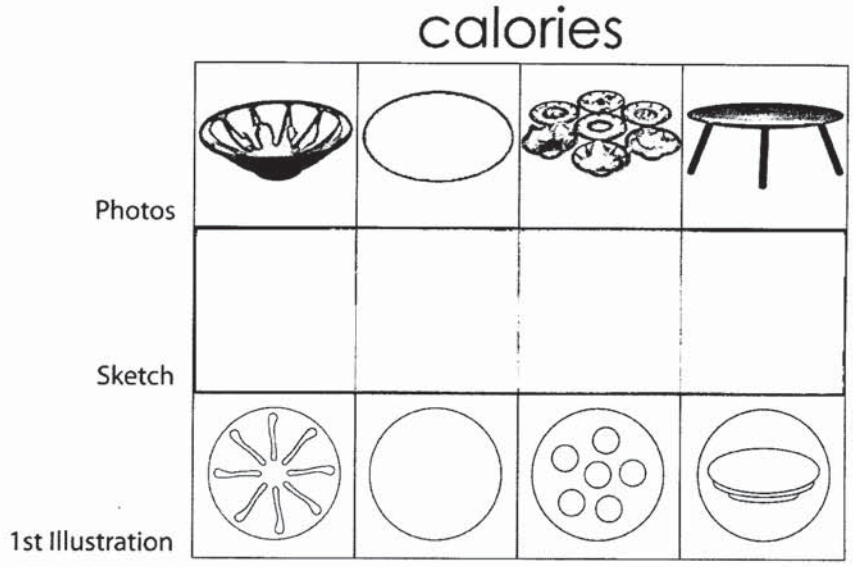


Figure 13: 1st Design process for the Lebanese clay plate and food serving

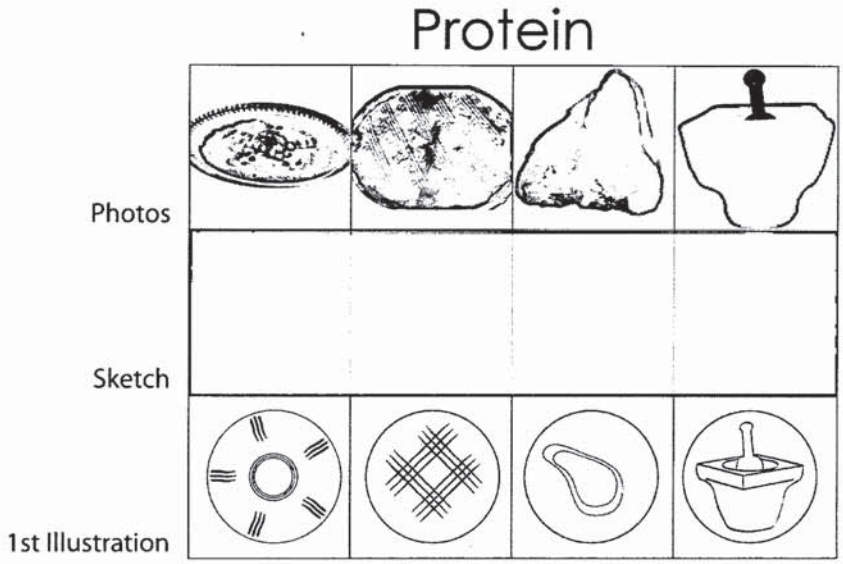


Figure14: 1st Design process for the Lebanese raw meat plate

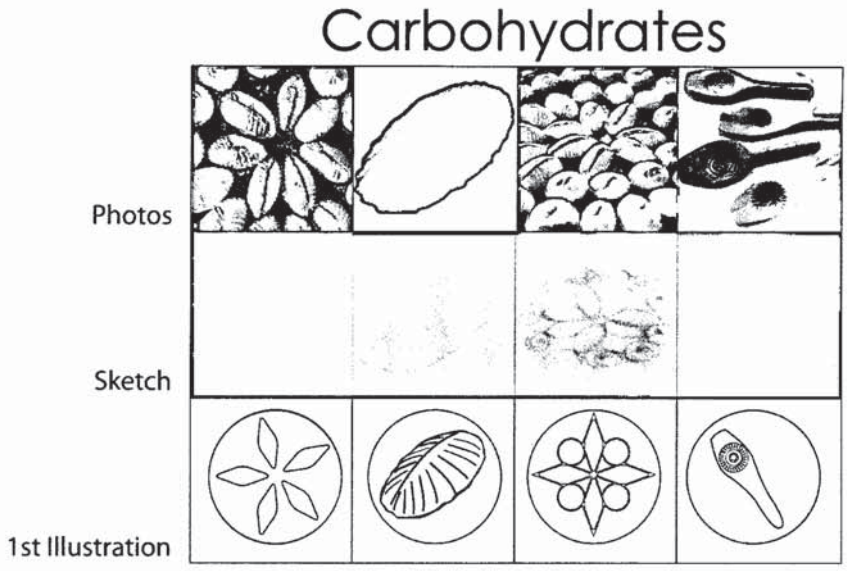


Figure15: 1st Design process for the Lebanese sweets ('maamoul')

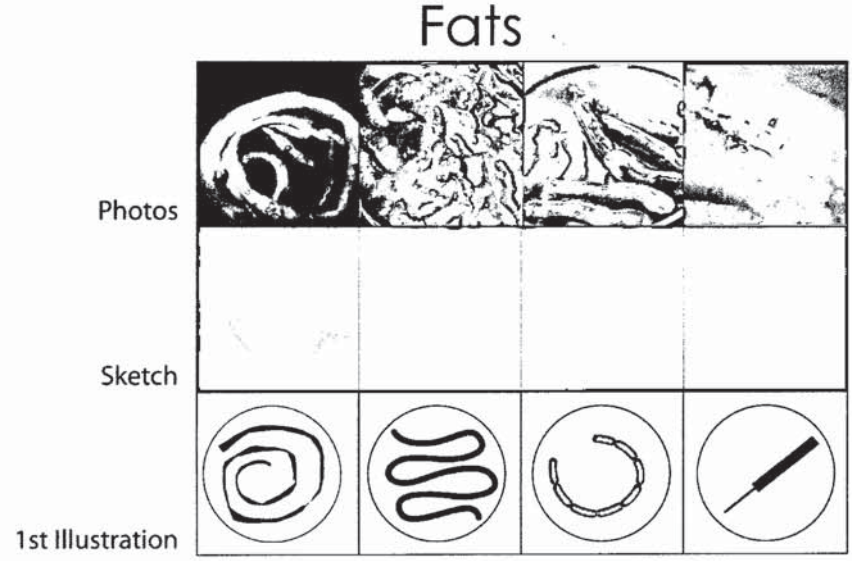


Figure16: 1st Design process for the Lebanese food 'fawerigh'

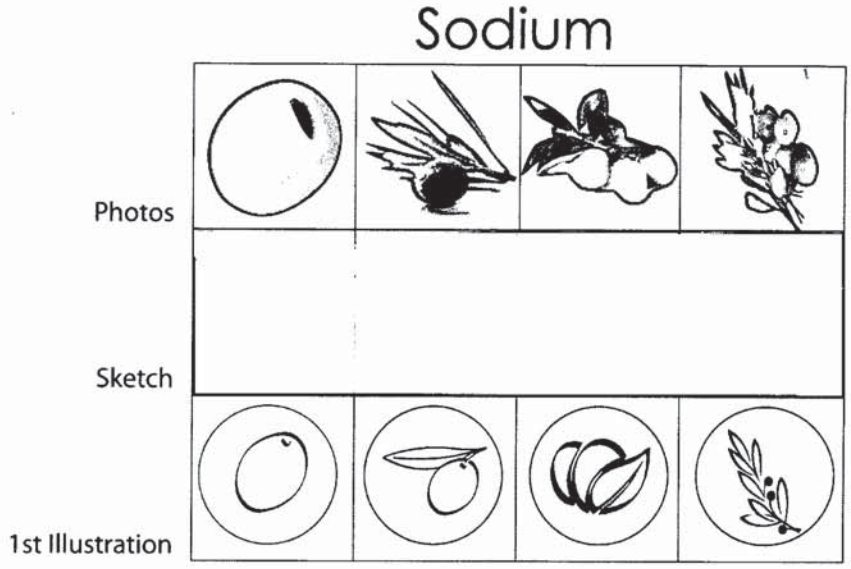


Figure17: 1st Design process for the Lebanese mezza olives

3.6. Choice of colors

For this project, I have to choose to adopt the color system of the traffic light label, namely red, amber and green, which serves to indicate whether the product is high, medium or low in each element.

The red light signals to stop, its use here will be for food that is high in a specific nutrient that the consumer should be trying to cut down on.

The color combination for the red will be: C:0 M:90 Y:100 K: 5

The amber/yellow signals to precede with caution, here it imply the food is neither high nor low in that nutrient; accordingly, this is an acceptable choice.

The color combination for the amber will be: C:0 M:20 Y:100 K:0

The green color signals to precede, here it means that the food is low in that nutrient.

The color combination for the green will be: C:70 M:0 Y:100 K:0

The calories pictogram will be presented in blue: C:100 M:50 Y:0 K:0

In addition to traffic light colors, the label will also show the number of grams of fat, saturated fat, sugars and salt in what the manufacturer or retailer considers as a 'serving' of the food.

Many of the food products carrying those pictograms will have a mixture of red, amber and green. Accordingly, when the consumer is choosing between similar products, s/he should try to go for more greens and ambers and fewer reds if that consumer is trying to make healthier choices.

3.7. Choice of typeface

After setting the basis for the icons design, came the need to add the text, which is a necessary extension for the label to be significant and influential, over the past fifty years the images are simplistic and generally less important than the words. Today, this situation is reversed. According to Boorstin (1963), "images have become more interesting than the original and in fact have become the original: "the shadow becomes the substance" (as cited in Hall, Neitz, Battani, 2003); therefore, the use of the text is a must, and it should accompany the icons. Paul Lester wrote in his book, Visual Communication: Images with Messages, "The most powerful and meaningful messages are combined with words and pictures equally" (Lester, 2000:5).

The choice of signs came from the classification of signs as verbal and non-verbal, known as conventional signs, which serve a fundamental need in humans to remember the world; knowing and using words and figures permit people to recognize the same thing over and over in all kinds of situations (Beasley & Danesi, 2002). First was the choice of the visuals (visual thinking) that is closer to the real world, "which is spatial in nature, because of the fact that it is multidimensional. It also presents us with direct choices and possibilities, and thus makes problem-solving process a more creative one" (Faruque, 1984:33). Second was the choice of verbal communication, which is linear, and although accused of being "long, tedious and often boring when trying to communicate visual thought", which gives the feeling to the natural, it should be reinforced with graphical communication; such reinforcement makes the communications clearer and more straightforward (Faruque, 1984).

Furthermore, it is said that, without signs, we would have to experience things and represent them a new way each time we come across them or each time we imagine

them (Beasley) since our perception of the picture may be different from what is being communicated because our individual interpretations of the whole words are different. Therefore, we need to combine the verbal and graphical aspects in this project to be sure that the desired message is well communicated and achieves its goal of contributing to the Lebanese people's health.

After deciding to add the verbal part to the label, there is a need to decide on which typeface to use, since different typefaces have different personalities to the extent that they can be said to actually have "faces" that tell stories and convey feelings other than the words they present, and typefaces have their own personalities and so it is appropriate to the different faces or characters they have, and the different roles or functions that types serve within design means that designers need to think about which type is appropriate for the message to communicated, the face that type is set with can help or hinder information transfer, as each face tells a different story, and provokes different feeling with the viewer.

As a result, I will be implementing the name of each nutrient underneath its relevant icon. As for the language and since the whole is in the Lebanese context, Arabic will be used and the optional language will be English (if the measurements of the package are enough). The typeface was chosen according to the legibility criteria; therefore. The typeface "insane" was chosen since it is legible even when minimizing the label to the smallest scale recommended. Moreover, this same typeface has an English-Arabic version that makes it possible to use when deciding to use both languages.

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz1234567890

أ ب ت ث ج ح خ د ذ ر ز س ش ص ض ط ظ ع غ ف ق ك ل م ن ه و ي

Chapter4: Methodology

4.1. The McDonald company's method

The McDonald Company's first step was to involve consumer groups, engage with political and civil organization stakeholders, such as European Union (EU) institutions and civil society, and consult with both scientists and companies. The group approached comprised nearly 50 outside experts. Subsequently, McDonald's developed its system, including visuals (icons) to represent key nutrients with a bar chart detailing key nutrient levels as well as the percentages of the GDA that the nutrients represent.

First approached were the branches operating in the European countries, where the EU had laid out minimum guidelines for the communication of nutrition information for the packaged foods industry.

Encouraged by internal research and by stakeholders' feedback on the European prototypes, the McDonald's global management team realized that the European system had the potential to "go global." After reviewing the evidence, McDonald's made the bold decision to develop a universal language for sharing nutrition information that could be used in its 30,000+ global restaurants.

The McDonald's company hired for this purpose an expert marketing research firm, namely, ENLASO Company, whose main task has been to develop global cultural interpretation.

The findings from this research were constructive; ENLASO distilled over 13,000 comments from cultural imagery experts around the world. Based on this marketing research work, McDonald's has successfully established the basis for a new

visual language of nutrition. The focus of its case study was the development of nutrient visuals and their cultural evaluation.

Based on this input, McDonald's developed its system for Europe, including visuals (icons) to represent key nutrients, an accompanying bar chart detailing key nutrient levels, and the percentage of GDA that the nutrients represent. The company's research and development department chose to use nutrient visuals rather than words, since visuals are known to universally communicate concepts.

McDonald's Europe Nutritionist Steering Group (NSG), comprised of independent nutritionists, provided the definitions of nutrients. For instance, protein acts as a building block, and carbohydrates fuel the body system. Precise descriptions were shared with the design firm to create the visuals needed. The company shared the icons with its customers everywhere and made them readily available for unrestricted use within the restaurant and food industry.

Designers at UK-based Boxer Design Consultants have tried a variety of early prototypes before hitting the mark. "Our goal was to make the visuals so obvious that a five-year-old could understand them", recalls Stuart Ruff, art director at Boxer Design Consultants. "We had very detailed scientific background on the function of each nutrient, so the intended meaning of the symbols was well laid out" (Hoffmann, 2007:5).

As far as the design is concerned, the company considered several options to better meet consumer needs, and concluded that a simple format with key information on packaging was the preferred global solution.

4.2. Development of the method

In order to come up with a suitable design, four design options were generated and would be tested through a data collection method to decide which will be the suitable one for the final outcome. Keeping in mind that the designs take into consideration the above-mentioned Lebanese aspects, the design sets will be devised and interpreted culturally. After testing the design options and assessing their acceptance among Lebanese people, a marketing strategy will be suggested for the launching of the project, its promotion in the market, as well as getting people accustomed to using it. It will be about launching the pictograms with text as a first step, and once the consumers get used to them and memorize them, the text will be removed and the pictograms will remain on their own.

4.3. Post-design testing

After designing the different sets for the nutritional facts label based on the selected features studied previously, and on the Lebanese features mentioned earlier, the researcher will test them through shopping mall intercept (Sampling).

The shopping mall intercept is one of the most widely used market research data-gathering techniques. Results of a 1981 study by Market Facts, Inc. have provided an indication of the growth of mall intercept interviewing. Through this technique, the researcher can test visual material, such as print or TV ads, package designs and new product colors and designs (Seymour, 1980).

In his article on improving the quality of the shopping center sampling, the

author, Seymour Sudman, professor of business administration and sociology, and research professor at the Survey Research Laboratory at the University of Illinois at Urbana-Champaign, has delineated the basic criteria under which the sampling could be done. For this project, I will make use of Sudman's 1980 study to decide on the criteria that I will adopt in when examining the labels that have been designed.

First, the basic assumption of shopping center sampling is that the clients of the supermarkets sample are really interested in the health aspect. The key assumption is that all persons have a nonzero (but not equal) probability of being found in a shopping center. Evidently, this postulation is unrealistic. Some persons who are far from the shopping centers have no transportation, or those who are confined to bed will never shop in shopping centers. Thus, overlooking this group would cause slight bias in the estimates. However, recent studies of shopping center usage have indicated that about 90-95% of all adults shop in shopping centers at least once a year and about two thirds do so every two weeks (Chain store age executive, 1978). Therefore, a margin of error will be between 5 to 10 %.

Second, the selection of the shopping centers will follow the basic procedures used in the selection of regional shopping centers. According to the Urban Land Institute (1978), a regional shopping center is defined as one which is built around at least three, and often four, major department stores with a gross leasable area of 750.000 to 1 million square feet.

Therefore, two shopping malls will be chosen which are the biggest Lebanese malls in different areas of Lebanon, namely, 'Spinneys' (Jnah, 17000 square meters) and 'Charcutier Aoun' (Jbeil, 14000 square meters), where I will be interviewing people about the designs previously set.

Third, for the selection of locations within the shopping center, there are two

options: Either the respondents are interviewed as they enter the center, or as they move around within it.

Selecting the respondents as they first arrive makes the process less biased since the required information as to how much time has been spent in the center would be omitted.

An unbiased sample requires that all entrances have some probability of being selected. A common situation is that some shopping center entrances are served by public transportation while others are used by individuals driving themselves. Using only one entrance selected judgmentally might well distort the sample due to economic and geographic characteristics. Because not all entrances receive equal use, an unbiased sample would require that entrances be sampled in proportion to the fraction of customers attracted. Therefore, the interviews will be conducted at all entrances of the two previously selected malls.

Fourth, the time and quantity of sampling. The characteristics of persons visiting shopping centers vary by season of the year, day of the week, time of day, and other less predictable factors, such as whether or not it is raining and whether there are special events or ongoing sales at the center. We assume, however, that the time period for the study has been determined so that seasonal factors can be ignored. Time segments are essentially no different from geographic clusters and may be sampled in the same way. The first thing to decide is the length of the time segments to be sampled. Their length would probably depend on the length of the interview and other administrative considerations. Suppose, on the basis of these considerations, that one decides to sample half-hour periods. If a shopping center is open 11 hours a day from 10:00 a.m. to 9:00 p.m seven days a week, 154 half-hour periods could fall into the sample. Note that any arbitrary exclusion of any of these time periods because the shopping center is too busy

or not busy enough leads to samples biased against the types of customers who shop during those periods.

In sum, the interviews will be conducted in two supermarkets, namely, 'Spinneys' (Jnah) and 'Charcutier Aoun' (Jbeil), at the entrances of each one at different times of the day, week and month. At each mall, 154 interviews will be conducted; therefore, in total, 308 interviews will be conducted during which customers will be asked about their choice of the suggested design for the nutritional facts label, and based on the results, the design set of nutrients selected by the majority of the interviewees will be employed and elaborated on for the final layout.

4.4. Questionnaire and results

After designing the pictograms, the below chart was drawn to be used as a model against which to check people's opinions regarding which pictogram best represents the five nutrients.

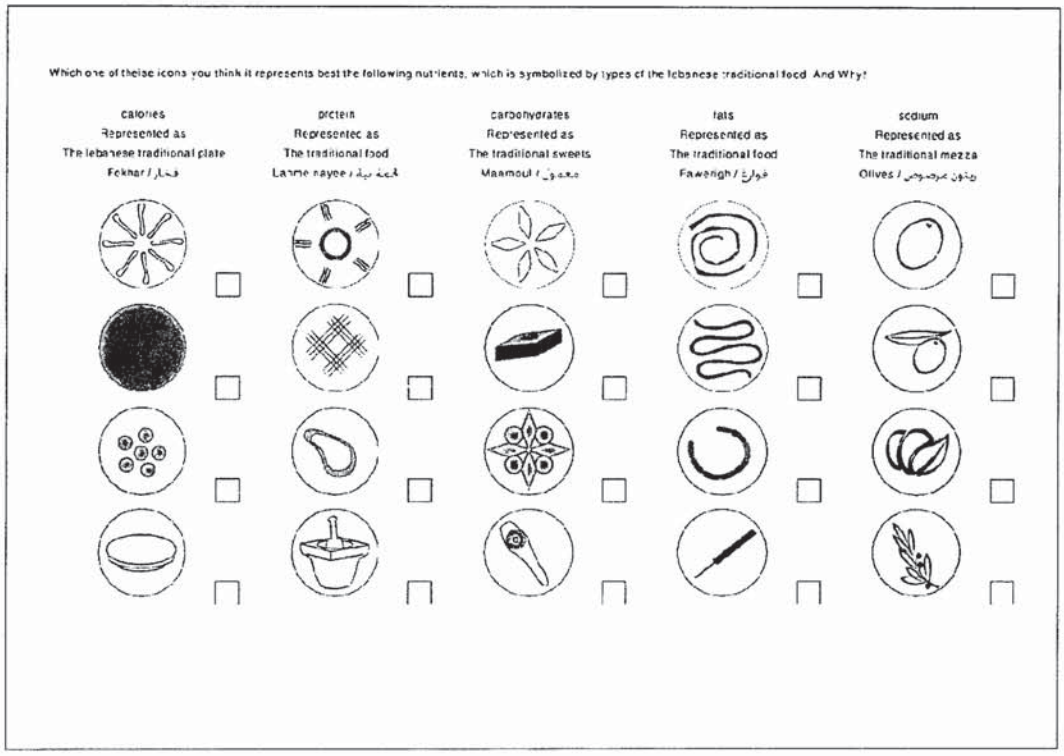
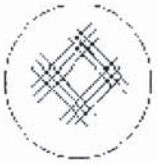


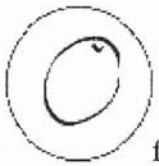
Figure 18: Questionnaire

237 of 308 chose  for the traditional plate 'fokhar': 77%

167 of 308 chose  for the 'lahme nayee': 54%

193 of 308 chose  for the 'beklawa': 63%

152 of 308 chose  for the 'faweriqh': 49%

174 of 308 chose  for the 'olives' dish: 56%

Based on the final outcome of the survey, I worked on the abstraction of the pictograms to make them have the same appearance in order to form one unified set.

4.5. 2nd Design phase

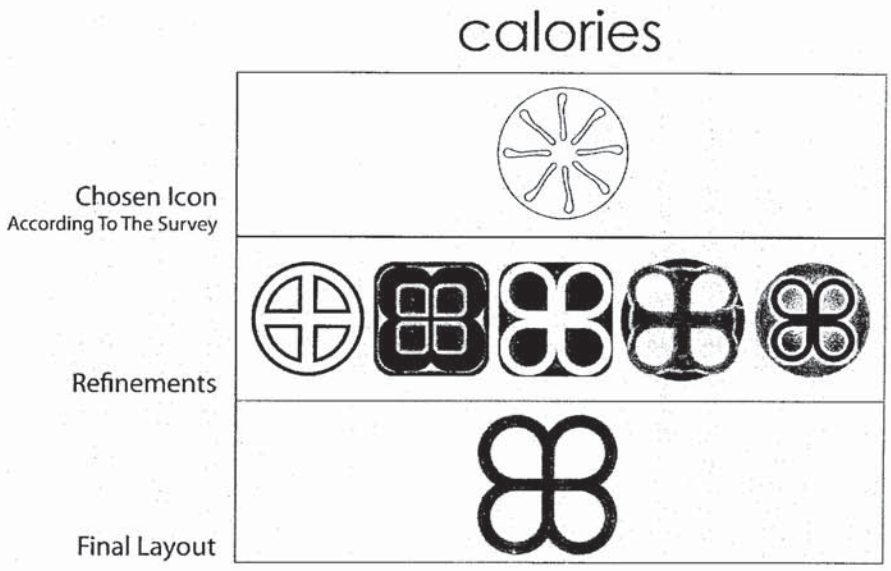


Figure 19: 2nd Design process for the Lebanese clay plate

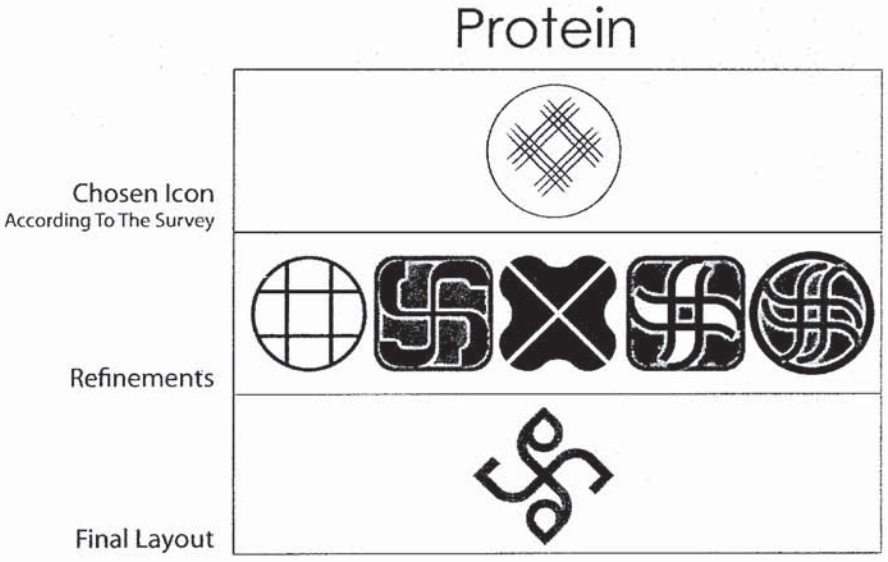


Figure 20: 2nd Design process for the Lebanese raw meat plate

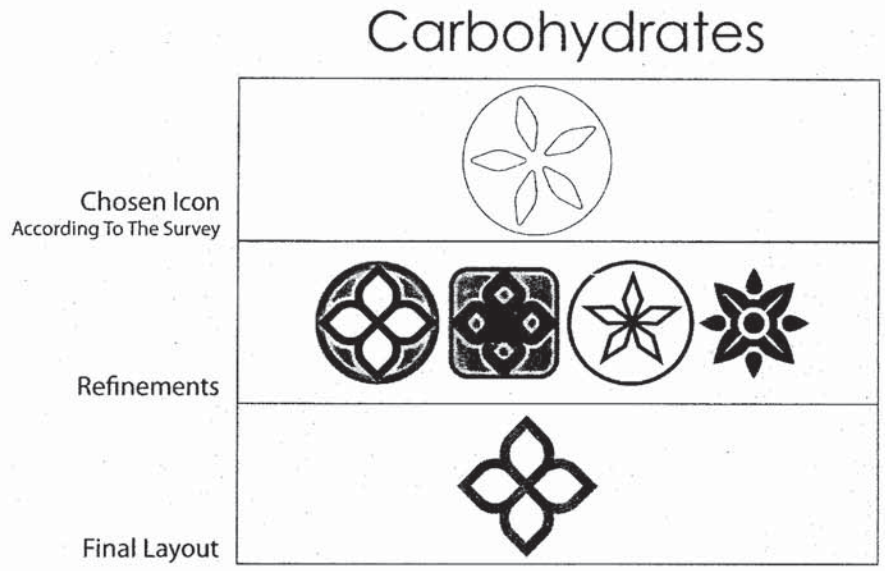


Figure 21: 2nd Design process for the Lebanese sweets ('maamoul')

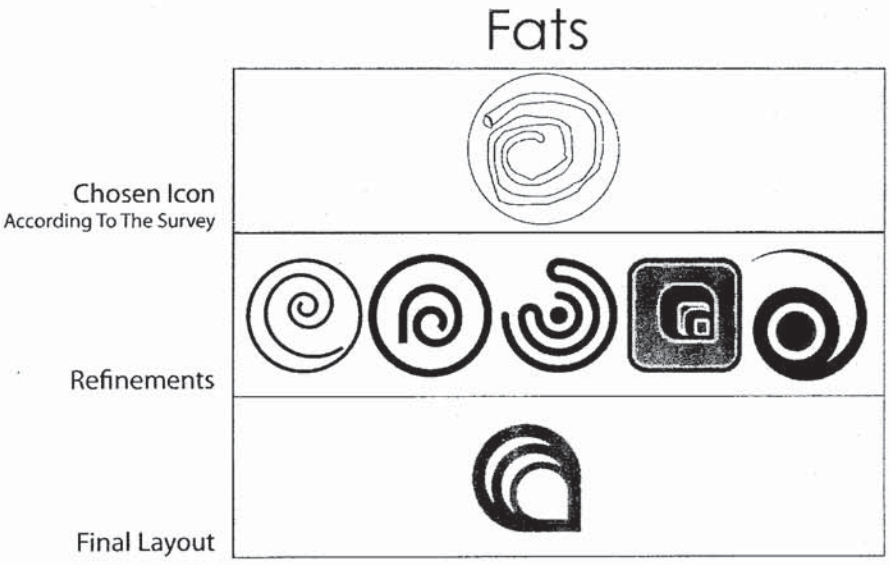


Figure 22: 2nd Design process for the Lebanese food 'fawerigh'

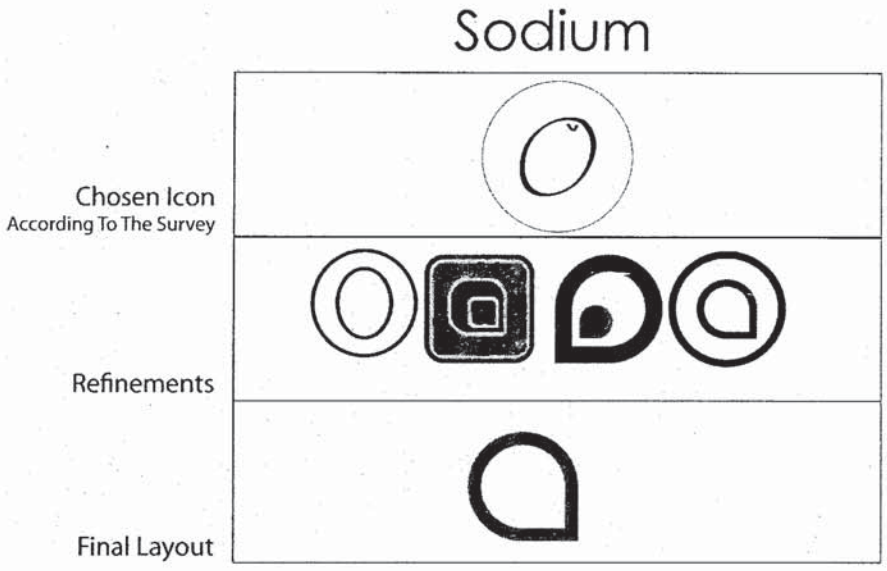


Figure 23:2nd Design process for the Lebanese mezza olives

Below is the final look of the pictograms (in Grayscale):

Figure 24: Final pictograms in Grayscale

Chapter 5: Advertising

After having developed the nutritional facts label design, and coming out with the final set, I have made suggestions for its promotion, to allow people to recognize it, know how to benefit from it, and achieve the main target it was designed for.

First, some interviews or short presentations explaining the project could be presented in TV shows such as, 'Alam Al Sabah' on Future TV and 'Hilwe Beirut'on LBCI. This could be followed or presented concurrently with an advertising campaign consisting of a set of TV ads (4 sketches), posters, brochures, and points of sale at supermarkets.

The main idea behind the design project was to inform people about the quantities of nutrients they are allowed to consume so they would not develop health problems. As a result, the idea came up of using exaggeration in the ads to the extent of saying, "If you over-consume any of the nutrients, then you are killing yourself". Thus, the idea of presenting a person who is eating, and his/her shadow on the wall looking like a person committing suicide developed; and in each scene, a different tool corresponding to the layout was employed.

Bearing in mind that the project was developed in Lebanon, all the scenes of the advertisements would be implemented in a Lebanese context, showing the traditional local spirit of the kitchen or the background area and using the Lebanese dialect both in the commentary and the slogan.

5.1. Advertisement theory

Going back to the Saussurean theories, the synchronic analyses specify two genres of relations, namely, paradigmatic and syntagmatic, which determine how signs are organized. A paradigm is a set of signs while a syntagm is the message formed by signs chosen from several paradigms. A paradigmatic choice conveys meaning through the differences between the signs selected and those not selected whereas the syntagmatic relations are evident in combinations of paradigmatic choices, revealing the rules or conventions that facilitate sign combination to form messages. From the latter came the idea for the choice of the personage, location for photography and proverb.

5.2. The context

The choice was to shoot the advertisements in "Assaha Lebanese Traditional Village", which is a traditional, cultural and touristic project, symbolizing the real model of the Lebanese Traditional Village in its multi-artistic elements. The selection was the latter, because it shows the Lebanese traditional spirit, which puts the ads in their intended context.

5.3. Proverb adaptation

"إلك ما الأكل... بطنك إلك ما" True, this food is not yours. But isn't your stomach yours? (Said to the voracious). This is an old Lebanese proverb said about greedy people, when they eat without being conscious of what they are

eating, or how the quantity of food they are consuming might harm them. For these ads usages, there will be a little modification in this proverb to suit the concept of the proposed ads.

5.4. Ad techniques

The chosen proverb, which consists of two phrases, gave the idea of using the Teaser ads techniques in the advertising campaign, which typically consists of a series of small, cryptic, challenging advertisements that anticipate a larger, full-blown campaign for a product launch or otherwise important event. A teaser trailer is usually released long in advance of the product, so as to "tease" the audience.

This type of advertisement is designed to tease the public by offering only bits of information without revealing either the sponsor of the ad or the product being advertised. Teaser ads are the frontrunners of advertising campaigns; their purpose is to arouse curiosity and draw attention to the campaign that follows. In order for a teaser campaign to be effective, the ads must have great visibility in print, broadcast, and out-of-home media so as to reach a large number of people. Teaser ads are often used in the introduction of a major motion picture or a new product, leaving the spectator with questions about what will follow and about the product or the services.

The second part of the ad, which will be released a period of time after the release of the first part, identified as revealer, will show the whole concept of the ads, and will inform the viewers about the product.

For this project, the teaser will consist of a shot of people eating with the

first part of the slogan, "el 'akel ma elak".

After a while, the revealers should be launched, where the four persons will appear still eating with their shadow reflected on the wall, but there will be an alteration in the shadow, showing the person's silhouette holding a tool for suicide instead of the shadow of the food, giving the impression of the person eating to an extent of killing himself, and the proverb will continue to convey the whole message.

At the end, for informative and instructive purposes, a scientific sentence will appear to inform people about the amount of each nutrient allowed per day, with the relevant pictogram for people to memorize.

Scenes/ sketches: There will be four different sketches, each relevant to one of the four nutrients studied previously, namely, carbohydrates, protein, fats and sodium.

5.5. The personages

The choice of personages in the sketches was intended to cover all sectors of Lebanese society from different ages, genders and social backgrounds. Therefore, four persons were selected, namely, a teenage boy, a young man, a young lady and an elderly woman. In the revealer of the ads, the different sectors of people were presented, with emphasis placed on the elderly woman who is veiled ('mohajjabe'), thus showing differences in religion (since the other lady is not veiled).

5.6. The campaign

5.6.1. The teasers

Figure 25: Teaser ad for protein

Figure 26: Teaser ad for fats

Figure 27: Teaser ad for carbohydrates

Figure 28: Teaser ad for sodium

5.6.2 The revealers

Figure 29: Revealer ad for protein

Figure 30: Revealer ad for fats

Figure 31: Revealer ad for carbohydrates

Figure 32: Revealer ad for sodium

Conclusion

Many factors, such as globalization and westernization, have contributed to drastic change in Lebanese people's eating habits, the consequences of which cannot go unmentioned. These factors, among others, have had a significant impact on the Lebanese diet, which has become increasingly unhealthy.

The consumer's attitude and lack of health-related knowledge is adversely affecting Lebanese people's well-being. In fact, while many people are still unaware of the existence of the nutritional facts label on food products, others are aware of it but tend to ignore it, either due to pressure of time, since reading the nutritional facts label requires time and some math skills to get the bottom-line, or because they do not know how to interpret it and come up with an adequate decision regarding their diet.

Accordingly, as a socially responsible designer, I wanted to contribute positively to the Lebanese people's health enhancement by proposing a nutritional facts label that abides by the scientific approach and takes into consideration the Lebanese context with a view of providing a Lebanese nutritional facts label that could be placed on local products.

This dissertation has dealt with the issue of nutritional facts labels and their relevance in people's diet and overall health. First, an extensive study of all the available types of nutritional facts labels in the market was done, in addition to a detailed revision of the qualifications for each one. The results of this initial stage gave me the idea of developing the Lebanese nutritional facts label. The deficiencies of each of the former types were taken into consideration in order to avoid them in the proposed label.

An examination of a number of nutritional facts labels on select Lebanese products has consistently revealed their lack of usage or misuse. Comparing some goods' labels with legalized ones, it was obvious that most product labels did not abide by any of the rules. While some did not carry any nutritional facts label, others had one, but did not stick to the rules.

Based on these findings, it was necessary to take a closer look at the Lebanese law related to the nutritional facts label in the Lebanese consumers' protection law enacted by the parliament. In effect, while reviewing the relevant law in the third chapter, entitled, "Information to Consumer", in article 7, there was no clear, specific or detailed explanation pertaining to the format of the nutritional facts label, nor it's content. The Ministry of Economy and Trade in collaboration with the European Union thus released a series of booklets intended to support the Lebanese companies in this area. In the fourth booklet in this series, a section was devoted to nutritional labeling, highlighting the required information for the label; however, the latter did not give any design guidelines.

These findings allowed the development of the main hypothesis of this thesis proposing that if the nutritional facts label is better designed and easily recognizable, then it would positively contribute to the enhancement of Lebanese people's health.

Another research was done on the nutritional facts labels found in the market. Four different types were found; from each, I took a feature to support my own thesis. From the FDA label, I got the scientific aspect, from the GDA label the idea of quick and easy snapshot, from the traffic light the color coding concept, and from the McDonald label the idea of using signs. After borrowing the appropriate aspects of each, a multi-disciplinary study was done in the field of food anthropology and semiotics to come up with signs based on the Lebanese culture. Claude Levis-Strauss

has argued that food serves as a system of signification. From this concept, I got the idea of using a traditional Lebanese cuisine menu as the basis for the proposed nutritional facts label. Subsequent to this, Micheal Owen Jones, stipulated that all aspects of foodways are subject to symbolism and that this initiative could be applied to the presentation and structuring of meals. Consequently, I borrowed this idea, and applied it to the latter to represent the nutritional facts label as symbols created originally from the traditional Lebanese meals. Accordingly, four design options were generated for the different nutrients and tested to choose among the suitable one, keeping in mind the above-mentioned Lebanese aspects.

After producing the four distinct nutritional facts label design proposals, the design implemented by the McDonald Company was adopted to involve consumers and get their judgment on the suggested labels. Consequently, the data collection methodology of shopping mall intercepts was adapted to test the different designs that I had generated, and to decide on which one would be approved as the Lebanese nutritional facts label.

Following the guidelines delineated by Seymour Sudman on shopping mall intercept, the sample was taken from two of the biggest supermarkets in Lebanon, namely, 'Spinneys' (Jnah) and 'Charcutier Aoun'(Jbeil). The choice of the supermarkets' location was intended in the sample to select people from different social backgrounds. Three hundred and eight interviews were conducted at the entrance of both locations at different times of the day over a period of a month.

The respondents were presented with a questionnaire consisting of five items, whereby they were shown four different representations for each of the five main relevant elements of the LNFL, namely, calories, carbohydrates, protein, fats, and sodium. The respondents had to vote on the best visual representation of each.

The findings of the interviews were meticulously analyzed and taken into account in the creation of the final layout of the Lebanese nutritional facts label.

The next step was to promote this label by creating the graphical/ promotional elements that would help introduce it to the companies as well as to the consumers. In fact, an advertising campaign was developed to promote the Lebanese nutritional facts label to consumers while a catalogue with guidelines for the companies that may be willing to adopt this label on their products was published.

At a practical level, further investigations must be conducted to check the legal local aspects to abide by before launching the proposed campaign. The Ministry of health, Ministry of commerce, and the Consumer Protection Department should all be approached for guidance on the proper legal procedure to follow.

Subsequently, at a later stage, I intend to propose the project to a specific set of local companies that may benefit from the adoption of this new cultural related nutritional facts label. Companies, such as 'Ta'anayel', 'Daliah , 'Dairy Day', may be tapped for this specific purpose.

The advertisement campaign could also be proposed to some TV channels, after their contribution in developing a more general awareness stage by conducting interviews to be diffused during TV shows, such as ''Alam Al Sabah' on Future TV and 'Hilwe Beirut' on LBCI.

Since it would take time for the consumers to get used to and memorize the meaning of the proposed set of pictograms, I suggest in the meantime keeping their names below each pictogram. The question remains; "How long should these names (definitions) be kept before they are removed?" Further research or market study could help answer this question.

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