A diachronic study of food labels with a particular focus on verbal and pictorial narratives that are relevant to health

Bodil Mostad Olsen

May 2022

Thesis submitted for the degree of Doctor of Philosophy
Department of Typography & Graphic Communication,
University of Reading.

AUTHOR´S DECLARATION

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged. This thesis has been proofread by a professional proofreader and its content have not been modified.

BODIL MOSTAD OLSEN

ABSTRACT

This thesis is about the verbal and visual presentation of health messages on food labels dating from 1850 to 1970. Health messages may describe the contents of the package, highlight the quality of ingredients, and inform or convince consumers about the health benefit of a particular food or nutrient. However, the verbal and visual presentation has changed over time, taking into account social changes, the discovery of the relationship between diet and health, and various label regulations.

The study aims to demonstrate that language and imagery used on food labels to depict the food´s health advantages is repeatedly linked to critical incidents related to health, indicating that manufacturers at any time have understood the marketing potential of including health-related information on their products.

The method used in this thesis can be summarised as a systematic review of a selection of food labels from three periods: 1850–1918, 1918–1945 and 1945–1970. It comprises developing a descriptive framework including a checklist of attributes to identify and describe the linguistic and graphic features of these labels. Four case studies are identified and analysed using this method in order to discuss how health messages are represented verbally and visually. The analysis is informed by the following:

- the use of the word *pure* on food labels from the nineteenth and early twentieth centuries to communicate non-adulterated food,
- how early nutrition science reflects the representation of vitamins in a selection of food labels from the 1920s, 1930s, and 1940s,
- how post-war diets and health are reflected on labels for convenience food, and
- labels for milk and milk-related products and how they have changed over time.

The case studies identify a number of health messages and show that changes in these messages were driven by significant health concerns, medical discoveries, and various health trends. For example, the food industry met the experts' (government medical advisors, and doctors and nutritionists) identification of dietary concerns by manufacturing new and 'healthy' products, and health messages promoted food quality by establishing a link to modern nutritional science or particular health considerations.

Adoption of the research methods used in this thesis could prove helpful in a further analysis of the effectiveness of the presentation of linguistic and graphic elements on packaging in relation to current health trends. Aligning the results of this analysis with the role of corporate advertising guidance for designers would highlight the food industry's approach to consumers' needs and expectations in terms of promoting information about nutrients and healthy foods.

ACKNOWLEDGMENTS

I would like to thank my supervisors, Sue Walker, Rick Poynor and Alison Black, for their kindness, patience and support while supervising this research. In addition, I am grateful to the staff and students at the Department of Typography and Graphic Communication for their care, comments and questions during work-in-progress presentations.

I would also like to acknowledge the generous and crucial support received in the form of bursaries from Grafill and Ernest Hoch Award.

Finally, I would like to thank my family and friends for their care, discussions and help, and special gratefulness to Marie, who offered me valuable support during the last months. Most of all, I want to thank Thorbjørn for his persistent encouragement throughout all these years.

CONTENTS

1.0 INTRODUCTION

This thesis is about the visual and verbal presentation of health messages on food labels dating from 1850 to 1970. Food labels are a kind of printed ephemera that may disclose important information about eating habits, health, and nutrition, during a particular time period. Health messages may describe the contents of the package, highlight the quality of ingredients, and inform or convince consumers about the health benefit of a particular food or nutrient. However, the verbal and visual presentation of health messages on food labels has changed over time, considering social changes, the discovery of the relationship between diet and health, and various label regulations. The thesis aims to show:

- how verbal and pictorial health messages used on food labels have changed over time
- that health messages used on food labels are repeatedly linked to critical incidents related to health, indicating that manufacturers during each time period have understood the marketing potential of including health messages on their products
- that language and imagery depicting the food's health advantages are frequently related to scientific developments or significant health trends

The material for this study is assembled from British archives and the author's personal collection and involves labels related to food and drink. The research undertakes a systematic and analytic review of a selection of food labels from three periods: 1850–1918, 1918–1945 and 1945–1970. Four case studies show how particular health messages are represented visually and verbally:

- through the use of the word *pure* in food labels from the nineteenth and early twentieth centuries to demonstrate how the word was used to communicate non-adulterated food and manufacturers' attempts to establish trust by convincing consumers about clean ingredients in products
- through representation of nutrients in a selection of food labels from the 1920s, 1930s, and 1940s, to consider whether contextual factors, such as the discovery of vitamins[1] and the relationship between diseases and lack of nutrients, influenced verbal and pictorial language relevant to health
- on post-war labels for convenience food to identify whether changes regarding diet and health after WWII influenced language and design

[1] 'The discovery of the vitamins was a major scientific achievement in our understanding of health and disease. In 1912, Casimir Funk originally coined the term "vitamine"' (Semba, 2012, p. 310).

- on labels for milk and milk-related products as an example of how a beverage associated with disgust and fear in the late nineteenth century moved towards a product perceived as pure, nutritious and health-giving in the twentieth century and beyond

There was little need for food labels before the industrialisation of food production. Most foods were sold fresh or with minimal packaging. Manufacturers often carved, burned or embossed their name, and directions for use for their goods, into containers of wood, pottery, or glass. Britain introduced paper packaging in the late eighteenth century, and tea, mustard, and sago powder, were some of the first wrapped products on the market (Turner, 1995; Davis, 1967). At first, wrappers or labels included only basic information on the front, such as nett weight, the name of the food, and the manufacturer's address (Fig. 1). The design's primary function was to acknowledge the manufacturer and communicate the product's purpose (Klimchuk & Krasovec, 2012, p. 5).

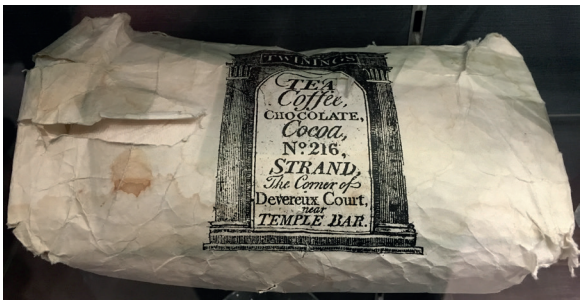


Figure 1. Paper wrapper for Twinings tea. 1771. Twinings Tea Shop, London.

An early paper wrapper includes basic requirements on the front, such as the manufacturer's name and address.

From the late nineteenth century, label design gradually included descriptions of the food as well as various statements about health benefits. For instance, some manufacturers described their food as *pure* to convince the public about clean and non-adulterated products (Fig. 2). Flags, coats of arms or medals also played an important part in giving a feeling of tradition or quality (Humbert, 1972). Some labels were also essential for catching the attention of the world market, and illustrated brands reflected traditions or discoveries distinguishing products from those of competitors.[2] Pictures of the packer´s premises illustrated rebuilding and the firm´s expansion and market progress.[3] Design might also have been used to make less desirable food more attractive in order to encourage people to eat what was available.

[2] For example, canned sardines imported from Norway in the corpus show a variety of colourful designs reflecting traditional costumes, Norwegian landscape and discoveries. Examples are shown in Appendix 3.

[3] Factory scenes or images appeared, for example, on many of Huntley & Palmer´s tins (Davis, 1967, plates 193–196).

Figure 2. A label for malt vinegar. *c.*1901.
Size: 102 x 97 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (76).

An example of how a coat of arms is used to signify authority; the word pure suggests that the vinegar is an unadulterated product.

In the early twentieth century, an increasing number of food labels included descriptions of food as nutritious and healthy, and labels specified the content of particular vitamins, such as *rich in vitamin C* or *vitamin D content increased*. In addition, visual narratives were often essential elements to include as health-related references (Fig. 3).

Figure 3. A label for a tin of tomato juice. *c.*1930–*c.*1940.
Size: 110 x 228 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 19 (75b).

By including *rich in vitamin C* combined with a picture of tomatoes, this label familiarised consumers with the nutrients of fresh tomatoes.

1.1 Thesis scope and limitations

This thesis involves a diachronic study of food labels. As 'diachronic' relates to the way something, especially a language, has developed over time (Oxford University Press, n.d.), this thesis looks at the visual and verbal presentation of food labels from 1850–1970 with a particular focus on health messages (described in Section 1.3).

The material for the research is assembled from British archives and the author's own collection and presents items for foods and non-alcoholic drinks. Some labels are from imported food products.

Several factors may have influenced the presentation of the labels, and contributed to how health information has changed over time. The thesis limits the main contextual factors to

- changes in nutrition science
- significant health trends
- label regulations

Other issues could have also been relevant, such as the role of jobbing printers[4] or advertising agencies deciding which information related to health should be presented to the consumers. A significant part of the material presented in this thesis derives from the nineteenth and early twentieth centuries, characterised by mass promotion to sell, rather than specifically targeting one consumer group (Schwarzkopf, 2010). Some material from the following years represents well-known brands, and advertising agencies contributed to value-focused campaign strategies to promote some of the food as beneficial to health.[5] Although I refer to some advertising campaigns, the thesis limits the main factors to those mentioned above.

When analysing the material, I am aware that I am looking at the labels through twenty-first-century lenses in order to comprehend how

[4] Although briefed by the manufacturer, several food labels were likely designed by jobbing printers who issued commercial work such as advertising material and other forms of printed material in the nineteenth and early twentieth centuries (Osbaldestin, 2020). Advertising agencies have existed since around the 1850s; however, it was not until the WWI that the agencies implemented branding and value-focused campaigns strategies. Hence, the inter-war period was characterised by mass promotion to sell rather than specific market communication. With that said, after WWI, advertising agencies started to communicate the meaning of different foods, for example, emphasising that a brand for fruit and vegetables communicated the meaning of agricultural excellence and reliable quality and not included as a beautiful trademark logo meant for decoration (Schwarzkopf, 2010). From the growth of the jobbing printers in the 1850s to the increasing competition from the advertising agencies, commercial artists and independent typographers in the late nineteenth century is thoroughly described by David Jury (2012) in *Graphic design before graphic designers: the printer as designer and craftsman 1700–1914*.

[5] For example, Ward (1994) discusses the planning, research and marketing campaigns that established the Horlicks brand as a health drink between the wars. Collins (1994) discusses how ready-to-eat cereals, such as Kellogg´s, Quaker, Shredded Wheat and Weetabix, became an established part of the British diet in the inter-war years and how some of the foods were marketed as healthy during the following decades.

viewers in the nineteenth and twentieth centuries perceived information from the items. Also, I occasionally refer to current studies, even though these are not always directly comparable to the previous century's circumstances. However, they contribute to adding a more nuanced and general picture of the significance of health messages.

The thesis does not include a conventional 'literature review' chapter, instead relevant literature is introduced in context and runs throughout the thesis.

For the purpose of this research, three periods are defined: 1850–1918, 1918–1945 and 1945–1970. Each period represents significant phases in terms of scientific discoveries, and health and diet among the public.

1850–1918

This period covers the time of the Industrial Revolution, a growing population, mass production of food, and an increased need for food labelling. Changes in the food industry generated difficulties in managing and controlling food quality (Rowlinson, 1982), causing widespread food adulteration, often with harmful ingredients.

The British Government introduced a rapid series of parliamentary acts to prevent fraud and protect public health (Turner, 2007). Towards the end of the nineteenth century, the use of harmful substitutes declined, and most basic foodstuffs were legally pure in terms of adulteration by substitution. However, as foods became more processed, new additives were included, such as chemical colourants, preservatives[6] and flavourings (Rioux, 2019).

This period also represents a social class difference based on people's power, education, economic status, and prestige. Diet was radically different in the lowest and highest social classes (Nelson, 1993), and the food consumed by poor people was low in nutrients, causing severe health problems. During WWI, medical researchers gradually acknowledged the connection between inadequate nutrition and various diseases (Drummond, Wilbraham, & Hollingsworth, 1958, pp. 439–443). As the population increased in this period, Britain could no longer supply itself and became dependent on imported food supplies (Burnett, 1979, p. 133).

[6] 'Preservatives are substances added to food or to certain medications to slow or prevent spoilage, discoloration, or contamination by bacteria and other disease organisms. The use of preservatives dates back thousands of years, when only natural preservation methods were available. The modern use of artificial preservatives is an extension of these centuries-old methods of food preservation, some of which involved adding naturally occurring chemicals to food. As technology advanced, artificial preservatives were designed with the same goal as these natural methods—to prevent food from spoiling or discoloring'. 'The categorization of a preservative is never permanent; it may change as new information about the preservative's safety is reported and analyzed. Certain preservatives that were once considered safe—most notably sulfites and nitrites—have since been banned or greatly restricted in their permissible uses' (Frey & Swain, 2017).

1918–1945

A tremendous change in diet characterises this period due to new food items available. There was a rapid growth in the marketing of canned food, such as vegetables, fruit, meat, tinned soups, and condensed milk (Oddy, 2003, p. 97), and increased consumption of pre-packed goods as well as confectionery, chocolate, and potato crisps (Burnett, 1979, pp. 292–293). The period also demonstrates a remarkable development of scientific research into aspects of food and nutrients and deals significantly with the discovery of vitamins and their impact on the nation's health. Pharmaceutical companies manufactured food products and announced malt extract, cod-liver oil, and dried milk, as dietary supplements containing essential vitamins. Food manufacturers realised *health* was a strong message to use in order to promote their products' quality (Oddy, 2003, pp. 98–100).

After the WWI, the British Government comprehended the need to include nutrition policies as a part of an effective health service. Based on new knowledge, they recommended a fundamental diet for poor people, and in the 1930s, introduced the *Milk in School Scheme (MISS)*, which made milk available to children in schools. During WWII, food rationing was based on a precise, nutritionally adequate scheme to ensure fair shares of limited food and good health for the population. Dietary modifications, such as fortifying margarine with vitamins A and D and raising the extraction rate of flour to 85%,[7] increased the nation's intake of vitamins and minerals (Oddy, 2003, pp. 138–140).

1945–1970

After WWII, Britain went through demographic and social changes with new types of family structures. There was a rise in single parents and pensioners, and the number of women continuing to work after marriage increased significantly (Burnett, 1979, p. 335). The change had an essential effect on dietary patterns; fully prepared meals and convenience food, such as frozen, dehydrated, canned and prepared food were all labour-saving products. The growth of self-service shops and television influence also characterise this period. From the 1960s onwards, there were health concerns with, among other things, obesity and cardiovascular disease (Oddy, 2003, pp. 174–193). New label regulations required detailed information of ingredients for all pre-packed foods. Also, the appropriate designation of each ingredient had to be listed in descending order of use.

---

[7] Extraction Rate: 'The amount of flour extracted or milled from a given amount of wheat. A 100 % extraction flour is a whole grain or wholemeal flour, milled to retain 100% of its components: bran, germ and endosperm. Lower extraction rate flours indicate that less of the bran and germ remain in the flour after milling. For example, a traditional powdery fine pastry flour has a low extraction rate of 45–55%, which means it is composed primarily of the white starchy endosperm with the vast majority of bran and germ sifted out' (Grist & Toll, 2020).

1.2 Perspectives on food labels

The following sections seek to provide different perspectives on food labels by drawing attention to ephemera studies as well as to current research.

Ephemera studies

Printed ephemera are documents of everyday life[8] and provide a rich and crucial source of information by throwing particular light on history in many different areas. Items may offer factual details as well as evocative links with the past (Twyman, 2008; Andrews, 2008). For example, food labels are a kind of ephemera which has been a significant part of people's daily lives since the expansion of mass food production began in the early nineteenth century. Its design and written communication evolved in-step with marketing opportunities, what people needed or wanted in their everyday lives, or significant health incidents. Therefore, labels disclose essential information about eating habits, health and nutritional science, as well as language and design.

However, food packaging has not received much serious attention in graphic design history surveys or scholarly studies (Maffei & Schifferstein, 2017). In the book *The Total Package*, for example, Thomas Hine writes that despite food packaging being regularly present in almost everyone's life, it 'slip[s] beneath conscious notice' (1995, p. 2). Whereas, for example, book and advertising design are topics widely addressed within the research field, ephemera and food label design seems to be underrepresented.[9] One of the reasons may be the availability of materials for study. While, for example, books have been preserved and archived for centuries, food labels are ephemeral and may have survived only by chance (Twyman, 2008). Michael Twyman discusses the significance of printed ephemera by emphasising that items can be used for storytelling or for providing specific information. Examining ephemera within a specific context brings items to life, which may uncover things we would otherwise not know. For example, Mike Esbester (2009) examines how nineteenth-century transport tables were designed, understood and used. His article adds to the growing literature that explores the relation between design and practises in everyday life. By focusing on specific items, he describes notions of the past, providing an understanding of daily life and how designed information does not necessarily meet the audience's need in terms of difficulties using the timetables.

---

[8] Ephemera was defined by the Ephemera Society in the UK as 'the transient minor documents or everyday life' or according to Maurice Rickards 'virtually any 'non-book' printed matter, principally of paper, designed in the main for short-term use – often implicitly for disposal' (Rickards, 1988, p. 13).

[9] Based on a search on British Library, EThOS, 18 February 2022.
Book design: 658
Advertising design: 301
Food packaging design: 43
Ephemera design: 15

Studying printed ephemera may provide historical details, and labels can document trade, rules, regulations, and taste of interests, within a certain period (Andrews, 2008). If the items carry messages about health, the material may indicate health conditions amongst the population, discoveries and trends, and also signify the introduction of particular regulations and rules to protect the public (Turner, 2007). Twyman also argues that '... it may be necessary to make a case for the significance of ephemera as documents with their own textual, graphic, and artifactual characteristics ...' (Twyman, 2008, p. 30).

In this context, food labels are an essential part of design history, showing how key social events, typography, materials, and printing technology, have influenced their change of appearance (Davis, 1967; Hudson, 2008; Twyman, 1970). Food labels are indeed referred to in historical surveys about ephemera, however, they are often included along with everyday items such as billheads, trade cards, matchboxes, soap, cigarette, and medicine packaging (Davis, 1967; Hudson, 2008).[10] Nonetheless, few of these examples have particularly emphasised food labels (or the health messages that they carry), or refer to significant reasons for language choices and design related to scientific developments or significant health trends. With that said, several researchers have discussed how an increased focus on nutrition from the late 1920s became a target for advertising (Teuteberg, 2000; Horrocks, 1995; Ward, 1994). These papers examine the context of a short period of time and include a few visual examples illustrating how this subject matter influenced ephemera, such as advertisements and food packaging.

Information design and public health

Relatively little attention has been paid to the historical origins of early food labels, or to understand general informational structure and how contextual factors likely influenced the verbal and visual presentation of health messages. However, there seems to be a growing interest in the subject. For example, a doctoral project currently being carried out at the University of Leeds asks how food advertisements appealed to the authority of scientists, doctors, and nutrition experts, and how *good health* was packaged and sold to consumers in Britain between 1930 and 1980.[11]

---

[10] Weaver (2010) presents a detailed picture of American culinary history during the nineteenth century. Among menus, postcards, trade cards, recipe books and match covers, a section about diet and health offers a discussion about what he refers to as 'quasi-medical materials that have emerged over the years to offer health seekers quick cures' (2010, p. 89). The book also includes a separate chapter about food labels with discussions about food and drink items, in order to highlight who the Americans have become, by describing their culinary history from the nineteenth to the mid-twentieth century. Other authors present collections of labels as a vast reserve of creative ideas, rather than describing them in detail (Lewis, 1962; Humbert, 1972). Some books outline the growth of a specific brand, such as *Fry's Chocolate Dream* and *Cadbury's Purple Reign*, and depict the firm's [Cadbury] development through the labels visual and verbal narratives (Bradley, 2008, 2013).

[11] Daniel Ewers is currently working collaboratively between the University of Leeds and the History of Advertising Trust (University of Leeds, 2022).

Much of the recent literature about food label design dates from the 1990s and is concerned with information design, food labelling policy, and the significance of health or nutritional claims. Lang (1995) asks whether labels are working to benefit the consumer or the manufacturer. He reflects on whether the use of various quality marks, words, or other verbal and visual elements, are only in place to attract sales and fix a brand with the primary purpose of persuading people to purchase unnecessary food, rather than providing helpful information. Hence, the implementation and presentation of health messages would be significant enough to include in his discussion, this is also emphasised by Nestle (2013), who argues that health claims become a factor in a company's marketing strategy only when they can help sell food. However, are they only included when it benefits the manufacturer? Rayner (1995) finds it difficult to argue that information is of no benefit to the consumer and claims that health messages both promote sales and contain helpful information. He refers to a typical cereal food packet. *Co-op Fruit with Fibre* is fortified with the vitamins *thiamine, riboflavin* and *niacin*, plus *iron*, all of which help promote a healthy nervous system and maintain a healthy blood system. He argues that the information, by all means, promotes sales. On the other hand, he reasons that the claims provide helpful information for consumers looking for specific foods with specific vitamins and minerals, including iron. However, as he points out, whether or not the product is a valuable mineral source is a different matter. Some of these issues will be discussed in Chapter 6, *How diet and health are reflected on labels for convenience food*, and reflects on post-war packaging promoting specific constituents that were considered a vital part of a healthy diet due to their abilities as carriers for nutrients.

Throughout the last decade, profound changes in people's lifestyles and eating habits have led to global epidemics such as obesity, and chronic diseases such as cancer (WHO, 1997). The health burden from these diseases is high (Lopez, Mathers, Ezzati, Jamison, & Murray, 2006), and several nutrient labelling concepts are proposed as a potential tool to inform and improve public health (Roberto & Khandpur, 2014). The most well known is the recommended daily intake (nutrition information without any evaluation), the traffic light label[12] and the Nordic Keyhole[13] (Hamlin, 2015; Neuman, Persson Osowski, Mattsson Sydner, & Fjellström, 2014). The impact of these concepts is, however, disputed. Previous research indicates that the traffic light label does not influence consumer behaviour (Sacks, Rayner, and Swinburn, 2009). Other studies show that similar nutrition information helps consumers choose more healthily

[12] The traffic light label includes evaluation of nutrition information using red, yellow and green symbols to alert consumers to low, medium, and high levels of fat, saturates, sugars, and salt.

[13] The Keyhole symbol has been used as a voluntarily and common Nordic labelling scheme on food packaging since 2009 to signify food with more dietary fibre, less saturated fat, less salt and sugar than products without the symbol (Helsenorge, 2019).

(Machín, Aschemann-Witzel, Curutchet, Giménez, & Ares, 2018). Hamlin (2015) argues that the different formats have had only small-sample, or not enough, testing to indicate whether they have the potential to be effective. Scandinavian consumers often use the Nordic Keyhole symbol or similar symbols introduced in Norway and Denmark as a nutritional guide. However, for this symbol to achieve its purpose, it needs to be in accordance with how the target consumers define health and healthy eating (Neuman et al. 2014).

Other studies indicate that nutritional information, such as that carried on fact panels, influence healthier food choices, although it often depends on consumer knowledge and interest (Barreiro-Hurlé, Gracia, & de-Magistris, 2010). Health messages also involve describing one aspect of a food as healthy or nutritious, creating 'health halos' and influencing people's expectations. Perceiving a food as healthier than it is may lead to overconsumption (Chandon, 2013).

Health trends

The brief overview of current studies emphasises a growing interest in food packaging and considers whether health claims or nutrient labelling concepts may inform and act as potential tools to improve public health. Coinciding with the research aim of this thesis, that is, to demonstrate that health messages are linked to scientific developments or significant health trends, other recent studies also demonstrate that nutrient labelling concepts reflect current conditions with relevance to changes in people's lifestyles and eating habits. For example, neither the traffic light labelling nor the keyhole symbol would have been applied on food packaging before WWII, as too much fat, sugar or salt were not health considerations. Similarly, today, the widespread descriptions of food as vegan or gluten-free are linked to health trends that were not relevant previously, so not included on packaging until a few years ago. However, with that said, gluten-free products marketed as healthy may be highly industrially processed foods, and may include 'cosmetic' ingredients and additives (Fardet and Rock, 2019). Also, some of today's products based on, for instance, vegan food made from synthetic ingredients, may carry advertising that promotes positive qualities about the food with the help of *green* graphic design – often referred to as *greenwashing*. However, claims may be false or exaggerated, misleading the consumers about the environmental benefits of the products. For example, according to Wagner (2015):

> Some manufacturers take advantage of the credibility of organic food and try to appear greener than they are, by using a vocabulary referring to nature and imitating the design of organic product packaging, which is often green and decorated with vegetable motifs (p. 210).

Several current health messages seem to be employed to promote the food; however, it may be challenging to consider the extent to which this information is helpful.

1.3 What is a health message?

Health messages may seek to describe the contents of the package, highlight the quality of an ingredient and inform or convince consumers about the health benefit of a particular food or nutrient. Health messages can create positive associations to health through verbal and pictorial narratives. However, interpretations of words and images are based on individual perceptions, preferences, and experiences. In the context of this thesis, health messages are defined as:

> Verbal and pictorial narratives suggesting a sense of health, or describing the food, or part of the food, as beneficial to health.

The following section is an in-depth examination of how the definition will be used when describing verbal and visual information on food labels. A good starting point to look for appropriate and health-related words and images is to look at the World Health Organisation's (WHO) definition of a healthy diet. According to the WHO (2020), healthy and nutritious foods include fresh fruit and vegetables, legumes (e.g., lentils and beans), nuts and whole grains (e.g., unprocessed maize, millet, oats, wheat and brown rice). In addition, they recommend reducing intake of salt, free sugars,[14] saturated fats, and industrially produced trans-fats.[15]

First, based on these definitions, pictures of fruits, berries, vegetables, nuts, and grains, are typical elements to include as health-related references. Also, words such as *raw*, *natural*, *pure*, *healthy* and *wholesome* are significant adjectives to incorporate. The WHO's advice on reducing salt, sugar, and fat, likewise relate to health-related descriptions such as *free from sugar*, *reduced salt*, *low-fat*, *fewer/few calories*, *slim*, *slimming*, *dieting*, and *diet*. Some phrases may suggest that a food has particular beneficial nutritional properties. For example, claims may describe levels of nutrients, such as v*itamin D added*, *rich in vitamin C*, *a good source of calcium*, *more proteins*, *nutritious,* and *high fibre*. Claims suggesting a relationship between food and health (European Commission, 2020), may also inform a health message; for example, *calcium helps maintain normal bones* or *vitamin D prevents rickets*. Also, *free from preservatives*, *colourings or other substances* are significant statements.

Pictures representing healthy, happy, and energetic people, may carry symbolic and emotional preferences to nutritious and healthy food, hence defined as health messages. For example, an unhealthy diet and lack of physical activity lead to health risks (WHO, 2020). Therefore, if pictures

---

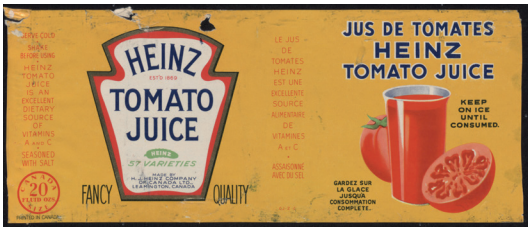
[14] 'Free sugars are all sugars added to foods or drinks by the manufacturer, cook or consumer, as well as sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates' (WHO, 2020).

[15] 'Unsaturated fats (found in fish, avocado and nuts, and in sunflower, soybean, canola and olive oils) are preferable to saturated fats (found in fatty meat, butter, palm and coconut oil, cream, cheese, ghee and lard) and trans-fats of all kinds, including both industrially-produced trans-fats (found in baked and fried foods, and pre-packaged snacks and foods, such as frozen pizza, pies, cookies, biscuits, wafers, and cooking oils and spreads) and ruminant trans-fats (found in meat and dairy foods from ruminant animals, such as cows, sheep, goats and camels)' (WHO, 2020).

on food packaging give associations of increased energy, some viewers may perceive the product as beneficial to health.

The examples above suggest a number of ways in which food can be regarded as *beneficial to health*—a phrase that offers multiple dimensions for discussion. The widespread food adulteration in the first half of the nineteenth century led to the introduction of a series of parliamentary acts to prevent fraud (Turner, 2007). Manufacturers convinced consumers that they could trust their products by promoting food as being free from injurious substances (Collins, 1993). Hence, messages such as *pure* or *free from harmful ingredients* indicated non-adulterated products; however, the food itself was not necessarily healthy — the food appeared instead to be products not dangerous to health. At the turn of the century, healthy food was considered nutritious and often described *as rich in vitamins or nourishing*. Later, the post-war period brought new challenges in terms of increased body weight throughout the general population. As a result, health was linked with slimming, and several food labels described their contents *as having less fat* or being *low calorie*. The food was beneficial to health; however, not necessarily healthy regarding the WHO's definition. The following items demonstrate different perspectives of *beneficial to health*.

4



5

6

Figure 4. A label for mustard condiment. *c.*1850.
Size: 68 x 69 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (13e).

Figure 5. A label for tomato juice. *c.*1930.
Size: 108 x 264 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (134).

Figure 6. A label for ginger ale. *c.*1960.
Size: 66 x 100 mm.
Centre for Ephemera Studies, University of Reading.

Labels from the 1850s, 1930s and 1960s, respectively, all three labels describe food as *beneficial to health*. The first label convinces the consumer that the product was 'warranted free from any injurious ingredients'. Figure 5 describes food rich in vitamin A and C, while Figure 6 promotes a beverage low in calories.

The following table demonstrates different interpretations of the phrase *beneficial to health*. The top row shows various ways in which food may have affected people's well-being and health throughout each research period. The yellow row indicates how food may be described as beneficial to health to meet these challenges. Finally, the bottom row contains verbal examples of health messages related to the different periods.

Various approaches to food influencing people's well-being and health	1850		1918		1945	1970
	Poisoned food	Food adulteration	Bacterial contamination	Preservatives	Food shortages	Processed food
Describing food *beneficial to health*	NOT INJURIOUS TO HEALTH					
			SAFE			
				RICH IN VITAMINS – WHOLESOME – NOURISHING		
						SLIMMING
Health messages found in the corpus	Warranted free from injurious ingredients	Pure, according to the Act of Parliament	Safe milk	Pure	Free from artificial colouring	Free from preservatives	Rich in vitamin A and C	No added colour	Unsweetened Fat free

Table 1. The table shows different interpretations of the phrase *beneficial to health.*

Suggesting a sense of health

Instead of conveying explicit nutritional health claims, some labels may indicate or suggest a sense of health. For example, food labels including pictures of robust children or those that display positive words such as *natural* or *energetic* might imply that the product is *good for you.* These narratives may create 'health halos', drawing attention to the packaging to conjure up food that might be healthier, fresher or purer than is the case (Chandon, 2013). On the other hand, labels including nutritional health claims may also suggest a sense of health. For example, giving prominence to nutritional properties on packaging for highly processed products, may mean that the messages lend themselves to be associated to a healthy product and miss the fact that the food could include 'cosmetic' ingredients and additives (Fardet & Rock, 2019). In other words, if food labels include exaggerated or 'dishonest' verbal and visual health messages, the labels can suggest healthy food by 'making something different from what it truly is' (Kalman as cited in McCarron 2001, p. 113).[16]

The general definition used for this thesis also ensures that even particular brand names can be identified as health messages, such as the *Fit* brand in Figure 7, indicating the beverage may contribute to a healthier lifestyle.

Figure 7. A label for orange juice. *c.*1960.
Size: 170 x 310 mm.
Centre for Ephemera Studies, University of Reading.

This label includes a brand name that may signify health benefits through using the name *Fit.*

[16] The quote was from Tibor Kalman, founder of New York design studio M&Co and included in an issue of *Adbusters* No. 27, Autumn 1999 written and designed around *First Things First 2000.*

Multiple meanings in health messages

Words and pictures might represent multiple meanings depending on the graphic language, time of period or the viewer's interpretation and personal preferences. While polysemy (in linguistics) is described as one word with two or more closely related meanings (Gairns & Redman, 1986), Puntoni, Schroeder, & Ritson (2010) define advertising polysemy as '... the existence of at least two distinct interpretations for the same advertising message across audiences, or across time and situations (p. 52).'

A shift in how health messages are perceived may also occur for the same individual. For example, the perception of a description might change after gaining specific knowledge about a particular food or health message being more visible after several exposures (Puntoni et al., 2010).

Dean et al., (2012) argue that consumers' reactions to health claims are influenced by personal factors and are especially strong when health risks are relevant to themselves or a family member. In the context of the earliest label describing food as *not injurious to health*, the statement could, for example, substantially impact viewers who had knowledge of, or were affected by, the seriousness of an adulteration to a greater extent than those not concerned.

Pictures

As mentioned, pictures may also provide health messages, either alone or in conjunction with textual messages, and meanings may change over time. For example, an image identified as a health message in the 1960s might not have signalled healthiness in the nineteenth century. Pictures of fish on food labels is a good example.

Labels from the late nineteenth century often employed pictures associated with superiority and fresh food rather than healthiness. For example, at the beginning of the twentieth century, the quality of fish sold in towns inland was regularly poor, but this significantly improved after enhanced rail communication. Fresh catches were successfully put on ice and transported around the country by rail. Therefore, it was essential to promote the quality of the fish, as the label in Figure 8 shows with a picture of fresh salmon. However, it is the use of a coat of arms,

Figure 8. A label for red salmon. 1900.
Size: 58 x 337 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 5 (76).

This label uses a coat of arms and decorative borders and the phrase '139 medals and highest awards' to affirm the quality and health benefit of the fish, rather than the image of the fish.

decorative borders and the phrase '139 medals and highest awards' that affirm the quality of the fish, rather than the image of the fish.

In the 1960s, life in Britain had changed dramatically compared to that at the beginning of the century, and packaging in general reflects a demographic and social change. As more women continued to work after marriage and less time was spent in the kitchen, convenience food became an established part of the diet (Oddy, 2003, p. 174). In addition, the sale of ready-prepared meals increased simultaneously as the government persuaded people to eat more healthily by including more fruit and vegetables in their diets. The picture in Figure 9 reflects some of these changes. By displaying the contents of the packaging fully prepared, and including a mixture of vegetables in the picture, the fish forms part of a nutritious meal which is quick to prepare and, in this context, conveys a health message.

Figure 9. Packaging for frozen cod fillets. *c.*1960.
Size: 85 x 220 mm.
The Sainsbury Archive, Museum of London Docklands.
Ref. NO SA/PKC/PRO/1/10/2/3/29/2.

By displaying the contents of the packaging fully prepared, and including a mixture of vegetables in the picture, the fish forms part of a nutritious meal which is quick to prepare, and in this context conveys a health message.

The image of fish in Figure 10 shows how an attractive and decorative style brings attention to the packaging rather than signalling health. However, the image may be perceived as a health message by those who already considered that fish was beneficial to health. Such personal judgments indeed correlate to pictures of all kinds of food, representing health values.

Figure 10. Packaging for filleted cod. 1964.
Size: 70 x 138 mm.
The Sainsbury Archive, Museum of London Docklands.
Ref. No: SA/PKC/PRO/1/10/2/3/23/1.

The picture in this label holds an attractive and decorative style which brings attention to the packaging, however, perceiving the visual as a health message would only be relevant for those considering fish beneficial to health.

Pictures can also indicate trust, purity, and health. For example, environmental pictures signal naturalness or create a mood that may connect to personal life and health. According to Corbett:

> Advertising's overall depiction of the environment idealizes and materializes a way of experiencing the natural world. In advertising depictions, nature is pristine, not endangered, and holds simple solutions to what are essential dilemmas, lifestyles, and choices. Advertising taps into our dissatisfactions and desires for qualities like solitude and health, but does so by linking those nonsaleable qualities with material goods (Corbett, 2006, p. 148).

Although Corbett's considerations concern advertising for material goods, her reflections can effortlessly transfer to a consideration of how images of nature may attract attention to the food label and indicate it's health benefits. By romanticising the environment through visualising nature, pictures on packaging may idealise the food or ingredients, such as describing aroma by displaying pictures of natural strawberries or presenting powdered vegetable content by using an image of fresh beetroot. Also, pictures describing *Healthy milk from happy cows* depict qualities related to nature and nutrition, which may draw attention to our desire to consume foods or beverages to stay healthy.

Nature, in terms of product pictures, may also direct viewers to labels in a slightly different way. MacInnis and Price (1987) define imagery as sensory information in working memory, which means, for example, displaying pictures of a particular fruit to affect the viewers' memory of how a product tastes and smells. A food label including a picture of an orange,

no matter which product, may positively impact viewers who have enjoyed the taste of the fruit. Finally, pictures of healthy, happy, and energetic children or adults may carry symbolic and emotional preferences to nutritious and healthy food.

Language

Various regulations have, over time, defined what was legal to write on food labels to prevent false and misleading descriptions and protect the health of the population. For example, *digestive*, identified in a range of products in the early twentieth century, was often applied to rather indigestible food (Fig. 11). To prevent confusing and false information, manufacturers had to remove the inappropriate use of the word from food packaging after labelling legislation came into force after WWII.[17]

Figure 11. A label for Pekoe Tips tea. *c.*1930.
Size: 43 x 200 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 10 (25b).

This label includes the word digestive. However, after the *Labelling Food Order 1946*, *digestive* had to be removed because the word was misleading (Turner, 1995).

While some words are controlled by legislation, other descriptions are part of a persuasive strategy motivated by the manufacturers' appeal. Health messages may be poetic, personalised, selective in the use of facts, emotional, and vague (Cook, 2010; Cook and O'Halloran, 1999), such as *fresh*, *wholesome*, *pure*, *nutritious*, *scientifically cooked*, *delicious*, or *vitamin D increased*. According to Cook, using vague descriptions may seem like a tendency to downplay facts unless they are to the manufacturer's advantage. By using imprecise definitions, foods may appear healthier than they are and create positive associations at the moment of purchase. Nestle argues that 'Food companies are not health or social service agencies, and nutrition becomes a factor in corporate thinking only when it can help sell food' (Nestle, 2013, p. 2). Nonetheless, interpretations of words and phrases depend on when the food is on the market, the viewer's knowledge and personal experiences, and additional visual elements displayed on the packaging.

---

[17] Many social and technical changes appeared after the war, and pre-packed food continued to increase. The Minister of Food introduced the *Labelling Food Order 1946*, which imposed detailed labelling requirements and compulsory labelling for all pre-packed food sold by retail. For example, *Digestive* was removed from tea, flour, cocoa, and suet packages. *Egg powder* consisting of coloured baking powder changed to *Golden raising powder. Milk stout* changed to stout (the drink contained only lactose, not milk). When used as a claim, *Tonic* changed to carbonated water containing quinine (Turner, 1995).

Implicit and explicit information

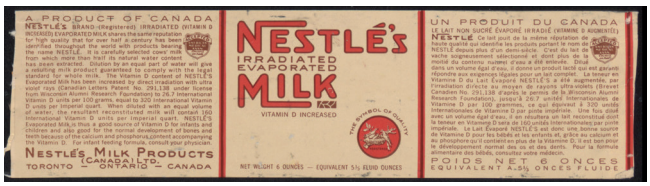
In order to sum up this section, a possible differentiation of food labels describing food as *beneficial to health* could refer to whether they include implicit or explicit information regarding nutritional properties. For example, labels may include words, phrases, or images implying that the food is beneficial to health without presenting specific nutritional descriptions. Other labels contain explicit information about particular nutritional properties, such as the content of vitamins. Figure 12 and Figure 13 demonstrate how two labels for milk may fit into these categories. On the left, a label for sweetened condensed milk contains no specific verbal information regarding the drink´s vitamin content. The label on the right represents evaporated milk and describes the drink´s nutritional properties by employing the phrase *Vitamin D increased*.

Dividing labels into these categories is only a matter of structure for the purpose of research and does not define whether the food is healthy. For example, some labels in the implicit category may represent healthy food, although the items do not describe the food's nutritional value. Food labels in the explicit category may cover highly processed food, for example, those with high sugar content or added substances.

IMPLICIT INFORMATION

12

EXPLICIT INFORMATION



13

Figure 12. A label for condensed milk. *c*.1930.
Size: 75 x 245 mm.
Private collection.

Figure 13. A label for evaporated milk. *c*.1920–*c*.1930.
Size: 54 x 201 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (92c).

The label to the left implies the food is beneficial to health without presenting specific nutritional descriptions. The label on the right describes the drink´s nutritional properties by employing the phrase *Vitamin D increased*. However, dividing labels into these categories is only a matter of structure for the purpose of research, and does not define whether the food is healthy.

In terms of reaching a definition of *health message* for this thesis, this section has looked into various approaches to *beneficial to health* – from promoting non-adulterated food to nutrition-related information and to what extent verbal or pictorial narratives may create positive associations to health.

The next chapter describes the method used in this thesis to identify and describe linguistic and graphic features of food labels and what informs the verbal and visual presentation.

2.0 RESEARCH METHOD

The method used in this thesis can be summarised as a systematic review of a selection of food labels from the 1850s to the 1970s. It comprises developing a descriptive framework including a checklist of attributes to identify and describe the linguistic and graphic features of these labels. This analysis is then undertaken on four case studies to carry out the discussion of how health messages are represented verbally and visually and what informs this.

Conducting a systematic review is a common method used in, for example, health science, and typically involves a detailed and comprehensive plan and search strategy to identify, consider, and synthesise all relevant studies on a particular topic (Uman, 2011). However, systematic reviews may also be used to document and describe graphic language employed in different kinds of documents and to track changes over time. Describing graphic language is generally based on the idea that 'in order to understand language use you need to analyze and describe its characteristics and work out why particular choices have been made' (Walker, 2012, p. 182). Such an approach emerges from linguistic analytical methods (Crystal & Davy, 1969, pp. 16–19), and is often chosen for its simplicity, and applicability to graphic language analysis. Systematically and objectively, the aim is to describe the usage and function of components in as much detail as possible. Breaking the language into segments is merely a tool to organise the material by paying close attention to each separate part. Several existing frameworks have been used in this review for various reasons (Twyman, 1979; Waarde, 1993; Pereira & Farias, 2019; Walker, 2012), and these have been useful as a starting point for developing a conceptual tool for analysing verbal and pictorial language in food labels.

Noteworthy examples of describing graphic language along the lines taken by linguistic scientists, have been conducted by, among others, Walker (2012) and Pereira & Farias (2019).[18] Walker presents an analytical approach to studying visual attributes in children's reading and information books in order to consider how graphic features have been organised and treated. Part of her work includes a systematic description and analysis of the visual characteristics of books from 1860 until the present day. 'Using a checklist ensures the same approach is taken to 'looking' at each item in a particular corpus. Each 'feature' is further subdivided into variants, attributes, or states – that describe the variations that might

[18] The approach taken in these studies derives from the late 1970s and 1980s in work undertaken by what has recently been called the 'Reading School' (Bateman, 2008, pp. 29–31). Academics in the Department of Typography and Graphic Communication at the University of Reading developed an interest in lines taken by linguistic scientists. For example, Michael Twyman's 'Schema for the study of graphic language' provided a tool for describing mode (verbal, pictorial, schematic) and configuration (linear, linear-interrupted, tabular) of graphic language (Twyman, 1979).

occur within a particular feature' (Walker, 2012, pp. 186–187). Hence, Walker tracks changes over time by showing how text, pictures, headings, and captions are treated differently through, for example, typeface, spacing, position on the page, and the use of colour throughout different periods.

A similar approach to understanding the informational structure in a large corpus is conducted by Pereira & Farias (2019). By systematically investigating how verbal, pictorial and schematic elements were arranged in late nineteenth- and early twentieth-century graphic artefacts produced by printing shops in Brazil, they determined a hierarchy of information and whether graphic elements signified the presence of dissimilarity and identity.

Walker's and Pereira & Farias's frameworks are not directly applicable to investigating health messages' visual and verbal presentation on food labels. As Walker's framework mainly describes the design of children's books, she uses a detailed checklist for recording, among other things, visual attributes such as infant characters, letterspacing and treatment of the start of paragraphs. These facts are not relevant to food label design, therefore not included in this investigation. Pereira & Farias's framework includes relevant descriptions such as typographic treatment, emphasis, style, and arrangement. However, they do not consider typical verbal and pictorial elements relevant to health messages and food labels, thus, unsuitable for this thesis. Also, this study aims to investigate changes in the typographical hierarchy over time so needs a more appropriate and specific framework.

However, the conclusion can be used as a starting point for modifying these existing frameworks to describe components relevant for this study. In order to build up information concerning usage, development, and hierarchy of health messages on food labels throughout a century, it is essential to investigate the visual presentation (letterform style, treatment and arrangements) of brand name, ingredient name and verbal descriptions in addition to identifying pictorial components; all components relevant to describing health benefits in food labels. The study will reflect different needs and values through time by highlighting three research periods (Klimchuk & Krasovec, 2012, p. 35).

In order to understand the relationship between the information content and its visual presentation, it is essential to consider the users of the language and the circumstances (Twyman, 1982). Also, according to Walker (2012), external factors are significant in understanding information and graphic presentation:

> As well as providing information about language in use, and about book design in particular, this approach to description that considers a range of contextual elements, such as educational policy, legibility and vision research, typeface manufacture and advances in printing technology, and reinforces the view that the designing of the visual presentation of information is frequently constrained by external factors (p. 194).

This thesis investigates the extent that these significant external factors may influence health communication on food packaging; four case studies show how health messages are represented verbally and visually, and what might inform this

Case study research is a common term within social sciences. Usually, it concerns an in-depth investigation of a contemporary phenomenon to understand a complex issue of the real world (Yin, 2014). However, the term 'case study' may also be used to draw attention to specific themes or in-depth studies, for example, by investigating the significance of ephemera, seen in *Useful reading? Designing information for London's Victorian cab passengers* (Dobraszczyk, 2008), *Designing time: The design and use of nineteenth-century transport timetables* (Esbester, 2009) and *The bold idea: The use of bold-looking types in the nineteenth century* (Twyman, 1993). In this thesis, the term case study will be used to conduct an in-depth investigation of the presentation of health information in a specific period, a word promoting health benefits, and how one significant food category is presented on packaging over time and what informs this.

Parts of the method for analysing labels in the case studies initially draw on the same method used in the systematic review. The study aims to explore pictorial and verbal health messages for relevant labels based on the descriptive framework, such as describing typographical hierarchy, and linguistic and graphic features. Additionally, the case studies aim to establish whether external factors influenced the verbal and pictorial presentation of health information. These are limited to changes in nutrition science, significant health trends and label regulations.

The limitations of these chosen methods must be taken into consideration. Conducting a systematic review is time consuming and this may have an impact on the time spent on other parts of the study. Since food packaging is usually thrown away, the availability of the material may not offer enough diversity. Additionally, the corpus in this research depends on the archives I visit. Consequently, a more extensive corpus or material from other archives could slightly skew the results. Using case studies draws attention to key issues relevant to the presentation of health messages. However, as it is essential to limit the investigation to a few external factors, other significant issues, such as the role of jobbing printers or the influence of advertising agencies that may have influenced the presentation are not considered. Choosing a specific theme for each case study provides information related to specific food labels. Other themes, words, health messages or food labels may provide slightly different results. The case studies chosen are reliant on the food labels available in the corpus.

2.1 Terminology

In terms of this thesis, I refer to verbal and pictorial components when describing separate elements in the labels. Verbal refers to all textual parts. For pictorial information, I use the word *picture* synonymously with *image* when referring to pictures of food, landscape, animals, or people. I also use the term *pictorial narratives* when describing images on food labels. The reason for this is that viewers may create their own stories when observing pictures, due to personal experiences or other types of established information. One image may also include different components, which creates a story. Components that are not related to food, such as symbols, flags, and coats of arms, are referred to as *graphic elements*.

For text that defines the food's quality or indicates the product's health benefits I am using the term *romance copy*. This terminology is based on Klimchuk and Krasovec's (2012) definition: 'Sometimes called "sell" copy, romance copy describes the product's personality and/or attributes' (p. 77). I will use two different intentions for romance copy: *Poetic descriptions* depict food using emotional words often lacking logical preferences. *Functional descriptions* depict food without emotional preferences.

Concerning the case studies, I refer to *health trends*, which for this thesis is a broad description of significant issues associated with public health concerns, or movements related to wellbeing at a particular period of time. A health trend may relate to concerns about adulterated foods in the nineteenth century, or to getting enough vitamins or fibre into the diet during the following century. It also refers to the pervasive slimming fixation in the 1960s. Today a health trend would include concerns of consuming too much salt and sugar, or movements related to vegan and gluten-free diets. Throughout the thesis, it has been necessary to differentiate between various foods due to different production processes.

Unprocessed food includes, for example, raw fruit and vegetables, grains and nuts. *Processed food* is used synonymously with *convenience food*[19] and includes all industrially manufactured food. However, sometimes there is a need to distinguish processed foods between *moderately processed foods* manufactured with only one or two ingredients, such as raw squeezed tomato juice or tinned green beans, and *highly processed food* manufactured by advanced food technology with added constituents, whether sugar, salt, vitamins, or chemical substances.

[19] Others may use different terminology. Oddy (2003), for example, refers to similar products as prepacked foods (2003, pp. 102–103.) Foods after WWII were officially classified as convenience foods (Burnett, 1979, p. 344) and included labour-saving prepared (or partly prepared) dishes, frozen, dehydrated and canned foods.

Today these are often categorised as *ultra-processed food,*[20] a term I will use when discussing current food packaging in Section 7.7.

Chrysochou (2010) defines the point at which something becomes a *health brand* as when consumers gradually associate health values and interests with a particular company and its claims of nutritional properties found in its foods. The term for this thesis extends Chrysochou's definition and covers the following:

Suggestive brand names include names associated with health benefits such as the Vitamin *brand*. However, the company does not explicitly communicate health values.

Non-suggestive brand names include names of companies associated with health values and who have promoted their products for decades by extensive advertising campaigns to establish an image of healthy food. For example, Horlicks and Kellogg's are defined as non-suggestive brands.

2.2 Selection of labels: compiling a corpus

The labels were selected from several archival sources in the UK. As well as labels, complimentary items, such as posters, pamphlets, promotional materials, menus and brochures were also considered. The primary sources used were found at the following archives: the John Johnson Collection held at the Bodleian Library at the University of Oxford, ephemera collections from the Centre for Ephemera Studies at the University of Reading, and the Sainsbury´s Archive; Museum of London Docklands, supplemented by, among others, Marks & Spencer Archives in Leeds, University of Reading Special Collections, and The History of Advertising Trust.

(see Appendix 2 for more information about these sources).

---

[20] Today the NOVA system of food classification is based on the nature, extent and purpose of food processing and classifies foods into four groups highlighting the degree of process (Monteiro et al., 2018).
Unprocessed foods and minimally processed foods include fruit, vegetables, nuts, seeds, grains, beans, pulses and natural animal products such as eggs, fish and milk. Other foods may have been dried, crushed, roasted, frozen, boiled or pasteurised, but contain no added ingredients.
Processed culinary ingredients include oils, fats such as butter, vinegar, sugars and salt. These foods are not meant to be eaten alone, but usually with foods in group one.
Processed foods are products usually made using a mix of group one and two ingredients. They include smoked and cured meats, cheeses, fresh bread, bacon, salted or sugared nuts, tinned fruit in syrup, beer and wine.
Ultra-processed usually contains ingredients that would not be added when cooking home-made food, such as chemicals, colourings, sweeteners, and preservatives. The most common ultra-processed foods are industrialised bread, pre-packaged meals, breakfast cereals, sausages, other reconstituted meat products, confectionery, biscuits, pastries, buns and cakes, industrial chips, soft drinks, fruit drinks and fruit juices (Monteiro et al., 2019).

2.3 Criteria for selection

Approximately 500 food labels were assembled, and all items were related to either food or drink with no restrictions regarding the type of food or the material's origin. Also, there were no constraints in terms of employed verbal or pictorial messages, health messages or other descriptions when selecting items for the corpus.

The material was then divided into labels with no information implying associations to health and items including health messages. Based on the criteria defined in Section 1.3, *What is a health message,* two significant categories of labels, including health messages, appeared: *explicit* and *implicit*. The following figures demonstrate and describe the three categories defined for the corpus.

Explicit

These labels contain information about particular beneficial nutritional properties such as *vitamin D added*, *rich in vitamin C*, or *a good source of calcium*. Explicit messages also include health claims, suggesting a relationship between food and health, such as *calcium helps maintain normal bones*, or *vitamin D prevents rickets*.

Figure 14. A label for vitamin C drink. *c.*1970.
Size: 42 x 290 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P7.

An example of a label in the explicit category. *Triple boosted vitamin C* promotes a particular beneficial nutritional property in the beverage.

Implicit

These labels use words, phrases, or images, to imply that the food is beneficial to health without presenting specific nutritional descriptions. Examples of words are *natural*, *pure*, *fresh*, *healthy*, *free from sugar*, *reduced salt*, *low-fat*. Examples of pictures used are of fruit, vegetables, or healthy children.

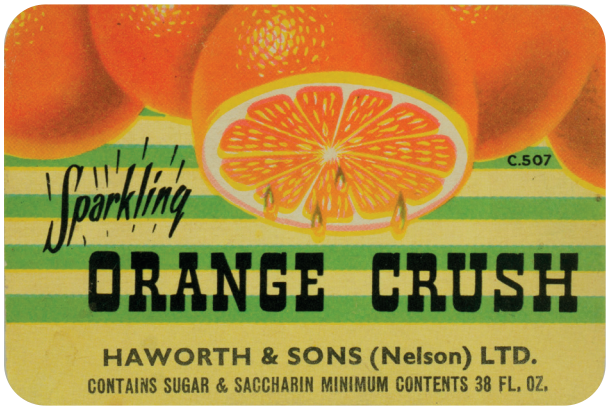


Figure 15. A label for Orange Crush. *c.*1970.
Size: 57 x 85 mm.
Centre for Ephemera Studies, University of Reading.

An example of a label in the implicit category. A picture of fresh oranges may give associations to a beverage beneficial to health.

Absent

Food labels in this category contain no verbal or pictorial information, that is, no descriptions of the food being healthy or implying any positive associations to health.

Figure 16. A label for luncheon meat. *c.*1920–*c.*1930.
Size: 85 x 229 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (41).

An example of a label in the absent category. No verbal or pictorial description to imply health benefits.

I then randomly selected 150 labels from each of the three defined periods.[21] The following table shows the distribution of food labels across the research periods and demonstrates how many items include health messages. The table shows an increase in examples in the implicit and explicit categories signifying a growth in use of both nutritional and associative health messages throughout the research period. Similarly, the number of labels including health messages increased towards the 1970s.

		HEALTH MESSAGES		
	Absent	Implicit	Explicit	Total number
1850–1918	97	53	0	150
1918–1945	50	82	18	150
1945–1970	51	76	23	150

Table 2. The table shows the distribution of food labels across the research period and demonstrates an increase in food labels including health messages towards 1970s.

I then created two different corpora:

1. For analysing typical graphic characteristics, I randomly chose 50 items from the total number of items from each research period.
2. For explicitly analysing labels with health messages, I randomly chose 50 items from the implicit and explicit categories from each research period.

50 is based on the maximum collected labels, including health messages from 1850–1918.

	Absent	Implicit and explicit		CORPUS 1 Absent + implicit and explicit	CORPUS 2 Implicit and explicit
1850–1918	97	53		50	50
1918–1945	50	100		50	50
1945–1970	51	99		50	50

Table 3. The table shows the number of food labels in the two corpora created for describing graphic characteristics in food labels.

[21] The items are selected using a random integer set generator. https://www.random.org/integer-sets/

2.4 Verbal and pictorial components

This section is about producing a method for a systematic review of the corpus to comprise identification and description of the linguistic and graphic features of selected labels. The study aims to investigate how typography is used to indicate the hierarchical relationship of textual elements and to explore where health messages usually occur in this hierarchy. Also, the purpose is to examine whether there are any significant differences between the defined research periods.

Labels comprise a number of separate textual components, for example:

- the ingredient name that describes what is in the package
- a brand name giving the company name, often presented as a logo
- text that may define the food's quality or indicate the product's health benefits *Categorised as romance copy*
- factual information about e.g., product weight and company address *Categorised as additional copy*

Pictorial information on food labels includes:

- landscape (nature, flowers and branches), fruit and vegetables, animals, farms and domestic settings
- people, adults and children
- the food contained in the packet
- graphic elements such as medals, coats of arms, logos, trademark or brand symbols, flags or castles, and decorative frames

The following item demonstrates a typical food label used to identify textual and pictorial information in order to structure a framework for analysis.

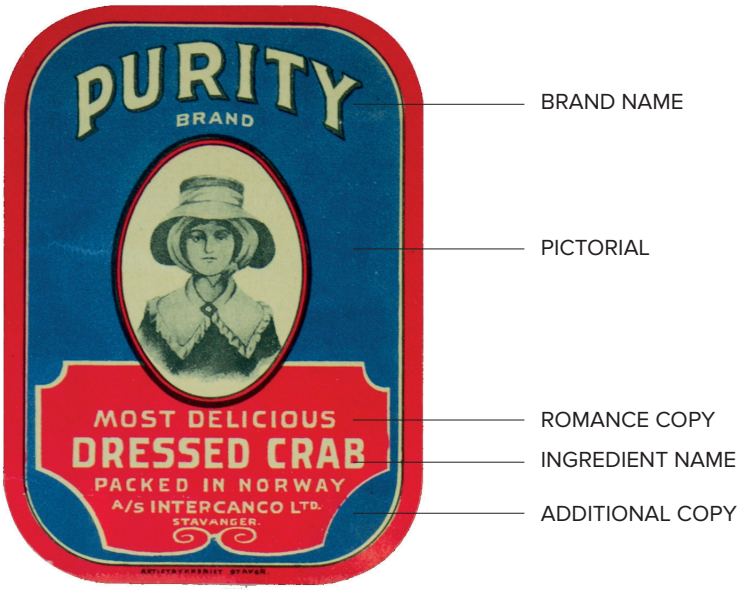


Figure 17. A label for dressed crab. c.1930.
Size: 100 x 73 mm.
Centre for Ephemera Studies, University of Reading.

This label identifies textual and pictorial information used to structure a framework for analysis.

Hierarchy of information

To investigate the ways in which components and health messages are made prominent, the framework identifies levels of hierarchy.

Primary textual information refers to a verbal element that captures the reader´s attention first, for example, by using large type or a strong colour. In Figure 18 the primary textual information is *Country Market*.

Secondary textual information may include complementary descriptions of the food or ingredient such as *Select Dessert Golden Plums* in Figure 18. Here, the size of the lettering is usually smaller, or the colour is less dominant.

Tertiary textual information is the least prominent text such as nett weight, directions for use or the country of origin, seen here as *A Sandring quality product*. *Packed in syrup* and *Packed by United Canners Ltd. Boston Lincs. Net Weight 1lb 4ozs* (Fig. 18).

The following label demonstrates the different levels of hierarchy.

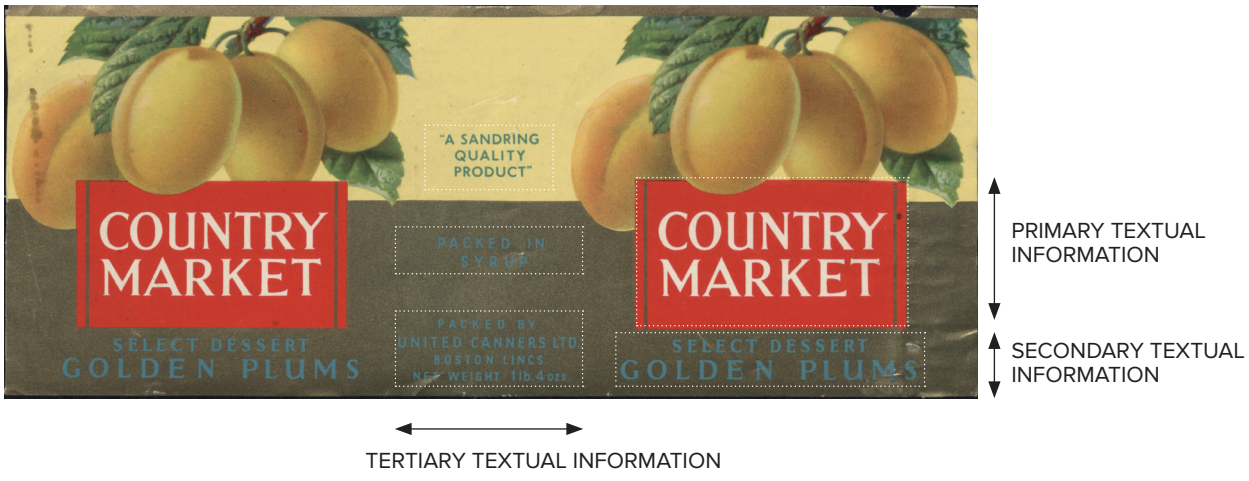


Figure 18. A label for plums. 1930.
Size: 106 x 264 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (4).

This label Identifies primary, secondary and tertiary textual information.

Table 4 summarises the proposed framework structure. Verbal components include *ingredient name*, *brand name*, *romance copy*, and *additional copy*. Pictorial components split into four categories: *natural, the ingredient*, *people,* and *graphic elements.*

	PRIMARY TEXTUAL INFORMATION			SECONDARY TEXTUAL INFORMATION			TERTIARY TEXTUAL INFORMATION		
VERBAL COMPONENTS	**1850–1918**	**1918–1945**	**1945–1970**	**1850–1918**	**1918–1945**	**1945–1970**	**1850–1918**	**1918–1945**	**1945–1970**
INGREDIENT NAME									
BRAND NAME									
ROMANCE COPY									
ADDITIONAL COPY									

PICTORIAL COMPONENTS	**1850–1918**	**1918–1945**	**1945–1970**
NATURAL Nature Fruit and vegetables Animals Farm Domestic setting			
THE INGREDIENT			
PEOPLE Child Adult			
GRAPHIC ELEMENTS			

Table 4. The proposed structure for devising a framework including significant verbal and pictorial components.

The following sections briefly describe the different graphic features and pictorial components included in the framework, then finally, Table 5 and Table 6 present the complete checklist.

Verbal components – letterforms, treatment and orientation

The corpus demonstrates the usage of many typefaces, and it would be too detailed to specify categories by names. Therefore, it is more relevant to include a rough classification of letterforms that falls into three sub-categories, s*erif, sans serif*, and *script*.[22] Detailed information about the treatment of letterforms such as applying a specific colour, outline, shadow, or decorative letterforms, is significant with relevance to particular periods, or the attributes giving emphasis to separate parts of the labels. Similarly, bold letterforms may impact levels of hierarchy. Different orientations of textual elements can contribute to further prominence and are relevant to include.

[22] Serif includes Humanist, Geralde, Transitional, Didone, and Slab-serif. Sans serif covers Grotesque, Neo-grotesque, Geometric, and Humanist. Script refers to typefaces that imitate cursive writing (the classification is based on British Standard 2961: 1967, Typeface classification and nomenclature) (Baines & Haslam, 2005, p. 51).

Pictorial components – content, style and treatment

In terms of classifying pictures, it is significant to distinguish between describing an ingredient, visualising a taste, captivating the viewer by telling a story, or delivering health messages. These four categories emerge from reviewing the corpus: *natural, the ingredient, people,* and *not related to food*. It is worth mentioning the difference between n*atural* and *the ingredient*. Two identical pictures may be defined in separate categories depending on the food. For example, suppose a label for jam includes a picture of strawberries; the visual is categorised as *fruit and vegetables* because the berry represents jam and not whole berries. On the other hand, if an identical picture of a strawberry describes the packaging for unprocessed berries, the visual is defined as *the ingredient*. This differentiation is significant as it may reveal to what extent pictures of fruit and berries might promote highly processed foods or sugary cereals or beverages.

With relevance to food, animals may, for example, be represented by fish or cow on labels for tins of salmon or milk respectively, while animals with no relevance to food may include a lion on a packaging for pineapple. The differentiation of subcategories may seem detailed; however, this is in place to demonstrate the vast variation of pictures available throughout the research periods.

Relevant categories describing pictures correlate to whether they are presented as drawings or photographs, and if they are displayed in colour or not. Different styles and treatments are likely concerned with technological developments and available print production methods at a particular time. On the other hand, the presentation of pictures on labels may also signify the food´s quality or health benefits.

The next page shows the checklists for identifying verbal components and relevant features, and pictorial and graphic components.

VERBAL COMPONENTS				
		PRIMARY TEXTUAL INFORMATION	SECONDARY TEXTUAL INFORMATION	TERTIARY TEXTUAL INFORMATION
IDENTIFICATION	Ingredient name			
	Brand name			
	Romance copy			
	Additional copy			
LETTERFORMS	Serif			
	Sans serif			
	Script			
TREATMENT OF LETTERFORMS	Outlined			
	Shadow			
	Decorated			
	Regular			
	Bold			
	Black only			
	One colour			
	Several colours			
ORIENTATION OF TEXT	Horizontal			
	Vertical			
	Diagonal			
	Curved/circle			

Table 5. A checklist for identifying verbal components and relevant features.

PICTORIAL COMPONENTS	
CONTENT	
NATURAL	Nature (landscape, flowers, branches)
	Fruit and vegetables with relevance to the food
	Fruit and vegetables with no or little relevance to the food
	Animal with relevance to food
	Animal with no relevance to the food
	Farm
	Domestic setting
THE INGREDIENT	Refers to the specific ingredient, e.g., whole peas or strawberries
PEOPLE	Child
	Adult
STYLE AND TREATMENT	
DRAWING	Representational
	Schematic
	Cartoon
PHOTOGRAPHY	Photograph
COLOUR OR NOT	Black and white
	Single colour
	Several colours
GRAPHIC ELEMENTS, NOT RELATED TO FOOD	Medal
	Coat of arms
	Logo, trademark, or brand symbol
	Castle or flag
	Decorative frames

Table 6. A checklist for identifying pictorial and graphic components.

Data from the application of these checklists are included in Chapter 3, *Describing graphic language of food labels* – the graphic characteristics, in general, appear in Section 3.1, and health messages in particular, in Section 3.2.

2.5 Four case studies: reasons and criteria

The four case studies use the same method for describing linguistic and graphic features of health messages and all consider factors that likely influenced the verbal and visual presentation of the package contents. The reason for choosing case studies is to show topics as examples of how health messages are presented during a particular time period. Significant words and phrases relevant to health emerged from the review in Section 3.2 and formed the basis of the topics.

1. ***Examining food labels from the nineteenth and early twentieth century including pure***

   Describing food as *pure* is frequently observed as the most common health message employed on food labels during the first research period. This case study shows how *pure* or similar descriptions are represented visually and verbally to demonstrate how the phrases were used in connection with food adulteration in the nineteenth century, and to highlight manufacturers' attempts to establish trust by convincing the consumers about clean and non-adulterated products. However, describing *pure* food does not necessarily signify healthy food seen from a nourishing perspective. Instead, the word indicates the benefits of eating clean, unmixed or non-toxic products.

2. ***Representation of vitamins in a selection of labels from 1920s to 1940s***

   The review in Section 3.2 shows that the first food labels employing information regarding the food's vitamin content appeared in the 1920s. This case study demonstrates the representation of vitamins in a selection of food labels from the 1920s, 1930s, and 1940s to consider whether contextual factors, such as the discovery of vitamins and the relationship between diseases and lack of nutrients, influenced verbal and pictorial language relevant to health. Hence, these messages describe the food from a nutritional perspective, which differs from nineteenth-century examples, often portraying the food as pure to convince consumers about the product's health benefits regarding non-adulterated foods. All samples discussed in this chapter emerge from the criteria for selecting material in Section 2.3*: These labels contain information about particular beneficial nutritional properties such as vitamin D added, rich in vitamin C, or a good source of calcium*.

3. *Health messages in post-war labels for convenience food*
   The review in Section 3.2 shows a slight difference in promoting the food's nutritional content compared to the previous period. By, for example, displaying *enriched with* or *with extra vitamins*, the statements may indicate processed products whose health advantages depend on added artificial vitamins. The review also shows that several post-war labels include messages regarding slimming, weight loss and low calorie, which coincides with contemporaneous health concerns regarding obesity.

   This case study investigates post-war labels for convenience food to identify whether changes regarding diet and health after WWII influenced language and design. The chapter discusses breakfast cereal packaging and soft drink labels representing typical highly processed foods with added constituents, whether sugar, salt, vitamins, or chemical substances.

4. *Health messages for milk and milk-related products*
   Labels for milk and milk-related products occur across all three research periods. This case study investigates labels for milk as an example of a beverage associated with disgust and fear in the late nineteenth century which then moved towards a product perceived as pure, nutritious and health-giving in the twentieth century and beyond.

This chapter has presented a method for conducting a systematic review of food labels in order to identify and describe linguistic and graphic features. In addition, it has described the reasons and criteria for four proposed case studies to show topics as examples of how health messages are presented at a particular period in time. The following chapter describes and analyses informative and persuasive elements in two corpora. The first section gives an overview of typical graphic characteristics of food labels, while the second part reviews health messages in particular.

3.0 DESCRIBING GRAPHIC LANGUAGE OF FOOD LABELS

3.1 The organisation of typical visual characteristics

This chapter aims to better understand the informational structure of food labels by analysing informative and persuasive elements in two different corpora. The first section outlines typical graphic characteristics of food labels in general. This review provides a generally accepted outcome in terms of typography development; however, the investigation delivers an overview of the general landscape of food labels over the 120 years in question. The data is available in Appendix 1.

The second part of the chapter reviews food labels, including health messages,[23] identifying words, phrases, and pictures, all of which may suggest positive associations to health, or provide information about particular beneficial nutritional properties. The two studies draw on the descriptive framework outlined in the previous chapter to consider how typeface, size, colour, or pictures, depict a hierarchy of information.

This section describes verbal and visual attributes related to:

- Ingredient name
- Brand name
- Romance copy
- Additional copy
- Pictures

Identification

It is noted that in all three date ranges of the study, the ingredient name and brand name are used for the purpose of attracting attention, with romance copy providing a second layer of, often, persuasive text. Additional copy on the labels refers to facts, these elements are rarely employed to draw attention; however, they are evident on most labels as minor text.

Ingredient name and brand name

There are distinctions in terms of presentation, and levels of visibility, for prominent ingredients and brand names. For example, decorative features are often applied to the components of nineteenth-century food labels, which sometimes interfered with legibility even though they were prominent in terms of size. The use of decorative letterforms diminished from the 1920s in step with the growth of the food industry, with new products and brands selling similar items. This growth in consumer choice meant that there was an increased need for more precise and persuasive communication, and bold sans serif letterforms became widely

[23] The definition of health messages derives from the two categories defined in Section 2.3. *Implied* includes food labels with words, phrases or pictures giving positive associations to health. *Explicit* includes labels that contain information about added particular nutrients.

used.[24] The following food labels demonstrate significant graphic characteristics for emphasised ingredient and brand names across the three periods.

Figure 19. A label for pickles. *c.*1900.
Size: 112 x 72 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (47).

This example shows an early label emphasising the ingredient name in terms of position, size, and the use of curved, outlined, and ornamented, letterforms. The usage of decorated letterforms was likely part of the early nineteenth-century trend to attract attention to theatre bills, notices or posters (Twyman, 2008). Also, decorated qualities in food labels created an overall mood to attract affluent Victorian consumers (Klimchuk & Krasovec, 2012, p. 6).

Figure 20. A label for tinned peas. *c.*1930.
Size: 105 x 280 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (2a).

This inter-war label emphasises the brand name, excluding any decorative attributes and reflects the need for more precise and persuasive communication in the growth of new products and similar brands in the 1920s and 1930s.

Figure 21. label for chicken soup. *c.*1965.
Size: 110 x 230 mm.
Centre for Ephemera Studies, University of Reading.

To achieve the highest level of hierarchy for the ingredient name in this post-war label, size, position, and bold, sans serif letterforms are used.

---

[24] From the early twentieth century, the use of flourishing types faded, and a strong puritanical reaction to the previous century's excess of ornamented letter design developed. Edward Johnston was hugely influential in the design of updated letterforms. He was commissioned to design an easily identifiable alphabet for use on signs and publicity for the London Underground Railway. The main concern here was to design simple, legible letterforms, and the geometry of the letters, the thickness and the lack of serifs helped 'to convey something of the spirit of the machine age' (Twyman 1970, p. 76). As well as reflecting modernity, Johnston's letterforms were easily copied. As a result, a range of sans serif types of varying line thickness was produced, and bold sans serif letterforms were often employed in food packaging and advertisements 'to try and shout down its neighbours' (Hollis, 1997, p. 90).

The use of colour to emphasise brand and ingredient name

The use of colour in letterforms for brand and ingredient name is consistent across all periods. Red is often used to highlight the letters, or applied as a background, to accentuate white or another bright colour. Yellow is also commonly used as a background colour as it gives strong visibility to dark or red letterforms. The following examples demonstrate that red and yellow have been utilised throughout the research period to attract attention.

1850–1918

Figure 22.
From top left: The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 5 (80), 8 (122), 6 (47a).
From bottom left: The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (82c), 5 (98) and 5 (52a).

1918–1945

Figure 23.
From top left: The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (26), 5 (48a) 6 (19).
From bottom left: The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (34), 6 (6) and 6 (14).

1945–1970

Figure 24.
From top left: The Sainsbury´s Archive, Museum of London Docklands and Centre for Ephemera Studies, University of Reading.
From bottom left: John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P7 and P14, Centre for Ephemera Studies, University of Reading.

Romance copy

Romance copy is most frequently observed in the secondary and tertiary hierarchical levels. Regular sans serif predominates all periods. Only a few statements employ outline and shadow, while decorated qualities are rarely observed. Bold letterforms are scarce on nineteenth-century labels but predominate the second research period. Two different types of romance copy are identified (*poetic* and *functional*): poetic is most frequently observed and is associated with the lack of logical preferences, often referred to as food marketing language (Cook, 2010). Typical words to convince consumers of good food quality are *genuine*, *fresh*, *pure*, *or best*. Functional descriptions exist to describe the contents of food packaging, it is unemotional and serviceable. For example, *evaporated*, *cooked*, *dried*, and *frozen*; words mainly observed on labels from the early twentieth century onwards.

The following examples demonstrate typical poetic descriptions from the three research periods.

Figure 25. Label for tinned spiced beef. *c.*1900.
Size: 112 x 349 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 5 (58).

Warranted, Genuine Prime Meat describes the food's quality in this label from 1900, which shows the use of persuasive language without factual content. In addition, a diagonal banner improves visibility for the description, and sans serif letterforms demonstrate the predominance observed for romance copy in this typographic level. Finally, a diagonal banner keeps the phrase together, improving the visibility. However, diagonal orientation for presenting descriptions is rare across all periods.

Figure 26. A label for milk and honey biscuits. 1920.
Size: 237 x 237 mm.
University of Reading, Collections. HP 151.

While labels in the first research period include specific words such as *genuine* and *pure*, a language change is observed a few decades later. Instead, evocative words and phrases appeared, such as *They're Delicious*, seen in this example. A script typeface indicates that someone speaks.

Describing the food in terms of its country of origin or production is mainly observed on food labels from the early twentieth century. Such information may be perceived as fact without adding any evocative bias. On the other hand, the descriptions do evoke emotion regarding buying food produced at 'home'. For example, poor quality imported canned food from the USA (Burnett, 1979, p. 134) may have led the growing British canning producers to emphasise the quality of their food by stating the country of origin, such as *English, Scottish* or *Home Grown* (Fig. 27).

Figure 27. A label for tinned vegetable salad. *c.*1925.
Size: 58 x 280 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (7c).

In this label, *Home Grown* describes the food´s quality in its production country, which may have led to desired affiliation and enthusiasm among the public.

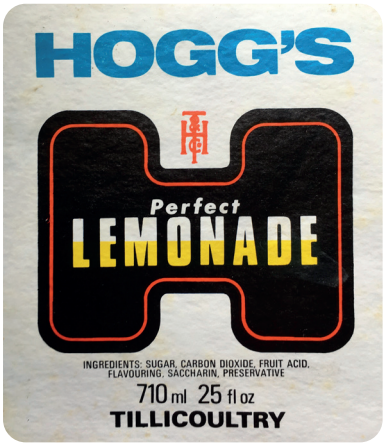


Figure 28. A label for lemonade. *c.*1950–*c.*1970.
Size: 90 x 75 mm.
Centre for Ephemera Studies, University of Reading.

Post-war items also include a wide range of descriptions using evocative, non-factual language. However, the language appears to be slightly different from previous food labels, and many descriptions make little sense, such as *Perfect Lemonade* in this example. The use of language likely indicates the need to use unique and unexpected words to stand out from similar products.

Additional copy

Additional copy refers to factual information without reference to food quality and includes information such as, *place of production*, *weight*, *directions for use*, or *ingredient list*. This information is frequently displayed using a minor type, typically presented in regular sans serif letterforms. As nineteenth-century food packaging usually has little space on the panel for print, all information is gathered on the front. However, from the early twentieth century onwards, additional copy frequently appeared on a side or a back panel and thus became less noticeable. Figures 29–31 demonstrate characteristic labels from the three research periods.

Figure 29. A label for onions. *c.*1900.
Size: 110 x 78 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (42).

Factual information, in this example, the manufacturer's address, on the front of the label.

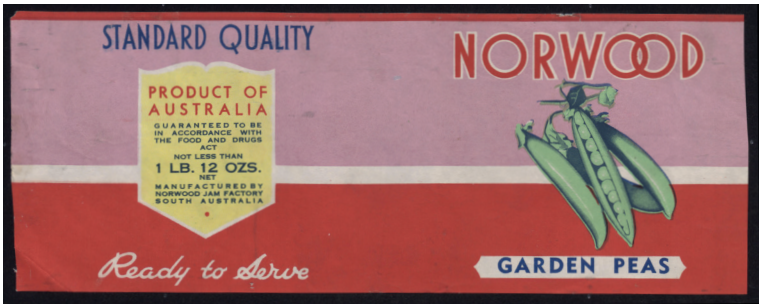


Figure 30. A label for garden peas. *c.*1925.
Size: 109 x 286 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6(19).

This early twentieth-century food label presents factual information on the back panel, providing more prominence to the brand and ingredient name on the front.

Figure 31. A pack for chicken stock. *c.*1960.
Size: 62 x 52 x 15 mm.
The Sainsbury´s Archive, Museum of London Docklands.
Ref. No:SA/PKC/PRO/1/14/2/2/43/2.

This post-war food label displays factual information on the back of the packaging. Framing the information and applying a particular colour gives prominence to the information.

Pictorial components

The use of pictures in the sample of labels is significant; however, there are considerable variations in content, style, and treatment, across the research periods. For example, there is extensive use of representational drawings depicting nature on nineteenth-century labels. Without any apparent associations with the product inside the packaging, pictures of landscapes or flowers would attract attention by idealising the food or one of the ingredients. Hence, the use of such pictures may subliminally (and perhaps fraudulently) suggest that contaminated food is pure and free from harmful substances. Additionally, there is a significant usage of coats of arms, trademark symbols and decorative frames on labels from the same period. This coincides with the widespread use of ornamented letterforms mentioned earlier in this section, signifying that early labels were designed to create a general sense of grandeur to attract wealthy Victorian consumers.

From the early twentieth century onwards, several examples picture an ingredient, or display the product fully prepared, to indicate how the food may form part of a meal. Pictures of fruit and vegetables relevant to the food are observed on labels across all periods, while pictures of products with no relevance are rare. Also, the employment of animals with relevance to the food is identified a few times and is particularly noteworthy on packaging for fish and milk. The following examples demonstrate different use of pictures through the research period.

Figure 32. A label for tinned salmon. c.1880.
Size: 100 x 262 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (65).

This label is typical of those from the late 1800s and early 1900s and includes representational drawings portraying nature. The image on the right depicts the name of the brand by showing a pictorial description of place of origin, while the picture of fish on the left have relevance to what is in the tin.

Figure 33. A label for apple juice. 1964.
Size: 125 x 168 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: P14.

The image of raw apples in this post-war label serves as an indication of the content, which is apple juice.

Figure 34. A pack for whole wheat bisk. c.1970.
Size: 175 x 239 x 49 mm.
The Sainsbury´s Archive, Museum of London Docklands. Ref. No:SA/PKC/PRO/1/13/2/1/9/3.

The content of this box is apparent on this packaging. Such images are mainly observed from the early twentieth century onward.

Figure 35. A label for chicken soup. *c.*1960s.
Size: 110 x 230 mm.
Centre for Ephemera Studies, University of Reading.

The label shows how a domestic setting image with genuine ingredients shows similarities with a fresh, homemade soup arriving directly from someone's kitchen. Domestic setting images are mainly observed from the early twentieth century onward.

3.2 Health messages

The following section reviews food labels which include health information. The study aims to identify the integration of health messages on labels to understand information structure, and to recognise how verbal and pictorial language conveys the food's health benefits. This research draws on the descriptive framework outlined in the method chapter to consider how typeface, size, colour, and pictures convey information.

This section describes verbal and visual attributes for health messages related to:

- Romance copy – poetic descriptions
- Poetic descriptions as minor text
- Additional copy
- Ingredient name and brand name
- Pictures

Romance copy – poetic descriptions

Most health information appears as romance copy and is specifically identified as poetic description across all the periods in question. While some labels give prominence to these health messages, most feature as secondary or minor text. Health messages that describe the quality of food may indicate that it is free from harmful or unnecessary ingredients, through the use of words such as *pure*, *natural*, or *healthy*. Other messages describe nutritional properties with phrases such as *high content of vitamins* or emphasise that food is low in calories by employing the word *slimline*. Table 7 on the next page, summarises poetic description with relevance to health across all typographic levels and time periods, and provides an overview of descriptions promoting health benefits across all typographic levels and periods.

ROMANCE COPY PROMOTNG HEALTH BENEFITS			
	1850–1918	**1918–1945**	**1945–1970**
PRIMARY TEXTUAL INFORMATION	• Pure • Pure jams & jellies • Pure malt vinegar • Healthy childhood promotes robust manhood	• Fresh, ripe fruit • Pure beef • Pure butter • Vitamin, English peas	• No added colour • Pure • With extra vitamin C • Low fat • Low calorie • Slimline
SECONDARY TEXTUAL INFORMATION	• Purity • Purity • Pure • Pure • Pure country • Pure production • Pure • Pure • Nutritive • Pure malt • Warranted pure • Warranted pure • Warranted free from any injurious • Pure wheat • In pure olive oil	• Safe and pure • Rich in vitamins • Pure sugar • Build bones • Contains vitamin A and D • Vitamin D • Contains Vitamin A + D • Contains healthgiving vitamlns • Enjoy good health • Vitamin D increased • Vitamin D • Soups that nourish • Delicious and nutritious • For special diets • Highly nutritious	• Vitamin C healthdrink • Low calorie • Extra rich in vitamin C • A tasty and nutritious food • Pure olive oil • Pure olive oil • Free from preservatives and colour • Enriched with iron • Whole wheat cereal with extra vitamins • Light • The natural taste for living • Natural foods • Starch reduced • Rich in vitamin C • Low fat • Rich in vitamin D • Pure • Contains real fruit • Rich in vitamin C • Natural vitamin B6 and E ...
TERTIARY TEXTUAL INFORMATION	• Proper food for man • Wholesome / Nutritious • Pure • Contains mixed phosphates .. forming the substances of Bone Brain and Nerve • Pure fruit, pure sugar • Pure and wholesome ingredients • Prepared from the pure fresh ... • Pure • Pure • Of the purest manufacture • Pure vinegar • Pure oil • Pure	• Pure • Guaranteed pure • Pure, fresh cows milk • No artificial colouring • Pure, free from artificial • Natural vitamins and minerals • Good source of vitamin A & C • To comply with all the pure food laws • Vitamin D fortification • Vitamin D fortification • Excellent source of vitamin A & C • Source of vitamin A & C • High percentage of protein	• Wholesome, nutritious • Products are pure and no colouring or preservatives are added ... • Brings you the light and refreshing way to drink your health • One of the richest sources of natural B vitamins • Provides at least one quarter of the recommended daily intake of these vitamins for the average adult • Light low calorie ... A natural whole-grain taste with a light melt-in-the-mouth texture ... help keep you slender and healthy • Comes from all the country goodness of barley, malt, milk and eggs • Enriched with vitamins • It helps to give nourishment • Natural goodness

Table 7. An overview of descriptions promoting health benefits across all typographic levels and periods.

The most common description *pure*[25] is more frequently observed in nineteenth-century food labels. The widespread use of this word demonstrates the manufacturer's need to inform the public about positive changes concerning food production which had involved food adulteration for years. Hence, describing foods as *pure* on a label was not only a vehicle for advertising the improved quality of a product, but could also indicate the possible negative consequences of consuming adulterated products from a different manufacturer.

From the early twentieth century the promotion of the nutritional properties of food transpired, and new kinds of health messages related to vitamins appeared, such as c*ontains vitamin A + D* or v*itamin D increased*. Also, there is an apparent change in language, with a move towards adding more poetic terms to descriptions.

[25] An investigation of food labels, including *pure*, is broadly discussed in Chapter 4.

For example, *rich in ..., excellent source of ...,* or *health-giving,* are all phrases used to indicate significant vitamin content. However, many descriptions are vague, lack verifications, and seem to only be employed as marketing or to distinguish food from similar products. Post-war labels continued to include vague descriptions regarding health and nutrition, however, this was often utilised in more expressive and detailed language, such as *Brings the light and the refreshing way to drink your health* and *One of the richest sources of natural B vitamins.* Additionally, slimming and low-calorie descriptions appear on post-war labels, this messaging was not observed on earlier items.[26]

The visibility of such health messages varies according to the period and the design of the labels. Table 8 shows the distribution of different kinds of letterform for romance copy promoting health benefits across all typographic levels and periods.

ROMANCE COPY PROMOTNG HEALTH BENEFITS

		PRIMARY TEXTUAL INFORMATION			SECONDARY TEXTUAL INFORMATION			TERTIARY TEXTUAL INFORMATION		
		1850–1918	1918–1945	1945–1970	1850–1918	1918–1945	1945–1970	1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	0	0	0	4	0	2	5	4	3
	Sans serif	4	5	7	11	13	18	8	9	7
	Script	0	0	0	0	3	0	0	0	0
TREATMENT OF LETTERFORMS	Outlined	2	1	0	3	3	0	0	0	0
	Shadow	3	0	0	0	0	0	0	0	0
	Decorated	0	0	0	0	0	0	1	0	0
	Regular	0	0	1	8	8	9	11	12	9
	Bold	4	5	6	7	7	11	2	1	1
	Black only	0	1	0	8	1	3	2	9	5
	One colour	4	2	7	6	10	13	11	4	5
	Several colours	0	2	0	1	5	4	0	0	0
ORIENTATION OF TEXT	Horizontal	1	2	5	13	11	15	11	13	9
	Vertical	0	0	1	1	0	0	1	0	0
	Diagonal	0	0	0	0	1	3	1	0	1
	Curved/circle	3	3	1	1	4	2	1	0	0

Table 8. The table shows the distribution of different letterforms and their features for presenting health information as romance copy across all typographic levels and periods. For example, bold sans serif predominates prominent descriptions. Bold and regular sans serif are equally observed in the second typographic level, and regular sans serif predominates usage for the minor type. In addition, the presentation of information varies between letterforms employed in black, one, or several colours, across the periods.

[26] The earliest recorded usage of the word 'slimline' seems to have been the early 1950s. https://www.collinsdictionary.com/dictionary/english/slimline)

The review shows that letterforms and their treatments support the visibility of health messages. As expected, a larger size and bold sans serif used for descriptions are on the highest level of hierarchy. In contrast, regular sans serif is equally observed throughout the second typographic level, and minor type predominates. From the nineteenth and early twentieth centuries script letterforms are scarcely identified, and outline and shade are only occasionally employed.

The display of information varies between letterforms using black, one, or several colours, across the periods; however, one colour printing dominates. No significant or particular colour is observed, as the usage depends on the design or the desired prominence. Most descriptions are positioned horizontally on the labels, although some text is set in a curve. Again, the orientation of textual descriptions seems relatively dependent on the overall design or, to some extent, to achieve a higher level in the hierarchy. Although the health messages appear at different typographic levels, the letterforms and their treatments generally show at least a moderate level of legibility. The following examples show food labels in which health messages that appear as romance copy are given different degrees of prominence.

A 1900s label for Quaker Oats in Figure 36 describes the food as *pure,* suggesting that the product is free from harmful or unnecessary ingredients. In order to give prominence to this message, large text, red print, and outlines are used. Framing the word in a curved banner provides additional emphasis.

Figure 36. A label for Quaker Oats. *c.*1900.
Size: 195 x 105 mm.
University of Reading, Special Collections. HP 280.

An example of how a poetic description promoting health benefits draws attention to the packaging; to achieve the highest level of hierarchy for pure, typographic emphasis is shown through size, sans serif letterforms, and red colour.

Highlighted descriptions are also identified on early twentieth century labels, emphasising pure food. Bold sans serif letterforms provide prominence, however, there is less use of shade and outline. Persuasive health messages in post-war labels hold a different tone and, as summarised in Table 7, some food is described as *slimline, low fat* or *low calorie*. For example, in the Schweppes *American Ginger Ale* label shown in Figure 37 the word *slimline*, suggests a product that is healthy because it contains little or no sugar. Large and bold sans serif letterforms give prominence to the message. The use of condensed typeface suggests connotations of slimming to further reinforce the impression of a low-calorie product.

Figure 37. A label for ginger ale. *c.*1965.
Size: 66 x 100 mm.
Centre for Ephemera Studies, University of Reading.

Slimline indicates a slimming drink. In order to highlight the health message, typographic emphasis is employed through size and bold sans serif. In addition, condensed typeface denotes slimming and reinforces the impression that this is a low-calorie product.

However, across the three research periods most poetic descriptions promoting health benefits are not prominent. In Figure 38, although the description *WARRANTED PURE* appears in the second typographic level, the message is still noticeable due to its position and sans serif letterforms. The use of outline and shadow may increase attention to the word.

Figure 38. A label for onions. *c.*1900.
Size: 110 x 78 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (42).

Although *WARRANTED PURE* in this label appears in the second typographic level, the message is still noticeable due to its position and sans serif letterforms.

From the early twentieth century, some poetic descriptions refer to the food's nutritional properties, such as *Rich in vitamins, Soups that nourish* or *Highly nutritious,* as illustrated in Figure 39. Typographic emphasis is employed through regular sans serif letterforms and displayed in one colour, although bold sans serif is just as commonly observed in other samples.

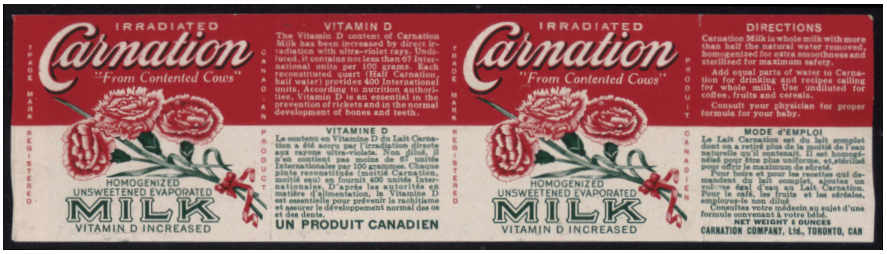


Figure 39. A label for evaporated milk. *c.*1920–*c.*1930.
Size: 53 x 200 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (92b).

This label refers to the food's nutritional properties and displays *VITAMIN D INCREASED*. Typographic emphasis is employed through regular sans serif letterforms and is displayed in green.

Post-war labels display a diversity of poetic descriptions promoting the food's health benefits. As well as referring to the food's nutritional properties (Fig. 40), labels often carry messages regarding non-sweetened or low-calorie food, conveying that the associated products may contribute to a healthier lifestyle (see Fig. 41). Typographic emphasis is employed through bold sans serif letterforms, which, along with regular sans serif, are characteristic features found in numerous descriptions. The diagonal orientation used in Figure 40 increases the visibility of the health message, but generally a horizontal position is observed in other samples.

Figure 40. Packaging for rye crispbread. *c.*1970.
Size: 50 x 140 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P7.

Figure 41. A label for lemon flavour drink. *c.*1960.
Size: 110 x 85 mm.
Centre for Ephemera Studies, University of Reading.

Both post-war labels include poetic descriptions promoting the food´s health benefits. While Figure 40 refers to the food´s nutritional properties, Figure 41 carries a message regarding low-calorie food. Typographic emphasis is employed through bold sans serif letterforms.

Poetic descriptions as minor text

Some health messages are poetically described in very small print. This is evident across all periods. The following three labels demonstrate representative examples from the three research periods.

Figure 42. A label for mustard. 1868.
Size: 184 x 124 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (32).

One panel characterises most nineteenth-century food packaging, as demonstrated in this example. The label promotes pure food manufacture presented as minor text.

Figure 42. A label for tinned evaporated milk. *c.*1920–*c.*1930.
Size: 91 x 241 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (99).

This example is a typical twentieth-century label utilising a side panel to display elaborated descriptions emphasising the food´s nutritional properties.

Figure 44. A packaging for rye crispbread. *c.*1970.
Size: 395 x 150 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P14.

In this post-war label, the health message is poetically described in tiny print and applied to the back of the packaging. The descriptions utilise an expressive and detailed language that combines health messages with other words packed with vague and persuasive content such as *A natural, whole-grain taste with a light melt-in-the-mouth texture*.

Additional copy *– Scientific and verified information*

Additional copy relevant to health typically refers to information demanded by legislation, such as verifiable nutritional content. However, few labels before the 1930s included this kind of information. New technology used in food processing and composition led to an increase in the manufacture of pre-packed food, and consequently, a need for standardising and regulating labelling. For example, the *Labelling of Food Order, 1946,* ruled that where a vitamin or mineral claim appeared on labelling, nutrition labelling to identify the present vitamin or mineral quantity was compulsory (Turner, 1995, 2007).[27] Verifiable nutritional information is only observed as the minor type on packaging from the corpus.

ADDITIONAL COPY PROMOTNG HEALTH BENEFITS				
TERTIARY TEXTUAL INFORMATION		**1850–1918**	**1918–1945**	**1945–1970**
LETTERFORMS	Serif	0	0	1
	Sans serif	0	0	15
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	0	0	0
	Shadow	0	0	0
	Decorated	0	0	0
	Regular	0	0	15
	Bold	0	0	1
	Black only	0	0	3
	One colour	0	0	11
	Several colours	0	0	2
ORIENTATION OF TEXT	Horizontal	0	0	14
	Vertical	0	0	1
	Diagonal	0	0	1
	Curved/circle	0	0	0

Table 9. The distribution of different kinds of letterforms for additional copy promoting health benefits in the tertiary textual information level (the smallest type). No such information is observed in the other two hierarchical levels.

[27] The *Labelling of Food Order, 1946* also provided other specific requirements, such as giving details about the appropriate designation of each ingredient listed in descending order of use. Additionally, it was compulsory to include the packer´s name and address, a declaration of the ingredients from which the food was made, and the minimum contents of the package.

Regular sans serif predominates in the descriptions, frequently presented horizontally and schematically. Information is usually displayed in black or one colour on a bright background, providing good contrast despite the small type. A side panel on a post-war pack for Kellogg´s *Corn Flakes* represents a typical example of this (Fig. 45).

Figure 45. Part of a side panel for Kellogg´s Corn Flakes packaging. *c.*1970.
Size: 180 x 70 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P1.

This side panel on the post-war pack for Kellogg´s *Corn Flakes* represents a typical example, including factual information regarding the food´s nutritional content. Horizontally and schematically presented, black, regular sans serif letterforms on a bright background provide sufficient legibility.

This side panel on the post-war pack for Kellogg´s *Corn Flakes* represents a typical example, including factual information regarding the food´s nutritional content. Horizontally and schematically presented, black, regular sans serif letterforms, on a bright background, provide sufficient legibility.

Ingredient names and brand names promoting health benefits

Although most health information appears as romance copy, a few ingredients and brand names linked to health are observed on early twentieth-century and post-war food labels. For example, milk- and fruit drinks may include ingredient names associated with health benefits (milk, oranges, etc.). In addition, health brands, such as Kellogg´s or Horlicks, suggested that their foods were healthy by introducing a connection between the product and brand with health values.

Table 10 shows the distribution of different kinds of letterforms for persuasive ingredient and brand names promoting health benefits across all periods.

INGREDIENT NAME AND BRAND NAME PROMOTNG HEALTH BENEFITS				
PRIMARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	0	2	0
	Sans serif	1	5	9
	Script	0	0	1
TREATMENT OF LETTERFORMS	Outlined	0	3	2
	Shadow	0	3	1
	Decorated	0	0	0
	Regular	0	0	0
	Bold	1	7	10
	Black only	0	1	1
	One colour	1	3	7
	Several colours	0	3	2
ORIENTATION OF TEXT	Horizontal	1	5	7
	Vertical	0	0	0
	Diagonal	0	0	1
	Curved/circle	0	2	2

Table 10. Labels which include ingredient or brand names for promoting health are mainly observed as prominent elements in early twentieth-century and post-war food labels — the table shows the distribution of different letterforms and their characteristics.

As expected, larger sized and bold letterforms are used on the top level of hierarchy for these elements. In contrast, instances of serif and sans serif are found in equal numbers. The use of serifs often seems related to particular brand names and logos. The use of outline and shade is occasionally observed while decorated letterforms are not identified. Most elements are positioned horizontally, although some are set in a curve. The following examples show food labels where the prominent ingredient or brand name promotes health benefits.

The ingredient name *WHOLE ORANGE DRINK* in Figure 46 suggests that the drink contains fresh oranges, associated with nutrition and health benefits. The ingredient name is given prominence by position, size, and bold, red, sans serif letterforms. Giving typographic emphasis

to the name effectively diminishes the position of main ingredient, which is sugar (see ingredient list).[28] Giving prominence to an ingredient name associated with nutritional properties even though there is a high sugar content could influence the perception of this being a healthier drink than is the case.[29]

Figure 46. A label for orange drink. *c.*1970.
Size: 95 x 85 mm.
Centre for Ephemera Studies, University of Reading.

This label highlights the ingredient name, which may instantly associate the beverage with fresh, nourishing oranges despite high sugar content.

Letterforms sometimes apply a colour referring directly to the ingredient, such as red observed in the label for tomato juice in Figure 47. Consequently, the colour may connote freshness and naturalness as well as provide ingredient information.

Figure 47. A label for tomato juice. *c.*1930–*c.*1940.
Size: 110 x 228 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 19 (75b).

In this example, the colour of the letterforms refers directly to the ingredient. Red may well lend itself to associations of raw, nutritious tomatoes.

---

[28] *The Labelling of Food Order, 1946*, required the following: 'For compound foods, the common or usual name (if any) of the food and the appropriate designation of each ingredient and, in descending order of use unless the quantity of each ingredient was specified' (Turner, 2007, p. 163).

[29] This issue will be addressed in Case study 3, Chapter 6, discussing the marketing of health benefits on packaging in post-war Britain.

Milk is also closely associated with nutritional properties, and the word is observed to be prominent on several early twentieth-century evaporated milk labels (Fig. 48).[30]

Figure 48. A label for tinned evaporated milk. *c.*1920–*c.*1930.
Size: 91 x 241 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (99).

This evaporated milk label highlights *MILK* and draws attention to a drink associated with nutritional properties.

Health brand names may appear as suggestive or non-suggestive.[31] Figure 49 shows an example of a suggestive brand name, which draws attention to the label. The brand name, Vitamin, helps to establish the perception that the food contains nutritional properties. However, the company itself may not explicitly communicate health values. In order to achieve the highest level in the hierarchy for the brand name, typographic emphasis is given through size, colour contrast, and bold sans serif letterforms.

Figure 49. A label for sweet potatoes. *c.*1960–*c.*1970.
Size: 230 x 230 mm.
Privat collection.

Vitamin Brand in this label helps establish a healthy image of the food. The name is given typographic emphasis through size, colour contrast and sans serif letterforms.

---

[30] A case study of food labels for milk and milk-related products is thoroughly discussed in Chapter 7.

[31] The term health brand for this study is explained in Section 2.1.

Figure 50 shows an example of a non-suggestive brand name drawing attention to the label through size, colour contrast and bold letterforms. Horlicks promoted their products for decades through extensive advertising campaigns which, in turn, established an image of a healthy and nourishing drink to be consumed as an energy builder (Ward, 1994).[32] Consequently, consumers would effortlessly associate the brand with health values and a drink with nutritional properties.

Figure 50. A label for Horlicks. *c.*1970.
Size: 65 x 285 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P7.

This example includes a non-suggestive brand name with no immediate associations to any health. Instead, consumers are gradually convinced, through different marketing strategies, about the advantages and the nutritional content of the product.

[32] The History of Advertising Trust holds several print advertisements from the early 1900s promoting good health through consuming drinks.
https://www.hatads.org.uk/catalogue/search.aspx?Kwrd=Horlicks
https://www.hatads.org.uk/catalogue/search.aspx?Kwrd=Ovaltine
Examples of advertisements for Horlick´s and Ovaltine can also be found in Appendix 3.

Pictures / illustrations

Pictures also deliver health messages and may show a healthy food or communicate an emotional response, thus linking the visual story to associations of (good) health.

PICTURES PROMOTING HEALTH BENEFITS				
CONTENT		**1850–1918**	**1918–1945**	**1945–1970**
NATURAL	Nature (landscape, flowers, branches)	5	5	0
	Fruit and vegetables with relevance to the food	19	15	22
	Fruit and vegetables with no or little relevance to the food	8	3	2
	Animal with relevance to food	1	2	0
	Animal with no relevance to the food	0	0	0
	Farm	2	0	0
	Domestic setting	0	2	8
THE INGREDIENT	Refers to the specific ingredient, e.g., whole peas or strawberries	0	6	9
PEOPLE	Child	0	3	1
	Adult	1	2	5

STYLE AND TREATMENT		**1850–1918**	**1918–1945**	**1945–1970**
DRAWING	Representational	32	31	12
	Schematic	4	7	5
	Cartoon	0	0	0
PHOTOGRAPHY	Photograph	0	0	30
COLOUR OR NOT	Black and white	0	0	0
	Single colour	2	6	7
	Several colours	34	32	40

Table 11. The distribution of different pictures promoting health benefits across all periods.

All pictures identified in the nineteenth-century labels and most early twentieth-century examples are representational drawings. Post-war labels primarily contain photographs. Regardless of the period, nearly all pictures are produced in full colour. The following section provides examples of the most relevant types of pictures promoting health benefits observed for this study.

Nineteenth- and early twentieth-century labels often feature pictures of nature in order to associate the food with purity and freshness.

Figure 51. A label for pickles. *c.*1900.
Size: 110 x 76 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (40).

An example of how a picture of nature is used to signify pure production; the visual romanticises the environment to idealise the perception of clean food.

Pictures of fruit and vegetables promoting nutritional benefits are evident across all research periods. For example, pictures on labels for different soft drinks may show the ingredient, a flavour, or a substance, relevant to the beverage.

Figure 52. A label for orange and lemon drink. *c.*1970.
Size: 63 x 290 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P7.

The picture of fresh oranges and lemons in this label is relevant to the drink; however, although consumers may associate the beverage with fresh, nourishing citrus fruits, this beverage includes reconstituted apple juice undergoing a heating process that has destroyed most of the essential nutrients in the original fruit (Hamilton, 2009).

Visuals for healthy content packaging often deal with food which is perceived as beneficial to the consumer due to the employment of health brands (discussed above) and extensive marketing campaigns. Typical examples are Kellogg's breakfast cereals and Weetabix; both promoted as health foods from the early twentieth century (Collins, 1994).[33]

Figure 53. A pack for Weetabix cereal. *c.*1970.
Size: 240 x 320 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P15.

The image of cereals on this pack shows the exact ingredient. However, health benefits usually depend on public awareness of the applied health brand, and extensive marketing campaigns.

Depictions of children or adults occasionally indicate health benefits, primarily by communicating a feeling or emotion, or promoting associations with wellbeing. For example, nineteenth-century labels may present a picture of a capable-looking farmer to emphasise a pure product. In contrast, later food labels indicate nutritious products by depicting a pink-cheeked, smiling and healthy child. There seems to be a move towards using pictures appealing to the consumer in order for them to self-identify with the images.

Figure 54. A label for green beans. c.1930–39.
Size: 65 x 192 mm.
History of Advertising Trust, HZ 5/1/6.

Pictures of children occasionally indicate health benefits, primarily by communicating a feeling of, or being associated with, wellbeing. For example, the picture on this label indicates a beneficial product by depicting a pink-cheeked, smiling and healthy child.

[33] The use of pictures to promote convenience food is addressed in Case study 3, Chapter 6.

Pictures of adults on post-war drink labels sometimes include silhouettes of women to indicate a slimming low-calorie beverage.

Figure 55. A label for orange flavour drink. *c.*1960.
Size: 110 x 85 mm.
Centre for Ephemera Studies, University of Reading.

The silhouette of a woman on this post-war drink label indicates a low-calorie and slimming beverage.

Domestic setting images are mainly observed on post-war packaging, and pictures may contribute to increasing the perception of a healthy product.

Figure 56. A pack for soft margarine. *c.*1970.
Size: 300 x 215 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P14.

A domestic setting image presents fresh vegetables combined with the package's content on this post-war label. The vegetables visually emphasise the benefits of margarine made with 100% pure vegetable oil in this item. Additionally, the picture contributes to increasing the perception of a healthy product.

3.3 Discussion

The systematic review aims to better understand the informational structure of food labels, within the three research periods, by identifying informative and persuasive elements in two different corpora. While the first section outlines typical graphic characteristics of food labels, the second part shows the implementation and presentation of health messages. The final section concerns some general observations from the review and discusses branded food, hierarchy, legibility, and use of colour. The themes deal with significant topics that will continue through the following discussions in the four case studies.

Trademarked food and brand names were established from the mid-1800s in order to garner public awareness, and also to make a packaged product look appealing (Klimchuk & Krasovec, 2012, p. 8). Using a brand name on packaging identifies the relationship between the owner and the products, and later, distinguishes them from competitors; it also guarantees the quality of the goods (if it were a reputable brand) (Moor, 2007, p. 16). Food labels across all periods show that brand names are placed into the highest level of typographical hierarchy; however, striving for legibility, in some nineteenth-century examples, seems less critical than attractiveness. For example, as lettering includes decorative qualities, the brand names are often integrated into the design itself. This can be seen as a feature of Victorian ephemera in general; matchboxes, patent medicine bottles and boxes, and invitations show similar designs and purposes.[34]

> The Victorian conception of lettering was a very elastic one, and letterforms were often elaborated and distorted with abandon, either for decorative purposes or in order to create an overall mood. Legibility, if it was considered at all, was usually of minor importance, and in some examples of the period lettering is so effectively integrated with the total design that it is hardly even noticed (Twyman, 1970, p. 75).

However, from the beginning of the twentieth century, a vast number of brand names employed on food packaging are on the highest level of hierarchy, showing good legibility due to size. Initially there was an influential and rigid reaction to the excesses of letter designs, and the richness in lettering for decorative purposes began to fade (Twyman, 1970). This change in visual taste influenced packaging design, and bold, sans serif letterforms were used to signify most brand names from the early twentieth century onward. As the food industry grew, new products and similar brands emerged and there was an increased need for more precise and persuasive communication. It is also well known that branding developed

[34] Several examples can be found in Davis, 1967, and Twyman, 2008.

from trademarked property and ownership through connotations of different values and meanings (Moor, 2007, p. 15), and the need for brand names to stand out from each other increased.

On the other hand, giving prominence to brand names may also correlate to Moor's discussion regarding the *imagined community* during the early twentieth century. As food previously had been sold locally by retailers, '... brand name consumer goods were reproduced on a large scale and yet addressed their audience 'intimately' as a part of a common, known group' (Moor, 2007, p. 20).

Packaging, names, logos, and imagery circulated across the country. Consumers buying particular brand named foods would have been aware that there were thousands of others consuming similar foods and, through recognition, shared a particular and bounded language field with others. Thus, giving importance to brands increased in the national consciousness and contributed to the creation of 'unified fields of exchange and communication' (Anderson in Moor, 2007, p. 20). Hence, describing branded goods by stating the country of origin with *English* or *Home Grown*, as shown in Figure 27, may have contributed to this recognition and desire to join the *imagined community*. Also, imported branded foods could be given similar status, as manufacturers addressed their audience as part of a worldwide, known group. This reflection can also be related to health brands. For example, as Kellogg´s and Horlicks promoted their brands and products for decades, in order to establish an image of healthy foods and drinks, consumers would, first of all, gradually associate the brands with health values and recognise foods with nutritional properties. On the other hand, buyers purchasing a particular health-branded food would also have been aware of others consuming similar healthy products. Food can also perform a social function linked to the feeling of collective identity (Pereira, 2021, p. 566),[35] as individuals may be encouraged to not only embrace a specific dietary lifestyle themselves but also on behalf of a group (Judge, Fernando, and Begeny, 2022). For example, by belonging to the Vegetarian Society, established in Britain in 1847 (Shapiro, 2008), or today, adopting a vegan lifestyle, consuming specific food may work as being part of a collective identity. Hence, specific brands, health claims, or information on labels, would also be crucial to choosing the appropriate food.

As a result of the increase in new brands and self-service stores from the mid-twentieth century, manufacturers had to make their packaging unique and quickly identifiable. 'When rival products are much the same, the package must be used to exploit what tiny variations there are. Quite often, it is used to create uniqueness where none exist' (Pilditch, 1973, p. 3). Verbal and visual elements are generally, and as expected, employed

[35] In terms of 'collective identity' Pereira refers to the book: Fischler C. *L'Homnivore: le Goût, la Cuisine et le Corps*. Paris: Odile Jacob; 2001, p. 440.

to inform the consumer of the brand and what is inside the packaging, so their purpose should be to communicate effectively. However, prominent information might establish individual expressions of apparently similar foods. The following food labels for orange juice represent a typical example.

Figure 57. A label for whole orange drink. *c.*1970.
Size: 95 x 85 mm.
Centre for Ephemera Studies, University of Reading.

Figure 58. A label for Suncrush orange drink. *c.*1950–*c.*1970.
Size: c. 50 x 70 mm.
Centre for Ephemera Studies, University of Reading.

Two post-war labels for orange drinks. Based on the ingredient lists, the two products seem identical. However, two unique expressions emerge due to emphasising either the ingredient name or the brand name.

In terms of the ingredient lists, the labels in Figures 57 and 58 represent two identical beverages. However, the items appear differently due to the emphasised verbal and pictorial elements.

The ingredient name in Figure 57 seeks to attract attention to the drink giving prominence to *WHOLE ORANGE DRINK*. The image of fresh oranges visually replicates the name of the product, indicating its main component. This also contributes to an immediate appeal and captures attention. In this example, it seems unnecessary for the consumer to decode the cues, as the name and picture address the packaging content. However, by reading the ingredient list, it is apparent that fresh oranges are not a significant part of the beverage which brings a slightly different

purpose to the graphics. Rather than representing the main ingredient, the persuasive elements idealise some substances, and consumers might perceive a drink as fresher than is the case.

Several current studies analyse the effect of images on food packaging and show that pictures of fresh ingredients affect approval, willingness to buy, and perceptions of health and quality (Lidón et al., 2018). Thus, an image of whole oranges in addition to the prominent verbal presentation of the ingredient, may have created a sense of quality and content, that effectively dominated factual information.

Figure 58 represents a similar orange drink. However, instead of verbally and visually giving prominence to fresh oranges, the label emphasises the brand name. Although Suncrush may possibly indicate a drink prepared from oranges, giving emphasis to the name would firstly draw particular attention to the brand rather than the nutritional content depicted by a visual of fresh oranges. Recognising the brand name from previous purchases could result in buying the beverage. On the other hand, additional verbal components such as *ORANGE DRINK* and *MADE FROM WHOLE FRESH ORANGES,* in the second and tertiary layers of information, to some extent, may have influenced the perception of a nourishing drink similar to that in Figure 57. Nevertheless, these two examples demonstrate that prominent verbal components immediately create individual expressions for seemingly identical products. In terms of labels promoting health benefits, typographical hierarchy, whether used for health brands, ingredient names, nutritional information, or images, may well influence how consumers perceive the food, through the implementation of highlighted verbal and visual elements. Also, as seen in the two examples, textual elements enhanced by verbal or visual components may 'override' factual information, creating less effective or potentially unclear communication. These approaches are thoroughly discussed in Chapter 6, *How diet and health are reflected on labels for convenience food*.

Verbal persuasion usually refers to increased type size or significant typographical characteristics and is observed across all three research periods. The widespread use of horizontally positioned, bold, sans serif letterforms applies to several prominent messages, as well as information in the second layer, of often persuasive text, such as general and health-related descriptions. Hence, type size and weight are the most significant features that differ between hierarchical levels rather than giving attention to particular typeface designs. This study confirms that typography has traditionally been associated with legibility rather than expressing meaning on its own (van Leeuwen, 2006). McLean (1980) highlights this: 'To a very limited extent, lettering may help to express a feeling or a mood that is in harmony with the meaning of the words' (p. 56). Victorian food labels employed ornamented letterforms to create

a mood or express an overall quality of the product; however, they did not serve to evoke meaning or ideas in words or phrases.

Adding meaning to words interests semioticians, and according to van Leeuwen (2006), increased weight to a typeface can signify daring, solid, or substantial, qualities, in addition to increased salience. Additionally, smooth rounded letters may signify the idea of indulgence and symbolically please the viewer. For example, with size and bold letterforms, *Suncrush* in Figure 58, indeed increases salience. However, these attributes for the name design may also function on a different level. Using the heavier weight could, for example, represent a company that is substantial and reliable, in turn, influencing the perception of a brand providing a good quality beverage. Additionally, van Leeuwen (2006) argues that while typographic features signify qualities of what is being characterised, 'they can also signify attitudes towards what is being represented or *do* something to readers' (p. 148). The slanted and smooth rounded letterform used for Suncrush can simultaneously signify the idea of a dynamic and energetic appearance and symbolically convince the reader of the pleasure they would get from consuming a refreshing drink.

A similar observation occurs in the Schweppes *American Ginger Ale* label shown below.

Figure 59. A label for ginger ale. *c.*1965.
Size: 66 x 100 mm.
Centre for Ephemera Studies, University of Reading.

Typographic emphasis in this example is employed through size and bold sans serif. In addition, condensed typeface has connotations of slimming and reinforces the impression of a low-calorie product.

Again, typographic emphasis is employed through size and bold sans serif letterforms to achieve importance for the word *slimline*. Additionally, condensed letterforms signify the idea of slimming and symbolically convince the reader about the satisfaction of consuming a low-calorie product, contributing to a healthier lifestyle. Although only a few examples of such semiotic material are observed in this study, they pave the way in the development of letterforms on labels; we see this today where these styles are deliberately used to convey a variety of potential meanings. This is confirmed in several current studies.

For example, in *Reading packages: social semiotics on the shelf*, Wagner (2015) discusses how, if glanced at, the Swedish brand V6's chewing gum line, *Origins*, can be misread as *organic*. The identity of this particular line is characterised by soft, rounded forms and involves plant iconography – of which the letter 'g' has the form of a sprouting plant.[36] Hence, the product line signifies naturalness which may convince the consumer that they are looking at an ecologically green and healthy product.

The use of colour is also a well-known and significant semiotic resource; however, in early labels, colour likely just served an aesthetic purpose, drawing attention to the desired parts of the label or used to distinguish one message from other graphic elements. The review for this thesis shows that red is frequently shown to highlight text, and yellow is often used as a background colour giving strong visibility to dark or red letterforms. Consequently, and as expected, the use of colour is not significantly concerned with communicating potential meaning. Through a study of colour-related research and a discussion about how packaging colour attracts consumers' attention, Kauppinen-Räisänen and Luomala (2010) explore how packaging colours help capture the consumer's imagination. They establish that colour could involuntarily attract attention, caught particularly by striking, vibrant or warm colours, such as yellow, orange, and red. Moreover, they discuss how colours attract voluntary attention as consumers use colours to search for a brand or to identify a product. For example, Kellogg's has employed red for their brand name since the company's establishment, making the packaging stand out and easy to spot. However, as colour also has the capacity to communicate, consumers would likely link the red Kellogg's brand with the company's health values.[37]

A particular colour is also applied to letterforms to directly refer to the main ingredient, such as red observed in a label for tomato juice (Fig. 47) or the yellow background on an orange drink label (Fig. 58). As a result, the colours symbolise the intensity of flavour or the ripe texture of the foods. In other labels, red indicates the fruitiness of strawberry or yellow is associated with sun, warmth, or the taste of lemon, and the flavour of butter (Klimchuk & Krasovec, 2012). Therefore, colour on early labels, may also have evoked emotions based on personal experiences related to the food's taste. On the other hand, the perception of colours in terms of positive associations to taste could vary depending on subjective preferences.

---

[36] An image of the item can be found in *Reading packages: social semiotics on the shelf* (Wagner, 2015, p. 2011).

[37] Kellogg's has, throughout the ages (according to their own publicity), provided customers with nutritional information and contributed to education concerning nutrition (Kellogg's, 2020). Therefore, the brand name plays an essential role in communicating health benefits for many of their products. See also analysis of Kellogg's packaging in Section 6.2.

This chapter has systematically identified informative and persuasive elements in two different corpora with a particular focus on the implementation and presentation of health messages. The following chapters present four case studies, to consider factors that likely influenced health messages´ verbal and visual presentation in a selection of food labels.

The themes for the case studies arrive from the systematic review and particularly the comprehensive observation of descriptive language used for promoting the food's health benefits across all typographic levels and periods (Table 7). Hence, each period's most significant verbal messages contribute to outlining the content. For example, the review shows that the word *pure* (or similar) was a common verbal health message used on food labels in the nineteenth century due to extensive food adulteration (Case study 1). Messages promoting vitamin-rich food were relevant to new scientific findings and were first observed on labels in the inter-war period (Case study 2). Post-war labels demonstrate fibre and slimming descriptions in addition to nutrient fortification information. These messages were not present in examples from previous years and are observed and discussed in Case study 3. Hence, Case studies 1, 2 and 3 aim to investigate significant health messages from each research period and consider factors that likely influenced verbal and visual presentation.

Correspondingly, the review shows a range of various health messages within the different typographic levels. To get a glimpse of the general development throughout a century, and what informs this, Case study 4 looks at labels for one food category. By investigating packaging for milk and milk-related products, the study aims to observe the change in verbal and pictorial presentations and what informs these differences. The reason for dealing with this particular food is that the corpus contains very few labels for other product categories that can be followed for over a century.

Analysing labels in the case studies draws on the same framework used in the systematic review. The investigation explores pictorial and verbal health messages for each label in the respective case studies, such as describing typographical hierarchy, and linguistic and graphic features. However, instead of conducting a systematic review, each label is described separately in as much detail as possible. Additionally, the usage and function of components refers to contextual factors limited to changes in nutrition science, significant health trends and label regulations. This investigation draws on the literature review found in this thesis to describe the context and to work out the reasons for specific verbal and pictorial presentations.

The subsequent chapters include the following four case studies:

Chapter 4: Case study 1:
The use of the word *pure* to communicate non-adulterated products.

Chapter 5: Case study 2:
How early nutrition science reflect the representation of vitamins.

Chapter 6: Case Study 3:
How diet and health are reflected on labels for convenience food.

Chapter 7: Case Study 4:
How labels for milk and milk-related products have changed over time.

4.0 CASE STUDY 1. THE USE OF THE WORD PURE TO COMMUNICATE NON-ADULTERATED PRODUCTS

This chapter concentrates on a selection of labels that utilise the word *pure,* and comparable descriptors, to communicate that the packaged contents were non-adulterated products. The items represented were essential foods of the time, mustard, cocoa, jams, and canned vegetables. However, the graphic treatment of *pure* varies depending on the context, the food, and desired visibility. The aim is to observe how typographic variations and pictures interact to communicate a clean product and what informs this. The chapter also discusses whether the word in the earliest labels reflects public fears regarding the consumption of foods injurious to health.

The first part of the chapter defines *pure*, and includes a summary of contextual factors which led manufacturers to exploit marketing strategies in order to gain public trust in their non-adulterated food. Some advertisements are included to demonstrate how companies presented similar messages in channels other than on the label.

4.1 Defining pure

Dictionaries may serve as a valuable tool to reflect on the definition of *pure* in relation to food labels. Entries most relevant to foodstuffs have been selected, however, it is still essential to consider other definitions within context because the word is displayed on labels over an extended period. The *Oxford Dictionary of English* includes these phrases in their definition of *pure* 'not mixed or adulterated with any other substance or material', 'without any extraneous and unnecessary elements', 'free of any contamination' and 'of unmixed origin or descent' (Stevenson, 2015). *The American Heritage Dictionary of the English Language* defines *pure* as follows: 'Having a homogeneous or uniform composition ... [f]ree of dirt, pollutants, infectious agents, or other unwanted elements ... [c]ontaining nothing inappropriate or extraneous' (Harper Collins, 2022).

Although there are similarities in the definitions, they also show differences, which exposes the difficulties in providing a precise definition of *pure.* A definition may depend on the type of food, or when it is manufactured. For example, if *pure* is intended to imply *not adulterated with any other substances*, this could mean food free from toxic additives in the early nineteenth century. However, by the 1900s, when basic food had to be legally pure from fraudulent adulteration, *pure* could instead depict food not mixed with any other substances, or food free from preservatives or colouring. Likewise, if milk labels displayed *pure*, the description could correlate to *free of dirt*, referring to no bacterial contamination.

The definition of *pure* may also depend on an individual's experiences or knowledge. We can learn about words and their meaning from every-

day conversations and nowadays through mass- and social media (Danesi, 2002, p. 196). Linguist Christy Marie Taylor (2013) demonstrated how consumers can be misguided by vague and misleading information on packaged food. Her research included a survey of students in the US who were asked to define the term *pure* and to limit their responses to the context of food packaging. Several responses corresponded with dictionary definitions, *not contaminated*, *no extra ingredients added*, and *unprocessed*. Others interpreted *pure* as *healthy,* a *state of existence close to nature*, and *no pesticides*. The latter gives a different perspective of *pure* than discussed so far. Instead of emphasising food with no added substances, these last two statements (*state of existence close to nature*, and *no pesticides*) reflect information related to the whole cycle of food growing.

In 1988 the London Food Commission (LFC)[38] published work concerning food safety in terms of additives, particularly concerning adulteration; they also questioned the use of nitrates, excess water, pesticide residues, too much fat, and irradiation, in food production. Since this work is from the second part of the twentieth century, some of these food safety issues, pesticide residues for example, are not relevant to the earliest food labels. However, the study does highlight significant problems that gradually increased throughout the industrialisation of food production, which influenced the purity of products and contributed to a different interpretation of *pure*. The following declarations represent a few concerns that the LFC raised:

> Chemicals from packaging materials can move into food. For example, surprisingly high levels of DEHA, a chemical that makes PVC cling films soft and clingy, move from films into certain fatty foods. The presence of possible contaminants is not declared on the label.
>
> Antibiotics are fed to pigs and chickens to stop infections spreading among animals kept too close together. Some of these drugs may remain in the meat when it is bought. But this is not declared. Some butchers now sell meat grown without antibiotics.
>
> Hormones are given to animals to make them grow faster, so farmers can sell them sooner. Sometimes hormones remain in meat. Pesticides are chemicals sprayed on fruit, grain and vegetables to kill pests like insects, weeds and fungi. Pesticides may remain on and in food when we eat them. Fertilisers may also leave high levels of nitrates in vegetables. The presence of residues in food is not declared (London Food Commission, 1988, pp. 33–34).

---

[38] The London Food Commission [now The Food Commission] was an independent source of research, information, advice, and food and public health education. It was launched in the spring of 1985, with funds from the Greater London Council (now defunct, powers were devolved locally until 2000 when GLA – Greater London Authority was formed). It works with a wide range of statutory and voluntary organisations, trade unions and individuals. Its interests cover all food matters from production to consumption (London Food Commission, 1988).

Current research refers to the usage of *pure* on food packaging, and claims that manufacturers frequently include the term as part of a compelling strategy to evoke emotions, build trust, or downplay facts (Cook & O'Halloran, 1999). The term corresponds with similar vague and poetic product descriptions such as *natural, traditional, premium*, *local,* and *homemade*. In a later piece of work, Cook (2010) follows up with relevant questions: 'But what do these words and similar ones actually mean? How near is *local*? How old is *traditional*? How free is *free-range* chicken?' (p. 172). Similarly, and in the context of this case study, it is appropriate to ask: How clean is *pure*? The question corresponds with the general considerations of this chapter, which refer to difficulties in providing a precise meaning of *pure*.

Barnes (2017) also reflects that much of the language used today to describe food in general is difficult to define and terms such as *local, quality, authentic,* and *premium,* could confuse consumers. The word *pure* falls into the same category. 'The food and design industries can use this lack of clarity to their advantage and develop a narrative that will best connect with their audience' (Barnes, 2017, p. 183).[39] Hence, the numerous definitions of *pure* indicate multiple meanings allowing for different interpretations, demonstrating that the term is far from precise. Unless the public is familiar with what *pure* precisely refers to, the word becomes vague and ambiguous. Consumers may therefore consider the meaning of *pure* based on individual interpretations.

4.2 Urbanisation and food adulteration

The reason manufacturers described their food *pure* stems from the widespread adulteration of basic foodstuffs in Britain from the early nineteenth century. In the *Encyclopaedia Britannica* from 1875, adulteration was defined as:

> ... the act of debasing a pure or genuine commodity for pecuniary profit, by adding to it an inferior or spurious article, or by taking from it one or more of its constituents. ... The objects of adulteration are fourfold, namely, to increase the bulk or weight of the article, to improve its appearance, to give it false strength, or to rob it of its most valuable constituents (Baynes & Smith, 1875).

Primarily, food adulteration is a phenomenon of urban life (Burnett, 1959). From the early nineteenth century, a growing population led to considerable changes in the complexity of food trades which eventually generated difficulties in managing and controlling food quality (Rowlinson, 1982). In order to bulk out a product, most everyday foods, such as milk,

[39] For example, Tesco used 'fake farm' brands to evoke aspects of 'authenticity' which is briefly referred to in Section 7.7.

bread, flour, tea, and coffee, were supplemented with cheap, nutrient-poor, and worthless substitutes. The 'enhanced' end products weighed or measured more and manufacturers were able to make a bigger profit. In 1820, the chemist Frederick Accum systematically examined a wide range of everyday foodstuffs such as bread, beer, wine, and coffee and discovered that almost all samples were heavily adulterated. He revealed that bread frequently contained alum, milk was diluted with water, and coffee included chicory, to mention a few.[40] Two of the more serious examples though were cheese coloured with red lead, and *Cocculus indices*[41] added to beer (Burnett, 1959).

Scientific investigations continued throughout the century, and alarming new facts concerning systematic food adulteration were brought to light in the 1850s by the scientist A. H. Hassall. He verified numerous examples of harmless as well as harmful adulteration. The latter involved the addition of poisonous substances directly injurious to health, such as sulphate and copper added to pickles and bottled fruit, lead chromate in mustard, sulphate of iron in tea, and various colouring matters in sweetmeats. These discoveries caused great concern amongst the scientific and medical communities. Doctors considered that food which had been supplemented with these poisonous ingredients, caused illness and deaths among adults and children. Reports recorded deaths caused by *Cocculus indicus* in rum, paralyses due to lead in cayenne pepper, and poisoning of children because of sweetmeats coloured with toxic ingredients (Burnett, 1979, p. 119).

As well as harmful additives, substances were occasionally included in a process to dilute or bulk out a product. This perceivably harmless adulteration was, however, considered damaging, as it lowered the nutritional properties in the products (Rioux, 2019). For example, mixing cheap barley with oatmeal or diluting milk with water could cause severe malnutrition due to lowering the nutritional value of foodstuffs (Burnett, 1979, p. 118). Hassall's results were published weekly in *The Lancet* and popularised as articles in newspapers and magazines for several years. The outcomes supported public awareness; however, reactions among the population seemed to vary. Due to significant differences within social classes, only educated and literate people received information regarding the seriousness of the food fraud scandal.

Parts of society were unconcerned as they did not know about the adulteration, and poor people had no real choice but to buy impure

---

[40] Accum´s results were published in his book: *A treatise on adulterations of food, and culinary poisons*, exhibiting the fraudulent sophistications of bread, beer, wine, spiritous liquors, tea, coffee, cream, confectionery, vinegar, mustard, pepper, cheese, olive oil, pickles and other articles employed in the domestic economy – and methods of detecting them (Accum, 1820).

[41] *Cocculus indicus* is a cheap substance used with malt and hops to increase the bitterness of the beer; however, a dangerous poison that contains picrotoxin (Collins, 1993). It was also used to give an intoxicating quality to porter or ale (Accum, 1820).

products because they were cheap. Some even favoured adulterated products to unadulterated because of their eating habits. For example, many had long consumed impure tea, coffee, and bread, and preferred the taste of these products (Burnett, 1979, p. 116). Nevertheless, Hassall's investigations and subsequent publicity, influenced politicians and practical politics (Rowlinson, 1982) and as a result, the first *Food and Drugs Act* was passed in 1860 (Drummond et al., 1958, pp. 294–295). This law made it illegal to sell food as *pure* if the manufacturer knew that it was adulterated. (Rowlinson, 1982). However, the new law was not very successful due to the lack of food controls. Significant improvements did not appear until the *Sale of Food and Drugs Act 1875* was passed. The new law made it illegal to include anything injurious to health or to add unnecessary substances to increase weight or bulk (Turner, 2007). Improved food controls in following decades, and the power for local authorities to prosecute fraudulent tradesmen (Rowlinson, 1982), resulted in a significant decline in food adulteration towards the turn of the century (Burnett, 1959).

Several parliamentary acts to prevent adulteration and improve the quality of food were passed towards the end of the nineteenth century. One fundamental law was the *Margarine Act 1887*, the first statute to counteract the sale of margarine as butter (Turner, 2007). Butter mixed with other fats, such as oleomargarine, was labelled *butterine* which may have deceived consumers into believing it was pure butter. This legislation clearly defined margarine as an imitation of butter and included strict instructions for a manufacturer to label the food margarine, and not butter or butterine (Oddy, 2003, p. 26).

As mentioned, general information and public awareness regarding extensive food adulteration was disseminated through popularised articles in newspapers and magazines. Additionally, the public may have become aware of the fraud indirectly when reading advertisements which promoted products as being free from harmful substances, or those advising caution when buying, due to the availability of lesser quality substitutes from other manufacturers. Therefore, applying *pure* on food labels, or including the term in adverts, could bring awareness to the practice of food adulteration, but would also act as a guarantee against contaminated products. Figures 60–62 show different adverts used to inform the literate public about food adulteration in the nineteenth century.

"(*Signed*) CHARLES A. CAMERON."
Dr. HASSALL (author of "Food: Its Adulteration, and the Methods for their Detection,") reporting upon the Port Wine used as a basis for the **Marza Wine**, says:—"The tests for extraneous colouring matter yielded negative results, the quantity of tannin present being very small. It is apparent from the results of the analysis, that the Wine may be regarded as of a satisfactory degree of purity and quality; the flavour is good, and there is no excess of acidity."


SCIENTIFIC AND LAY TESTIMONY OF THE VALUE OF MARZA WINE.

MARZA WINE.
VITALIZING AND STRENGTHENING.
AWARDED THE GOLD MEDAL.

FOR THE BRAIN.

TAKE MARZA WINE IF BELOW PAR, UNSTRUNG, FAGGED, AND WEARY, IT CAN'T CURE DISEASE, BUT IS THE FINEST PREVENTIVE AND RESTORATIVE

FOR THE NERVES.

ANÆMIA
(Bloodlessness).

CHLOROSIS
(Pale Blood).

NEURALGIA.

CATARRH & COLDS.

MARZA WINE
IS RECOMMENDED BY THE FACULTY FOR
ANÆMIA, CHLOROSIS, INDIGESTION, DEBILITY, NEURALGIA, INSOMNIA, CONVALESCENCE, BRAIN FAG, MENTAL DEPRESSION, EXHAUSTION, INFLUENZA, PALPITATION, CHILLS, AND CATARRH.

MARZA WINE.
INVIGORATING AND SUSTAINING.
AWARDED THE GOLD MEDAL.

DEBILITY.

INDIGESTION AND DYSPEPSIA.

FOR GROWING CHILDREN.

BRAIN FAG.

CONVALESCENCE.

AFTER ACCOUCHEMENT.

INFLUENZA.

FOR THE BLOOD.

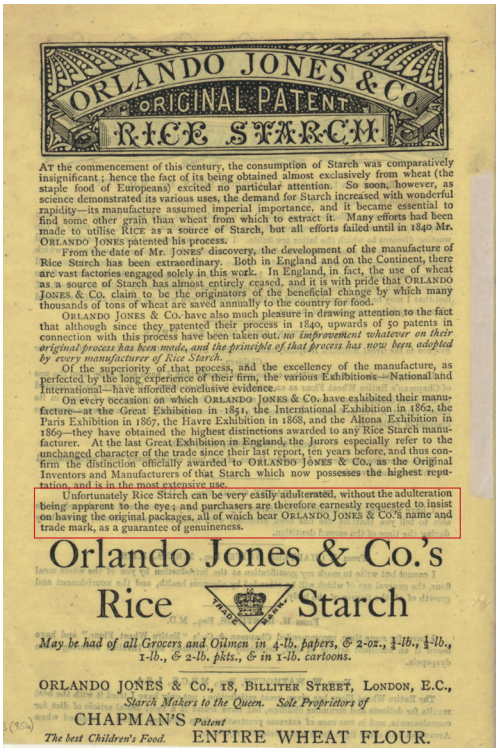
TAKE MARZA WINE FOR BRAIN, NERVE, AND MUSCLE, MAKES RICH RED BLOOD, AND GIVES TONE AND VIGOUR TO ALL THE VITAL FORCES.

FOR THE MUSCLES.

Price 3/9 per large bottle, 42/- per doz., of Chemists, Wine Merchants, Grocers, &c. Carriage Paid of the MARZA COMPANY, Ltd., 19 & 21, WILSON STREET, FINSBURY.

Figure 60. Advert for Marza wine. *c.*1880–*c.*1895.
Size: Folded sheet, 4pp. 216 x 140 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Patent Medicines 4 (77b).

The advert includes information about Dr Hassall´s book Food: *Its Adulteration, and the Methods for their Detection*, and may have brought awareness of systematic food adulteration to the public.


ORLANDO JONES & Co.
ORIGINAL PATENT
RICE STARCH

At the commencement of this century, the consumption of Starch was comparatively insignificant; hence the fact of its being obtained almost exclusively from wheat (the staple food of Europeans) excited no particular attention. So soon, however, as science demonstrated its various uses, the demand for Starch increased with wonderful rapidity—its manufacture assumed imperial importance, and it became essential to find some other grain than wheat from which to extract it. Many efforts had been made to utilise RICE as a source of Starch, but all efforts failed until in 1840 Mr. ORLANDO JONES patented his process.

From the date of Mr. JONES' discovery, the development of the manufacture of Rice Starch has been extraordinary. Both in England and on the Continent, there are vast factories engaged solely in this work. In England, in fact, the use of wheat as a source of Starch has almost entirely ceased, and it is with pride that ORLANDO JONES & Co. claim to be the originators of the beneficial change by which many thousands of tons of wheat are saved annually to the country for food.

ORLANDO JONES & Co. have also much pleasure in drawing attention to the fact that although since they patented their process in 1840, upwards of 50 patents in connection with this process have been taken out, *no improvement whatever on their original process has been made, and the principle of that process has now been adopted by every manufacturer of Rice Starch.*

Of the superiority of that process, and the excellency of the manufacture, as perfected by the long experience of their firm, the various Exhibitions—National and International—have afforded conclusive evidence.

On every occasion on which ORLANDO JONES & Co. have exhibited their manufacture—at the Great Exhibition in 1851, the International Exhibition in 1862, the Paris Exhibition in 1867, the Havre Exhibition in 1868, and the Altona Exhibition in 1869—they have obtained the highest distinctions awarded to any Rice Starch manufacturer. At the last Great Exhibition in England, the Jurors especially refer to the unchanged character of the trade since their last report, ten years before, and thus confirm the distinction officially awarded to ORLANDO JONES & Co., as the Original Inventors and Manufacturers of that Starch which now possesses the highest reputation, and is in the most extensive use.

Unfortunately Rice Starch can be very easily adulterated, without the adulteration being apparent to the eye; and purchasers are therefore earnestly requested to insist on having the original packages, all of which bear ORLANDO JONES & Co.'s name and trade mark, as a guarantee of genuineness.

Orlando Jones & Co.'s
Rice Starch

May be had of all Grocers and Oilmen in 4-lb. papers, & 2-oz., ¼-lb., ½-lb., 1-lb., & 2-lb. pkts., & in 1-lb. cartoons.

ORLANDO JONES & Co., 18, BILLITER STREET, LONDON, E.C.,
Starch Makers to the Queen. Sole Proprietors of
CHAPMAN'S *Patent*
The best Children's Food. ENTIRE WHEAT FLOUR.

Unfortunately Rice Starch can be very easily adulterated, without the adulteration being apparent to the eye; and purchasers are therefore earnestly requested to insist on having the original packages, all of which bear ORLANDO JONES & Co.'s name and trade mark, as a guarantee of genuineness.

Figure 61. Advert for rice starch. 1870.
Size: 206 x 140 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 3 (85b).

The manufacturer in this advert warns the consumer that rice starch can be very easily adulterated which could have informed the public in the nineteenth century about the fraud.

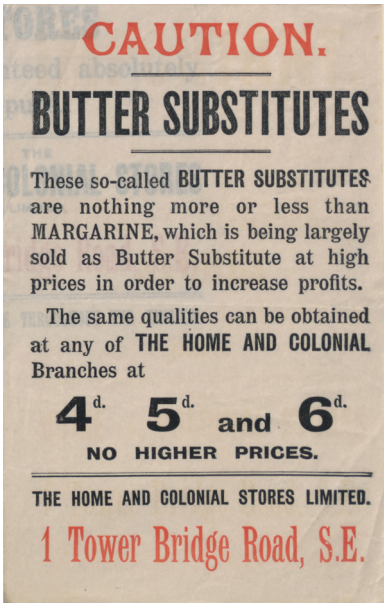


Figure 62. Advert for Home & Colonial Stores Ltd. *c.*1890.
Size: 217 x 138 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 3 (7b).

This advert announced that butter substitutes were nothing more than margarine. Hence, they brought awareness to the public, who thought the alternatives included pure butter.

Towards the end of the nineteenth century, the use of harmful substitutes declined, and most of the basic foodstuffs were legally pure in terms of adulteration through substitution. However, new concerns arose with the widespread practice of legitimate adulteration. An increase in highly processed food production based on advanced science and food technology, necessitated the creation and use of new additives; chemical colourants, preservatives, and flavourings. Throughout the early twentieth century, the number and the complexity of these compounds increased. The new food technology evolved into a sophisticated form of adulteration (Rioux, 2019). However, there were continuous disagreements between authorities and manufacturers as to whether the new chemical substances were harmful to health or not (Collins, 1993). Some breweries used glucose made with sulphuric acid in their production process, which resulted in large quantities of arsenic acid in the beer. Concern arose after severe outbreaks of arsenic poisoning among beer drinkers was reported during the early 1900s. Later, additional analyses showed that glucose used in jam manufacture also contained traces of arsenic. From 1903 all arsenical compounds were banned from use in food production. The use of toxic chemicals such as boric acid, copper salts, and other metallic compounds, were used in the manufacture of dairy products, fruit juices, jams, and jellies, which remained legitimate until the mid-1920s (Collins, 1993).

4.3 Re-establishing public trust in the nineteenth century

Trust is generally established based on relationship and mutual reliability between individuals (Giddens, 1990, p. 34), and fundamental for all human existence (Zachmann & Østby, 2011). The main definition in the *Oxford Dictionary of Philosophy* describes trust as: 'The attitude of expecting good performance from another party, whether in terms of loyalty, goodwill, truth, or promises' (Blackburn, 2016).

In the context of food safety, *trust* implies a good relationship between the manufacturer and the public. Today, consumers depend on trusting the information on food packaging, including accurate descriptions and reliable promises. In return, the manufacturer counts on loyalty and goodwill from the consumer. However, the relationship and the trust between the parties have changed radically since the beginning of the nineteenth century. Before the industrialisation of food production, customers purchased food directly from the farmer or the mill and identified quality items by inspecting, touching and smelling the products (Wilkins, 1994). A close relationship between producer and consumer, along with promises and mutual loyalty, established trust between the parties. As a result of the change in industrial structure, food was transported and sold over distance, and the face-to-face interaction between producer and the consumer gradually ceased (Finstad, 2013). The basis for trust disappeared, and a reliance on packaging and visual information to describe the purity and quality of a product replaced personal interaction and producer's knowledge. The industrialisation of food production, followed by the rapidly increasing use of food additives, and an awareness of linked health concerns, made it necessary to initiate processes to ensure that the provision of food was trustworthy and reliable. Collaboration arose between the government, food providers, and consumers, and food quality controls and label legislations were gradually implemented. As a result, consumer confidence in food changed, from a face-to-face trust to reliance on science and expertise on one hand, and marketing efforts on the other (Zachmann & Østby, 2011). Manufacturers followed up by using advertisements and packaging which included descriptions and visual elements to convince the public about the quality of the products.

An example of one global company which built public trust in their industrial food from the nineteenth century onwards is the H. J. Heinz Company (est. 1876). The trustworthiness of their products was established through modern food processing, standardisation, industrial packaging, and labelling. By advertising, lobbying, and operating with modern industrial equipment, Heinz built up the value of purity and trust among its customers. They also used the slogan *pure food* to reassure consumers that their products would not include any harmful additives. For example, in order to control the quality and purity of their products, they grew their own vegetables and invited consumers to the factory to

watch the production and taste the products (Petrick, 2009). Additionally, salespeople, who both demonstrated and sold Heinz products, used a Christian slant in their sales pitches and emphasised traditional values such as faith and purity (Zachmann & Østby, 2011).

This section has included a summary of contextual factors which led manufacturers, in the late nineteenth and early twentieth century, to gain public trust in their food after the industrialisation of food production caused an increase in food adulteration and health concern. The next sections present a selection of food labels in the context they were produced and discusses observations related to the presentation and implementation of pure, or comparable descriptions. The labels are from jars, or tins, of mustard, cocoa, jams, and canned vegetables, representing essential foods of the time.

4.4 The presentation and implementation of *pure*

Convincing the public about pure mustard

Mustard was a common consumable in the British kitchen in the mid-1850s (McGuire, 2016).[42] At the same time, the food adulteration scandal was brought to light through articles in newspapers and magazines; those members of society who were well informed knew to demand *clean* food. Therefore, it was essential for manufacturers to convince consumers that their mustard was pure. Figure 63 shows a black and white printed mustard condiment label from Lewis & Co[43] and is identified as one of the earliest food labels from the corpus. The label states *This Compound is warranted free from any injurious ingredients*. The item does not include the company's name, a trait that is also observed in a few other food labels from the early nineteenth century study period.[44] Instead, the item primarily emphasises *London Mustard,* followed by the content name *Mustard Condiment* and the health message.

[42] Mustard is an annual plant and comes in three important varieties distinguished by the colour of their seeds, white, black, and brown, all of which are used as a spice or to make condiments or medicines. English mustard is usually sold as powder and production is believed to have started in the 1720s (Jones, 1983).

[43] According to records from The John Johnson Collection of Printed Ephemera, the company name is Lewis & Co. London mustard was a type of powdered mustard and the earliest reference found in an advertisement from 1806 (Jones, 1983).

[44] An 1830´s label for anchovies can be found in Appendix 3.

Figure 63. Label for mustard condiment. *c.*1850.
Size: 68 x 69 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (13e).

The London Mustard label describes a product warranted free from any injurious ingredients. The use of language reflects public concern in early nineteenth century Britain, as essential foods frequently included harmful or even toxic ingredients.

Firstly, the arrangements of elements help to distinguish the levels of information. Poster and advertising printers used large, bold, and eye-catching types, to override typical reading strategies of their audience, and to promote the growth of commerce, from the turn of the century (Twyman, 1970, p. 68). Bold letterforms set curved into a circle give *London Mustard* visual prominence. Although set in a regular typeface, by presenting *Mustard Condiment* and the health message horizontally in the middle of a circular border, the framed space in the centre of the label provides relatively good visibility for the information, and the health message becomes a significant part of the label.

By describing the condiment *free from any injurious ingredient*, the manufacturer is claiming that the product is not harmful to health. This language is influenced by the widespread adulteration scandal in early nineteenth century Britain and reflects public concern, as essential foods frequently included unhealthy or even toxic ingredients (Collins, 1993) (see also Section 4.2). By stating the health benefit of consuming the food compared to similar, and possibly poisoned, products, the label addresses a positive depiction of this particular mustard. Naturally it is impossible to fully know production processes, or to find out about specific added substances in a particular jar of food, or to reconstruct one individual's understanding of health messages in the nineteenth century. However, the presentation of this health information on the *London Mustard* label may have led the consumer into questioning the actual quality of the condiment. According to Accum (1820), most manufacturers adulterated their mustard with radish seed or pea flour. Although few included harmful ingredients, many producers deteriorated the quality of the condiments. Therefore, based on Accum's investigations, the *London Mustard* condiment may have contained some substitutes despite not injuring health. Perceiving the message, any questions concerning added substances that may have worsened the quality of the condiment may

have been ignored. Whether Accum's investigations represent all mustard condiments from the 1850s is difficult to ever know, as the validity of claims also included other aspects. For example, due to the lack of food labelling regulations, there were few or no consequences for manufacturers promoting misleading communication (Rowlinson, 1982). Consequently, messages applied on labels informing about pure food may have misled the consumers.

Figure 64 shows a different *London Mustard* label. By including the word *pure* and significant graphic components, the informational structure and language differ when denoting a non-adulterated product from that on the *London Mustard* label in Figure 63.

Figure 64. Label for London mustard. *c.*1870.
Size: 82 x 164 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (19).

An example of how a coat of arms is used to signify power, authority, and tradition. The element also emphasises quality to strengthen the impression of clean food. However, although *pure* probably describes a product without any harmful additives, it still might include non-toxic substances.

The arrangement of verbal and pictorial elements and variations in letterforms demonstrate a clear hierarchy of information, and significant graphic elements contribute to communicating a trustworthy product. By assuming the left part of the label is the front panel, an eye-catching coat of arms is positioned in the centre of the label. A coat of arms was a commonly used graphic element on packaging in the nineteenth century to give a feeling of authenticity and tradition, or to attract affluent consumers (Humbert, 1972, p. 22). The emblem closely interacts with a prominent brand and ingredient name, and all three elements draw attention to the label bringing awareness to the quality of the food.

Warranted Pure mustard is displayed outside the border. However, this health message seems to play a secondary role favouring the more prominent elements—coat of arms and crown—signifying the food quality. On the other hand, the description has its own framed space, which gives it somewhat good visibility, and describing the product *warranted pure* reinforces the perception of the food quality. This reinforcement

may well work the other way around; the powerful and prominent coat of arms contributes to strengthening the impression of clean food and building trust in the product. The label also includes a trademark symbol which became commonly used on packaging with the increase of mass-produced consumer goods. Trademarked food appealed to consumers because they could more easily compare price and quality (Schwarzkopf, 2010), and the element on the label would contribute to raising the perception of the food's purity.

Based on a similar assumption about the previous mustard label (Fig. 63), the product probably did not contain harmful substances, however, it was possibly mixed with non-toxic substitutes. Nevertheless, it is still unclear whether *pure* here means no added injurious substances, or no additives at all. On the other hand, inadequate food control and hesitant legislative intervention still characterised the 1870s (Burnett, 1959), so the credibility of label information remains questionable.

The examples of mustard labels have usefully demonstrated two different approaches to using language and imagery to claim a non-adulterated product in the nineteenth century. While the first label openly addresses public concern regarding frequently added substances, the second item includes a less specific, and perceivably ambiguous term, describing the food as *warranted pure*. This label displays a significant coat of arms and a prominent brand name to promote the overall quality of the product. However, both labels reflect the manufacturer's need to include specific information to convince the public that their food was pure during a time of widespread challenges regarding food adulteration. Although different in language and visual presentation, the two labels share the suggestion that their products are of improved quality than that of similar products without any health messages.

4.5 Two different definitions of *pure* emerged

New parliamentary acts passed during the second part of the nineteenth century had a significant impact on the use and definition of *pure* in the context of labels and advertisements for cocoa.[45] The use of pictures was also a vital contribution to express the food's purity.

Cocoa beans were initially understood to be healthy, and people believed the cocoa drink had nutritional and medicinal properties (Othic, 1976). However, the inclusion of high proportions of cheap

[45] Several firms manufactured cocoa products in Britain in the 19th century. Fry ran a significant and well-known business in the first part of the century, followed by Cadbury a few decades later. Initially, the whole cocoa industry, including Fry and Cadbury, adulterated their products. Cocoa was primarily sold for drinking purposes; however, as cocoa beans consist of more than 50% fat, mixing the product with water or milk was difficult (Bradley, 2008, pp. 8–16). Eventually, the standard production process was to counteract the fat from the cocoa by adding, for example, powdered lentils, tapioca, sago and arrowroot. There were different views on the adulteration. Some manufacturers claimed that particular added substances such as arrowroot were well-regarded foodstuffs and sold their products as health-giving (Bradley, 2008, p. 29).

substances had a dire impact on the quality of the product. If, for example, the product was made up with four-fifths of cheap fillers, any health benefit from the original ingredient would be minimal. Some businesses even added harmful and illegal substances, such as red lead and brick dust, to counteract the texture of excessive fats that occur in cocoa beans (Bradley, 2013, p. 39). If, in general, consumers, perceived cocoa as being healthy, the consequences of consuming a product with added toxic materials could prove fatal.

The Cadbury manufacturing business (est. 1831) contributed significantly in changing the perception of cocoa as a consumable and set out the direction for the whole chocolate industry. They adopted a new production technique to provide drinkable cocoa utterly free from additives. This was done by squeezing out half of the cocoa fat, which removed the need for brick dust fillers. In 1866, the company decided to cancel the production of their range of adulterated cocoas and produced only pure *Cadbury Cocoa Essence*. Through massive advertising campaigns, they introduced the slogan *Absolutely Pure* (Fig. 65). From that stage, Cadbury concentrated on building a strong, trustworthy brand, convincing the consumers about a *new* cocoa market exclusively based on purity and a product without any added substances (Bradley, 2013, pp. 38–40).

Based on this evidence, two different definitions of *pure* emerged: products with no harmful material added, but still containing extra substances, in contrast to products with nothing at all added. The first definition confirms the argument that manufacturers often include *pure* as part of a compelling strategy to evoke emotions, build trust, and sometimes downplay facts (Cook, 2010). Products that have absolutely nothing added tend to build trust and elicit positive reactions; however, grounded in objective and scientific information, *pure* rather relates to one of the definitions that emerged from Taylor´s survey: *Only one ingredient* (Taylor, 2013, pp. 187–189).

To differentiate usages of the word *pure* on various packaging and adverts would depend on extensive knowledge about a company and its production strategy; this would have been challenging to comprehend for customers in general. Moreover, if the public were not familiar with what *pure* precisely referred to, the use of the word may appear unclear, thus, superfluous. However, Cadbury frequently underpinned the claims of purity by using scientific research results and displaying testimonials from *The Lancet* medical journal on their advertisements, and by advertising in other health magazines (Figs. 65–67).

The standard of highest purity at present attainable in cocoa – The Lancet
Of absolute purity and freedom of alkali – Retrospect of Medicine

65

66

67

Figure 65. Advertisement for Cadbury cocoa. *c.*1880.
Size: 178 x 132 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Cocoa, Chocolate and Confectionery 1 (20).

Figure 66. Advertisement for Cadbury cocoa. c.1885.
Size: 119 x 77 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Cocoa, Chocolate and Confectionery 1 (16a).

Figure 67. Advertisement for Cadbury cocoa. *c.*1897.
Size: 147 x 194 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Cocoa, Chocolate and Confectionery 1 (19).

Cadbury introduced the slogan *Absolutely Pure* and built a reliable and trustworthy brand through massive advertising campaigns convincing the consumers about a non-adulterated, soluble and health-beneficial food. In addition, scientific research results and citations from Lancet or other health magazines often underpinned food purity claims.

Cadbury introduced the slogan *Absolutely Pure* and built a reliable and trustworthy brand through massive advertising campaigns convincing the consumers about a non-adulterated, soluble and health-beneficial food. In addition, scientific research results and citations from Lancet or other health magazines often underpinned food purity claims.

Additionally, Cadbury did not define *pure* in terms of non-adulterated products entirely through their substantial advertising campaigns. They wanted a new direction for the whole cocoa industry and lobbied the government for years in the hopes of changing political attitudes to the extensive use of fillers in cocoa production. The *Adulteration of Food and Drink Act 1860,* (Turner, 2007) in force at the time, was merely designed to prevent manufacturers from adding toxic additives. Cadbury argued that substances added to cocoa, such as flour and starch, would lead to indigestible products. They claimed that a more rigorous law was needed in order to distinguish pure and non-adulterated cocoa products from those which had been adulterated.

With the help of substantial political influence, Cadbury contributed to the more comprehensive *Sale of Food and Drugs Act, 1875*. The new law demanded manufacturers of compound products to state any adulterants on the label, and whether they were harmful or not (Bradley, 2008, pp. 12–13). Figure 68 shows a black and white printed label for Fry's soluble cocoa from the 1880s which demonstrates how the language was

grounded in the new act. Fry's, who still adulterated their products, was forced to add a specification to their labels and displayed the following: *Manufactured from Cocoa combined with other perfectly pure and wholesome ingredients, according to Act of Parliament*.

Figure 68. Label for Fry´s soluble cocoa. *c.*1880–*c.*1890.
Size: 40 x 40 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 10 (3c).

An example of how manufacturers of compound products stated any adulterants on the label. Fry's, who still adulterated their products in the 1880s, was forced to add a specification to their packaging to provide the product included other substances than cocoa. However, in accordance with the *Sale of Food and Drugs Act, 1875*, they assured their buyers that the ingredients they used were not harmful to health.

The statement confirmed that Fry's cocoa was mixed with other substances, differentiating the product from Cadbury's non-adulterated single ingredient *pure* product. Fry's promoted a cocoa drink with a label that had been worded entirely by following the new law; however, as expected, there is no information on the proportions or quality of the substances added. Therefore, it is difficult to decode what *perfectly pure* precisely refers to, and the word *pure* becomes ambiguous.

Graphic variations determine a hierarchy of information. Although the product and production process description occupy half of the label's space, bold uppercase letterforms give brand and ingredient name prominence. Fry's had been the market leader among cocoa producers for nearly a century and gained trust among many retailers and customers (Bradley, 2008, p. 6).[46] Giving distinction to their well-known name perhaps dominated any information about cocoa mixed with other substances. Consumers may have placed confidence in the food by recognising the name and reflecting on the company's longevity, scale, and reputation.

By concentrating on nineteenth-century cocoa items in relation to their historical context, this section has demonstrated that two definitions of *pure* emerged – some *pure* products may have included extra substances which were not necessarily harmful, in contrast, other *pure* products comprised only one ingredient. However, to be aware of the difference between the definitions, the consumer would have to have seek out objective knowledge, about the manufacturer and the product, from sources that reached beyond promotional advertisements.

---

[46] See more labels and advertisements for Fry's in *Fry's Chocolate Dream*. (Bradley, 2013). Some examples demonstrate that Fry's described their cocoa as solely *pure* although the product included fillers.

4.6 Pictures helped to illustrate purity and trust

Food labels for fruit and vegetables are selected here to show how manufacturers intended to illustrate purity and authenticity by including evocative narratives of buyer-seller relationships pre-industrialisation, or pictures to strengthen the feeling of food maintaining its natural state. Britain depended significantly on food imports from the 1860s onwards (Burnett, 1979, pp. 285–286), and the corpus contains numerous labels from abroad, particularly canned jam, fruit, and vegetables. There are similarities with several western countries concerning the impact of urbanisation, and the late nineteenth-century increased use of chemical colourings and new preserving technologies (Atkins, Lummel, & Oddy, 2007). Two examples of Australian jam labels, followed by one label for Belgian peas are shown here to demonstrate the use of full-colour pictures combined with the word *pure* to prove a clean product.

Figure 69 shows an Australian fig jam label. The visual information and the presentation of *pure* in this label differs from that of previously discussed labels, particularly by using pictures to communicate a pure and trustworthy product.

Figure 69. A label for fig jam. *c.*1918–1920.
Size: 115 x 310 mm.
Centre for Ephemera Studies, University of Reading.

This label, for an imported jam, includes an eye-catching drawing depicting a close relationship between producer and consumer. The face-to-face interaction in the picture aims to strengthen consumers´ confidence regarding a good quality product and reinforces the description of a pure product.

The arrangement of elements shows a hierarchy of information which primarily directs the viewer to the prominent pink circular *Good as Gold* trademark, placed directly above the name fig on one side, and an eye-catching drawing of one man handing canned preserves to another is placed on the right side of the label. A red banner horizontally through the middle of this item and the placement of the phrase *Made from PURE FRUIT and SUGAR only* in the mid-section are useful graphic strategies which serve to link the two components. All three graphic elements contributed to establishing an impression of a pure and good quality product. As a result of the industrialisation of food manufacturing, the basis of

trust, which arose from personal interaction and producer's knowledge, disappeared (Finstad, 2013), and visual information on packaging was the tool used to strengthen verbal descriptions and guarantees of quality. Hence, this drawing shows a nostalgic narrative of the lost relationship between producer and consumer and is associated with personal interactions and trust. Additionally, by illustrating nature, the narrative supports the feeling of the natural state of the food, which in turn, draws attention to the pureness and the quality of the food. Also, *Good as Gold* is predominately used in this trademarked message which, through suggestion, successfully created the expectation of a superior product. The agency J. Walter Thompson offered a booklet to its clients under the title *Things to Know About Trade-Marks*, which informed about the importance of a well-recognised trademark. 'A trademark must not misrepresent the quality, composition, character or origin of the product. A fraud cannot be legalized, and a misrepresentation of any kind, made by a trademark, renders it invalid' (Thompson, 1911, p. 31).[47] Hence, trademarked products should offer consistent qualities which appealed to customers as they could make quality and price comparisons, and easily recognise a product.

Good as Gold was a registered trademark and signified the quality of the food. However, the definition of good quality jam in the first part of the 1900s may have been questioned. For example, toxic chemicals such as boric acid, copper salts, and other metallic compounds were frequently used in jam and jelly manufacturing, and this practice remained legitimate until the mid-1920s (Collins, 1993). Even if a jam contained some of these harmful substances, the use of this trademark was legitimate, as harmful ingredients had yet to be banned, thus, a representation of 'good quality' could not be seen as fraud. Consumers might have perceived the food as safe based on a positive pictorial element. However, as this example raises an essential issue related to food safety and eventually affected the perception of labels in the early 1900, a similar wariness of information about additives occurs today. There is disagreement about whether some synthetic chemicals currently added to foodstuffs are harmful to health. These additives appear especially in ultra-processed food,[48] and often in foodstuffs marketed as 'healthy'. (A discussion in Section 7.7 draws parallels between late nineteenth-century and current food packaging).

In addition to the picture and the trademark on the fig jam label, the verbal element *Made from PURE FRUIT and SUGAR only* delivers a further description to emphasise the quality. At first sight, this element seems to suggest no other substances added. However, it is somewhat unclear as to what *pure* refers to. For example, *PURE FRUIT* may

---

[47] The booklet was published in 1911, and the agency that was originally American opened its first office in London in 1899 (https://www.jwt.com/history/). The History of Advertising Trust Archive, Norwich, holds the item.

[48] Ultra-processed food is explained in Section 2.1.

indicate the jam is free of any chemicals, or it might instead refer to no added pulps or pectin. Accordingly, the label demonstrates that without any factual status about the food or the production process, *pure* becomes ambiguous, and any understanding would depend on the viewer´s knowledge or interpretation of the word.

Figure 70 shows another label for imported jam which demonstrates a different approach to creating perceptions of a trustworthy product. While the picture in Figure 69 conveys trust through a symbol of a face-to-face relationship lost in the past, this label instead visualises purity by using a strong image of the foods in their natural state. Firstly, the arrangement of verbal and visual elements direct the viewer to the descriptor, *PURE JAMS & JELLIES,* and to a full-colour, eye-catching picture of fruit and berries, positioned at the right side of the label. In addition, the framed space and graphic variations for presenting *pure*, such as colour and typographic distinction, benefit the prominence. Hence, the word *pure* appears more definite and persuasive than in the previous example.

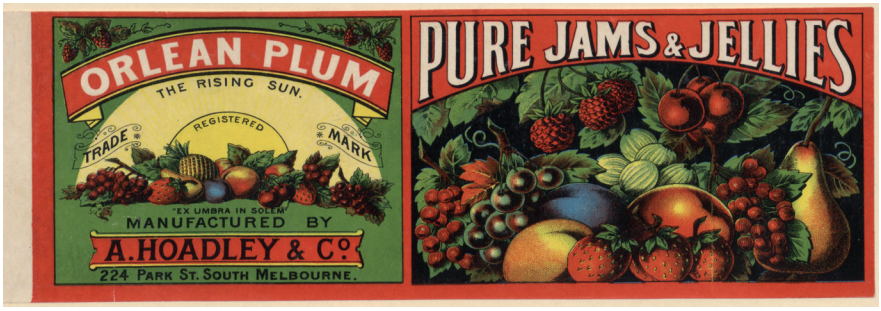


Figure 70. A label for plum jam. *c.*1900.
Size: 78 x 241 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 8 (122).

A naturalistic drawing of fruit and berries gives associations to fresh ingredients in this label. Presenting pure with high visibility on the top of the label directs the viewer to the description and reinforces the impression of a natural purity of the product. Whether there are any added substances, or if this is a product made from cheap fruit or pulp, remains minimised so appears less significant.

Instead of conferring *pure* on to a specific ingredient, this label includes a general statement; *PURE JAMS & JELLIES* – a description likely applied to other types of jam labels from the same manufacturer.[49] As well as drawing attention to the label, the verbal element creates positive associations with the manufacturer. Rather than promoting nonadulterated food, *pure* could confidently be used to indicate the company's methods during the production process.

Different types of fresh fruit in nineteenth-century Britain were only available seasonally. Although the diminishment of seasonal availability

[49] Another reason for including and reusing a picture representing similar products could be that it was cost saving for the manufacturer or the printer.

started in the 1890s through fruit imports from different parts of the world, it took almost a century to fully accomplish (Oddy, 2003, p. 29). Therefore, fruit was mainly consumed in the form of preserved jams and jellies (Torode, 1966, p. 122). By considering fruit healthy and in possession of a natural purity, the full-colour drawing represents an authentic image lending associations to a product made from fresh ingredients. However, suppose the product contained chemical additives, or was made from cheap fruit or pulp, which, as mentioned, characterised the jam industry in the early twentieth century. If that were the case, the picture could mislead the consumer into judging the product as being of better quality than the reality. Additionally, the picture does not represent the actual ingredient, also leading to a deceptive impression of the product.

This final example in this section (Fig. 71) demonstrates a verbally different approach to representing the purity of a product. This label shows the product as being *Free from preservatives*, a description first seen on labels from the early 1900s, within the corpus.

Figure 71. A label for tinned garden peas. *c.*1910–*c.*1920.
Size: 105 x 314 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (22).

The label describes the purity of the food by stating the product is free from preservatives reflecting the increased use of chemical additives in the preserving industry in the early 1900s. The picture reinforces the impression of freshness and purity by presenting peas, with their their pods and flowers. However, with any amount of colourants potentially added, the image may affect the perception of the food, and the actual quality may be neither noticed, nor known.

The use of preservatives in food manufacturing increased significantly from the end of the nineteenth century. However, their extensive use caused worries among the public when reports eventually showed that some of the substances were harmful to health (Collins, 1993). By describing food 'free from preservatives', manufacturers set out to convince buyers of the purity of their foods. Nevertheless, although a product was free from preservatives, it might still have contained colourants. Copper, for example, was a legitimate additive and widely used in the early twentieth century to restore discoloured peas or spinach to a brighter green, although it was not listed under the category "food preservative" (Thresh & Porter, 1906, p. 164). However, as with other additives at the time, there

were concerns among investigators about whether consuming copper was injurious to health. As a result, it was banned from use in food production from the mid-1920s (Collins, 1993).

Guaranteed pure and free from preservatives, is presented in small uppercase letterforms and positioned on the side of the label (Fig. 71), which gives the description minor significance. Greater importance is given to a full-colour hand-drawn picture on the front, displaying peas, including their pods and flowers, and providing the impression of fresh and recently harvested vegetables. The visual shows similarities to Figure 70, describing pure jam and jellies, where fresh fruit and berries are directly associated with natural purity. Because any available colourant could be used in production, this picture of fresh fruit could affect the perception of the food, the reality was that it had been highly processed, and there was no way of knowing what the actual quality of the content would be. By adding a trademark which illustrates a farmer sowing seeds, this visual reinforces the perception of pure and fresh produce. The narrative strengthens the emotion of the product being in its natural state; fresh and pure food. The similarity to the image in the fig jam label (Fig. 69) is noticeable.

4.7 Summary

Tracking the use of the word *pure* (or comparable descriptors) to indicate non-adulterated food has provided insight into whether the meaning of *pure* changed in respect of the type of food it was describing. It also highlights the extent to which its prominence or depiction through imagery has changed over time. The case study has analysed a selection of nineteenth- and early twentieth-century food labels representing a few essential foods of the time; mustard, cocoa, jams, and canned vegetables.

The labels demonstrate the extensive variations used for the content descriptions, discussing the design elements of typeface usage, orientation, size, and colours. The beginning of this case study concentrated on typographic diversity and the use of language to illustrate labels from different decades. Early black and white printed examples represent products available towards the end of what has been termed *the golden age* of food adulteration (Collins, 1993). The London Mustard label from 1850 (Fig. 63) and the label for Fry´s Cocoa (Fig. 65) demonstrate a trend in typography, structure, and language usage, which can be viewed as an extension of information in handbills or posters in the nineteenth century (Twyman, 2003).[50] The statements on both labels informed customers about pure production processes or the benefits of consuming products free from injurious additives. Consequently, the items fed public concern

[50] Handbills, also known as cheap leaflets or flyers, were often produced by local printers and used for trade publicity or public information. 'For the local printer, the handbill was a paying proposition. It needed little in the way of expertise; layout, wording and the general style emerged on the spur of the moment, and life of the finished product was mercifully brief' (Rickards, 1988, p. 130).

by indicating through suggestive language that similar products may include harmful ingredients, and also highlight the seriousness of the food fraud scandal. However, at the beginning of the time range in question there were relatively low levels of literacy in Britain, so realistically only a small percentage of the population would have benefitted from written information on labels. Another good reason for using colourful and enticing imagery to promote a product.

Samples from 1900 onwards show that labels begin to give less significance to the word *pure,* favouring full-colour pictures. The manufacturers had identified that pictures could represent narratives of trust or authenticity and strengthen the feeling of purity and freshness of the food. The result is in line with a general change in label design in the early twentieth century. The introduction of colours and visual package design improved the ability to display a picture of the content, or present other illustrations to increase sales or evoke emotions (Davis, 1967, p. 92). Also, the importance of *pure* for many labels seems less significant than the brand names and the ingredient names. This observation coincides with the systematic review in Section 3.2. The vast majority of nineteenth-century food labels display *pure* with less visibility and appear less substantial than, for example, brands and ingredient names. This is hardly surprising as it demonstrates the manufacturer's requirement to promote new products, and to create ownership, due to competing trade and the expansion of the food industry in the nineteenth century. Hence, manufacturers would practice more comprehensive strategies to convince the public about purity, and to build trust in their products. Cadbury, for example, contributed to the new law in 1875, which supported establishing a definition of *pure*, and also strengthened its position among competitors. They marketed their cocoa through extensive advertising campaigns; however, presented *pure* on a less significant level than the brand and the ingredient name on their cocoa essence packaging.[51] By continuously connecting the brand name to the idea of purity, there seemed less need to use the message overtly on the labels.

Comprehension of the manufacturers use of the word *pure* on labels is dependent on the time period, and types of food, being discussed. Sometimes *pure* described foods as free from harmful or harmless substances; on other occasions *pure* described foods with no fruit pulp or added chemicals, as seen in the early twentieth-century examples from jam industry. From early 1900, the idea of *pure* was reflected through images to increase the perception of clean food. The different, and often vague, ways that manufacturers used the word *pure* meant that they could promote the quality and purity of their products to serve their own interests, but also to allay public fears concerning food adulteration, and later, the addition of preservatives.

---

[51] *A Century of Progress 1831–1931* includes examples of various packaging for Cadbury from the nineteenth century (Rogers, 1931).

5.0 CASE STUDY 2. HOW EARLY NUTRITION SCIENCE REFLECTS THE REPRESENTATION OF VITAMINS

This chapter considers the vitamin messaging on selected labels from the 1920s, 1930s, and 1940s, and reflects on whether the early twentieth-century science of vitamin discovery affected the presentation of the visual content and positioning on labels. Most of the examples found for the 1920s and 1930s are for imported canned products; beans vegetables and tomato juice, and these are included in this case study.[52] Heinz products are used to represent new lines of food, introduced from America into the British food market from the 1920s onwards (Oddy, 2003, pp. 103–104); some of these labels show an American seal as an indicative device for the product's country of origin.

Several food labels represent moderately processed foods,[53] indicating that they are manufactured by including only one or two extra ingredients, e.g., salt or sugar. Hence, the vitamin content in a moderately processed food is determined by the actual ingredient content rather than additional synthetic vitamins.

Packaging from WWII shows examples from a period when it was necessary to enrich the food with specific vitamins. Excluded from this chapter are labels from this period ('20s, '30's, and '40's) which were found on tins of evaporated milk. These labels describe an irradiation process which increased nutritional content of a product. Chapter 7 is concerned with milk and milk related products, so evaporated milk tins will be fully discussed at that stage.

In this chapter, Case study 2 considers whether typography distinguishes vitamin messages from other textual elements. For example, how is information presented when *vitamin* is less prominent? Do additional pictorial elements enhance the vitamin message and increase healthy food perceptions? Does the early twentieth-century science of the concept of vitamins influence verbal and pictorial presentation? This case study begins with a summary of the significant factors of the period that would have persuaded food manufacturers to include vitamin content information on their labels.

5.1 Discovery of vitamins in the early twentieth century

Although it was well known that food contained significant compounds essential to health in the late nineteenth century, their role was not fully understood until the concept of vitamins was formulated in the early twentieth century (Carpenter, 2003). Until then, proteins, fats, carbohydrates, mineral salts, and water in food, were considered essential

---

[52] The limited range of products relates to the limited availability of prepacked food before WWII. However, the growth in technology and significant development in the food industry in the second half of the twentieth century led to a considerable increase in the range of products.

[53] See Section 2.1 for the terminology used for this thesis regarding different definitions of processed foods.

substances and significant to growth and health (Hollingsworth, 1976). However, researchers discovered that food contained additional material critical to stopping deficiency diseases such as beriberi and rickets, and in 1912 Casimir Funk named these dietary elements *vitamins* (Semba, 2012). Gradually, through to the mid-twentieth century, epidemiologists, physicians, physiologists, and chemists, from Europe as well as the US, contributed to the cataloguing the scientific make-up of each vitamin (Semba, 2012; The Nobel Prize, 2021). This discovery was a significant scientific achievement in understanding health. In *The Business of Vitamins*, Horrocks (1995) discusses how the concept of vitamins came to be known as the *Newer Knowledge of Nutrition*. Foods rich in vitamins, such as fresh fruit, green vegetables, and wholegrain bread, were given status as *protective foods* and were seen as important vehicles to lifelong good health. Consumption of vitamin-rich food was actively encouraged and advocated for in newspapers and women's magazines. As a result, their readers gradually became familiar with the term *vitamin* and understood that these substances were essential to their family´s health. They also became aware of the different names; vitamins A, B, C, and D, and learned that fresh food was an important carrier of essential vitamins (Teuteberg, 2000). In addition, nutrient information was popularised in books primarily aimed at an educated middle-class audience (Horrocks, 1995). For example, the much-reprinted *Food, Health and Vitamins* by Plimmer and Plimmer appeared for the first time in 1925, and nutritional science influenced Drummond and Wilbraham when writing *The Englishman's Food*, first published in 1939. Information regarding the value of vitamins also found its way into cookery books. From an edition published in 1923, Mrs Beeton's *Book of Household Management* speaks of the necessity of vitamins mainly found in fresh foods.

> In addition to proteins, fats and carbohydrates, it has been shown during recent years that there are certain subtle but indispensable elements of nutrition called vitamines. In an ordinary dietary these are present in small, yet sufficient quantity, but where no fresh foods are available these substances may be absent, and the lack of them results in the production of what are now called "deficiency diseases". Scurvy and beri-beri, come under this classification, while the probability is growing that rickets also is in part, at least, due to vitamine deficiency (Beeton, 1923, p. 1531).

It is difficult to determine the extent to which the public initially understood the implications of vitamins and the importance of particular foods to stay healthy (Horrocks, 1995). For example, a survey in 1938 showed that only a minority of housewives were interested in dietetic subjects, and this interest was usually restricted to slimming diets or feeding young children. The survey showed that public campaigns may have had only

marginal effects at the time (Burnett, 1979, p. 316). On the other hand, Horrocks (1995) concludes that there is considerable evidence that the *Newer Knowledge* gradually did change people's perception of food, in terms of nutrition, throughout the early twentieth century. Along with nutritional scientists, the food trade contributed to this shift in understanding. Several high-profile companies drew upon and adapted nutritional information in order to form the basis of their advertising campaigns, this ensured that scholarly knowledge about vitamins became standard public information.[54]

In the 1930s, researchers experimented with isolating pure vitamin C from cabbage, Swedish turnips, oranges, and red peppers. A few years later, they succeeded in making synthetic vitamin C, and over the following decades, industrial production increased significantly. A vast part of this output was delivered directly to the food industry, knowledge that they used to improve the quality of food. From 1935 the quantity of industrially produced vitamins increased, and the production of vitamin foods and medicinal goods increased accordingly (Teuteberg, 2000).[55]

The science of nutrition continued to develop significantly in the following decades, and the British government understood the need to include nutrition policies as a part of an effective health service. Based on the *Newer Knowledge*, they recommended a fundamental diet for poor people, and in the 1930s, the *Milk in School Scheme* provided free milk to children in schools. The British Government's structured plan for food rationing in 1940 also reflects nutritional awareness. A dietary rationing scheme, and dietary modification, ensured an increased intake of vitamins and minerals, improving public health. For example, to compensate for the scarcity of eggs during the WWII, margarine was fortified with vitamins A and D (Burnett, 1979, pp. 322–326).

Nutritional awareness influenced the food industry to include 'new' types of health messages on food labels. According to Horrocks: 'The advent of the "Newer Knowledge" and the rapid development of the subject were important for the food industry because they offered a new definition of good food which was widely accepted by consumers' (Horrocks, 1995, p. 239).

Whereas nineteenth-century packaging was mainly used to convince consumers about the health benefits of consuming pure food, descriptions of vitamin content on labels is noted in examples from 1920 onwards. However, it is impossible to build a complete picture of the food's nutritional components entirely based on labelling from the early twentieth century, as there were no demands for nutritional specifications to be listed on them. Such requirements did not appear until the 1990s (Turner, 1995).

---

[54] The importance of vitamins is presented in advertisements for milk, milk drinks, and patent medicines.Examples of advertisements for Cooperative milk, Cow & Gate milk food, and Radio Malt, The Vitamin Food are shown in Appendix 3.

[55] For example, the discovery of vitamin D led to cod-liver oil production to combat rickets (Rajakumar, 2003).

The following section examines the presentation of vitamin information on early twentieth-century labels. Some products only rely on the natural sources of nutrition found in the ingredients, while other foods have added vitamins by way of nutritional concentrates or fortification. The labels demonstrate how some manufacturers marketed their products in the heyday of vitamin discovery. As most examples in this chapter represent tinned foods, including labels that circle the whole pack, there does not seem to be a clear distinction between a front and a back panel. However, one part of the item would still serve as the most crucial front section, showcasing the brand name, ingredient name, and a possible health message. Therefore, I have clearly defined which parts I consider represent the front, back, and sides of a label, when discussing the different sections.

5.2 Representation of vitamins on labels

Figure 72 shows a label for canned English peas from the 1920s–1930s including the term *vitamin*.[56]

Figure 72. Label for a tin of peas. *c.*1920–*c.*1930.
Size: 107 x 283 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (5a).

This label is the earliest example from the corpus, including the term vitamin. The label shows how the discovery of vitamins, also known as the *Newer Knowledge of Nutrition*, influenced the manufacturer to employ the word vitamin, thus suggesting a new definition for good quality food.

The front panel is divided into three main parts. In the centre, *vitamin,* alongside the brand and the ingredient name, creates a separately framed element resembling an emblem. Presenting *vitamin* between the brand and ingredient name suggests a strong relationship between the verbal elements, and *vitamin* creates a close and positive association to the food as well as the brand. Red highlights *VITAMIN* while *SANDRING* and *ENGLISH PEAS* are reversed out of red. Interestingly, these can be read

[56] Based on the analytic review of food labels in Chapter 3, the label for *SANDRING VITAMIN ENGLISH PEAS* in Figure 72 is the earliest example containing the term, as vitamin was unknown terminology before the 1920s. Also, there are no observations of food labels describing the food's vitamin content before the 1920s in books presenting ephemera from the 1800s to 1970s, (Davis, 1967; Humbert, 1972; Lewis, 1962).

individually, i.e., brand name, health message, ingredient; alternatively, it can be seen as the name of the product in one statement. However, an additional heading that directly connects vitamins to the product appears on the label's side panel. Presenting *SANDRING VITAMIN ENGLISH PEAS* in a bold typeface directly brings together the three elements *Sandring* – manufacturer's brand name, *Vitamin* – health message, and *Peas* – content or ingredient, which means there is no doubt that this is the whole name of the product at the same time as reinforcing the intended message on the front.

Above the emblem to the front of the label, *THE NEW* catches the eye as the words are printed with a red outline reversed out of the background. This phrase could refer to the new and improved manufacturing methods, described on the side of the label, but could also be used to acknowledge the *Newer Knowledge of Nutrition*. (Horrocks, 1995). Hence, *THE NEW* and *VITAMIN* are both used to draw attention to the label and associate the food with current knowledge regarding nutrition and health. The statement *Highly Nutritious – Create energy & strength* further emphasises the food's nutritional value in terms of vitamins and proteins. To each side of the emblem, depictions of medals and a membership certificate of the Pea Growers Association, help communicate the quality and heighten its perception. These elements further address the manufacturing process as well as the nutritional value of the food.

The label also displays a full-colour background drawing of green peas, clearly depicting the tin's content. Further, as the public gradually perceived green vegetables as healthy, and carriers of essential vitamins (Teuteberg, 2000), the picture very likely increased the perception of the food as *protective* and essential to good health. Consequently, the label shows a relationship between green food and vitamins and includes contemporary information about significant nutrients; information that was also emerging into the mainstream through books and newspaper articles of the time.

However, as seen in the earlier discussion of food labels for industrial products (Chapter 4), it is hard to consider whether the use of particular verbal and visual elements employed on the labels represented the genuine health values of the food. Plimmer and Plimmer bring this into question here:

> Many artificial processes are now interposed between food as we eat it and the plants and animals from which it is derived. A modern provision shop is filled with packets and tins branded by a factory. We do not know what has been added or taken away from our food. Many articles are vividly dyed to simulate the green freshness of plants, the red or yellow of fruit juices, the golden colour of butter and eggs (Plimmer & Plimmer, 1933, p. 4).

Their description of branded packets and tins indicate the challenges consumers encountered when considering the food's quality based on the labels. For instance, although the label for tinned peas emphasised vitamins and green vegetables, it would not have been easy to establish whether any added chemical substances, such as colouring, may have deteriorated the quality of the food. Still, the Sandring pea label shows how the discovery of vitamins, or the *Newer Knowledge of Nutrition,* influenced the manufacturer to display the word *vitamin*, thus suggesting a new way of defining good quality food.

The following examples show information about specific vitamins and set out to demonstrate how the language of nutrition science was used for commercial purposes, to increase the perception of the food´s health benefits. Figures 73–75 represent food from Heinz. All items display messages about the vitamin content of the food on the side or the back of the labels. This information, then, appears less prominent than the brand and the ingredient name, which are on the front panels and restricted by the recognisable frame present on nearly all of Heinz's packaging. Through food processing, standardisation, industrial packaging, and labelling, Heinz committed to the quality of its products. Therefore, the brand name represented the value of purity and trust, and it seemed less crucial to include *pure* prominently on the front panel. Likewise, the information about the vitamin content is presented less noticeably on the side/back of the labels, instead, favouring the brand name on the front.

The following three labels deal differently with information regarding nutritional content, especially in terms of language and specifications. In particular, the two tomato juice labels seem to have a clear connection with the discovery of explicit vitamins. The *Strained Green Beans* label from the 1930s (Fig. 73) includes general information regarding vitamin content, which is presented in small sized, uppercase, sans serif letterforms on the back of the item, as follows: *All Heinz strained foods are prepared from the best quality of raw material. A special vacuum process conserves in high degree the natural vitamins and mineral salts.*

Figure 73. Label for a tin of green beans. *c.*1930–39.
Size: 65 x 192 mm.
History of Advertising Trust, HZ 5/1/6.

Heinz promotes the food's natural vitamin content due to the unique conservation process. As a result, the term vitamin becomes a general description of the product's health benefits and part of Heinz's commitment to the quality of its products.

The label does not include claims based on specific vitamins. Instead, the manufacturer promotes the food's natural vitamin content being due to the unique conservation process. Hence, the term *vitamin* becomes a general description of the product's health benefits and a significant part of Heinz's commitment to the quality of its products. The label also includes a seal from the American Medical Association (AMA)[57] which suggests a scientific guarantee for the product, giving further credit to the quality of the food.

An eye-catching drawing of a healthy baby with rosy cheeks dominates a large part of the back panel. The baby stretches her arms towards the viewer which immediately signals to the shopper that the food is intended for babies. This picture corresponds with the information above it, *RAW MATERIAL ... CONSERVES ... NATURAL VITAMINS ...* etc., which makes the verbal message concerning nutrition more effective.

The picture of a healthy child holds positive connotations. Consequently, the visual helps to pull out significant parts of the text, such as emphasising the nutritional content. In other words, the narrative builds a direct relationship between the food's health benefits and a healthy child. Nutritional awareness among mothers in the 1930s coincides with feeding young children (Burnett, 1979, p. 316). Thus, pictures of healthy babies connected with verbal health messages would have a direct and positive impact and heighten perception of the food's nutritional properties. Similar pictures of healthy babies are also found in 1930s advertisements for Heinz.[58] For example, with the words, *Protect your baby with foods you know are safe!* In advertisements, Heinz places emphasis on safety and appeals directly to mothers by using *your baby* in the text. The safety claim is twofold; it applies the protective production process, and also to the natural protection against, for instance, malnutrition, that a vitamin-rich, highly nutritional food would give to a baby.

The following two labels demonstrate how Heinz promoted their canned tomato juice as a health drink, mainly in terms of specifying the vitamins and using pictures. The first label (Fig. 74) is for Heinz Tomato Juice.[59] The item displays a similar informational structure to that of the green beans example in Figure 73. However, the label includes less information about the production process, but more details regarding the food's specific vitamin content, printed in red on the side panel: *Heinz Tomato Juice is an excellent dietary source of vitamins A and C.*

---

[57] Founded in 1847, the American Medical Association (AMA) is the largest and only national association that convenes 190+ state and speciality medical societies and other critical stakeholders (AMA, 2022). In 1936 AMA offered its *Seal of Acceptance* to food manufacturers who passed safety and hygiene standards and did not advertise any unproven benefits (Encyclopedia.com, 2018).

[58] The advert can be seen at: https://www.thenostalgiashop.co.uk/products/heinz-strained-vegetable-soup-original-advert-1935-ref-ad8158.

[59] This label was probably intended for the Canadian market. However, this example shows how graphic information about some of the first discovered vitamins was shown verbally and visually.

FRONT PANEL BACK PANEL

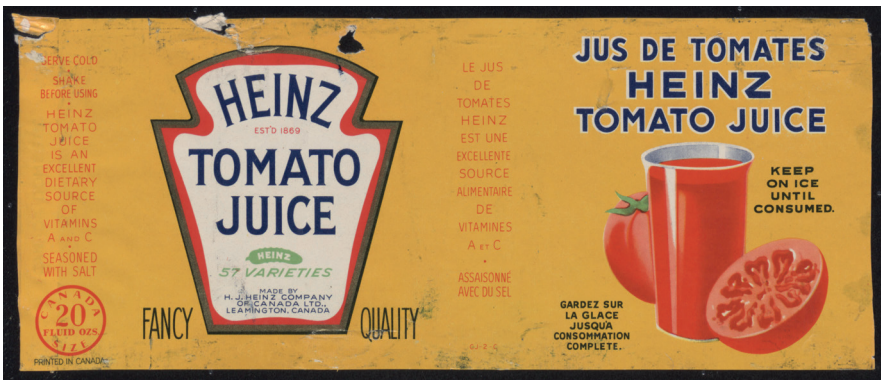


Figure 74. A label for a tin of tomato juice. c.1930.
Size: 108 x 264 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 6 (34).

Vitamin A and C were two of the first vitamins discovered (Teuteberg, 2000). The label presents contemporary scientific knowledge by including the names of these newly identified health-giving substances.

The nutritional message sits directly below the two directions for use, *SERVE COLD* and *SHAKE BEFORE USE*, and is positioned to the side of the brand. Consequently, like all Heinz labels, other information appears less prominent than the brand and ingredient name on the front panel. Also, listing the nutritional message casually beneath the instructions to some extent 'normalises' the message. Heinz demonstrates the contemporary scientific knowledge by claiming the drink contains vitamins A and C – two newly identified health-promoting substances found naturally in tomatoes (Teuteberg, 2000). As consumers gradually became familiar with the concept of vitamins and their associated health benefits, through reading books and magazines, this packaging information went further to raising public awareness of these connections.

A drawing of a glass of juice and fresh tomatoes dominates the back of the label. The picture adds information to the verbal health message as it enabled consumers to recognise a fresh vegetable as a vital source for well-being. As the red used in the vitamin message echoes the red of the tomatoes, the picture contributes to drawing attention to the verbal message, although this is presented in small size on the label's side. Hence, the visual increases the healthy food perception as the ingredient is given the status of a food important to good health.

The second label for Heinz tomato juice also displays a verbal description promoting the benefits of consuming the product. However, the label additionally includes claims based on an extended number of vitamins. The text occupies one-third of the back panel and is presented in a minor typeface as follows:

> *Heinz tomato juice is a good source of vitamins A, B, C and G. It also contains the same acid present in oranges and lemons and other healthful constituents, especially recommended for infants and invalids.*

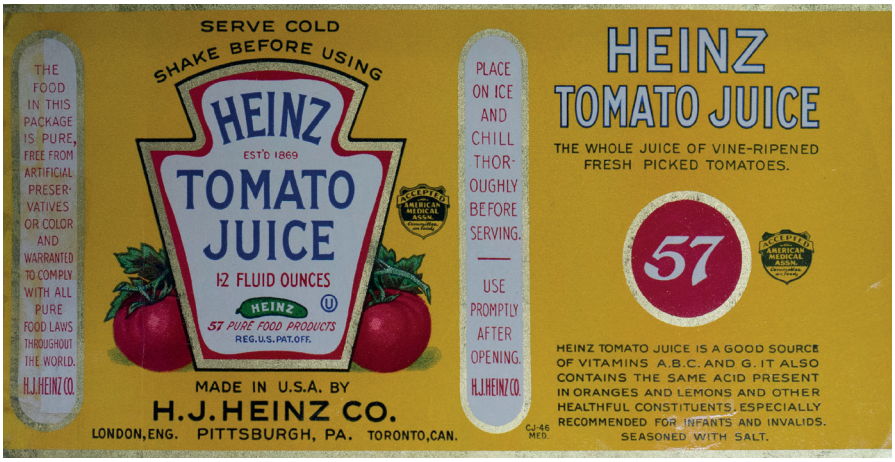


Figure 75. A label for a tin of tomato juice. *c.*1930–1939.
Size: 114 x 230 mm.
History of Advertising Trust, HZ 5/1/6.

Adding vitamin B and G signifies current knowledge at a particular time. The picture of fresh tomatoes supports the information regarding vitamins on the back, indicating a food beneficial to health.

Including vitamin G in the list of nutritional properties of a beverage identical to the previous example shows how up to date with scientific findings Heinz were, and that they were keen to show their knowledge. Vitamin G was initially categorised as a significant stand-alone vitamin; however, it was later reclassified as *riboflavin* and sits within the extensive vitamin B group. Therefore, including the notion that vitamin G was separate to vitamin B would seem peculiar a few years later. Nevertheless, as the concept of vitamins had novelty value at the time of production, mentions of them on labels would increase the impression of a healthy and nutritional drink.

There are striking similarities between the first and second Heinz tomato juice labels, this second item also includes a descriptive picture of fresh tomatoes, although it is now more prominent, on the front panel. The visual of a fresh, red tomato, helps draw attention to the packaging and enables the consumer to identify the essential ingredient quickly. This picture also supports information on the back regarding the food's vitamin content. As a result, both labels reflect the nutritional benefits of consuming fresh tomatoes. As the public eventually understood that raw vegetables were healthy and carriers of essential vitamins (Teuteberg, 2000), the pictures of tomatoes likely increased the perception of the food as *protective, therefore* essential to good health.

Although very difficult to prove, if the assumption is that tomato juice from Heinz only had added salt to squeezed tomatoes, and there had been no detrimental heating process to destroy nutrients in the vegetables, the beverage could be closely associated with fresh tomatoes in terms of nutritional value. However, complications emerged when Heinz used similar communication strategies to promote less healthy foods.

For example, an advertisement from 1938 (Fig. 76) displays a bottle of tomato ketchup alongside a row of fresh tomatoes, claiming the quality of the ingredients and the product as follows:

> *The fresh, delicious tang is like a shaft of sunshine all day. The secret lies in the way Heinz make it. They pick the big, ripe juicy tomatoes fresh from the vines and bottle them all in a day—sealing down all their full, fresh flavour, all their life-giving vitamins.*

Figure 76. Advertisement for Heinz tomato ketchup. 1938.
Size: 290 x 185 mm.
History of Advertising Trust, reference: HAT62/1/1511.

Ketchup contains processed tomatoes which means there may be a reduction or complete destruction of vitamins and nutrients found in raw tomatoes. However, the advertisement uses the image of fresh tomatoes, as they did with their tomato juice, which would lead consumers to think that this more processed product contained the same levels of health-enhancing vitamins.

This advertisement displays fresh tomatoes as the main ingredient (similar to the tomato juice labelling) in order to create the perception of a health-giving product. However, the advert does not mention that ketchup involves a different manufacturing process than tomato juice.

Ketchup recipes demonstrate that heating is a part of the method, this can reduce or destroy some of the health-giving vitamins found in raw tomatoes.[60] Nestle (2013) refers to a parallel advertisement from Heinz published in the *New York Times*, January 1999, showing a bottle of Heinz ketchup with the headline 'Lycopene may help reduce the risk of prostate and cervical cancer' (Clinton, as cited in Nestle, 2013. p. 334). The advert singled out one component of ketchup, lycopene, naturally present in tomatoes and good for health when eaten raw: Heinz later withdrew the advertisement under the challenge by Federal Trade Commission, due to the unauthorised health claims for lycopene and cancer risk (Nestle, 2013, pp. 334–335).

Verbally or visually emphasising one particular source of nourishment, based on one nutritional element of a single ingredient, is first observed in early twentieth century labels promoting vitamins. However, this approach to promoting food seems to have increased throughout the following decades and is commonly seen in post-war labels for soft drinks. For example, pictures of raw oranges, known for their high vitamin C content, are often displayed on labels for beverages frequently high in sugar and additives. These issues are further discussed in the third case study (see Chapter 6).

Although Heinz promoted the significance of nutritional properties in their products, the food labels discussed so far do not show verbal information concerning vitamins on the front panels. As mentioned, it is likely that this stance shows their choice in promoting the food's quality, and the firm's fundamental values, by emphasising the brand name. On the other hand, it has been demonstrated that the use of pictures of fresh vegetables implicitly indicates the food's health benefits.

Other firms, selling similar products to Heinz, adopted a different design for their front labels. For example, the label for *Edgell Tomato Juice* (Fig. 77) displays information regarding the food's vitamin content in addition to a distinctive visual of a fresh tomato next to a glass of juice. The picture shares a similar style with the Heinz label discussed above (Fig. 74), although the image on the Heinz example is applied on the back panel, favouring the characteristic and eye-catching brand name on the front.

[60] Plimmer and Plimmer referred to tests regarding cooking vegetables and showed that the process harmed the vitamin content – the longer the cooking, the greater the damage. However, boiling for a short period was less harmful than slow cooking at a lower temperature. In addition, the tests showed that tomatoes were more resistant to heat than, for example, green vegetables (Plimmer & Plimmer, 1933, p. 31).

Figure 77. A label for a tin of tomato juice. *c.*1930–*c.*1940.
Size: 110 x 228 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 19 (75b).

By presenting the picture in conjunction with the health message *RICH IN VITAMIN C*, the health perception of the beverage familiarised consumers with the nutrient value of fresh tomatoes. Giving prominence to the picture also emphasises the narrative that it was possible to drink the nutrients as juice instead of consuming raw vegetables.

By presenting the picture in conjunction with the health message *RICH IN VITAMIN C*, the health perception of the beverage familiarised consumers with the nutrient value of fresh tomatoes. Giving prominence to the picture also emphasises the narrative that it was possible to drink the nutrients as juice instead of consuming raw vegetables.

Visualising a domestic setting with the use of the full glass, and including a fresh tomato on the label's front panel, achieves several functions. Firstly, and as expected, the full-colour picture draws attention to the item and enables the viewer to recognise the key ingredient quickly. Secondly, the picture of raw tomato may positively impact consumers who enjoy the taste of the vegetable. However, perceiving or identifying whether the food is tasty depends on individual experience.

The visual of tomato juice poured into a glass in the Edgell label could just be there to create an appeal, on the other hand, when presenting the picture in conjunction with the health message *RICH IN VITAMIN C*, consumers would be reminded of the nutritional value of fresh tomatoes. The picture also conveys the narrative of drinking the nutrients in juice instead of consuming raw tomatoes.

These issues are also evident when looking into advertisements. According to Lyngø (2000), the breakthrough of nutritional science in the middle of the nineteenth century, later followed by the discovery of vitamins, significantly influenced advertising campaigns, advising how housewives should or could prepare nutritional meals for the family. For example, she points to several adverts in the Norwegian magazine *Liv og Sundhet* (*Life and Health*) from the 1930s, translating messages about diets and health into a *visual language*.

> Many magazine articles about food and cookery emphasise that the housewife does not have to be a 'scientist'. Preparing food is a concrete act, admittedly during this period to be built on scientific insight, but it was not really necessary to know something about these insights themselves. ... When teaching the nutritional science message on diet and health, great emphasis was placed on the visual aspect (Lyngø, 2000, p. 158).

Lyngø examines several advertisements for milk and dairy products, which used large photographs. The images show fresh milk in clean, sparkling glasses, and blocks of cheese and butter, with the implication that the foods should be included as essential elements in the daily diet. Thus, visually, the advert *teaches* the viewer about essential nutritious foods, eating habits, and a new mealtime aesthetic.

Similarly, the tomato, the glass of juice, and the verbal health message, may combine to *educate* the consumer about the connection between vegetables and vitamins. Additionally, describing the food as a *health drink* on the back of the package further emphasises the connection between diet and health. However, the statement *RICH IN VITAMIN C* is concerned with persuasion and does not inform the viewer about the specific vitamin content in the beverage. Also, there were differences between brands and production processes that may have affected the quality and nutritional value of each different product.

> The method of canning is not always the same ... one kind of tinned tomatoes or pineapple may be better than another. The supply of vitamin C, if derived solely from canned fruits, should not be cut down to the minimum (Plimmer & Plimmer, 1933, p. 61).

Consequently, statements such as *Rich in vitamin C* were difficult to check in detail. However, an interesting observation that applies to all three labels for tomato juice, (which, as far as we can be aware, represent similar beverages), regards the differences in the choices of vitamins that were considered essential to promote. The first label describes the juice as an excellent source of vitamins A and C. The second label displays vitamin A, B, C, and G. In contrast, the third label only promotes the juice as being rich in vitamin C. The inclusion of one vitamin being represented in the food seems to have been a strategy driven by novelty, the labels showed specific vitamin letters as soon as they appear in the public domain. Promoting one explicit vitamin may be related to critical information provided by communication channels at the time of production. For example, if there were a particular focus on vitamin C in advertisements or public information in newspapers, comparable information on labels would help increase awareness of the food. Emphasis on any

particular vitamin depended on scientific categorisation, and with this information manufacturers were able to promote products in a way that served their best interest.

Quite a different approach to designing packaging for vitamin-rich food in the 1930s is exemplified by this label for *Bemax Vitamin Chocolate* (Fig. 78). The chocolate was advertised within a pamphlet for Bemax vitamin tonic,[61] and seems strongly influenced by the visual appearance of medical packaging in terms of simplicity and typographical hierarchy. Like consumer goods, medical packaging involves motivation for purchase as well as communicating important information such as product benefits and brand differentiation. An important aspect of communication is product identification, creating legibility, visibility, and accuracy of the information (Bix & de la Fuente, 1995). Similar to the medical packaging in Figure 79, the *Bemax Vitamin Chocolate* does not add any crowded or decorative elements, giving prominence to the brand name positioned at the top of the front panel. Adding the term *vitamin* to chocolate indicates benefits in terms of nutrition and health and this box resembles medical packaging describing therapeutic properties. Also, promoting that the chocolate is obtainable from chemists increases associations to a product with health benefits.

Figure 78.
A pamphlet (16p) for Bemax tonic, advertising Bemax vitamin chocolate. *c.*1934.
Size: 78 x 76 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Patent Medicines 1 (42).

Bemax advertised their tonic as the richest natural vitamin tonic food. 20% tonic was used to vitaminise Bemax chocolate and was advertised as the most nutritious chocolate made. The design imitates medicine packaging which is closely associated with a product with therapeutic properties.

[61] It's quite a marked change between the tonic package design and the chocolate wrapper design. As the tonic package shows similarities to late nineteenth-century design, giving emphasis to decorative qualities, the chocolate wrapper presents a new visual direction. A different design may signify a new product aimed at a different demographic to that of the tonic.

Giving prominence to *vitamin* on the front panel can also be viewed within the context of the development of special food supplements or *patent food* in the early twentieth century due to the *Newer Knowledge* (the correlation between lack of vitamins and disease). Dietary supplements, such as tonics, cod-liver oil, and malt extract, were sold for their vitamin content and marketed for their health-giving values (Oddy, 2003, p. 98). These products were often obtained from chemists, giving associations to therapeutic properties.

The perception of the benefits of eating vitamin chocolate from Bemax in this example, would also have been enhanced by its inclusion in the pamphlet, that is, within promotional material for Bemax tonic, which was described as *The richest natural vitamin tonic food*.

Figure 79. Medical packaging for inhalant capsules. Date: n.d.
Size: 70 x 95 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P24.

Labelling on Vitamin Chocolate is designed to imitate medical packaging and gives associations to therapeutic properties. This example demonstrates a visual relationship with the Bemax Vitamin Chocolate in Figure 78.

5.3 Messages regarding vitamins on labels during WWII

Examples from WWII demonstrate differences as well as similarities to the previous examples in this chapter so far. The outbreak of war brought challenges in terms of food shortages and rationing, and the Ministry of Food was set up in 1939 to provide a nutritionally adequate diet for the population of Britain. One crucial approach was the mandatory fortification of food. Margarine was fortified by adding vitamins A and D, giving the food the same nutritional value as butter, to some extent, this process of fortification also compensated for the scarcity of eggs (Burnett, 1979, p. 326). Calcium was added to flour, and vitamin D to *National Dried Milk* (Ministry of Health, 1946. p. 117). Figure 80 shows packaging examples for fortified margarine and is useful to look at in this context. As it

became compulsory to add vitamins to margarine during WWII, the image below illustrates a wartime package with information about the nutrients supplied. No health messages were found on pre-war margarine packaging.

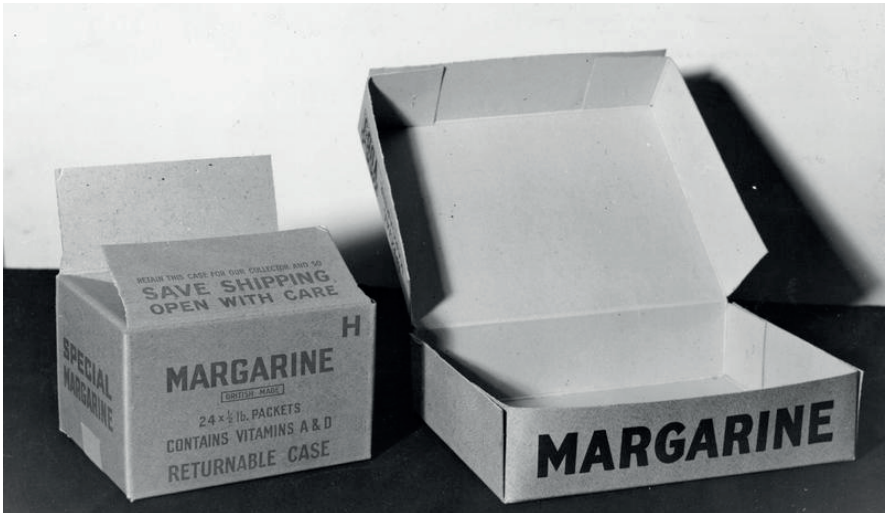


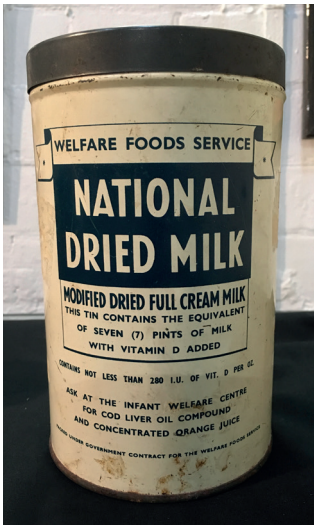
Figure 80. Packaging for margarine. Wartime and pre-wartime. IWM (V 119).

The wartime package on the left includes the wording *CONTAINS VITAMINS A & D* due to the mandatory fortification of margarine. Pre-war margarine packaging did not include any health messages.

Compared to earlier examples, which carried persuasive words like *Rich in …* or *Excellent source of vitamins*, the wartime pack only shows that the food contains vitamins A and D but still, there is no indication of the actual nutrient content levels. In this case though, as the item shown is the outer container for several packs of product and not the packaging for one individual item, there is no evidence available to find out whether these had more persuasive information on them. However, other wartime items show similarities regarding the formal and utilitarian use of language. For example, the *Meadow-lea Table Margarine* tin in Figure 81 includes *CONTAINS VITAMINS A & D*, and the *National Dried Milk* package in Figure 82 shows *WITH VITAMIN D ADDED*.

The careful use of language, such as using *Vitamin D added,* indicates information about a product fortified with nutrients and not the natural nutritional content of the food. In contrast, the tomato juice labels reflected the food's inherent nutritional values by using persuasive words such as *Rich in vitamin C.* Although *Rich* does not confirm any evidence of the actual content, but as tomato juice was well known for its naturally high vitamin C content, this could, to some extent, explain the usage of the word.

81



82

Figure 81. A tin for table margarine. WWII.
Size: Hight: 115 mm.
IWM (EPH 9737).

Figure 82. A tin for dried milk. WWII.
The Royal Berkshire Medical Museum.

Foods produced during the war contained added vitamins. The tins inform about the content without using any persuasive words or statements.

While the pre-war and war margarine tins are very different in their use of health messaging, the following two examples demonstrate the opposite. The Huntley & Palmers *Tribrek* cereal packaging (Fig. 82) from the 1930s includes *Rich in vitamins* positioned on the top and bottom of the box. In contrast, the war packaging (Fig. 83) does not display any verbal health messages; however, it does present comparable brand names and pictures, but the print has been reduced from full colour to only two colours. One pertinent reason for the lack of verbal health messages seems to coincide with the change of packaging. The cheaper paper bag restricts the space for information in contrast to the cardboard container. Reusing the familiar verbal and pictorial elements from the pre-war front panel seemed relevant.

83

84

Figure 83. Figure 83. Packaging for Tribrek cereal. WWII.
Size: 298 x 140 mm.
University of Reading, Special Collections, HP 280.

Figure 84. Packaging for Tribrek cereal. 1934.
Size: 210 x 160 mm.
University of Reading, Special Collections, HP 280.

The description on the wartime package on the left excludes descriptions of a cereal rich in vitamins, likely because of space restrictions compared to pre-war packaging.

5.4 Summary

Studying the representation of vitamin messages on food labels provides insights into how early nutrition science influenced which elements of language and imagery were used in their design. This chapter initially analysed a selection of items representing tinned beans, vegetables, and tomato juice from the 1920s, '30s, and '40s. The discovery of vitamins in this period became known as the *Newer Knowledge of Nutrition*, and foods such as fresh fruit, green vegetables, and wholegrain bread, were marked out as being essential vehicles to good health. As health messages on nineteenth-century labels were frequently applied to products *free from* adulteration, the food's vitamin content instead referred to *inherent* substances providing positive purposes. Hence, modern nutritional science and health messaging about vitamins were intrinsically linked. The discovery of vitamins was 'important for the food industry because it offered a new definition of *good* food' (Horrocks, 1995, p. 239). Consequently, food packaging became a great communication tool for presenting 'new' nutritional information, increasing awareness of scientifically good quality food.

Mentioning vitamins on labels raised public awareness as customers gradually became acquainted with each new vitamin by reading the labels. As the word vitamin initially may have been abstract and

incomprehensible, combining verbal information with images of fresh fruit and vegetables on labels could make the public familiar with the term (Lyngø, 2000, p. 162).

Vitamin messages appeared on food labels as soon as the benefits of vitamins became publicly known. However, the messages were vague because no additional information regarding nutritional content can be found on the labels. There are variations in whether messages about vitamins draw attention to labels or are given less significance by being included on the back of the items. For example, Heinz, who had already built trust in their industrially produced food through processing, standardisation, and packaging, gave vitamin descriptions less significance than their brand name on the front.

Most labels specifically describe the food's vitamin content. However, a few items stand out in using *vitamin* as a significant part of the product name, such as *Vitamin English Peas* and *Vitamin Chocolate*. The latter provides a stark contrast to previous label design and visually modelled the design to simulate medical packaging. This observation coincides with what Teuteberg (2000) refers to as ***vitamin mania,*** which captured the imagination of industrialised countries in the 1930s, for example, in Germany there were *Multi-Vitamin Products, Vitamin mixtures* and *Herbal Vitamin Tablets*. Also, *Heart Vitamin-Bread* and *Vitamin Plant Margarine* gained enormous success. He further refers to advertisements in one of the leading magazines in Germany registering that nearly all industrial vitamin products used the prefix *vit* to reflect similarities to vitamin.[62] Horrocks (1995) refers to similar circumstances in Britain in the late 1930s, pointing out an increased availability of supplements advertised with references to their vitamin content. With the intensified focus on nutrition, vitamins, and health in society, *Vitamin Chocolate* shown in Figure 78 indicates how the food industry adapted nutrition science by designing packaging that cross-referenced food with vitamins and medical evidence.

Verbal and pictorial information used on the labels might have increased the perception of better food quality due to vitamins, which in turn benefitted health. Most images represent foods that were recently given status as *protective foods* and essential vehicles for good health. In addition, pictures of domestic settings made their entrance in the early twentieth century, such as the image shown of raw squeezed tomato juice poured into a glass. These pictures revealed that nutrients could be drunk as juice as well as eaten as raw fruit or vegetables.

---

[62] *Zeitschrift für Volksernärung*, 1938 (Teuteberg, 2000).

6.0 CASE STUDY 3. HOW DIET AND HEALTH ARE REFLECTED IN LABELS FOR CONVENIENCE FOOD

> Convenience foods have been defined as 'Those processed foods for which the degree of culinary preparation has been carried to an advanced stage by the manufacturer, and which may be used as labour-saving alternatives to less highly processed products' (Davis as cited in Oddy, 2003, pp. 174–176).[63]

Case study 3 focuses on convenience food labelling and packaging from breakfast cereal and soft drinks. This thesis defines these as appearing in the highly processed foods category, with frequently added constituents, whether sugar, salt, vitamins, or chemical substances. All labels display a list of ingredients.[64] The chapter's aim is to identify whether changes regarding diet and health after WWII influenced language and design. The first section includes a summary of how an increased consumption of convenience foods raised health concerns after WWII.

6.1 Increased consumption of convenience foods raised health concerns

After WWII, Britain went through enormous demographic and social changes, which is shown to have affected dietary patterns. For example, there was a rise in smaller family units, such as single parent families and pensioners living alone, and the number of women continuing to work after marriage increased significantly (Burnett, 1979, p. 345). These social changes influenced manufacturers as well as designs on packaging material. Market research and consumer psychology considered gender, age, interest, and family life cycles, to discover what kind of foods a changing population wanted, and what motivated different consumers to purchase particular goods. Furthermore, the information helped packaging designers work out how to make different foods stand out from others, depending on interests and trends (Moor, 2007, p. 19). From the 1950s, powdered soups, dinners-for-one, and fully pre-prepared meals were all labour-saving products available to cater to new needs. One of the most significant advances in food technology was refrigeration, and frozen vegetables and fish fingers became a part of the British diet (Oddy, 2003, pp. 173–174). In addition, television significantly affected eating patterns as advertisers could communicate directly to the consumers. As a result, in

---

[63] Convenience foods are classified as falling within four product sectors: frozen, dehydrated, canned and prepared (and partly prepared). Low temperature technology was a major factor in their development (Oddy, 2003, pp. 174–176). For this thesis convenience foods also include highly processed foods such as breakfast cereals. See terminology in Section 2.1.

[64] Although there were no official regulations concerning the listing of nutritional contents until the 1990s (Turner, 1995) there are several items that do list added nutrients.

America, television marketing soon influenced the population, causing the growing popularity of TV dinners and take-away food. 'Food and drink were major targets for advertisers, particularly those food products marketed by American firms which already had experience of running television commercials in the USA. Kellogg, for example, began advertising its Rice Krispies in 1955' (Oddy, 2003, p. 184).

In the 1940s, demographic change, the rise in availability of convenience foods, and the introduction of self-service stores, all had a considerable impact on consumer behaviour as well as that of producers. As a result, manufacturers paid more attention to package design, creating labels that were more unique, eye-catching and quickly identifiable at the point of purchase (Klimchuk & Krasovec, 2012, p. 24). Simultaneously, an increased output of industrialised food resulted in new products processed by chemical, mechanical, and technical methods; consequently, much food resulted in being of a completely different composition than fresh and unaltered foods. Industrialised foodstuffs formed a large part of the population's diet which led to nutritional deficiency problems due to a lack of natural vitamins and roughage in dietary fibres (Tanner, 2000). As soon as scientists succeeded in producing synthesised vitamins, the demand for them increased rapidly. In the second half of the twentieth century, a large part of this output was delivered directly to the food industry in the hopes of improving food quality and increasing its nutritional value (Teuteberg, 2000).[65] This was described as *fortification* or *enrichment*:

> Fortification or enrichment means the addition of one or more essential nutrients to a food, whether or not it is normally contained in the food for the purpose of preventing or correcting a demonstrated deficiency of one or more nutrients in the population or specific population groups (Codex Alimentarius Commission, 1989).[66]

Fortification of food has been necessary during specific periods, such as WWII, when food shortages and rationing put an emphasis on compensating for nutritional deficiencies in the population. As discussed in the previous case study, for example, margarine was fortified with vitamins A and D during the war, to compensate for the scarcity of eggs (Burnett, 1979, p. 326). Also, a legislative requirement was introduced in Britain in

---

[65] In research regarding producing synthesised vitamin C, Hungarian, Swiss and British scholars worked closely together. For example, the first vitamin C was registered in 1933 by the firm Merck in Darmstadt, and 12 kg of pure vitamin C was produced. The production, which in 1964 amounted to 5000 tons per year increased to 50 000 in 1991. Two third of this output were delivered directly to the food industry (Teuteberg, 2000).

[66] 'The Codex Alimentarius Commission develops and adopts food standards that serve as a reference for the international food trade. Objectives: Protect consumers' health; Ensure fair practices in international food trade; Coordinate all food standards work done by international governmental and non-governmental organisations' (European Commission, 2022).

the 1950s; the addition of specific nutrients to foods in order to restore the iron, thiamine, and niacin lost in the milling process of whole grains of wheat (National Institute for Health and Care Excellence, 2012). However, the fortification of food does not automatically make diets better. After the war, industrially refined foods were often chemically processed with added colourings, sweeteners, and preservatives. Consequently, some products may not have been as healthy as indicated on the packaging. Nestle and Ludwig point out a few crucial practices in terms of misinterpretation:

> • Few, if any claims can be verified.
> • Although specific dietary components may be linked to improved health outcomes, food products containing the dietary components might not have the same effect.
> • Claims based on individual nutritional factors are misleading.
> • ... front-of-package health claims have a selective focus, ignoring the presence of potentially unhealthful aspects (e.g., the sugar or salt content in a prepared breakfast cereal) (Nestle & Ludwig, 2010, pp. 2–3).[67]

On the other hand, the practice of food fortification makes sense in order to rectify nutrient deficiencies among a low-income population, without the means to afford a varied diet.

By the mid-1950s, Britain was confronted with health concerns regarding obesity and cardiovascular disease (Oddy, 2003, p. 193). Obesity is the result of a poor diet, with a high intake of calories from saturated fat and salt, combined with a low intake of fibre, fruit, and vegetables (Scarborough, Wickramasinghe, Bhatnagar, & Rayner, 2011). While public health organisations in the early twentieth century were concerned with raising the population's intake of nutrients and calories, how to lower the intake of calories was their new focus by mid-century. The question for retailers and foodprocessing firms was, from then on, how to encourage people to buy more and eat less? The supermarkets' response was to solve the problem by encouraging healthy eating through the development of new products and the wider availability of quality brands. Production of small portion ready-made dishes and low-calorie products specifically for body-weight loss, met both the demographic changes, and the demand for slimming food (Oddy, 2003, p. 193).

After the war, the rise of food industrialisation, and the increased complexity in the composition of different foods, also influenced Britain's labelling policy. *The Labelling of Food Order 1946* imposed detailed

---

[67] Although a few decades after the defined period for this thesis, a survey from 1999 provide similar indications for Britain. 260 food products with added vitamins and minerals showed that almost three quarters were high in fat, sugar and salt. The report expressed concern that fortification was used as a marketing tool to promote unhealthy processed foods. http://www.foodcomm.org.uk/pdfs/fortification.PDF

labelling requirements for all pre-packed food including the packer's name and address, the pre-pack nett weight, and each ingredient's proper name, listed in descending order of use. The latter is significant in observing any inconsistency between prominent visual health messages and high sugar content, extensive additives, or synthetic vitamins. The new policy provoked a fundamental change in the appearance of food labels and established the format for the labelling that we see on today's packaging.

By the 1960s, the use of food additives increased, and medical and governmental reviews pushed for labelling to be as clear and informative as possible to protect consumers and honest traders. *The Labelling of Food Regulations 1970* issued a more detailed plan for ingredient listing, which included general requirements for labelling in terms of readability;

Any designation, name, particulars, list, statement, declaration, indication of origin, word or words ...

a. shall be clear and legible
b. shall not be interrupted by other written or pictorial matter where such interruption might mislead the purchaser or consumer as to the nature of the food
c. shall not be in any way hidden or obscured or reduced in conspicuousness by any other matter, whether pictorial or not, appearing on a label (Labelling of Food Regulations 1970, p. 1427)

Based on the review of food labels in Chapter 3, the typographic treatment given to, for example, ingredient lists on post-war labels, was frequently presented in red or dark colour uppercase letterforms, providing good legibility for the information. Grouping the ingredients by framing is also seen through a combination of descriptions, which separate the ingredient list from other textual elements, or are used to emphasise specific information. On the other hand, some designs set the ingredient lists vertically, down the outer edge of the label, or above pictures which, to some extent, negatively influenced the clarity of information. However, readability in most cases was adequately in line with the guidelines.

Several post-war labels include nutrient specifications, usually applied on the back panels, thus adhering to the guidelines, from 1946: If a vitamin or mineral claim appears on the label, nutrition labelling to identify the present vitamin or mineral quantity is compulsory (Turner, 1995, 2007).

The question is whether prominent verbal and visual health messages on the front of a label, leads to unhealthy ingredients in the food becoming too inconspicuous? The following examples of cereal and soft drink labelling shows how language and pictorial narratives promote the food's health benefits.

6.2 Presenting health messages on packaging for breakfast cereals

Ready-to-eat cereals from large companies, such as Kellogg's, were an established part of the British diet by the 1960s and 1970s; branded hot cereals, for example, Quaker Oats, had been popular breakfast products for decades (Collins, 1994). Quaker promoted their oat as *The World's Breakfast* and emphasised its purity, simplicity, and healthiness – unsweetened without any inferior substitutes.[68] The idea behind Kellogg's products was to also create a healthy breakfast cereal, and since the late nineteenth century, the company has introduced many products claiming nutritional and health benefits. Current research shows that consumers may evaluate a food's healthiness based on the brand (Chrysochou, 2010) and perceive particular products as healthier than existing alternatives on the basis of the perception of the healthiness of the brand (Masterson, Florissi, Clark, & Gilbert-Diamond, 2020). Kellogg's has, throughout the years, provided customers with nutritional information, published research on the importance of fibre,[69] and contributed to nutritional education (Kellogg´s, 2020). Therefore, the brand name played an essential role in communicating the health benefits of their many products, and was generally recognised as a health brand.[70] A pamphlet for *All-Bran* from the inter-war years (Fig. 85) illustrates how Kellogg's laid out the product´s health benefits in its promotional material, connecting its brand to health, nutritious food, and medical discoveries:

- *Every year medical science discovers new facts providing that constipation is one of the greatest sources of ill-health.*
- *Kellogg´s All-Bran relieves constipation.*
- *All-Bran contains Vitamin B. Vitamin B has several important functions in the diet.*
- *Iron is needed to build good, red, blood, and to prevent nutritional anæmia. Laboratory tests show that Kellogg´s All-Bran is an excellent source of food iron.*

---

[68] Examples of advertisements for Quaker Oats are shown in Appendix 3.

[69] 'All-Bran was first produced in 1916 and was introduced in the UK, with corn flakes, in 1922. Demand steadily grew by over 30% a year up until the mid '20s and by 1924 Kellogg's cereals were proving so popular that a separate company, the Kellogg Company of Great Britain Ltd., was formed. Similar to its parent company in the States, the Kellogg Company of Great Britain is dedicated to nutritional research and education and believes strongly in the role of ready-to-eat cereals in a well-balanced diet. In 1947 they published a summary of 14 years of research into the importance of fibre, entitled *The dietary importance of All-Bran in the treatment and prevention of constipation*' (The History of Kellogg´s All Bran, 1991, p. 16).

[70] The term *health brand* for this study is explained in Section 2.1.

Stay Young — Keep Healthy

How you feel—how well you look—is largely determined by the kinds of food you eat.

Every year medical science discovers new facts proving that constipation is one of the greatest sources of ill-health. If neglected it saps your vitality.

Kellogg's ALL-BRAN relieves constipation: It provides "bulk," which absorbs moisture from within the body and forms a soft mass gently inducing proper elimination. The "bulk" in ALL-BRAN is similar to the fibre in lettuce, celery, French beans, spinach and other leafy vegetables.

ALL-BRAN contains Vitamin B.

Vitamin B has several important functions in the diet. It promotes appetite and helps tone the intestinal tract, and thus aids normal elimination.

ALL-BRAN supplies a generous quantity of Vitamin B to help meet your daily requirements.

There's iron, too, in ALL-BRAN.

Iron is needed to build good, red blood, and to prevent nutritional anæmia. Get plenty of iron. It helps to give you natural colour in cheeks and lips. Laboratory tests show that Kellogg's ALL-BRAN is an excellent source of food iron.

Kellogg's ALL-BRAN is a delicious cereal. Just eat two tablespoonfuls daily with cold milk or cream. Look for the name Kellogg's on every packet. Made in Canada. Sold by all grocers.

The gentle, natural way to relieve CONSTIPATION.

Figure 85. Advertising pamphlet for Kellogg´s All-Bran. 1925–1935.
Size: Folded sheet, 135 x 90 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 13 (50a).

This pamphlet for Kellogg's *All-Bran* promotes the rich fibre content beneficial to constipation by linking the product to science and new medical discoveries. Later, the brand achieved significant advantages when marketing new products with health benefits, although often high in sugar content.

Profound awareness of the link between fibre deficiency and illhealth emerged in the 1970s. However, Kellogg's was ahead of its time, presenting the benefits of consuming bran enriched food as early as 1930. The brand name played an essential role in communicating connections between diet and health in the following years. By repeatedly associating the Kellogg name and its products with medical discoveries, scientific achievements, and health, the brand gained significant advantages when marketing new products associated with health benefits.

Figure 86 (below) shows an example of a small-sized package from Kellogg's in order to consider how the presentation of verbal and visual elements may influence the perception of cornflakes as 'healthy'.

Figure 86. Packaging for Corn Flakes. 1974.
Size: Front panel: 102 x 70 mm. Side panels: 102 x 44 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P15.

Kellogg's is defined as a health brand and play an important role in communicating the food's health benefits.

The front panel displays the brand name on the top and is a significant element which draws attention to the item due to its position and red colour. Located close to Kellogg's name, *Corn Flakes* also appears prominent through size and bold letterforms. Framing the brand and the ingredient name suggests a strong relationship and gives the elements a similar hierarchical status. First, as Kellogg´s is defined as a health brand, their company name may influence the perception of cornflakes as wholesome. Next to the framed elements, a prominent stylized yellow sun displays the phrase *Shake out the sun* in its centre. The phrase itself does not describe the food or the product's vitamin content. Instead, the message and the simplified visual indicates a wholesome breakfast with connotations of energy and nutrition. The link between exposure to sunlight and the body's production of vitamin D has been well known for years (Rajakumar, 2003), therefore, the message may have evoked positive associations with great energy and nutrients. A photograph of a trademarked bowl containing cornflakes dominates half of the front panel and illustrates a ready-to-eat breakfast. Providing such a serving suggestion on the front of the pack reflects the increased demand for labour-saving meal ideas during the post-war period.

Both side panels carry the red Kellogg's logo and *Corn Flakes* at the top. The panel on the left side frames the ingredient names and added substances in the food: *Maize with sugar, salt and malt flavouring, Niacin, Riboflavin and Thiamine.* Complying with the *Labelling of Food Regulations 1970 r*equirements, the list appears clear and legible, defined by red framing and a black sans serif typeface. On the opposite panel, with great emphasis, red letterforms applied on a yellow background display explicit information regarding the food's health value by declaring: *Your 'sunshine breakfast' is fortified with vitamins*. Hence, the vitamin message reinforces the verbal and pictorial elements on the front. By mixing a health brand, a visual of a breakfast bowl, and the phrase *Shake out the sun,* the packaging suggests a 'healthy' breakfast.

Cereals were promoted aggressively in Britain throughout the period (Collins, 1994), and the phrase *The sunshine breakfast* appeared as a theme on several TV advertisements for Kellogg´s *Corn Flakes* between the 1950s and 1970s.[71] Although most Kellogg's commercials weren't explicit in the use of the words 'healthy' or 'nutritious', they did use visuals of happy children, and emphasised growth, strength, and play. The subliminal message then, indicated that consuming cornflakes meant staying energetic and healthy. However, a 'natural' product requiring fortification with vitamins reflects that added synthetic nutrients replaced essential vitamins (present in grain in its natural state) that would have

[71] History of Advertising Trust holds several commercials for Kellogg´s promoting *The Sunshine breakfast or Sunshine Living*.
https://www.hatads.org.uk/catalogue/search.aspx?Kwrd=the+sunshine+breakfast

likely deteriorated in the production process.[72] Consequently, the *sunshine breakfast* was a highly processed product whose health advantages depend on added artificial vitamins (Lawrence, 2010).[73] The packaging highlights three vitamins: *Niacin, Riboflavin*, and *Thiamine* which are the corresponding names for vitamins B3, B2, and B1 (Teuteberg, 2000; Meštrović, 2022). However, there is no indication on the packaging that these additives are actually categorised as B vitamins. Therefore, some consumers may have had difficulties in understanding their relevance, although some newspapers of the period do carry articles and advertisements referring to niacin, riboflavin, and thiamine, as essential vitamins beneficial for good health.[74] By emphasising significant added vitamins on the packaging, Kellogg's *Corn Flakes* could appear wholesome despite being a profoundly processed product.

The cornflakes pack discussed above is relatively small (Fig. 86), likely part of a typical Kellogg's *Corn Flakes Handi-Pack*, packaged in eight individual servings.[75] A comprehensive explanation of niacin, riboflavin, and thiamine may potentially have been clearer on the outer packaging of the *Handi-Pack*. We can see this does exist on the large sized (12oz) *Corn Flakes* packaging in the following example (Fig. 87). This includes comprehensive information in terms of vitamin B and directly refers to riboflavin to as B2 and thiamine as B1. Additionally, the pack summarises the health-giving properties of these three crucial vitamins:

- *NIACIN is the anti-pellagra vitamin important to condition of skin and nerves.*
- *RIBOFLAVIN is essential to growth, normal vision, healthy skin.*
- *THIAMINE aids nerve function and the utilisation of carbohydrate foods.*

---

[72] Fortification is explained in Section 6.1.

[73] Cornflakes are generally made by breaking corn kernels into smaller grits which are then steam cooked in batches of up to a tonne under the pressure of about 20lbs per square inch. The nutritious germ with its essential fats is first removed because, as the Kellogg brothers discovered all that time ago, it goes rancid over time and gets in the way of long shelf life. Flavourings, vitamins to replace those lost in processing and sugar may be added at this stage (Lawrence, 2010).

[74] See for example: *Newcastle. Evening Chronicle* – Tuesday 06 February 1962. Notice: 'There are about 20 vitamins in the B vitamin group, for example Thiamine, Riboflavin and Niacin'. *Daily Mirror* – Monday 25 March 1963: 'Advertisement for Yestamin: Each Yestamin tablet contains Vitamin B1, Riboflavin (B2), Niacin, Protein and all other vitamins of the B complex natural to yeast'. *Sunday Mirror* – Sunday 15 July 1973. Special report: 'In the milling process many natural constituents like thiamine, iron, calcium and niacin are removed'.

[75] The following description is observed on large Kellogg's *Corn Flakes* packs. Kellogg's Corn Flakes are sold in four packet sizes. Regular size. 8 oz. Large size. 12 oz. Giant size 16 oz and Handi-Pack, 8 individual servings in one pack.

Figure 87. Packaging for Corn Flakes. 1971.
Size: 293 x 70 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P1.

The side panel demonstrates that Kellogg´s included additional specifications to emphasise the significance of the three crucial vitamins, niacin, riboflavin and thiamine, to present the health benefits of consuming *Corn Flakes*.

The copy clearly explains the benefits of these three essential nutrients and provides the public with information that is easy to comprehend. Public health in the 1960s and '70s focused on individual behaviour due to the increased risk factors related to, among other things, poor diet. As a result, people were encouraged to eat more healthily, and commercial nutritional information aligned with general public health campaigns.[76] On the other hand, claims on packaging based on individual nutritional factors, such as on the Kellogg's *Corn Flakes* packaging, may have caused buyers to overlook the fact that these were highly processed foods which included potentially unhealthy substances.

The graphic variation for the verbal description on the side panel shows the chosen hierarchy for the information. The colour red draws attention to specific verbal and pictorial elements: *Kellogg's, Best, Fortified with three important vitamins* and the coat of arms. This gives the brand name and the quality of food a direct link to health. Using the same red for each element gives the information comparable hierarchical status, and the consumer can quickly understand the summary of the product's benefits.

[76] 'From the late 1960s, the government deliberately adopted professional journalistic and advertising techniques in its public health policy with the formation of the Health Education Council.' (Public Health England, 2022). See examples on the website: https://publichealthengland.exposure.co/100-years-of-public-health-marketing

The two Kellogg´s *Corn Flakes* examples indicate significant changes concerning ingredient and nutritional information compared to pre-war food packaging. First, the ingredient list for food made of two or more components, reflects labelling restrictions after 1946.[77]

> In the case of a food made of two or more ingredients, the common or usual name (if any) of the food and the appropriate designation of each ingredient, and, unless the quantity or proportion of each ingredient is specified, the ingredients shall be specified in the order of the proportion in which they are used, the ingredients used in the greatest proportion (by weight) being specified first (Jukes, 2018).

Secondly, as the added vitamins became a significant part of the list, the nutritional information may have contributed to a positive perception of the cereal. There is no specific information on Kellogg's *Corn Flakes* packaging indicating the amount of sugar included. However, referring to the labelling requirements from 1946, specifying *Maize, with Sugar ...*,[78] as the first two ingredients, indicates a high sugar content. In the early 1970s the American Dental Association claimed that ready-made breakfast cereal seriously damaged the nation's health (Collins, 1994). The manufacturers' choice of giving weight to descriptions of the health benefits of individual nutritional substances may have convinced consumers about the health benefits of the foods, but this tactic effectively hid the list of unhealthy substances. On the other hand, many purchased ready-cooked cereal grains because they liked the flavour and texture, rather than for nourishment (Collins, 1994), and added sugar may have contributed to the product being more palatable.

The negative focus on breakfast cereals high in sugar among dentists and doctors[79] led to the development of new products with an increased positive health image. For example, medical discoveries concluded that a lack of fibre in the diet was responsible for many diseases. As a result, manufacturers invented new concepts such as products which included bran, or were made from whole wheat; ingredients intended to positively impact blood cholesterol, constipation, and cancer (Collins, 1994). For example, the detail on the box of Kellogg's *30% Bran Flakes* (Fig. 89) illustrates how the company presents a *wholesome product* highlighting

---

[77] *The Labelling of Food Order*, 1946, (Jukes, 2018, p. 3).

[78] It is noticed that there are differentiations in how maize and sugar are presented in the ingredient list on the various packaging. While the first pack writes Maize with sugar, the second item writes Maize, with sugar, including a comma which slightly changes the meaning of the content. However, it is likely the variation is a result of the work of different designers, although it is not known which example is precise.

[79] As early as in the late 1930s a group of doctors questioned the value of breakfast cereals because the use of heat in the manufacture destroyed the vitamin B which made them nutritionally useless (Collins, 1994).

verbal and pictorial health messages. The structure of information on the front and the side panels shares similarities with the previous examples (Fig. 86 and Fig. 87) in terms of typographical hierarchy, logo placement and information regarding ingredients, added vitamins, quantity, and recommended daily intake.

Figure 88. Packaging for Bran Flakes. 1974.
Size: Front panel: 102 x 70 mm. Side panels: 102 x 44 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P15.

On this packaging, Kellogg's emphasise *Bran enriched wheat flakes* and also highlight B*ran Flakes* to emphasise one significant constituent of the food and demonstrate an example of the business meeting the expert's identifications of new dietetic problems.

The front panel employs powerful words and pictures to increase the perception of healthy food. By highlighting nutritional information as well as visualising natural elements, the front differs from the *Corn Flakes* packaging by directly indicating a natural and nutritious breakfast.

All three panels display *Bran Flakes* by large, bold, and shaded, typography drawing attention to the packaging. Consequently, the word *Bran* attracts awareness in terms of linking this product to increased fibre content and possible health benefits. *30%* likely specifies the amount of bran added to the wheat, although there is no supporting information for this on the box. Regardless of understanding what the percentage here actually refers to, highlighting *Bran Flakes* would have been enough to have a positive effect on those seeking out foods for a high fibre diet.

Additional emphasis on the health benefits of consuming Kellogg's *Bran Flakes* emerges through the banner arranged diagonally at the bottom of the front panel. Red helps draw attention to the message, emphasised further by being reversed out. Applying *enriched with* reflects the addition of industrially produced iron to replace nutrients lost in the production process. As industrially processed food does not usually indicate positivity, employing the words *enriched with* gives connotations to something being improved or enhanced. Simultaneously, the red echoes

the Kellogg's logo which visually connects a positive nutritious message to the brand. Drawing attention to one or several significant food constituents could cause the information regarding sugar and salt content on the side panel to appear less noticeable.

A bowl of cereal dominates most of the front panel of the *Bran Flakes'* pack, an image which shares a similarity with the *Corn Flakes'* pack in Figure 86; this image fulfils several functions. Initially, it describes the ingredient and depicts a labour-saving breakfast cereal ready to eat. Also, the image attempts to bring the consumers´ imagination of food as close to nature as possible. Natural elements (ears of wheat) and brown crockery connotates soil and earth, and the domestic setting connects to a 'countryside' setting which reinforces a natural atmosphere. Next, the wheat introduces an additional level to the picture, connecting whole grains directly to the content. Whole grains have long been considered a vital component of a healthy diet, rich in fibre and essential nutrients. However, as the bran flakes are sugary, highly processed, and fortified with synthetic vitamins to replace the mechanically removed nutritious germ, the visual of the wheat ears may indicate healthier food than is the case. Underwood, Klein, & Burke (2001) maintain that pictures may serve as information to validate the product's quality. Hence, employing the wheat as information to validate *Bran Flakes'* health values could lead to the consumption of a less than wholesome product.

Dietetics in the nineteenth century hardly focused on fibre, and roughage was long considered a burden that might ruin people's stomachs. In the early twentieth century, nutritional scientists proposed that more vitamin-rich vegetables be added to the diet, which meant that people were naturally consuming more roughage; however, the importance of this dietary fibre was still not considered to be significant.

The post-war period demonstrates a change in people's diet with an increased demand for ready-prepared foodstuffs, converted by chemical, mechanical and technical processes. As a result, the food no longer possessed the exact composition of the natural product which resulted in the loss of dietary fibres. Also, the 1950s 'ideal' female hourglass body shape demanded a slim waist. To achieve this, dieting suggestions were to consume fewer carbohydrates, and animal proteins and fat were used as replacement foods; consequently, this high-fat, low-carbohydrate diet, meant that a lack of roughage was identified as a significant problem. According to Tanner (2000), the food industry exploited the situation by promoting the healthier elements of their foods and developing new products. For example, the phrase *Bran-enriched wheat flakes* shows how Kellogg's dealt with the identification of new dietary problems.

The message of fibre content on the Kellogg's *Bran Flakes* packaging used nature as a backdrop to increase the perception of healthy food, this is also noticeable on post-war labels for soft drinks, illustrated by the following section.

6.3 Presenting health messages on labels for soft drinks

There are a range of products that can be categorised as 'soft drinks', from elixirs and fruit juices, to fizzy drinks and natural mineral water. In this case study, *soft drinks* also applies to fruit drinks, defined by some manufacturers as health drinks. This section highlights significant verbal and pictorial health messages, which draw attention to the items, then goes on to discuss whether these elements increase healthy food perceptions.

The first example (Fig. 89) shows the label for *Libby's Triple 'C' Orange and Lemon Drink*. Libby's is a large international company and according to their own publicity, they are amongst the world´s leading brands and have built trust in their products by promoting the quality for generations (Libby´s, n.d.).[80] Presenting the public with a consistent brand creates a strong, lasting impression of the company and recognising the logo helps draw attention to a reliable product. Therefore, this well-established brand already linked itself with trustworthiness and good quality products. To find *WITH EXTRA VITAMIN C* and pictures of fresh fruit on the packaging would further the perception of the product as being beneficial to health.

Figure 89. A label for orange and lemon drink. *c.*1970.
Size: 63 x 290 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P7.

The label shows how a picture of fresh fruit and a claim based on one specific nutrient content indicates that this reconstituted juice is high in natural nutrients. Seeing such details does validate the product's healthiness but could also cause the consumption of a less than healthy product.

The front panel is vertically divided into two. The upper part displays a significant red brand name positioned close to a red oval, including *with EXTRA VITAMIN C*, emphasised by being reversed out. Position, size, and colour give the brand and health message similar hierarchical status, which indicates a strong relationship between the elements. In addition, the green section displays the ingredient name: *TRIPLE 'C' ORANGE AND LEMON DRINK*, with the use of a bolder type to emphasise *TRIPLE 'C'*. A photographic image of fresh oranges and lemons, some whole, some halved, covers most of the label. Giving prominence to

[80] 'Founded in 1875 in Chicago, Illinois, Libby's began with canned meat products. At the turn of the 20th century, it expanded to canned fruits and vegetables. https://www.libbysinternational.com/history/

significant verbal and pictorial components contributes to drawing attention to the brand as well as to nutritional substances. The back panel includes a list of ingredients and grouping the constituents by framing gives emphasis to the information.

Citrus fruits, such as fresh oranges and lemons, are known to combat scurvy due to their high vitamin C content (Drummond et al., 1958, pp. 133–146). In the 1940s, the Ministry of Food promoted the value of orange juices, particularly to children (The National Archive, 2021), which further emphasised the importance of consuming products rich in vitamin C. However, challenges emerged when manufacturers added synthetic vitamins to reconstituted products, often with high sugar content and chemical additives. For example, verbal and visual health messages associated with fresh and nutritious drinks were not directly comparable to the drink's actual ingredients. The ingredient list in Figure 89 shows that the beverage contains: *Reconstituted Orange and Lemon Juices, Sugar, Oranges, Lemons, Citric Acid, Vitamin C, Flavouring, Saccharin, Colouring and Preservatives.*

Reconstituted fruit juice undergoes a heating process that destroys most of the essential nutrients found in the original fruit. Chemical additives are included to compensate for the lost nutrients. Some of these drinks additionally comprise a high percentage of sugar. Thus, while the claim *WITH EXTRA VITAMIN C* may not be fraudulent, in terms of the constituent ingredients, the pictures of fresh citrus fruits could mislead consumers into thinking that they were buying a product high in natural nutrients, rather than one containing synthetic additives and extra sugar. A consumer using these images to gather information about the product, to validate claims based on nutrients and fresh fruit, could put less healthy products than expected into their basket.

Figure 90 shows a very similar label for an almost identical product to the one discussed above; however, there is additional information on the back of the item which emphasises the health benefits. Printing the heading in red letterforms highlights and repeats the ingredient name from the front, *TRIPLE BOOSTED VITAMIN C*, followed by a narrative describing the advantages of consuming the beverage:

> *Libby´s new Triple 'C' is specially formulated to give your body extra Vitamin C and help fight off colds. Medical opinion has long recognised the essential value of Vitamin C for helping to keep fit and healthy.*

Figure 90. A label for orange drink. *c.*1970.
Size: 42 x 290 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P7.

This soft drink label mentions *medical opinions* and that that these recognise vitamin C as an essential component to keep fit and stay healthy. Hence the message may downplay any information regarding reconstituted orange juice, flavouring, colouring, and high sugar content. It is noticed that the label does not contain a list of ingredients. Therefore, it is likely that the bottle added a separate label with this kind of information.

Acknowledging the medical viewpoint behind the nutritional value of vitamin C strengthens the health message of the drink. This information emphasises the Government's stance of promoting the intake of vitamin C in order to fight off cold related illness. (The National Archive, 2021).

Because the image suggests that the drink is made of fresh oranges, the assumption would be that it is a healthy choice. These verbal and visual health messages on the label, indicate foods that naturally contain essential nutrients, again, this pulls attention away from the genuine ingredients used in the manufacturing process.

Other soft drinks labels (e.g., Fig. 90 and Fig. 91) do not explicitly define health benefits verbally, but do include full-colour pictures of oranges and apples. Where the labels indicate health benefits associated with essential nutrients in fresh fruit, the ingredient lists demonstrate high sugar content, preservatives, flavouring, and colour.

91

92

Figure 91. A label for apple dash. *c.*1960s.
Size: 42 x 290 mm.
Centre for Ephemera Studies, University of Reading.

Figure 92. A label for whole orange drink. *c.*1960s.
Size: 95 x 85 mm.
Centre for Ephemera Studies, University of Reading.

Examples of soft drinks labels displaying images of fresh fruit which may have been associated with moderately processed drinks including essential nutrients. However, the ingredient lists demonstrate high sugar content, preservatives, flavouring, and colour.

The soft drink labels discussed above show how verbal, and especially pictorial, health messages, lead to highly processed drinks being perceived as healthy. These labels employ a very similar communication method to those used to promote moderately processed drinks (e.g., squeezed tomato juice). There does not seem any separation in the use of pictures of fresh fruit on labels for either natural or moderately processed juice, to those of artificially enhanced fruit drinks. Consequently, on first impression, it would be difficult to distinguish the two types of product from each other.

To a certain extent, the presentation shows similarities with today's packaging when manufacturers may take advantage of the credibility of, for example, organic food. Imitating organic product packaging by verbally and visually referring to nature (Wagner, 2015) leads to foods often appearing 'greener' than they are.[81] In the same way, referring to nutritious fresh fruits or vegetables on labels for highly processed products can make foods seem healthier than they are.

In the example of the Libby's *TRIPLE BOOSTED VITAMIN C* label in Figure 90 it is easy to see the value put on the addition of vitamins in foods during this period; the information phrase is set prominently on the front panel in black capital letters. It is the back panel that points to a shift in emphasis for diet and nutrition. The phrase *Contains not more than 9 calories per fluid ounce in* red text highlights the information and emphasises a *new* type of health message that gradually appeared on labels from the 1950s onward.[82] Britain experienced health concerns regarding obesity after WWII due to an increase in a high intake of saturated fat and salt combined with a low intake of fibre, fruit, and vegetables (Oddy, 2003, p. 193). Hence, people were encouraged to eat fewer calories if they showed signs of weight gain. As a result, manufacturers developed and marketed lowcalorie foods and beverages. Libby's sold a product that was low in calories, but at this stage, chose to prioritise the promotion of its medicinal properties (*fight colds and keep the family* fit) rather than highlight calorific content. As a whole, this label highlights several concerns Britain experienced after WWII. First, by proposing a slimming beverage, the manufacturer suggests a drink beneficial to weight loss. This information is very low down in the label's typographical hierarchy though, so seems less significant than the vitamin message. Secondly, Libby's suggest that the drink compensates for low fibre and fruit intake by promoting vital nutrients from fresh produce.

By the 1960s there are examples of soft drink labels which pay no attention to fresh ingredients or specific vitamin content (see Fig. 93, next page).

---

[81] See also Section 7.7 discussing current packaging.

[82] The evidence is based on the analytic review of food labels in Chapter 3, as no items promoted slimming before WWII. Nor are there any indications of food labels, including information regarding slimming before WWII in books presenting ephemera from the 1800s to 1970s (Davis, 1967; Humbert, 1972; Lewis, 1962). However, although there are no specific food labels emphasising weight loss and slimming, obesity concern is not a modern problem. Obesity seems to fit the criteria for disease as early as the 1700s, and in the 1860s, the modern phenomenon of dieting started (Weber, 2016). Advertisements for remedies sold by chemists are observed from the 1880s; however, they essentially concern pills or tablets. An example of an advertisement for Dr Gordon's Elegant Pills is shown in Appendix 3.

Figure 93. A label for lemon flavour drink. *c.*1960.
Size: 110 x 85 mm.
Centre for Ephemera Studies, University of Reading.

An example of how a slim female silhouette, coupled with the description low calorie, is used to signify slimming health benefits.

A prominent brand name positioned at the top of the label helps the company, Wells, distinguish itself from similar firms and products. Below the brand name, a slim female silhouette is applied onto a red oval and enclosed by an ornamental frame. The frame symbolises a mirror, which could perhaps be the expected appearance of the consumer, once they drink this beverage. Furthermore, the health message *Low calorie* and the ingredient name set in black, bold, sans serif letterforms, helps draw attention to the lower part of the label. Finally, the yellow colour background is used to make the label conspicuous amongst other similar products, and the choice of colour signifies the lemon flavoured ingredient.

This label and its message seem very straightforward, the ingredient name is to the point, *LOW CALORIE LEMON FLAVOUR DRINK*, a marked change from previous soft drink labels in this study. By including the word *flavour* to the description indicates that the drink is made from artificial substances. Also, there are no pictures of fresh fruit to indicate health in terms of nutrition. Instead, the label conveys a specific message regarding the health benefits of weight loss. This illustration correlates to the rise of what Offer (2001) describes as the *cult of thinness* and notes that intentional weight loss became more pervasive, especially amongst women, from the 1960s onward. Dieting in the post-war period reflected health concerns regarding being overweight and personal attractiveness (Offer, 2001). There were countless articles and advertisements concerning slimming (Barker, McNeir, Sameer, & Russell, 2014), as well as whole cookery books devoted to the subject.

> A population becoming overweight, and with degenerative heart disease increasingly common was in sharp contrast with the youth culture and the fashion image of Britain in the 1960s. ... Slimming was the reaction of a society in which over-consumption was made possible by the benefits of full employment and rising incomes (Oddy, 2003, pp. 211–212).

As a result, slimming products were targeted at consumers for different dietary reasons. However, using the term *slimming food* in advertisements and on packaging could lead to the misrepresentation of some products.

> Early slimming claims were made for 'starch reduced' breads, which were considered in the first report of the Food Standards Committee on Bread and Flour, 1960. It agreed with the Joint Nutrition Panel that no food can properly be called 'slimming'; also that no labels or advertisements should be allowed to suggest that particular types of bread (extended to biscuits, rusks, rolls and certain cereal breakfast foods) have specific weight-reducing property (Martin, 1975, p. 10).

Consequently, the Food Standards Committee tightened the food regulation. To claim slimming properties, the manufacturer had to declare the product as *part of a properly designed diet* (Martin, 1975). Heinz *SlimWay Chicken Soup* (Fig. 94) is one example from the 1970s which includes this statement: *SlimWay soups can aid slimming only when eaten as part of a calorie controlled diet*.

Figure 94. A label for chicken soup. *c.*1970.
Size: 194 x 220 mm.
History of Advertising Trust, HZ 5/2.

This label declares the product can *aid slimming only when eaten as part of a calorie controlled diet*. The information was part of the Food Standards Committee new regulations in the 1960s to avoid misrepresentation.

Another company, the drink manufacturer, Schweppes, promoted slimming values by emphasising *slimline* and *low calorie* on their labels. Again, these conformed with the regulations, stating they only helped weightloss if they were 'part of a properly designed diet' (Martin, 1975).

Figure 95. . Label for ginger ale. 1965.
Size: 66 x 100 mm.
Centre for Ephemera Studies, University of Reading.
This label also includes *Aids slimming only as part of a calorie controlled diet.*

This increased focus on slimming led to product differentiation which helped producers thrive during the first half of the twentieth century (Ward, 1994). The rise of new brands and increased business competition resulted in an expansion of product ranges, and also the need to target a new consumer demographic. New product categories appeared such as artificial sweeteners, and low-calorie biscuits were used as meal replacements. With the help of advanced post-war food technology (Oddy, 2003, pp. 211–212), low-calorie foods would be added to existing product lines, improve food diversity, and increase sales.

The character of foods previously discussed in this case study was that of chemically processed or fortified foods, therefore not necessarily as healthy as the packaging might indicate. Post-war food in Britain was, however, characterised as safe, pure, and non-adulterated. Leaps forward had been taken in the control of disease, specifically through a change in diet; for example, milk pasteurisation was universal, and tuberculosis was brought under control (Oddy, 2003, p. 212). However, advanced food technology and new manufacturing methods in the 1960s raised new health issues. Very public concerns were raised about toxic food packaging, and the growth of antibiotic, chemical, and pesticide use in farming.[83] Some of these issues are still relevant today, in terms of promoting 'ethical food' such as organic, fairly-traded or locally produced food 'where special attention is paid to issues of health, the environment and the working conditions of the producers' (Wagner, 2015, p. 210).

[83] These questions gave rise to the BBC television program *A Suspicion of Poison* in 1962, followed by several articles in The *British Food Journal*. (Oddy, 2003, pp. 212–213).

Different symbols play an important role on the packaging to define the quality of the food by signalling the ethical character of the product.[84] Several symbols need to be verified by certification schemes before being applied to product packaging, and challenges to their use occur when manufacturers take advantage of the credibility of, for example, organic food and try to appear 'greener' and more conscientious than they are (Wagner, 2015). Similarly, a rise in the use of health messages promoting specific nutritional constituents, and the perception of 'green food' as healthy, can be contrasted with the typographical 'hiding' of potentially unhealthy ingredients. These are more generally on the back of a label and set in a reduced size.

6.4 Summary

Nutritional research during the 1960s and '70s highlighted obesity challenges and lack of nutrients and fibre in the diet. The examples in this chapter focus on food labels for convenience foods which not only show a change in the rhythm of people's day-to-day lives, but also reflect these dietary issues through verbal and pictorial representations. Other examples used are from drink labels providing health messages which changed in subject matter and appearance in accordance with scientific, and perhaps fashionable, dietary trends. Two samples; the Kellogg's *Bran Flakes'* packaging (Fig. 88) and the *Slimline Ginger Ale* label (Fig. 95) are indicative of *two significant post-war trends, related to nutritional fibre and slimming.*

Before the expansion of industrialised food manufacturing, dietetics hardly focused on fibres. Wartime food was rich in roughage due to an increased intake of fruit and vegetables. However, increased industrialisation after the war resulted in processed foods with minor levels of dietary fibres, later linked to several 'new' diseases (Tanner, 2000).

> And as always when experts diagnose new problems, the food industry started praising new solutions semantically linked with success. Thus, just as revitaminization became a profitable business in all industrial nations in the last half of the century, the enriching of snacks with roughage promises to become equally as profitable for some decades (Tanner, 2000, p. 247).

Advertising in British women's magazines, drawing attention to fibre content in foods, increased significantly from 1950 to 1970 (Barker et al., 2014).

---

[84] For example, 'The Soil Association was founded in 1946 by a group of people who were concerned about the health implications of increasingly intensive farming systems following WWII. Their certification scheme launched in 1973, at a time where there was increasing demand from shoppers and farmers for a system that proved food was high-quality and made with integrity. Today, Soil Association Certification still provides that reassurance, the symbol is more than just a trade mark: it represents a set of standards that are developed to achieve aims and embody the organic principles of ecology, fairness, care and health' (Go Organic, 2022).

However, the rehabilitation of the image of fibre in the 1970s went beyond the consumption of food with added bran. The term *having moral fibre* lent itself to this new trend that focused on an active and modern way of life of physical fitness and resilience (Tanner, 2000, p. 247). The new trend was good news for the breakfast industry, which developed several variants of *healthy* cereals that fitted into modern life; the discussion on Kellogg´s *Bran Flakes* in this chapter exemplifies this. By giving prominence to bran and vitamins, the health messages clearly emphasised food rich in substances that positively influenced people's diet based on recent medical discovery. As public health in the 1960s and '70s focused on individual behaviour and encouraged people to eat more healthily, the food industry met this identification of dietary concerns by communicating 'healthy' products.[85]

Concern regarding rising rates of obesity, and a faster paced way of life in the '60s also influenced dieting matters, and public health officials encouraged individuals to follow a lower-calorie diet to stay healthy. Consequently, as the examples show, the trend for messaging through food labels brought the concept of slimming to the supermarkets. However, instead of drawing attention to one constituent of the food, such as fibre, words such as *Slimway* (Fig. 94), *Slimline* (Fig. 95), or *Low calorie* were squarely highlighted on the front of labels to attract an immediate awareness of the food's health benefits. Again, manufacturers met the identification of dietary concerns and addressed their products as beneficial to health.

Finally, pictures of fruits and vegetables were prevalent across samples in this study, often representing ingredients in their natural state, prior to any industrial processing. These constituents have long been considered a vital part of a healthy diet due to their carrier of essential vitamins. However, when fresh produce is industrially produced - often processed by chemical, mechanical and technical methods - they contain a completely different composition than natural foods (Tanner, 2000). Natural landscapes are often used in advertisements 'to establish a relationship between the consumer and the environment' (Todd, 2010, p. 173). Using visuals of fresh fruit on the labels may have achieved a similar effect as they appealed emotionally to consumers in terms of health, and nutrition, close to natural ingredients. Therefore, the pictures could mislead consumers into thinking they were buying foods containing natural nutrients and to eventually ignore unhealthy ingredients such as chemical additives, or high sugar content.

---

[85] A specific approach to scientifically linking food to disease prevention after WWII was the reconceptualization of margarine from a low-cost and inferior butter substitute to a product with distinct health benefits. Studies showed that a diet high in saturated fat significantly impacted heart diseases. Unilever, who produced synthetic margarine, marketed Flora as healthy food for a healthy heart and established Flora, not only as a brand but also as a type of 'health expert'. Flora information service provided info about heart disease and dietary fats through literature, lectures and exhibitions. Hence, the promotion became a cross-over between the government's public health campaigns focusing on individual behaviour with healthy eating and the industry (Hand, 2017, p. 481).

7.0 CASE STYDY 4. HOW LABELS FOR MILK AND MILK-RELATED PRODUCTS HAVE CHANGED OVER TIME

> 'Milk as nutrition, as the essence of motherhood, as a white symbol of purity and as icon of commercial advertising, all are familiar. But what about milk as harbinger of death?' (Atkins, 2003, p. 1).

This chapter investigates labels for milk and milk-related foods to provide knowledge about one significant product category over time. The study explores how language and imagery have changed from portraying a drink perceived as contaminated, in the nineteenth century, to one that is nutritious and health giving, in the twentieth century. *Milk* may describe packaged, tinned, or bottled content, emphasise a product's quality, or create positive associations for a food. Therefore, the word is identified as a health message, as it might be part of a verbal narrative suggesting a sense of health or used to describe a food, or part of a food, as being *beneficial to health*. A selection of milk drink labels is discussed, regardless as to whether the product was condensed, sweetened, or identified as wholesome and nutritious. In addition to labels and paper packaging there is a wealth of information directly printed on to glass milk bottles which contained fresh cow's milk. Samples of these bottles have also been used to investigate visual and verbal messages. One of the issues explored is: how associations to milk are expressed on packages if milk is only a limited part of the product. The chapter considers contextual factors to understand what informed the visual and verbal presentation. Where appropriate, advertisements demonstrate similar messages in promotional channels other than on the label.

The chapter reviews a selection of items from the corpus related to:

- Fresh cow's milk
- Milk drinks
- Other foods containing milk

7.1 Fresh cow´s milk
– from contaminated and unattractive to pure and accessible

Milk has been an essential part of people's diet for centuries (Rozenberg et al., 2016). Fresh cow's milk is packed with essential nutrients, and has been recognised as crucial and protective (Nestle, 2013, p. 79) during periods of nutritional deficiencies, for example, when fortified with vitamin D to prevent rickets (Rajakumar, 2003). Until the 1920s, milk was considered a medical supplement, along with, for example, cod-liver oil (Atkins, 2005).

At the beginning of the nineteenth century, fresh cow´s milk was sold locally. As the Industrial Revolution flourished, milk adulteration became a widespread practice, primarily by watering down the product to increase volume and make more profit. Also, due to disgraceful and unhygienic

conditions in many dairies (particularly in towns), inadvertent adulteration took place, which caused polluted and contaminated milk (Collins, 1993). Due to poorly regulated production conditions in the late nineteenth and early twentieth centuries, milk was heavily contaminated with germs and often the source of many infections and epidemics. Therefore, cow´s milk was seen as very unattractive at the turn of the twentieth century. Raw milk from contaminated cattle, sold to unsuspecting consumers resulted in cases of tuberculosis (TB), which caused significant numbers of deaths. The disease led to approximately 500,000 infant deaths in Britain between 1850 and 1950 (Atkins, 2003). Even though the introduction of pasteurisation and sterilisation, from around the 1890s, reduced instances of infected milk significantly (Collins, 1993), TB was not brought under control until the 1940s (Atkins, 2003).

As milk in the late nineteenth century was delivered into jugs or pails set out on people's doorsteps (Ward, 2016), there are no milk labels in the corpus from the first research period. However, contemporary advertisements provide helpful context. Many of these adverts represent commercial dairies, aiming to convince the population that they delivered safe, uncontaminated milk. The Express Dairy Company, for example, developed equipment to produce, store, and transport fresh milk safely and hygienically, from farmers in the countryside, to cities. Using the railway network, they brought affordable milk to urban areas, and the dairy was, in the late nineteenth century, associated with delivering pure, good quality milk (Colloms & Weindling, 2012, pp. 2–8). Figure 96 shows a typical advert, which may have been part of a trade card, from the 1890s representing the Express Dairy.

Figure 96. Advertisement for Express Dairy. 1890–1900.
Size: 80 x 112 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 2 (12).

This advert is an example from one of the largest dairies in Britain, promoting milk deliveries in the second half of the nineteenth century. The dairy guaranteed milk quality by emphasising purity, prosperity, and speed through presenting a visual narrative. However, highlighting pure milk did not signify health from a nourishing perspective; instead, the message guaranteed a safe, hygienic, and unmixed liquid.

This advert is an example from one of the largest dairies in Britain, promoting milk deliveries in the second half of the nineteenth century. The dairy guaranteed milk quality by emphasising purity, prosperity, and speed through presenting a visual narrative. However, highlighting pure milk did not signify health from a nourishing perspective; instead, the message guaranteed a safe, hygienic, and unmixed liquid.

An idyllic visual narrative aims to convince the public that milk from the Express Dairy is safe. A maid waits at the front door of a high-standard Victorian house, while the milk deliverer points at the cart, giving attention to the Royal Warrant of Appointment with visible text underneath that states, *To Her Majesty the Queen*. In its entirety, the narrative mirrors Victorian consumer culture, by presenting human figures with material surroundings (Loeb, 1994, p. 3). A pink border frames the picture, and the die-cut edges reflect the use of early nineteenth century print production processes; e.g., offset lithography, paper-cutting guillotine, and various other cutting and folding devices (Twyman, 2020, p. 42). The visual mood in the picture and the advanced technical production of the card, links the Express Dairy to prosperity, and associates the business with the financial ability to produce, store, and transport, fresh milk safely and hygienically. The phrase *Guaranteed Absolutely Pure* at the bottom of the advertisement reinforces the convincing pictorial narrative of milk from the dairy, deriving from non-contaminated cows, and safe to drink. The letterforms include decorative qualities, a typical feature originating from the artistic movement of the 1880s to emphasise beauty or to create an overall mood (Twyman, 1970, p. 75). In this case, the ornamented lettering continues the Victorian atmosphere of affluence present in the picture. Similar visual expressions regarding the usage of letterforms are observed in food label design from the same period, reviewed in Chapter 3. The statement *By Special Appointment to Her Majesty the Queen* demonstrates a similarity to the importance of the usage of coats of arms and medals that was discussed earlier. These were frequently employed as essential graphic elements on the packaging and advertisements, to reinforce the quality of products.

Overall, the dairy guarantees the quality of the milk through a narrative emphasising prosperity, purity, and speed. Describing milk as *pure* coincides with observations from Case study 1, demonstrating that adverts and food labels from the nineteenth century which included the word *pure,* did not signify health from a nourishing perspective. Instead, the word indicated the benefits of consuming clean, unmixed, or non-toxic products. Similarly, the advert in Figure 96 embraces the benefits of drinking uncontaminated milk without emphasising the drink's nutritional value. However, the perception of milk gradually changed over the next century, and the following section covers the establishment of milk as a nourishing drink.

7.2 Change in the 1930s: Establishing milk as a national beverage

Until the 1930s, the demand for clean, fresh milk, supported by welfare societies and government legislation, resulted in comprehensive controls on production and sales. Also, with the encouragement of nutritionists, there was an increased conviction that milk was a nutritious and well-balanced food for growing children. This resulted in the beginnings of the popularisation and establishment of milk as a national beverage (McKee, 1996).

While dairies chose to primarily promote that their milk was safe and pure during the late nineteenth century, a few decades later they marketed milk as the most important single food in a child's diet. For example, in an advertising pamphlet for United Dairies (Fig. 97), the phrase *Milk is Life to Children* is emphasised, followed by the most significant benefits of consuming the liquid:

- *Milk is the sole support of your child for the first year and the most important single food for the next ten years.*
- *Milk is the most nearly perfect food.*
- *No other food contains in such perfect combination all the essential elements for growth and development.*
- *Children ... are quicker at their schoolwork, brighter in play, grow faster and are more efficient.*

The dairy also refers to experiments carried out by the Medical Research Council, thus substantiating the content by adding medical expertise. In addition, two full-colour drawings depict children playing and drinking milk, leaving no doubt as to the connection between milk, nutrition, activity, and health. The growing perception of milk as *nutritious food* also influenced labels and advertisements for milk drinks and milk products, discussed later in this chapter.


Milk is Life to Children —

watch your children thrive on U.D. Milk

Milk is the sole support of your child, for the first year of life and the most important single food for the next ten years.

Milk is the most nearly perfect food. No other food contains in such perfect combination all the essential elements for growth and development. Your growing child is better nourished on milk than on any other single food.

Teeth are formed from lime and lime must be supplied in the diet if your child is to have sound teeth. Milk contains the right kind of lime in the right proportion. No other single food is as valuable as milk for building and maintaining strong, healthy teeth and bone. Hot or cold, as a drink, or in custards, puddings, cooked dishes or over fruits: it matters not how children take milk so long as they have a quart each day. But it must be pasteurized milk delivered in clean, sealed, sterile bottles. Order U.D. milk which fulfils these conditions.

Children given a liberal supply of milk are quicker at their school work, brighter in play, grow faster and are more efficient. This has been actually proved by experiments carried out by the Medical Research Council.

Figure 97. Advertising pamphlet (12 p.) for United Dairies Ltd. in London. *c.*1920. Size: 130 x 184 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 2 (53).

This advert shows that dairies have changed the perspectives on milk from describing the liquid as safe and pure in the late nineteenth century, to the most important single food for children, a few decades later.

A significant contribution to the rehabilitation of the image of milk was the impact of the *Milk in School Scheme (MISS)*, introduced in 1934 by the newly created Milk Marketing Board (Atkins, 2005). With subsidies from the Government, the scheme made milk available to children in schools, and a large part of the nation´s population learned to appreciate cow´s milk from an early age (McKee, 1996). In some schools, milk even replaced regular school meals (Atkins, 2005),[86] thus indicating that the liquid was seen as wholesome food as well as just a drink.

However, whilst the introduction of the *MISS*, and the promotion of milk as a perfect *food*, gradually influenced the future generation about the health benefits of milk, convincing the adult population to appreciate the drink needed a different strategy. By linking fresh milk to science and new technology, the beverage's reputation among this group improved. Furthermore, dairies promoted the advantages of pasteurised milk, and connected their business with that of qualified chemists and bacteriologists working in large laboratories.

> One of the most successful steps in the promotion of milk was the alliance of its traditional, mythic associations of purity and goodness with the futuristic, clinical domain of the scientific laboratory. This alliance both assuaged public fears over contamination and rehabilitated the image of milk (McKee, 1996, p. 130).

For example, an advert from United Dairies (Fig. 98) describes the importance of modern science in the production of safe milk. The most relevant messages were the headlines, highlighted by red print: *See that Your Milk is PASTEURIZED* and *Modern Science watches over every bottle of U.D. Milk*.

Additionally, the advert includes a black and white photograph framed in red, presenting one of the dairy's own laboratories. The picture creates an atmosphere related to modern science and clinical analysis, aiming to convince potential customers that their processes prevented contaminated milk. Serif type is used for headlines as well as for the two-column text wrapped around the picture. The typography and the presentation show similarities to book design, which may have reinforced the seriousness and significance of the message. This publicity material typifies that of several milk drinks, in accordance with nutrition awareness and modern scientific research findings of the time. For example, evaporated milk labels from the 1920s and 1930s include an in-depth scientific description of the processes of irradiation, and vitamin D supplementation.[87]

---

[86] Atkins (2005) also discusses the financial motive behind the Milk in School Scheme. Cheap imported butter and cheese led to a surplus of milk, and with the help of the scheme, the dairy industry was able to deliver milk to a whole new market on a large scale. So just as well as supplying malnourished children, the scheme was helping the dairy industry.

[87] See discussion in Section 7.4.1.

Figure 98. Advertising pamphlet (12 pp.) for United Dairies Ltd. in London. *c.*1920. Size: 130 x 184 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 2 (53).

This advert aims to rehabilitate the image of milk by explaining the importance of pasteurisation and how fully qualified chemists and bacteriologists work in laboratories to make sure each consumer received clean and safe milk.

Furthermore, McKee (1996) refers to promotional articles from the 1930s to demonstrate that dairies consistently repeated the words *thoroughly* and *clean,* emphasising purging dirt from the dairy. Some newspaper articles even linked milk to the periodic table of elements, lifting the image of milk away from a dirty farmyard, into the world of science and technology. *The Times*, for example, presented several articles, between 1934 and 1936, promoting milk as an almost perfect food that could build up the health of a whole new generation.[88] Describing new technological processes and reiterating milk´s substantial health benefits helped reassure people that this was a safe and uncontaminated product.

To further expand the idea of establishing milk as a national beverage, several milk bars were opened in the mid-1930s, enthusiastically supported by the Milk Marketing Board. In order to attract adults and young customers, milk drinks were served over the counter and given exotic names such as *Bootlegger´s Punch*, *Goddess Dream* and *Blackberry Cocktail.*

> 'These establishments were also gleaming, reflective temples of health. Their popularity seemed to demonstrate the success of the campaigns to encourage the recognition of milk as an enjoyable beverage on its own right' (McKee, 1996, p. 136).

[88] See for example:
The Times, Friday 20 April 1934: *Pure and safe milk.*
The Times, Wednesday 26 February 1936: *Health of the nation. Free milk for children.*
The Times, 13 November 1936: *The national physique. More milk for children.*

According to a pamphlet describing the design and equipment in a milk bar, issued by the Milk Marketing Board, the selection of turquoise, white and blue colours for the standard design of the interior created an atmosphere of cleanliness and modernity (Milk Marketing Board, 1950s). However, WWII brought new priorities to the country, and many milk bars did not survive the war (McKee, 1996).

Charting the image of milk is shown through an interrogation of samples from the corpus and from newspaper articles. Milk, initially seen as natural and pure, then went through a very negative period, characterised by disease. But with scientific advancement, and the backing of social welfare legislation, by the mid-1930s it was re-establishing itself as a clean, health-giving drink, which could be enjoyed by the whole population. Because dairies were aligning their product with science and new technology, the following section observes the extent to which farmers employed similar messages on the glass bottles that transported fresh cow´s milk directly to the customer's doorsteps.

7.3 Marketing milk: messages on glass bottles and cardboard caps

From the 1930s, milk was delivered in glass bottles directly to schools and households; various printed messages were employed directly onto the flasks. A typical example carried the name of the dairy and the farmer's name as the most prominent element, this would ensure that the bottles were returned to their owners. If bottles were from local dairies rather than larger ones, the individual farmer could, through branding the bottle, establish a personal relationship with the consumer.

Printing one colour, usually green, red, or blue, directly onto the glass, was standard practice from the late 1930s until the 1950s (Harbor, 1998). When filled, the white milk contrasted with the printed element of the bottle, giving associations to white as a symbol of purity. The following section presents eleven different milk bottles, which hold varying types of information. There are few records of production year; however, as cartons and plastic began to replace glass bottles in the 1970s and '80s, these items likely date from the 1930s–1980s.

99

100

101

Figure 99. Milk bottle from Winnersh Dairy Farm, n.d.
Size: 220 x 75 mm.
Museum of English Rural Life, University of Reading, 2002/1/6.

Figure 100. Milk bottle from Hartley Wintney Dairy: 2002/1/10, n.d.
Size: 220 x 75.
Museum of English Rural Life, University of Reading.

Figure 101. Milk bottle from the Royal Dairy Farm, *c.*1960–*c.*1980.
Size: 210 x 70 mm.
Museum of English Rural Life, University of Reading, 96/7/9.

Examples of milk bottles, including the dairy's name, printed directly on the glass in one colour. The primary function of information was to return the bottles to the owner.

The first three examples display the dairies and farmers' details, printed in individual colours.

- Winnersh example (Fig. 99): Guernsey cows are promoted (rich milk), and the same weight and prominence are given to the dairy name and the farmer's name. Legibility seems to be the main reason for the visual presentation.

- Hartley Wintney example (Fig. 100): The farmer's name is given prominence, and the typeface is bold and big, san serif. Next in the hierarchy, the same typeface, but slightly smaller, is given to the name of the dairy. Finally, a different style is used for the phone number. Legibility also seems significant for this bottle.

- Windsor example (Fig. 101): The main feature of this is the royal cypher (crown with initials), drawing attention to the fact that this milk is from the Queen's diary. The milk bottle differs from the first two items by adopting a typeface inspired by the Gothic lettering of the late eighteenth century (Twyman 1970, p. 69). Instead of being concerned with legibility, the letterforms connote tradition and authenticity. A different style is used for the volume (1 pint).

Several dairies included different types of information on their bottles, such as milk from tuberculin-tested cows – indicating that fear of TB among the public was still present well into the twentieth century (Atkins, 2003). However, not all messages seemed equally explanatory, and interpretation of these required knowledge, or at least a particular interest. For example, milk production included a system of grades differentiating between *Certified, Grade A tuberculin tested* and *Grade A*,[89] of which *Grade A* suggests superiority by name. However, this milk was not tested for TB and had the highest risk of infection rates among the three examples. Consequently, the message applied to bottles could confuse the public, or give misleading safety information. Other bottles included explicit information, such as *From Brucellosis and Tuberculin tested cows* (Fig. 102) or *Tuberculin tested milk* (Fig. 103), with no mention of the classification system listed above. These bottles also include representational drawings of cows, sunshine, and nature, which complement and fulfil the dairy's desire to convey pure milk associations.

102

103

Figure 102. Milk bottle from Jacksons Hey House Farm, *c.*1960–*c.*1980.
Size: 210 x 70 mm.
Museum of English Rural Life, University of Reading, 96/7/22.

Figure 103. Milk bottle from Lochview Dairy, n.d.
Size: 220 x 75 mm.
Museum of English Rural Life, University of Reading, 2002/1/17.

Examples of milk bottles marketing milk from tuberculin tested cows, reassuring consumers the liquid was not contaminated and safe to drink. Also, the message indicates that fear of TB among the public was still present well into the twentieth century.

[89] The *British Medical Journal* provides an insight into the definitions and terms used in the discussions of the time concerning the purity of milk (A Pure Milk Symposium, 1925, p. 263).

The example in Figure 104 displays *Rich graded milk* which at first sight may seem puzzling. The phrase does not coincide with the categorisation system, and perhaps more importantly, there is no obvious way to recognise whether the phrase relates to tuberculin tested milk or not.

The bottle in Figure 105 differs slightly from the previous items, in terms of visual attributes, as it includes a prominent red triangular graphic symbol.

104

105

Figure 104. Milk bottle from Stanlake Model Dairy, n.d.
Size: 220 x 75 mm.
Museum of English Rural Life, University of Reading, 2002/1/14.

This milk bottle displays the *Rich graded milk*. The statement does not coincide with the classification system and provides information that is difficult to interpret.

Figure 105. A milk bottle from Elms Farm Dairy, Argyle Dairy and Smith Brothers, n.d.
Size: 220 x 75 mm.
Museum of English Rural Life, University of Reading, 2002/1/12.

This milk bottle includes a red open triangle which contributes to attract attention to a dairy promising milk from T.T certified cows.

Symbols may provide information or attract attention and are usually designed for quick identification and understanding (Dewar, 1999). For example, an open red triangle is commonly identified and understood to be a visual representation of a warning, particularly on traffic signs or on pharmaceutical labels, to inform people of potential dangers. However, the red triangle in this case does not warn about the product; instead, the symbol attracts attention to a dairy ensuring their milk comes from T.T (tuberculin tested) certified cows. Instead of promoting milk from tuberculin tested cows, the dairy must have expected that people understood what TT signified. The red triangle can be considered a health message as it attracts awareness to a safe product, but also serves to warn the

consumer about the dangers of drinking infected milk. Another quite different interpretation of the triangle, is that the milk is derived from a collaboration between three dairies, so it may just serve to signify this trio. Interestingly, none of the glass milk bottles include claims based on nutrients, even though there was considerable awareness of milk as a beneficial and well-balanced food from the 1930s onwards.

McKee (1996) discusses a series of experiments carried out by John Boyd Orr[90] in 1928, to test the nutritive value of milk, which found a clear correlation between consumed milk, growth and weight. This was a move forward in brightening people's perception of the product, however, milk's reputation as nutritious and healthy could only significantly change if the transmission of tuberculosis through infected milk was brought under control (McKee, 1996, p. 126). The examples discussed above demonstrate that during this period, promotion of a clean, tuberculin-tested product, was, necessarily, given greater attention than providing detail on nutrition or particular vitamins. Also, as the primary purpose of information applied on the bottles was to ensure returning the bottles to the owners, it seems wholly relevant that emphasis was applied to the dairy name. From the 1970s, food manufacturers utilised milk bottles to promote products, such as orange juice, chocolate, breakfast cereals, and newspapers (Fig. 106).

Figure 106. Glass milk bottles, 1970–1980.
Size: 1 pint/568 ml.
Museum of English Rural Life, University of Reading, from left to right: 2006/53/16, 2006/53/15, 2006/53/5, 2006/53/8.

These examples demonstrate that external companies utilised milk bottles to promote products, such as orange juice, chocolate, Kellogg's cornflakes, and newspapers.

[90] Funded by the Empire Marketing Board, John Boyd Orr of the Rowett Research Institute in Aberdeen publicised a report on the effects on milk supply to schoolchildren aged 5 to 14 and found a clear connection between milk added to the diet and growth. The study showed an increase of 20 per cent in weight and height among the children (McKee, 1996).

Cardboard caps were used for sealing milk bottles until the 1970s, and although the print area was restricted, this space was well utilised by dairies and other advertisers. Encouraging phrases such as, *DRINK MORE PURE FRESH MILK, DRINK MILK,* or *PLEASE RETURN EMPTY BOTTLES DAILY* are characteristic of the messages on these caps. Some examples contain general text concerning good health, such as *DRINK MORE MILK, ENJOY GOOD HEALTH* and *DRINK MILK FOR GOOD HEALTH*; these messages have not been found to be directly applied onto glass bottles.

Some caps include slogans unrelated to milk; public information, and traffic safety information aimed directly at children (Fig. 109). The shape and size of these caps made them perfect for using in games and for young collectors to trade with; they may have been persuaded by the messages, from keeping safe in the traffic to associating milk to good health.

Figure 107. Circular card that fitted in the top of a bottle of milk. Between 1940–1949.
Size: 42 mm in diameter.
Wellcome Collection, EPH89A.

These cardboard caps present the type of cows that the milk is coming from, or a reminder to return the bottle to the owner.

Figure 108. Circular card that fitted in the top of a bottle of milk. Between 1940–1949.
Size: 42 mm in diameter.
Wellcome Collection, EPH89A.

Caps with messages promoting or encouraging to drink pure fresh milk.

Figure 109. Circular card that fitted in the top of a bottle of milk. n.d.
Size: 42 mm in diameter.
Centre for Ephemera Studies, University of Reading.

Caps included specific messages related to good health.

Figure 110. Circular card that fitted in the top of a bottle of milk. Between 1940–1949.
Size: 42 mm in diameter.
The National Archives, INF 12/233 (public information), Wellcome Collection, EPH89A (traffic safety).

Some caps include slogans unrelated to milk; from public information to traffic safety information aimed directly at children.

With evidence from nutritionists and scientists, and backing from the government, dairies were able to promote the safety of their milk. There was an increased uptake of milk consumption and conviction (still prevalent today) that fresh cow´s milk was a safe, nutritious and well-balanced food for all ages. The examples discussed so far in this case study demonstrate how the public was informed and persuaded through beneficial messages on bottles and caps. Simultaneously, other types of milk drinks were coming on to the market. The following section investigates food labels for evaporated, condensed, and flavoured milk drinks, in order to recognise how the word *milk*, and its associated verbal and pictorial health messages, express the product´s health benefits.

7.4 Milk drinks

Milk drinks are defined as preserved products from fresh cow's milk, such as evaporated and condensed milk, and cow's milk with added flavour, sugar, enriched with nutrients, or other substances.[91] Significant proportions of preserved milk were used for feeding infants and were particularly popular from the second half of the twentieth century onwards, when Britain experienced a trend favouring artificial feeding over breastfeeding (Atkins, 2003).[92]

Evaporated and condensed milk production benefits from sterile products destroyed of all bacteria (Drummond et al., 1958, p. 332). However, although evaporated milk was unsweetened, nutritious and recommended by paediatricians as infant food (Stevens, Patrick, & Pickler, 2009), several condensed products were deficient in fat, included sugar, and were devoid of vitamin A and D (Burnett, 1979, p. 272). Although intended for use in tea and coffee, sweetened condensed and skimmed condensed milk, was frequently used for feeding infants, because they were cheap options which lasted longer than fresh cow's milk. However, from the late nineteenth century onwards, Medical Officers expressed concerns regarding the increased use of such nutrient-poor, low-fat, infant food alternatives.[93] These worries particularly related to the increased prevalence of rickets, scurvy, and other diseases related to malnutrition (Atkins, 1992). As it may have been challenging for the public to distinguish between the different alternatives of preserved milk on the market, this section discusses whether verbal and pictorial narratives found on packaging

---

[91] 'Evaporated milk is prepared by removing a little over half the water, sealing in cans, and sterilizing. It has a creamy consistence and differs from ordinary milk in containing slightly more than twice the amount of solids.' 'Condensed milk, sometimes called "sweetened condensed milk," is concentrated to about the same degree as evaporated milk, and sufficient sugar added to preserve it' (Rice, 1929, p. 777).

[92] For some mothers, breastfeeding was incompatible with working in factories, while others were unable to provide the necessary milk. The increase was also a part of women's social freedom, including the rise in scientific research (W. Jones, 2017).

[93] Medical Officers were medical doctors who advised the Government on public health matters.

contributed to clarifying the content, or not. The first part examines evaporated, condensed, and powdered milk labels. The second part investigates items representing milk drinks made up with added flavour and sugar, such as Sainsbury's Strawberry Milk Drink, or Horlick's Malted Milk which was enriched with nutrient substances. Since nearly all the labels for preserved milk in the corpus represent goods from abroad intended for export, some labels show the content's health benefits in two languages.

7.4.1 Evaporated milk

During the 1930s, medical researchers were able to verify that the nutritive value of unsweetened evaporated milk, combined with the necessary sterilisation process, made it an effective substitute for breastfeeding infants (Rice as cited in Apple, 1987, pp. 45–46). Manufacturers went further by convincing doctors and mothers, through public relation drives and advertisements, that this substitute was to a certain extent, better than breast milk (Nestle, 2013, pp. 145–146). This section investigates the graphic language of evaporated milk labels from the 1920s and 1930s, in order to explore how verbal and pictorial elements promote the drink's health benefits, and whether the information is for a product that is explicitly for feeding infants. Evaporated milk labels from a few decades later are also used to identify the similarities and differences in language use. In the early 1920s, the domestic production of canned food was small-scale, and Britain depended on imported goods. Therefore, the three labels for evaporated milk represent large international companies: Carnation, Borden's, and Nestlé (Figs. 111–113). All the labels show similarities in visual presentation and specific language use when describing the health benefits of consuming these products.

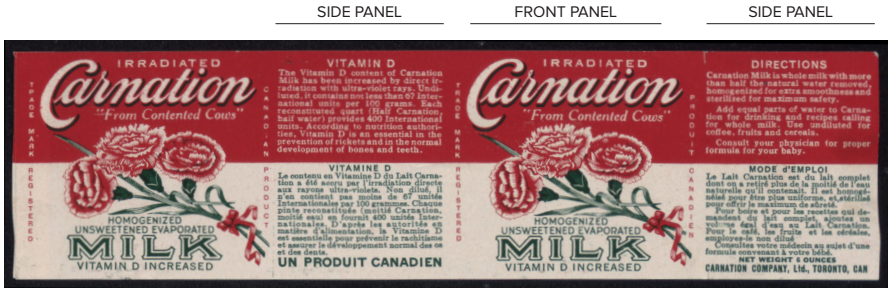


Figure 111. A label for tinned evaporated milk. *c.*1920–*c.*1930.
Size: 53 x 200 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (92b).

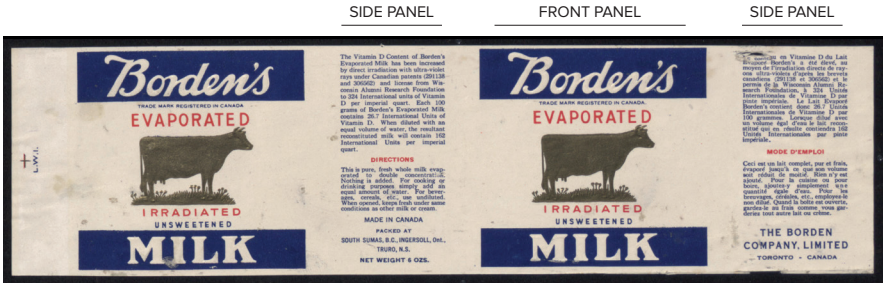


Figure 112. A label for tinned evaporated milk. *c.*1920–*c.*1930.
Size: 56 x 211 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (92a).

Figure 113. A label for tinned evaporated milk. *c.*1920–*c.*1930.
Size: 54 x 201 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (92c).

By paying particular attention to the vitamin D content, the labels reflected the recent discovery of the connection between rickets and a lack of, among other things, vitamin D.
.

The examples show that all brands on the front panels are given prominence through size, outlined or shaded letterforms, and colour contrast. The high visibility of the brand names, and their unique expression, are crucial methods to distinguish between apparently similar products, which coincides with the findings in Chapter 3 and demonstrates the increased need for persuasive communication and differentiation of brands from the 1920s onwards. Typography similar to handwriting for two of the labels can be seen as reminiscent of a signature, associated with personal guarantees, in this case, of the quality of the product (R. Jones, 2017, p. 33). The label for Nestlé also includes its trademark symbol[94] on the front panel. By adding the phrase, *The symbol of quality*, the company aimed to convince consumers about the product's superiority. Giving emphasise to a global brand would presumably increase the consumer expectations of a trustworthy and safe product.

All three front panels emphasise the content name, *Evaporated Milk*, however the two words are displayed contrarily in terms of size and visibility. As *Milk* appears prominent, *Evaporated* acts slightly less

[94] 'The original Nestlé trademark was based on Henri Nestlé's family's coat of arms, featuring a single bird sitting on a nest. Nestlé means 'nest' in German, and by adding three young birds fed by a mother, Henri created a visual link between his name and his company's infant cereal products. The image was used as a trademark from 1868' (Nestlé, 2001).

significantly. Although there are a few graphic variations, the front panels also include the following information: *Homogenized*, *Unsweetened*, *irradiated*, and *Vitamin D increased*. These are displayed at the same size as *Evaporated*, so are given slightly less significance than the brand name and the word *Milk*. Also, the front panels incorporate varying pictorial elements, such as a rough drawing of a cow, landscape, and a trademark depicting young birds fed by a mother – all components portraying a relationship to nature and fresh produce. The usage of red, green, and blue, for presenting letterforms on a bright background, contrasts with the textual elements.

The label's side panels contain textual information presented in two different languages explaining the irradiation process and the importance of vitamin D – specifically related to the prevention of rickets. Directions for use is an additional part of the subject matter. The following phrases provide examples of the particular language used to explain the content, the irradiation process, and to define some of the product's health benefits.

- *High quality.*
- *Carefully selected cows.*
- *This is pure, fresh whole milk.*
- *Nothing is added.*

- *The Vitamin D Content of Borden´s Evaporated Milk has been increased by direct irradiation with ultra-violet rays under Canadian patents (291138 and 306562) and license from Wisconsin Alumni. Research Foundation to 324 International units of Vitamin D per imperial quart. Each 100 grams of Borden´s Evaporated Milk contains 26.7 International Units of Vitamin D. When diluted with an equal volume of water, the resultant reconstituted milk will contain 162 International Units per imperial quart.*

- *Good source of vitamin D for infants and children.*
- *According to nutrition authorities, Vitamin D is an essential in the prevention of rickets and in the normal development of bones and teeth.*

Although the evaporated milk labels above represent products that were, according to the information on the labels, produced in Canada, where social welfare and governmental legislation may not have rolled out at the same pace as in Britain, industrialisation and processing methods show similarities in many parts of the world. Therefore, it is likely that the graphic presentations and any health messages on labels of imported goods reflect the British conditions.

The visual expression and the particular wording used on evaporated milk labels, corresponds with McKee's consideration (1996) (see Section 7.2) regarding the promotion of fresh cow's milk in the 1930s – by merging associations to tradition and purity, with nutrition and modern science, manufacturers of evaporated milk drew upon similar communication strategies to market their products as the dairies did. Secondly, the labels demonstrate that it is not always straightforward to separate between persuasion and information. On the one hand, *milk* communicates information about the main ingredient within the packaging; however, by presenting the word prominently, attention is drawn to a word associated with the growing perception of purity, nutrition, and health. Cook & O'Halloran (1999) refer to similar observations in their analysis of a label for Baby Organix Cereal, considering the relationship between information and persuasion. For example, a picture of a healthy smiling baby may be concerned with persuasion, because pink cheeks and green colour clothing match the overall message of healthy packaging content. On the other hand, a picture of a baby may also communicate information about whom the cereal is for. Consequently, some may purchase the food exclusively based on this picture. Other parts of the label, whose primary function is to inform, also have a persuasive function. For example, as Rayner (1995) points out, nutritional information provides helpful information for consumers looking for food, including particular nutrients. On the other hand, the same information also promotes sales in terms of marketing the quality of a food *high* in terms of high vitamin content. Similarly, as the evaporated milk labels inform consumers that milk contains added vitamin D, the information has a persuasive function related to other milk products not improved with vitamin D. In terms of colour usage, the labels above demonstrate similarities to the glass milk bottles discussed in the Section 7.3. To some extent, they are reminiscent of the bottles filled with white liquid, which contrasts well behind blue, red, or green graphics, and holds strong associations with white being a symbol of purity.

An additional statement emphasising purity and health is shown in the phrase *From Contented Cows* displayed on the Carnation label (Fig. 111). The phrase originates from a hyperbolic speech delivered by the company's chairman in 1906, who spoke of:

> ... "ever verdant pastures of Washington and Oregon, where grazed the carefully-kept Holstein herds, which yielded the rich milk used for Carnation" and described "the picturesque background of these pastures—mountains often snow-capped, from which danced and dashed the pure sparkling waters which were to quench the thirst of the herds and render more juicy the tender grasses of the well-watered pastures" (Valenze, 2011, p. 189).

By including *From Contented Cows* on the label, the manufacturer promotes the quality and *freshness* of the product by creating a picture in the consumers´ minds of healthy cows. The statement is reminiscent of today´s typical advertisements portraying food as natural and healthy and part of a country landscape (Todd, 2010). Todd explains how different adverts are designed to establish a relationship between consumers and the environment and argues that particular campaigns educate consumers to believe *happy cows* make healthier food. Hence, the statement *From Contented Cows* demonstrates an early example of the suggestion that better, healthier, and tastier milk is dependent on a cow's disposition.

Besides providing associations with fresh milk and its natural goodness, the evaporated milk labels also drew upon new science and nutrition theories to communicate the advantages of the product. As cow's milk is not a good source of vitamin D (National Health Service, 2020), and breastmilk alone is not an adequate source of vitamin D (Rajakumar, 2003), evaporated milk was promoted as the best alternative for feeding infants, as it contained vitamin D after irradiation.[95] By displaying *Irradiated* and *Vitamin D increased* the manufacturer demonstrates themselves as being at the forefront of scientifically led food production, using modern science to promote their product ahead of cow's milk and breast milk. Since an unopened tin of evaporated milk does not contain bacterial contamination, the product also showed advantages over fresh, potentially contaminated, cow's milk. The use of evaporated milk as a substitute for cow's milk could eliminate consumers' fear of TB when, for example, bottle feeding infants. Compared to other low-nutrient, high sugar infant formulas, discussed later in this section, evaporated milk demonstrated clear benefits, as it contained no added sugar.

Advertisements from the 1920s and '30s provided credibility to the concept of *scientific motherhood* [96] by promoting processed infant foods over breastfeeding (Apple, 1995). The manufacturers of evaporated milk targeted women correspondingly, by including scientific information on labels, with implicit advice in terms of feeding their babies healthfully. On the evaporated milk labels (Figs. 111–113)**,** by emphasising the high vitamin D content, the product demonstrates its superiority over the vitamin D deficient cow´s milk and breast milk. Furthermore, by referring to nutrition authorities stating that, *vitamin D was crucial for preventing rickets as well as normal bone and teeth development*, the information and

[95] 'Milk that has been subjected to ultraviolet light, when the 7-dehydrocholesterol naturally present is converted into vitamin D' (Bender, 2009).

[96] Scientific motherhood is the belief that women require expert scientific and medical advice to raise their children healthfully (Apple, 1995). Apple illustrates how mothers not only were advised to learn from scientific and medical expertise but also followed the directions of experts. A 1938 advertisement for Libby's homogenized baby food writes the following: 'special homogenization – which breaks food cells into tiny particles' followed by a dialogue which urge the readers to 'Ask your doctor'. The advertisement can be found in *Constructing mothers: Scientific motherhood in the nineteenth and twentieth centuries* (Apple, 1995, p. 164).

the support from professionals displayed in the verbal description may have given the women the confidence to trust the product to raise their children healthfully. The description of the irradiation process highlights scientific innovation and explains the increased vitamin D process in detail. However, understanding the content of the text, such as *Reconstituted milk will contain 162 International Units per imperial quart* or *Increased by direct irradiation with ultra-violet rays under Canadian patents* must have been challenging to comprehend without having significant knowledge of the subject.

Evaporated milk labels from the 1960s until the 1980s (see Fig. 114) demonstrate some similarities with the earlier three items discussed, particularly in terms of the visual presentation on the front panel.

Figure 114. Label for evaporated milk. 1960–80.
Size: 95 x 241 mm.
The Sainsbury's Archive, Museum of London Docklands. Ref. No:SA/PKC/PRO/1/6/2/5/1/8/16.

This label promotes evaporated milk rich in vitamin D. It includes the standard daily requirement of vitamin D for adults in addition to a recipe for *Savoury Quiches*. By emphasising the product's nutritional value, evaporated milk is associated with a healthy lifestyle.

The brand name and *milk* are given prominence through size and graphic attributes, such as outline and colour contrast. Like the labels from 1920–30, this example includes *Evaporated* and *Rich in vitamin D* legibly, but significantly reduced in contrast to the two most prominent elements. However, there are no illustrations giving associations to nature, although the solid green and blue for *milk* may, to some extent, provide some references to environmental elements. As green and blue were used along with red on the milk bottles, this might be a connection as the colours contrast the white background giving those same symbolic connotations to white milk. The typography is characterised by soft, rounded shapes, a typical style from the 1970s, associated with the environmental movement of the period (Wagner, 2015). Altogether, the label's front panel promotes a clean, pure product that visually, to some extent, correspond with other milk-related labels or filled milk bottles.

However, the textual information on the label's side panel differs from the 1930s examples discussed above. Instead of including a

thorough description of the vitamin D increase in the product, its good source for infants, and the importance of the nutrient in preventing rickets, a short one-column text printed in blue specifies the vitamin D3 content and the daily requirements for adults. Very few natural foods contain much vitamin D (National Institutes of Health, 2021), and specifying D3 (cholecalciferol) demonstrates a product fortified with a commercially synthesised vitamin (Ross et al., 2011, p. 75).

By leaving out information regarding rickets, the label reflects a disease brought under control[97] and, consequently, no need to provide such information. The text also demonstrates a different approach to product usage than in previous examples. Instead of paying attention to evaporated milk suitable for infants, the label includes serving suggestions for fruit, desserts, puddings, soups, and sauces. A recipe for *Savoury Quiches* further emphasises using evaporated milk in cooking. Besides giving attention to the rich content of vitamin D and adult daily requirements, the label indicates evaporated milk should be part of a healthy diet for grown-ups rather than infants.

Finally, not declaring evaporated milk suitable for infants is most likely related to the introduction of commercially prepared milk formulas fortified with iron, in the 1960s (Fomon, 2001). The use of homemade infant formula based on evaporated milk declined, therefore targeting a different demographic was reasonable shift of focus for manufacturers to make.

7.4.2 Condensed milk

Although many mothers used unsweetened evaporated milk for feeding infants in the early twentieth century, other condensed milk products were also widely popular as baby food. Full cream sweetened condensed milk was nutritious; however, it included a significant quantity of sugar. Therefore, many nineteenth-century physicians advised against its use for infant feeding (Apple, 1987, p. 44), while others claimed it appropriate as a complementary feed (den Hartog, 2007, p. 132). Machine-skimmed, or sweetened skimmed condensed milk, was a low-quality version of condensed milk and frequently used in poor urban households because these variants were inexpensive and lasted longer than cow´s milk (Fildes, 1998). However, as they were deficient in fat, contained extra sugar, and devoid of nutrients (Burnett, 1979, p. 272), there was danger in using these products to feed infants. Generally, the milk was intended for adding to tea or coffee and the different versions of condensed milk were often confused with unsweetened evaporated milk (Apple, 1987). This section examines whether or not verbal and pictorial narratives employed on condensed milk labels contribute to clarification of the actual content.

---

[97] In the 1950s, rickets was brought under control due to an improved diet, increased vitamin D supplementation and foods supplemented with vitamin D (Yapp, 2021; NHS, 2021).

Like the evaporated milk labels, many condensed milk examples also represent imported goods that involved product descriptions in more than one language. For example, a considerable proportion of condensed milk consumed in Britain, during the first part of the twentieth century, arrived from the Netherlands (den Hartog, 2007, p. 134).

It is likely that Figure 115 (below) represents the earliest example from the corpus. However, there is little information on the label, which only leaves assumptions.

Figure 115. Label for condensed machine-skimmed milk. n.d.
Size: 60 x 70 mm.
Centre for Ephemera Studies, University of Reading.

This is an early example of a label for condensed milk. Highlighting *machine-skimmed milk* directs to the *Sale of Food and Drug Act 1899*, requiring all condensed skimmed milk labels to employ adequate declaration to avoid these products being fed to infants.

A prominent brand name at the top of the label first and foremost distinguishes it from similar products. The large trophy gives associations to an award for the company, this is surrounded by four significant medals printed in red, elements frequently used as symbols of quality (Humbert, 1972). The medals inscriptions, *Cork International Exhibition*, indicate that the manufacturer attended the exhibition in Cork, Ireland, in 1902 (Breen & Spalding, 2014) – if this is the case, the assumption is that the label is from the turn of the century. In addition to describing the milk as *condensed*, the label displays *Machine-Skimmed Milk* printed in large, black, sans serif letterforms. One reason the item has a reference to *Machine-Skimmed* is in line with the increased use of condensed and machine-skimmed milk for feeding infants at the end of the nineteenth century (Fildes, 1998). Medical Officers expressed concern, since skimmed milk, deficient in fat, or products low in vitamin D, A, and C, were significantly related to the increased prevalence of rickets, scurvy, or other malnutrition diseases (Atkins, 1992). Consequently, in 1899 the ensuing *Sale of Food and Drug Act* required all condensed, separated or skimmed milk to include an adequate declaration:

> ... requiring all condensed, separated, or skimmed milk imported into this country, and all such milk sold or exposed for sale, to bear on the tin or other receptacle a label on which the words “Machine Skimmed Milk” or “Skimmed Milk” as the case may require, are printed in large and legible type (Coutts, 1911, p. 182).

Size and high tonal contrast used in the font for this declaration (see Fig. 115) provides this salience as required.

Nevertheless, in parts of Britain at the turn of the century, some babies were still fed almost exclusively on condensed machine-skimmed milk (Atkins, 1992). Many consumers may not have had enough knowledge to understand the consequences of the phrase *Machine-Skimmed*. Also, as the label includes limited information on, for example sugar content, this could contribute to possible misinterpretation. Giving greater importance to the medals and trophy could reinforce their perception of the milk’s quality.

Later labels for condensed milk include significant information on the front and side panels. Nevertheless, sweetened and skimmed condensed milk was still confused with unsweetened evaporated milk (Apple, 1987). One reason for this can be traced to similarly communicated ideas which create associations to products close to fresh, nutritious milk. Also, by presenting illustrations prominently, other informative elements such as *condensed*, *sweetened* or *skimmed* turned out to be less salient and harder to spot. The following example (Fig. 116) demonstrates a Dutch label, for full cream sweetened condensed milk, from the 1930s, to illustrate some significant findings.

Figure 116. Label for tinned sweetened full cream condensed milk. c.1930.
Size: 75 x 245 mm.
Private collection.

This label illustrates how verbal and pictorial elements depict childhood, happiness, and nature, giving associations to health, fresh milk and purity.

The front panel displays the brand name *Little Mary* in red ‘hand-drawn’ letterforms and a representational drawing of a happy, healthy girl, resting in a flowery green meadow, positioned in front of a cow. There is a glimpse of a farm, the sea, and a windmill, in the background. *CONDENSED*

MILK is displayed in three different languages at the bottom of the item and printed reversed on a solid blue background. The label's side displays the entire content name, *CONDENSED MILK FULL CREAM SWEETENED,* with directions for use printed in blue and correspondingly presented in three languages. The copy only refers to use in coffee and tea with no verbal recommendations or suggestions for infant feeding.

In terms of label design, the brand name *Little Mary* establishes itself in the upper level of typographical hierarchy, through large size and red letterforms which attracts attention to the packaging. The brand name itself does not communicate health and cannot be characterised as a suggestive health brand.[98] However, closely attached to the picture, the name immediately connects with the girl, indicating a product suitable for children. While evaporated milk labels highlighted *milk* to draw attention to a liquid, at the time associated with the growing perception of purity, nutrition, and health, this drawing plays on similar connotations. Secondly, the picture associates fresh produce with health and goodness by depicting a happy, healthy girl, surrounded by natural elements. Finally, in terms of colours, the label demonstrates similarities to evaporated milk labels, as red and blue usage contributes good contrast to a bright background, which may further be associated with bottles filled with fresh milk. Earlier we saw that evaporated milk proved successful in feeding infants due to its unsweetened and nutritious nature (Marriott & Schoenthal in Apple, 1987, pp. 45–46), in contrast, sweetened condensed milk does not include vitamin D and does contain a high proportion of sugar (West, 2018).

Therefore, it is significant to observe that the front panel in Figure 116 avoids any mention of sweeteners. This information, along with the serving suggestion briefs the consumer that the product is sweetened and recommended for use in coffee and tea, but it appears on the label's back panel, which immediately makes it harder to spot. Hence, the most visible part of the label may signify a drink giving associations to unsweetened evaporated milk and not a highly sweetened product intended for adding into a drink, rather than being a drink in itself. Hiding vital information on the back of the label, often by using small type, is emphasised in a study of baby food labels by Cook and O'Halloran (1999). Mothers, especially in developing countries, rely upon accurate, accessible and visible information on formula milk powder packaging, particularly about the importance of breastfeeding, and the risk of contracting severe diseases from bottle-feeding, if they do not have access to a clean water supply. However, the study showed that some companies marketing and selling baby formula to poorer countries, had either not made this information available, or not made it clear enough to understand. Similarly, the label

[98] Suggestive and non-suggestive health brands are explained in Section 2.1.

in Figure 116 draws attention to a visual narrative that may lead to misrepresentation of the genuine content. Also, if the viewers based their decisions on the front panel, the food could be confused with unsweetened evaporated milk.

Other full cream sweetened condensed milk labels draw on different ideas and recommendations, which may have also been unclear. For example, Figure 117 demonstrates an another Dutch label, again from the 1930s, displaying *FULLCREAM SWEETENED Safety CONDENSED Milk* on the front panel.

Figure 117. Label for sweetened full cream condensed milk. n.d.
Size: 75 x 245 mm.
Private collection.

Safety Milk on this label attracts awareness, not only to a nutritious beverage but also to the danger of drinking potentially infected fresh milk. In addition, as the product is canned, the product has the advantage over fresh cow's milk in terms of storage.

The arrangement of graphic elements on the front panel highlights parts of the contents name. For example, to achieve a high level in hierarchy for *FULLCREAM SWEETENED,* the name is printed in red and positioned curved at the label's top. *Milk* is given prominence by size and red colour and employed at the bottom of the label. Close to *Milk* and displayed in the centre of the label, *Safety* emerges as a suggestive health brand giving associations to a pure and safe product. Thus, the two elements attract awareness to a nutritious beverage, indicating the milk is not infected. Furthermore, as the product is canned, *Safety Milk* provides an advantage over cow's milk. *CONDENSED* is, however, less significant as the word is printed in black and employed diagonally within *Milk*.

Other parts of the label include the following:

- *from our own famous black and white Dutch cows*
- *preserved with best refined sugar and is guaranteed pure*
- *recommended for infants and invalids*

The first two descriptions are predominately poetic and coincide with the portrayal of ingredients used for unsweetened evaporated milk products – depicting happy, healthy cows. Words such as *best refined sugar* and *guaranteed pure* create a positive impression of added ingredients. Hence, the information may withdraw the significance of a product with sugar and the evidence that physicians advised sweetened full cream condensed milk merely as a complementary food for infants (den Hartog, 2007, p. 132). Including advice such as *Recommended for infants and invalids,* directions for feeding infants, and highlighting information regarding the fat content, clearly emphasises a milk suitable for infants. Finally, *Safety* may also reinforce the impression of food suitable for babies.

Whether or not there are any significant differences between the contents of latter two full cream sweetened condensed milk products (Figs. 116 and 117) is challenging to determine. However, based on the label´s content names, to some extent, they seem identical. Nevertheless, while the first label recommends milk for coffee and tea, exclusive of any verbal recommendations related to baby food, the second item includes instructions for infant feeding. Hence, the two labels demonstrate typical challenges when choosing a product based on promotional verbal and visual messages. By visually emphasising superiority or informing about a particular use, two identical products can be seen very differently.

The choice of colours for the label in Figure 117 is significantly different from the previous items representing evaporated and condensed milk. Instead of including bright colours contrasting with white background, yellow gives the item a much warmer and more energetic appearance. Yellow in food packaging is often used to communicate wholesomeness and sunlight (Klimchuk & Krasovec, 2012, p. 84), and the background colour in Figure 117 could give associations to nature and freshness. The red element being employed across a simplified image can be identified as a road or railway signal, considering the white tracks in the background of the illustration. Hence, the image can relate to safety in terms of safe to pass, linking the drink as safe to use. However, the illustration is somewhat simplified and may, at first glance, seem rather unidentifiable to the modern eye. When considering the illustration and the assortment of lettering, the label can be judged either as a brave design decision or made by someone with little design training. What it did do was catch the eye. Thus, might the presentation and the odd use of graphic elements showcase what is today considered to be *bad* design? Regardless of this, when consideration is given to the persuasive elements, the label still seem to accomplish several tasks. Giving emphasis to *Milk* and *Safety* means that *CONDENSED* is harder to spot, making much more of an association with fresh, pure milk. The use of yellow could also have had a positive impact on consumers as the label differs from similar items, thus drawing attention the product.

7.4.3 Condensed skimmed milk: unfit for babies

Although regulations in the late nineteenth century required condensed skimmed milk to include *machine skimmed* on the labels, the product was still being used by many to feed infants well into the 1900s. This tinned milk was cheap and had the added advantage of having a long shelf life; especially useful in crowded urban homes with few facilities for keeping food fresh. Britain imported a significant amount of condensed skimmed milk from Netherlands; however, this was still considered unsuitable for feeding infants. Due to concern regarding its extensive use, *Public Health (Condensed Milk) Regulations, 1923*, required all skimmed condensed milk labels, whether imported or not, to include the statement *Unfit for babies* (den Hartog, 2007, p. 135). To protect the public, Britain introduced the first food label warning. The warning thus appears to be the opposite of a health message, conveying a food **not** beneficial to health.

The next two labels, a 1930s Dutch label (Fig. 118) below and a British item from the 1970s (Fig. 119) in the following section, demonstrate different approaches to the 1923 regulations. It could be argued that the Dutch label is not significant to this study, considering it was produced for the African market. However, the label is included to indicate that a similar design may have been appropriate for identical products distributed to Britain. This view is relevant also because the distributor's address seems to have been added to the label after the final design, and consequently shows that this milk was probably also exported to countries other than the African ones listed.

The Dutch label is printed in black and divided into three parts. The front panel displays the brand *Black Cow* prominently above a large photograph of a representative cow and the content name *CONDENSED SKIMMED MILK [SWEETENED]* positioned at the bottom.

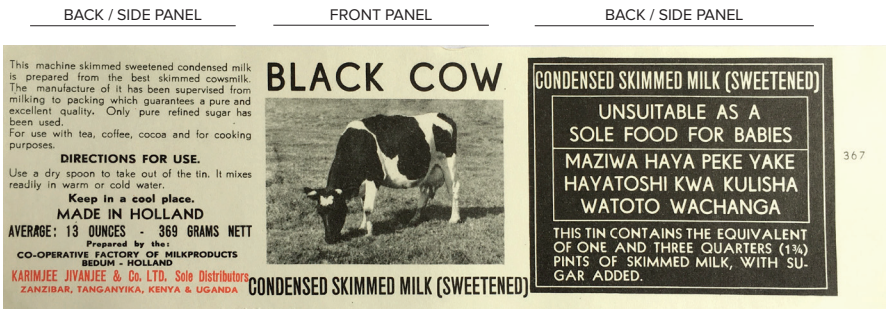


Figure 118. A label for condensed sweetened skimmed milk. 1930s?
Size: 70 x 250 mm.
Private collection.

An example of how a warning is implemented to signify that skimmed milk is unsuitable as a sole food for babies.

The verbal narrative on the left side of the front panel includes positively charged words such as *pure*, *best, supervised*, *excellent*, and *only pure refined sugar has been used, conveying* an impression of a superior product. Additionally, the copy includes *for use with tea, coffee, cocoa and cooking purposes*. Suppose the design was intended for the British market – in line with the 1923 legislation, the panel on the right side includes a *warning* regarding using the food as baby food. However, it is a mixed message which might give room for various interpretations. *Unsuitable as a sole food for babies* implies that some use is acceptable, which is significantly different from the official guidelines that ruled skimmed condensed milk as wholly unfit for babies. The extent to what *some* use could mean, and what proportion of skimmed milk could be used, would be a matter for the user, who would need some level of literacy and understanding. The front panel picture and the positively charged description of the milk show a significant contradiction to the *warning*.

7.4.4 Powdered milk

A label from Sainsbury's (Fig. 119) demonstrates an additional label for skimmed milk which gives less room for confusion in terms of design and usage of words, in stark contrast to the previous label. On the other hand, as this is dried milk, it may be an element of potential confusion as baby formula came as a powdered product as well.

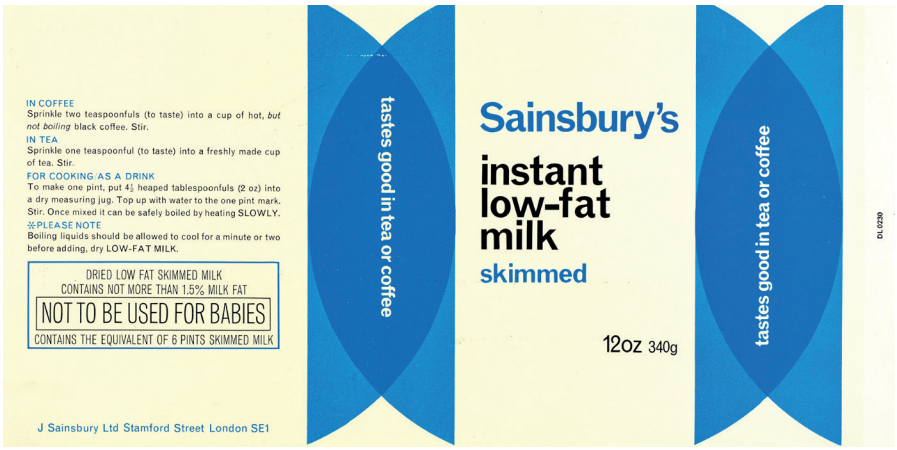


Figure 119. Label for skimmed instant low-fat milk. *c.*1970.
Size: 154 x 309 mm.
The Sainsbury's Archive, Museum of London Docklands. Ref. No:SA/PKC/PRO/1/6/2/5/1/14/3.

The front panel of this label includes no visual narratives associating the drink to nature or fresh milk, contributing to a greater emphasis on skimmed milk. Additionally, the back panel includes *Not to be used for babies* – a clear message that gives less room for different interpretations than the previous label.

Firstly, the front panel includes the brand name and *skimmed* printed in blue, while *instant low-fat milk* is printed in black. All elements provide good contrast and high visibility due to the white background. Similar to some previously discussed labels, the colours, to one extent, give connotations to glass bottles filled with milk. On the other hand, the front panel does not include any visual narratives associating the drink to nature or fresh milk, which may provide less confusion than the previous label. Hence, the design contributes to a greater emphasis on skimmed milk.

The label's side panels include the statement *Tastes good in tea and coffee*. *Tastes good* promotes the milk´s quality, however this is challenging to confirm as taste is based on individual preferences. On the other hand, describing the taste may not interfere with the perception of usage, and as the second part of the phrase includes *in tea and coffee,* the label clearly defines use. It is by all means possible that some consumers still interpreted the information differently than intended, and used the product for feeding infants. However, the label's back panel supplies further information regarding this by including supplementary directions for use. Additionally, as required by regulation, the label also displays *Not to be used for babies* which undoubtedly communicates that the product is unfit for infants. Although the warning appears on the label's back panel, the frame contributes to highlighting the message. Unlike the warning on the previously discussed label, which could give room for different interpretations, the language in Figure 119 is precise and leaves little room for misinterpretation. As the label avoids descriptions such as *pure milk* or *happy cows* or any visual narratives portraying the food as pure or natural, the label communicates the content more informatively than previous milk drink examples, providing less room for confusion.

This case study has so far concerned itself with milk drinks in the form of evaporated and condensed milk labels, and then, the label for powdered skimmed milk. The following section examines material promoting *Horlick's Malted Milk* and Sainsbury's *Low Fat Milk Drink flavoured with strawberry*.

7.4.5 Horlick's Malted Milk and flavoured milk

The idea behind *Horlick's Malted Milk* was to '... provide a non-farinaceous[99] highly-nutritious food for infants and invalids by combining the nutritive parts of the cereals with milk' (Horlick, 1883, US Patent NO. 278.967). The product was made from barley malt, ground wheat (or oats), and full-cream milk modified into a powdered form, and was to be prepared by the user with hot water. The food was thus favourable to fresh milk, especially in terms of storage in warm weather (Horlick, 1883). Eventually, Horlicks

[99] Farinaceous: 'containing or rich in starch.' 'The non-farinaceous properties of my food render it of peculiar value to the weakest infant stomachs, since they cannot digest starch until they have teeth ...' (Horlick, 1883, US Patent NO. 278.967).

promoted the drink as a delicious, nutritious, and refreshing health food drink suitable for all ages (Ward, 1994). Consequently, Horlicks is identified as a health brand as the consumers gradually associated the company and brand with nutritional and wholesome products (Chrysochou, 2010).

Figure 120 shows an early 1900s Horlicks advert and demonstrates how keywords such as the brand, combined with *malted milk*, draw the attention through position, size, and bold typography. By emphasising *milk*, the product benefits from associations with the nutrient-rich properties of cow's milk. However, as many consumers viewed fresh milk with disgust and fear in the late 1800s, Horlicks profited from presenting a similar nutritious product powdered.

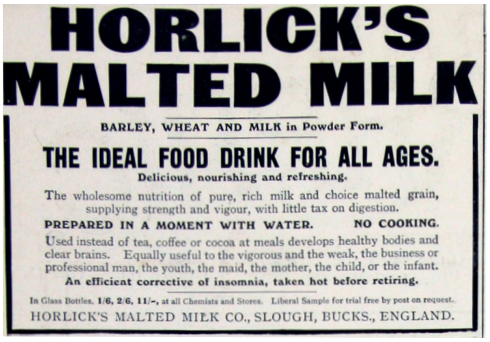


Figure 120. An advertisement for Horlick's Malted Milk. 1907. Grace's Guide to British Industrial History. File: Im19110624G-Horl.jpg

An example of how particular keywords draw attention to the advert. For example, giving prominence to milk gives clear associations with cow's milk perceived as essential and nutritious. However, as *Horlick's Malted Milk* was manufactured as powder, the food was favourable to fresh milk, especially in terms of storage in warm weather.

The advertisement also pays attention to specific health issues such as *supplying strength* and *developing healthy bodies* – similar words and phrases used by the dairy industry when promoting cow's milk. Consequently, emphasising the word milk in the advert indicates significant associations between the two products' nutritional values.

Horlicks gradually changed the composition of some of their product categories, for example, by adding flavour and sugar.[100] Nevertheless, they continued to claim the properties of a healthy food drink, which seemed to be a powerful message in several planned campaigns from the 1920s (Ward, 1994). One important target group in the 1930s involved school children. Although the introduction of the *Milk in School Scheme* was aimed at making milk available to all pupils, not all schools joined the scheme.[101] One reason could be that some children were becoming

[100] See for example the ingredient list in Figure 50.

[101] Distributors of local milk were not obliged to supply school milk, and especially in rural areas, many refused to deliver because they could not afford to invest in appropriate machinery for bottling and long distances for deliveries. Other reasons children in London did not participate in the scheme may have been an aversion to milk, parental poverty, or that parents protested because they thought milk ruined their appetite, to mention a few (Atkins, 2005).

Figure 121. Advertisement for Horlick's. 1936. Grace's Guide to British Industrial History. File:Im193601GHK-Horlicks.jpg

This advertisement for *Horlick's Malted Milk* is one of several from the 1930s that played on the parent's fear for the health and happiness of their children. The drink was promoted to build a solid foundation for the child's health, using arguments often heard from the dairy industry.

familiar with milk drinks such as *Horlick's Malted Milk*. The manufacturer carried out a massive propaganda drive, especially towards schools in rural areas (where there was a lower uptake of the *MISS*), and *Horlick's Malted Milk* was especially popular as the children appreciated the taste in favour of ordinary milk (Atkins, 2005). Horlicks also targeted anxious parents worried about their children's nutritional health and happiness (see Figure 121). The approach coincides with concerns about national fitness in the inter-war period and the significance of providing school milk or other nutritional beverages to keep fit and healthy (Atkins, 2005). Other manufacturers played on similar communication themes during the same period. For example, Scott's Brand Emulsion was targeted at anxious mothers who worried about their babies getting coughs, colds, influenza, and infections.[102] Using fear is a powerful persuader (Lindstrom, 2012, p. 34) and designed to '... stimulate anxiety in an audience with the expectation that the audience will attempt to reduce this anxiety by adopting, continuing, discontinuing, or avoiding a special course of thought or action' (Spence & Moinpour, 1972, p. 40).

Milk drinks were promoted as a quick fix, building solid foundations for children's health. Adverts included *Growing children*, *Energy* and *The essential food elements growing children need*; words and phrases heavily argued for by the dairy industry. Hence, milk drinks often gave the impression of being as nutritious and healthy as fresh cow's milk in its natural form. However, later analyses showed high levels of sugar and low milk content in the products. Some Local Education Authorities even banned the products after these findings (Atkins, 2005). Nevertheless, by making the drinks available in schools and delivering advertisements relevant to lifestyle, nutrition, and quick solutions, children learned to appreciate the taste of sugary drinks.

While the original adverts promoted *Horlick's Malted Milk*, the previously discussed publicity shows that the manufacturer removed *Malted Milk* from the name. The brand name could serve on its own to encompass several product categories, some of which did not include sufficient milk content to be mentioned, such as chocolate-flavoured Horlicks. Nevertheless, the manufacturer continued promoting the drink as a health drink due to its nutritional properties and benefited from building a health brand throughout a century (Ward, 1994). Also, as *Horlick's Malted Milk* was originally produced with ingredients containing its essential nutrients, later products added, among other things, synthetic vitamins and sugar. Early Horlicks labels do not display the percentage of each of the ingredients in the food; however, to suggest whether, for example, the content of milk decreased throughout the following decades, a current product from Horlicks may give some indications:

[102] An advertisement promoting Scott's Emulsion can be found in Appendix 3.

> *Wheat 46% (Wheat Flour and Malted Wheat), Malted Barley 26%, Dried Whey (Milk), Calcium Carbonate, Dried Skimmed Milk, Sugar, Palm Oil, Salt, Anti-Caking Agent (E551), Vitamin Mix (Vitamin C, Niacin, Vitamin E, Pantothenic Acid, Vitamin B6, Riboflavin, Thiamin, Folic Acid, Biotin, Vitamin D, Vitamin B12), Ferric Pyrophosphate, Zinc Oxide* (Horlicks, 2021).

As 72% of the content consists of wheat and malted barley, milk seems to only be a limited part of the product. Instead, the product is fortified with 14 vitamins and minerals, which indicate nutritional properties as well as a highly industrialised food. As Horlicks benefited from associations with the nutrient-rich properties of cow's milk in the nineteenth century, they later promoted the advantages of the range of vitamins and minerals that they included in their product.

Several types of milk drinks emerged from the late nineteenth century through to today. For example, Nestlé and Ovaltine produced similar products to Horlicks, such as infant food made from cereals and milk. Other milk drinks were based on cow's milk with added flavourings. As an illustration, Figure 122 shows a 1970s package from Sainsbury's. Instead of promoting nutritional properties, this label emphasises a *low fat milk drink* with *strawberry flavour*.

Figure 122. Packaging for low fat milk drink. *c.*1970.
Size: This is a proof but when constructed would be approx. 102 x 115 x 40 mm.
The Sainsbury's Archive, Museum of London Docklands. Ref. No:SA/PKC/PRO/1/6/2/5/1/11/2.

The front panel for this milk drink emphasises milk that may be instantly associated with fresh cows' milk, although the drink is treated by Ultra High Temperature, a method used to produce long-life milk. Additionally, *low fat* indicates a slimming drink, a milk drink developed explicitly for weight loss and gained popularity in the post-war period after research into the 1940s and '50s suggested a strong connection between diets high in saturated fat and an increased risk of heart disease.

The arrangement of graphic elements on the front panel gives typographical emphasis to *milk drink* using reversed bold sans serif letterforms. The brand name, *low fat* and *strawberry flavour* are employed in smaller types, so less noticeable. As milk emerges as a significant element, the word may instantly have an association with fresh cow´s milk. However, according to the side panel, the drink is treated by Ultra High Temperature (UHT), a method used to produce long-life milk. The result of this process is a complete deterioration of harmful microorganisms present in raw milk, but maintaining the nutritional values of primary nutrients such as protein, calcium and vitamin D (Tetra Pak, n.d.). Therefore, emphasising milk on the front panel draws attention to a word supplying positive associations.

Additionally, *low fat* indicates a slimming drink made of, among other things, skimmed milk, according to the ingredient list. Several types of low-fat milk were developed explicitly for weight loss and gained popularity in the post-war period (Messinger, 2015), after research in the 1940s and '50s suggested a strong connection between diets high in saturated fat and an increased risk of heart disease (Hand, 2017). However, chocolate, and strawberry flavouring was often added to these low-fat drinks to make up for the loss of taste when removing the fat. Consequently, many drinks included a very high percentage of sugar (Messinger, 2015). The visual graphic features employed on the front panel of the packaging could, however, provide a slight misrepresentation of the drink. For example, on the Sainsbury's label, by paying attention to the word *strawberry* on the front, the drink may give a sense of a fresh and natural drink at first glance. Also, the dark red colour usage for *Strawberry flavour* and typography similar to handwriting gives the element an informal and *natural* appearance. The red background symbolises the fruitiness of strawberries. Although *flavour* adds additional information, the extensive use of red may override the word's meaning and instead provide comprehensive attention to *strawberry*. According to the information on the side panels, the drink contains flavouring and no natural ingredients relevant to fresh strawberries. Sugar is a significant part of the content. Like other highly processed foods packs, highlighting *strawberry* (for example) on the front panel and *hiding* the ingredient list or other messages on the back or side panels may give an incorrect perception of the food.

Other food labels may also benefit from using the word milk in terms of a word rich in connotations related to nutritional value. The final section in this case study observes adverts and labels for chocolate.

7.5 Other foods containing milk

A huge range of foods contain milk to a greater or lesser extent, the list includes biscuits, chocolate, ready-made soups, and puddings. However, there are variations in whether labels display milk as a significant substance. Some items merely include milk as part of the ingredient list; others highlight the word on the front panel, often as part of the ingredient name, such as *Milk Chocolate* or *Milk Pudding*. The final part of this section pays particular attention to milk chocolate, to observe whether associated labels promote milk as a significant substance due to its nutritional benefits. I have selected a few items from Cadbury to show how they advertised their chocolate in the twentieth century.

Cadbury introduced their milk chocolate in 1905, realising that including a large percentage of milk in their recipe made cocoa less bitter (Bradley, 2008, p. 34). They also marketed their chocolate as a convenient way of carrying and consuming milk (French, 2017). Just as importantly, part of their marketing strategy was to communicate the benefits of consuming milk.

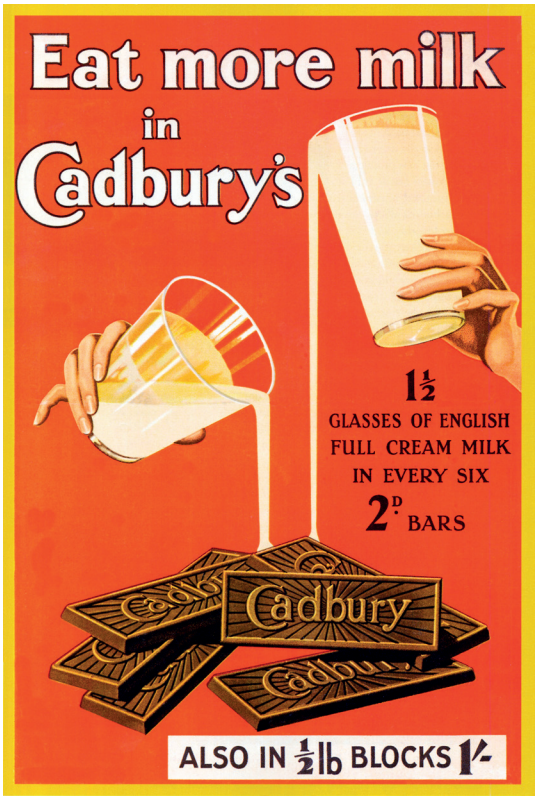


Figure 123. Advert for Cadbury chocolate. *c.*1930.
Size: 335 x 228 mm.
Lordprice Collection / Alamy Stock Photo.

This advert exemplifies how Cadbury promoted their chocolate in the 1930s by emphasising the significant milk content. *Eat more milk* correlates with contemporaneous public health and leading dairies' campaigns, which promoted milk as a nutritious and healthy food.

The language and the arrangement of graphic elements in the Cadbury's advertisement from the 1930s (Fig. 123) help establish milk as a significant constituent of their chocolate. Positioned at the top, the choice of bold, outlined, and reversed out letterforms, gives prominence to the statement: *Eat more milk in Cadbury's*.

The statement is followed by a visual of two glasses pouring milk into several chocolate bars each branded with a Cadbury logo and the subsequent declaration: *1 ½ glasses of English full cream milk in every six 2D bars.* The solid, red background is the initial attraction of the advert and contrasts with the statement and the milk glasses. A yellow frame joins the verbal and pictorial elements together. The slogan and the imagery *glass and a half of milk in every bar* first appeared in 1928 and was part of Cadbury´s advertising strategy to establish *Dairy Milk* as the nation's leading brand. At the same time, the new Milk Marketing Board emphasised the health value of drinking milk. Public health and leading dairies' campaigns promoted milk as proper food as much as a drink (French, 2017), and gradually convinced the public that milk was a nutritious and well-balanced beverage. Dairies drew upon scientific knowledge about nutrition and the health value of drinking milk in their advertisements, emphasising that the drink included all essential elements for growth, and claiming its value for building and maintaining strong, healthy teeth and bones.[103] Hence, *Eat more milk* presented in Cadbury´s adverts corresponds with contemporary public health and leading dairies' promotion of milk as a nutritious and healthy food. By declaring milk as a significant ingredient in chocolate, the company indicates that the product is wholesome and nourishing. The *Glass and a Half* logo and slogan accompanied a series of advertising campaigns in the 1930s, linking the benefits of drinking milk to consuming chocolate. For example, Bradley refers the following:

> In 1928, the Minister of Health – the future Prime Minister, Neville Chamberlain – was being quoted in Cadbury ads exhorting the nation to, "Eat more milk – it is the perfect food." In 1929 the company was advertising the contents of a report to the Scottish Board of Health on the benefits of giving milk to children, with Dairy Milk being not only a delicious, convenient and concentrated form of milk, but one having twice the amount of 'sunshine vitamin D' than fresh milk (Bradley, 2008, p. 102).

Eat more milk draws attention to a statement, emphasising the growing belief and conviction in the 1930s among nutritionists, government, and milk producers, that milk was a nutritious and well-balanced food. Hence, Cadbury's took advantage of the positive associations and current scientific knowledge concerning milk's nutritional properties, indicating

[103] See advertising pamphlet for United Dairies Ltd. In Figure 97 and Figure 98.

that their chocolate had similar health benefits due to its substantial milk content.

Ever since Cadbury introduced milk chocolate at the beginning of the twentieth century, they have emphasised *Dairy Milk* on their labels. Graphics and narratives related to the advert discussed above, were also employed on the packaging. For example, a label from the 1970s (Fig. 124) includes the following narrative: *The chocolate in this bar is Cadbury's Dairy Milk Chocolate which contains a glass and a half of full cream milk in every 1/2 lb produced.*

Figure 124. Label for Cadbury´s Dairy Milk chocolate. *c.*1970.
Size: 100 x 105 mm.
John Johnson Collection, University of Oxford: Modern JJ Coll: Packaging P5.

Giving emphasise to D*airy Milk* promotes one constituent recognised nutritious and health giving. Although a significant amount of milk may influence the taste, it is questionable whether it affects health benefits.

The highest level of typographical hierarchy is given to *Dairy Milk* using large, bold purple letterforms framed in a white space, contrasting the element. Giving prominence to *Dairy Milk* promotes the nutritious and health-giving benefits of milk. However, as discussed in the previous chapter, emphasising one healthy constituent in highly processed foods may lead consumers into ignoring other unhealthy content, like sugar or fat (Nestle & Ludwig, 2010, p. 78). For example, Cadbury has, to date, continued to use the name *Dairy Milk* for various products on the market, such as *Cadbury Dairy Milk Caramel* and *Cadbury Dairy Milk Oreo Mint Flavour*. Although the current variants seem to contain the exact equivalent of liquid milk, the ingredients and added substances have increased substantially compared to the 1970s. A bar of chocolate produced with a significant amount of milk may influence the taste; however, whether the milk affects health benefits is questionable.[104]

---

[104] Cadbury Dairy Milk Oreo Mint Flavour contains: '**MILK****, sugar, vegetable fats (palm shea), **WHEAT** flour, cocoa mass, cocoa butter, whey powder (from **MILK**), skimmed **MILK** powder, reduced fat cocoa powder, emulsifiers (E442, SOYA lecithin, E476, sunflower lecithin), glucose syrup, **WHEAT** starch, flavourings, salt, acidity regulators (E501, E500), colour (E141), raising agent (E503), glucose-fructose syrup ** The equivalent of 426ml of fresh liquid milk in every 227g of milk chocolate (Cadbury Dairy Milk, 2020).

7.6 Summary

This chapter has looked at labels for milk and milk-related products to show how the word *milk* appears on different packaging, whether describing the content, emphasising the product's quality, or creating positive associations for a food. Focus on labels for milk and milk-related products showed how language and imagery on labels have changed, from portraying a drink perceived as contaminated in the nineteenth century, to nutritious and health-giving food from the 1930s onwards. The review of items was related to *Fresh cow's milk*, *milk drinks*, and *other foods containing milk*.

The promotion of milk in the late 1800s and early 1900s was primarily concerned with dairies establishing trust and convincing consumers that milk was safe and pure, and from non-contaminated cows. These health messages are mainly found in late nineteenth century adverts for commercial dairies, playing on emotions and moods to convince consumers through visual narratives, emphasising prosperity, speed, and purity. The adverts did not show milk from a nourishing perspective, instead, dairies guaranteed that they had upgraded the quality of the milk in terms of improved hygienic conditions. The adverts demonstrated that it was necessary to bring cases of infected milk under control before emphasising milk as nutritious and healthy (McKee, 1996, p. 126).

Verbal and visual elements applied to early twentieth-century glass milk bottles showed similarities. For example, few items include health messages in terms of nutritional values. Instead, the bottles demonstrate a great importance put upon messages promoting clean, tuberculin-tested milk.

There was a significant change in how milk was perceived and presented from the 1930s onwards. Instances of tuberculosis-infected cows were almost brought under control, and due to the science of nutrition, there was an increased conviction that milk was nutritious and well-balanced food. Dairies referred to investigations carried out by medical researchers and linked fresh cow's milk to science and new technology. As a result, they enabled consumer trust by emphasising scientific development as well as high nutrition value in the beverage.

Labels for milk drinks merged the goodness of milk with modern science by visually presenting nature and pureness, alongside verbal scientific nutritional information. However, the challenge occurred if consumers based their buying decisions on the front panel of the food labels alone. For example, different versions of condensed milk were often confused with unsweetened evaporated milk (Apple, 1987) because manufacturers used similar communication ideas by creating associations with a product close to fresh, nutritious milk. Also, by presenting illustrations with reference to milk prominently on the front, other informative

elements such as *condensed or sweetened* became less salient and harder to spot. Other labels emphasised the positive aspects of milk, despite milk being a limited part of the product.

These observations coincide with the previous case study, where labels for highly processed foodstuff often highlight substances that have long been considered an essential part of a healthy diet, due to their being a carrier of essential vitamins, such as fruits or vegetables. However, some of these products were not *inevitably* healthy once synthetic vitamins had been added to reconstituted products, often with high sugar content and chemical additives. Milk gradually emerged as a health food, labels for various milk drinks and milk-related products frequently included messages about the benefits of fresh, nutritious milk.

.....

Four case studies have shown topics as examples of how health messages are presented during a particular time period, and discussed factors that likely influenced verbal and visual presentation. The following section summarises these discussions by reflecting on the consumer´s awareness of health messages and the challenge of perceiving accurate information about the food´s health properties from reading the labels. Finally, the section discusses health messages on current packaging.

7.7 Discussion

The case studies established that health messages on the labels investigated reflected various health trends as well as medical discoveries. For example, consumers may have only found out about the extensive food adulteration in the nineteenth century by engaging with labels which promoted foods that were not injurious to health. Labels from the early twentieth century presented health messages about vitamins, as soon as the benefits of these vitamins became publicly known. From labels, consumers could even read that food protected against specific diseases, such as the benefits of consuming irradiated evaporated milk to prevent rickets, or the health advantage of vitamin B from Kellogg´s *Corn Flakes*. Health messages on packages in the 1960s through to the 1970s could have brought an awareness to slimming, and the relevance of nutrients and fibre in the diet. However, the challenge is to consider if health messages on food labels did raise public awareness, and the difficulties that may have been encountered in order to interpret these messages precisely. It is impossible to know to what extent consumers *specifically* noticed health-related information. Awareness would indeed relate to literacy in the mid-1800s. Retrieving information from other sources such as maga-

zines, reports, newspapers, and cookery books would have broadened the perspective of different issues, from concern regarding food adulteration to medical findings and nutritional science. Still, the difficulty is in finding out what proportion of the population bought food based on the health messages. According to the corpus for this thesis, of all the assembled items from the first research period (1850–1918), only 50% include health information, mainly emphasising *pure* food, indicating that health messages were not particularly visible on food packaging available at that time. Also, considering that this period represents a time of substantial social class difference, it is appropriate to assume that poorer people bought the cheapest food available, many of these were adulterated with inexpensive substances. If the assumption is that *pure* foods were more expensive, then they would be financially out of reach for this group.

In the second and third research periods (1918–1945 and 1945–1970), the corpus consists of twice as many labels which include health messages than those which don't, demonstrating a period when consumers were much more likely to encounter food packaging informing about any health benefits. Also, a population with better provision of education would more easily place health messages on labels in the context of similar information from newspapers, adverts, magazines and cookbooks. However, as discussed in Case study 2, it is hard to determine whether the public understood the concept of, for example, vitamins, and their implications on diet, when information regarding them became public knowledge. On the other hand, the definition of good food and vitamins was gradually associated with fresh fruit, vegetables, and wholegrain bread, through information from popular media channels and contemporaneous recipe books, primarily aimed at an educated middle-class audience (Horrocks, 1995). Consequently, consumers may have gradually understood nutritional messages from reading the labels, especially from items connecting the word *vitamin* with visuals of fresh fruit and vegetables. However, the process of buying food would also have been influenced by price, taste or a particular brand name, rather than health messages.

The case studies showed the ambiguities of health messages on the food labels. For example, nineteenth- and early twentieth-century labels did not include a list of ingredients, making it hard to understand the foods' composition accurately. In addition, vitamin messages on interwar labels were vague because no additional information regarding nutritional content was found. As discussed in Section 4.1, much of the language used to describe the food is challenging to define (Cook, 1999, 2010; Taylor, 2013; Nestle & Ludwig, 2010), and the first case study showed that different definitions of *pure* emerged, dependent on the chronological context in which the labels were being produced, and the type of food they were describing. For instance, *pure* may have described

foods free from harmful or harmless substances; on other occasions, *pure* defined foods with no fruit pulp or added chemicals, shown in the examples from the jam industry in the early twentieth century. Thus, one word or phrase may indicate several meanings. An example from Rayner describes how *low fat* can have at least two meanings: '... this food is low fat relative to all foods in general ...' and '... this food is low in fat relative to foods of a similar type ...' (1995, p. 32). Likewise, *rich in vitamins*: this food is rich in vitamins relative to all foods in general and this food is rich in vitamins relative to foods of a similar type. A similar approach applies to most poetic descriptions observed in the samples, and words such as *fresh, ripe fruit, highly nutritious, light, natural* or *high percentage of protein* may all describe food for different reasons and purposes. Hence, the examples demonstrate that the varied use of verbal health messages, often with vague associations, helped manufacturers to profit in their promotion of the quality of the food. Visual health messages on food labels can also indicate several meanings. For example, displaying a picture of fresh oranges might refer to freshly squeezed oranges or describe the aroma of the food. The challenges appear when visualising nature idealises unhealthy food by depicting nonexistent qualities.

Health messages on food labels may also have contributed to *conjuring up the idea of a food and making it appear healthier than it was*. For example, several labels in the case studies, such as those for cereals and orange drinks, gave prominence to nutritional properties on the front panels that may have increased associations to a healthy product, and hidden the fact that the food included added 'cosmetic' ingredients. Although the message about fortification was not incorrect, the health messages gave the false perception of the entire product being beneficial. Also, prominent health messages on the front panels contributed to downplaying important information about the food, such as ingredient lists and nutritional labelling, often positioned on the back of the pack and printed in small types.

If a vitamin or mineral claim appeared on a post-war label, it was compulsory to identify the present vitamin or mineral by numeric nutrition labelling (Turner, 1995, 2007). Such information could potentially have helped with interpreting health messages, but research in 1992 confirmed that participants found numeric labelling challenging because they did not have the knowledge needed to interpret the data (Black & Rayner, 1992). Considering the labels examined for the case studies were from the 1970s, the difficulties of interpreting data would perhaps have been even more challenging to understand than in the 1990s, as such information on the packaging was relatively new. Reading the ingredient lists would reveal the presence of additives and whether the food included high sugar content. Later studies conclude that only well-informed consumers read the ingredient list, or are able to make sense of the content

of nutrients (Barreiro-Hurlé et al., 2010). Therefore, although nutritive health messages appeared explicit and informative, information may still have seemed vague and unclear due to lack of knowledge or interest.

Finally, the interpretation of health messages may differ depending on knowledge, personal experiences, or social class. For example, those who identified that ingredient lists provided details about the appropriate designation of each ingredient listed in descending order of use, were able to better assess the food quality in terms of health values. Hence understanding the messages could change after gaining specific knowledge (Puntoni et al., 2010).

However, difficulties in precisely interpreting health messages do not only concern early labelling. It seems to be a critical aspect even now, in terms of knowing the extent to which labels truthfully describe the food, or perhaps indicate a healthier food by emphasising significant verbal and pictorial elements. The following section shows a few contemporary examples, and discusses some challenges consumers face in making sense of foods and whether to trust information when reading the labels.

Health messages on packaging today.

Although there are considerable differences in food safety and label regulations between the nineteenth century and today, some significant similarities can be demonstrated by showing how positive verbal and pictorial components on present-day front panels may misrepresent healthy food perception (see Fig. 125 as an example).

Figure 125. A pack for kale crackers. Front and back. 2020.
Size: c.220 x 150 mm.
Private collection.

The package shows a substantial difference between the front panel and the listed ingredients on the back. The small amount of kale compared to the extensive content of white maize may raise some questions about whether the label's front panel is truthful in its description of the food.

Firstly, by presenting kale as the most prominent verbal element on the packaging, it is relevant to consider that this is one of the main ingredients in the biscuit. Over the past decades, marketers and media have described kale as a superfood due to its nutritional content and significant health benefits (Shearman, 2014). Shearman further points out that superfood, in general, has become part of a health trend as consumers grow more interested in healthy eating. Hence, indicating that kale is a significant part of the biscuit draws attention to an ingredient associated with nutrition and health. The green letterforms and the visual of fresh kale reinforce the food's health values. However, the ingredient list, which is presented in tiny print on the back, shows that maize is the most significant part (65%). In addition, the content of kale accounts for only 6% of the whole, 3% as a powder and 3% as flakes. Consequently, there is a substantial difference between the perception of the front panel and the actual ingredients listed on the back. Instead of emphasising the significant part of the cracker, which is maize, the label highlights a popular food many consumers lately have recognised as healthy. The small amount of kale compared to the high content of white maize may raise some questions about whether the label's front panel truthfully describes the food. Therefore, similar to labels from the twentieth century, discussed in this thesis, the visual and verbal language used to describe the food may have misled consumers.

It may not seem relevant to compare current packaging with labels from the nineteenth and early twentieth centuries. Today all packs include detailed ingredient and nutritional information, which means consumers can read the content list and question the quality. However, as mentioned in the previous section, studies conclude that only well-informed consumers read the ingredient list, or are able make sense of the content of nutrients (Barreiro-Hurlé et al., 2010). The kale crackers packaging demonstrates the significance of emphasising one substance, associated with a nutritionally beneficial superfood, on the front panel. More severe issues occur if prominent elements on the front create a vague and misguiding impression of the food by downplaying critical facts, such as the presence of allergens, or benefits and superiority of breastfeeding, on packages of formula milk powder for babies (Cook, 2010). Consequently, those not taking notice of the ingredient list on the back may get an inaccurate impression of the product.

Another significant example relates to today´s labelling of orange juice. Many choose to buy orange juice labelled *Not from concentrate* instead of *Made from concentrate*. The former juice is often described and labelled pure and marketed as high quality, healthy, and fresh. Interestingly, Alissa Hamilton (2009) has revealed that orange juice marketed and labelled *pure* and *not from concentrate* can be heavily processed. She describes how oranges stored in huge tanks are first stripped of oxygen,

causing all the natural taste and flavour to disappear, then, chemical flavours and fragrances are added to create the taste of fresh oranges. However, this information is not presented on the packaging, and facts about chemicals employed in the production process are difficult to uncover, unless deliberately approaching relevant sources.

So, does describing orange juice as *pure* mislead the consumer? The word does identify a beverage not mixed with other substances. On the other hand, when the product is necessarily m*ixed with chemicals* during the production process, does *pure* still give an accurate description of the product? This example demonstrates the challenges consumers encounter when attempting to make sense of health messages. It shows that manufacturers use a lack of clarity to their advantage, in order to emphasise one aspect of the product and leave out others. Nevertheless, few companies would be minded to include any information about the production process on their labelling, if it were damaging a positive image of the product.

According to Hamilton, the best way to find out how your *pure* orange juice is produced is by looking at the 'best before' date. It is more likely that orange juice expiring within four to five days is less processed than a similar product expiring within a couple of months. However, it requires customer knowledge, and curiosity, to discover and understand the differences. Also, the hierarchy of typographic and visual information can be significant. Usually, the 'best before' date is displayed in the smallest letterforms on the label's back panel, making it at best, hard to read, or at worst, ignored.

The final example presents a slightly different approach to showing how highlighted brands may misrepresent details. In 2006, Tesco introduced a range of new product lines for fruit, vegetables, beef, and chicken, named after traditional English sounding farms (Redmere, Woodside, Nightingale, Boswell, Rosedene, Willow, and Suntrail Farms).[105] The packaging was designed to create a feeling of nostalgia and tradition and included images of a rising sun, tractors, and chickens, in an attempt to indicate tradition and pre-mechanisation, some were also branded with the 'Union Flag' to signify British produce. In addition, the food was described as *Butcher's quality*, *Fresh quality* and *Quality picked fruit*. Visuals and descriptive language indicated a link to traditional farms, giving an impression of locally produced food.

However, it was revealed that the brands were named after farms that either did not exist, or were not, historically, operating farms. Secondly, the five brands offered a mix of British and imported food, while one was exclusively imported. According to Fredenburgh (2016), Tesco argued

[105] Pictures of the packaging can be found in *Telling stories: The role of graphic design and branding in the creation of 'authenticity' within food packaging* (Barnes, 2016) and in *Tesco under fire for 'farm' brands which sound British but are imported (Fredenburgh, 2016).*

that their packaging displayed the country of origin on the front of the pack to help customers with information. However, the copy is the smallest text element on the labels and consequently easy to overlook. This particular example is thoroughly discussed by Barnes (2017), who focuses on how the fake farm brands utilized the design and branding of the packaging to evoke specific aspects of authenticity, and how the food was marketed with a story, to create a feeling of nostalgia, tradition and localness (2017, p. 97). In terms of this doctoral project, the example is significant because it shows how the creation of Tesco's fake farm brands can be linked to a current health trend. People are more concerned about chemicals in food production and have a growing interest in consuming local and organically produced food. As many associate such foods with positive qualities, the fake farm brands, language, and imagery on Tesco's food packaging, invoked an impression of good quality foods with increased health advantages.

To one extent, the Tesco example can be associated with health messages used on food labels which include narratives that may create 'health halos', and drawing attention to packaging, in order to conjure up the idea of a healthier food than is the actual case. For example, as shown in several samples through this thesis, giving prominence to nutritional properties on packaging for highly processed products may give associations to a healthy product, and not to the fact that the food could include 'cosmetic' ingredients and additives.

The present-day examples show how manufacturers may exploit current health trends and use a lack of clarity to promote their food, demonstrating similarities to early food labels and possible misrepresentation. Front panels may seduce consumers with persuasive verbal and pictorial elements; assessing whether the information is accurate or exaggerated can be challenging because additional information may be downplayed and ignored. Also, it is hard to distinguish between what is true, which messages are exaggerated, and whether consumers can trust the food they are buying, based on information employed on the packaging.

When considering the situation in the nineteenth century, food was, to a greater or lesser extent, adulterated; there was a lack of food control, few labelling regulations, and no ingredient lists - the period demonstrates the challenges of assessing whether health messages represented genuine information. Unfortunately, food fraud is also relevant today and may cause uncertainty regarding trusting the labels. For example, Economically Motivated Adulteration (EMA) concerns the increased industrialisation and complexity of the food industry and food fraud refers to the dishonest, intentional addition of a substance, to increase the product's value or the cost of its production. Problems occur when manufacturers replace high-value ingredients with cheaper substances, which might

increase profits due to cost differentials, or when misrepresented products cause allergic reactions (Johnson, 2014). Likewise, adding more ice or water to seafood than regulations allow, may increase profits as well as being a potential public health risk, if the ice derives from chemically contaminated pond water (Spink & Moyer, 2011). None of these issues would be represented on food labels. If one disregards the most severe cases mentioned above, most fraudulent products today do not usually pose a public health risk (Johnson, 2014). However, although food is increasingly regulated to ensure its safety, the public's trust in food has dramatically deteriorated due to severe food-related scandals (Zachmann & Østby, 2011). According to Spink and Moyer (2011), there is currently no comprehensive overview of the effect of long-term exposure to legitimate low doses of chemicals, or unlisted additives in common foods.

The reason for mentioning current food fraud here, is to demonstrate that whether discussing food from the nineteenth, early twentieth century, or today, there seems to have always been some level of mistrust in industrial foods. Adulteration or the addition of substances and chemicals may have caused uncertainty in understanding the extent to which labels truthfully described foods in the nineteenth century. Today, doubts may focus on ultra-processed food, which is 'designed to create highly profitable (low-cost ingredients, long shelf-life, emphatic branding), convenient (ready-to-consume), hyper-palatable products' (Monteiro et al., 2019, p. 936). Unlike food fraud, which can't be proved through wording on packaging, labelled ultra-processed food today includes a list of ingredients. However, as mentioned, these may not be read, understood, or even noticed. According to Monteiro et al., (2019) identifying an ultra-processed product is

> ... to check to see if its list of ingredients contains at least one item characteristic of the NOVA ultra-processed food group,[106] which is to say, either food substances never or rarely used in kitchens (such as high-fructose corn syrup, hydrogenated or interesterified oils, and hydrolysed proteins), or classes of additives designed to make the final product palatable or more appealing (such as flavours, flavour enhancers, colours, emulsifiers, emulsifying salts, sweeteners, thickeners, and anti-foaming, bulking, carbonating, foaming, gelling and glazing agents) (p. 936).

Further, ultra-processed foods have been successful due to marketing strategies and campaigns, especially towards children in schools, as well as health claims on packaging. However, there are also current studies indicating that a high intake of ultra-processed foods may create, among other things, diverse forms of inflammatory diseases (Monteiro et al.,

[106] The NOVA classification is described in Section 2.1.

2019, pp. 936–937). Could trading adulterated foods in Victorian times be compared to today's selling of ultra-processed food? In the early nineteenth century, grocers promoted and sold poisonous pickles and adulterated cocoa as *pure*, even though the food harmed people's health. Today, much ultra-processed food is marketed and sold as *healthy* even though there is evidence that the food may cause harm. As noted by Wilson, ultra-processed foods 'may also come plastered with health claims. Even a sugary multi-coloured breakfast cereal may state that it is "a good source of fibre" and "made with whole grains"' (Wilson, 2020). So, what has changed?

Regardless of the period, the examples demonstrate the challenges consumers may encounter in identifying food based on health messages, and the difficulties of interpreting words which are often inaccurate and vague, with no reference to scientific information. Therefore, considering the truth within the health message is difficult. According to Brashier and Marsh (2020), people draw assumptions about truth from feelings and through the repetitious listening to, watching of, and reading about, health claims. Hasher, Goldstein and Toppino (1977) demonstrated that repeated claims seemed more trustworthy than new ones, and encountering the same health message several times may, therefore, increase the perception of the claim's validity. Consequently, consumers can be less critical of health information on labels after several exposures, and health messages may seem truthful, although they are vague and not fact-based. However, drawing assumptions about health messages is also based on the subjective feeling of truth. Considerations would be made depending on people's personal and prior experiences, knowledge, interests or context. Today, establishing something based on how people feel is referred to as *truthiness:* 'a truthful or seemingly truthful quality that is claimed for something not because of supporting facts or evidence but because of a feeling that it is true or a desire for it to be true' (Merriam-Webster, n.d.).[107] To one extent, *truthiness* can be relevant to health messages. For example, perceiving vague and compelling messages could involve consumers emotionally judging information instead of considering messages based on facts, whether they are not available or visually downplayed. Judging health messages based on emotions may also relate to subjective feelings based on concerns or dreams one wishes to be true. For example, those concerned about the extensive food adulteration in the nineteenth century could perceive compelling information about *pure* food as truthful because they strongly wished for clean food.

[107] *Truthiness* is a rare word dating back to the first half of the nineteenth century (Merriam-Webster, n.d); however, recently popularised by American TV comedian Stephen Colbert in his political satire program in 2015. 'We're not talking about truth, we're talking about something that seems like truth—the truth we want to exist' (Zimmer, 2010). The word reflects today's widespread challenges regarding fake news and deceptions from both politicians, celebrities and marketers.

Consequently, information that much food was still contaminated could have been overlooked for the benefit of individual judgements or a lack of knowledge. In the same way, 'dreaming' of becoming slim in the 1960s (or today) may have led consumers to perceive labels promoting slimming food as true information; being unconcerned about the fact that the food contained few calories, but instead acknowledging the desire of becoming thin would come true if they ate the food. Hence, considering supporting facts that such food had to be part of a properly designed diet may have been overlooked or not understood.

However, drawing assumptions from feelings or hearing claims repeatedly only create a subjective truth, it may still be difficult to genuinely identify whether vague messages represent any facts. According to Lakoff and Johnson (1980), '[u]nderstanding a sentence as being true in a given situation requires having an understanding of the sentence and having an understanding of the situation' (p. 169). Therefore, uncovering whether vague and non-factual health messages are true requires knowledge of the situation and the context.

For example, to understand *rich in vitamins* as being true, it is necessary to interpret the phrase and its entities in a given context. First, the consumer must understand the word *vitamin* and the importance of consuming nutritious food. This knowledge would be dependent on the time period and access to information. Also, information on whether *vitamin* refers to natural sources of vitamins or a product enriched with synthetic substances would be critical. It is crucial to be aware of which vitamins the phrase refers to and what amount *rich* signifies. Such information must be available on the label as numerical nutritional labelling. However, to understand whether the quantity of vitamins in the food has relevance, the measurements can, for example, relate to recommended daily intake. The consumer can also compare nutritional information with similar food from other brands or other types of food. As few food labels included nutritional labelling before WWII, it was impossible to see the phrase *rich in vitamins* as true on early labels because there were no significant data that *rich in* could be related to. However, encountering later labels with relevant data, it was crucial that consumers understood and made sense of the information to validate whether *rich in vitamins* was true.

To some extent it is possible to understand whether vague health messages were true, although this was dependent on the time period that the information was being disseminated. It has also been shown that supplementary information, significant knowledge, and further investigations, are required to be able to validate any messages.

8.0 CONCLUDING REMARKS

This thesis aimed to show how the verbal and visual presentation of health messages on food labels dating from 1850 to 1970

- were repeatedly linked to critical incidents related to health, indicating that manufacturers at any time have understood the marketing potential of including health messages, and that
- the language and imagery depicting the food's health advantages were frequently related to scientific developments or significant health trends.

The thesis showed how

- a systematic and analytical review of a selection of food labels from 1850–1918, 1918–1945, and 1945–1970, could be used to indicate change over time, and how
- case studies can be used to focus on change and influences on the verbal and visual presentation of health messages.

Health messages, defined as 'verbal and pictorial narratives suggesting a sense of health, or describing the food, or part of the food, as beneficial to health' were represented by health-related words, phrases, and pictures; and typeface, type size, and colours were used to prioritise different messages over time. For example, the word *pure* (or similar) was a common verbal health messages used on food labels in the nineteenth century, and vitamins relevant to new scientific findings related to nutrition was included on labels in the inter-war period, though not observed on items a few decades earlier. Similarly, the post-war period showed fibre and slimming descriptions unobserved in examples from previous years. While brand and ingredient names were prominent in labels across the samples, health messages tended to be found in the supplementary text, and through the use of pictures. Most verbal information appeared as *poetic descriptions,* depicting the food by using emotional and vague portrayals. Pictures of fruits and vegetables were most prevalent across all samples, and images depicting the natural environment were used on packaging for all kinds of food, from adulterated pickles in the nineteenth century, to moderately processed food, or products manufactured by advanced food technology, in the latter period. Using images of nature as information to validate a product's healthiness may have given an inaccurate perception of the food's health benefits.

Tracking the use of the word *pure* (or comparable description) over time, in order to trace non-adulterated food, provided insight into whether the meaning of *pure* changed concerning the type of food, and the extent to which its prominence or depiction through imagery changed over time. The earliest labels described the benefits of consuming products free from

harmful additives, clearly addressing public concern in the nineteenth century. Different definitions of *pure* depended on the context in which the labels were produced, and the type of food described. Sometimes *pure* described foods free from harmful or harmless substances; on other occasions *pure* described foods with no fruit pulp or added chemicals, such as in the jam industry in the early twentieth century. From early 1900, the idea of *pure* was reflected through images to increase the perception of clean food. The use of *pure* in different ways, often with vague associations, enabled manufacturers to promote the quality and purity of the food to serve their best interests, whether convincing concerned consumers about food free from harmful or harmless substances, or later, with regard to the addition (or not) of preservatives.

Studying the representation of vitamin messages in food labels provided insights into how early nutrition science influenced language and imagery on food labels. While health messages on nineteenth-century labels were frequently applied to products *free from* adulterations, the food´s vitamin content referred to *inherent* or *included* substances that provided positive purposes. Health messages about vitamins were linked to modern nutritional science and related benefits. Mentioning vitamins on labels raised public awareness of them, even though reference to them was often not visually prominent. Vitamin messages appeared on food labels as soon as the benefits of vitamins became publicly known, yet these messages were vague because no additional information regarding nutritional content was found on samples. However, verbal and pictorial information used on the labels might have increased the perception of better food quality due to vitamins, which in turn benefitted health.

Health messages on packaging for convenience food showed how diet and health, post-WWII was reflected in language and imagery. Scientific medical discoveries, in the 1960s and '70s, linked diet to several diseases, and health messages on packages for highly processed foods reflected current health concerns, such as obesity or lack of nutrition and fibre. Messages on labels promoted specific nutritional constituents that were considered a vital part of a healthy diet due to their being carriers of nutrients, these were given graphic prominence. Consequently, the perception of certain foods as being healthy may have risen, especially when less focus was put on potentially unhealthy ingredients, which was often included in small text and/or positioned on the back.

Focus on labels for milk and milk-related products showed how language and imagery on labels have changed, from portraying a drink perceived as contaminated in the nineteenth century, to a nutritious and health-giving food from the 1930s onwards. Labels for milk drinks linked the goodness of milk with the modern science of nutrition by visually reflecting nature and pureness with verbal scientific information. Other labels emphasised the positive aspects of milk, despite milk being a

limited part of the product. Milk gradually emerged as a health food, labels for various milk drinks and milk-related products frequently included messages about the benefits of fresh, nutritious milk.

Summing up the case studies

The case studies showed that health messages, on the labels investigated, reflect medical discoveries and various health trends in the early twentieth century. Food packaging became one of many communication tools for presenting 'new' scientific information and used to increase the perception of quality food. As noted by Horrocks (1995), the discovery of vitamins was 'important for the food industry because they offered a new definition of good food which was widely accepted by consumers' (p. 239), and Lyngø (2000) suggested that pictures and verbal health messages could also visually *educate* viewers about the connection between, for example, fresh vegetables and nutrients, as the word vitamin for many may have been abstract and incomprehensible. The correlations between the findings and the arguments can be found in an early twentieth-century food label for Edgell tomato juice.

Figure 126. A label for a tin of tomato juice. *c.*1930–*c.*1940.
Size: 110 x 228 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 19 (75b).

This example shows how a food label can work as a tool to promote food according to current nutrition science. Furthermore, *vitamin* becomes comprehensible by linking the word to a picture of fresh vegetables.

Foods such as fresh fruit and vegetables were, between the wars, given status as *protective foods* due to their content of vitamins. The phrase *RICH IN VITAMIN C* and a visual of fresh tomatoes clearly illustrates the relationship between the two elements, and the label works as a tool to promote food according to current nutrition science. The label also demonstrates how *vitamin* became comprehensible by the connection of the word to a visual of a fresh tomato.

The case studies showed difficulties in precisely interpreting health messages on the food labels. Manufacturers communicated differently

based on diverse intentions depending on the food and the contextual circumstances. This finding is in line with that of Cook (1999, 2010), Taylor (2013), and Nestle and Ludwig (2010), who argue that much of the language used to describe food, whether health-related or not, is often difficult to define as it may be poetic, personalised, emotional, and vague. This is also in agreement with this thesis's definition of health messages. Instead of conveying explicit nutritional health claims, some labels may indicate or suggest a sense of health. Narratives may create health halos drawing attention to the packaging to conjure up food healthier or purer than is the case (Chandon, 2013).

Specific nutritional health messages with scientific descriptions or numerical nutrition labelling, may have been difficult to interpret because such information was challenging to comprehend.[109] A research study from 1992 confirmed that participants found numeric labelling challenging because they did not have enough knowledge to interpret the data (Black & Rayner, 1992). Later studies conclude that only well-informed consumers read the ingredient list or make sense of the content of nutrients (Barreiro-Hurlé et al., 2010). Therefore, although nutritive health messages appeared explicit and informative, information may still have seemed vague and unclear due to lack of knowledge or interest. Understanding the messages could change after gaining specific knowledge (Puntoni et al., 2010).

As health-related information serves to increase the perception of quality, the motivations behind employing different messages can also be discussed from a different perspective. While describing food as *pure* addressed public concern regarding non-adulterated foods in the nineteenth century, similar approaches to apprehension are also relevant for later health messages. The discovery of the relationship between vitamins and diseases created attention towards significant nutrients. As a result, concern that the population was not obtaining enough vitamins to stay healthy may have risen. Similarly, increased awareness of food not providing enough fibre saw an understanding of obesity and cardiovascular diseases emerging, and positive health messages addressing these underlying concerns could promote dietary solutions to various health problems. Consequently, due to medical discoveries and scientific achievements, the food industry met the expert's identification of dietary concerns by manufacturing products and communicating t heir chosen health messages.

[109] Numeric nutrition labelling to identify the present vitamin or mineral quantity was only compulsory if a vitamin or mineral claim appeared on the label (Turner, 1995, 2007).

This thesis has drawn attention to the value of printed ephemera as providing a rich source of information, delivering factual details and evocative links with the past, in this case about health messages and how the public likely encountered information about health. As some labels linked particular diseases with the lack of nutrients, they provide a useful lens through which to view health and nutritional science at a particular time.

When working with printed ephemera, one challenge was whether the available material offered enough diversity for the current research. The corpus used in this research derived from material in the collections I visited, which may have influenced its constituency. For example, the corpus includes relatively few items describing the food´s nutritional properties in the second and third research periods. Also, many of these labels from the latter periods represent imported food, which may indicate that British manufacturers rarely emphasised the benefits of nutrition and instead focused on the brands.

The use of case studies was a useful technique to draw attention to key issues relevant to the presentation of health messages. However, the case studies could have been approached differently: Chapter 4 (concerning the use of the word *pure*) could have involved all three research periods instead of including only nineteenth- and early twentieth-century food labels. Although fraudulent adulteration of foods ended by 1900, the use of preservatives and chemicals in industrial foods increased, and the necessity for describing food *pure* seemed to continue. An extension of the period may have shown how manufacturers applied the concept to a broader range of foods, but the review of health messages in Section 3.2 shows relatively few labels describing food as *pure* from the 1920s, favouring other health messages such as richness or increased nutrition content.

The labels used in this thesis also included those that had no health messages, which perhaps makes them redundant. However, including them served to provide a good view of the verbal and visual landscape on food labels from 1850 through to the 1970s. A larger corpus and assembled food labels from several western countries may offer the potential for a comparative study, for example, covering the UK and the US. Adoption of the research methods used in this thesis could prove helpful in a further analysis of the effectiveness of the presentation of linguistic and graphic elements on packaging in relation to current health trends, such as veganism, and popularity for gluten-free foods. Aligning the results of this analysis with the role of corporate advertising guidance for designers would highlight the food industry's approach to consumers' needs and expectations in terms of promoting information about nutrients and healthy foods.

9.0 REFERENCES

Accum, F. (1820). *A treatise on adulteration of food and culinary poisons*. London: Longman, Hurst, Rees, Orme, and Brown.

American Medical Association. (2022). About. Retrieved from https://www.ama-assn.org/about

Andrews, M. (2008). The importance of ephemera. In Elliott, S. & Rose, E. J. (Eds.), *A Companion to the History of the Book* (pp. 434–450).

Apple, R. D. (1987). *Mothers and medicine: A social history of infant feeding, 1890–1950*. University of Wisconsin Press. Retrieved from http://site.ebrary.com/lib/reading/Doc?id=10256037

Apple, R. D. (1995). Constructing mothers: Scientific motherhood in the nineteenth and twentieth centuries. *Social History of Medicine, 8*(2), 161–178. doi: 10.1093/shm/8.2.161

A Pure Milk Symposium. (1925). *British Medical Journal, 2*(3371), 263–265. Retrieved from http://www.jstor.org/stable/25445980

Atkins, P. (1992). White Poison? The social consequences of milk consumption, 1850–1930. *Social History of Medicine, 5*(2), 207–227. doi: 10.1093/shm/5.2.207

Atkins, P. (2003). Mother's milk and infant death in Britain, circa 1900–1940. *Anthropology of food*. doi: 10.4000/aof.310

Atkins, P. (2005). The milk in schools scheme, 1934–45: 'Nationalization' and resistance. *History of Education, 34*(1), 1–21. doi: 10.1080/0046760042000315291

Atkins, P., Lummel, P., & Oddy, D. J. (2007). *Food and the city in Europe since 1800*. Aldershot: Ashgate.

Baines, P., & Haslam, A. (2005). *Type & typography* (2nd ed.). London: Laurence King.

Barker, M. E., McNeir, K., Sameer, S., & Russell, J. (2013). Food, nutrition and slimming messages in British women's magazines, 1950–1998. *Journal of Human Nutrition and Dietetics, 27*(s2), 124–134. doi: 10.1111/jhn.12076

Barnes, A. (2017). Telling stories: The role of graphic design and branding in the creation of 'authenticity' within food packaging. *International Journal of Food Design, 2*(2), 183–202(20). Retrieved from https://link.gale.com/apps/doc/A517807781/AONE?u=rdg&sid=AONE&x-id=3b1d5a27

Barreiro-Hurlé, J., Gracia, A., & de-Magistris, T. (2010). Does nutrition information on food products lead to healthier food choices? *Food Policy, 35*(3), 221–229. doi: 10.1016/j.foodpol.2009.12.006

Baynes, T. S., & Smith, W. R. (1875). *The Encyclopædia Britannica: A dictionary of arts, sciences, and general literature* (9th ed. Vol. 1). Edinburgh: Adam and Charles Black.

Beeton, I. M. (1923). *Mrs. Beeton's household management* (New ed.). London: Ward, Lock & Co Ltd.

Bender, D. (2009). milk, irradiated. In *A Dictionary of Food and Nutrition* (3 ed.). Oxford University Press. Retrieved from https://www.oxfordreference.com/view/10.1093/acref/9780199234875.001.0001/acref-9780199234875-e-3521

Bix, L., & de la Fuente, J. (1995). Medical Device Packaging. *World, 42*, 46.

Black, A., & Rayner, M. (1992). *Just read the label: Understanding nutrition information in numeric, verbal and graphic formats*. London: HMSO.

Blackburn, S. (2016). *A Dictionary of Philosophy*. (3 ed.). Retrieved from https://www.oxfordreference.com/view/10.1093/acref/9780198735304.001.0001/acref-9780198735304-e-3153?rskey=Ws6WvC&result=1

Bradley, J. (2008). *Cadbury's purple reign: The story behind chocolate's best-loved brand* (pp. xiv, 287). Retrieved from http://site.ebrary.com/lib/reading/Doc?id=10301422

Bradley, J. (2013). *Fry´s Chocolate Dream*: Yknot Publishing.
Brashier, N. M., & Marsh, E. J. (2020). Judging truth. *Annual Review of Psychology, 71*(1), 499–515. doi: 10.1146/annurev-psych-010419-050807
Breen, D., & Spalding, T. (2014). *Cork International Exhibition, 1902–1903: A Snapshot of Edwardian Cork*. Co. Kildare, Ireland: Irish Academic Press.
Burnett, J. (1959). The history of food adulteration in Great Britain in the nineteenth century, with special reference to bread, tea and beer. *Historical Research, 32*(85), 104–109. doi: 10.1111/j.1468-2281.1959.tb01630.x
Burnett, J. (1979). *Plenty and want: A social history of diet in England from 1815 to the present day* (Rev. ed.). London: Scolar Press.
Cadbury Dairy Milk, oreo mint flavour. (2020). Retrieved from https://www.cadbury.co.uk/products/cadbury-dairy-milk-oreo-mint-flavour-11679
Carpenter, K. J. (2003). A short history of nutritional science: Part 3 (1912–1944). *The Journal of Nutrition, 133*(10), 3023–3032. doi: 10.1093/jn/133.10.3023
Chandon, P. (2013). How package design and packaged-based marketing claims lead to overeating. *Applied Economic Perspectives and Policy, 35*(1), 7–31. doi: 10.1093/aepp/pps028
Chrysochou, P. (2010). Food health branding: The role of marketing mix elements and public discourse in conveying a healthy brand image. *Journal of Marketing Communications, 16*(1–2), 69–85. doi: 10.1080/13527260903342787
Codex Alimentarius Commission. (1989). Report of the sixteenth session of the Codex Committee on nutrition and foods for special dietary uses. Retrieved from http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FMeetings%252FCX-720-16%252Fal89_26e.pdf
Collins, E. J. T. (1993). Food adulteration and food safety in Britain in the 19th and early 20th centuries. *Food Policy, 18*(2), 95–109. doi: 10.1016/0306-9192(93)90018-7
Collins, E. J. T. (1994). Brand and breakfast cereals in Britian. In G. Jones & N. J. Morgan (Eds.), *Adding value: Brands and marketing in food and drink* (pp. 237–258). London: Routledge.
Colloms, M., & Weindling, D. (2012). The cow with an iron tail: The great Westminster dairy company and the Express dairy. *Camden History Review, 36*, 2–8.
Cook, G. (2010). Sweet talking: Food, language, and democracy. *Language Teaching, 43*(2), 168–181.
Cook, G., & O'Halloran, K. (1999). Label literacy: Factors affecting the understanding and assessment of baby food labels. In T. O'Brien (Ed.), *Language and literacies* (pp. 145–157): Clevedon: BAAL in association with Multilingual Matters.
Corbett, J. B. (2006). *Communicating nature: How we create and understand environmental messages*. Washington, DC: Island Press.
Coutts, F. J. H. (1911). Condensed Milk. *British Food Journal, 13*(10), 181–184. doi: 10.1108/eb011000
Crystal, D., & Davy, D. (1969). *Investigating English style*. London: Longmans.
Danesi, M. (2002). *Understanding media semiotics*. London: Arnold.
Davis, A. (1967). *Package and print: The development of container and label design*. London: Faber.
Dean, M., Lampila, P., Shepherd, R., Arvola, A., Saba, A., Vassallo, M., . . . Lähteenmäki, L. (2012). Perceived relevance and foods with health-related claims. *Food Quality and Preference, 24*(1), 129–135. doi: 10.1016/j.foodqual.2011.10.006

den Hartog, A. P. (2007). The discovery of vitamins and its impact on the food industry: The issue of tinned sweetened condensed skim milk 1890–1940. In P. J. Atkins, P. Lummel, & D. J. Oddy (Eds.), *Food and the city in Europe since 1800* (pp. xvi, 260 p.). Aldershot: Ashgate.

Dewar, R. (1999). Design and evaluation of public information symbols. In H. J. G. Zwaga, T. Boersema, & H. C. M. Hoonhout (Eds.), *Visual information for everyday use: design and research perspectives.* (pp. xxxiv, 328). London: Taylor & Francis.

Dobraszczyk, P. (2008). Useful reading? Designing information for London's Victorian cab passengers. *Journal of Design History*, *21*(2), 121–141. Retrieved from http://www.jstor.org/stable/25228577

Drummond, J. C., Wilbraham, A., & Hollingsworth, D. (1958). *The Englishman's food: A history of five centuries of English diet* (New and rev. ed.). London: J. Cape.

Encyclopedia.com. (2018). American Medical Association. Retrieved from https://www.encyclopedia.com/sports-and-everyday-life/social-organizations/private-organizations/american-medical-association

Esbester, M. (2009). Designing time: The design and use of nineteenth-century transport timetables. *Journal of Design History, 22*(2), 91–113. Retrieved from http://www-jstor-org.idpproxy.reading.ac.uk/stable/40301432

European Commission. (2020). What are "Health Claims"? Retrieved from https://ec.europa.eu/food/safety/labelling-and-nutrition/nutrition-and-health-claims/health-claims_en#:~:text=A%20health%20claim%20is%20any%20statement%20about%20a,for%20evaluating%20the%20scientific%20evidence%20supporting%20health%20claims

European Commission. (2022). About the Codex Alimentarius. Retrieved from https://ec.europa.eu/food/horizontal-topics/international-affairs/international-standards/codex-alimentarius_en

Ewers Daniel. (2022). The "appliance of science"? Appeals to medical and scientific expertise in British advertising, 1930–1980. Retrieved from https://ahc.leeds.ac.uk/philosophy/pgr/3084/daniel-ewers.

Fardet, A., & Rock, E. (2019). Ultra-processed foods: A new holistic paradigm? *Trends in Food Science & Technology, 93*, 174–184. doi: 10.1016/j.tifs.2019.09.016

Fildes, V. (1998). Infant feeding practices and infant mortality in England, 1900–1919. *Continuity and Change, 13*(2), 251–280. doi: 10.1017/S0268416098003166

Finstad, T. (2013). Familiarizing food: Frozen food chains, technology, and consumer trust, Norway 1940–1970. *Food and Foodways, 21*(1), 22–45. doi: 10.1080/07409710.2013.764786

Fomon, S. J. (2001). Infant feeding in the 20th century: Formula and Beikost. *The Journal of Nutrition, 131*(2), 409S–420S. doi: 10.1093/jn/131.2.409S

Fredenburgh, J. (2016). Tesco under fire for 'farm' brands which sound British but are imported. Retrieved from https://www.fwi.co.uk/business/tesco-fire-farm-brands-sound-british-imported

French, M. (2017). Modernity in British advertising: Selling cocoa and chocolate in the 1930s. *Journal of Historical Research in Marketing, 9*(4), 451–466. doi: 10.1108/JHRM-05-2017-0015

Frey, R., & Swain, L. (2017). Preservatives. In In Gale (Ed.), *Gale virtual reference library: The Gale encyclopedia of nutrition and food labels*. Retrieved from https://search.credoreference.com/content/entry/galegnafl/preservatives/0?institutionId=158

Gairns, R., & Redman, S. (1986). *Working with words: A guide to teaching and learning vocabulary*. Cambridge: Cambridge University Press.

Giddens, A. (1990). *The consequences of modernity*. Cambridge: Polity.

Go Organic. (2022). Look for the logo. Retrieved from https://goorganicuk.com/blog/articles/look-for-the-logo#

Grist & Toll. (2020). Flour properties. Retrieved from https://www.gristandtoll.com/flour-properties/

Hamilton, A. (2009). *Squeezed: What you don't know about orange juice.* Yale University Press. Retrieved from http://ebookcentral.proquest.com/lib/reading/detail.action?docID=3420601

Hamlin, R. (2015). Front of pack nutrition labelling, nutrition, quality and consumer choices. *Current nutrition reports, 4*(4). doi: 10.1007/s13668-015-0147-1

Hand, J. (2017). Marketing health education: Advertising margarine and visualising health in Britain from 1964–c.2000. *Contemporary British History, 31*(4), 477–500. doi: 10.1080/13619462.2017.1305898

Harbor, G. (1998). Milk in a bottle. *Antiques & Collecting Magazine, 103*(4), 18–21+60.

Harper Collins. (2022). Pure. In The American Heritage Dictionary. Retrieved from: https://ahdictionary.com/word/search.html?q=pure

Hasher, L., Goldstein, D., & Toppino, T. (1977). Frequency and the conference of referential validity. *Journal of Verbal Learning and Verbal Behavior, 16*(1), 107–112. doi: 10.1016/S0022-5371(77)80012-1

Helsenorge. (2019). The Keyhole – for healthier food. Retrieved from https://www.helsenorge.no/en/kosthold-og-ernaring/keyhole-healthy-food/

Hine, T. (1995). *The total package: The evolution and secret meanings of boxes, bottles, cans, and tubes*. London: Little, Brown and Company.

Hollingsworth, D. F. (1976). Developments leading to present-day nutritional knowledge. In D. J. Oddy & D. S. Miller (Ed.), *The making of the modern British diet* (pp. 189–195). Totowa, New Jersey: Roman Littlefield.

Hollis, R. (1997). *Graphic design. A concise history.* London: Thames and Hudson.

Horlick, W. (1883). *U.S Patent No. 278,967.* Washington, DC: U.S Patent and Trademark Office.

Horlicks. (2021). Original. Retrieved from https://www.horlicks.co.uk/products/original/

Horrocks, S. M. (1995). The business of vitamins: Nutrition science and the food industry in Inter-war Britain. In H. Kamminga & A. Cunningham (Eds.), *The science and culture of nutrition, 1840–1940* (pp. 235–258). Amsterdam: Rodopi.

Hudson, G. S. (2008). *The design & printing of ephemera in Britain & America, 1720–1920*. London, New Castle, DE: British Library ; Oak Knoll Press.

Humbert, C. (1972). *Label design*. London: Thames and Hudson.

Johnson, R. (2014). *Food fraud and "Economically motivated adulteration" of food and food ingredients.* Congressional Research Service. 1–40. Retrieved from: https://sgp.fas.org/crs/misc/R43358.pdf

Jones, O. R. (1983). London mustard bottles. *Historical Archaeology, 17*(1), 69–84. Retrieved from http://www.jstor.org/stable/25615431

Jones, R. (2017). *Branding: A very short introduction*. Oxford: Oxford University Press.

Jones, W. (2017). The history of child nutrition over the past 200 years. Retrieved from http://s895428841.websitehome.co.uk/wp-content/uploads/2017/02/THE-HISTORY-OF-CHILD-NUTRITION-OVER-THE-PAST-200-YEARS.pdf

Judge, M., Fernando, J. W., & Begeny, C. T. (2022). Dietary behaviour as a form of collective action: A social identity model of vegan activism. *Appetite, 168*, 105730. doi: 10.1016/j.appet.2021.105730

Jukes, D. (2018). UK food labelling. Retrieved from http://www.foodlaw.rdg.ac.uk/label-uk-history.htm

Jury, D. (2012). *Graphic design before graphic designers: The printer as designer and craftsman 1700–1914*. London: Thames & Hudson.
Kauppinen-Räisänen, H., & Luomala, H. T. (2010). Exploring cosumers' product-specific colour meanings. *Qualitative Market Research: An International Journal, 13*(3), 287–308. doi: 10.1108/13522751011053644
Kellogg´s. (2020). Retrieved from https://www.kelloggs.co.uk/en_GB/our-story/kelloggs-in-the-uk.html.
Klimchuk, M. R., & Krasovec, S. A. (2012). *Packaging design: Successful product branding from concept to shelf*. Hoboken, N.J.: Wiley.
Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago ; London: University of Chicago Press.
Lang, T. (1995). The contradictions of food labelling policy. *Information Design Journal, 8*(1), 3.
Lawrence, F. (2010). Drop that spoon! The truth about breakfast cereals. Retrieved from https://www.theguardian.com/business/2010/nov/23/food-book-extract-felicity-lawrence
Labelling of Food Regulations 1970. Retrieved from https://www.legislation.gov.uk/uksi/1970/400/contents/made
Lewis, J. (1962). *Printed ephemera: The changing uses of type and letterforms in English and American printing*. Ipswich: W. S. Cowell.
Lewis, J. (1978). *Typography, design and practice*. London: Barrie and Jenkins.
Libby´s. (n.d.). About. Retrieved from https://www.libbysinternational.com/history/
Lidón, I., Rebollar, R., Gil-Pérez, I., Martín, J., & Vicente-Villardón, J. L. (2018). The influence the image of the product shown on food packaging labels has on product perception during tasting: Effects and gender differences. *Packaging Technology and Science*, *31*(10), 689–697. doi: 10.1002/pts.2407
Lindstrom, M. (2012). *Brandwashed*. London: Kogan Page Limited.
Loeb, L. A. (1994). *Consuming angels advertising and Victorian women* (xiv, 287). Retrieved from http://site.ebrary.com/lib/reading/Doc?id=10142115
London Food Commission. (1988). *Food adulteration and how to beat it*. London: Unwin Hyman.
Lopez, A. D., Mathers, C. D., Ezzati, M., Jamison, D. T., & Murray, C. J. L. (2006). *Global burden of disease and risk factors* (pp. 1 online resource (xiv, 287 p.)). Retrieved from http://site.ebrary.com/lib/reading/Doc?id=10126091
Lyngø, I. J. (2000). Symbols in the rhetoric on diet and health – Norway 1930: The relation between science and the performance of daily chores. In A. Fenton (Ed.), *Order and Disorder* (pp. 155–169). Edinburgh: Tuckwell Press.
Machín, L., Aschemann-Witzel, J., Curutchet, M. R., Giménez, A., & Ares, G. (2018). Does front-of-pack nutrition information improve consumer ability to make healthful choices? Performance of warnings and the traffic light system in a simulated shopping experiment. *Appetite, 121*, 55–62. doi: 10.1016/j.appet.2017.10.037
MacInnis, D. J., & Price, L. L. (1987). The role of imagery in information processing: Review and extensions. *Journal of Consumer Research, 13*(4), 473–491. Retrieved from http://www.jstor.org/stable/2489369
Maffei, N. P., & Schifferstein, H. N. J. (2017). Perspectives on food packaging design. *International Journal of Food Design, 2*(2), 139–152.
Martin, C. R. A. (1975). British Food Journal Volume. *British Food Journal, 77*(1), 10–12. doi: 10.1108/eb011702
Masterson, T. D., Florissi, C., Clark, K. R., & Gilbert-Diamond, D. (2020). "Healthy"/"unhealthy" food brands influence health, calorie, and price ratings of food. *Journal of Nutrition Education and Behavior*. doi: 10.1016/j.jneb.2020.01.008

McCarron, C. (2001). First things first: A second look. In D. K. Holland (Ed.), *Design issues: how graphic design informs society*. (pp. 113–123). New York, Great Britain, Allworth Press.

McGuire, D. C. (2016). A taste for mustard: An archaeological examination of a condiment and its bottles from a loyalist homestead in Upper Canada. *International Journal of Historical Archaeology, 20*(4), 666–692. Retrieved from http://www.jstor.org/stable/26174289

McKee, F. (1996). The popularisation of milk as a beverage during the 1930s. In D. F. Smith (Ed.), *Nutrition in Britain: Science, scientists, and politics in the twentieth century* (pp. 123–141). London: Routledge.

McLean, R. (1980). *The Thames and Hudson manual of typography*. London: Thames and Hudson.

Merriam-Webster. (n.d.). Truthiness. In Merriam-Webster.com dictionary. Retrieved from https://www.merriam-webster.com/dictionary/truthiness

Messinger, L. (2015). Could low-fat be worse for you than whole milk? Retrieved from https://www.theguardian.com/lifeandstyle/2015/oct/09/low-fat-whole-milk-usda-dietary-guidelines

Meštrović, T. (2022). Niacin History. Retrieved from https://www.news-medical.net/health/Niacin-History.aspx

Milk Marketing Board. (*c*.1950). *About milk bars*. Thames Ditton: Milk Marketing Board.

Ministry of Health. (1946). *On the state of the public health during six years of war: Report of the Chief Medical Officer of the Ministry of Health, 1939–45*. London: HMSO.

Monteiro, C. A., Cannon, G., Levy, R. B., Moubarac, J.-C., Louzada, M. L. C., Rauber, F., ... Jaime, P. C. (2019). Ultra-processed foods: What they are and how to identify them. *Public Health Nutrition, 22*(5), 936–941. doi: 10.1017/S1368980018003762

Monteiro, C. A., Cannon, G., Moubarac, J.-C., Levy, R. B., Louzada, M. L. C., & Jaime, P. C. (2018). The UN decade of nutrition, the NOVA food classification and the trouble with ultra-processing. *Public Health Nutrition, 21*(1), 5–17. doi: 10.1017/S1368980017000234

Moor, L. (2007). *The rise of brands*. Oxford: Berg.

National Health Service. (2020). Vitamin D. Retrieved from https://www.nhs.uk/conditions/vitamins-and-minerals/vitamin-d/

National Health Service. (2021). Rickets and osteomalacia. Retrieved from https://www.nhs.uk/conditions/rickets-and-osteomalacia/

National Institute for Health and Care Excellence. (2012). Retrieved from https://www.evidence.nhs.uk/document?id=2036084&returnUrl=-search%3Fpa%3D30%26q%3D64&q=64

National Institutes of Health. (2021). Vitamin D. Retrieved from https://ods.od.nih.gov/factsheets/VitaminD-Consumer/

Nelson, M. (1993). Social-class trends in British diet, 1860–1980. In C. Geissler & D. J. Oddy (Eds.), *Food, diet, and economic change past and present*. (pp. 101–120). Leicester: Leicester University Press.

Nestlé. (2001). The Nestlé logo evolution. Retrieved from https://www.nestle.com/aboutus/history/logo-evolution

Nestle, M. (2013). *Food politics: How the food industry influences nutrition and health*. Berkeley and Los Angeles, California: University of California Press.

Nestle, M., & Ludwig, D. S. (2010). Front-of-package food labels: Public health or propaganda? *JAMA, 303*(8), 771–772. doi: 10.1001/jama.2010.179

Neuman, N., Persson Osowski, C., Mattsson Sydner, Y., & Fjellström, C. (2014). Swedish students' interpretations of food symbols and their perceptions of healthy eating. An exploratory study. *Appetite, 82*, 29–35. doi: 10.1016/j.appet.2014.07.003

Oddy, D. J. (2003). *From plain fare to fusion food: British diet from the 1890s to the 1990s*. Woodbridge: Boydell Press.

Offer, A. (2001). Body weight and self-control in the United States and Britain since the 1950s. *Social History of Medicine, 14*(1), 79–106. doi: 10.1093/shm/14.1.79

Osbaldestin, D. J. (2020). The art of ephemera: Typographic innovations of nineteenth-century Midland jobbing printers. *Midland History, 45*(2), 208–221. doi: 10.1080/0047729X.2020.1767975

Othic, J. (1976). The cocoa and chocolate industry in the nineteenth century. In D. Oddy & D. Miller (Eds.), *The making of the modern British diet* (pp. 77–90). London: Croom Helm.

Oxford University Press. (n.d.). Diachronic. In *Oxford Advanced Learner's Dictionary*. Retrieved from https://www.oxfordlearnersdictionaries.com/definition/american_english/diachronic

Pereira, C. (2021). The meaning of colors in food packaging: A study of industrialized products sold in Brazil. *Color research and application, 46*(3), 566–574. doi: 10.1002/col.22651

Pereira, F. M. C., & Farias, P. L. (2019). Information, typography and persuasion in Brazilian late 19th and early 20th century ephemera. *Information Design Journal*, *25*(2), 171–191.

Petrick, G. M. (2009). Feeding the masses: H.J. Heinz and the creation of industrial food. *Endeavour, 33*(1), 29–34. doi: 10.1016/j.endeavour.2008.11.002

Pilditch, J. (1973). *The silent salesman: How to develop packaging that sells* (2nd ed.). London: Business Books.

Plimmer, R. H. A., & Plimmer, V. G. (1933). *Food, health, vitamins* (6th ed.). London: Longmans, Green & Co.

Public Health England. (2022). A century of public health marketing. Retrieved from https://publichealthengland.exposure.co/100-years-of-public-health-marketing

Puntoni, S., Schroeder, J. E., & Ritson, M. (2010). Meaning matters: Polysemy in advertising. *Journal of Advertising, 39*(2), 51–64. Retrieved from http://www.jstor.org/stable/20720466

Rajakumar, K. (2003). Vitamin D, cod-liver oil, sunlight, and rickets: A historical perspective. *Pediatrics, 112*(2), e132–e135. Retrieved from http://pediatrics.aappublications.org/content/pediatrics/112/2/e132.full.pdf

Rayner, M. (1995). Food labelling and information design. *Information Design Journal, 8*(1), 25–35.

Rice, F. E. (1929). Evaporated milk and its relation to public health. *American Journal of Public Health and the Nation's Health, 19*(7), 777–781. doi: 10.2105/ajph.19.7.777

Rickards, M. (1988). *Collecting printed ephemera*. Oxford: Phaidon Christie´s Limited.

Rioux, S. (2019). Capitalist food production and the rise of legal adulteration: Regulating food standards in 19th-century Britain. *Journal of Agrarian Change, 19*(1), 64–81. doi: 10.1111/joac.12265

Roberto, C. A., & Khandpur, N. (2014). Improving the design of nutrition labels to promote healthier food choices and reasonable portion sizes. *International Journal of Obesity, 38*(1), S25–S33. doi: 10.1038/ijo.2014.86

Rogers, T. B. (1931). *A Century of Progress, 1831–1931*: *Cadbury Bournville.* Birmingham: Cadbury Brothers.

Ross A.C., Taylor C.L., Yaktine A.L., et al., (Eds.). (2011). Institute of Medicine (US) Committee to Review Dietary Reference Intakes for Vitamin D and Calcium. *Dietary Reference Intakes for Calcium and Vitamin D*. Washington (DC): National Academies Press (US)

Rowlinson, P. J. (1982). Food adulteration its control in 19th century Britain. *Interdisciplinary Science Reviews, 7*(1), 63–72. doi: 10.1179/030801882789801250

Rozenberg, S., Body, J.-J., Bruyère, O., Bergmann, P., Brandi, M. L., Cooper, C., ... Reginster, J.-Y. (2016). Effects of dairy products consumption on health: benefits and beliefs—a commentary from the Belgian Bone Club and the European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases. *Calcified Tissue International, 98*(1), 1–17. doi: 10.1007/s00223-015-0062-x

Sacks, G., Rayner, M., & Swinburn, B. (2009). Impact of front-of-pack 'traffic-light' nutrition labelling on consumer food purchases in the UK. *Health Promotion International, 24*(4), 344–352. doi: 10.1093/heapro/dap032

Scarborough, P., Wickramasinghe, K., Bhatnagar, P., & Rayner, M. (2011). *Trends in coronary heart disease, 1961–2011*. British Heart Foundation: London. Retrieved from: https://www.bhf.org.uk/informationsupport/publications/statistics/trends-in-coronary-heart-disease-1961-2011

Schwarzkopf, S. (2010). Turning trademarks into brands. How advertising agencies practised and conceptualized branding, 1890–1930. In T. da Silva Lopes & P. Duguid (Eds.), *Trademarks, Brands, and Competitiveness*. (pp. 165–193). London, UK: Taylor & Francis Group.

Semba, R. D. (2012). The discovery of the vitamins. *International Journal for Vitamin and Nutrition Research, 82*(5), 310–315. doi: 10.1024/0300-9831/a000124

Shapiro, R. N. (2008). [Review of the book Of Victorians and vegetarians: The Vegetarian Movement in nineteenth-century Britain, by James Gregory]. *Victorian Studies, 51*(1), 160–161. Retrieved from http://www.jstor.org/stable/20537379

Shearman, S. (2014). Quinoa, chia seeds and kale: Superfoods or supermarketing? Retrieved from https://www.theguardian.com/media-network/media-network-blog/2014/oct/02/quinoa-chia-seeds-kale-superfoods-marketing

Spence, H. E., & Moinpour, R. (1972). Fear appeals in marketing. A social perspective. *Journal of Marketing, 36*(3), 39–43. doi: 10.2307/1251038

Spink, J., & Moyer, D. C. (2011). Defining the public health threat of food fraud. *Journal of Food Science, 76*(9), R157-R163. doi: 10.1111/j.1750-3841.2011.02417.x

Stevens, E. E., Patrick, T. E., & Pickler, R. (2009). A history of infant feeding. *The Journal of Perinatal Education, 18*(2), 32–39 doi: 10.1624/105812409X426314

Stevensen, A. (Ed.). (2015). pure. In *Oxford Dictionary of English* (3 ed.). Oxford University Press. Retrieved from https://www.oxfordreference.com/view/10.1093/acref/9780199571123.001.0001/m_en_gb0674510?rskey=IzixTz

Tanner, J. (2000). Food, fibres, and health. In A. Fenton (Ed.), *Order and disorde*r. (pp. 240–252). Edinburgh: Tuckwell Press.

Taylor, C. M. (2013). *Language and nutrition (mis)information: Food labels, FDA policies and meaning.* (Doctoral thesis). University of California, California. Retrieved from https://www.proquest.com/docview/1524704487?accountid=13460&pq-origsite=summon

Tetra Pak. (n.d.). UHT Milk FAQ. Retrieved from https://www.tetrapak.com/solutions/aseptic-solutions/uht-faq

Teuteberg, H. J. (2000). The discovery of vitamins: Laboratory research, reception, industrial production. In A. Fenton (Ed.), *Order and disorder*. (pp. 253–280). Edinburgh: Tuckwell Press.

The history of Kellogg's All Bran. (1991). *Nutrition & Food Science, 91*(4), 16–17. doi: 10.1108/EUM0000000000940

The National Archive. (2021). Ministry of Food and successors: Welfare Food Scheme, Registered Files (WF and WFP Series). Retrieved from https://discovery.nationalarchives.gov.uk/details/r/C10953

The Nobel Prize. (2021). The Nobel Prize and the discovery of vitamins. Retrieved from https://www.nobelprize.org/prizes/themes/the-nobel-prize-and-the-discovery-of-vitamins

Thompson, J. W. (1911). *Things to know about trade-marks*. New York: Walter Thompson Company.

Thresh, J. C., & Porter, A. (1906). *Preservatives in food and food examination*. London: Churchill.

Todd, A. M. (2010). Happy cows and passionate beefscapes. In J. A. Sandlin & P. McLaren (Eds.), *Critical pedagogies of consumption: Living and learning in the shadow of the "shopocalypse"* (pp. xxvi, 278). Retrieved from http://ebookcentral.proquest.com/lib/reading/detail.action?docID=460276

Torode, A. (1966). Trends in fruit consumption. In T. C. Barker, J. C. McKenzie, & J. Yudkin (Eds.), *Our changing fare: Two hundred years of British food habits* (pp. 115–134). London: Macgibbon & Kee.

Turner, A. (1995). Prepacked food labelling: Past, present and future. *British Food Journal, 97*(5), 23–31. doi: 10.1108/00070709510091047

Turner, A. (2007). The development of food labelling regulations in the UK. *Nutrition Bulletin, 32*(2), 161–167. doi: 10.1111/j.1467-3010.2007.00634.x

Twyman, M. (1970). *Printing 1770–1970: An illustrated history of its development and uses in England*. London: Eyre & Spottiswoode.

Twyman, M. (1979). *A schema for the study of graphic language.* In: Kolers P.A., M.E. Wrolstad and H. Bouma. (eds) *Processing of Visible Language 1.* New York, NY. Plenum Press, 117–150.

Twyman, M. (1982). The graphic presentation of language. *Information Design Journal*, *3*(1), 2–22.

Twyman, M. (1993). The bold idea: The use of bold-looking types in the nineteenth century. *Journal of the Printing Historical Society, 22,* 107–143.

Twyman, M. (2003). Information design and early ephemera. In Spinillo, C. G., Coutinho, & S. G. (Eds.), *Selected readings of the information design international conference 2003* (pp. 11–27). Recife, Brazil The Brazilian Society of Information Design.

Twyman, M. (2008). The long-term significance of printed ephemera. *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage. 9*(1), 39. doi: 10.5860/rbm.9.1.294

Twyman, M. (2020). Advertising takes shape. In J. A.Lambert, *The Art of Advertising*. Oxford: Bodleian Library.

Uman L. S. (2011). Systematic reviews and meta-analyses. *Journal of the Canadian Academy of Child and Adolescent Psychiatry 20*(1), 57–59 Retreived from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3024725/

Underwood, R. L., Klein, N. M., & Burke, R. R. (2001). Packaging communication: Attentional effects of product imagery. *Journal of Product and Brand Management*, *10*(6), 403. Retrieved from https://search-proquest-com.idpproxy.reading.ac.uk/docview/220599584?accountid=13460

Valenze, D. M. (2011). *Milk, a local and global history* (pp. xiv, 287). Retrieved from http://site.ebrary.com/lib/reading/Doc?id=10480877

van Leeuwen, T. (2006). Towards a semiotics of typography. *Information Design Journal, 14*(2), 139–155. doi: 10.1075/idj.14.2.06lee

Wagner, K. (2015). Reading packages: Social semiotics on the shelf. *Visual Communication, 14*(2), 193–220. doi: 10.1177/1470357214564281

Walker, S. (2012). Describing the design of children's book: An analytical approach. *Visible Language, 46*(3), 180–199.

Ward, A. (2016). *No milk today*. London: Robinson.

Ward, V. (1994). Marketing convenience foods between the wars. In G. Jones & N. J. Morgan (Eds.), *Adding value: Brands and marketing in food and drink* (pp. 259–288). London: Routledge.

Waarde, K. (1993). *An investigation into the suitability of the graphic presentation of patient package inserts.* (Doctoral thesis). University of Reading. Retrieved from: https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.359205

Weaver, W. (2010). *Culinary ephemera: An illustrated history* (Vol. 30). Berkeley: University of California Press.

Weber, C. (2016). 19th century undertaker introduced the world to dieting. Retrieved from https://sciencenordic.com/denmark-obesity-society--culture/19th-century-undertaker-introduced-the-world-to-dieting/1436238

West, H. (2018). Sweetened condensed milk: Nutrition, calories and uses. Retrieved from https://www.healthline.com/nutrition/sweetened-condensed-milk

World Health Organization. (1997). *The World Health Report 1997*. Retrieved from https://www.who.int/whr/1997/en/

World Health Organization. (2020). Healthy diet. Retrieved from https://www.who.int/news-room/fact-sheets/detail/healthy-diet

Wilkins, M. (1994). When and why brand names in food and drink? In G. Jones & N. J. Morgan (Eds.), *Adding value: brands and marketing in food and drink* (pp. 15–40). London: Routledge.

Wilson, B. (2020). How ultra-processed food took over your shopping basket. Retrieved from https://www.theguardian.com/food/2020/feb/13/how-ultra-processed-food-took-over-your-shopping-basket-brazil-carlos-monteiro?utm_term=RWRpdG9yaWFsX1RoZUxvbmdSZWFkLTIwMDIxNQ%3D%3D&utm_source=esp&utm_medium=Email&CMP=longread_email&utm_campaign=TheLongRead

Yapp, R. (2021). The return of rickets. Retrieved from https://www.dailymail.co.uk/health/article-200848/The-return-rickets.html

Yin, R.K. (2014). *Case study research: Design and methods*. London: Sage

Zachmann, K., & Østby, P. (2011). Food, technology, and trust: An introduction. *History and Technology, 27*(1), 1–10. doi: 10.1080/07341512.2011.548970

Zimmer, B. (2010). Truthiness. Retrieved from https://www.nytimes.com/2010/10/17/magazine/17FOB-onlanguage-t.html

APPENDIX 1

Tables showing the results from the systematic review, described in Chapter 3.

APPENDIX 2

Additional archival sources from Section 2.2.

APPENDIX 3

Advertisements and labels referred to in footnotes 2, 32, 44, 54, 68, 82 and 103.

APPENDIX 4

An overview of the labels in a chronological order.

APPENDIX 1

The organisation of typical visual characteristics.
Results from the systematic review in Chapter 3.

BRAND NAME				
PRIMARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	13	11	3
	Sans serif	22	27	26
	Script	0	4	5
TREATMENT OF LETTERFORMS	Outlined	14	15	1
	Shadow	9	5	3
	Decorated	12	5	0
	Regular	2	5	1
	Bold	33	37	33
	Black only	4	1	6
	One colour	17	23	17
	Several colours	14	18	11
ORIENTATION OF TEXT	Horizontal	16	29	28
	Vertical	0	0	0
	Diagonal	3	2	4
	Curved/circle	16	11	2

The distribution of different kinds of letterforms for persuasive brand names across all periods.

The organisation of typical visual characteristics.
Results from the systematic review.

BRAND NAME				
SECONDARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	9	2	2
	Sans serif	8	5	10
	Script	0	1	5
TREATMENT OF LETTERFORMS	Outlined	2	0	2
	Shadow	5	1	1
	Decorated	7	0	0
	Regular	3	3	3
	Bold	14	5	14
	Black only	5	1	6
	One colour	9	3	9
	Several colours	3	4	2
ORIENTATION OF TEXT	Horizontal	9	6	16
	Vertical	0	0	0
	Diagonal	1	1	0
	Curved/circle	7	1	1

The distribution of different kinds of letterforms for brand names in the second layer of information across all periods.

The organisation of typical visual characteristics.
Results from the systematic review.

INGREDIENT NAME				
PRIMARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	17	6	6
	Sans serif	25	24	31
	Script	1	2	0
TREATMENT OF LETTERFORMS	Outlined	21	10	3
	Shadow	16	2	3
	Decorated	14	2	0
	Regular	3	5	2
	Bold	40	27	35
	Black only	6	3	7
	One colour	24	18	18
	Several colours	13	11	12
ORIENTATION OF TEXT	Horizontal	26	29	34
	Vertical	0	0	0
	Diagonal	4	2	0
	Curved/circle	13	1	3

The distribution of different kinds of letterforms for persuasive ingredient names across all periods.

The organisation of typical visual characteristics.
Results from the systematic review.

INGREDIENT NAME				
SECONDARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	3	4	0
	Sans serif	1	13	8
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	1	2	0
	Shadow	1	0	0
	Decorated	0	0	0
	Regular	1	6	4
	Bold	3	11	4
	Black only	1	1	1
	One colour	3	7	5
	Several colours	0	9	2
ORIENTATION OF TEXT	Horizontal	3	16	8
	Vertical	0	0	0
	Diagonal	0	1	0
	Curved/circle	1	0	0

The distribution of different kinds of letterforms for ingredient names across all periods.

The organisation of typical visual characteristics.
Results from the systematic review.

ROMANCE COPY				
PRIMARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	3	3	0
	Sans serif	6	5	14
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	5	1	1
	Shadow	4	1	0
	Decorated	0	1	0
	Regular	0	1	0
	Bold	9	7	14
	Black only	0	1	3
	One colour	5	4	6
	Several colours	4	3	5
ORIENTATION OF TEXT	Horizontal	4	6	12
	Vertical	0	0	0
	Diagonal	0	0	0
	Curved/circle	5	2	2

The distribution of different kinds of letterforms for persuasive romance copy across all periods.

The organisation of typical visual characteristics.
Results from the systematic review.

ROMANCE COPY				
SECONDARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	5	2	3
	Sans serif	10	28	22
	Script	2	6	3
TREATMENT OF LETTERFORMS	Outlined	2	5	2
	Shadow	2	1	0
	Decorated	1	0	0
	Regular	13	15	17
	Bold	4	21	11
	Black only	3	3	5
	One colour	12	15	16
	Several colours	2	18	7
ORIENTATION OF TEXT	Horizontal	11	30	23
	Vertical	0	0	1
	Diagonal	2	0	3
	Curved/circle	4	6	1

The distribution of different kinds of letterforms for romance copy in the second layer of information across all periods.

The organisation of typical visual characteristics.
Results from the systematic review.

ROMANCE COPY				
TERTIARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	6	3	2
	Sans serif	4	14	17
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	0	0	0
	Shadow	0	0	0
	Decorated	0	0	0
	Regular	7	15	16
	Bold	3	2	3
	Black only	5	5	6
	One colour	4	9	12
	Several colours	1	3	1
ORIENTATION OF TEXT	Horizontal	10	16	17
	Vertical	0	0	1
	Diagonal	0	1	1
	Curved/circle	0	0	0

The distribution of different kinds of letterforms for romance copy (defined as minor text across all periods).

The organisation of typical visual characteristics.
Results from the systematic review.

ADDITIONAL COPY

SECONDARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	2	0	1
	Sans serif	11	4	2
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	1	0	0
	Shadow	1	0	0
	Decorated	1	0	0
	Regular	9	2	3
	Bold	4	2	0
	Black only	0	1	0
	One colour	11	3	3
	Several colours	2	0	0
ORIENTATION OF TEXT	Horizontal	11	4	2
	Vertical	0	0	1
	Diagonal	0	0	0
	Curved/circle	2	0	0

The distribution of different kinds of letterforms for romance copy in the secondary typographic level across all periods.

The organisation of typical visual characteristics.
Results from the systematic review.

ADDITIONAL COPY				
TERTIARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	6	4	4
	Sans serif	30	26	31
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	1	0	0
	Shadow	0	0	0
	Decorated	0	0	0
	Regular	32	27	34
	Bold	4	3	1
	Black only	5	8	6
	One colour	27	13	25
	Several colours	4	9	4
ORIENTATION OF TEXT	Horizontal	27	25	30
	Vertical	0	1	3
	Diagonal	0	2	0
	Curved/circle	9	2	2

The distribution of different kinds of letterforms for additional copy (defined as minor text across all periods).

The organisation of typical visual characteristics.
Results from the systematic review.

PICTURES				
CONTENT		1850–1918	1918–1945	1945–1970
NATURAL	Nature (landscape, flowers, branches)	20	10	4
	Fruit and vegetables with relevance to the food	9	11	14
	Fruit and vegetables with no or little relevance to the food	3	1	4
	Animal with relevance to food	5	4	2
	Animal with no relevance to the food	2	1	0
	Farm	1	3	1
	Domestic setting	2	11	14
THE INGREDIENT	Refers to the specific ingredient, e.g., whole peas or strawberries	2	14	17
PEOPLE	Child	2	3	3
	Adult	8	11	4

STYLE AND TREATMENT		1850–1918	1918–1945	1945–1970
DRAWING	Representational	47	59	11
	Schematic	7	4	8
	Cartoon	0	4	2
PHOTOGRAPHY	Photograph	0	2	42
COLOUR OR NOT	Black and white	0	0	0
	Single colour	6	5	7
	Several colours	48	64	56

The distribution of different pictures across all periods.

GRAPHIC ELEMENTS				
CONTENT		1850–1918	1918–1945	1945–1970
NOT RELATED TO FOOD	Medal	4	3	0
	Coat of arms	10	4	2
	Logo, trademark or brand symbol	20	14	6
	Castle or flag	3	2	0
	Decorative frames	33	6	0

The distribution of different graphic elements across all periods.

Health messages.
Results from the systematic review in Chapter 3.

BRAND NAME PROMOTNG HEALTH BENEFITS				
PRIMARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	0	0	0
	Sans serif	0	1	4
	Script	0	0	1
TREATMENT OF LETTERFORMS	Outlined	0	1	1
	Shadow	0	1	0
	Decorated	0	0	0
	Regular	0	0	0
	Bold	0	1	5
	Black only	0	0	0
	One colour	0	0	4
	Several colours	0	1	1
ORIENTATION OF TEXT	Horizontal	0	1	4
	Vertical	0	0	0
	Diagonal	0	0	1
	Curved/circle	0	0	0

The distribution of different kinds of letterforms for persuasive brand names promoting health benefits across all periods.

BRAND NAME PROMOTNG HEALTH BENEFITS				
SECONDARY TEXTUAL INFORMATION		1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	0	0	0
	Sans serif	0	1	4
	Script	0	0	1
TREATMENT OF LETTERFORMS	Outlined	0	1	1
	Shadow	0	1	0
	Decorated	0	0	0
	Regular	0	0	0
	Bold	0	1	5
	Black only	0	0	0
	One colour	0	0	4
	Several colours	0	1	1
ORIENTATION OF TEXT	Horizontal	0	1	4
	Vertical	0	0	0
	Diagonal	0	0	1
	Curved/circle	0	0	0

The distribution of different kinds of letterforms for brand names promoting health benefits in the second layer of information across all periods.

INGREDIENT NAME PROMOTNG HEALTH BENEFITS				
PRIMARY TEXTUAL INFORMATION		**1850–1918**	**1918– 1945**	**1945–1970**
LETTERFORMS	Serif	0	2	0
	Sans serif	1	4	5
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	0	2	1
	Shadow	0	2	1
	Decorated	0	0	0
	Regular	0	0	0
	Bold	1	6	5
	Black only	0	1	1
	One colour	1	3	3
	Several colours	0	2	1
ORIENTATION OF TEXT	Horizontal	1	4	3
	Vertical	0	0	0
	Diagonal	0	0	0
	Curved/circle	0	2	2

The distribution of different kinds of letterforms for persuasive ingredient names promoting health benefits across all periods.

Health messages.
Results from the systematic review.

ROMANCE COPY PROMOTNG HEALTH BENEFITS										
PRIMARY TEXTUAL INFORMATION					**SECONDARY** TEXTUAL INFORMATION			**TERTIARY** TEXTUAL INFORMATION		
		1850–1918	1918–1945	1945–1970	1850–1918	1918–1945	1945–1970	1850–1918	1918–1945	1945–1970
LETTERFORMS	Serif	0	0	0	4	0	2	5	4	3
	Sans serif	4	5	7	11	13	18	8	9	7
	Script	0	0	0	0	3	0	0	0	0
TREATMENT OF LETTERFORMS	Outlined	2	1	0	3	3	0	0	0	0
	Shadow	3	0	0	0	0	0	0	0	0
	Decorated	0	0	0	0	0	0	1	0	0
	Regular	0	0	1	8	9	9	11	12	9
	Bold	4	5	6	7	7	11	2	1	1
	Black only	0	1	0	8	1	3	2	9	5
	One colour	4	2	7	6	10	13	11	4	5
	Several colours	0	2	0	1	5	4	0	0	0
ORIENTATION OF TEXT	Horizontal	1	2	5	13	11	15	11	13	9
	Vertical	0	0	1	1	0	0	1	0	0
	Diagonal	0	0	0	0	1	3	1	0	1
	Curved/circle	3	3	1	1	4	2	0	0	0

The distribution of different kinds of letterforms for romance copy promoting health benefits in all layers of information across all periods.

Health messages.
Results from the systematic review.

ADDITIONAL COPY PROMOTNG HEALTH BENEFITS				
TERTIARY TEXTUAL INFORMATION		**1850–1918**	**1918–1945**	**1945–1970**
LETTERFORMS	Serif	0	0	1
	Sans serif	0	0	15
	Script	0	0	0
TREATMENT OF LETTERFORMS	Outlined	0	0	0
	Shadow	0	0	0
	Decorated	0	0	0
	Regular	0	0	15
	Bold	0	0	1
	Black only	0	0	3
	One colour	0	0	11
	Several colours	0	0	2
ORIENTATION OF TEXT	Horizontal	0	0	14
	Vertical	0	0	1
	Diagonal	0	0	1
	Curved/circle	0	0	0

The distribution of different kinds of letterforms for additional copy promoting health benefits across all periods.

Health messages.
Results from the systematic review.

PICTURES PROMOTING HEALTH BENEFITS				
CONTENT		**1850–1918**	**1918–1945**	**1945–1970**
NATURAL	Nature (landscape, flowers, branches)	5	5	0
	Fruit and vegetables with relevance to the food	19	15	22
	Fruit and vegetables with no or little relevance to the food	8	3	2
	Animal with relevance to food	1	2	0
	Animal with no relevance to the food	0	0	0
	Farm	2	0	0
	Domestic setting	0	2	8
THE INGREDIENT	Refers to the specific ingredient, e.g., whole peas or strawberries	0	6	9
PEOPLE	Child	0	3	1
	Adult	1	2	5

STYLE AND TREATMENT		**1850–1918**	**1918–1945**	**1945–1970**
DRAWING	Representational	32	31	12
	Schematic	4	7	5
	Cartoon	0	0	0
PHOTOGRAPHY	Photograph	0	0	30
COLOUR OR NOT	Black and white	0	0	0
	Single colour	2	6	7
	Several colours	34	32	40

The distribution of different pictures promoting health benefits across all periods.

APPENDIX 2

Additional archival sources from Section 2.2.

John Johnson Collection of Printed Ephemera

The John Johnson Collection holds food labels from mid-1800 to 1940s. Many of the earliest food labels they hold are for imported goods, such as canned fish, condensed milk, jams, fruit and vegetables, while domestic labels represent, among other things, pickles, vinegar and jams. The John Johnson Collection holds more modern ephemera from the 1960s, 1970s, and early 1980s, including material for soup, butter, cereals, chocolate, milk drinks, and biscuits.[109] Complementary material includes food-related advertisements from the nineteenth to the early twentieth century as well as adverts from nineteenth-century magazines such as The *Lady's Magazine, Harpers Monthly Magazine* and various pamphlets for the Vegetarian Society (1847 and onwards).

The Centre for Ephemera Studies

The Maurice Rickards Collection holds domestic and imported food labels, and advertisements, from all three research periods. Other Collections comprise predominantly British soft drink labels from the 1960s, and domestic cans and boxes from the late 1800s and early 1900s.

University of Reading Special Collections

These holdings comprise information, photographs, and brochures from the Milk Marketing Board in the 1940s. The Huntley & Palmers Collection includes labels and pamphlets for biscuits from the late nineteenth and early twentieth century. The John & Griselda Lewis Printing Collection comprises predominately advertising from the 1940s.

The Museum of Rural Life, University of Reading

MERL holds a collection of milk bottles of different sizes and shapes from early 1900 up to 1980s.

The Sainsbury's Archive

The Archive holds a variety of food packaging from the busines's own brand and represents mainly foods from the 1930s onwards.

Marks & Spencer Archive

The archive includes food packaging from the businesses own brands and represents mainly foods from the 1930s onwards.

---

[109] The collection is digitised and includes, among other things, extensive information regarding date of publication, company, physical format and printing process.

The History of Advertising Trust

HAT holds material from well-known food brands such as Heinz, Horlick´s and Hovis and includes food packaging and advertisements from the 1920s onwards.

The Wellcome Collection

The collection includes leaflets, promotional material and recipes with particular relevance to milk and milk-drinks.

The National Archives

The archives hold milk bottle caps, advertising and some correspondence regarding milk sales promotions, publicity and advertising campaigns from the 1930s onward.

The Imperial War Museum

The archive holds food packaging, posters, photographs, and advertisement from WWI and WWII.

Private collection

Food labels bought from ephemera fairs or photographed in public spaces.

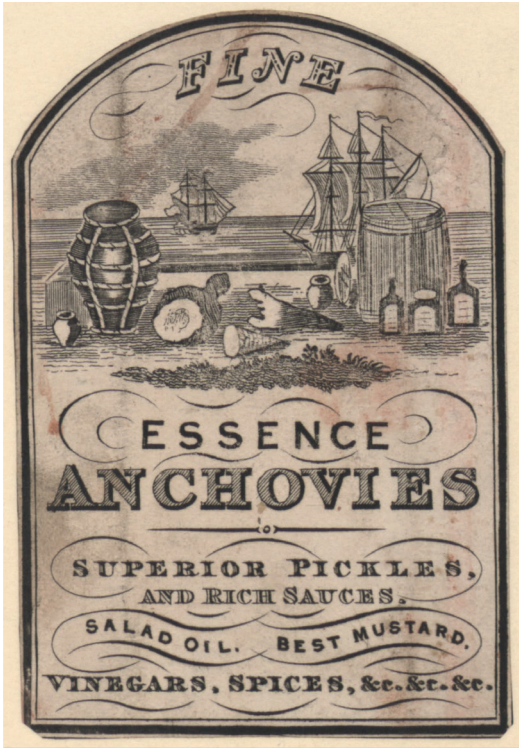
APPENDIX 3

Advertisements and labels, ref. footnotes 2, 32, 44, 54, 68, 82 and 103.

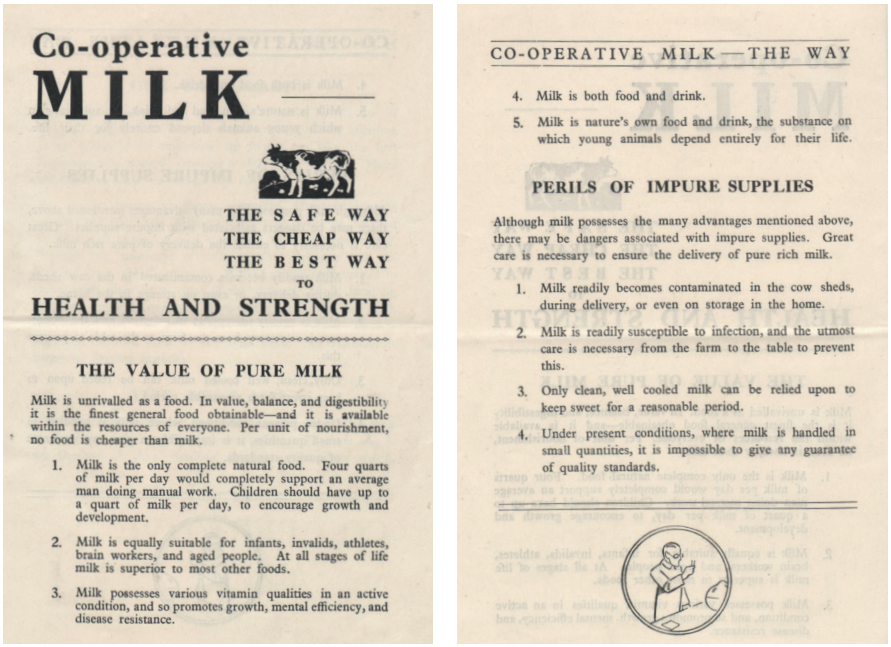
Ref. Footnote 2. Labels for Norwegian sardines and brisling. *c.*1950–*c.*1960.
Size: 102 x 73 mm.
Centre for Ephemera Studies, University of Reading.

Ref. Footnote 32. Advertisement for Horlick´s. 1931.
Size: 298 x 21 3 mm.
History of Advertising Trust, HAT20/2/1/2//9.
(from The Colin McArthur Collection of consumer magazine tearsheets).

Ref. Footnote 32. Advertisement for Ovaltine. *c.*1920.
Size: 51 x 178 mm.
The History of Advertising Trust, HAT21/21/1/60.
(from The Wilfred M Fryer Archive).



Ref. Footnote 44. A label for anchovies. *c.*1820–*c.*1830.
Size: 93 x 62 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Labels 9 (12).



Co-operative
MILK

THE SAFE WAY
THE CHEAP WAY
THE BEST WAY
TO
HEALTH AND STRENGTH

THE VALUE OF PURE MILK

Milk is unrivalled as a food. In value, balance, and digestibility it is the finest general food obtainable—and it is available within the resources of everyone. Per unit of nourishment, no food is cheaper than milk.

1. Milk is the only complete natural food. Four quarts of milk per day would completely support an average man doing manual work. Children should have up to a quart of milk per day, to encourage growth and development.
2. Milk is equally suitable for infants, invalids, athletes, brain workers, and aged people. At all stages of life milk is superior to most other foods.
3. Milk possesses various vitamin qualities in an active condition, and so promotes growth, mental efficiency, and disease resistance.

CO-OPERATIVE MILK — THE WAY

4. Milk is both food and drink.
5. Milk is nature's own food and drink, the substance on which young animals depend entirely for their life.

PERILS OF IMPURE SUPPLIES

Although milk possesses the many advantages mentioned above, there may be dangers associated with impure supplies. Great care is necessary to ensure the delivery of pure rich milk.

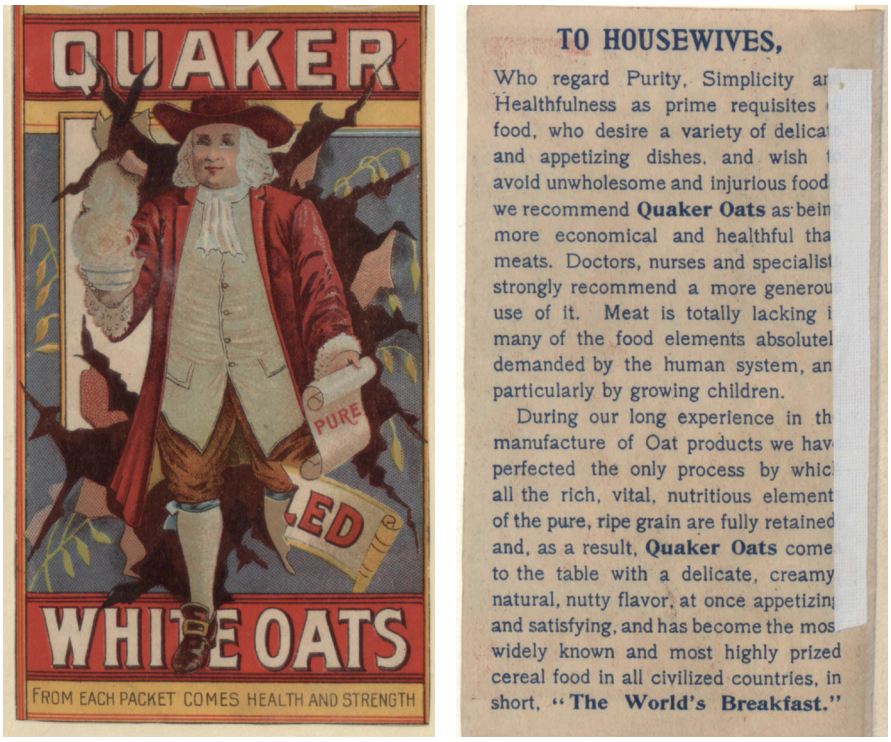
1. Milk readily becomes contaminated in the cow sheds, during delivery, or even on storage in the home.
2. Milk is readily susceptible to infection, and the utmost care is necessary from the farm to the table to prevent this.
3. Only clean, well cooled milk can be relied upon to keep sweet for a reasonable period.
4. Under present conditions, where milk is handled in small quantities, it is impossible to give any guarantee of quality standards.

Ref. Footnote 54. Advertising folder (4pp.) for Co-operative milk. *c.*1920.
Size: 187 x 125 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 2 (6).

Ref. Footnote 54. Cow & Gate milk food Baby's weight record card (4pp.). *c.*1930.
Size: 107 x 71 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 2 (8a).

Ref. Footnote 54. Advertisement for Radio-Malt. *c.*1920–*c.*1930.
Size: 193 x 174 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Patent Medicines 5 (63).

Ref. Footnote 68. Advertising pamphlet (16 pp.) for Quaker Oats. *c.*1890.
Size: 136 x 101 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 4 (61).



Ref. Footnote 68. Advertising sheet (2 pp.) for Quaker Oats. *c.*1890.
Size: 116 x 65 mm.
The Bodleian Libraries, The University of Oxford. John Johnson Collection: Food 4 (62b).

Ref. Footnote 82. Advertisement for Dr. Gordon´s Pills. 1893. Bodleian Libraries, University of Oxford. John Johnson Collection: Advertisers Misc. III, The Argosy.

Ref. Footnote 103. Advertisement for Scott´s Brand Emulsion. 1935. Size: 280 x 120 mm.
History of Advertising Trust. JWT6/1/1/65/27.

APPENDIX 4

An overview of the labels in a chronological order.