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Flesh-formers or fads? Historicizing the contemporary protein-enhanced food trend

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ABSTRACT

This paper explores the historical development of protein-enhanced foods in Great Britain and how they were marketed by food manufacturers to convince consumers that protein was essential to maintaining a healthy lifestyle. It focuses particularly on Plasmon and Emprote – the two biggest brands of the early twentieth century – and uses multimodal critical discourse analysis to identify how semiotic resources are used to embed products in scientific rationality, promote health discourses and develop concepts of masculinity in accordance with the two strands of the physical culture movement. It argues that, just as today, food manufacturers capitalized upon the growing middle-class interest in functional foods and presented protein as an "elixir" that consumers should take to safeguard their health, the health of their families and the state of the nation. Overall, this study demonstrates that, even with today's strict legislation on food packaging and advertising, protein food manufacturers still use similar techniques to sell their products. In gaining a better understanding of the historical use of semiotic resources in food advertising, we can assess the legitimacy of current food regulations and ensure that people make informed choices when shopping.

KEYWORDS

Protein; advertisements; functional foods; health; body; physical culture movement; masculinity; vegetarianism; multimodal critical discourse analysis

Introduction

Contemporary western society is marked by what some researchers have called "protein mania" (Fleming 2019), with more than half of all consumers actively seeking to purchase protein-enhanced foods based on the conviction that they will improve exercise performance, decrease recovery time, build strength and reduce the risk of injury (Hartmann and Siegrist 2016; Samal and Samal 2018). This has driven food manufacturers to increasingly "mythologize" protein and connect it to broader cultural values of healthiness and wellbeing (Chen and Eriksson 2019). However, the obsession with protein-enhanced foods, in fact, has much deeper roots in the late nineteenth century when casein was first extracted from cow's milk and turned into a soluble powder. A wave of new food brands promptly emerged, using buzzwords, flashy images, clever typographical designs, color and layout to lure consumers into developing unrealistic perceptions about their impact on fitness, health and body weight.

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The aim of this paper is to historicize our understanding of the contemporary protein trend by investigating the marketing of two popular proteid foods – Plasmon and Emprote – in early twentieth-century Britain. It builds upon the recent work of Chen and Eriksson (2019), who explored the "mythologization" of protein in a contemporary context, and contributes to the growing body of transhistorical research that is concerned with explaining and situating apparently "new" phenomena within a longer trajectory of practice and use (Tagg and Evans 2020). Using a dataset of 105 advertisements from 1900 to 1930, collected largely from the British Newspaper Archive, I specifically seek to address the following interrelated questions:

(1) How did early twentieth-century marketers frame proteid food advertisements to appeal to health-conscious consumers?
(2) How were these strategies enacted in the lexical and semiotic choices of their advertisements?
(3) What similarities in marketing techniques can be identified between historical and contemporary protein food advertisements?

As these advertisements used a combination of verbal and visual cues to make their claims, my analysis draws on the tools of multimodal critical discourse analysis (MCDA), which is a method to reveal how semiotic resources are used to shape the representation of discourses and how we understand the world (Ledin and Machin 2018, 2020a). I reveal how, just as today, Plasmon and Emprote were engaged in "lifestyle marketing", embedding protein in discourses of health, fitness, science and technological development to attract health-conscious consumers. Thus, they offer a powerful illustration of how protein was already being mythologized at the beginning of the twentieth century in Britain. Overall, I argue that establishing a greater appreciation of the historical marketing of protein-enhanced foods can empower us to recognize the subtle persuasive techniques of current food manufacturers and make informed choices when purchasing products (Smith and Phillips 2000, 2).

"The twentieth-century ambrosia"[1]: the origins of protein-enhanced food

In the late nineteenth century, the recommended daily intake of protein was 120 g, but most of the British population struggled to consume even 60 g (Hindhede 1913, 27; Oddy 2003, 71). Particular concern developed around the fitness of young British men following the social studies on poverty by Booth (1889) and Rowntree (1901) and came to a head during the Second Anglo-Boer War (1899–1902) when one third of recruits was deemed unfit for military service due to poor health. In keeping with both the Victorian development of nutrition as a science and Social Darwinism, many political and military figures began to fear that improper nourishment would cause the British race to degenerate, thus leading to a decrease in industrial productivity and military security (Coveney 2000, 9).

Leading scientists advised that this issue could be abated by the consumption of more proteinaceous foods, which would help build strength and improve stamina (McCay 1912). However, meat was too expensive for most working-class families and drinking milk came with the risk of bovine tuberculosis. Following the invention of the milk separator in 1877, German scientists started to experiment with extracting casein (the

predominant protein in cow's milk) from skimmed milk waste. The addition of bicarbonate of sodium made this casein soluble and turned it into what we now know as protein powder. Canny businessmen quickly recognized the commerciability of this powder and began to sell it in tins under the strapline "a meal in a mouthful" as it only required one teaspoonful to be added to hot water. These products met with great success and soon, protein-enhanced cocoa, oats, chocolate, whipped cream, custard and biscuits were also launched onto the market, now rebranded as "good food" options.

The benefits of taking protein-enhanced food quickly evolved into what Crotty (1995, 65) has termed "the politicization of health" as good nutrition and scientific eating became viable arguments against workers' demands for higher wages or shorter working hours (Coveney 2000, 19). However, although interest in protein intake had initially developed out of a practical concern to improve the diet of the working classes, these "proteid foods", or "flesh-formers" as the popular press called them, were largely purchased by members of the middle classes (Knight 1904, 447). This consumer group had more disposable income, greater leisure time and were strongly attracted to the physical culture movement of the period, which was centered around eating well and keeping fit to combat the pressures of daily life in the modern world (Steinitz 2017). Thus, in consuming proteid foods, they not only sought to find an alimentary root back to nature, but also to showcase themselves as good, British citizens who led an active and healthy lifestyle. For food companies, this middle-class interest strongly influenced the way in which proteid foods became advertised to consumers: most advertisements were placed in broadsheets, sports journals and local newspapers rather than tabloids and cheap periodicals. Furthermore, these advertisements deliberately balanced nutritional "facts" with the promotion of middle-class cultural values to maximize their success and profit.

Writing in 1904 in the *Indian Medical Gazette*, one physician noted that protein-enhanced foods were so "assiduously advertised as to seem indispensable" but they were "often found wanting and are by no means cheap" (341). While doctors recognized that so-called proteid foods could be beneficial to those who lacked sufficient protein in their everyday diets (Hare 1905), many were also keen to point out that overreliance on them was "theoretically and practically undesirable" and could even be harmful for the kidneys, liver and heart (Chittenden 1911, 662; Hindhede 1913). Despite these caveats, by 1914, casein-based protein foods had a steady and profitable position on the British market, with the largest brand – Plasmon – recording annual profits of £14,000[2] (*Dundee Evening Telegraph* 1915). Proteid foods had now become so much a part of everyday life that one frustrated journalist in the *Evening Express* (1910) grumbled, "We are sick of all this proteid talk," while others moaned that people obsessed with consuming high quantities of protein were nothing more than "food cranks" (*Hampshire Telegraph* 1906) or "proteid slaves" (*Evening Express* 1904).

The two main competitors on the market were Plasmon and Emprote. Plasmon was developed by a joint German and British team of scientists and was first produced in Britain in 1900. It immediately gained popularity when it was endorsed by famous bodybuilder Eugen Sandow who claimed, "Plasmon is the essential food I have so long wished for and I would never be without it" (*Westminster Gazette* 1901). The scientific-sounding brand name took its name from the Latin "plasmare" meaning "to mold" to emphasize the notion of gaining muscle. According to the *Plasmon Cookery Book*, released in 1904, a teaspoonful of Plasmon powder "at once raises the nourishing value

of food" as it is equal to the nutriment contained in 1lb of beef (10). A guide released by the International Plasmon Company in 1902 asserted that consuming Plasmon regularly would "invigorate the digestive system," "increase weight," "give strength to digestion" and "speedily rectify all irregularities in the nutrition of the body" (5).

Emprote, on the other hand, was conceived by the British tennis player Eustace Miles and developed in 1902. It drew its name from Miles' initials and an abbreviation of protein. Throughout his tennis career, Miles advertised and experimented with various fad diets, including the uric-acid free diet, the "no breakfast plan" and the "no lunch plan", before becoming a strong advocate of lacto-vegetarianism (Whorton 2016). It was his conversion to vegetarianism that inspired the development of Emprote and led to the launch of a chain of restaurants and health stores across London, where visitors could dine on Emprote products or purchase them for home use. Emprote was advertised as a tonic for "hard workers of hand and brain" (*Y Darian* 1914) and was even lampooned in the E.M. Forster novel *Howards End* when Margaret Schlegel describes Miles' restaurant as being "all proteids and body-building and people coming up to you and beg pardon, but you have such a beautiful aura" (1910, 160). Some physicians, however, felt that, while Miles "preached the gospel of fitness," it was "almost impossible for any but the wealthy and leisured classes" to follow an Emprote-based diet (Tibbles 1914, 243).

As descriptions in *The Lancet* (1902) and *British Medical Journal* (1910) state, protein powders were colorless, odorless, flavorless and, in some cases, left a sandy texture in the mouth once consumed. Therefore, it was essential for brands like Plasmon and Emprote to convince the public that their products were worth purchasing. They did so through bold publicity stunts, including competitions, giveaways, coupons and daily practical demonstrations at their headquarters in London. Eustace Miles even declared an annual "Emprote Week" where a range of promotional events were organized, including cooking classes, tasting sessions and public lectures (*Daily Mirror* 1907). Already, a clear segmented market was developing between bodybuilders and weightlifters who sought Plasmon to gain muscle and strength, and athletes, cyclists and swimmers who turned to Emprote for endurance and stamina. Despite the fact that both Plasmon and Emprote essentially contained the same ingredients, each brand was able to create associations between their product, the credibility of science and a particular concept of healthy living and masculinity, thereby influencing consumers to purchase their products. As this paper will demonstrate, through MCDA, it is possible to highlight the linguistic and visual strategies that Plasmon and Emprote used to achieve this goal and identify buried discourses in the advertisements, many of which bear striking similarities to the way that protein-enhanced foods are marketed today.

Methodology and data

This paper builds upon the recent turn in sociolinguistics toward transhistorical approaches, arguing the need to historicize our knowledge of the current protein-enhanced food trend to better understand it (Tagg and Evans 2020). Using a dataset of 105 advertisements for the two biggest proteid food brands of the early twentieth century – Plasmon and Emprote – I will demonstrate that, even with today's legislation on food labeling and advertising,[3] manufacturers continue to use similar tactics to mislead consumers by drawing upon the meaning potentials of linguistic and semiotic resources.

The advertisements date from 1900 to 1930 and were collected from a manual search of the British Newspaper Archive and Welsh Newspapers Online (see Appendix for more details). They were also supplemented by more targeted searches on the archival databases of the *Illustrated London News, The Times, Daily Mirror* and *Daily Mail*. Of the collected advertisements, 73 represent Plasmon and 32 represent Emprote. The Plasmon subset includes advertisements for powder (38), cocoa (20), oats (12), whipped cream (2) and cornflour (1), while the Emprote subset contains advertisements for powder (31) and custard (1). The higher number of Plasmon advertisements and the wider product range reflects the brand's market dominance and pricing power, particularly between 1900 and 1914.[4]

The advertisements are approached through the theoretical perspective of social semiotics, which is concerned with how power is transmitted and practised through discourse (Mayr and Machin 2012, 2), and analyzed using multimodal critical discourse analysis (Ledin and Machin 2018, 2020a). MCDA seeks to demonstrate how certain linguistic and visual strategies are used to convey meaning in discourse and make people think about the world in a particular way. Focusing on how word, image, typography, color, texture, materiality, layout and composition are combined to make meaning can help draw out the types of identities, ideas and values that are foregrounded, abstracted or concealed, thereby pointing to their ideological and political consequences (Machin 2013, 35).

The approach to MCDA that I use draws particularly on the work of Ledin and Machin (2018, 2020a) who designed a set of analytical tools to critically interrogate the meanings of semiotic choices and how they shape what we do, how we think and how we experience the world. These tools focus particularly on the following key elements: (1) the lexical and grammatical choices of texts; (2) image, including participants, actions, perspectives, angles and distance; (3) color, particularly meaning potentials in terms of emotions, attitudes and values; (4) typography, especially the cultural connotations of certain typefaces; (5) texture and materiality in terms of their physical and symbolic meanings; and (6) layout and composition, made up of salience, framing, coordination and hierarchies. As Ledin and Machin's toolkit was designed for contemporary texts, I also embed these semiotic choices in evidence from archival records to ensure that the analysis takes into account the historical context and sociocultural norms that guided the creation of proteid food advertisements, and how meaning potentials may have changed over time. For the present study, the archives of the Vegetarian Society (Manchester), Wellcome Trust (London), Science Museum (London), Museum of Brands (London) and Oakham Treasures (Bristol) were particularly useful.

The analysis is organized according to three key themes that have been identified in the advertisements and regularly reoccur across the dataset: scientific rationality, healthy lifestyle and masculinity. I use specific examples to illustrate how Plasmon and Emprote constructed similar narratives to today on healthy eating, drawing upon the power of semiotics to help create a "myth" about protein.

The argument of scientific rationality

Following the introduction of the 1875 Sale of Food and Drugs Act, which made "better provision for the sale of food and drugs in a pure and genuine condition," the British government made compulsory the appointment of public analysts to detect the nutritional content of foods. This had a revolutionary impact on food advertising as companies quickly capitalized upon these scientific advancements to present their products as

healthy. Consequently, it is unsurprising that a major theme that runs across all advertisements by Plasmon and Emprote is an emphasis on scientific rationality to support claims about the nutritional benefits of consuming proteid food. However, just as Chen and Eriksson (2019) have demonstrated in a modern-day context, detailed analysis reveals that these claims were often pseudo-scientific and allowed untested assumptions around protein being a better diet choice to become a belief.

In many of their advertisements, Plasmon and Emprote give specific details of the amount of protein in their products, which suggests that they have been scientifically measured and approved, thus convincing consumers of their high quality. Yet, these amounts are often confusing and offer little help in making an informed buying decision. Plasmon, for example, claims it contains nearly 66% proteid compared to 6.3% proteid of pure cocoa in some advertisements and 70% of proteid in others. Sometimes, this figure is increased to 80% against 8% of ordinary cocoa or the strapline "1lb of Plasmon contains the nourishment of 30 pints of milk" is used. Equally, Emprote regularly states that it has "three times the body-building value of meat." While these figures sound scientific, we as consumers are unaware of the exact quantity of protein in the products or what the recommended daily intake should be. Furthermore, 1lb, in fact, represents a whole tin of Plasmon, but is presented in such a way that it implies one serving. Together with the use of manicules, bold font and capital letters, these figures symbolically communicate that Plasmon and Emprote contain high protein, but convey that these figures have been precisely measured. Chen and Eriksson (2019) note a similar phenomenon in contemporary protein-food packaging: despite EU regulation 1169/2011 concerning mandatory nutritional panels, these "voluntary callouts" on percentages or grams are made more visible and, therefore, mislead consumers.

Having a smaller budget and lower turnover then Plasmon, Emprote relied largely on words rather than images to present its scientific claims. Frequently occurring buzzwords include "body-building," "muscle-making," "force-producing" and "flesh-forming," which fit with the Edwardian notion that protein literally replaced the muscles worn out through exercise (Knight 1904, 447), or "the mainstay food" and "the master food," which give Emprote an air of mystery surrounding its actual ingredients. While Plasmon also used similar buzzwords, it depended more heavily on infographics to highlight its purported benefits. Figure 1(a) shows a bar chart indicating a list of foods and the percentage of protein they contain. We are told that the table is compiled "from the best authorities" and shows "the great superiority of Plasmon to all other foods." While the paradigms are assumed to be based on a fixed measurement, we have no knowledge of where these figures come from, their relative status, whether the foods are comparable or indeed who the "best authorities" are (Ledin and Machin 2018, 169). Nonetheless, the simplified and user-friendly way of visualizing what would otherwise be dense information can be persuasive for consumers.

This is also apparent in Figure 1(b) which shows two large vats of cocoa. According to the image, two thirds of Plasmon cocoa is "all pure nourishment," while just 5% of ordinary cocoa is "nourishment." Here, the use of "pure" is significant, as Plasmon reshapes its legal meaning as "unadulterated food" to signal physical and mental purity, thus investing the product with a moral authority that entices consumers to buy into the cultural values it promises (O'Hagan 2019, 1). The curved edges, pointy top and metallic hue associate the vats with industrialization and create the impression of science and

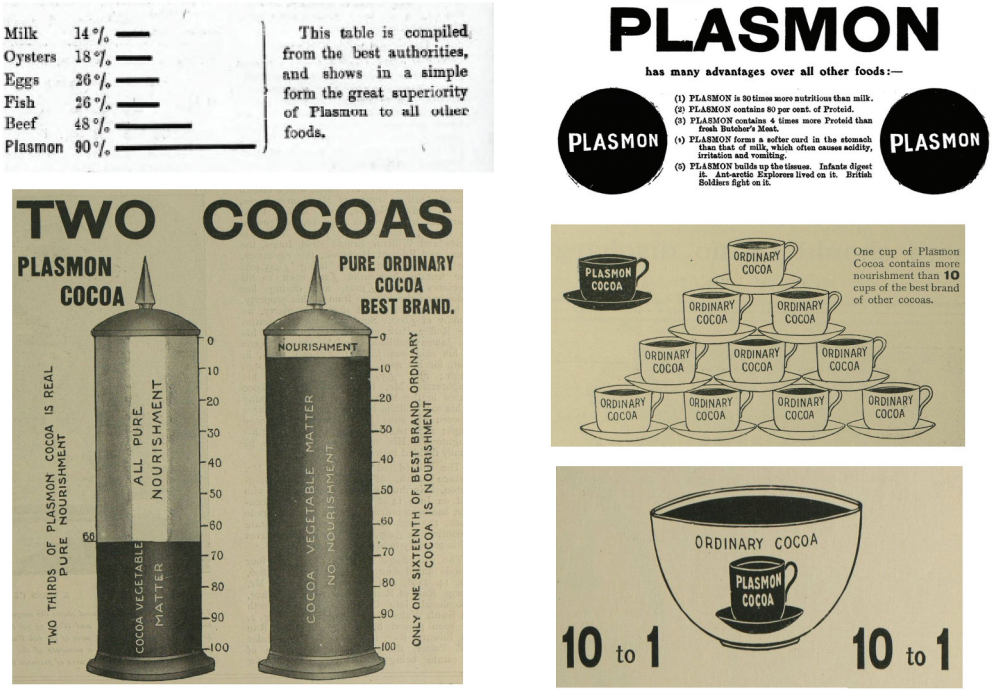


Figure 1. Use of infographics by Plasmon.
(a) Horizontal bar chart; (b) Vertical bar chart; (c) List of points; (d) Pyramid of teacups; (e) Large bowl.
(a) *Sheffield Daily Telegraph* © The British Library Board. All rights reserved. With thanks to The British Newspaper Archive (www.britishnewspaperarchive.co.uk); (b), (d) and (e) *Illustrated London News*/ Mary Evans Picture Library (c) *The Medical Press and Circular*.

modernity (Ledin and Machin 2018, 96), thereby masking the vagueness of the term "nourishment" and convincing readers of Plasmon's benefits. Figure 1(c), on the other hand, uses a list of five points to outline why Plasmon is superior to other foods. While the list serves to present the basic advantages of Plasmon, the items have no chronological order or ranking of priority, which makes it challenging to interpret or find connections (Ledin and Machin 2018, 165). However, the numbering sequence connotes logic and science, and associates Plasmon with having more control over one's life. The two circles that flank the list evoke wholeness and perfection, again linking the consumption of Plasmon to being a good person who cares about their wellbeing (Ledin and Machin 2018, 185). Infographics are also a device used by contemporary protein-food manufacturers to compare products (Chen and Eriksson 2019). Although EU regulation 1169/2011 sets out that the products being compared must be clearly identified, this is often not the case, but the association between infographics and science leads consumers to believe that the comparisons are based on statistical evidence and that one is a better choice than the other.

Figure 1(d,e) also rely on infographics to transmit their messages, but this time, use images that are "fun" and familiar to consumers to make the science more approachable (Chen and Eriksson 2019, 435). Here, we see ten teacups stacked into a pyramid formation alongside one cup of Plasmon and a small cup of Plasmon within a large bowl of

ordinary cocoa to indicate that Plasmon has "more nourishment than 10 cups of cocoa." The typeface is spread out and mimics the bubble letters associated with children's handwriting or cartoons, which adds a touch of playfulness, while the color contrast between black and white creates salience and gives symbolic power to the representation of Plasmon (Ledin and Machin 2020a, 105, 126). This playfulness is further emphasized by the strapline "10 to 1," which draws upon familiar gambling jargon, and the pyramid structure of the cups, which resembles the "house of cards" game that was popular in Edwardian Britain. In its user-friendly layout, it creates the sense that consumers are being empowered, even if the information presented is pseudo-scientific. Playfulness is also a common feature of contemporary protein food marketing to combat the association between "healthy" food and boringness (Chen and Eriksson 2019).

Both Plasmon and Emprote also cleverly embed notions of science and technology in their products through the use of geometric shapes and patterns (Figure 2(a,b)). The interconnection of hexagons and circles brings to mind a chemistry cell chain, implicitly suggesting that the products have been scientifically analyzed and formulated. Chemical chain reactions had only been identified in 1913 by German chemist Max Bodenstein, thus indicating how both brands promptly introduced cutting-edge science into their advertisements to signal modernity. Geometric shapes are also used in contemporary protein food advertisements and packaging with the aim of conveying efficiency, innovation and energeticism (Chen and Eriksson 2019, 431). In the case of Emprote, these

Figure 2. Scientific shapes.
(a) Interconnected Hexagon and Circles (Plasmon); (b) Tree of Life (Emprote). (a) *Illustrated London News*/Mary Evans Library; (b) *The Vote*, With thanks to The British Newspaper Archive.

concepts are stretched and blended with biblical rhetoric by placing the scientific shapes within the "Tree of Life" – the source of eternal life in Genesis – to suggest that Emprote is a "life bearer." This claim extends the scientific rationale of the period that protein was essential to support life and that, without it, humans would die (Miles 1905, xiv). It also fits with the notion that proteid foods brought consumers back in touch with nature as they were eating "the best part of nature's best food" or even a "new milk." The three overlapping circles also hint at the Holy Trinity, thereby reinforcing the impact of the scientific message through religious symbolism, while the accompanying "three valuable hints" further accentuates this triadic structure, with the handwritten typeface connoting familiarity and authenticity (Ledin and Machin 2020a, 131).

Another feature of adverts by both Plasmon and Emprote is the inclusion of testimonials by leading scientists and medical practitioners. On the surface, these testimonials seem genuine and, for consumers, add strong credibility to the nutritional benefits of eating protein foods: for example, "*The Lancet* says: 'These foods in general show a high nutritive value'" (Emprote) and "The nourishing value of these foods is enormously increased, *British Medical Journal*" (Plasmon). However, searching the archives of *The Lancet* and *British Medical Journal* reveals that, in some cases, no such testimonial ever existed, or, in others, the original citations were referencing protein in general rather than Plasmon or Emprote. Leaving the quotes deliberately vague in the advertisements (e.g., "these foods") forces consumers to "connect the dots" and make assumptions that these prestigious medical journals have endorsed the products. Other dubious testimonials include only the doctor's initials, making it difficult to trace whether he is actually a real person: "The voice of the physician J.C.: 'Plasmon Oats are simply magnificent and I have porridge made from them every morning'." Today, testimonials are highly regulated by the Advertising Standards Authority (UK) and EU legislation, which may explain why they are not commonly used in protein food advertisements or packaging. Furthermore, these testimonials rely on the written word rather than semiotics, making it far more difficult to bypass rigorous legislation.

Overall, just as now, both Plasmon and Emprote communicate the discourse of science to consumers, but the scientific rationality is, in fact, questionable. These advertisements act as a form of "lifestyle marketing" (Chen and Eriksson 2019, 435), which deliberately capitalizes upon people's concerns about a lack of protein in their diets. In using elements of science to frame these products as possessing a "wonder cure" that will immediately boost protein levels and, in turn, increase strength, stamina and recovery, consumers are duped into believing that they are making informed choices about their diet. As the use of science to sell products was fairly innovative in the early twentieth century, consumers were not as clued into these subtle marketing strategies as contemporary consumers and, thus, were more likely to take the claims at face value (Gurney 2017, 64). Nonetheless, it is clear that even the more scientifically aware consumers of today can still be fooled by semiotic choices that transmit the "myth" of protein.

Healthy lifestyle aspirations and goals

The physical culture movement (PCM) of the late nineteenth century had a profound effect on the marketization of protein-enhanced foods. The PCM emphasized that a fit body was an "obligation of citizenship" and was essential for Britain's military prowess, economic success and social harmony (Zweiniger-Bargielowska 2006, 596). Cutting

across the political spectrum, the PCM drew on Victorian self-help ideology and advocated regular exercise alongside broader health reforms, including vegetarianism, temperance, fresh air and frequent bathing, to avoid the physical degeneration of the British race (Whorton 2000). Many of the PCM's arguments have striking parallels with neoliberalism, which encourages citizens to take responsibility for their own health to limit the burden they might place upon society (Cederström and Spicer 2015).

Advocates of the PCM tended to fall into two camps: those who participated in weightlifting, bodybuilding and gymnastics with the aim of developing strong, muscular bodies; and those who practised tennis, swimming and running to obtain leaner, athletic bodies (Zweiniger-Bargielowska 2006, 599–600). The two men who epitomized these contrasting yet coexisting views on health and fitness were Eugen Sandow and Eustace Miles (Figure 3): the spokesperson for Plasmon and the figurehead of Emprote, respectively.

Across its advertisements, Emprote uses bold, capitalized headings to market its protein food to particular types of sports enthusiasts: "Before swimming, take an Emprote meal" or "Before tennis, take an Emprote meal. Often, these headings are accompanied by images of men and women participating in these sports to emphasize the product's target audience. In depicting these figures as engaged in material actions with their gaze directed away from viewers, they are turned into objects of contemplation, which idealizes and decontextualizes them (Ledin and Machin 2018, 57). This, in

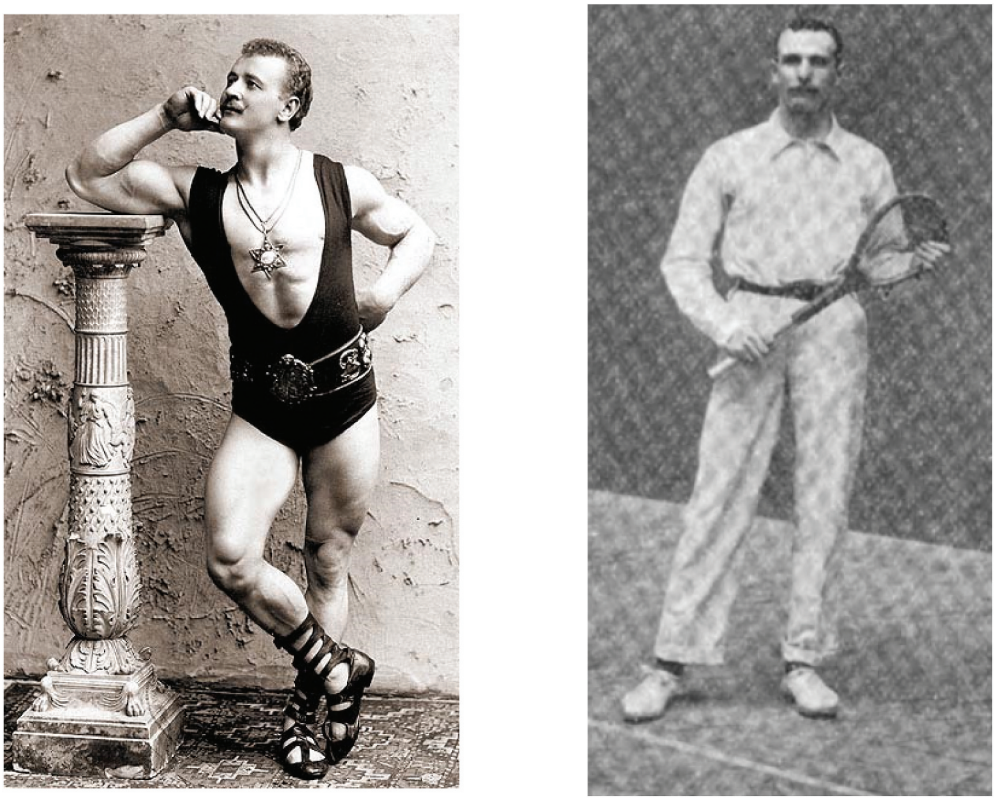


Figure 3. Two strands of the physical culture movement.
(a) Eugen Sandow; (b) Eustace Miles.

turn, encourages viewers to make a connection between themselves and the figures, hoping to claim the discourses of health, fitness and an active lifestyle as their own. Active participants are also a common feature of contemporary protein food marketing. Bright and soft lighting, slim and attractive models and smiling expressions are all used to create a sense of optimism toward protein consumption and fitness (Chen and Eriksson 2019, 438).

Emprote sets up a clear customer base for its product and creates a rivalry with Plasmon by using provocative straplines like "before all real sport," coupled with the absence of images of bodybuilders. Emprote's clientele is further reiterated by the testimonies that appear in its advertisements from such people as the cyclist Chas Davey, the mountaineer General Bruce and the sailor Robert Hitchens, as well as the announcement that, with Emprote, "the tennis player Eustace Miles has perfected a food" which fulfills the requirements of "every keen athlete" and must form "the basis of his diet when training." The tall, slim and narrow glyphs used in the Emprote brand name also associate the product with athleticism and the body shape that consumers are likely to aspire to. This tactic can also be found in the font choices of contemporary protein food brands (Chen and Eriksson 2019).

Plasmon, in contrast, squarely aims its advertisements at those looking to build strong physiques. Images regularly show muscular men in leotards lifting weights and even young boys flexing their biceps or holding dumbbells; similar images can still be commonly found today in the advertisements of some protein brands (e.g., Nitro Tech, Dymatize, Superpump Max). Typical "callouts" that appear alongside these images are "makes strong bodies" and "builds body, brain and nerve," implying a direct cause and effect between taking Plasmon and the body's transformation. As Chen and Eriksson (2019, 431) note, such callouts are often written in a large, bold font, which attracts consumers' attention and leads them to overlook more scientific "facts" about the product written in a smaller typeface. Like Emprote, typography also plays a key role in expressing healthy lifestyle discourse: Plasmon's letters are often short, heavy and wide to imply that it is more substantial than other foods, with bulging cracks that resemble muscles and represent strength (Ledin and Machin 2020a, 125).

The supposed transformative properties of Plasmon are emphasized by the reoccurring image of a pyramid in its advertisements, with each building block suggesting interconnections between consuming protein food and acquiring a healthy lifestyle (Figure 4). In these pyramids, the product name Plasmon is written in capital letters at the base, with the word "strength" alongside supporting four tiers that make a visual hierarchy based on body parts (muscle, tissue, bone, blood), what Plasmon does to them (strong nerve, alert brain, active body), what this leads to (energy, vitality) and the ultimate outcome (long life). These words are enclosed within a triangle made up of "health" repeated three times, its strong border and repetition visually suggesting that Plasmon keeps consumers healthy. Both its layout and the historical association of pyramids with Ancient Egypt and eternal life imply connections that do not really exist, thus leaving it up to consumers to make sense of the relations (Ledin and Machin 2020a, 188). When viewed as a whole, these components create what Hartmann and Siegrist (2016, 233) call a "halo of health" as consumers rely upon their limited knowledge of protein to make assumptions about Plasmon's effectiveness.[5]

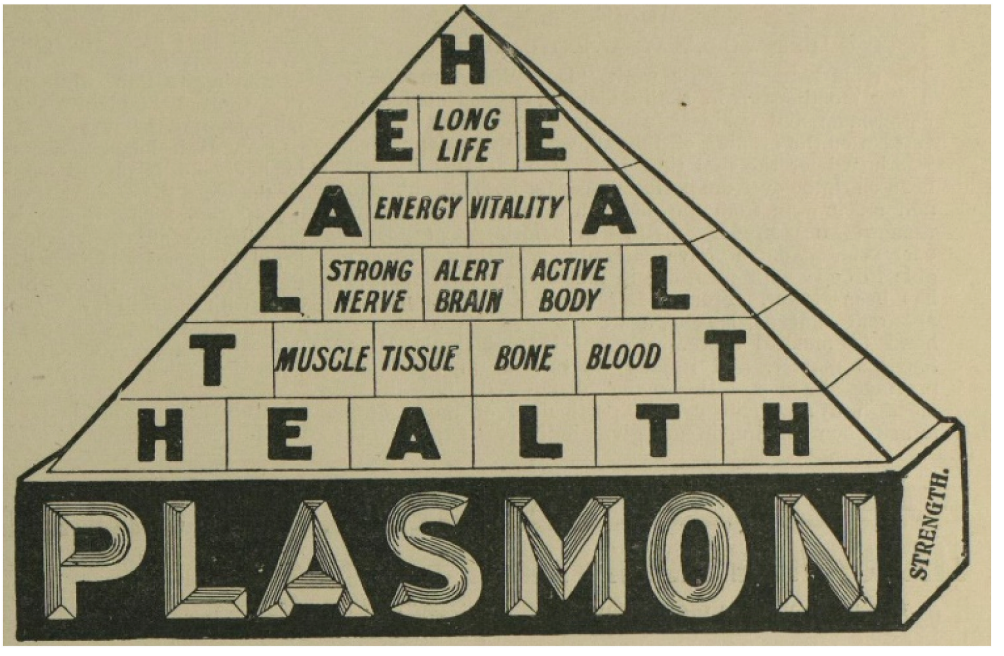


Figure 4. The Plasmon pyramid. *Illustrated London News*/Mary Evans Library.

Despite positioning themselves as healthy products, Plasmon and Emprote often feature conflicting messages in their advertisements. The font and texture used for Plasmon whipped cream, for example, creates the impression that it is dripping, which conjures up notions of indulgence and succulence, while the Plasmon product range listed in Figure 5(a) is clearly not healthy yet uses the strapline "why not take them in their best form?" to suggest that Plasmon versions are highly nutritional. Similarly, images of cows to support the claim that "Plasmon is fresh milk" are highly misleading (Figure 5(b)). While these strategies seem

Figure 5. Misleading advertisements.
(a) Unhealthy choices presented as healthy (Plasmon); (b) Cow images (Plasmon). (a) *Gentlewoman* and (b) *Norwich Mercury* © The British Library Board. All rights reserved. With thanks to The British Newspaper Archive.

contradictory, similar examples have been found in contemporary advertisements, which serve to maintain the link between protein and scientific evidence while also associating it with fun and comfort (Chen and Eriksson 2019, 437). Another common trait in Plasmon and Emprote advertisements is the inclusion of slogans that offer little or no linguistic sense: "5000 free samples of health" (Emprote), "the race is to the strong" (Emprote), "for brain workers" (Emprote) and "the food cocoa" (Plasmon"). Again, similar incohesive phrases – "squat love", "lean quark drink" – have been found in contemporary advertisements, which work symbolically to emphasize the supposed health-restoring properties of the products to consumers (Chen and Eriksson 2019, 439).

Both Plasmon and Emprote are also very skilled at profiting from current affairs to gain support for their foods. During the 1906 heatwave, for example, the products were rebranded as "summer foods," incorporating rays of sunshine into their advertisements to convey naturalness and healthiness. Emprote also argued that it was helping to keep thousands of people in a "healthy, cool and invigorated condition." Equally, in the extremely cold winter of 1908, Emprote claimed that it was now "specially adapted for winter," despite the fact that none of its ingredients had changed. Following an outbreak of bovine tuberculosis in 1907, Plasmon capitalized upon the public's fears by claiming that "the milk danger" could be entirely avoided by consuming their product. This claim is particularly ironic considering the earlier assertion that Plasmon was "fresh milk" and highlights the fickleness of manufacturers. In all the above cases, no details are provided on how the products meet the criteria they purport to possess. Instead, buzzwords, imperatives and direct address are relied upon to persuade consumers to act in a particular way: "Base your diet on Emprote and be really fit"; "Hard work is no trouble if you feed rightly." These types of phrases make it the consumers' responsibility to undertake a self-care regime and suggest that if they cannot be bothered to consume Plasmon and Emprote, they are irresponsible and will contribute to the decline of the British race. Thus, just as we see today in protein food advertisements, these Edwardian products also created a dichotomy between the "responsible" who are prepared to look after their bodies and the "lazy" who are unwilling to adhere to the norms of healthiness (Chen and Eriksson 2019, 425).

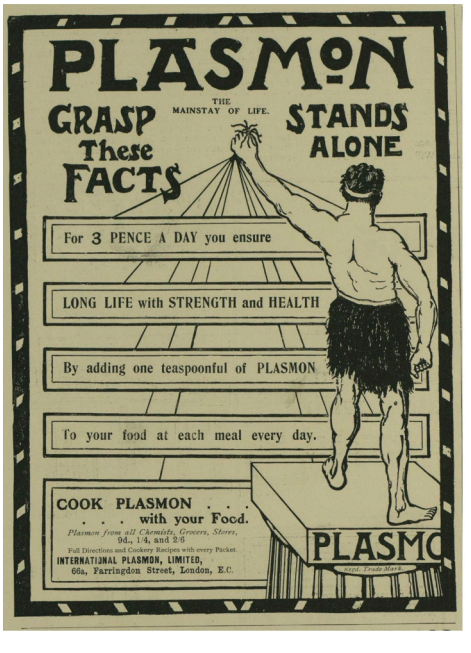
Overall, we see similarities between past and present techniques for marketing protein foods in the way that the meaning potentials of particular semiotic choices are drawn upon to connect products to prevalent cultural values surrounding health, exercise and wellbeing. In some cases, this is overtly done through language, while in others, image, typography and layout play a major role. In splitting the consumer market according to two different strands of the PCM, both Plasmon and Emprote are able to sustain different discourses about protein and emphasize its supposed nutritional benefits for particular types of active lifestyle. At the same time, they manage to connect protein's consumption with one's duty as a good British citizen, consequently suggesting that those who do not consume it are selfish and thoughtless.

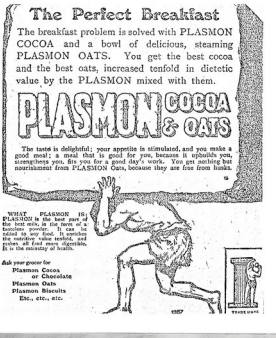
Classical and new masculinities

As the previous section may have hinted at, both Plasmon and Emprote aimed their discourses of healthy lifestyle primarily at male consumers. In the early twentieth century, there was a prevailing belief that men benefitted most from protein as they led physically active lives and, thus, required greater strength than women. Protein was also inherently associated with other

masculine traits, such as emotional stoicism and virility, thereby turning its consumption into a performance through which men could assert their hegemony (Greenebaum and Dexter 2017, 637). Even today, protein-enhanced foods are still consumed more frequently by males than females due to persisting stigmas around "bulky" women who go against traditional gendered body norms. However, there has been a recent push toward the promotion of muscular bodies for women, with such protein brands as Bio-Synergy and N.O. Explode emphasizing that "strong is the new skinny." Just as with the promotion of healthy lifestyle, Plasmon and Emprote shaped and advocated particular discourses of masculinity based on their differing perspectives of the PCM.

Plasmon, which was endorsed by bodybuilder Eugen Sandow, promoted a type of masculinity that was concerned with the "ideological and commercial cultivation" of the body and strongly influenced by classical revivalist models of body perfection (Heffernan 2019). The predominant figure in most advertisements is a mesomorphic male, dressed in a loincloth and depicted on a plinth from a full-body rear angle (Figure 6(a)). His appearance evokes classical sculptures of Greek gods, which were seen by early twentieth-century physicians and health reformers as embodying masculine ideals of health and beauty (Park 2007, 1606). According to Kress and Van Leeuwen (2006, 119), rear angles offer the individual to viewers as "an object of contemplation" as if he were "a specimen in a display case." This gives the man a godlike status as viewers aspire to look like him and are encouraged to buy Plasmon in the hope that their bodies will miraculously resemble his. The loincloth is also significant due to its strong connotations with the prehistoric age and hunter-gatherer cavemen. Physical culturalists believed that healthy eating and exercise would help men combat the chaotic, industrial





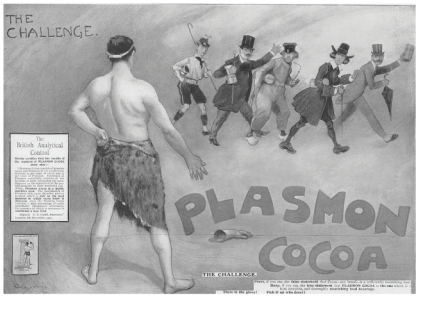


Figure 6. Plasmon and classical masculinity.
(a) Figure on plinth; (b) Figure as Atlas; (c) The Challenge. (a) and (c) *Illustrated London News*/Mary Evans Library (b) *Lyttleton Times* All rights reserved. With thanks to The British Newspaper Archive.

world and prompt a quasi-spiritual awakening (Stapell 2019, 212). Thus, in this choice of apparel, Plasmon is implying that their product will bring men back in accordance with both nature and their primitive alpha male status, consequently restoring masculinity, as well as health and strength.

In other advertisements, the male figure is holding heavy tools and engaged in physical actions, such as hammering, chiseling, lifting and throwing. These actions are staunchly male-oriented and help transmit the message that Plasmon is for the physically strong. Again, many of these images bear a strong resemblance with classical antiquity: Figure 6(b), for example, evokes Atlas, with the man's bent-over torso and huge rock being lifted above his head. In one particular advertisement (Figure 6(c)), we see the male figure facing a group of five English gentleman dressed in suits and top hats and holding tins of standard cocoa under their arms. The figure has one hand on his hip and the other outstretched in a challenge to them to "pick up the gauntlet" on the floor and accept his invitation to try Plasmon. Positioning the men across from one another creates tension between them, which is further accentuated by their strong contrast in physical appearance that indicates a clear "before" and "after" (Ledin and Machin 2020a, 206). These subtle visual cues lead viewers to believe that Plasmon is superior to other products and will make them stronger and more masculine if they consume it. Thus, in these depictions, Plasmon transforms from a food into a micronutrient, while eating becomes a mechanical process that turns these nutrients into muscle (Lefkowich et al. 2017, 458). While images of muscular men can still be found on protein food packaging today, masculinity is conveyed more frequently through product names (e.g., Combat, Maximuscle, Alpha-Nitrox) and symbolic colours/fonts, which help manufacturers to circumvent regulations on gender-biased advertising.

Park (2007, 1614) notes that another key aspect of the PCM was modulating physical strength with moral strength in order to achieve the right balance of body, brain and self-control. This harmony between mind and body is clearly evoked in the straplines that appear alongside the male figure in Plasmon's advertisements: "Plasmon cocoa is the only one which builds and nourishes muscle, brain, nerve" and "Plasmon makes bone, muscle, brain." Here, the visual and verbal elements work in conjunction with one another to convey the idea that a man's mental ability will be impaired if he does not build up his body. Today, references to brain power tend to be omitted from protein food packaging and advertisements, partially due to the risk of promoting false messages but also due to the desire to associate the "myth" of protein with physical rather than mental strength (Chen and Eriksson 2019). Nonetheless, "brain food" has become a popular buzzword in the marketization of other products, particularly nootropic drinks (e.g., Neurobliss, Synapse, Trubrain).

In keeping with the social beliefs and lifestyle of its founder Eustace Miles, the advertisements for Emprote showcase a newly emergent masculinity predicated upon vegetarianism and athleticism. Although vegetarianism had emerged in Britain in the 1840s, it grew in popularity in the late nineteenth century amongst some followers of the PCM who were concerned with adopting flesh-free diets to live as close to nature as possible (Heffernan 2019). Defenders of the British Empire complained that vegetarianism robbed men of stamina and energy, which threatened their virility and Britain's racial strength (Gregory 2007, 65). Emprote aimed to tackle these concerns head on and show that masculinity and vegetarianism could go hand in hand. In its advertisements, Emprote constructs a narrative that challenges the hegemonic idea that men need animal protein by emphasizing how vegetarianism can improve physical fitness and highlighting examples of famous male

Figure 7. Emprote and "new" masculinity.
(a) Vegetarianism; (b) Aggressive language and rivalry. (a) *Bath Chronicle and Weekly Gazette*/Reach Licensing; (b) *Athletic News* All rights reserved. With thanks to The British Newspaper Archive.

athletes whose abilities have been enhanced from consuming the product. Lists of athletic records are presented and attributed to Emprote; even when not explicitly stated, the close spatial position of the Emprote logo and names of male athletes creates a sense of causality (Ledin and Machin 2020a, 210) and associate Emprote with sporting success: the traditional hallmark of masculinity. Despite the marked growth in vegetarianism and veganism in recent years, these buzzwords have not been widely employed in protein food advertisements and packaging, suggesting that stereotypes around plant-based diets and femininity persist.

Emprote advertisements also use vegetarianism to tap into middle-class values of self-discipline and self-control (two key components of the PCM) by claiming that the product is essential for "brain and body work" or promote its superiority to animal protein through assertions that "it more than takes the place of meat" because it is "rich in body-building factors," "builds up health" and "increases energy." In other examples, Emprote argues that "vegetarian meals are only successful if proteid foods like nuts, pulses and Emprote" are used (Figure 7(a)). Here, in placing Emprote in juxtaposition with two legitimate and well-established health foods, it is given equal footing, leading consumers to believe that it possesses the same nutritional qualities (Ledin and Machin 2020a, 208). Contemporary studies show that veganism is promoted to men by emphasizing its health benefits over animal rights or environmental concerns, which are associated with femininity (Gough 2007; Wright 2015). Emprote's advertisements, which advise men that vegetarianism will make them "conquerors of their sexual and

social world" (cited in Heffernan 2019), show that these marketing strategies are not unique to the twenty-first century.

Greenebaum and Dexter (2017, 339) note that another way in which contemporary male vegans justify their dietary choices is through aggressive language, which emphasizes their heterosexuality. Similar processes are at work in Emprote's advertisements, which often use direct address, value-laden words, dichotomies and face-threatening rhetorical structures to develop non-existent rivalries. We see this particularly in Figure 7(b), which was published in a Manchester sports newspaper and is entitled "The North vs. the South." The advertisement plays on the stereotypically competitive nature of men to claim that thousands of athletes in the south of England consume Emprote and that if northerners do not start consuming it, they will lose against southerners when they next compete. It goes on to set out two extreme possibilities in the form of questions: "Is the North to live up to its reputation or are the Southerners to win? Are you going to adopt the Emprote diet or are you going under?" These two options are clearly not what we would expect to be presented as opposites, but in placing them together, they are seen as linked and suggest to male readers that their masculinity is at stake if they do not adopt the Emprote diet. It also creates tensions between men and their ancestors: "Your vitally insufficient, unscientific food which was good enough for the easy-going times of your grandfathers will not stand a chance against the highly scientific modern training methods of the men who get fit the Emprote way." Again, Emprote is presenting untruths (e.g., their grandfathers had it easy) as facts, but this is masked by the direct challenge that follows ("what are you going to do about it?") which gives the statement credibility and plays up the notion of the "good citizen" who consumes Emprote to maintain his masculinity, protect his reputation and, ultimately, save his country from decline (Rose 2003, 153). Aggressive advertising is also used by contemporary protein brands aimed at men: "Be a warrior. Get in the gym and go to war" (Extreme Labs) and "Don't just hit the gym. Demolish it" (Oh Yeah!), which play upon macho ideals around toughness, violence and dangerousness.

In the two differing discourses on masculinity promoted by Plasmon and Emprote, we see distinct linguistic and visual strategies in operation. Plasmon depends overwhelmingly on images to convey a blend of primitive and classical masculinities, centered around a beautiful, strong body, while Emprote largely uses language to reframe vegetarianism within the context of athleticism, rivalry and aggression in order to present it as a manly phenomenon that is essential to being a good British citizen. Despite their opposing ideas on body image, both brands, nonetheless, emphasize a masculinity in line with the PCM that is strongly marked by a "return to nature" and the search for inner harmony between the body and the mind. Today, protein brands rely largely on product names, color and typography to position their products as masculine. They also tend to use aggressive language and avoid references to vegetarianism or veganism, indicating a persisting stigma around the need to associate protein with meat and manliness.

Conclusion and theoretical/practical implications

This paper has historicized the contemporary protein-enhanced food trend by focusing on two brands – Plasmon and Emprote – that emerged onto the British market in the early twentieth century and how they harnessed the meaning potentials of semiotic resources to

"mythologize" protein and suggest to consumers that it was essential to maintaining a healthy lifestyle.

Capitalizing on the growing public interest in health and wellbeing, marketers combined pseudo-scientific facts, buzzwords, percentages, infographics, geometric shapes and testimonials in their advertisements to provide a sense that their products were scientifically formulated, technologically advanced and, therefore, trustworthy and effective. Through a single-minded focus on one nutrient (in this case, protein), marketers were also able to convince consumers to think about what they ate in terms of nutrients rather than whole ingredients. This meant that they bought into the idea that protein was fundamental for healthy living, but also that protein-enhanced versions of typically unhealthy foods, such as biscuits, chocolate and cocoa, were healthy choices. Illustrations of trees of life (Emprote) and pyramids (Plasmon) preserved an illusion that protein powder was an elixir that brought harmony between the body and mind, while direct address, value-laden words and rhetorical questions placed the onus on consumers to look after their health, implying that not to do so was to be irresponsible and to be letting down themselves, their family and their country. Despite the fact that Plasmon and Emprote essentially contained the same ingredients, their clever use of image and typography to depict particular types of sportspersons and, by the same token, particular types of masculinity also enabled them to split consumers automatically into two camps. Whether a person chose to align with one product or the other became indicative of who they were, their lifestyle beliefs and their fitness goals.

The marketing strategies identified in this paper are in line with other historical research on advertising in the early twentieth century. Both general studies on gender and healthy living in advertisements (Loeb 1994; Apple 2016) and specific studies on the marketing of radium products (Santos 2020; Eriksson and O'Hagan, forthcoming), pure foods (O'Hagan 2019) and nerve foods (O'Hagan 2020) have all shown how advertisers acted quickly in response to new inventions or scientific discoveries and used the power of semiotics to shape public perceptions of their effectiveness. However, there is scope for further research in this area that addresses other new and popular products of the era, such as vitamins, powdered milk and frozen vegetables, and how they were marketed as innovative, "healthy" choices. Perhaps even more significant is the fact that the marketing strategies identified in this paper also show striking parallels with contemporary marketing strategies for protein foods, which rely equally on scientific rationale to frame their consumption as both healthy and necessary (cf. Chen and Eriksson 2019). This distinct focus on science, gender and healthy lifestyle in historical marketing also crosses over with contemporary studies on the marketing of other "healthy" products, such as probiotic yogurts, skincare creams, nootropic drinks, margarine and oat milk (cf. Koteyko 2009; Arroyo 2013; Chen and Eriksson 2021; Ledin and Machin 2020b). This makes it clear that "lifestyle marketing" – often considered a contemporary phenomenon and used by brands to embody the values and interests of a particular group and, therefore, maximize sales potential (Featherstone 2007) – has much earlier origins in the early twentieth century. Thus, cross-temporal comparative research on the marketing of supposedly contemporary trends, such as functional foods, veganism and gluten-free diets, could offer an important new avenue of research.

From a theoretical perspective, the application of MCDA has brought to the fore the range of strategies that were mobilized by marketers to generate public interest in their protein foods as healthy lifestyle choice. Yet, it has also uncovered contradictions or

misinformation that existed across brands and sometimes even within advertisements by the same brand. Therefore, the current study posits MCDA as an important methodology to be introduced to historical research on food marketing because it places advertisements in a broader societal context, explores how they are shaped by and shape discourses that circulate in a society at a given time and fosters a critical reflection on how semiotic resources can be exploited to construct certain discourses of truth. Beyond an historical context, MCDA also has important implications for contemporary understandings of food marketing. Gaining an awareness of how susceptible consumers were to messages in protein food advertisements during the early twentieth century offers us distance from our current experiences with protein marketing and, accordingly, more room to develop a critical stance and reflect on the information we receive today. Therefore, by understanding the sociohistorical antecedents of other supposedly contemporary food trends and the overwhelming similarities between past and current marketing practices and consumer behavior, we can become empowered against such strategies and make informed choices about products that are framed as healthy.

From a practical perspective, the fact that similar marketing techniques are still used today to mislead consumers and reinforce the "myth" of protein raises the important question of how effective current legislation on correct labeling and responsible advertising is and whether it enables loopholes on semiotics to be exploited. EU directives 2006/114/EC and 1169/2011, for example, focus largely on written language and the need for evidence-based factual claims in food advertisements and packaging. These directives do not apply to choices of color, font and texture, and can even be circumvented by images to imply what cannot be overtly claimed in the text. The directives also ignore layout and composition, which can subtly convey health discourse through such techniques as salience, framing and visual hierarchies. Too often is history ignored when developing policy, but the findings of this study suggest that food legislators and policymakers would benefit enormously from grounding legislation in historical evidence. This would enable them to reconstruct the roots of seemingly contemporary problems and restrict policies that develop from distorted renderings or misunderstandings of "lifestyle marketing", thereby ensuring that consumers are not manipulated by visual cues and misled into purchasing products that offer no real additional benefits to their health.

Notes

1. Protein-enhanced foods were described as such in the *Daily Mirror* (September 26, 1907).
2. Roughly £1.5 million in today's money.
3. See the Consumer Protection from Unfair Trading Regulations in the UK and (EU) No 1169/2011 on food labeling, for example.
4. 1900 to 1930 marked the key years for Plasmon and Emprote. They began to lose popularity in the lead-up to World War Two as the ideal of a strong body became corrupted by right-wing agitators and increasingly associated with Fascism. Furthermore, wartime rationing enabled people to consume the appropriate daily intake of protein without having to resort to protein-enhanced foods. By the early 1950s, Emprote had disappeared entirely from the market, while Plasmon dropped any references to protein and began to reframe its product as "the food with that extra something," before finally ceasing British operations around 1962.
5. In fact, some Plasmon advertisements even describe the product as creating "a crown of health" when consumed.

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Appendix. Date and Source of Advertisements for Plasmon and Emprote

No.	Product Name	Food Type	Date	Source
	Plasmon	Cocoa	April 19, 1902	Illustrated London News
	Plasmon	Cocoa	March 11, 1905	Illustrated London News
	Plasmon	Cocoa	May 16, 1907	Sheffield Daily Telegraph
	Plasmon	Cocoa	January 30, 1905	Western Daily Press
	Plasmon	Cocoa	February 5, 1907	Yorkshire Evening Post
	Plasmon	Cocoa	September 25, 1905	Daily Mirror
	Plasmon	Cocoa	October 10, 1910	Daily Mirror
	Plasmon	Cocoa	November 12, 1904	South Wales Daily News
	Plasmon	Cocoa	February 8, 1902	Illustrated London News
	Plasmon	Cocoa	April 5, 1902	Illustrated London News
	Plasmon	Cocoa	November 15, 1902	Illustrated London News
	Plasmon	Cocoa	October 24, 1904	Illustrated London News
	Plasmon	Cocoa	October 10, 1903	Illustrated London News
	Plasmon	Cocoa	January 26, 1907	Illustrated London News
	Plasmon	Cocoa	November 26, 1904	Illustrated London News
	Plasmon	Cocoa	January 18, 1905	Leicester Daily Post
	Plasmon	Cocoa	February 15, 1913	Daily Mirror
	Plasmon	Cocoa	February 5, 1913	Daily Mirror
	Plasmon	Cocoa	October 17, 1913	Daily Mirror
	Plasmon	Cocoa	January 4, 1908	Lyttleton Times
	Plasmon	Cornflour	July 11, 1911	Aberdeen Press and Journal
	Plasmon	Oats	December 16, 1910	Forfar Herald
	Plasmon	Oats	January 10, 1905	Western Evening Herald
	Plasmon	Oats	April 24, 1908	Forfar Herald
	Plasmon	Oats	October 29, 1904	Illustrated London News
	Plasmon	Oats	October 26, 1907	Illustrated London News
	Plasmon	Oats	July 22, 1912	Lyttleton Times
	Plasmon	Oats	November 3, 1913	Daily Mirror
	Plasmon	Oats	October 16, 1922	Daily Mirror
	Plasmon	Oats	October 6, 1925	Daily Mirror
	Plasmon	Oats	November 3, 1925	Daily Mirror
	Plasmon	Oats	November 3, 1916	Birmingham Daily Post
	Plasmon	Oats	October 27, 1916	The Times
	Plasmon	Powder	January 9, 1907	Nottingham Evening Post
	Plasmon	Powder	January 19, 1907	The Penny Illustrated Paper
	Plasmon	Powder	February 15, 1907	Bristol Times and Mirror
	Plasmon	Powder	September 11, 1916	Sheffield Independent
	Plasmon	Powder	January 4, 1912	Banffshire Reporter
	Plasmon	Powder	July 26, 1902	Illustrated London News
	Plasmon	Powder	September 29, 1906	Illustrated London News
	Plasmon	Powder	April 4, 1903	Illustrated London News
	Plasmon	Powder	June 13, 1903	Illustrated London News
	Plasmon	Powder	March 16, 1907	Illustrated London News
	Plasmon	Powder	September 28, 1903	Illustrated London News
	Plasmon	Powder	April 13, 1907	Illustrated London News
	Plasmon	Powder	May 3, 1902	Illustrated London News
	Plasmon	Powder	May 17, 1902	Illustrated London News
	Plasmon	Powder	June 16, 1902	Illustrated London News
	Plasmon	Powder	June 28, 1902	Illustrated London News
	Plasmon	Powder	October 18, 1902	Illustrated London News
	Plasmon	Powder	November 1, 1902	Illustrated London News
	Plasmon	Powder	December 13, 1902	Illustrated London News
	Plasmon	Powder	June 4, 1904	Illustrated London News
	Plasmon	Powder	December 20, 1902	Illustrated London News
	Plasmon	Powder	May 9, 1903	Illustrated London News
	Plasmon	Powder	July 11, 1903	Illustrated London News
	Plasmon	Powder	January 6, 1904	Illustrated London News
	Plasmon	Powder	July 16, 1904	Illustrated London News
	Plasmon	Powder	November 12, 1904	Illustrated London News

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No.	Product Name	Food Type	Date	Source
	Plasmon	Powder	June 16, 1905	Illustrated London News
	Plasmon	Powder	June 25, 1906	Evening Express
	Plasmon	Powder	October 27, 1906	Illustrated London News
	Plasmon	Powder	December 21, 1907	Illustrated London News
	Plasmon	Powder	April 25, 1908	Illustrated London News
	Plasmon	Powder	April 22, 1903	Western Daily Press
	Plasmon	Powder	January 11, 1907	Coventry Evening Telegraph
	Plasmon	Powder	March 7, 1903	Black & White
	Plasmon	Powder	January 10, 1903	Illustrated London News
	Plasmon	Powder	March 2, 1905	The Medical Press and Circular
	Plasmon	Powder	September 21, 1916	The Daily Record
	Plasmon	Powder	October 1900	Journal of Mental Science
	Plasmon	Whipped Cream	May 6, 1905	Illustrated London New
	Plasmon	Whipped Cream	July 1, 1905	Illustrated London News
	Emprote	Custard	September 9, 1905	Illustrated London News
	Emprote	Powder	November 14, 1907	Daily Mirror
	Emprote	Powder	June 17, 1908	London Daily News
	Emprote	Powder	January 28, 1908	London Evening Standard
	Emprote	Powder	April 9, 1908	London Evening Standard
	Emprote	Powder	November 10, 1924	Athletic News
	Emprote	Powder	November 24, 1924	Athletic News
	Emprote	Powder	December 15, 1924	Athletic News
	Emprote	Powder	December 22, 1924	Athletic News
	Emprote	Powder	December 29, 1924	Athletic News
	Emprote	Powder	October 25, 1926	Athletic News
	Emprote	Powder	November 22, 1926	Athletic News
	Emprote	Powder	January 3, 1927	Athletic News
	Emprote	Powder	February 28, 1908	London Evening Standard
	Emprote	Powder	January 30, 1908	Westminster Gazette
	Emprote	Powder	May 25, 1925	West Sussex Gazette
	Emprote	Powder	March 7, 1928	Worthing Gazette
	Emprote	Powder	February 2, 1910	The Scotsman
	Emprote	Powder	January 20, 1928	Fleetwood Chronicle
	Emprote	Powder	August 15, 1930	Fleetwood Chronicle
	Emprote	Powder	October 18, 1920	Portsmouth Evening News
	Emprote	Powder	August 8, 1925	John Bull
	Emprote	Powder	November 26, 1914	Y Darian
	Emprote	Powder	January 12, 1925	Athletic News
	Emprote	Powder	October 16, 1925	The Vote
	Emprote	Powder	June 3, 1916	Bath Chronicle
	Emprote	Powder	November 14, 1907	Daily Mirror
	Emprote	Powder	December 3, 1914	Y Darian
	Emprote	Powder	July 27, 1925	Daily Mail
	Emprote	Powder	August 13, 1925	Daily Mail
	Emprote	Powder	July 10, 1926	Daily Mail
	Emprote	Powder	June 8, 1931	Daily Mail