

The future of food: where a hamburger is not what it seems

Gyorgy Scrinis
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For many people, a tasty and healthy hamburger would be one made with simple, fresh and good quality ingredients.

But for the director of the CSIRO Food Futures division, Dr Bruce Lee, a healthy hamburger is constructed from highly processed and engineered ingredients containing substances, such as modified protein fat replacers, designed to simulate the taste and "mouth-feel" of a real hamburger, without delivering a high dose of calories or saturated fats.

Australian food scientists, manufacturers, marketing gurus and government regulators are meeting this week at the Food Safety Conference to promote "new directions" in food production such as these.

The CSIRO Food Futures research division is dedicated to "tailoring raw ingredients to develop healthier foods that meet consumer demands".

This includes the development of a number of "bioactive" ingredients that serve particular functions, such as a glycoprotein that has a satiating effect and thereby helps control weight, or antioxidants from native fruits to prevent ageing.

Some of these nutritionally engineered foods and ingredients stray into the realm of medicinal or pharmaceutical products, and are made to sound like they tackle important public health issues. But most applications are aimed at nutritionally tinkering with highly processed and mass-produced foods and ingredients so as to market them as offering health benefits.

The aim is not only to deceive our senses, but our common sense as well. A consequence of nutritionally engineering foods in this way is that they may undermine the trust we place in our own senses to evaluate how healthy foods are, or the trust we place in traditional, cultural and ecological approaches to food.

Instead we become ever more dependent on nutrition experts to tell us what nutrients we should be eating, and dependent on the food industry to deliver foods engineered with the required nutrients, health benefits and simulated sensual experiences.

Within the food industry, the term for foods that are supposed to serve a specific health or bodily "function" is functional foods. It's not a term familiar to most people, although we'll be hearing more of it in the years to come, since this, we are assured, is the future of food.

It's not a particularly appetising term either — more mechanical than gastronomical.

The food industry would like us to think that what distinguishes "functional foods" from other foods is the "enhanced" or "optimised" state of health that these foods deliver. But any highly processed or poor quality food with a few added nutrients would qualify as a "functional food" under these definitions.

What really distinguishes these foods, however, is the ability to market their supposed health benefits. For this reason I refer to these foods as "functionally marketed foods", rather than "functional foods".

While the food industry has been marketing foods as healthy on the basis of their nutrient content for many decades, it has also been pushing to make explicit

health and disease-prevention claims on food labels, which are currently prohibited. The Australian Food Standards authority has once again bowed to the interests of the food industry, and is finalising new regulations to allow the use of health claims from next year.

Since our health authorities consider a high body mass index (BMI) to be a major cause of certain diseases, and to be a disease in and of itself — although both are highly contestable claims — any engineered food product that restricts calorie absorption might one day qualify for an approved health claim or disease-prevention claim.

The "functional hamburger", for example, might carry the claim: "As part of a balanced diet, functional hamburgers may help reduce the risk of heart disease and diabetes."

The "functional hamburger" could even be the centrepiece of the forthcoming CSIRO Total Wellbeing Diet Book for Kids. It would certainly meet the diet's optimum macro-nutrient profile for effective weight-loss, as it would be high-protein (lots of meat), moderate-carb (the bun) and low-fat (the modified-protein fat simulator).

All of these nutritionally engineered and nutritionally marketed foods and weight-loss diets have appeal only because we are already in the grip of what I call the ideology of nutritionism, or nutritional reductionism. The reduction of food to its nutrient and biochemical composition has come to dominate the way we think about food, particularly in relation to its quality.

Nutritionism goes hand in hand with nutrition confusion, and has provided the food industry with a powerful strategy for marketing its food products. Like "functional foods", the ideology of nutritionism undermines other ways of understanding and contextualising the quality of foods.

We need to return to other ways of approaching and thinking about food, as well as to look forward and to imagine other food futures. In fact, in the spirit of technological innovation, I've been experimenting with my new French-lentil pizza recipe.

The kids think it tastes all right, and it's pretty healthy too. They have dubbed it "funky pizza", which sounds less scientific, but more appetising, than "functional pizza".

Unfortunately, my funky pizza is high in protein (lentils), high in carbs (flour and potatoes in the dough), and high in fat (lots of cheese and olive oil), so it fails the CSIRO Diet's macro-nutrient test.

Perhaps I could just sprinkle on a few bioactive nutrient absorption inhibitors, and then the kids would be able to stuff their faces.

Dr Gyorgy Scrinis is a research associate in the Globalism Institute at RMIT University.