

WN *Hot stuff*

World Nutrition **Volume 6, Number 6, June 2015**

Journal of the World Public Health Nutrition Association
Published monthly at www.wphna.org/worldnutrition/

Project Phoenix

Conventional nutrition is burned out. 2. Obsolescence, irrelevance

Access April 2015 Update on Project Phoenix here
Access May 2015 Update special on Project Phoenix here



Evident inability to prevent or control obesity and diabetes at any population level is one reason why conventional nutrition science is being questioned. Is this fair and if so, what are the implications?

The *Update* team reports

This is the second *Update* special in which modern conventional nutrition science is indicted. Last month the charges were of its obscurity and ignorance. This month the charges are of obsolescence and irrelevance. We stress two points again. One is that an indictment is not a judgement but a preliminary case to be examined. Two is that the charge is general and not total. Of course there are and will remain situations in which conventional nutrition is helpful and indeed crucial. The case being made here is not that such situations never occur – of course they do –but that they are peripheral. The letters we publish in this month's *Feedback* section are from Mark Wahlqvist and Claus Leitzmann, two former officers of the International Union of Nutritional Sciences, and Brooke Asknes and Maria Alvim, two recently graduated nutrition students. All of them support *Project Phoenix* as so far set out.

Introduction

How can a journal named *World Nutrition* run a series of commentaries indicting nutrition as a burned-out case, and specifically charging that nutrition in theory and practice suffers from obscurity and ignorance, obsolescence and irrelevance (here, this month) and (to come next month) incompetence, complacency and venality? What's happening? Why this auto-destruction? We are being asked questions like these.

The answer is that we are not indicting nutrition. The charge is laid against modern conventional nutrition, which is seen here from an historical point of view as a recent aberration. Dietetics, the fount of wisdom originating millennia ago, in which agriculture, animal husbandry, food customs, preparation and cooking, hospitality, commensality, gastronomy, health, well-being and healing have been perceived as parts of a greater whole, has within the last 200 years been reduced to a sub-set of biochemistry and medicine.

Properly understood, nutrition is vastly important – like money, in itself and also in what it stands for. Its true meaning is very close to if not identical with nourishment, which clearly refers to the mind, heart and soul as well as the body, and to well-being and good living in the world, as well as presence or absence of disability and disease.

What is under examination here is the still-dominant discipline that confuses nutrition with nutrients. These are the 'macronutrients' (proteins, fats and carbohydrates), and the 'micronutrients' (minerals and vitamins), now together with other 'bioactive substances' that may or may not be counted as 'nutrients'. As we said last month: 'A dictionary definition is "The branch of science that deals with (*esp.* human) nutrients and nutrition".' A definition which is less circular, making the point more explicitly, is contained in Wikipedia:

> Nutrition is the science that interprets the interaction of nutrients and other substances in food (e.g. phytonutrients, anthocyanins, tannins, etc.) in relation to maintenance, growth, reproduction, health and disease of an organism. It includes food intake, absorption, assimilation, biosynthesis, catabolism and excretion. A nutritionist is a person who advises on matters of food and nutrition impacts on health.

The topic thus described obviously is a science, which works by reducing foods into some of their chemical constituents, and examining their biochemical effects. Textbook examples are gross deficiency of vitamin C, the biological cause of the potentially deadly disease scurvy, once the scourge of mariners, and gross overdosing of vitamin A, said to have killed Arctic explorers subsisting on the livers of polar bears.

This reductionist discipline has been identified as 'the chemical theory of nutrition', and more succinctly by Gyorgy Scrinis and then Michael Pollan as 'nutritionism'. In these commentaries here, we refer to 'modern conventional nutrition'. This is meant to indicate that the type of nutrition science being scrutinised is not merely one among

others and of no special significance, but is currently dominant not only in Europe and the US and other countries that were the first to industrialise, but also now in all continents and almost all countries.

The charge is that notwithstanding its value in the circumstances of the 19th and earlier 20th century, modern conventional nutrition is now up a blind alley – or, to use the metaphor that is the theme of these commentaries, is burned out. If this charge is a sound basis for judgement, it is a sufficient explanation for the now blatant impotence of conventional nutrition in the face of the facts of this 21st century.

Obsolescence



The original driving force of modern conventional nutrition was the discovery that certain chemical constituents of food accelerate child growth and increase attained height. The patrons and paymasters were initially European imperial rulers, who needed tall strong young men fit to fight land wars

Beginning more than four thousand years ago, understanding of the relationship between food and health, well-being, and prevention and treatment of disease, was created and developed as part of what became known as the natural philosophy of dietetics. This knowledge and wisdom concerning the good life well led, of which food and eating was an integral part, was accumulated and enriched in China and India, and then in Mesoamerica, Greece, Rome, the Arab world, and Europe. A common factor especially in Asia has been perception of humans as part of the living and physical world, and of eating as a focus of what are now seen as the separate activities of farming, supply, food security, preparation and cooking of meals, commensality, gastronomy, good fellowship, and respect for the family, community, society and the environment. Living well in good health was the aim. Living long in bad health was not an aim. Quality mattered more than quantity – as it does.

In this context it becomes obvious that what is now the conventional and dominant nutrition science is a novelty. Its most important inventor less than 200 years ago was the German chemist, physiologist and entrepreneur Justus von Liebig (1803-1873), whose impact on nutrition was as overwhelming as that of the French chemist, microbiologist and entrepreneur Louis Pasteur (1822-1895) was on infection.

Nutrition as a tool of imperialism

Quality and judgement was discarded and usurped by quantity and numbers. Chemical nutrition rapidly became a tool of the rulers of the European imperial powers. This was because von Liebig and his contemporaries and followers in Europe and Britain demonstrated that their manipulations of diets in favour of protein of animal origin accelerated growth, and made children and young adults stronger and taller – all as measured. The impact of such diets on disease in later life was not observed or taken into account. Youth was all. Von Liebig himself also invented artificial fertiliser of crops, and also infant formula and meat and yeast extracts, the first industrialised ultra-processed products, which with other products high in protein were in effect artificial fertilisers of humans. Many of this first and later generations of nutrition scientists became rich and famous, because they showed how to breed big strong young men fit to fight land wars, and big strong young women and men fit to work in factories.

Thus, the main purpose of modern nutrition science in its first phase was as a servant of militarism, industrialisation and imperialism. In its second phase, beginning in the early 20th century, it retained the same purpose in a more benign form, after the nutritional causes of what became identified as specific deficiency diseases became identified. Thus as examples, scurvy and beri-beri, now rare, which ravaged sailors subsisting on putrid meat, rotten biscuits and rum, and coolies subsisting on rice stripped of almost everything but starch by new machines, were successfully prevented and treated respectively with vitamin C and B1 – and also more effectively by fresh food and artisanally-refined rice. In general the basic causes of nutrition deficiencies include war, invasion, colonialism, dislocation, immiseration and famine, which is to say tyranny in various forms and its effects and after-effects. Deficiencies usually are of adequate varied food and thus of all sorts of nutrients. *Whereas, in the judgement of Leonardo Mata* from his long experience in Guatemala:

> It is an axiom of settled peasant communities, even in the most marginal environments, that there is always enough food farmed and stored for all seasons.

What is left now

As a method of raising up big strong young infantry and labourers, conventional nutrition is becoming obsolete. Mechanised war and work can be and now is waged and done by men and women who are out of shape or even obese. But conventional nutrition science in general is obsolescent, not obsolete. Peasant communities are diminished or disappeared all over the world, and increasingly few societies, irrespective of level of material goods, are settled. So first aid, a form of charity, which

unfortunately tends to overlook and thus validate unjust and predatory systems of political and economic governance, remains constantly needed. There are plenty of jobs for conventionally trained nutritionists that pay the rent and include travel. These include as paramedical workers in their own and other countries (often housed in annexes or basements of medical schools), or at all sorts of levels within the ultra-processed product manufacturing industry and its associated businesses, or of course as teachers of new generations of students not able to match what they learn with the realities of the world we all live in now and can foresee.

There are of course very many people all over the world, some originally trained conventionally, others with different qualifications or experienced in life, who understand and practice nutrition in a full sense. These have rejected or broken out of the mould of biochemical science, or have never known or been interested in such a strange reduced technical discipline. The nutritionists who are able to make substantial contributions to the world now, have uncovered or absorbed the principles of the natural philosophy of dietetics. Many equally wise people without academic qualifications understand and practice these principles now with increasing confidence.

Irrelevance



Ronald McDonald in Kuala Lumpur, Malaysia. Plans are to double McDonald's outlets in Malaysia to 500 by 2020. Plans are to double outlets in China to 4,000 by 2017. Of McDonald's 35,000+ outlets, 10,000+ are now in Asia and Africa, where sales of Coca-Cola are also booming

While being new in an historical context, conventional nutrition is curiously antiquated. Its conceptual structure, as evident for example in textbooks, while much elaborated, is basically the same as it was in the 19th century, with the addition of micronutrients as appendices. As said above, it remains relevant in support of the food product manufacturing industry in its present forms, or as an adjunct to clinical

medicine as now practiced, or as training for students who may graduate to commercial or paramedical jobs, or who become teachers. Conventional nutrition is almost wholly irrelevant where understanding of nutrition properly understood is now most needed, as an integrated discipline using systematic methods. It is only as part of the practice of public health, also incorporating the age-old tried and tested philosophy and principles of dietetics, that nutrition now makes sense.

Part of the public health problem

As a merely biochemical discipline, seeking to be a 'hard' science retreating into ever-more cryptic technical and mathematical calculations, nutrition has no understanding of the social, economic and political drivers of obesity, diabetes and other chronic disease epidemics, and does not and cannot affect them. Discerning deep determinants of health requires qualities of insight and wisdom. Conventional nutrition now generally accepts or acquiesces in the cynical corporate position that states of disease and health are merely consequences of individual consumer choice, and that any food product, however degraded, whose 'nutrient profile' is thought to be more or less satisfactory, is healthy. As an adjunct to conventional medicine, it can have no understanding of good health and well-being, and therefore of how to live well.

So the charge against conventional nutrition science here is of obsolescence and irrelevance – and more besides. It is ignorant of the causes of population ill-health and disease, and of good health and well-being, and of the sources of good food and nourishment. It is impotent in the face of sick societies. It is at least by omission, a cause of degeneration of the human species, most evident as the uncontrolled pandemics of obesity and diabetes. Conventional nutrition science is not part of the population health solution. It is part of the problem.

Status

Cite as: The *Update* team. *Project Phoenix.* Conventional nutrition is burned out. 2. Obsolescence, irrelevance. *World Nutrition* June 2015, **6,** 6, 474-479. All *WN* contributions are obtainable at www.wphna.org. *World Nutrition* commentaries are reviewed internally or by invitation. All contributions to *World Nutrition* are the responsibility of their authors.

How to respond

Please address letters for publication to wn.letters@gmail.com. Letters should usually respond to or comment on contributions to *World Nutrition*. Usual length for main text of letters is between 350 and 1,200 words. Letters are edited for length and style, may also be developed, and once edited are sent to the author for approval.