

biochemistry. I suggest this requires development of alternative approaches also *within* the biological dimension. One way of framing these alternatives is to engage with food primarily at the organic or wholefood level, and to subordinate and recognise the inherent limitations of the chemical and genetic levels^{5,6}. This implies the need not only to *eat* wholefoods, but also to *think* wholefoods.

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DOI: 10.1079/PHN2005909

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Nutrition and evolution

Sir,

The special issue of *Public Health Nutrition* on *The New Nutrition Science project* was presented at the 18th IUNS Congress in Durban in September. This was welcomed. It is hoped that public (health) nutrition will be an important part of the agenda of IUNS congresses.

My comments will be limited and will basically focus on the article by Cannon and Leitzmann¹. Other articles in the same issue take up some elements presented by them, but they make little or no reference given to those contributions. However, any article should be judged on its own quality and scientific merit.

Historical bias: The description in the article could be understood as if the centre of the nutrition universe is UK, Germany and the USA. Little of the rest of the world is given much merit for contributing to the nutrition sciences. From a history of science perspective that is not justified. Such a bias may be detrimental and lead to negative reactions from scientists working with the history of science^{2,3}.

*The Giessen Declaration*⁴: The centre-piece of this *Public Health Nutrition* issue is *The Giessen Declaration*. The Cannon and Leitzmann¹ article starts every issue by

citing the Declaration. The Declaration is written in a normative manner, but cannot be seen as a landmark definition of public health nutrition.

There are few references to similar efforts in the relatively recent past. In addition to the writings of Allan Berg, Susan George and Francis M Lappé (see Box 1), one of the first formal discussions on public nutrition was linked to the IUNS Congress in Montreal 1997. Mason *et al.*⁵ had published a letter to the editor of the *American Journal of Clinical Nutrition*, with a response to this in 1997⁶. A follow-up meeting was organised in Vienna at the IUNS Congress in 2001. At that time the IUNS was not interested in the topic and only reluctantly allowed a short meeting to discuss follow-up. The interest was so high that not everybody who wanted could attend; the room was simply too small.

The lack of such references in *PHN* Vol 8(6A) is a major flaw. The content, format and credibility would have been improved if the authors had used and given references to similar efforts and declarations produced over the years.

Policies and politics: Many asked in Durban about the political dimension. The response was that it was included in 'social science'. In Box 2 policy is however treated as a separate issue. Nutrition surveys are often used as a basis for planning, but expose also policy and programme failures, and uncover wrong or good political decisions. Food and nutrition policy is a specific element of public nutrition and should thus be included explicitly.

Nutrition and evolution: The paper includes puzzling formulations. On p 680, Box 3: '... the new nutrition science is not centred on *Homo sapiens*, any more than the universe has planet Earth as its centre.' What then is this new nutrition science all about? This creates concern about the ideas and philosophy of the 'New Nutrition Science project'. Concerns for the environment, the impact on global warming, globalisation, etc., are important⁷. They are considerable threats against the livelihood of people throughout the world. However the concerns are taken out of context and signal other ideas. Is this New Age, Gaia Theory, or something similar? If so, maybe this is not at all about public health nutrition and thus misplaced in the journal of *Public Health Nutrition*?

Genomics, nutrigenomics, proteomics: The importance of those areas in molecular biology and molecular nutrition research is growing. Such research provides increased understanding of how nutrients communicate with genes, how that determines the impact of what we eat, and provides new diagnostic possibilities. The description by Cannon and Leitzmann is only critical and negative to such an extent that those who know the science well would not take the text seriously. In the eagerness to describe challenges and pitfalls, but excluding the positive aspects, the authors may alienate many researchers who are well aware of the potential dangers. The text underlines the moral obligation of scientists, which I agree with. However, when this big scientific area is reduced to

catering for the pharmaceutical multinational companies, the reductionism goes too far. The authors fall into the trap of defining the research as only the misuse and negative application of actors that seek profit no matter the method to reach that goal.

Human rights: Box 8 is devoted to rights approaches, which is very positive. However the text is disturbing. The Box starts with *The Giessen Declaration*, which does not provide any definition or description of what this is, nor does the paper. Human rights are only mentioned in the Declaration with two words linked to ethics as the overarching principle³. This gives an impression that the human rights issue has been added in the last minute, while the original and actual issue should have been ethics.

The mentioning of animal rights (which is important but do not have any place in a box presenting the human right to food) just confirms the impression that it is the ethical dimension that is the major concern. Maybe the authors should have dealt with that only?

Human rights create obligations, claims and duties. A human rights approach is based on principles such as universality and indivisibility, accountability and rule of law, transparency, equality and non-discrimination, participation and inclusion. If the authors had understood this the text would have been very different, and they would have raised the question of paradigm shift.

The authors are not discussing paradigms. Kuhn is referred to, but not related to paradigms. Paradigms should have been central in the discussion of a 'new nutrition science'.

Is it a new nutrition science? A person asked during the symposium in Durban what is new about *The New Nutrition Science project*. The presenters underlined that nothing much was new, in which many would agree. That is also underlined in Box 1¹. The only new I see is that it was presented in a plenary session of the IUNS Congress, and in a subsequent symposium. This is positive and deserves credit. Maybe the title could have been 'revisiting' the nutrition science? Such revisiting sessions should be done over and over again in IUNS congresses. What can defend the title is the word 'project', but is it a project in real terms?

Even though Box 1 states that there is nothing new, the text outside the box (p 677) states that the project is to specify new principles, a new definition, and new dimensions and domains for nutrition science. Which are those? I cannot find them. All issues mentioned have been dealt with in one way or another by different scientists including nutritionists, economists, anthropologists, sociologists, political scientists, and even legal experts. Maybe nutrition will develop into more of a meeting ground for related disciplines as mentioned on p 689?

In the text on p 677 it is stated that 'nutrition scientists now are uncomfortably aware that the science is in crisis...' I have to ask, are we? I would say that the

development of nutrition science has been staggering, leading to a science very different from earlier. It has mushroomed into new disciplines, proliferated into political science, anthropology, sociology, molecular biology, economy, and become an important element in legal deliberations in particular linked to economic, social and cultural human rights. Most of those scientists are not considering themselves as nutritionists, nor do they have nutrition training. Rather than 'one science fits all' one could say that the development has led to a number of sciences, where the common denominator is nutrition, related to livelihood, food, diet, health and other issues. It would have been helpful if 'the new science' was defined as seen by those behind the project. Such a definition could then help structuring the paper in a different way, and more stringent than it is now. An attempt is done in a separate article⁸, but the article discussed here only refers generally to it.

Concluding remarks: *The New Nutrition Science project* in PHN Vol 8(6A) raises a number of challenges of great importance for the further development of public (health) nutrition. The discussion should continue and be a standing issue for IUNS. However, the lead article discussed here has led to serious concerns. The article renders much ammunition to critics. One could question the job of the referees, since some mistakes are obvious, for example the use of references. The references seem carefully selected and biased towards the authors, for example when the references to important UN documents are to the authors themselves. There is no holistic discussion of relevant earlier contributions. Can it be called 'a new nutrition science' as it is presented in this paper? My personal opinion is no.

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DOI: 10.1079/PHN2005905

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Welcome

Sir,

Professor Oshaug is a distinguished academic who advises UN agencies, the government of Norway and non-governmental organisations, and who has a special interest in human rights¹. He is critical of *The New Nutrition Science project* in general², and of the paper introducing the project of which we are co-authors³. We first respond to his general remarks.

Nothing new is new in all ways. As a rule all innovative concepts and theories have precursors^{3,4}. *The Giessen Declaration*⁴ proposes a new definition, additional dimensions and relevant principles not for another speciality, but for the whole of nutrition, seen equally as a biological, social and environmental science. In this way 'classic' biochemical nutrition scientists are encouraged and enabled to give their work more relevance, meaning and impact in the circumstances of this twenty-first century.

Two comments made at the International Congress of Nutrition in Durban last September by delegates who support the project, and also by Professor Oshaug, were that it so far understates the importance of politics, and also of human rights. This may be so. As editors of the special issue we have tried to be inclusive and balanced, but cannot always have succeeded. Besides, projects are work in progress.

That said, politics as a social science is contained within the new nutrition, and food and nutrition policies are discussed throughout the special issue. There is a difference between inclusion of politics within a conceptual framework, and advocacy of specific political ideologies. On rights, *The Giessen Declaration* states that the overall principles of nutrition are and should be ethical. The science should 'be guided by the philosophies of co-responsibility and sustainability; by the life-course and human rights approaches, and by understanding of evolution, history and ecology'. The theme of human rights is included in a number of the papers in the special issue, including the two of which we are co-authors^{3,5}.

The Giessen Declaration begins by acknowledging confluences which, as well as the work of individuals and institutions, include public health nutrition and public nutrition (which are not the same), nutrition ecology, wholesome nutrition, eco-nutrition, and ecologically integrated nutrition. Most of these specialities are themes of papers in the special issue^{6–9}, and all are summarised and cited in the two papers of which we are co-authors, or in introductory text^{3,5,10,11}.

A paper agreeing that public nutrition fits within the new nutrition science⁶ cites the 1999 special issue of *Food and Nutrition Bulletin* edited by Nevin Scrimshaw¹²; and also the 1996 letter to the *American Journal of Clinical Nutrition* signed by John Mason, Jean-Pierre Habicht, Peter Greaves (not Graves), Urban Jonsson, John Kevany, Reynaldo Martorell and Beatrice Rogers¹³.

Professor Oshaug thinks that nutrition science does not face a crisis and is proliferating nicely. The signatories of the *Declaration* might invite him to think again. It states that the persistence of nutritional deficiencies and relevant infectious diseases, the explosive global increase in early-life obesity and diabetes, increasing insecurity and inequity, depletion of the planet's life-support system, and other factors, amount to a real world crisis. The *Declaration* also states that nutrition can effectively address the fundamental determinants of well-being, health and disease, but only when it is reformulated as a social and environmental as well as a biological science.

Professor Oshaug is puzzled by an evolutionary approach and by a conceptual framework that includes personal, population and also planetary health, which therefore is not centred just on the human species. These are challenging concepts, and he is invited to read some of the relevant papers and to follow up their citations^{3,5,14}.

We now respond to his criticisms of the introductory paper of which we are the authors³. He was given a draft of this paper early in 2005 with a request for comments, and it is a pity that he did not then have the time to make any response. The paper in its final form takes into account comments of a number of readers who did respond, and also the conclusions of the Giessen workshop, and in these respects is a group effort.

He rightly says that the paper does not include definitions and principles. These are not hard to find: they are contained in the *Declaration*, in the multi-authored paper 'The principles, definition and dimensions of the new nutrition science'¹⁵, and in a more exploratory paper, 'Dimensions, domains and principles of the new nutrition science'⁵.

He claims that the paper denigrates genomics. This is not so. It emphasises the importance and potential of genomics, and says that its value and credibility, in common with other domains of nutrition currently usually perceived as mainly biological in nature, will be enhanced when it fully takes into account its social and environmental aspects.

He says the paper implies that most nutrition science comes from Britain, Germany or the USA. No, it does not. It points out that modern nutrition was developed on biochemical principles up to the mid-twentieth century as a result of external pressures including the industrial revolution and the expansionist policies of the leading