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Culture, Values and Ethics of Animal Scientists

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Enlarged EU

An event of great historic import took place on 1 May 2004 when the European Union was enlarged by welcoming 10 new countries and thus brought millions of European citizens into a closer relationship – closer in fact than existed before 1939 which started the violent break-up and long period of political and economic division in Europe society. The occasion of ten new countries entering the enlarged EU passed quietly, but it has high significance for the future development of Europe especially for agriculture, food, animal production and particularly for animal scientists.

So, it may be natural for animal scientists to ask why we have a further contribution to make in dealing with diversity in the enlarged EU. "Aren't we all scientists using the same proven scientific methods?" "Aren't we all devoted to the same cause of food production?" "Why speak of the need for unity in diversity when we read the same scientific literature, use the same scientific code words and rarely disagree on anything other than trying to understand new discoveries?" The answer is that the development of an economically viable food chain in the enlarged community of 470 million people in the EU necessarily involves the integration of science within a range of diverse natural and social environments.

Enlarged communities

The enlarged EU is not the only area of the world where huge changes are in progress which have deep implications for agriculture and food. The current process of Economic Globalization through the World Trade Organization (WTO) aims to bring billions of people with different historic and traditional backgrounds into an open trading unity. These socio-economic movements in Europe and globally invite us, as animal scientists, to broaden our understanding of other people. Whereas 70 years ago an animal scientist, even in Europe, needed to be informed only about farming in his or her own country, today the food market embraces customers in many different countries and traditions. Expansion of the EU as a trading population brings greater economic unity as tariffs, taxes, old political barriers and border controls are removed; but it also vastly increases the diversity of life within one community. This is a new challenge to animal scientists.

The tendency of animal scientists during the last decades of the 20th century has been to adopt increasingly standardized production practices which offer the most efficient and low cost routines for animal production. EAAP has been a successful forum where new scientific knowledge able to increase efficiency has been quickly shared across country boundaries bringing more evenness in animal production systems. Reduction in genetic variation within species testifies to the economic attractions of uniformity. Some animal scientists may be tempted to think, like Macdonald's executives, that worldwide standardization of animal production is both

desirable and inevitable and that the whole food chain should continue to become more uniform. Not so.

Europe is an older society than the USA and traditions do not easily yield to fast food. Historic cultures have a great variety of foods, practice assorted culinary arts, call for diverse dietary menus and expect meals to be community and family events contributing distinctive features to quality of life. The new Slow Food Movement recently started in Italy has growing support from more traditional societies worldwide.

Diversity and Uniformity

One of the major debates about the nature of the EU focuses upon maintaining cultural diversity within economic unity. To many people diversity in community emphasizes the separate identities. When people join a larger block such as the EU or the WTO for economic benefits, they do not want to lose their historic identity. This attitude is one of the enormous contrasts between Old Europe and the USA. Within a couple of generations immigrant families to the USA have lost their former identity as a conscious value in daily living. Their historic culture becomes a charming and perhaps treasured root of family history which does not bear on the routines of life, but is perhaps explored on a vacation visit to the continent of origin. Samuel Huntingdon, in his new book "Who are we?: The challenge to America's national identity", recognizes this tendency as a significant part of American identity since the time of the founding fathers, but he thinks there is evidence that Mexican immigrants to the USA are changing this identity pattern. He considers the tendency to retain Spanish as a working language as well as English may be a new form of identity in the USA. Typically, however, in the USA the former identity shows only in the family name while second and subsequent generations quickly embrace the culture, values and ethics of the USA. Europe is different. In the EU strong values of identity tie people to their historic cultures. These feelings are characteristic of older societies and occur also in the traditional societies of the developing world even though they join the global trading community.

Whereas the USA feels that its culture and values are so attractive they should be exportable, citizens in older societies usually insist on retaining their own language, culture and values even if they enter into economic partnerships in trading blocks. This pattern of human behaviour provokes many thinking leaders and thoughtful people on the street to recognize that success in the task of developing an improved quality of life in the 21st century is not brought about simply by economic blocks and political alliances. Consequently, in the enlarged EU and in the growing WTO there is much hard work to be undertaken to understand different cultures and values of people with disparate traditions and life styles. Since food plays a major part in defining cultural identity and values, animal scientists and agricultural scientists have a major new task in opening themselves to a new form of education: human culture, values and ethics. The implications of this trend are deeper than may first appear.

A new realm for animal scientists

Rarely do specialists in any professional field have difficulty understanding each other. They may disagree, but they understand what the difference is about. Animal scientists do not have problems communicating, understanding or working with each other in the laboratory. The new challenge is arising from the fact that the market for animal products is changing. With increased trade across traditional

boundaries, animal scientists encounter new expectations from customers. These expectations have at least two forms. One is the wish to continue to buy animal products as they are prepared in the traditions of local cultures and indeed to export them as designated products (PDO-Protected Designation of Origin and PGI-Protected Geographical Indication). The second concerns the growing expectations from the market that consumers want their food to be nutritionally healthy and hygienically safe, derived from animals treated with respect, from systems that do not harm the environment and based upon sustainable farm practice with an increasing interest in locally grown and organic products. This dual set of values calling for traditional products from historic cultures and for the food chain to be based upon sound moral and ethical values confronts both uniformity and the view that the market always insists upon the cheapest possible food.

These new factors in the enlarged market of the EU and beyond mean that scientists, in common with leadership in all specialist areas of society, need better to understand the culture, values and ethical expectations of the expanding economic communities in the world typified in Europe by the enlarged EU. To understand the depth of this problem we need to step back for a moment and listen to the views and actions of some of the most respected leaders in human society as they work to bring about a better quality of life.

What do Top Leaders think is the Problem?

In 2003, in anticipation of enlargement, the European Union launched a Reflections Group to deliberate on the question of European identity. The brief to the Reflections Group calls for better understanding on the question of European identity and common European values in their relation to the social and political structures of the enlarged EU. In his statement at the first meeting of the Reflections Group, the President of the European Commission, Romano Prodi, said, "If we are to build a Europe inspired by a sense of common destiny, we need to reflect upon the cultural background which allows a specifically European phenomenon of unity within diversity".

Placing culture, values and ethics into the public arena is not limited to Europe. In the USA, recent large-scale corruption in several businesses has shocked the nation and the world into realization that even in civilized Western society a sub-culture of corruption exists which holds self-centred values leading to unethical behaviour. The events provoked legislation defining new ethical standards for business executives based upon the values which society expects leaders to practise in public life.

At the world level the President of the World Bank, James Wolfensohn, personally convened and spoke at a World Bank International Conference on "Cultural and Spiritual Values in Development" in which he emphasized that economic methods to alleviate poverty must be integrated with the cultural values of the societies being served. He emphasized that professionals working in specialist roles or organizations must measure their own professional and personal cultural values alongside the expectations and values of the people they seek to serve. On another occasion, in London in May 2004, Mr. Wolfensohn spoke of "The challenge in economic development of uniting in dialogue on equity and social justice – about what is right." He said: "Absent from the debate at the moment is any sense of moral values or even spiritual values in development. And, we are so used to beating each other up in terms of what I do, what you do, what we've got wrong, what Europe's got wrong, what America's got wrong that we have to get back to searching our souls

for values. Today, 45% of the world population is under 24 years of age. I have personally taken time to talk with many of them in the last couple of years. They are turned off by the lack of values in the leadership of the world. None of us is giving these young people a real, true sense of purpose and a true sense of values and a true moral case in terms of the issues of development and social justice."

Thus, we hear thoughtful top leaders in Europe, in the USA and at the global level calling for culture, values and ethical behaviour to influence socio-economic development. If one asks ordinary people of all ages in Western Europe for their views on these issues one often hears the same message. To meet this opportunity, animal scientists have to integrate positive values and ethical actions with science, technology and economics to serve the expectations both of the billions of poor in developing countries and the millions of affluent people in the West.

Dr. M.S. Swaminathan, a high profile Indian agricultural geneticist who has held scientific posts including Director-General of the International Rice Research Institute, Chief Planner of the Indian Government and holder of the prestigious World Food Prize, has called for parallel Globalization of Ethics with Trade especially for agriculture and food. Nelson Mandela, former President of South Africa, addressed a United Nations meeting in June 2004 and said, "Feeding the world is a moral not an economic problem".

Culture and Behaviour of Animal Scientists

If EAAP and animal scientists in Europe are to enter fully into this changing world we need to define more precisely within our own profession the issues of culture, values and ethics. Culture is well defined as the way in which a group sees itself and what it accepts as normal behaviour. "The way we do things around here" is an easy but accurate way to describe culture. Clearly culture is not limited to traditional clothes, music, architecture and food of which Europe has so much diversity. Culture has a deeper level of meaning related to group beliefs which direct the way people do things. Values and behaviour in any group are determined by history and traditions forming consensus among people who share a common identity and activities. Individual scientists are not only scientists – they also belong to other groups. No doubt, animal scientists from Turkey and from Germany have different cultural traditions affecting their behaviour at home. But when they gather in EAAP Meetings as animal scientists and work together on problems of food production, they share the common scientific culture. These practices include conformity to the modalities of scientific research, formulating agendas for meetings, protocols for oral presentations and discussions at meetings and the format and language of written communications. These ways of behaving together as scientists are neither exclusively Turkish nor German. A non-scientist from either Turkey or Germany who tried to inform the group on how to conduct scientific research would soon be identified as an outsider whose views would not likely change the way animal scientists believe things should be done. This scientific sub-culture and behaviour pattern is highly commendable for its efficiency in use of scientists' time, accuracy in communication and ability to create a working environment in which the rigours of the scientific method can be used, checked and validated. You have to be a scientist to belong to this sub-culture and to follow its norms of behaviour. Research results which fail those tests are quickly identified as bogus and are rejected.

Values and Ethics

The issues raised by the world leaders quoted above are concerned less with the methodologies of a specialty sub-culture such as the scientific method used by animal scientists. Instead these speakers target the values or beliefs by which research objectives are identified and by which production systems are designed. The present generation of animal scientists working in the food chain has been tutored to value "efficiency" above all other values both in research and in practice. We measure this efficiency in biological and economic terms and we broadly describe it as "productivity" – meaning research and systems to get more out of less. With the assumption of efficiency and productivity as over-arching values it is easy to assume they are fore-ordained and have always been so. But this paradigm of efficiency and productivity is now subject to review by external social auditors – namely by society.

Having values questioned is threatening. Values are so called because they matter to an individual or to a cultural sub-group. People shape their lives by their values. Personal resources of professionals such as finance, time and energy are allocated by accepted values. Within professional sub-groups such as scientists, economists, development experts, financiers, bankers or administrators, the accepted values of peers are the norm. For creative artists this would not be so true as they listen to an alternative drum-beat, nor of politicians whose ears are tuned to listen to changes in the values of the electorate.

But within the professional sub-groups of scientists, individuals are praised and gain recognition for original research, but it has to be within the assumptions of the group; whereas those who propose alternative assumptions and objectives are liable to be regarded out-of-touch and ignored. An example of this rejection is the original strong resistance from agricultural scientists to suggestions that organic food should become a feature of the food chain. This idea conflicts with the values of efficiency and productivity and was initially dismissed as unscientific and impractical. Similarly there was, at first, a strong reaction by scientists for modification in production systems for animal welfare – again because it was seen as reducing efficiency and productivity.

Understanding the new Values and Ethics

Let us illustrate the difficulty of changing established values in another way. Scientists recognize and understand without difficulty the award of Nobel Prizes for original contributions to scientific knowledge. Here are two examples which have affected animal science and the food chain. Kary Mullis received his Nobel Prize in 1985 for inventing the Polymerase Chain Reaction (PCR) to amplify DNA. Stanley Prusiner was awarded a Nobel Prize in 1997 for discovering prions. We readily understand these scientific triumphs and awards. They do not conflict with our professional values – rather they reinforce them.

But, as scientists we have greater difficulty understanding what international leaders, like the President of the World Bank, are talking about when they ask agricultural scientists to integrate equity, social justice, human values and ethics into development of the food chain. It means we are encouraged to ensure that PCR and the new knowledge of prions are used in food production not simply to improve productivity but also to ensure that their use contributes to a better quality of life for all.

This way of thinking requires a new paradigm for scientists in the food chain. Values from outside the membership of a specialist sub-culture have to be incorporated, studied and worked into the routines of daily behaviour. This is a new

approach. In advanced Western society, scientists are used to generating their own values within the group. The call to listen to alternative values of a diverse society is not easy.

Current examples of incorporating new values

Now we need some examples in which animal scientists are learning to incorporate the values and expectations of society. As a first example, we look at the vexed question of meat and bone meal (MBM). Scientifically and economically the idea of feeding slaughterhouse waste back to domestic animals was brilliant. First, it captured the feeding value of animal protein waste by recycling it as animal feed and in so doing replaced the need for growing new protein, thus releasing land for other crops. Second, it reduced the costs of importing animal protein from distant sources as the supplies of animal offal are close to intensive animal production areas. Third, it reduced substantially the high costs of disposing of animal offal, a cost without a benefit. Fourth, it minimized environmental pollution by avoiding the problem of where and how waste animal offal is disposed. At the time, feeding MBM seemed a perfect fit for the values of efficient use of resources, increasing productivity and reducing the costs of animal products.

The saga of Bovine Spongiform Encephalopathy (BSE) does not need retelling here – an update was given in Livestock Production Science, 87 1 pages 46-52, April 2004.. Today scientists know more about BSE and variant Creutzfeldt-Jakob Disease (vCJD) and have regained some confidence. It is now believed that MBM could be safely fed to non-ruminants without any threat to animals or to humans. However, the EU has decided against reintroducing MBM as animal feed because of the bad image created in the public mind by the negative BSE and vCJD experience.

Prior to BSE the public did not know they were eating meat produced from domestic farm animals which had been turned into cannibals. Since learning this, public opinion has expressed outrage and undoubtedly some people have stopped eating animal products. However, the deeply significant point is that scientists were unaware of public values concerning food animals being cannibals. If scientists had consulted public values prior to the original introduction of MBM to animal feed, it would have been rejected. With MBM we have a current example of how the single-minded value system of animal scientists for efficiency has since been modified by taking on board a value from the consuming public. The cost of making the decision about MBM without public consultation has cost society dearly. A retrospective analysis in the recent EAAP Working Group report “After BSE” (EAAP Publication No. 108, 2003, Ed: Cunningham, E.P.) estimates the cost of BSE to be the enormous sum of Euros 92 billion Net Present Value - equal to the whole annual budget of the EU. The consequential costs of feeding MBM are in excess of the benefits quite apart from the lost credibility of scientists and the suffering of vCJD victims. The fact that the scientists who made the decision to feed MBM to domestic food animals did not think any public consultation was necessary before introducing the practice as a routine in the human food chain shows how wide the gap in values was at that time between animal scientists and the consuming public. That gap in culture, values and ethics has fortunately begun to narrow.

A second example of how animal scientists are slowly taking the values of society into their thinking is Sustainability. This concept calls for farming practices to leave the natural resources in equal or better shape after use than before. Sustainability is generally used as a technical term but in fact it has a moral foundation. Sustainability refers to the old practice of good husbandry which has been

a traditional practice of farmers for millennia. Why have millions of farmers, with few exceptions like those in arid parts of Africa who use shifting cultivation, always practised sustainable management of the natural resources? It is because they know that they belong to a community of life which extends from the past to the present and into the future. This brings us back to diversity, because the common historic practices of good husbandry (sustainability) avoided mono-culture by following mixed rotational agriculture. These sustainable routines may still be seen further east in Europe and in many developing countries. By contrast, modern Western agricultural science has moved away from diversity in farming and into mammoth single-product enterprises. This track, driven only by the values of efficiency and cheap food, lowers the quality of life through environmental pollution, abuse of animals, mono-diets, fast food, obesity, food health scares and lost community experiences of shared slow food. That track has also produced an excess of food in Western society while half the world population continue to live on less than two dollars per day.

Conclusion

The enlargement of the EU and the other movements to create large trading blocks for food throughout the world are stimulating a revival of cultural identities and values. Lowered trade barriers increase the linkage of human society throughout the world making intelligent and thinking people realize that humanity is one community. We are also learning that food is the lowest common denominator in the world community. Everyone eats. The three billion poor and the wealthiest folk in the West all share a need for food.

The tendency for Western intensive farming to produce more uniform, standard food products suitable for Fast Food living is being resisted by older cultures who join the new economic trading communities. They assert their historic identities and cultures in many ways – but one of the most powerful is through food. Though traditional cultures enjoy the benefits of advanced economic trading in manufactured goods through membership of the EU and the WTO, nevertheless they argue for retaining diversity in agriculture and food and prefer Slow Food cultures and values.

In Europe especially, but also throughout the world, agricultural and animal scientists face a new opportunity, namely to adapt their ‘efficiency paradigm’ to ensure that cultural diversity, respect for human values and ethical behaviour is part of their value system in applying science in the food chain.