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## Food democracy : The "other legitimate factors" and the cultural power

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**ABSTRACT:** The innate relation between public debate issues and ethics points to the limits of a system based on the prevalence of science and technology as legitimate factors for public decision. The process of scientific objectification, exemplified by substantial equivalence, *de facto* excludes the subjective, i.e. cultural and moral factors, and opposes the recognition of intrinsic concerns as 'other legitimate factors'. To counter this situation, civil society has emerged to embody a cultural power besides the economic and political powers. A new basis for subjectivity as objectification will be crucial for the enforcement of this cultural power in a tri-polar social organisation.

**KEY WORDS:** *other legitimate factors - substantial equivalence - social threefolding - cultural power - intrinsic value*

In recent years, biotechnology has proved a powerful stimulus for both the public debate and ethics. Despite the innate connection between these two forms of social demand, ethics is to a large extent debated outside the public sphere whilst the public debate tends to be used as a procedural and political instrument for governance and democratic processes. Although the scaffold of institutions may require new approaches to account for the deliberation and participation demand in society, the recognition of the actual kinship between the public debate and ethics also points to the underlying world view in which the evaluation of biotechnology operates. The questions at stake are not merely political — 'who decides and how', but cultural, epistemological and deontological — on what basis, premises and values, decisions are made'.

**THE CULTURAL BASIS OF LEGITIMACY.** Presently, the evaluation of technological innovations relies on three main decision actors: market, science — technoscience in fact, and institutions. These actors may be described respectively by the good — or more prosaically the acceptable, the true — or even more prosaically the operational, and the legitimate and legal. The three decision actors interact with each other through: valorisation between technoscience and market, expertise between technoscience and institutions, and regulation

between institutions and market. They also have interactions with their respective social partners: diffusion between market and consumer, protection between institutions and citizen, and instruction between technoscience and layman. These social relationships prove fundamentally asymmetrical in terms of actual contribution of the social partners in decision making. By definition, the layman has no contribution due to ignorance and can only be instructed. The citizen expression is limited to elections and the delegation is a resignation of the right to speak on his/her own in favour of political representatives and institutions. The potency of consumer contribution is potentially highest since consumption is a form of direct democracy but is in fact neutralised by globalisation due to opacity and concentration of the markets. The three social partners proceed of course from one and the same entity — society, now represented by civil society (see below).

A major cause of controversy about biotechnology is the congruency between polity and science which obliterates the distinction between the political and cultural dimensions. The political delegation is only the visible part of the democratic system and is in fact accompanied by a second implicit delegation, the expert delegation which has a cultural basis (Callon, 2001). The expert system thus constitutes a parallel authority endowed with legitimacy and prevailing on other forms of cultural expression in public decisions. In this context, modern science is the only core of knowledge officially recognised whilst society is considered to be mostly ignorant and prejudiced. The resulting situation is called the 'Public Instruction Model' by the French sociologist Michel Callon (1998).

Historically based on religion, legitimacy is the expression of the good and the true. Hegemony of one form of cultural expression or the other— religion in the past, technoscience in our time, has resulted in a loss of the innate connection between our sense of the good and sense of the true, exemplified today by the debate between ethics and science. This shows that the basis of legitimacy is not primarily political, although it is expressed in the polity sphere and transcribed into legality, but cultural. This distinction is important to understand why a political answer to biotechnology issues is not sufficient.

**THE OTHER LEGITIMATE FACTORS.** In the Public Instruction Model, the legitimacy of other factors and cores of knowledge besides science is mostly denied. Since modern science is based on objectification and quantification, factors other than scientific, i.e. subjective factors, are either ignored or processed through objectification. To address the non-scientific factors, the science-polity sphere of decision has reduced them to 'risks'. As a consequence, the relationship between individuals and living organisms and processes, for example food, has been mostly restricted to a risk quantification issue.

The term 'other legitimate factors', i.e. other than scientific, can be found in the Agreement on technical barriers to trade of WTO (World Trade Organisation) documents. Also called 'WTO listed objectives', the other

legitimate or authorised factors are as follows: national security requirement; prevention of deceptive practices; protection of human health or safety; protection of animal and plant life or health; and protection of environment. These factors have in common to be amenable to quantification, at least to some degree, and thus can be re-introduced into the scientific sphere. However, the 'other' other legitimate factors, including social, cultural, and ethical issues are not yet acknowledged in this picture.

In our society, dominated as it is by the Public Instruction Model, ethics is to a large extent implemented through ethics committees. Like scientific expert circles, these committees operate as advisory circles for the politics. The idea of ethics committees implies that some form of knowledge and expertise is required to attain a qualified moral judgement and justifies that the deliberation about the common good is taken away from society. Since objectification is the basis of modern qualified cores of knowledge, subjective factors, hence background individual representations, tend to be ignored and eliminated from ethical deliberations. In the same way as the other subjective factors are reduced to risks, ethical considerations are thus essentially confined to objectifiable consequences, leading ethics committees into consequentialist rather than deontological reflection. The consequential dimension, including for instance the precaution principle, is further emphasised by the implicit political mandate of ethics committees. In cost/benefit analyses, benefits are considered to be essentially regulated by the market through adjustment between supply and demand. But markets only have a weak ability to absorb risks, especially systemic risks associated with globalisation. Risks thus fall to institutions and this explains the prevalence of the risk discourse at the political level. In this context, only economic and political issues are acknowledged. Finally, the cultural, deontological dimension of ethics is mostly ignored if not denied. Paradoxically, ethics has thus become a means of maintaining a whole structure of institutions which is unable to acknowledge the cultural dimension in society.

#### **THE CULTURAL IMPLICATIONS OF SUBSTANTIAL EQUIVALENCE (SE).**

SE was introduced in 1993 by the OECD (Organisation for Economic Cooperation and Development) for the safety assessment of novel foods derived from modern biotechnology, i.e. genetically modified organisms by 'comparison with traditional foods that have a safe history of use' (OECD, 1993). The absence of an operational definition and lack of extensive experimental validation of SE contrasted with its legal implications —as in EC Regulation 258/97 — have been a major source of controversy in the scientific community. Most recent reflection has thus been aimed at improving the SE comparison toolbox to address potential toxicological or nutritional unintended effects (Millstone et al., 1999; Schenkelaars Biotechnology Consultancy, 2001). However, by scrutinising the epistemological and deontological premises of SE, it appears that the controversy is eventually not scientific but cultural.

The explicit background assumptions about SE report are mostly based on a familiarity slant. They postulate that the concept of SE is not novel in fact and *'articulates*

*procedures used in the past, albeit intuitively*, for accepting new foods' (OECD, 1993). Although SE may embody common, implicit background representation in our time (at least in countries of the North though this is probably less true in the South), no ground is provided for the interpretation of similar 'intuitive' representation in the past nor is the basis of this representation described. In fact, no explicit definition of food can be found in the OECD reports. Yet, the description of the comparison toolbox recommended by expert committees implies that it is implicitly restricted to end products irrespective of the context in which food is produced. In this picture, food appears as a context-free, quantitative aggregate of basic chemical substances. This explains why improvement of SE is currently sought through the systematic detection of the largest number of compounds possible with 'omics' profiling techniques based on genomics, proteomics and metabolomics (Schenkelaars Biotechnology Consultancy, 2001).

Whereas the 'intuitive' approach in the past allowed cultural flexibility as to how individuals or societies would address food issues for themselves, the concept of SE imposes one uniform representation of food that is meant to be universal. Indeed, the conclusion of SE 'will be *equally valid in all countries* and for application of the modified crops' (OECD, 1998) and 'knowledge obtained using these methods might also be used to *approach safety assessment of new foods* or food components from organisms developed by traditional methods' (OECD, 1993). Finally, if there is only one approach to food safety that is applicable to any food, genetically modified food should no longer entail specific concerns compared to food produced by traditional methods and its evaluation 'does not necessitate a fundamental change in established principles, nor does it require a different standard of safety' (OECD, 1993).

Analysing SE as a cultural product rather than a scientific tool proves instrumental in understanding the values underlying current food evaluation. This raises the issue as to what the legitimate factors for defining food should be and ultimately as to how food can be comprehensively defined. A global assessment of food thus leads to wider democratic issues and the need to re-assess legitimacy by re-balancing economic and political issues with cultural values. This points to the necessity to implement qualitative and ethical assessments of food to integrate the other legitimate factors and address the issue of food substance integrity. To this end, two other equivalence concepts, qualitative equivalence and ethical equivalence have previously been described (Pouteau, 2000; 2002).

**NOMINALISM AND INTRINSIC CONCERNS.** The birth of the modern human mind has been tentatively assigned to the emergence of the first religious symbols in the Neolithic, a major cultural change that was called the Symbol revolution by the French prehistorian Jacques Cauvin (2000). Symbols can be viewed as a first differentiation between subject and object and thus constitute a first step toward abstract thinking and modern rationality. But for very long, symbols have embodied a reality of their own which is simply reflected in human thinking. This realism was first challenged in the Middle

Age by the emergence of nominalism. The nominalist world view holds that ideas, or symbols, have no reality independent of human thinking and are merely names created by man to account for his mental capacity to identify categories of kind. According to this view, notions like species or food are merely mental constructions and have no reality of their own. Although nominalism was initially confined to an intellectual elite, it rapidly expanded in the occidental world at the Renaissance. This cultural change was characterised by a new sense of space as illustrated by the emergence of perspective, quantification, trade, and the beginning of globalisation through the conquest of the world.

Rationality in our time is intrinsically linked to the advent of a nominalist world view. First, the definition of categories by their traits and characters leads to consider wholes as aggregates of parts, thus to mechanistic reductionism and the prevalence of quantification over qualification. Second, categories must be described by objectifiable, physical properties, i.e. methodological materialism. Third, because cognitive revelation is dismissed, knowledge can only be acquired by experimentation, trial and error, i.e. empiricism. Since the Renaissance, symbols and realist cultural world views have increasingly been dismissed by submission or extinction of 'primitive' cultures in the South, rejection of traditional cores of knowledge, and exclusion of intuitive and aesthetic perceptions as legitimate cognitive approaches in the North.

Exclusion of subjectivity from consideration is gradually leading to exclusion of subjects, living organisms and human beings, and to their reduction to objects. A tragedy of our time is that a radical nominalist approach has no access to values other than instrumental and consequential. Deontological values are not ignored on purpose, they simply no longer have a reality of their own. This decline in the capacity to conceive a realist world view is exemplified by increasingly anachronistic interpretations of the past through nominalist lenses, for example domestication as genetic manipulation or 'Neolithic genetic engineering'.

Although, living organisms have been interpreted as sophisticated machines since Descartes, their systematic instrumentalisation has only become an official purpose through the development of biotechnology. The encouragement of this instrumentalising purpose by institutions and the economic system has created the need to question the significance of life, nature, and food. As regards these issues, the deontological notions of dignity, integrity and intrinsic value are of crucial importance (Ifgene, 2001; 2002). But in a nominalist world view, intrinsic value dissolves into parts and can only be translated into instrumental value and commercial value. In this context, how long can 'mental constructions' such as the dignity of man resist against erosion by instrumentalisation and trade before they finally represent only meaningless names?

**THE CULTURAL POWER AND SUBJECTIVITY AS OBJECTIFICATION.** Since the principle dimension is not addressed and intrinsic concerns are not recognised by authorised expert circles of decision, scientific and

ethical, the cultural entity — i.e. society — has no other choice but work its way to speak again. The emergence of civil society has been a first step in the definition of a new power of decision — a cultural power based on values — besides the politic and economic powers. This power, initially scattered in isolated demonstrations or civil disobedience has suddenly acquired global coherence during the Seattle battle against the WTO conference in 1999, subsequently echoed by several other international demonstrations. Initially confined to a movement of protest against globalisation, civil society soon claimed its specific, independent identity by defining itself as an alter-globalisation movement ('another world is possible') during the first World Social Forum in Porto Alegre in 2001. By trying to wrest the cultural dimension from subjection to polity and economy and defend intrinsic concerns ('the world is not a commodity'), civil society has *de facto* revealed the existence of a third social power and, thus, the threefold nature of the social order: culture, economy, and polity (Perlas, 2000).

At this stage, the emancipation of a cultural power still rely on its capacity to fully understand its specific identity and foresee what the respective tasks of the three social powers are. The demand for new participative democracy allowing cultural expression and participation in public decisions is only a first step in this process. But values cannot be defended very long without a clarification of the background cognitive and epistemological approaches embedded in society. As such, epistemology appears intrinsically linked to ethics. The growing prevalence and promotion of technology in life sciences is not value neutral. Technologies as embodied nominalist concepts are powerless to account for intrinsic concerns and, on the contrary, tend to challenge them. In addition, the current development of high debit methodologies such as 'omics' profiling approaches has similar consequences as globalisation in calling for a concentration of facilities, human resources, and funding, a trend which is presently encouraged by the Sixth Framework Programme of the European Union.

Concentration in technoscience is a cultural threat to scientific autonomy and may endanger the potential for alternative approaches based on intrinsic concerns such as quality and integrity. In this respect, phenomenological approaches able to provide a basis to subjectivity as objectification methods and to re-introduce the cognitive dimension of perception and aesthetics seem more appropriate. To implement cultural power in one of its territories — science, at the root of conceptual investigation and before concepts are embodied into practice and instruments and finally in the institution scaffold, is a challenge in our time and may require a post-nominalist cultural revolution possibly of the same amplitude as the Symbol revolution.

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