

Biotechnologies, alimentary fears and the orthorexic society

Guido Nicolosi

Abstract

The article suggests interpreting current alimentary anxieties and the wide-spread hostility toward biotechnologies by defining contemporary society as an orthorexic society. The main idea proposed is that it is formed around two key pivots: the crisis of the limitations of the cultural Order that protects and prescribes the definitions of the right diet (Fischler) and the individualistic closure of the body of the subjects (Falk).

Comment ne voit-on pas que ce qui est le plus biologique - le sexe, la mort - est en même temps ce qui est le plus imbibé de symboles, de culture ! Nos activités biologiques le plus élémentaires, le manger, le boire, le déféquer, sont étroitement liées à des normes, des interdits, valeurs, symboles, mythes, rites, c'est-à-dire à ce qu'il y a de plus spécifiquement culturel.

(Morin, 1973: 146)

Introduction

Our age is characterised by a broad diffusion of alimentary fears. In this article, I intend suggesting that they do not represent a secondary or contingent phenomenon. The case of BSE, the problem of the GMO, the avian flu crisis, the diffidence towards biotechnologies, etc are, in truth, all manifestations of a much deeper structural phenomenon. The thesis proposed here is that they are the manifestation of the social affirmation of a rather significant anxiety-inducing syndrome that expresses the particular symbolic relationship we have established with food and the body in the contemporary scenario. I will

attempt describing such a relationship by defining our society as an *orthorexic society*¹, trying to illustrate some of its more salient features.

Moreover, I will try to bind the spread of such a syndrome with three processes set in motion by modernity: the erosion of the constraining aspect of norms regulating a correct-diet (the culinary Order), the distancing, in the food production sector, of the producer from the consumer ('opacity' of food) and the closure in an individualist frame of the human body. The argument will be articulated in the following way:

In the first paragraph, mostly descriptive, I will highlight that the judgment of public opinion on technological innovations is ambivalent: positive for medical innovations; source of anxiety and fear in the case of biotechnologies in the alimentary field. Furthermore, I will propose interpreting the ambivalence of this attitude making recourse to a reading that takes into account the symbolic importance of the relationship with food. Such a reading will be introduced in the next paragraphs.

In paragraph 2.1, I will show how the crisis of the sharing of the cultural order taking place in modernity has had echoes in the decline of the constraining nature of the alimentary diet and that such a decline, together with the opacity of food caused by the indefinite lengthening of the productive sector, is a source of insecurity.

In paragraph 2.2, I will begin to describe the features of the orthorexic society setting the crisis of the cultural order in relation to the progressive individualistic closure of the body taking place in modernity, a transformation useful for understanding the increasing spread of obsessive control phenomena of food and the *borders* of the body.

In paragraph 2.3, I will illustrate how, in the orthorexic society, the individualisation of alimentary incorporation does not only create a problem of insecurity for physical integrity, but also raises a delicate issue of identity projection; and how advertising takes advantage of such issue through targeted business strategies.

Lastly, in paragraph 2.4, I will try to show that to comprehend the widespread hostility toward biotechnologies it is necessary to analyse the hegemon-

¹ *Orthorexia nervosa* is a psycho-cultural syndrome, whose definition is the work of Steve Bratman, that may summarily be described as the obsession for healthy (opportune) feeding. Although the clinical picture has still not been definitively established, it represents a condition that affects an increasing proportion of the western population and, here, serves as a metaphoric representation of an 'epoch-making' condition. The orthorexic passes an important part of his time in search of dietetic perfection, organizing, researching and selecting food.

ic, scientific and ethical-dietetic discourse, that lies at the roots, not without contradictions, of the orthorexic society. A discourse oriented toward the ideal of the 'perfect diet' and the valorisation of tradition in contrast to the artificial.

1. Technological innovations and public opinion

All the surveys carried out to measure public perception on the topic of techno-scientific innovations demonstrate a certain ambivalence in the judgment of public opinion. In Italy, an attitude that has been defined by some commentators as '*utilitarian*' (Cerroni et al., 2002: 1) would appear to emerge. It is, in fact, generally positive with respect to medical applications (diagnosis, prevention and cure of disease); in this sense, Borgna (2001) notes a public perception based on the substantial identification between science and medicine.

On the contrary, at the top to Italians' worries, the source of anxiety and considerable fear, is innovation in the biotechnological field, with particular reference to applications in the agricultural and food sector.

According to the findings of Censis (Social Investments Study Centre) in the XXXV report on the social situation of the Country (Annual report of 2001), among the main fears of Italians, those with regard to foods play a primary role:

Fears provoked by the recurrent alimentary shocks (mad cow, dioxin-contaminated chicken, etc.) have worn away the last certainties of foodstuffs, generating in the population an expectation of genuineness and effective protection [...] the fear also generates precaution, so much so that, both in Europe as in Italy, more than half the population express worry and refusal for an excess of genetic manipulation in food (Censis, 2001).

The data found by Censis (2001) record, in Italy, a significant increase, even if minor with respect to other European Countries, of the opposition to genetically modified foods (+ 12% in the four-year period '96-'99; + 30% in Greece; +20% in GB; etc).

Closely correlated to these data, according to Censis, is the exponential increment in the growth of the market share of biological products (Censis, 2000): turnover (direct and indirect) of quality alimentary products (D.O.P. and I.G.P.)² is estimated at 7 million euro; the consumption of biological fruit and vegetable products at 5%. The anxieties shown by Italian consumers have also been found in a broader European context (European Commission, 2003; 2005): fear and pessimism are not connected to biotechnologies *tout court*, but rather are mainly focused on the alimentary field.

² In 2003, Inea (Agrarian Economy National Institute) recorded as many as 120 products certified thus in the gastronomic field and as many as 450 in the wine growing and producing sector (Sassatelli, 2004: 486).

The focus on applications in the alimentary field is confirmed by research carried out in Italy between the end of 1999 and the first half of 2001 on the public perception of science (Cerroni et al., 2002). An important aspect emerging from this research consists in the fact that biotechnological applications in the food sector, which in the more anxiety-inducing aspects practically coincide with the fear of contaminating one's own body, become more acceptable if the 'contaminating' products (as an example GMO) are accompanied by informative labels. Indeed, 61% of those interviewed stated they were 'favourable to the introduction on the market of biotechnological products if the relative information were indicated on the label' (Cerroni et al., *ibidem*: 130). Highly interesting is the interpretation that Cerroni gives to this data. In his view, labelling does not so much perform an informative role (as the supporters of the cognitive approach would have believe³), but rather realizes an essentially psychological task (Cerroni, 2003: 60-66). Cerroni cites various empirical researches to show that the value of labelling does not consist in assuring an effective increase in the power of control over technology by the consumer, because in the background persist:

- a) a profound *informative asymmetry* between producer and consumer;
- b) a fundamental emotional and symbolic dimension that cannot be resolved in mechanistic manner (or hydraulic) through the mere 'pumping' of information.

The greater propensity of the consumer in the presence of labelling is, instead, explicable with a *control illusion*. Interpreting the work of Slovic⁴, Cerroni asserts that through labelling it is possible to reduce 'the subjective component of unknown risk': namely the component that increases the perception of risk of all that which is not known (Cerroni, *ibidem*: 61). The existence of such a component is demonstrated, a *contrario*, by the disavowal or the scant importance attributed to the danger of day-to day hazardous behaviours (domestic incidents, cars, etc).

The interpretation proposed in the following argument is that this special attention reserved to biotechnological applications in foods may be explained

³ According to these researchers, citizens would only perceive science and technology hazardous for the health and the environment owing to the incapacity to face risk analysis with an opportune and correct understanding. The profane, therefore, would react in a 'non-scientific' way (read: non-rational) only because they are ignorant. According to this view, there is an information deficit (*deficit model*) at the roots of the unwarranted anxieties of contemporary society. Increasing the amount of information would be enough to resolve the problem of the widespread resistance to change and progress (Lupton, 2003: 23-30). About this point you can also see Wynne (1994).

⁴ In particular, Cerroni quotes the renowned distinction between dread risk and unknown risk: the former definable as a fear of unimaginable effects; the latter owing to the fear of 'the hidden nature of the process'.

by recognizing that food continues to hold, also in complex contemporary societies, a decisive symbolic weight. Unfortunately, official science (in particular medicine) obstinately continues to underrate this aspect.

For such a reason, doctors and scientists are often vexed by the broad spread of alimentary fears; and they make irony of the behaviour of consumers which is defined 'irrational'. In the magazine *Salute* (weekly insert magazine of the daily paper 'La Repubblica') 16 February 2006, n° 479, Riccardo Crebelli, renowned toxicologist of the Higher Institute of Health, in an interview on the theme of banning Teflon and Pfoa (with particular reference to so-called 'non-stick frying pans'), emblematically, asserted astonished:

[...] Pfoa have been found everywhere: in 92% of American non- exposed citizens [...] they enter into the atmosphere, they are concentrated, they end up in the alimentary chain, the aquifers and become ubiquitous and persistent [...] as a toxicologist I always ask myself why people's attention is *pathologically* concentrated on food, while one never thinks of air or water. We breathe approximately 15 kilos of air a day, drink 2 litres of water, we only eat 1 and a half kilos of food, yet our main worry..... (my italics).

Prof. Crebelli's question expresses the organicist, mechanistic and rationalist perspective so widespread in the medical-scientific field.

The main thesis developed in this article takes a contrasting view: for or against, we will never understand the widespread fears and consequent resistance to innovations in the biotechnological field if not by starting off from a serious reflection on the symbolic importance of the food.

2. Food, the body and modernity

2.1. The culinary Order and its crisis: gastronomy and the opacity of food

In compliance with the matrix of the anthropological charter of human nature (in which biological, cultural, individual and social are *fused* inseparably), the *homo sapiens'* relationship with food is complex and cannot be reduced to one-dimensional readings. Given the overall brevity of the present article suffice it to remember that, because of the *principle of incorporation*⁵ (Fischler, 1988), there is a complex but essential food-body nexus. There are three dimensions able to specify such complexity. Food is: substance of phys-

⁵ Founding principle of the relationship between man and food, consists in the banal fact that eating means incorporating the external world within, making him break the barrier between the interior and exterior. This implies the fact that, both on a material as well as symbolic level, incorporating food means incorporating a part or all of its qualities (positive or negative). Much of primitive thinking is based on such a 'belief'.

ical-biological maintenance; pharmacological remedy⁶; 'cultural object' able to channel important symbolic meanings.

These three dimensions, in effect, are traceable to two fundamental spheres: a material (life, health, energy, etc.) and another immaterial (symbolic projection). Moreover, both may be tinted in an ambivalent way (and in a synchronic or diachronic sense) by conservative or innovative instances: protect the body (physical identity), the Self (symbolic identity) or innovate both. Such fundamental ambivalence is, in the last instance, traceable to the so-called *paradox of the omnivore* (Fischler, *ibidem*), namely that the human being, in so far as an omnivorous animal, lives out an elementary anthropological contradiction. On one hand, he inhabits the reign of freedom, to the extent he is not limited to one food alone, but can choose from a more or less limitless variety of possibilities. This renders him particularly flexible, creative and ready to adapt to the changes in the environment in which he lives (*neophilia*). On the other hand, as always happens in the reign of the freedom, he experiences the distressing constraint of choice. He must choose and decide among infinite possibilities, some of which are irremediably toxic, corruptive or lethal (*neophobia*).

As we have already hinted at, the technocratic and rationalist drift of western modernity has led to a slow but inexorable removal (to which hegemonic scientific discourse has strongly contributed) of the 'immaterial' spirit of food, its symbolic dimension, to the entire gain of the other spirits, the material ones. Naturally, this does not mean that food is no longer in a position to produce meanings, on the contrary; rather, more simply, that this force is widely ignored or neglected. In fact, as Claude Fischler sustains:

It is undoubtedly this ultimate intimacy of incorporation that gives oralconsumption an entirely particular symbolic importance and contributes to making food a kind of machine travelling in social space and the imagination. (Fischler, 2001: 80)

In the West, what has changed in the course of the time is the mould of such incorporation: tendentially communitarian and prescriptive in the past, by and large individualistic (anomic) today.

In 'primitive'⁷ (or simple) societies, he who eats absorbs and, at the same time, is absorbed by a complex culinary system: through incorporation one is

⁶ Indeed, food precisely in virtue of the fact that of being the main material with which our bodies are made, has always been, in every society, the first pharmacological remedy (Hippocrates invited making his medicine into food). But if in archaic societies this fact further augmented its symbolic importance, in modern western societies it has increased its rationalist reification (nutritional science, etc.).

⁷ I use the term 'primitive' in the classic Durkheimian meaning, referring it to the classic dichotomy between mechanical solidarity society and organic solidarity society.

incorporated in a collective order⁸. In this sense, *gastronomy* is a rich system that contains a cosmological taxonomy and a broad ensemble of rules that refer directly to a precise Cultural Order (Douglas, 1993). Namely, the culinary system expresses the representations, the beliefs and the practices of the subjects belonging to a certain culture (or a group within it). The culinary system, moreover, carries out the important function of resolving *the paradox of the omnivore*. It regulates the anxiety of incorporation, the risks of contamination, arbitrarily reducing the ambient of the edible (a variable ambient between cultures).

Modernity has radically modified this social-anthropological framework, activating a process of erosion of the 'culinary order', parallel to a more general decline of the Cultural Order, that has led to a new situation in which the regulatory criteria of alimentary habits are less and less socially shared and constrained and increasingly left to the mercy of an interpretative pluralism, often contradictory⁹ and, consequently, of an individual choice of an absolute type (in the etymological sense of *ab-solutus* 'loosened from' ties); setting, therefore, the bases for a passage from gastronomy to the *gastro-anomy* (Fischler, 1979). Such a passage, in effect, reflects and reproduces the wider transformations of modernity. The most important of these, probably, lies in what Pietro Barcellona defines as 'asocial socialization': indeed, ours is probably the first age in history in which subjects are culturally oriented toward autonomy from the social and in which, consequently, they remove what in them is the fruit of a process of socialization (Barcellona, 200). Such a removal is at the roots of the shift, occurring in modernity, of the cultural framework towards a new parameter of reference: the valorisation of the individual, of his deliberative will and his acting (*agency*). In this transition, the body becomes, as we shall see, the geometric locus for the reconquest of the self, an attempt at sensorial exploration and, lastly, an instrument for social contact experienced as a narcissistic contact.

Along the same lines, modernity has also inaugurated a series of radical transformations in the production processes of food. Domestic cooking has been replaced by an industrial conception, and the new agro-industrial system has rendered food processing opaque. Its identification, namely in the new order of alimentary production, is increasingly difficult and an ever greater part of the population consumes food whose history and origins it does not

⁸ And at the same time, as happens with the sharing of a language, it defines Otherness, those who do not belong to the same order. Exemplary is the identification of social or national groups with a particular food: Italians are 'maccheroni', the Germans 'sauerkraut-eaters', etc.

⁹ Fischler speaks of a mosaic or a 'cacophony' of discordant alimentary criteria proposed: moral, scientific, dietetic, identitary discourses etc.

know. At the same time, the olfactory/taste consistency of a food has increasingly less of the very nature that identifies it. Its 'sensible' characteristics are increasingly an issue of *sign* appearance (marketing, packaging, etc.) exposed to technological sophistication (artificial flavour, additives, preservation techniques, etc). Also natural and traditional products are subject to imitation or industrial elaboration.

In the framework of such epochal transformations (individualisation and untransparency of the alimentary act), *insecurity and alimentary uncertainty represent an ever more decisive aspect of contemporary society*. Only in such a way can the ever greater demand for informative labelling of food products be understood (nutritional tables, traceability, marks of quality and origin, etc). Likewise, the various ethical-dietetic preoccupations all refer back, in a different way, to a single horizon: the search for a 'logical normative' able to ensure a harmonious ensemble of control regulations (an Order). Fischler explains the importance assumed by diets by drawing attention to the etymological meaning of the term (*regime* in French). In Latin, regimen, in fact, meant 'the act of directing' (Fischler, *ibidem*: 290). The current success of diets (in the several health-conscious, ethical forms, etc), therefore, would be interpreted as a widespread need to reinsert the act of eating within a broader discipline of control on life styles and on the body. Naturally, this concerns a control in an individualistic and scientific-rationalist frame. The growing importance assumed by the *fitness* phenomenon and the frantic concentration on bodily 'shape' are to be viewed in the same light of a search (illusory) for a 'religious' harmony (in the Latin sense of *religere*) between the corporeal/individual level and the universal one: 'between the self and the universal order'. In such a sense, the French sociologist interprets the common etymological origin of the terms 'cosmic' and 'cosmetic': they both recall the Greek term 'cosmos', in its meaning of 'order' (Fischler, 1988: 291).

2.2. *The individualisation of the body and Orthorexia nervosa*

One of the theoretical contributions that have 'motivated' with greater force the symbolic centrality of the relationship between food, modernity and corporeity is that by Pasi Falk (1994). As is known, he attempts to define the profile of a '*topology*' of the body and its openings, emphasizing the existing ties between sensory organization and social-cultural Order.

According to the Finnish sociologist, the human sensory organization is not a biological constant. It is a historical given depending on the changing conditions of the social-cultural Order. This conviction is articulated in some assumptions:

- a) the sensory apparatus of the human being is physiologically able to perceive the external world thanks to its capacity to make 'distinctions';
- b) the nature of such distinctions is not entirely objective. They are shaped by cultural categories (*representations*);
- c) in order that the sensory apparatus may perceive it must be in a position to distinguish, in the first place, between a 'interior' (of the apparatus) and an 'exterior' (of the apparatus);
- d) interior and exterior are ambiguous categories because diverse cultural Orders define them in a different way.

Now, says Falk, 'the organs of sensory reception are located on the corporeal surface' (*ibidem*: 12). But, at the same time, the distinction between exterior and interior depends on the way in which the subject is placed within the frame of the cultural Order. Along these guidelines, Falk re-elaborates the classic fundamental dichotomy of classic sociology: *Gemeinschaft* vs. *Gesellschaft*:

First, the stronger the cultural Order and the community bonds in which the subject is constituted, the more 'open' is the body both to outside intervention and to a reciprocal relationship with its cultural/social context. In general terms, this is the situation in a 'primitive' society [...]. And, second, the less rigid the cultural Order and the weaker the community bonds, the more intertwined are the boundaries of the self with those of the individual body. In other words, the constitution of the subject takes the form of an individual self - especially characteristic of modern society - articulating the inside/outside distinction primarily at the boundaries of the individual self, and thus the body surface. (Falk, *ibidem*:12)

Therefore, in the archaic society it is a collective subjectivity, a 'group-self' (or 'group-ego') that discriminates the interior from the exterior; it is the collective rituals and the cultural norms that define what is interior (the integrated community), distinguishing it from what is external (the 'Not-us', 'the non-human'). Here, the body is a collective entity and the community is an '*eating community*' that defines itself around the ritual meal and, at the same time, integrates and positions the individual. And it is for this reason that, in simple societies, eating is a rigidly codified activity. One eats together as an act of *sharing*, reinforcing the principles of social *cohesion* and *reciprocity*. For this reason, in the past, it was unbecoming to eat alone in the presence of others:

One passed the jug or flask to others, who in turn did the same until nothing remained. The hunter saw to distributing the meat of the killed animals following a precise criterion of allocation, that took account of the ties of relationship, status and rank, so that everyone, also the children, received something, even a very small portion [...]. 'When one eats and the other

must watch' said the Turkish peasants 'then the moment of the end of the world has arrived'. It was not only about the gift, the gesture in itself, but of the wider significance of giving and receiving. (Müller, 2005: 82)

The sharing carried out a decisive *unifying* function of strengthening social ties and the relationships of dependency. At the same time, in order to avoid the deterioration of such bonds, periodically, in periods of transition¹⁰, the traditional rites of passage were accompanied by a festive meal. This unifying function is etymologically incorporated in the term *companion*, that derives from the Latin *companiono*, popular compound of *cum* (together with) and *panis* (bread). The companion is, therefore, the one with whom bread is shared. In the same way, the wedding, an essential tie for the maintenance of the life of the group, was perceived as 'the furnishing of provisions' (Müller, *ibidem*: 121)¹¹. Also for such a reason, there was (and still is) a deep symbolic mingling between food and sex. So much so that, in many cultures, as Müller sustains, 'eating' and 'sex' are synonymous and, still today, in all languages there are alimentary metaphors of a sexual nature:

Men described women as 'warm tomatoes', 'pieces of mutton' or 'vase of honey', and expressed in such a way their sexual 'appetite', their desire to 'eat them', in the same way that the vulva of the woman 'ate' the male member during intercourse. (Müller, *ibidem*: 121-122)

This communitarian mould, so widely reflected in the alimentary ritual code that regulated it, converged in the same corporeal conception of the group members. The 'primitive' body was, according to many observers, a *communitarian* body; indeed, it bore within itself a very strong symbolic charge and was not the simple medium of action and communication of individuals, but the social field of expression of sense. The body was, as Falk tells us again, 'open' and 'grotesque' (Bakhtin), characterized by flexible outlines and borders. A Dionysian and carnival body, bound indissolubly and organically (sweat, sperm, breath) to the social body. Here the body, the self and the culture are interconnected within the very same network.

[...] the grotesque body is not separated from the rest of the world. It is not a closed, completed unit [...]. This means that the emphasis is on the apertures or the convexities, or on various ramifications and offshoots: the open mouth, the genital organs, the breasts, the phallus, the potbelly, the nose. The body discloses its essence as a principle of growth which exceeds its own limits only in copulation, pregnancy, childbirth, the throes of death, eating, drinking, or defecation. (Bakhtin, 1984:26)

¹⁰ Births (incarnation spirit of the ancestors), weddings (alliances between groups), deaths (journey in the dominion of the dead), reconciliation, aggregation, etc. For a review also see Van Gennep, 1909.

¹¹ This cohesive dimension of food, moreover, is also to be found in the underlying meaning of the Potlâc term, a form of 'total fact' of a competitive kind, whose intimate structure is grounded in the obligatory nature of giving, receiving and giving back, and whose central function (certainly not the only one) consists in strengthening the social bond. Mauss, the foremost author associated with the study of the gift in human societies, defines the meaning of the Potlâc as 'nourish' and, at the same time, 'consume' (Mauss, 1950).

In modern society, instead, the body is an individualised body (Le Breton, 1990) and 'closed'. Again according to Falk, indeed, the erosion, in time, of culturally shared alimentary codes has implied the valorisation of the organ-mouth as the privileged site of taste and judgment (ethical and aesthetic) of the individual. What Falk means is that the act of eating has undergone an inexorable process of individualisation, in the alimentary choices (the tastes) and in practices (to eat alone); becoming ever more based on a marginalisation of the collective and communitarian moment. To sustain an integrating function of an oral type, Falk claims, there remains only *communication*. An emblematic example of what we find in the experience of 'eating out'. On these occasions, table companions choose what to eat freely, and individually, from the menu. The collective dimension is assured chiefly by *conversation*.

The individualisation of alimentary choices is closely correlated to the generalized spreading of rational strategies toward alimentary care; echoed by the proliferation of the advice of nutritional science and the increment in media attention toward the 'right alimentation'. In the age of the triumph of individualism, the body must represent the fulcrum of control (narcissistic) of instincts and weaknesses. To this diktat the female body cannot escape either; starting from the 70s, alongside the processes of social and political of emancipation the woman, it was subject to a deep transformation that was to upset the cultural mould: from *reproductive* to *productive*. Such a transformation was also to radically modify the iconographic forms of the representation of female sensuality. Behold the triumph of slenderness and tonicity, symbols of productivity, countering the fatness that hallmarked the past cult of fertility (Fischler, 2001).

Well, the modern body (individualised) of which Falk speaks is an ideal body, 'noble', pure, autonomous and separate (from other bodies). It is a Kantian body, the reverse of the grotesque body described by Bakhtin (Benbow, 2003). A body obsessed with the control of its orifices¹². Following the etymological analysis made by Mary Douglas, the modern body is a body that aspires to *holiness*, understood as separation and integrity: both attributes of divinity (Douglas, 1993: 94-96). An aspiration that we can verify in the

¹² Falk's description proposes the contrast between the open and closed body as implicit reflections of the classic Durkheimian dichotomy between mechanical solidarity society and organic solidarity society. It is evident that, from a diachronic point of view, the passage from one form to another is not linear. Forms of opening in the body cohabit in geographic, social and temporal enclaves (consider carnival) with the hegemonic closure of modernity (Le Breton, 1990). An extraordinary account of the forms of symbolic, imaginary and literary representation that have marked the passage from one form to another in Germany has been undertaken by Cheesman, 1996.

exponential increment of the importance attributed to the control of the borders of the body¹³.

In my view, the transformations described up to this point may help explain the ever broader spread of phenomena of obsessive control over food. We refer on one hand, as already pointed out, to the exponential increase of institutional levels (public and private) of control of alimentary purity¹⁴. On the other, to the consumer's heightened attention, increasingly unwholesome, with regard to the dietetic, health-conscious, ideological and ethical characteristics of food. If, starting from the 70s, the opulent society of the capitalist West has been represented, with an alimentary metaphor, as an obese society, late modern society would be defined, with another equally significant alimentary metaphor, as an orthorexic society.

Now, the destiny of the orthorexic society is, in many respects, similar to what the neurotic subject will encounter: as claimed by Patrick Denoux¹⁵, he is exposed to a perverse effect of an 'inflationist' nature. If, in fact, increased control reduces the effective risk, it also provokes an increase in the dread of an imagined risk, in an endless spiral. As an example, labelling may subjectively reduce the fear of risk because, as we said, it renders it known (increasing the illusion of control), but can increase, collectively, the amplified perception of potential risk. Thus, consumers may interpret the increase of institutional controls as the proof that their fears are justified.

2.3. Food as commodity: the struggle of symbols and publicity

Orthorexia nervosa, therefore, represents a subjective and social response, at the same time, that is to be understood within an alimentary scenario characterised by uncertainty. A picture constructed on the fact that feeding, an anthropologically rooted action (*embedded*) in the social domain, an important *humus* of the shared production of meaning, becomes increasingly a fact of anomie consumption; founded on the removal of a sense and a shared collective order (*the gastro-anomia*) and on the alarming transformations induced by the advent of the industrial globalised society.

¹³ But, with the aim of ensuring that the radicalization of this closure does not provoke the absolute annulment of the relationship with the external world (a 'non-relation'), the modern body modifies its own function, undergoing a process of *semiotisation* of its surface (consider the importance of corporeity in the various expressions of the society-show: fashion, publicity, pornography, etc.). The *body-for-images*, in fact, becoming simul-linguistic expressivity, and joining up with conversation, ensures a proportionate relationship between introjection and externalisation. Falk would say that we have passed from the body for communion to the body for communication (this latter able to assure the subjects autonomy and separation).

¹⁴ Naturally, the appropriateness of such controls, as well as their function as sociological branding of an age, is not discussed in this work.

¹⁵ See www.agrobiosciences.org/imprime.php3?id_article=1260.

As the same Falk sustains, today the meal has become a de-ritualised event, and food has become mere *commodity*. In many respects, in truth, it is the commodity *par excellence*. Indeed, the idea of 'consumption', associated with the development of capitalist society, in the case of food, takes on a *prototypical* profile. In compliance with the *incorporation principle* we may assert that by consuming food, we introduce the commodity inside us until transforming it into an integral part of our body and identity:

It is possible to demonstrate that food is the extreme edible commodity. The act of incorporating foods can be considered as the apotheosis of the mark left by the choices of consumption on the body, in an almost permanent way both from the external as well as internal point of view: commonly, one believes that skin tone, bodily weight, the solidity of bones, the conditions of hair and nails, digestion, are all directly conditioned by the diet. (Lupton, 1999: 41)

Food in contemporary capitalist society is a commodity consumed *subjectively*, more so for its identity dimension than its organoleptical features (still less for hunger). Today, consuming food/commodity means introjecting this identity dimension and transferring it to the very self in individualised context/manner.

For this reason, there is not only the fear of physical contamination (virus, GMO, etc.) at play, but also the fear of a loss of a symbolic-identity purity (if I do not know what I am eating, I do not know who I am; if I eat unnatural foods, I become un-naturalised, etc.) or ethical-ideological (consider the vegetarian or the no-global activist who boycotts Coca-cola, McDonald's, etc). Food becomes the symbolic 'object' that indicates the belonging (and the distinctions) of individuals. This concerns, as happens with fashion, forms of belonging that give concreteness to specific practices of consumption or *lifestyles*. A consequence of this is that in a complex society like ours, in which identity issues assume ever greater importance and in which the struggle for symbolic recognition acquires centrality, the body of the subject (and with it, food), no longer confined to the sticky weave of social obligations, but constructed in a 'deliberative' way like a 'thought out and organized plan' (Giddens), 'cut out' by means of a plurality of choices (*lifestyle*), becomes the arena of real and proper *semi-otic struggle* (the Moslem veil, tattoos, fitness, vegetarianism, religious alimentary regimes, etc.) in which individual choices and the interests of small and large political and industrial groups are mixed together.

That human beings by eating nourish themselves not only with food, but above all with signs, has been widely understood by the advertising world. For this reason, it seeks to construct communicative strategies around the produce-food based one on two specific modalities:

- a) the production of discursive strategies (Ferraro, 1998; 1999);

b) brands¹⁶.

Both modalities are targeted to give, for the purposes of money making, an identity to food so that the consumer can newly incorporate, with it, meanings; after modernity by means of commoditisation has obscured traditional ones.

It is interesting to find that, in the orthorexic society, advertising strategies perform a function in many respects analogous to that carried out by traceability. Both cases entail, through *narration*, giving back an identity to 'objects' that in time have become opaque and unrecognisable owing to cultural and social uprooting. Naturally, this regards various forms of narration. Traceability tries to tell an 'objective', biographical story of a particular food. Advertising often tells a mythical or fantastic story (stories).

2.4. Orthorexic society and hegemonic discourse: the myth of returning to the origins

If we really wish to comprehend the cultural foundations of the Orthorexic society and, therefore, the resistance to biotechnologies diffused within, it will be necessary to recall how a hegemonic speech has become consolidated in time whose main characteristic is of being (a circumstance that, as Vito Teti highlights, is very rarely realised) at the same time scientific, ethical-ideological and rooted in common sense. Such a discourse, revolving around the myth of the realization of the perfect diet, began to take on important dimensions around the 50s and saw its highest moment in the idealisation of the so-called Mediterranean alimentary model.

The first problem that this model raises, and that reveals a certain ideological mould in those who have championed it, remains the age-old issue of the possibility to conceptually define, in the first place, the locus in question: the Mediterranean. A task, however much absurd, that is not so readily done. A difficulty tied to the strong historic-cultural fragmentation of the area.

The second problem raised, consists in the fact that, as Claude Fischler has precisely explained, the ideal of the Mediterranean diet carries all the typical characteristics of a 'utopia' (Fischler, 1996). Citing Sfez (1995), in fact, Fischler defines utopia as characterized by two aspects: the hygienic rules of life and the return to origins. In this sense, he underlines, the discourse on

¹⁶ André Gorz defines the brand as a symbolic monopoly, one of the fundamental pillars around which intangible assets is structured in the age of the *economy of the knowledge*: 'Intangible assets of companies like Nike, Coca-Cola or McDonald's consist mainly in the power of monopoly, symbolized in the brand name, that they exercise on the market, and in the importance of the income that this power assures them. The brand name is already in capital itself, to the extent in which its prestige and fame confer to the products bearing the name a symbolic value that can be converted into money' (Gorz, 2003: 43).

Mediterranean alimentation contains an evident moralistic hue (the 'right diet'¹⁷). This latter feature, in truth, may be generalised, with more or less marked stress, for all alimentary discourses. The experience of the '*health reformers*' (of Adventist extraction) in Jacksonian America who tried to change the moral customs of society through the radical and puritanical reform of the alimentary styles, is an emblematic demonstration; thereby giving a significant contribution to the development of modern nutritional science (a process then continued and secularised by the work of John H. Kellogg). The principle followed was: to guarantee health through a healthy life, to prepare the grounds for holiness (*sanitas* and *sanctitas*). Also modern nutritional science, according to Fischler, bears this moralising and utopian charge and the myth of the Mediterranean diet represents its most obvious form (Fischler, *ibidem*).

According to Fischler, therefore, the theorisation of a Mediterranean diet with matchless salutary virtues, in truth, refers directly back to a moralistic prescription of hygienic rules founded on an ideal return to origins that, at least in the continuity and unitariness presented by the upholders of such an ideal, have strongly been doubted by historical analysis, beginning with the same Fernand Braudel (1992).

As Vito Teti has highlighted, albeit finding ourselves facing a model that has effective historical grounds, it is in truth an emphatic exogenous construction:

In the more naive and approximate formulations, the Mediterranean diet appears a post-modern culinary invention in which heterogeneous elements, taken from various geographic, environmental, traditional contexts join together, often external to the Mediterranean world [...] as has been demonstrated by numerous investigations, the model, the alimentary ideal, does not correspond to the reality of any geographic area in the Mediterranean. (Teti, *ibidem*: 35-36)

The Mediterranean, therefore, has carried out a utopian function of timeless *non-place* (fundamentally coinciding with the idealised American image of southern Italy) founded on the respect for principles of tradition, thrift and austerity (Fischler, *ibidem*). Nevertheless, both Fischler and Teti emphasize the paradoxical nature of such a utopia:

Arising as a puritan and moralistic Anglo-Saxon invention, the 'Mediterranean diet' is nourished in the Old World by a grounding in anti-Americanism. And the proposal of some regional cuisines assumes the profile of an anti-American denunciation. This image - of which a singular comeback is taking place - has contributed, thanks also to scholarly elaborations, to cancel out ancient stereotypes on the 'alimentation of hunger' of the South, traditional undervaluation of the cooking of the regions of the South by famous gastronomes, and has prompted in the populations forms of reflection on the their own alimentary identity and self-

¹⁷ On this point see also Atkinson, 1983.

recognition, of diverse awareness. The Mediterranean diet, in the reworking that it is subjected to in the Mediterranean, takes on an opposing value to accredited models and 'non-cooking' forms, attempts a recovery of traditional forms, asserting the pleasure of eating and the link between feeding and health. The search for a food that does good to the health is received well, also in mass society, with much favour [...]. (Teti, *ibidem*: 44-45)

The success of the utopian model of the Mediterranean diet is an indicator of the importance that the recovery, with various declensions, of a more reassuring idea of *tradition* is having in the contemporary western world, after years of progressive myth. This process proves rather pervasive; and takes on fairly defined and decisive forms in the alimentary field, like a radical contrast to the category, by now anxiety-inducing, that more than others has dominated the positive outlook of the recent past: namely *the artificial one*. Also this aspect is to be analysed in order to understand the fear of biotechnologies and the so-called *Frankensteinfood*, an expression that pertinently fuses the idea of food with that (mad) artificial manipulation represented by Mary Shelley's *Frankenstein* (Poulain, 2002).

The contrast between the natural and artificial is one of the most important semantic shapes of signification. In truth, such a contrast directly echoes many other and stratified forms of symbolic oppositions typical of modernity. Around the concept of 'natural', in fact, rotate an articulated constellation of concepts which may all be traced back to a sole paradigmatic system: original, primitive, true, traditional, rural, pure, uncontaminated, tasty, beautiful, healthy, good, etc. Against this, the concept of 'artificial' revokes: cultural, modern, urban and civil, but also corrupt, unhealthy, ugly, tasteless, bad, and false. It is easy to verify how the *semantic categories* that may arise from the contrast of the terms imply, at the same time, an ethical dimension (good/bad; healthy/unhealthy; etc.) and an aesthetic one (beautiful/ugly; tasty/tasteless; etc). In late modernity, the contrast between these categories assumes ever greater importance and weight.

In this perspective it is possible to read the exponential increase of the phenomenon of the vegetarianism (Lupton, *ibidem*: 146). A complex and variegated phenomenon, not traceable to a single motivational source¹⁸, in the developed world western it is characterized by the fact it is taken up mostly in subjects with 'a very acute perception of their state of health and of the signs transmitted by the body' (Cooper *et al.* 1985: 526). Julia Twigg, in this light, underlines how there is a profound difference between contemporary western vegetarianism and the historically present forms in other cultures. If in the western world it is based on more or less extreme individual choices, in the case of

¹⁸ Beardsworth (2004) singles out six: moral, health-conscious, ecological, political, gustative, spiritual.

Hindu vegetarianism, for example, the abstention from meat eating is part of a broader and more structured cultural framework:

[...] In the west, by contrast, vegetarianism is very much a product of individual choice, and indeed, requiring one, as it does, to step outside the culturally prescribed forms of eating depends on the development of a highly individuated sense of self. [...] Western vegetarianism is also dominated by the imagery of Eden and its recovery, whereas such a return to a primordial innocence of matter is essentially alien to Hindu thought. (Twigg, 1983: 19)

Therefore, western vegetarianism would be founded emblematically on these three characteristics: *highly individualised sense of the self, marked perception of the body and the myth of Eden*. Precisely the main keys of reading that, following the thesis set forward in this article, may help us comprehend the widespread hostility and diffidence toward biotechnologies.

Notwithstanding, then, that such a drastic contrast between natural and artificial is therefore not rationally founded, advertising uses the semantic game proposed by these contradictions to the full, speaking directly to the imagination and presenting an order (moral) of the country and tradition as opposed to the disorder (immoral) of the city and industrial innovation; natural virtue is contrasted with abomination, in the Douglasian meaning of 'confusion' and 'mixture of different categories' (impurity). As Paul Atkinson has written in exemplary fashion:

Mass produced goods which make their appeal to 'nature' and 'tradition' hence mask their actual production, and the abomination they create. Rather, they invoke a mythological character in which the categories are kept separate and pure. The 'old order' is maintained and mythological contradictions of the new are thus glossed over. This resolution is the work of all mythology: and the systems of health foods and the promotion of ordinary foods are alike in this respect. Both purvey the message that social order and personal virtue can be eaten. Just as in some belief systems one may be thought to consume the strength of one's prey, so in such food imagery one can ingest the mana of 'pure', 'natural' food. In this way can harmony be restored, and abominations abolished. (Atkinson, *ibidem*: 16)

Conclusions

In this article, I have sought to indicate a possible interpretation of the widespread resistance in public opinion to biotechnologies with regard to agriculture and food. In the last instance, two critical nodes of a cultural type have been highlighted.

In the first place, we have reasserted the principle that the act of eating, founded on an action of incorporation of the external world, bears an exceptional symbolic charge. To a large extent, indeed, we are what we eat and this

as true from the physical and biological point of view, as it is from the point of view of identity. If we accept such a principle, we cannot fail to recognize that eating unknown artefacts, without a past and without social roots, as has happened with the advent of modernity, may mean losing the deepest sense of the self; and that to eat 'unnatural' foodstuffs means to symbolically de-naturalise oneself¹⁹. Also we have tried to show how in order to respond to such a profound feeling of alimentary uncertainty, two strategies have developed aimed at restoring an identity to food: labelling (traceability, guarantee of origin, etc.) and brand name (advertising narration, symbolic monopoly, etc).

At the same time, we have emphasized that the neophobic alimentary anguish, a paradox which man must necessarily encounter given he is omnivorous, has been anthropologically superseded by means of the cultural recourse to the culinary Order. In simple societies, the culinary Order discriminates what is edible from what is not. And it does so arbitrarily, namely culturally, representing a perfect metaphor of the protective function of the community with regard to the individual. To comply with a culinary Order means the subject need not be exposed to the potential risks that the incorporation of the world entails. The suggestion proposed in this article is that the individualisation of alimentary choices, reflecting a more general propensity toward autonomy from the social of the modern individual-consumer, opens up, alongside important degrees of freedom, distressing new forms of neophobia. Tracing the steps of various authors, we have suggested in the article that there is an inverse proportionality between the limitations of the cultural Order (Fischler), which protects and prescribes definitions of correct feeding (and of the right way of life *tout court*) and the individualistic closure of the body of the subjects (Falk). In this sense, *Orthorexia nervosa* expresses well the anxieties caused by a radical weakening of such an Order²⁰.

It would be utopian to think that such anxieties could be removed with massive doses of information alone: the stuff of information is too dissimilar to the stuff of symbols to dent their power. What, then, is to be done? Most likely, since a return to a 'pre-biotech' stage is neither conceivable nor favourable, it will be necessary to learn to cohabit with new forms of negotiation between science and culture. The social sciences, in this sense, will have

¹⁹ Our anthropological honesty should oblige us to accept the idea that, even for the modern eater, incorporating food is an act deeply influenced by the 'magical thinking' (Mauss, *ibidem*) based on two principles: contagion (the contact with an impure object implies transmission of impurity) and similarity ('image equals object').

²⁰ In Italy, the quantitative and qualitative characterisation of the media debate on alimentary biotechnologies, in our view, faithfully reflects such an anxiety-inducing social condition. On this point, see also the research undertaken by the Observatory of Pavia (2003).

to carry out a fundamental role in guiding such a process of bringing the human and hard sciences closer together. This means, albeit with respecting and valorising scientific development, it is absolutely urgent to reintegrate agriculture and alimentation within a social, cultural, economic and environmental framework that might determine its sustainability in the long term.

In order to do this, it is not necessary to counter scientific development with nature, Prometheus with Ludd. Biotechnology cannot be simply liquidated, as is proposed by various radical movements, like an absolute evil to be eradicated. The problem is, rather, what kind of biotechnology should be sustained and which countered, to be able to ensure a progress in tune with the natural and social determining factors of human life.

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