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NEW ALLIANCES AMONG FOOD PRODUCTION AND CONSUMPTION. WHICH CO-OPERATION FOR WHICH POLICIES? EMPIRICAL SUPPORT FROM A SURVEY OF 800 CONSUMERS.

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1. Introduction

Risk society (Beck, 1986) does not influence eating styles as much as it does the relationship between consumers and the food-system. As debate moves away, from the scientific fray into the day-to-day lives of common people, the consequence has been that consumers have become more competent and selective. So much so that consumers are now in a position to influence the choices made by the food processing industry as a whole, almost elevating them to the role of the system's referees (Fabris, 2003). In order to establish a relationship founded on trust, it becomes crucial to understand how they actually perceive food quality.

Our survey based data on a sample of 800 consumers (Battaglini, 2007) show that there is no relation between trust in the food and the structural variables that define the socio-economic condition of the consumers. The main results of our survey illustrate that it is very difficult to marshal consumer trust. What is then required are new strategic alliances between the socioeconomic actors of the food chain, bridging food production and consumption.

In this view, the paper will discuss the concept of *food chain* intended as the aggregation of stakeholders and the combination of material flows (raw materials, additives, semi-finished

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products, packaging) that contribute to the manufacturing, distribution, marketing and supplying of the product (Murcott and Campbell, 2004). The construct of *food chain* is useful to shed light on the activities that are required in the food processing passages whereby the agricultural produce is transformed into food eaten at table or processed in the back-kitchen, i.e. in the places where food is processed. The core of the paper will be then to identify which policies are required to implement *food quality governance* and show best practices developed in Italy.

2. Perception of food risks: survey's selected method and techniques

Considering the interdisciplinary nature of the survey, but also its exploratory character, we have defined, right from the outset, an open approach towards existing theories, focusing on the analytical description of relations among perception of food risks, information and consumer conduct.

Following an accurate analysis of the economic, sociologic and anthropologic literature on consumption a hypothetical analysis model was developed in connection with the purchasing conduct of consumers. We have thus adopted a research perspective of the 'contextual constructionist' kind ¹, believing that the perception of food risks on the part of consumers is a function of several variables, subjective as well as structural. Subjective variables include those relating to different forms of rationality and culture and to the degree of trust single consumers grant to the complex network of individual and collective players, among which the media. As for structural variables, we have considered, on the other hand, those pertaining to the domain of society and birth, to geographic origins, to occupation and to income.

¹ This theoretical setting derives from Mary Douglas' theory of dynamic integration with the classical structural perspectives in which (co)determining factors are the social, political and historical contexts within which behavioural patterns take place, and in our case, consumption choices (see Beato, 1998).

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The model was then tested and fine-tuned by utilising focus group techniques, which contributed to develop accurate tools for the survey.

Consumers behaviour constitutes the synthesis of social and cultural and components, besides impacting their lifestyle. With a view to explaining the impact of risk in the behavioural patterns of consumers, a broader model was required where the point of departure is not represented by needs, as economical consumption theory states, but by norms and values. Both, in fact, are basic aspects in the articulation of the "structure of preferences" which, in turn, determine consumption choices.

Two different focus groups, conducted in different regional contexts, allowed us to reconstruct causal sequences in the behaviour of consumers. They highlighted the attributes that consumers felt were relevant in the choice of food products. Together these attributes form quality, intended as the presence of an aggregation of characteristics in a specific product that ultimately determine its choice or, if absent, its rejection on the part of consumers.

An attribute considered crucial by consumers is the genuineness-naturalness-freshness combination which shows a significant correlation – inversely proportional – to the consumers' level of trust for the products they eat. In particular, there is concern for the ever lengthening process leading to the end product. Another possible sequence is in a way alternative to the one outlined earlier. Specifically, research on safety is linked to differing often contradictory motivations. There are many examples. Safety is linked to the famous brand which, however, produces low-quality goods utilising raw materials of dubious provenance. Artefacts are preferable, although, in reality, any producer can create a potential adulterator. Thus against this backdrop the only certainty lies in the fact that one has to live with existing uncertainties.

The semi-standard questionnaire that was used included 28 questions and was submitted – applying the CATI system – to a sample of 800 Italian consumers, stratified by gender, age,

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geographical provenance (Northwest, Northeast, Centre, South and Islands) as well as by the size in terms of residents of the city of residence.

The data was processed through various sequential phases that included single, multiple factorial as well as cluster analyses that served to define the behaviour of consumer groups².

3. Food risks and consumers' trust

Anxiety and concern are the dominant sentiments felt by Italians at table. These fears regard not only the entire food processing system (transport, brands, non-EU production, presence of chemical products, etc.) but also the elements that are contained in the food they eat (food preservatives, hormones, antibiotics, saturated fat, etc.): 87.4% of consumers considered the production system "very risky", and 75.8% of respondents felt 'anxiety' while eating.

The main source of anxiety regards pesticides (66.0%), hormones (67.1%) and antibiotics (64.3%). These responses were further confirmed by the data emerging in connection with the risk elements within the productive system: 95.2% of respondents was worried by the use of chemical products; 88.3% by the use of GM food, while 82.1% was concerned by the transport system and 76.4% by the way sales outlets are managed.

The observation of the choice attributes that condition the purchasing of food gives us the image of a society that is rooted in a vision of quality that combines the need to please the palate with that of safeguarding safety and health. The attributes respondents care most about are taste (97.2%), best before date (96.5%), health benefits (94.0%).

² Coordinated by the present author, the research is the outcome of an interdisciplinary effort involving agrarian and environmental economists as well as environmental and cultural sociologists and methodologists. Though significant synergies were achieved, there are specific merits to be acknowledged: the survey on available literature was carried out by Daniele di Nunzio and Serena Rugiero of IRES; the investigation model was defined together with Prof. Davide Marino of Università del Molise; the questionnaire was compiled by Anna Ancora, a methodology researcher; the data were processed by Prof. Stefano Nobile of 'La Sapienza' University of Rome and by Prof. Roberto Rocci of 'Tor Vergata' University of Rome.

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The willingness to pay (WTP), i.e. the demand exercised by consumers even in the presence of a higher price to obtain increased guarantees and certifications concerned half the sample surveyed (45.2%). Elaborating consumers typologies through a cluster analysis, we also observed that WTP has no significant correlation with structural variables as social position, gender or educational level.

The examination of the attributes leading consumers to buy even when prices are higher proved just how widespread is the awareness that the entire food processing system must be constantly controlled in order to safeguard one's health: provenance and traceability and environmental respect are considered key factors (respectively 41.0% and 35.3% of respondents). The analysis on the relationship between consumers and high quality content products (DOP, DOC, organic, typical, etc.) helps us to better understand this demand for quality and to shed light on the contradictions that entail this kind of consumption. Though a broader knowledge, it was shown, does lead to an increased consumption of quality products, precise information continues to be lacking, generating an asymmetry in what are the perceptions of consumers and the correctness of their consumption practices.

4. Bridging consumers' trust and food production. The need of a "food quality governance"

Our data show that living in an era of uncertainty has led consumers to become more competent, demanding and selective. Consequently, consumers have taken up a relevant role in influencing the choices made by the entire food processing industry to the extent that they have emerged as referees of the system as a whole. Consumers, though, do not wish to take up a confrontational stance with regards to the food producer, but demand that it be a trustworthy partner in a situation where the perception of food risk is high.

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Given that primary needs have been satisfied and goods mainly serve to satisfy desires, consumption in industrial societies is entirely substitutive. Thus, if expanding, market quotas flourish on marginal or non-competitive companies in a zero sum game that betrays the Fordist illusion of unlimited growth and of growing expectations in terms of social and consumption mobility. There will always be niches that expand in order to meet new desires but unlike what occurred in the past the phenomenon will indicate niche expansion rather than sectoral growth as was the case in the period after the war. As confirmed in our study, Italian consumers claims to a high propensity for information. But this propensity and willingness to learn is often frustrated by an industry and a distribution system that do little in this regard, producing, in other words, a plethora of data but little knowledge.

These elements of analysis produce at least a consequence – a consequence laden with difficulties that seriously impact food safety policies: it becomes difficult to marshal consumer trust (Fürst et al., 1991). And if trust cannot be marshalled top-down, what is then required are motivational decisions that integrate the traditional policies of food quality control with voluntary regulation through specific measures aimed at providing adequate awareness and training.

According to the way we have tackled it in our study, food quality is in all practical terms a commitment, involving all parties of the food processing cycle (producers, processors, distributors, consumers), for the activation of 'new alliances' (Fabris, 2003) between interests and knowledge, between production and consumption, under the sign of the mutual interdependency of nature and culture.

The aim of these conclusive remarks is, therefore, to single out the processes (and the context these take place) aimed at enhancing agro-food quality as well as practices and policies pursued or to be pursued.

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With a view to analysing the new alliances between nature and culture, between production and 'thoughtful' consumption, the utilisation of the 'food chain' concept is useful inasmuch as it allows us to bring into focus the activities inherent in the processing phase leading to the transformation of the food item, which from the field should not end up only and exclusively on the table but also in the back kitchen and thus also in those places where food processing of a metabolic nature takes place. We prefer this concept to that of *filière* which singles out all the activities, players and flows that are critical for the definition of the product's characteristics but not specifically for the processes themselves. By giving relevance to the latter, the notion of 'food chain' also includes, for example, the processing of leftovers and waste in the consumption process, on which we intend to focus our policy in view of its impact on the environment.

What is intended as the food production chain, is the aggregation of players and the combination of material flows (raw materials, additives, semi-finished products, packaging) that contribute to the manufacturing, distribution, marketing and supplying of the product (Murcott and Campbell, 2004). This term thus defines the full range of activities, players and material flows that are crucial in determining the characteristics of the product but not the actual processes. With a view to identifying the socio-economic actors involved in agro-food processes, the notion of food chain is useful to shed light on the activities that are required in the food processing passages whereby the agricultural produce is transformed into food eaten at table or, as we shall see shortly, processed in the back-kitchen, i.e. in the places where food is processed. In addition, the concept of food chain also includes the processing of leftovers and waste during the consumption process, an aspect we would like to focus on considering the impact it has on environment.

The following table (1) may be useful:

Table 1 – The *food chain* from the field to the back-kitchen

PROCESS	PHASE	PLACE
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Cultivation	Production	Farm
Processing	Transformation	Agro-food enterprise
Conservation/Distribution/Selling	Distribution/trade/selling	Storage Market POS
Cooking	Preparation	Professional Domestic cooking
Eating	Consumption	Table
Processing	Distribution/ recycling	Back-kitchen

Source: adapted from Murcott and Campbell (2004)

Food quality, intended as a synthesis of organoleptic, health- and nature-related, ethical productivity components, is pursued within the food chain and, therefore, in a context of material and energy flows (also social) that contribute to the cultivation, transformation, marketing, supplying, consumption and recycling of the food product. Thus intended, food quality essentially implies that food products undergo as little transformation and alteration as possible and that the agro-food cycle be as a closed as possible – like what occurs in nature – with enhanced efficiency in terms of energy consumption and reduced waste material.

In this framework, which are the stakeholders of the processes involved in the food chain that we have outlined theoretically and which are the policies, among those that have already been implemented in Italy, that best serve to sustain those products and processes aimed at enhancing productive quality and the territory? In the following table, we have tried to trace the different phases of the food chain and, therefore, the different places where these production and disposal processes take place, singling out, for each one, the public policies that could sustain the processes outlined and the players involved, which are the active upholders of interest. We do not pretend to supply an exhaustive overview of existing best practices, but rather to highlight those practices that allow for the interaction between production and consumption, between food

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demand and supply that the 'discerning' taste of players – producers and consumers – express and substantiate.

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Table 2 – Food chain policies for quality governance

PROCESS	PHASE	PLACE	PUBLIC POLICIES FOR QUALITY ENHANCEMENT	STAKEHOLDERS
Cultivation/Animal rearing	Production	Commercial farm	Spreading of Agricultural Best Practice (ABP) – eco-compliance. Integrated Product Policy (IPP). Incentives for the development of bio-dynamic, organic and eco-compatible agriculture. Utilisation of eco-efficient technologies. Incentives designed to enhance voluntary regulation. Company and collective brand-names. Certification systems: quality, territorial trademarks (PDO, PGI, TSG), eco-compatibility, corporate social responsibility, production traceability, product certification.	EU, Government, Local Authorities Entrepreneurs Workers Employers and trade union representatives Consumers' associations
Transform	Transformation	Commercial farm	Integrated Product Policy (IPP). Incentives designed to enhance voluntary regulation Certification systems: quality, territorial trademarks (PDO, PGI, TSG), eco-compatibility, corporate social responsibility, production traceability, product certification.	EU, Government, Local Authorities Entrepreneurs Workers Employers and trade union representatives Consumers' associations
Conserve/Distribute/	Distribution/Commerce/	Warehouse Market	Integrated Product Policy (IPP). Incentives designed to enhance voluntary	EU, Government, Local Authorities Distributors

³ Introduced in Italy by Prof. Andrea Segre, Last Minute Market projects aim "to transform waste into a resource". The projects are activated by Carpe Cibus, a co-operative providing a service that makes possible the reutilisation of unsold goods which have no commercial value but which are still fit for consumption. These items are made available through donations to Bodies and Associations that provide assistance to people belonging to disadvantaged social classes. A similar initiative, the Food Bank focuses on collecting food surplus that is then distributed by charity organisations that assist the poor and the outcasts. The first food bank was set up in Phoenix, Arizona, at the end of the Sixties. In Italy, the initiative was developed and consolidated by Danilo Fossati, chairman of the food producer Star, and by monsignor Luigi Giussani, founder of the ecclesial

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Sell	Sale	POS	regulation.. Company and collective brand-names. Certification systems: quality, territorial trademarks (PDO, PGI, TSG), eco-compatibility, corporate social responsibility, production traceability, product certification. Promotion of/adhesion to discerning consumption initiatives. Adhesion to <i>Last Minute Market</i> ³ or Food Bank initiatives.	Tradesmen Large retailers Workers Employers and trade union representatives Consumers' associations
Cooking	Preparation	Professional or Family kitchen	Purchase groups. Promotion of/adhesion to discerning consumption initiatives. Adhesion to <i>Last Minute Market</i> or Food Bank initiatives. Care in the utilisation of packing materials. Utilisation of 'best technologies' in terms of eco-efficiency. Agreements involving quality restaurants with local producers with a view to safeguarding food biodiversity and to enhancing the territory. Policies aimed at shortening the food processing chain. Policies aimed at encouraging eco-efficient technologies.	Consumers Chefs, Restaurants Agricultural producers Local authorities
Eating	Consumption	Table	Purchase groups. Promotion of/adhesion to discerning consumption initiatives.	Consumers Chefs, Restaurants Agricultural producers

movement Communion and Liberation. Europe can rely on 174 food banks in 13 countries (Italy, Greece, Spain, Portugal, France, Switzerland, Belgium, Luxembourg, United Kingdom, Ireland, Poland, Latvia, Ukraine).

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			Agreements involving quality restaurants with local producers with a view to safeguarding food biodiversity and to enhancing the territory. Policies aimed at shortening the food processing chain.	Local authorities EU, Government
Discarding	Elimination/recycling	Back-kitchen	Reduction of waste matter. Separate waste collection. Composting. Policies aimed at encouraging closed cycles. Adhesion to <i>Last Minute Market</i> or Food Bank initiatives.	Consumers Chefs, Restaurants Agricultural producers Local authorities EU, Government

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Our conclusive hypothesis is that within the framework of our country's agro-food system it is necessary to develop an agro-food quality governance in which government, market and society interact to sustain discerning policies aimed at protecting resources, places and people that would ultimately have repercussions on the tastes and knowledgeability of products.

At a policy level, this process would resolve the tensions between structure and player, between production and consumption if food quality, in its socio-cultural and environmental components, became a shared objective as well as a vehicle for economic competitiveness, where wellbeing is intended not only in monetary terms but also as the satisfaction of broader values.

Thus the integration among the diverse production and consumption phases concern both material and structural aspects as well as symbolic and cultural ones which both impact production and consumption through the domain of information and knowledgeability.

The complex interactions between production and consumption pass from the knowledge node to the cognitive and emotional double dimension of how we produce and communicate food. Knowledge ultimately boils down to how consumer tastes – at the double level of taste and knowledge – interface with attitudes, styles and the choices of food entrepreneurs.

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