

SOCIETY | DOSSIER FOOD – VICE OR VIRTUE ?

## The industrialisation of food creates unease

Consumer criticism, supplier reaction, and  
creating alternatives

Over the past two centuries, major changes in industry have shaken up the  
food sector, consumer habits and our entire relationship with food.

Olivier Lepiller | 24.10.2017



Child working in the fields, McGregor, South Africa, 13 April 2007. ©Getty Images/Corbis/Gideon Mendel

Zooming out to look at changes in the food industry over the long term, they  
may have been a little hasty, in the sense that food models and their  
sociocultural regulations have been unable to keep pace with these

changes<sup>1</sup>. They have created tensions revealing concerns specific to food and to its political dimension. Today, solutions are sought in both supply and demand, in order to manage these tensions or move away from their original context. Perhaps some phenomena of adaptation are at play, with adaptation both to and of industrialisation.

### **Recent industrialisation**

The industrialisation of food corresponds to a series of technical evolutions linked to the industrial revolution that affect how food is made, from production through to processing, catering and distribution. These technical evolutions were guided by a logical industrial approach, with discourse and practices founded on real efficiency, measured and quantified by science. An ideology of modernisation drove the use of technical power. Technical development has often been motivated by the pursuit of profit and required significant financial investment, which inevitably brought about radical changes and the emergence of major economic players.

The industrialisation of food over the past 200 years is not the cause of all contemporary concerns. Historians have shown that such concerns already existed<sup>2</sup>. Our relationship with food is intrinsically troubled, both owing to the need to secure ⊕ supplies as well as due to the risk of intoxication ⊕<sup>3</sup>. This fundamental concern created the need for boundaries in the form of types of cuisine, dietetics, and lists of what is edible and inedible<sup>4</sup>.

Industrialisation has accelerated since the end of the Second World War and has nonetheless changed food considerably, the consequences of which we cannot yet fully measure. We can cite three major implications. Firstly, industrialisation opened the way to abundance. Of course, food poverty continues to persist, or even increase locally, even in wealthy countries. However, this poverty affects a much smaller proportion of the population than when the accessibility of staple products is directly dependent on the vagaries of the weather. Industrialisation then led to a significant part of the work in the home kitchen being outsourced and delegated to economic players producing and distributing food on a wide scale. This phenomenon is linked to the fact that more and more women were in paid employment outside the home. It led to the development of the restaurant trade and packaged goods, which helped stabilise the preservation of food and could be used as a tool for attracting consumers<sup>5</sup>. Finally, industrialisation changed diets immensely, increasing the amount of calories consumed from animal-based products, sugars, fats and fresh fruit and vegetables, and decreasing that of cereals and carbohydrates<sup>6</sup>.

To measure the scale of the impact of the industrial transformation of the food sector, we need to compare the 200 years of industrialisation and the 70 years of hyper-industrialisation to the 10 000 years of agriculture and millions of years of hunting, gathering and proto-agriculture which preceded them. The transition to agriculture brought major changes, such as wide-scale urbanisation, emergence of state social organisations,

development of trade and the invention of writing. What has been and what will be the impact of the hyper-industrialisation of food?



Employees wearing gloves, masks and hairnets to comply with hygiene rules on a cheese production line, Mustafakemalpaşa, Turkey, 16 June 2015

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## Anti-industrialisation movements

In the 19<sup>th</sup> century, new and innovative preserving techniques such as appertisation <sup>7</sup> and the development of organic chemistry transformed the legal definitions of food quality<sup>8</sup>, less and less dependent on the senses. The 19<sup>th</sup> century also saw the emergence of social movements founded on the rejection of industrial foodstuffs. Many of these movements originated in Germanic countries<sup>9</sup>. They shared a vitalist and holistic philosophy opposed to the materialistic reductionism of modern science, in particular of organic chemistry. These movements influenced the founding doctor of natural medicine in France, Paul Carton (1845-1947)<sup>10</sup>.

Anti-industrialisation movements had significant medical, dietetic, culinary and agronomic implications, as their leaders were doctors, naturopaths, defenders of vegetarianism and 'raw foodism', producers and distributors of organic products and 'alternative dieticians'<sup>11</sup>. Also of note was the anarchist vegetarian tradition, ecological ahead of its time<sup>12</sup>. Very much rooted in the tradition of Paul Carton<sup>13</sup> it continues to influence the contemporary anti-speciesist and vegan movement<sup>14</sup>.



These movements, still marginalised after the war, converged with the social criticism of the 1960s and 1970s, which served to legitimise them<sup>15</sup>.

Physicians, such as Jean Trémolières, a leading figure in French nutrition, were receptive to the criticism of industrialisation<sup>16</sup>. However, it received less media coverage during the 1980s<sup>17</sup>. Two phenomena combined to stifle it: A shift towards prevention saw responsibility for the management of health through nutrition placed on the shoulders of consumers while, in a saturated food market, the development of specific nutritional qualities (fortified, low-fat) gave the impression that manufacturers were improving their products<sup>18</sup>.

The 1996-1997 crisis of mad cow disease marked a clear turning point, re-opening the floodgates to criticism. It ushered in an era of suspicion still apparent today, whereby blame is increasingly placed not only on food suppliers, but also on the usual guarantors of food safety: scientific experts, political leaders and health authorities.



**Coffee label with the French organic farming and the Max Havelaar fair trade logos**

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## **The range of criticism of industrialisation**

Criticism of the industrialisation of food falls into four categories.

The first focuses on the risks posed by the use of potentially toxic substances resulting from innovations in the field of organic chemistry,

which are introduced into the food chain mainly via agriculture (pesticides, medicines) as well as during food processing (additives ⊕, preserving agents) or storage (PCBs). Organic farming focuses on the rejection of these substances. There is also a metaphysical version of this criticism, often ridiculed when based on a preconception that anything artificial is unhealthy while anything natural is healthy<sup>19</sup>. However, thanks to toxicology, there is also a methodical and scientific version of this criticism that does not share this preconception.

Another category of criticism concerns health considerations. It maintains that industrial foodstuffs, such as junk food, are unsuited to the human physiology. Such criticism is closely linked to the current growing importance of the themes of obesity ⊕ and noncommunicable diseases, both in nutritional sciences and in the public sphere in general<sup>20</sup>.

The third category of criticism condemns moral prejudice, dishonesty, manipulation, the exploitation of humans and nature, and the disrespect of dignity. Non-governmental organisations (NGOs) and consumer associations criticise industrial players for fraud, cover-ups and lobbying. Blame is apportioned to the standardisation of products and the massification of markets for endangering gastronomy and cultural identities. This was the case with unpasteurised cheese in France when the Common Market was created. Aesthetic and hedonic considerations have also come forward: For some people, industrialisation destroys the pleasure and the flavour to be found in food. Criticism also targets the consequences of industrialisation for farmers, such as the destruction of small-scale farming, the vulnerability of producers farming on an industrial scale exposed to speculation, or the pressure on subsistence farming in developing countries. Finally, others' criticism focuses on the dignity of animals, deploring poor breeding and slaughter conditions and calling for their improvement or abolition.

The fourth category of criticism relates to the environment, condemning the consequences of productivity-driven agriculture and the pollution it causes, deforestation and the harm caused to the biodiversity of the soil and habitats. Commercial fishing also falls into this category, blamed for the pillaging and non-targeted destruction of fish stocks.

Concepts common to these different categories mean that the lines between them are becoming increasingly blurred. Junk food, for example, touches on a range of issues relating to health, identity, culture, society and the environment. It should be noted that, although campaigners may sometimes voice these criticisms in radical terms and the media may sensationalise them, they could be backed up by science. More and more of the issues raised also contain objective arguments which prompt scientific discussion and research, relating, for example, to the possible links between highly processed food and noncommunicable diseases, between intensive farming and pollution, or between certain synthetic chemicals and health.



## The consequences of criticism: producers' reactions and creating alternatives


Industrial players have not remained indifferent to criticism. They have found various ways of responding, noticeable in the evolution of the market and in selling points. Some products, for example, promote the fact that they contain no synthetic products, additives or preservatives. Alongside the low fat or fortified products that spawned the market for health food more than 30 years ago, there are an increasing number of products vaunting their health credentials, basing their claims on official nutritional recommendations.

Other products accentuate their traditional character or heritage and display official signs of quality and origin. The choice of packaging materials and design, and the use of recipes containing only the same ingredients as those used in home-cooking can all serve to add an artisanal dimension. The solidarity between consumers and farmers can be used as a selling point, such as the guarantee of fair remuneration for farmers, fair trade. Other selling points highlight production methods which limit pollution and greenhouse gases, or which respect the forests, the oceans and biodiversity. Animal welfare, a highly topical issue, is increasingly being taken into account by companies keen to draw attention to their best practices and certifications.



Artisanal cheese shop, Pienza, Italy, 21 September 2011

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Contemporary consumers and certain producers express their criticism by seeking alternatives to industrialised food. This phenomenon has accelerated over the past twenty years. In France, AMAPs (CSA, Community-supported agriculture initiatives) are examples of these alternatives as they provide a direct link between consumers and producers united around a mandate to promote organic farming. Other approaches include short supply channels, whereby consumers are in direct contact with producers, or via a single intermediary, such as a producers' cooperative shop. Other initiatives see the consumers themselves coming together to set up and manage cooperative shops. In some sectors, such as that of wine  or meat, there is a growing trend to select products according to how they are produced and on quality rather than on price alone.

The rapid development of organic food is an obvious reflection of this quest for alternatives and, at the same time, represents a major challenge for future food production, that of the cohabitation, or the hybridisation of an industrialised system and alternative systems. This issue is raised, for example, by criticism concerning the 'conventionalisation' of organic food<sup>21</sup>.

### **Towards the politicisation of food and a diversified food ecosystem?**

Studying the development of the criticism of industrialisation and its consequences raises two key points. Firstly, the extraordinary capacity of the dominant industrialised food system to take these criticisms on board<sup>22</sup> and, secondly, the incredible innovative power of conscious eaters, despite the uneasy relationship between consumption and civic responsibility<sup>23</sup>.

Today, food is increasingly seen as a legitimate topic of political debate. It is also a common topic that is becoming politicised, perhaps because it is something citizens can easily understand precisely because it forms part of their everyday life. The issue of sustainable food, itself multidimensional, is a matter for both political decisions and scientific evaluation<sup>24</sup>. To face up to this collective challenge, a pluralism of knowledge and technical approaches is crucial<sup>25</sup>, without dismissing the dominant industrialised system, nor ignoring the possibilities offered by the burgeoning multitude of alternatives.

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