

From Molecular Gastronomy to its applications : « Molecular Cuisine » (it is over) and « Note by Note Cuisine» (don't miss this next world culinary trend!)

Hervé This

1. The scientific work

In 1988 Nicholas Kurti and I created the scientific discipline that we called « **Molecular gastronomy**» (remember that the word « gastronomy » means « knowledge », and not cuisine, even haute cuisine ; in the same way, Molecular Gastronomy does not stand for cooking!). The aim of Molecular Gastronomy was, is and will be forever : **looking for the mechanisms of phenomena occuring during dish preparation and consumption.**

2. An application in the kitchen

In the beginning of the 80's, we introduced also «**Molecular Cuisine** », whose definition is :
« **Producing food (this is cuisine) using « new » tools, ingredients, methods** ».

In this definition, the word « new » stands for what was not in kitchens of the western countries in 1980.

For example : siphon (to make foams), sodium alginate (to get pearls with a liquid core, spaghettis of vegetables, etc.) and other gelling agents (agar-agar, carraghenans, etc.), liquid nitrogen (to make sherbets and many other innovative preparations), rotary evaporator, and more generally, the whole set of lab's equipment when they can be useful ; another of new « method », finally, the preparation of the Chocolate Chantilly, of beaumés, gibbs, nollet, vauquelins, etc. (*Cours de gastronomie moléculaire n°1 : Science, technologie, technique (culinaires) : quelles relations ?*, Ed Quae/Belin)

Of course all these items are not completely new (many gelling agents are used in Asia for millenia, and many tools are used daily in chemistry labs), but the goal was to modernize the technical component of cuisine.

Yes, the expression « Molecular Cuisine » is poorly chosen, but it had to be introduced at some time... and it is not within the Encyclopedia Britannica Dictionnaly. And Molecular Cuisine will disappear... because of... see below !

3. The next culinary trend : Note by Note Cuisine !

The next proposal is much more exciting, and its name is **NOTE BY NOTE CUISINE**.

It was first proposed in 1994 (in the magazine *Scientific American*) at a time when I was playing at using compounds in food, such as paraethylphenol in wines and whiskeys, 1-octen-3-ol in dishes, limonene, tartaric acid, ascorbic acid, etc.

The initial proposal was to improve food... but the next idea was **obvious**, it is to make dishes entirely from compounds.

Let's say it differently. Note by Note Cuisine is not using meat, fish, vegetable or fruits, but rather

compounds, either pure compounds or mixtures, such as electronic music is not using trumpets or violins, but rather pure waves which are mixed in sounds and in music.

Here, for Note by Note Cuisine, the cook has to : :

- design the shapes of the various parts of the dish
- design the colors
- design the tastes
- design the odors
- design the temperatures
- design the trigeminal stimulation
- design the consistencies
- design the nutritional aspects
- etc.

The feasibility of this new cuisine was already shown by many meals :

- first Note by Note meal (called Note by Note N°1) shown to the international press in Hong Kong by Pierre Gagnaire in April 2009
- two dishes shown at the French-Japanese Scientific Meeting (JSTS) in Strasbourg, in May 2010
- whole Note by Note Meal served by the chefs of the Cordon bleu School in Paris in October 2010
- Note à Note meal served the 26th of January 2011, as a launching event of the International Year of Chemistry, at UNESCO, Paris, by the team of Potel&Chabot
- Note by Note cocktail serve in April 2011 to 500 French chefs freshly starred at Michelin, in Espace Cardin, Paris
- Note by Note Meal served in October 2011 by the team of the chefs of the Cordon bleu Schools Paris
- Note by Note dishes made by chefs of the Toques Blanches International Association, in Paris, 3 Decembre 2011

Many questions arise from this new cuisine:

- land development
- economy
- sensorial
- technique
- art
- politics
- nutrition
- toxicology
- etc.

But:

1. humankind is facing an energy crisis : it is not sure that traditional cuisine is sustainable (it is not!)
2. the New will always beat the Old
3. cracking products from agriculture and farming is already done for milk and wheat ; why not carrots, apples, etc. ?
4. The objections made to Note by Note cuisine were done half a century ago against electronic music, and guess what you hear at the radio today ?

In other words, are not we at the equivalent of 1947, when musicians such as Varèse and some others were investigating electronic music ?