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IS COOKERY AN ART OR A SCIENCE?¹

(A culinária é uma arte ou uma ciência?)

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ABSTRACT: In the last decades, western European cuisine has undergone very spectacular changes. Among them, a “molecular cuisine” has developed a strong interest for the chemical mechanisms of the cooking process. This is not the first time in the history that cookery has tried to appear as a science: the tension between art and science, innovation and reproduction goes back as far as the Antiquity. This paper studies, from the Vth century BC onward, the cultural framework in which cookery was thought, explaining its classification as an art or a science. The first point is Greek Antiquity, with the question: “Can cookery be written, as other kinds of knowledge?” The Late Middle Ages is the second stage of our history. Scholars of this time raised the following matter: “Is cookery a part of a *mechanical art* or a *mechanical art per se*?” Next point will be the Renaissance: “Did the rediscovery of Apicius’ book help to define cuisine as an art in the context of the emergence of the fine arts?” Around 1730-1740, a first French “nouvelle cuisine” claimed the status of science, defining itself as a “kind of chemistry”. Throughout the 19th and 20th centuries, two opposite traditions appear: one that stresses the link between cuisine and such fine arts as architecture (Carême), another one that insists on the “scientific” part of cookery. Nowadays, everyone can notice the explosion of the area of cookery. The strict separation of art and science is recent, with the crystallization of the fine arts around the notion of creation and the figure of the author and then with the building of “modern” science. Reconciling art and science is a challenge for the present time. Maybe cookery can help to this reconciliation.

KEYWORDS: cookery, art, science, Antonin Carême, molecular cuisine.

¹ I would like here to thank Pr. Carmen Soares who invited me to present a first draft of this paper at the “3rd Portuguese and Brazilian DIAITA Conference on Food History and Cultures” untitled *Dos Prazeres da Mesa aos Cuidados do Corpo* (Coimbra, 19-21 October 2015) and the members of this Conference who helped me to improve my arguments. Thanks also to Dr. Robin Nadeau who invited me to present a second draft of this paper at the workshop *Cooking Knowledge: An Intellectual History of Food and Cuisine* (Budapest, Central European University – Institute for Advanced Study, 8 April 2016). And last but not least, I am very grateful to my colleague, Pr. Véronique Pauly, who kindly agreed to translate this paper into English.

RESUMO: Nas últimas décadas, a culinária europeia ocidental sofreu mudanças espetaculares. Entre elas, uma “cozinha molecular” desenvolveu um forte interesse pelos mecanismos químicos do processo de cozimento. Esta não é a primeira vez que a gastronomia tentou aparecer como uma ciência: a tensão entre arte e ciência, inovação e reprodução remonta até a antiguidade. Este artigo estuda a partir do século V a.C., o quadro cultural em que a culinária foi pensada, explicando sua classificação como arte ou ciência. O primeiro ponto é a antiguidade grega, com a pergunta: “A culinária pode ser escrita como outros tipos de conhecimento?” O final da Idade Média é o segundo estágio da nossa história. Os estudiosos de esta época levantaram o seguinte assunto: “A culinária é parte de uma arte mecânica ou uma arte mecânica *per se*?” O próximo ponto será o renascimento: “Foi a redescoberta do livro de Apicius que ajudou a definir a gastronomia como uma arte no contexto do surgimento das belas artes?” Por volta de 1730-1740, uma primeira “novela de cozinha” francesa reivindicou o status de ciência, definindo-se como um “tipo de química”. Ao longo dos séculos XIX e XX, aparecem duas tradições opostas: uma que busca o vínculo entre a gastronomia e as belas artes como a arquitetura (Careme), e outra que insiste na parte “científica” da gastronomia. Hoje em dia, todos podem notar a explosão da área de culinária. A separação rigorosa da arte da ciência é recente, com a cristalização das belas artes em torno da noção de criação e da figura do autor, e depois com a construção da ciência “moderna”. Conciliar arte e ciência é um desafio para o presente. Talvez a culinária possa ajudar a essa reconciliação.

PALAVRAS-CHAVE: culinária, arte, ciência, Antonin Carême, cozinha molecular.

In the last decades, western European cuisine has undergone very spectacular and rather conflicting changes: an opening to the exotic tastes of *World Cuisine* coexists with the celebration of the cultural food heritage of different countries or regions; a taste and care for organic or healthy foods have not prevented a “molecular cuisine” from developing, with a strong interest for the chemical mechanisms of the cooking process.

This is not the first time in the history that cookery has tried to appear as a science. It was already the case in France in the beginning of the last century, when the famous Auguste Escoffier asserted, in the preface to the second edition of his *Guide culinaire*: “without ceasing to be an art, cookery will become scientific and will have to submit its formulas, still too often empirical, to a method and a precision that will not leave anything to chance”².

² “En un mot, la cuisine, sans cesser d’être un art, deviendra scientifique et devra soumettre ses formules, empiriques trop souvent encore, à une méthode et à une précision qui ne laisseront rien au hasard” (Escoffier 1912: IX). This sentence lacks in the foreword of the first edition, in which we read: “Pour combattre les désastreux effets de la suractivité moderne sur les centres nerveux, elle deviendra même plus scientifique et plus précise” (Escoffier 1903: VII).

To some extent, Escoffier's proclamation was a response to the one that Carême published one century earlier when he declared that, among the five fine arts, architecture had pastry as main branch³. Interestingly, Carême is quoted by Prosper Montagné, Escoffier's contemporary and Escoffier himself is quoted by Thierry Marx, the French "pope" of molecular cuisine⁴. It seems that nothing has changed during the last two centuries.

In fact, the tension between art and science, innovation and reproduction goes back as far as the Antiquity. We can study, from the Vth century BC onward, the cultural framework in which cookery was thought, explaining its classification as an art or a science. For this study, I chose six points. Each one allows us to ask a fundamental question whose answer requires using a particular kind of text.

The first point is Greek Antiquity. The question is: Can cookery be written, as other kinds of knowledge? The main documents are here the first books of culinary recipes and also some philosophical texts. The context is, indeed, the delimitation of two areas of knowledge: *episteme* (that will become *scientia* in Latin) and *tékhnē* (that will be translated as *ars*).

The End of the Middle Ages is the second stage of our history. Scholars of this time, who wrote books on classification of the sciences, raised the following matter: Is cookery a part of a "mechanical art" (like hunting or agriculture) or a "mechanical art" *per se*?

Next point will be the Renaissance: Did the rediscovery of Apicius' book help to define cuisine as an art in the context of the emergence of the fine arts? Humanistic works, titles and prefaces to cookbooks can be used here.

Around 1730-1740, a first French "nouvelle cuisine" claimed the status of science, defining itself as a "kind of chemistry". To study this point, we can use again prefaces to cookbooks, in the particular context of the "Quarrel of the Ancients and the Moderns".

Throughout the XIXth and XXth centuries, it seems that two opposite traditions appear. The one initiated by the great chef Antonin Carême, who stresses the link between cuisine and such fine arts as architecture; another tradition (as in Brillat-Savarin's *Physiologie du goût*) insists on the "scientific" part of cookery.

Nowadays, everyone can notice, as I wrote in the beginning of this paper, the explosion of the area of cookery – and even if the French pope of "molecular cuisine", chef Thierry Marx, pretends that this "innovating cookery

³ "The fine arts are five in number: painting, sculpture, poetry, music, and architecture — whose main branch is pastry" ("Les beaux-arts sont au nombre de cinq, à savoir: la peinture, la sculpture, la poésie, la musique, l'architecture, laquelle a pour branche principale la pâtisserie"). This sentence is quoted by Montagné 1938: 289.

⁴ Marx, Haumont 2012: 4.

is by no means in break-up with the tradition” and that the “new knowledge and tools will leave a greater part to creativity, through innovation”⁵.

I. GREEK ANTIQUITY: COOKERY AS A WRITTEN KNOWLEDGE

For Antiquity, I am heavily dependent on my colleagues’ works, particularly the synthesis by Andrew Dalby, and the papers published in one very interesting volume coordinated by Carmen Soares and Paula Barata Dias⁶. One important paper of Robin Nadeau has recently dealt with the issue of cookery books in Greek and Roman Cultures⁷.

We know that cookery books existed in Greece from the IVth (maybe Vth) century BC onward, but only by fragments, which can be found in papyri (like those preserved in Heidelberg⁸), in lexicographic repertories (for instance a recipe for *thrion* in Pollux⁹), and above all in a fascinating encyclopedia of food habits in the Ancient Time, the *Deipnosophists*, written by Athenaeus of Naucratis in the third century¹⁰. Sometimes it is only the title of the recipe book which has been preserved, but we are not even sure that this title was the good one. The fact is well known for a poem by Archestratus of Gela, mixing recipes with lists of food specialties, which is called by Athenaeus either *Hedypatheia* (“Life of Pleasure”) or *Gastronomia* (“Rules for the stomach”)¹¹.

As Carmen Soares has noticed¹², the literary genre of cookery books seems to have been denoted by the expression *Opsartytika Biblia*, that is to say “Books for preparation of *opson*”, and cookery itself by *opsopoiia*, “making of *opson*” – *opson*, that Andrew Dalby translates as “relish”, denotes itself food which is not bread (we can maybe find an equivalent in the medieval Latin word *companaticum*, “what is served with bread”). Thus, the first fact to remember is that cookery was a written knowledge in Ancient Greece.

We can add that some cookery books were written even before Ancient Greece, as early as Mesopotomia of the second Millenary before Christ: the recipes now preserved in Yale Babylonian Collection, written on cuneiform tablets, were published and translated by late Jean Bottéro¹³.

⁵ Ibid., p. 5.

⁶ Soares, Dias 2012.

⁷ Nadeau 2015: 53-58.

⁸ Published nearly one century ago by Bilabel, 1920. See Froschauer, Römer 2006: 133.

⁹ García Soler 2012: 12.

¹⁰ Murray 2015: 30-42.

¹¹ Olson, Sens 2000.

¹² Soares 2012: 35-47.

¹³ Bottéro 2004. See also Lion 2015: 313-314.

Second remark, the cookery production from Antiquity didn't completely disappeared during the High Middle Ages. Three manuscripts of Apicius' work were copied between VIIIth and IXth centuries. The *codices* in which they were included are very different in their writing, layout, and contents, suggesting quite different uses¹⁴. The most interesting case is a collection, now dismembered between Switzerland and United States, which gathers Apicius' and Hippocrates' texts together¹⁵. Unlike my previous hypothesis¹⁶, Apicius' cookbook was considered as useful for Food, and not only for knowledge of Latin¹⁷.

Even if cookery was a written knowledge in Ancient Greece, was it considered as an art? To answer this question, let us turn to philosophical texts studied by Carmen Soares¹⁸. In one chapter of his *Memorable*, Xenophon shows Socrates discussing with friends about the meaning of some nouns: they agree that the name of *opsophagos* (eater of *opson*) can be applied to the one who eats meat, without bread and without physical necessity. In the same way, Socrates, according to Xenophon, condemns people who eat several dishes together because it doesn't fit to the "art" of cookery. The term used by Xenophon here is *tékhnē*, that is to say a knowledge which has not the status of science (*epistēmē*).

Even this status of "art" is denied to cookery by Plato, in a long passage of one of his most important dialogues, the *Gorgias*. In fact, Plato chooses cookery as an example to demonstrate that rhetoric is not an art but just a practice (*empeiriai*) which doesn't aim to do good but only to please – unlike justice (for rhetoric) and medicine (for cookery). But his thought seems to have evolved in this matter, since in *The Politician* he ranks cookery (that he called here *mageiriké tékhnē*) among the seventh species of science for the body (the one dedicated to food), alongside medicine but also agriculture, hunting and gymnastics.

If Aristotle, in his *Politics*, takes up this idea of a food science, more precisely of a science of cookery (*epistēmē opsopoiikē*), he clearly defines it as a science for slaves. These terminological and ideological choices will be very important for the history of cookery.

¹⁴ Laurioux 2016: 467-492.

¹⁵ New York, Academy of Medicine, ms. 1 et Cologny, Fondation Bodmer, ms. 84.

¹⁶ Laurioux 1994: 17-38.

¹⁷ As shown in Dr. Asfora's works: Asfora 2016: 493-513 and Asfora 2014.

¹⁸ Soares 2012.

2. MIDDLE AGES: COOKERY AS A MECHANICAL ART

From the XIIth century – and the didactic treatise of Hugh of Saint Victor –, Cookery is clearly seen as a “mechanical art” (or a part of it)¹⁹.

But what is a mechanical art?²⁰ The idea is not new: as early as the VIIth century, Isidore of Seville used the word *mechanica* to denote the kind of knowledge linked to crafts²¹. What the Greeks called *Banausikai* were “denigrated” and “treated with contempt in the cities”, as wrote Xenophon in his *Economics*²². Mediaeval Christendom inherited this contempt for manual work, and the crafts were sometimes referred to disparaging phrases as *artes minores, artes vulgares, illiberales, serviles, adulterinae or sordidae*. The main point was the opposition to the liberal arts, which were considered as the privilege of free people.

The first scholar to speak of *mechanicae artes* was the Carolingian philosopher (and skillful in Greek) Johannes Scotus Eriugena in his commentary on a very important allegorical text from the Late Antiquity orator Martianus Capella, entitled *On the Marriage of Philology and Mercury*. As Martianus Capella counted seven liberal arts (which would structure mediaeval education until the XIIth century at least), John Scot claimed that “after Mercury will have given seven liberal arts, then the Virgin will give seven mechanical arts”. Unfortunately he quoted only one of these mechanical arts – architecture –, the other ones being referred as “et caetera”²³.

The aim of Hugh of Saint Victor is precisely to give a complete list of the seven mechanical arts. The master of a famous monastic school, he wrote a *Didascalicon* to organize the readings of his pupils. As a consequence, the *Didascalicon* also tries to classify the whole knowledge. Interestingly, the mechanical arts (what Hugh called in fact “mechanical sciences”) have an important place in this encyclopedia. And among them, hunting (*venatio*), about which Hugh writes: “to this discipline belongs the preparation of all food, seasoning and drink”²⁴. The foods that he quotes as an instance are very different from actual food of Hugh’s time: in fact, the list is taken from Isidore of Seville’s encyclopedia (*Etymologies*), which tries to make an inventory of all the words and the realities of the Ancient World. Most of

¹⁹ I develop this point in « La cuisine est-elle un art ou une science? Retour sur un vieux problème », to be published in *Mélanges Danielle Jacquart*.

²⁰ On the question of mechanical arts, see Sternagel 1966; Whitney 1990; Ovitt Jr. 1987: 107-136.

²¹ *De differentiis rerum*, PL 83, col. 94.

²² Xénophon, *Économique*, IV, 2, ed. & trad. fr. Chantraine 1971: 45-46.

²³ *Iohannis Scoti Annotationes ad Marcianum* in Lutz, 1939: 74, l. 20-21.

²⁴ *Didascalicon* II, 25: *Hugonis de Sancto Victore Didascalicon De Studio Legendi*, in Buttimer 1939: 42-43.

these food have nothing to do with hunting and Hugh has to explain that if food science gets its name from one of its part, “it is because, in Antiquity, people live mostly on the products of hunting”. But he admitted that food could also belong, by some point of view, to medicine or agriculture: “the preparation of food belongs to bakery, the preparation of meat to cookery and the virtues of seasoning to medicine”.

That’s why, after Hugh of Saint Victor, many mediaeval scholars tried to give a more important place to food, which, from then on, was considered as a mechanical *art per se: victuaria* for Radulphus Ardens at the end of the XIIth century, who regards hunting as a part of food and not the contrary; to this *victuaria* belong also agriculture, fishing, bakery and cuisine (*coquinaria*)²⁵. Around 1250, Robert Kilwardby suggests naming this science *cibativa* or *nutritiva*, as an echo to the aristotlelician “science of making” (*factiva* or *poietike*)²⁶.

I think that this process, which individualizes and promotes food, and even cookery, is not unconnected with another process, which allows cookery to be written²⁷. Thanks to a recent discovery, we know that recipes adapted to mediaeval cookery were written as early as the XIIth century, just when Hugh of Saint Victor wrote the *Didascalicon*²⁸. Therefore, the cooks, who imagined these recipes and composed, around 1300, new cookery books, were still considered as simple craftsmen. Their title of master referred to the fact that they managed a staff of workers and apprentices, like in any ordinary workshop.

The prefatory remarks that we find in some cookbooks of the XVth and XVIth c. can be still understood in this context: cooks are supposed to know “the science of art” (sic) of cookery as writes *Maitre Chiquart*, chef of the duke of Savoy around 1420²⁹.

3. RENAISSANCE: CUISINE AS ONE OF THE “FINE ARTS”

As early as the beginning of the XIVth century, we find a small cookery book which is written in Danish but whose Latin title is *Libellus de arte coquinaria*. Its text seems to be connected with German tradition³⁰. Therefore, in this early period, titles are not stable, for the cookbooks as well as for the whole textual production. So it is not before the middle of the XVth century that we find a second book whose title is related to culinary art. This is the

²⁵ Grabmann 1909: 254.

²⁶ Robert Kilwardby, *De ortu scientiarum*, XL, 377, in July 1976: 140; Whitney 1990: 122.

²⁷ Lauriou 2005a.

²⁸ Cambridge. Sidney Sussex College Δ. 3.6, pt. 4, fol. 39r-v. To be published by Giles Casper & Faith Wallis.

²⁹ Ed. Scully 1985: 127 & 130.

³⁰ Grewe, Hieatt 2001: 27-28.

famous collection of recipes gathered by Maestro Martino, who served as cook successively for the duke of Milano, the cardinal and patriarch of Aquileia Ludovico Trevisan, the pope Paul II and the condottiere Giangiacomo Trivulzio³¹. Two manuscripts give it the title of *Libro de Arte coquinaria*³². It is well known that the humanist Platina borrowed the recipes of the *De honesta voluptate* from Martino's collection³³. Interestingly, the description of the good cook that Platina develops in his book – giving Martino “The man from New Como” as an example – insists on his “art”. Here is the translation by the great specialist of Apicius and Platina, Mary Ella Milham³⁴.

On the Cook. One should have a trained cook with skill (*arte*) and long experience, patient with his work and wanting especially to be praised for it. He should lack all filth and dirt and know in a suitable way the force and nature of meats, fish and vegetables so that he may understand what ought to be roasted, boiled, or fried. He should be alert enough to discern by taste what is too salty or too flat; if possible, he should be completely like the man from New Como, the prince of cooks of our age, from whom I have learned the art of cooking food (*obsoniorum conficiendorum rationem*). He should not be gluttonous or greedy, as was the Frenchman Marisius, so as not to appropriate and devour what his master is supposed to eat.

It is not by chance if this very laudatory portrait of the good cook occurs in a humanist's work. In the XVth century, Humanistic circles welcomed the rediscovery of Apicius' cookery collection that they renamed *De re coquinaria*³⁵. Among connoisseurs of Apicius' work there were of course some physicians³⁶ and some members of the Academia Romana created by Pomponio Leto, a good friend of Platina whose group was dedicated to the celebration of Antiquity. But also Angelo Poliziano, who collated the two Carolingian Apicius' manuscripts, now preserved in Vaticano and New York. In the same time, Poliziano wrote a short treatise on classification of the sciences, *The Panepistemon* (“all the sciences”), in which *coquinaria* is ranked among mechanical artes as prestigious as architecture, graphic art and theater³⁷.

³¹ Laurioux 2005b: 141-154.

³² Ms. Washington, Library of Congress, ms. 153: ed. Faccioli, 1966: t. 1, p. 119; see also *Maestro Martino* 2005. Another manuscript that bears this title was formerly owned by Firmin-Didot and Pichon, but is no more located: see Laurioux 2005c: 13-17.

³³ Laurioux 2006: 523-524.

³⁴ Platina, *On Right Pleasure and Good Health*, ed. & trad. Milham 1998: 118-119.

³⁵ Laurioux 1994.

³⁶ As recently shown by Wanessa Asfora Nadler, “Apício como *opus medicinale* na Itália do século XV: estudo de caso dos manuscritos mediceo e ficiniano”, in *Dos Prazeres da Mesa aos Cuidados do Corpo*.

³⁷ *Coquinariae capita Graeca referam, qualia ponit Apitius. Ea sunt epimeles, artoptus, cepurica,*

From the humanist point of view, Cookery is thus a recognized knowledge, because based on one ancient authority: Apicius³⁸, who is to cookery what Vitruvius is to architecture and Terentius to theater.

As a consequence, cookery recipe became a literary genre. Originally written by cooks, probably for the use of butlers who could thus supervise the work of the kitchen, the cookbooks began to be spread among larger categories of medieval society, through manuscripts and, from the 1480's, printed copies³⁹. The culinary writing inspired authors who inserted recipes in their literary works, like, in the first half of the XVIth century, *The Baldus* of Teofilo Folengo, known also as Merlin Cocaio (Merlin the Cook), which contains twenty versified *doctrinae cosinandi* (recipes for cooking), supposed to be practiced in Jupiter's kitchen but in fact borrowed from contemporary cookbooks. Folengo's intention was probably not to exalt cooks' work: the use of macaronic language, blending Latin with various dialects from Italy, is deliberately droll and parodic⁴⁰.

Using colors and shaping dishes with different consistencies, the cook could have been easily classed as an artist, painter or sculptor, whose status began to evolve during the XVIth century⁴¹. Actually, the plates of Scappi's *Opera* (published in 1570 and the first one to be richly illustrated) can be seen as both professional (which equipment that needs to be used for cooking) and aesthetic: the kitchen is shown as the theater in which the master cook and his whole brigade work⁴².

However, the title *Art of Cookery* or *Culinary Art* seems to have been rarely given to a cookbook from the XVIth to the XVIIIth centuries, except in Spain⁴³ or in Portugal⁴⁴. Even in France, whose Cuisine invades the whole

pandecter, osprion, trophetes, polyteles, tetrapus, thalassa, halieus. Hanc Plato adulatricem medicinae appellat (Operum Angeli Politiani tertius tomus: ejusdem praelectiones, orationes, epigrammata complectens...., Lyon, Seb. Gryphium, 1546, p. 44). On Panepistemon, see Mandosio 1996: 135-164; Mandosio 1997: 331-390.

³⁸ Hugh of Saint-Victor seems to have not a direct knowledge of Apicius' book that he quotes through Isidore of Seville.

³⁹ Laurioux 1997a; Laurioux 1997b.

⁴⁰ Faccioli 1966: t. I, p. 240-251.

⁴¹ Csergo 2012: 13-36. This scholar uses the very interesting concept of "artification du culinaire".

⁴² *Opera di M. Bartolomeo Scappi, cuoco secreto di papa Pio V*, Venezia: Michele Tramezzino, 1570. See the reprint Bologna, 1981. The Venice edition of 1598 printed by Alessandro Vecchi, which includes *Il Trinciante* by Vincenzo Cervio and *Il Maestro di Casa* by Cesare Pandini, bears a different title: *Dell'arte del cuoco, del Trinciante, e Mastro di Casa* and, from 1610, simply *Dell'Arte del cucinare*; Schino, Luccichenti 2007: 70.

⁴³ As soon as 1520: *Libre de doctrina per a ben servir de tallar y del art de coeh* by Master Robert (ed. Leimgruber 1982), translated in Castilian in 1525. In 1609 was published a new edition of Diego Granado Maldonado's cookbook untitled *Libro del arte de cozina* and, in 1611 Francesco Martínez Montañó published the *Arte de cocina, pastelería, etc.*

⁴⁴ Domingos Rodrigues, *Arte de Cozinha*, Lisboa, 1680. See in England too, the *Accom-*

Europe from the middle of the XVIIth century, the most successful French cookbook is simply entitled *Le Cuisinier Français* (*The French Cook*)⁴⁵ and the only art to be referred to in the titles of French cookery books of the XVIIth century is the Art “de bien traiter”, that is to say to “treat well” (the guests)⁴⁶.

4. XVIIIth CENTURY: “NOUVELLE CUISINE” AS A SCIENCE

The first French Modern cookbook referring to an “Art of cookery” in its title is the *Suite des Dons de Comus ou L’Art de la cuisine réduit en pratique*, published by François Marin in 1742. In an apparent Paradox, this book was supposed to be a continuation of another collection, *Les Dons de Comus*, whose preface had been a manifesto for culinary science⁴⁷.

Although its authorship is under discussion⁴⁸, the preface to *Les Dons de Comus* clearly distinguishes a Modern Cuisine from an Ancient Cuisine⁴⁹. Simpler and more learned than the Ancient One, this Modern Cuisine is defined as a “kind of chemistry”⁵⁰.

The science of the cook consists today in decomposing, in rendering easy of digestion, in quintessencing the foods, in extracting from them light and nourishing juices, and in so mixing them together, that no one flavor shall predominate, and that everything can be felt; finally in giving different foods this unity that the painters give to colors and in making them so homogenous that their different flavors produce a subtle and racy taste, and [...] an harmony of all the flavors gathered together⁵¹.

plisht Cook, Or The Art & Mystery of Cookery, “wherein the whole ART is revealed in a more easie and perfect Method than hath been publisht in any language”, by Robert May, London, 1660. Even the old *Viandier*, can refer, from the XVIth century, to « l’art & science de appareiller viande », a formula which is very close of the Chi quart’s one (*Taillevent Grand Cuisinier du Roy de France*, Paris, Guillaume Nyverd, 1500/1519).

⁴⁵ La Varenne, *Le Cuisinier françois*, Paris: Pierre David, 1651, reprint with a foreword by Hyman, Hyman 2001.

⁴⁶ L.S.R. (1674), *L’Art de bien traiter*, Jean du Puys, Paris.

⁴⁷ *Les Dons de Comus ou les délices de la table* (1739), Prault, Paris, 1739.

⁴⁸ *Livres en bouche* 2001: 205, n. 198.

⁴⁹ Hyman and Hyman 1989: 73a-74c.

⁵⁰ *Les Dons de Comus...*, “Avertissement”, p. xix-xx: “On distingue aujourd’hui chez les gens du métier & chez les personnes qui se piquent d’avoir une bonne table, la Cuisine ancienne & la Cuisine moderne. La Cuisine ancienne est celle que les François ont mise en vogue par toute l’Europe, & qu’on suivoit generalement il n’y a pas encore vingt ans. La Cuisine moderne établie sur les fondemens de l’ancienne, avec moins d’embarras, moins d’appareil, & avec autant de variété, est plus simple, plus propre, & peut-être encore plus sçavante. L’ancienne Cuisine étoit fort compliquée, & d’un détail extraordinaire. La Cuisine moderne est une espece de Chymie.”

⁵¹ *Ibid.*, p. xx-xxi: “La science du Cuisinier consiste aujourd’hui à décomposer, à faire digerer & à quintessencier des viandes, à tirer des sucs nourrissans & legers, à les mêler & les

The reference to painting clearly shows that this “science” can be compared to an “art”⁵². Important also is the fact that cookery was compared to chemistry, a science whose separation from alchemy really began with the “Enlightenment”⁵³. But the most important was the qualification of Marin’s Cuisine as “Modern”. Fifty years before, an author only known by his initials LSR, already criticized the book written by La Varenne as not up-to-date⁵⁴. But opposing Modern to Ancient Cuisine was a clear echo to the “Quarrel of the Ancients and the Moderns” which had begun in the 1630’s and had been revived in the 1710’s⁵⁵. Mostly literary, this debate was also about “sciences and arts” and Cookery was a topic of the Quarrel: Charles Perrault, in the last volume of his *Parallel between Ancients and Moderns* (1697), asserts that “we have cooks with more taste than the Ancients had”⁵⁶.

5. XIXTH AND XXTH CENTURIES: TWO TRADITIONS

The XIXth and XXth centuries combined the two traditions that we have described. Antonin Carême (1784-1833)⁵⁷ was the main representative of an aesthetical cuisine⁵⁸ which can be described as architectural⁵⁹. When he was a young apprentice, he made sketches of historical monuments or garden pavilions which strongly inspired his cuisine⁶⁰. This tradition of “artistic cuisine” was transmitted through Carême’s disciples, such as Urbain Dubois (1818-1901) whose “pieces montées” were very spectacular. Another Carême’s

confondre ensemble, de façon que rien ne domine & que tout se fasse sentir; enfin à leur donner cette union que les Peintres donnent aux couleurs, & à les rendre si homogenes, que de leurs différentes saveurs il ne resulte qu’un goût fin & piquant, & si je l’ose dire, une harmonie de tous les goûts réunis ensemble.”

⁵² Quellier 2007: 221-224.

⁵³ See the important and recent book by Kahn 2016.

⁵⁴ “... on ne verra point icy les absurdités, & les dégoûtantes leçons que le Sieur de Varenne ose donner, & soutenir...” (L.S.R., *L’Art de bien traiter*, here quoted from the edition of Lyon: Claude Bachelu, 1693, p. 4-5). See *Livres en bouche* 2001: 63.

⁵⁵ See Fumaroli 2001.

⁵⁶ *Parallèle des Anciens et des Modernes ou il est traité de l’astronomie, de la Geographie, de la Navigation, de la Guerre, de la Philosophie, de la Musique, de la Medecine, & c. Cinquième et dernier dialogue par M. Perrault*, t. IV, Paris: Jean-Baptiste Coignard, 1697, p. 281-282: “[Le chevalier] Si l’art de la Cuisine qui à mon sens en vaut bien un autre, doit entrer en lice, je suis persuadé que nous avons des Cuisiniers d’un goût tout autrement delicieux que n’en avoient les Anciens. [L’abbé] Il n’en faut pas douter. Les Anciens ont eu soin de nous laisser par écrit plusieurs de leurs plus excellens ragousts; ceux qui en ont voulu essayer les ont trouvez détestables.”

⁵⁷ For a summary of Carême’s works, career and cuisine, see Ferguson 2004: 49-82.

⁵⁸ When Carême speaks of “artistic cooking”, it is about the “service à la française” (*L’Art de la cuisine française au XIX^e siècle*, quoted by Hyman 2001: 80.

⁵⁹ Bonnet 1977: 23-43.

⁶⁰ Hayden 1996: 39-44.

disciple, Jules Gouffé (1807-1877), is a representative of the second trend in the French Cuisine: the scientific approach. According to him, cooking requires watching constantly the clock and using constantly the balance⁶¹.

In the XIXth century, the most famous name linked with the scientific approach is Brillat-Savarin (1755-1826), allegedly – but erroneously – creator of “gastronomy”. In a very quoted part of his *Physiologie du goût*, he distinguished three kinds of cuisine. Only the first one is dedicated to preparation of food, the second one can be called “chemistry” and the third one “pharmacy”⁶². During the XXth century, Édouard de Pomiane (1875-1964) was a typical representative of the scientific approach. Besides “gastronomie”, which is considered as an art that strikes the senses, he distinguished “gastrotechnie” which is a real science⁶³. This “gastrotechnie” was the melting pot of our “molecular cuisine”, a science that studied “the good or bad modifications that occur in food during the cooking process”⁶⁴.

Even the French “New Cuisine” of the 1970’s is a mix of artistic and scientific approaches. Among the famous “Ten Commandments” of this New Cuisine, there is indeed “you won’t be systematically modernist” but also “you will try to find what the new techniques can give you” and “you will be inventive”⁶⁵.

⁶¹ “Je n’ai pas rédigé une seule de mes indications élémentaires sans avoir constamment l’horloge sous les yeux et la balance à la main. Je m’empresse d’ajouter qu’on n’est pas obligé d’avoir constamment recours, dans la pratique, à ces moyens de vérification absolue, du moment où l’on est devenu un ouvrier habile et consommé. Mais lorsqu’il s’agit de formuler pour les personnes qui n’ont pas encore de connaissances acquises, je déclare qu’on ne saurait procéder d’une façon trop rigoureuse.” (Jules Gouffé (1867), *Le Livre de Cuisine: comprenant la cuisine de ménage et la grande cuisine avec 25 planches imprimées en chromolithographie et 161 gravures sur bois dessinées d’après nature par E. Ronjat*, Hachette, Paris). See Rambourg 2005: 175-187.

⁶² “Quand on voit les choses d’en haut, on peut compter jusqu’à trois espèces de cuisine: La première, qui s’occupe de la préparation des aliments, a conservé le nom primitif; La seconde s’occupe à les analyser et à en vérifier les éléments: on est convenu de l’appeler *chimie*; Et la troisième, qu’on peut appeler cuisine de réparation, est plus connue sous le nom de *pharmacie*.” Brillat-Savarin, *La Physiologie du goût ou Méditations de Gastronomie Transcendante*, t. 2, Paris: A. Sautelet, 1826, Méditation XXVII, “Histoire philosophique de la cuisine”, p. 133-134.

⁶³ Pomiane 1950: 7-12 and 168-170. Studied at the Institut Scientifique d’Hygiène Alimentaire, this science “ramène l’étude de toutes les techniques culinaires à celle d’un nombre restreint de phénomènes physiques et chimiques: dialyse, osmose, coagulation et peptonisation des albumines, caramélisation des sucres, dextrinisation et saccharification des amidons, émulsion des graisses, genèse chimico-physique des émulsions et des gels...” (Pomiane 1950: 170).

⁶⁴ “Il existe cependant, toute une science nouvelle étudiant les modifications, heureuses ou malheureuses, survenues dans les aliments au cours de leur cuisson. Cette science s’appelle la gastrotechnie” (Pomiane 1940).

⁶⁵ Gault, Millau 1973: “...4. Tu ne seras pas systématiquement moderniste. 5. Tu rechercheras cependant ce que t’apportent les nouvelles techniques. [...] 10. Tu seras inventif.”

6. CONCLUSION

Nowadays, the tension still exists between innovation and repetition. Even Nathan Myhrvold, who wrote *Modernist Cuisine*⁶⁶ and pretends to prepare a potted goose without any fat, claims that cookery is also an art⁶⁷. For ordinary people, interviewed during a sociological survey, cookery is still an art, even a visual art, which can be compared to painting⁶⁸.

The meaning of “art” and “science” has deeply evolved from Antiquity to the XVIIIth century: if based only on translation, the comparison is dangerous. As long as *ars* designated a particular skill and knowledge based more on practice than on theory, it was not so far from a “science”. The strict separation of art and science is recent, with the crystallization of the fine arts around the notion of creation and the figure of the author and then with the building of “modern” science. Reconciling art and science is a challenge for the present time. Maybe cookery can help to this reconciliation.

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⁶⁶ Myhrvold 2011.

⁶⁷ “Quand on ose avancer que la cuisine, c’est un peu plus que de la science, Nathan Myhrvold rétorque: ‘La cuisine, c’est de l’art! Mais l’art a aussi besoin de la science. Prenez un architecte: si vous lui expliquez les dernières recherches sur la résistance de certains matériaux, par exemple, il aura plus de liberté de création. Les cuisiniers ont aussi besoin de technique pour inventer!’” (interview en ligne: <http://www.lexpress.fr/styles/saveurs/modernist-cuisine-le-livre-ultime_1051937.html>).

⁶⁸ “A la fin de l’entretien, la question suivante était posée: *la cuisine est-elle un art au même titre que la peinture?* Sur trente personnes interrogées, seules sept ont exprimé l’avis que la cuisine n’est pas un art *visuel*, car sa finalité est d’être *bonne à manger*, même si on cherche à la rendre plus appétissante en la rendant plus agréable à voir; les autres ont toutes affirmé que la cuisine était un art et que l’esthétique visuelle jouait un rôle aussi important que le goût. ‘C’est l’art de tous les jours’, Marie-Paule, 69 ans, niveau BTS, retraitée, 2000 € de revenu mensuel; ‘La cuisine est un art même s’il existe de mauvais plats comme il existe de mauvais tableaux, pourtant ce n’est pas pour ça qu’on pense que la peinture n’est pas un art’, Fanelie, 22 ans, niveau BTS, chômage, 700 € par mois.” (Csergo 2012: 22).

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