

- Bioprinting
- City
- Cooking
- Culture
- Design
- Environment
- Food
- Food designing
- Food product
- Food safety
- Health
- Intelligent labels
- Packaging
- Printed food
- Products
- Project
- Proteins
- Refuse
- Senses
- Society
- Sociocultural
- Strategy
- Technology
- Urban agriculture
- Urban design
- Urbanism
- Waste
- Waste of resources

- Creativity
- Decoding
- Method
- Process

Ferran Adrià Josep Maria Pinto

“Arranging and understanding the past is essential in order to move forward. Order is the fundamental premise for understanding what we are talking about and for working efficiently”

Ferran Adrià has been chef and co-owner of elBulli restaurant until 2011. In 2011 creates the elBulli Foundation and in 2014 opened the elBulli LAB, and develops the gastronomy process decoding. Doctor Honoris Causa from the University of Barcelona, and Aberdeen University.

Josep Maria Pinto is a freelancer in the field of writing and editing. Since 1985 carries out writing and translation in the publishing world. He collaborates with Ferran Adrià since 1997, with whom he has prepared the texts of all the books of elBulli.

SAPIENS: A Methodology for Understanding Gastronomy. First explanation (*work in progress*)

Being as it is an everyday activity closely linked to our senses, our appreciation of gastronomy is largely based on the satisfaction and the pleasure it provides us, on subjective considerations according to which we simply like what we have eaten to a greater or lesser degree. In other words, besides considering its objective values, creative contributions, novelties, and understanding its professionalism or *savoir faire*, its special gustatory combinations, we take for granted that the criterion of personal taste is the most important factor.

Arranging for Understanding

When elBullirestaurante became elBullifoundation on 30 July 2011, one of our first intentions was to further our work classifying cookery in order to come up with a methodology that would enable us to completely decode and arrange our gastronomic knowledge. Starting from the fact that our first purpose was to get to know and understand our discipline in order to educate and innovate, when it comes to judging the main contributions to gastronomy over time, we soon realise the significant absence of data and of a unified taxonomy in the history of gastronomy informing of its characteristics and its evolution, as a result of which objectivity is impossible.

So, in order to devise this decoding we decided to begin by studying how cookery had been classified over the course of history, i.e. whether it had been subjected to any systematic coding. By coding we mean an agreed arrangement or logical classification of all gastronomic elements.

The evolution of gastronomy may be studied from two starting points. The first is the history of cook-

ery as it is told in compilations and surveys by anthropologists, archaeologists and historians; indirect sources that describe everything related to cooking before the invention of the printing press. Indeed, up until the fourteenth century there are no books that reveal the work of cooks, their recipes or any conception of cookery that stems from the contents and classification of their works. The second starting point therefore is found in recipe books and thematic works drawn up by cooks and other agents to plainly describe their cookery or their knowledge of specific gastronomic aspects. A look at the contents and indexes of these books reveals that no consensus has existed to codify cookery, and no agreement has been reached by the various agents. Gastronomic knowledge may abound yet it is quite heterogeneous.

So why is it necessary to classify this knowledge? Why is this classification so important?

Arranging and understanding the past is essential in order to move forward. Order is the fundamental premise for understanding what we are talking about and for working efficiently. Confused knowledge hinders efficiency, preventing and a comprehensive under-

standing of the structures, processes and relationships of disciplines. Order is essential, especially for formulating complex ideas and tackling difficult processes.

Ordering means taking decisions, trying to understand how the different elements of disciplines are grouped together. Ordering implies reflecting, grouping, classifying, distinguishing, establishing families—in short, forming categories that will allow us to understand the processes that define disciplines. Ordering is a way of encouraging chaotic states that favour the flow of creativity. The Sapiens methodology is the tool that enables us to tackle our objective of understanding gastronomy so as to create in different ways. In other words, we want to understand in order to create again.

The Sapiens Methodology

We firmly believe that to maintain effectiveness and efficiency in the fields of innovation and education it is absolutely necessary to understand the different stages of disciplines, and have therefore developed a methodology that helps us decode the most important processes involved. Although our main purpose is to decode and understand the genome of gastronomy, Sapiens hopes to use it to decode all other creative disciplines. This is why Elisava, in collaboration with elBulliLab, is decoding design following the parameters outlined in this text.

To begin with it is indispensable to ascertain the questions raised by the discipline, which will enable us to understand it: the what, how, when, where, who, for what and why of all its processes, how they are contextualised and how they interact. We call this methodology Sapiens.

The Processes

The answers to the previous questions reveal that there are thousands of processes (that can vary greatly according to the discipline in question), each one of which brings its defining elements into play. A

discipline can be decoded to a great extent through these processes, moving from more to less, from maximum to minimum, from general to concrete – a company, a service, a concept, a specific product. For instance, we may decode the processes involved in mobile phone engineering as a discipline, but we may also decide to decode the processes of the Apple company, of the iPhone concept or even of a specific generation of iPhone. In this sense, the creative, productive, experiential and commercial processes of iPhone1, which were essentially disruptive, have little in common with the more evolutionary processes of subsequent generations of iPhones. To give another example, we may decode the processes involved in the making of champagne in general, or those of a certain producer, Dom Pérignon, or even that of a specific vintage year.

Studying a discipline's processes can be an absolutely boundless, infinite task—the fascination for diversity. The processes involved in the making of a large-scale painting will necessarily differ from those required to make a small painting or a series of paintings. Those that are involved in filmmaking can diverge considerably in the case of a commercial blockbuster, an animated film or an educational documentary. When we speak of disciplines in the field of science we start from a common methodology, the scientific method, but even so the processes involved in the work of biologists and physicists are completely different.

Processes can be produced more or less simultaneously. In performance art, for instance, experiences can be created, produced and perceived in parallel. A painting can be conceived and made at one and the same time, and experienced later. A menu can be created in one phase, produced in another and experienced in a yet another. In the case of a complex film production, successive processes can develop in several phases.

The decoding of processes is the first premise for approaching a discipline, for it helps us understand it as it is produced, as it works, although it doesn't

tell us what has taken place in the story and how the plot has developed, for which we need an evolutionary analysis that will contextualise each finding, each contribution, that will be set within a specific time frame.

The understanding gleaned from processes and from evolutionary analysis will then allow us to apply Sapiens in two main areas: education and innovation.

- Education: understanding a discipline will help us improve the quality of its teaching thanks to the creation of didactic material, a new propaedeutics that will structure curricula.
- Innovation: understanding a discipline and what it has in common with others as regards processes will lead to creative solutions that imply a development from the point of view of creativity. In other words, in this case Sapiens is used as a creative technique.

“Creating isn't reproducing; the action of the cook doesn't match the perception of the diner. The processes must be the backbone of the entire discourse”

The Sapiens Methodology Applied to Gastronomy in Restaurants

We have already pointed out that our first intention was to apply the Sapiens methodology to gastronomy, and more specifically to gastronomy in restaurants, i.e. the professional restaurant industry that stems from the tradition of culinary art and therefore attaches importance to the gastronomic element. As mentioned, the Sapiens methodology can be applied

at different levels, ranging from the most general (gastronomy in its broadest sense) to the most concrete (avant-garde restaurants, a chef's particular style or a specific preparation).

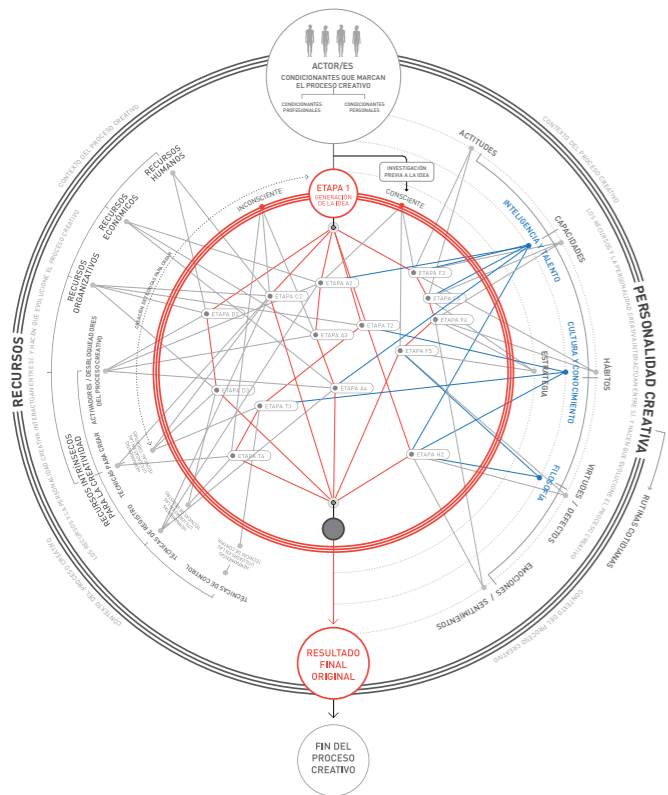
For a start, it is a matter of knowing how to pose the right questions for identifying the processes of the discipline.

- **Do we understand what we're doing?** We then go on to decode the reproductive process of gastronomy in restaurants.
- **Why do we do it?** We reflect on our degree of involvement in our activity.
- **What was the origin of gastronomic restaurants? What was the origin of gastronomy?** We study the reasons that triggered the appearance of our discipline.
- **When did our discipline emerge?** We study the origins of gastronomy.
- **How do we create?** We decode our own creative process and that of professional gastronomy in general.
- **How is what we create and reproduce perceived?** We examine the perceptions and reactions of diners and decode the experiential process.
- **How is it produced?** We examine and apply the decoding of professional gastronomy in the process of traditional reproduction.
- **Where did gastronomy first appear?** We study the places in which it emerged and developed.
- **Who has been or is still influential in our discipline?** We study the past development and the present of gastronomy in restaurants.

The answers to these questions enable us to identify the processes that define different moments, approaches, points of view, intentions and attitudes: creating isn't reproducing; the action of the cook doesn't match the perception of the diner. The processes must be the backbone of the entire discourse. They are so closely related that the connections that emerge between them define and classify gastronomy.

Processes in Gastronomy

We go on to draw up a taxonomy of the different elements shaping each of the processes, which we shall express in their respective charts.



▲ Creative process map

Creative Process

Given that all that exists must necessarily have been created, the first gastronomic process is the creative process, which we must learn in order to improve creative efficiency.

CONTEXT

Actors

- Personal determinants
- Professional determinants

Creative personality

- Attitudes, abilities, habits, virtues and/or faults
- Emotions and feelings
- Intelligence and talent, culture and knowledge, philosophy

Resources

Extrinsic to gastronomy and creativity

- Human resources
- Financial resources
- Organisational resources

Intrinsic to gastronomy

- Products
- Pre-production, production and preservation tools
- Pre-production, production and preservation techniques /technology
- Serving, presenting and tasting utensils
- Serving, presenting and tasting techniques/technology
- Intrinsic to creativity**
- Creative techniques
- Control techniques
- Recording techniques
- Initiators and releasers

PHASES / STAGES

END RESULT

- Intermediate preparations
- Final preparations

Traditional Gastronomic Reproduction Process

The following process is that of gastronomic reproduction, during which what has been created is prepared. All those who reproduce do not necessarily create. Strictly speaking, to reproduce means to follow a number of steps to reach a result that can be served and consumed.

CONTEXT

Actors

- Personal determinants
- Professional determinants

Creative personality

- Attitudes, abilities, habits, virtues and/or faults
- Emotions and feelings
- Intelligence and talent, culture and knowledge, philosophy

Resources

Extrinsic to gastronomy and creativity

- Human resources
- Financial resources
- Recursos organizativos
- Organisational resources

Intrinsic to gastronomy

- Products
- Pre-production, production and preservation tools
- Pre-production, production and preservation techniques /technology
- Serving, presenting and tasting utensils
- Serving, presenting and tasting techniques/technology
- Intrinsic to creativity**
- Creative techniques
- Control techniques
- Recording techniques
- Initiators and releasers

PHASES / STAGES

END RESULT

- Intermediate preparations
- Final preparations

Experiential Process

The gastronomic process has actors who create and/or reproduce, and others who receive the result of previous processes and consequently have certain specific experiences, in which case we speak of experiential processes.

CONTEXT

Actors

- Personal determinants
- Professional determinants

Personality

- Attitudes, abilities, habits, virtues and/or faults
- Emociones y sentimientos
- Emotions and feelings
- Intelligence and talent, culture and knowledge, philosophy

Resources

Extrinsic to experience

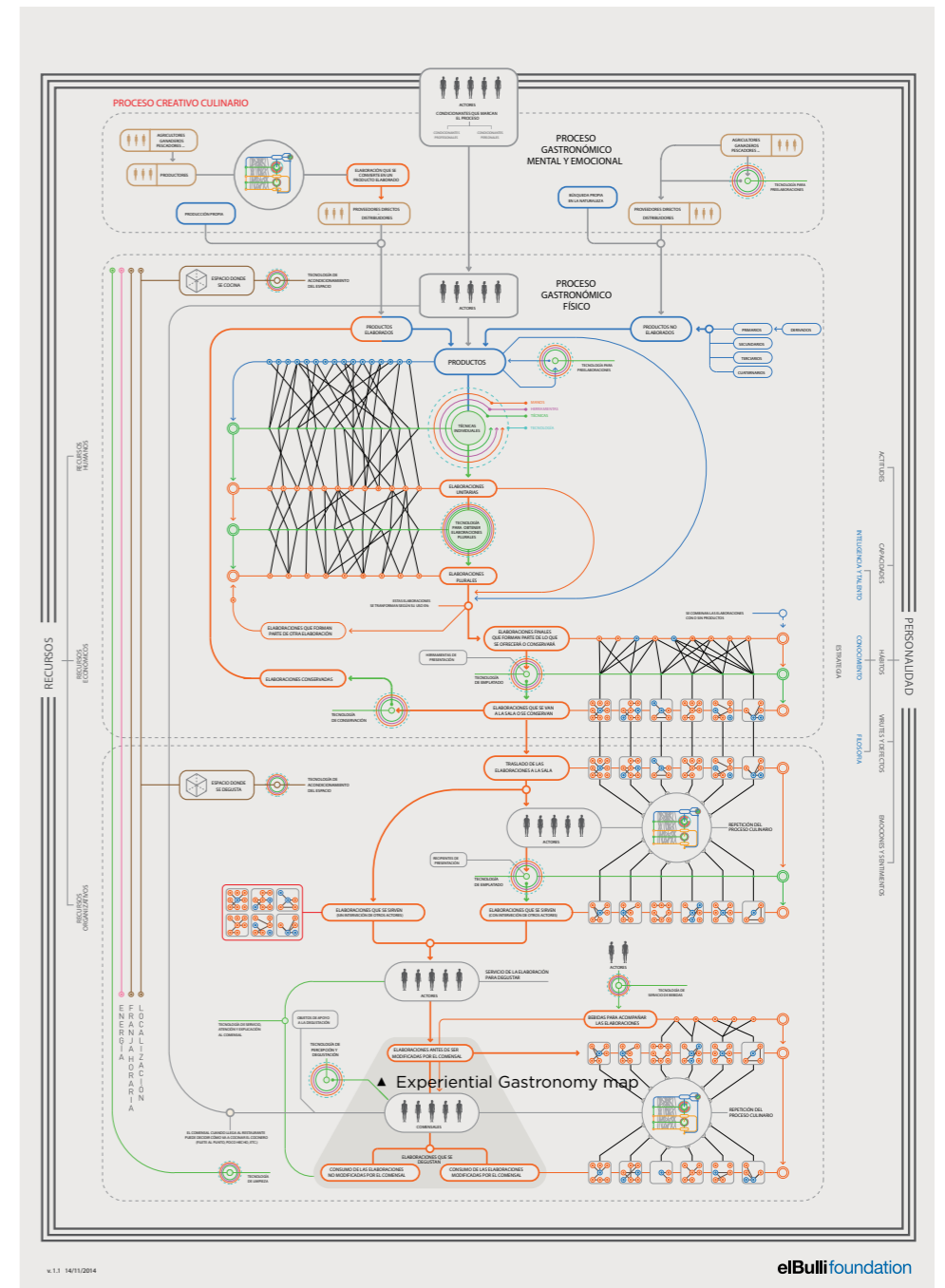
- Financial resources
- Organisational resources

Intrinsic to experience

- Direct information**
- Guidelines
- Invitation
- Social networks
- Advertising, magazines and/or newspapers
- Indirect information**
- Audiovisual medium
- Personal and/or professional connections
- Conferences
- Articles and/or press
- Recommendations

PHASES / STAGES

- Booking tools
- Telephone
- Web
- Transfer tools
- PHASES / STAGES**
- Decision to have the experience
- Booking
- Transfer
- Entrance



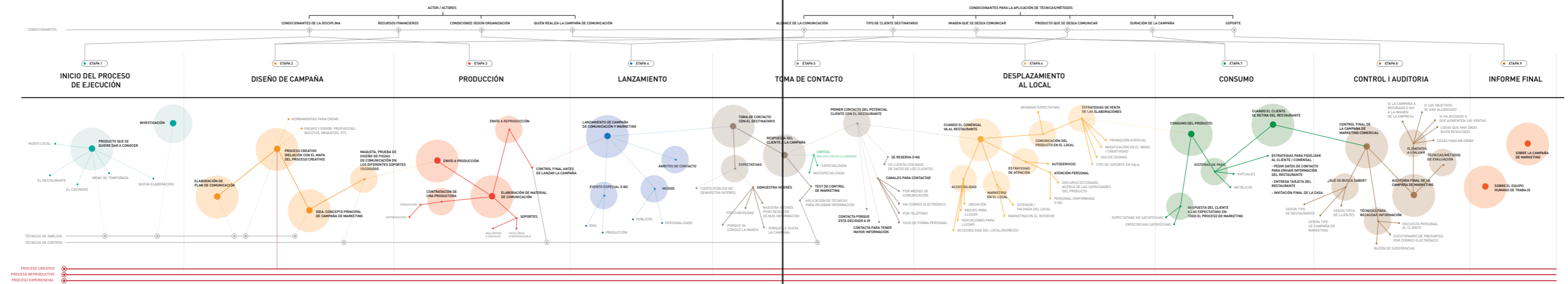
▲ Reproductive system map

- Welcome reception
- Welcome taste
- Standing or seated
- Offer

- À la carte or menu
- Beginning of the taste
- After-dinner conversation
- Payment
- Leave-taking
- Transfer back to starting point

CONSEQUENCES

- Appraisal
- Criticism
- Dissemination



▲ Map of the marketing process in a restaurant.

Commercial and Marketing Process

The commercial and marketing process contemplates studying the possibilities and needs of the market and how to convey and disseminate information.

CONTEXT Actors

- Personal determinants
- Professional determinants

Personality

- Attitudes, abilities, habits, virtues and/or faults
- Emotions and feelings
- Intelligence and talent, culture and knowledge, philosophy

Resources

- Extrinsic to marketing**
 - Human resources
 - Economic resources
 - Organisational resources
- Intrinsic to marketing**
 - Offer/Concept
 - Marketing supports

Direct marketing

- Guidelines
- Invitation
- Social networks
- Advertising, magazines and/or newspapers

Indirect marketing

- Audiovisual medium
- Personal and/or professional
- Conferences
- Articles and/or press
- Recommendations

PHASES / STAGES

- Beginning of the execution process
- Design of the campaign
- Production
- Launching
- Establishing contact
- Travelling to the restaurant
- Consumption
- Control and inspection
- Final report

These four processes are studied separately (and we therefore present them here in this way) in order to be better understood. Actually, the creative process comes first in professional gastronomy, while the reproduction, commercial and experiential processes have close ties and consequently the different elements of their respective taxonomies coincide to a great extent. The preparation reproduced in the kitchen, for instance, is advertised in order to promote the restaurant, providing the diner with the experience.

After the Results of the Processes

If we want to complete the taxonomy of professional gastronomy we must necessarily bear in mind that besides the processes, the consequences of their results are also important in our activity.

Contents and Activities

The gastronomic process produces results that can be expressed in preparations that are sampled or else in written transcripts, recipes. The consequences can be summarised in two grouped in two fields: contents and activities, divided into different areas.

Areas	Contents	Activities
RESTAURANT INDUSTRY	Menús Techniques Concepts	Restaurants Bars Banquets Cocktails
EDUCATION	Courses Masters	Cookery schools Laboratories Lectures
PUBLISHING SECTOR	Cook books Recipe books Leaflets	Prizes Competitions
WRITTEN PRESS	Newspapers Guides	-
DIGITAL MEDIA	Redes sociales Sitios web Portales	-
ENTERTAINMENT	Radio programmes Television Documentaries	Festivals Fairs
ART	Art works Musical pieces	Exhibitions Museums

Types, Styles and Movements

The characteristics of the results of gastronomic processes may lead us to group them together or relate them to other results. After this analysis, we go on to identify different types of cuisine, styles and movements, which are examined by periods.

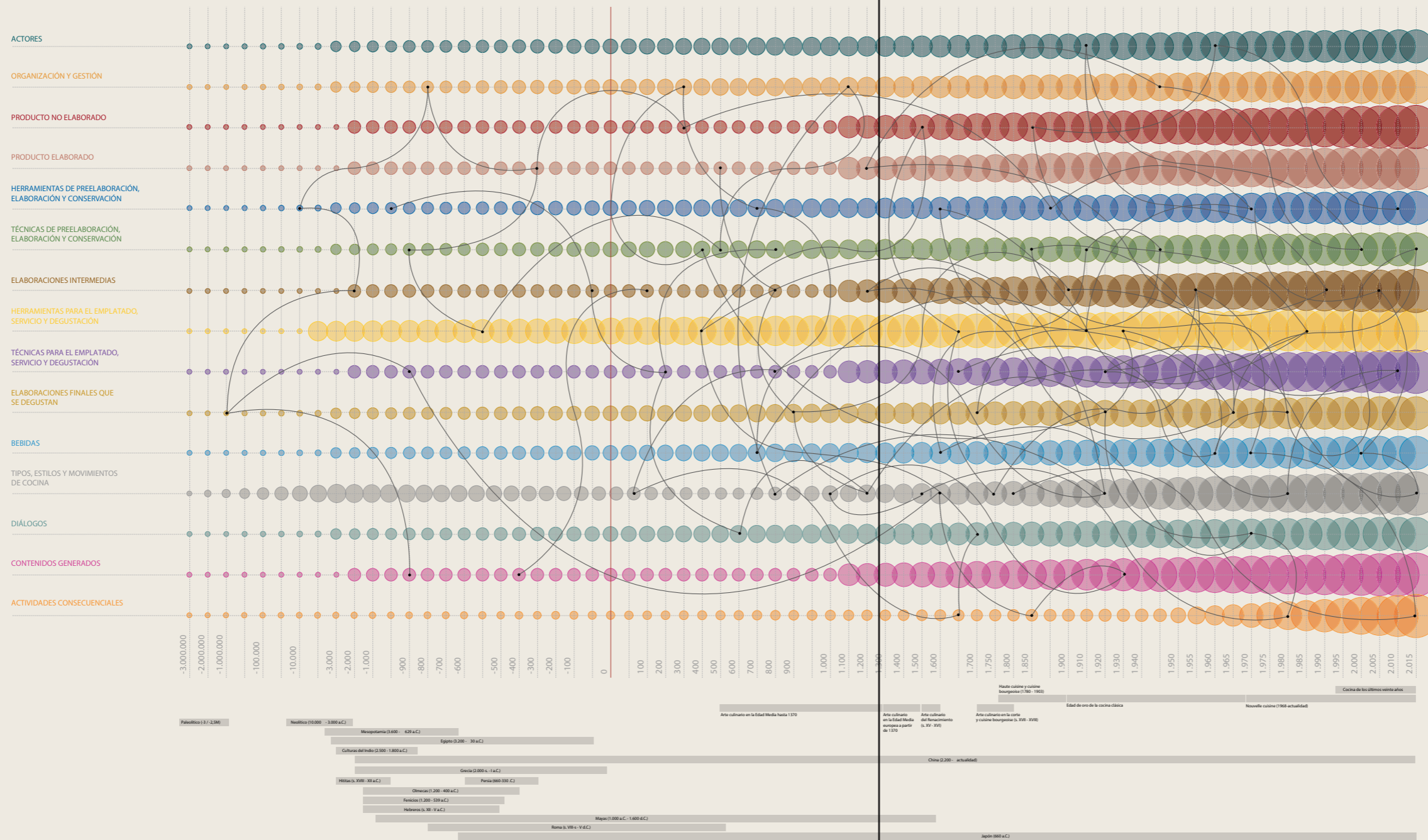
Economic sectors surrounding professional gastronomy

According to the process we are addressing, gastronomy can enter into dialogue with various economic sectors: public organisations, energy companies, the environment, health, education, culture, tourism, finance, marketing, the food industry, communication, transports, etc.

Areas and disciplines that use gastronomy without entering into dialogue with it

Some areas and disciplines use gastronomy in their own creative processes, although without entering into dialogue with it. The realm of the plastic arts, for instance, turns to motives and materials taken from cuisine and foodstuffs without gastronomy being influenced by the creative process. Literature and film too are disciplines in which we find works inspired in gastronomy without dialogue exchange.

Creative analysis map in Western gastronomy



v. 1.2 24/11/2014

elBulli foundation

Creative analysis

Physical and historic context

- Climate
- Model of society
- Type of diet
- Beliefs and religions
- Discoveries and colonisations
- Revolutions and wars

Actors

- Types of agent
- Personal determinants
- Professional determinants

Creative Personality

- Attitudes, abilities, habits, virtues and/or faults
- Emotions and feelings
- Intelligence and talent, culture and knowledge, philosophy

Resources extrinsic to gastronomy

- Human resources
- Financial resources
- Organisational resources

Resources intrinsic to gastronomy

- Non-manufactured products
- Manufactured products
- Pre-production, production and preservation tools
- Pre-production, production and preservation techniques /technology
- Serving, presenting and tasting utensils
- Serving, presenting and tasting techniques/technology

Resources intrinsic to creativity (creative process only)

- Creative techniques
- Control techniques
- Creative recording techniques
- Creative tools
- Initiators and releasers

PHASES / STAGES

End result

- Intermediate preparation
- Final preparation

Consequences of the results

- Contents and activities
- Types, styles and movements
- Economic sectors surrounding professional gastronomy
- Areas and disciplines that use gastronomy without entering into dialogue with it

The evolutionary analysis of the history of cuisine and professional gastronomy

In order to understand our discipline in its entirety it is essential that we introduce a new parameter: chronology. To place in the history of gastronomy each new creation, each of the events that have shaped its evolution, provides the time dimension we need for the global understanding of gastronomy. To study the subject, not only must we go back to the ages prior to the establishment of restaurants in the late eighteenth century¹ but back to the first human activities related to food. In fact, we have realised that in order to fully understand our discipline we must contextualise it within the history of humanity and the development of disciplines. Furthermore, if we don't understand the processes we will be unable to analyse the history.

Studying the history of gastronomy obliges us to redefine the taxonomy drawn up for the processes, as many of its elements are transversal. The discovery of America and thus of its products, for instance, influenced the creative, reproductive and experiential processes. The history of cuisine and of professional gastronomy must bear in mind the following items:

Conclusions

One of the transformations gradually produced by the realm of gastronomy that was sparked by the culinary revolution in Spain was the possibility of judging gastronomic creations following purely objective criteria instead of the subjective taste of the agents receiving the offers. In this sense, contemporary cuisine represents or decidedly hopes to represent the age of objectivity, knowledge and order,

the elements that enable us to assign each creation its true value and contextualise it within the history of the discipline.

This new situation highlights a change of paradigm, revealed thanks to this desire to understand and classify. This broader and more global approach has provided completely new viewpoints of various aspects of the gastronomic phenomenon. Here are some examples.

“When we speak of disciplines in the field of science we start from a common methodology, the scientific method, but even so the processes involved in the work of biologists and physicists are completely different”

If creativity has always played a key role in the history of cooking, to date this creativity and the creative process *per se* had hardly been propounded. The analysis and knowledge of the different elements that come together in the creative process has enabled this decoding, that results in greater efficiency, effectiveness and creative longevity.

Having defined the taxonomies to which we now apply the Sapiens methodology we have acquired a new vision of gastronomy. A whole series of questions are slowly explained, clarifying the previously unknown role played by each element in the gastronomic process. Is wine a product? A preparation? A beverage? Is a sauce a use or a preparation? Can we consider cocktails and snacks as dishes? Why do we usually classify them as such? What's the difference between a prepared product and a preparation?

¹ In spite of certain precedents, such as the establishment founded by Boulanger in Paris in 1765, whose importance in the history of the restaurant industry is a central object of study and discussion, there is general agreement in considering the Grande Taverne de Londres, opened in 1782 in the same city by Antoine Beauvilliers, chef to the Count of Provence (future King Louis XVIII), as the first grand restaurant.

If *nouvelle cuisine* stood for the emancipation of chefs from the conservative recipe books of cuisine after Escoffier, in recent years the perspective that has acquired maximum prominence is that of another agent: the diner. The experiential process has broadened his possibilities, weaving connections with the gastronomic process as a whole. For a start, the analysis of the process reveals that the role of the diner is no longer simply that of a passive subject undergoing an experience, but also that of an agent who cooks, i.e. someone whose decisions are not influenced by the chef and yet exert an influence on the end result, the meal he will consume. Choosing dishes from a menu is a decision, as is ordering the desired cooking point for meat, or asking to be served a salad without one or more of its ingredients. At the table, numerous situations can arise in which the diner's decisions are absolutely determinant for the outcome: the cooking time of meat and the accompanying sauce in a *fondue*, the way in which he spreads tomato on a piece of bread and how much olive oil he will add to it, whether he will eat the cured ham together with the bread or separately, etc. The examples are countless. Even in avant-garde gastronomy, where there seems to be less margin for choice, the diner can complete dishes, decide the proportions or the order in which he will combine the products and preparations that make up a dish, whether he will take one mouthful or two, etc. Awareness of this reality will necessarily alter our understanding of the gastronomic phenomenon.

The concept of restaurant can be legitimately called into question. Even though the term 'gastronomy' has only been in use for about a couple of centuries,² the gastronomic attitude can be traced back to the age of civilisations at the very least. Even so, the first gastronomic restaurant is barely two hundred years old, which means that most of the history of gas-

tronomic delight and satisfaction has unfolded 'without restaurants'. We should therefore be able to imagine gastronomy without restaurants, and in this sense increasingly original formats will continue to emerge.

Gastronomy without restaurants, but what about gastronomy without tastes? Certainly. Whenever we watch television programmes on cooking, read blogs on cookery criticism, use gastronomic portals or apps on the subject, or when we visit exhibitions on chefs we are consuming gastronomy.

From the point of view of knowledge, the possibilities provided by the digital world and the Internet are boundless and offer us new ways of accessing and classifying this information. Curating and classifying this knowledge following the Sapiens methodology, which, as we have pointed out, can be used in education and in innovation, will extend its influence to chefs, restaurant professionals and diners, who now consume gastronomy fully aware of what they are experiencing. As we are not facing a future projection but a reality, we can no longer understand gastronomy without this knowledge of its history, of its processes and characteristics.

² The term *gastronomie* first appeared in 1801 in a poem by Joseph Berchoux, but was popularised in 1826 following the publication of *La Physiologie du Goût* by Jean Anthelme Brillat-Savarin.