



Vegetable Love. Prospero Calano's Libidinal Food Gallery (1538, 1549)

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“Had we but world enough and time,
This coyness, lady, were no crime.
We would sit down, and think which way
To walk, and pass our long love's day.
Thou by the Indian Ganges' side
Should'st rubies find; I by the tide
Of Humber would complain. I would
Love you ten years before the flood,
And you should, if you please, refuse
Till the conversion of the Jews.
My vegetable love should grow
Vaster than empires and more slow;
An hundred years should go to praise
Thine eyes, and on thy forehead gaze;
Two hundred to adore each breast,
But thirty thousand to the rest;
An age at least to every part,
And the last age should show your heart.
For, lady, you deserve this state,
Nor would I love at lower rate...
(Andrew Marvell, 1621-1678, *To his Coy Mistress*)”

Prospero Calano is not very well-known in the history of Italian medicine of the Renaissance and his *Traicté excellent de l'entretenement de santé (Excellent Treatise for the Preservation of Health)* of 1549 (Paris: François Giraud) is not often quoted in the annals of nutrition and dietetics. He is not mentioned in Rachal Laudan's *Birth of the Modern Diet*, Jean-Louis Flandrin and Massimo Montanari's *Food*, Gian Mario Anselmi and Gino Ruozzi's *Banchetti letterari*, Deborah L. Krohn's *Food and Knowledge in Renaissance Italy*, etc., although Ken Albala and David Gentilcore do refer to him in their *Eating Right in the Renaissance* and *Food and Health in Early Modern Europe* [1].

Calano was born around 1480 in Sarzana, in Liguria, the son of Antonio Calani and Giorgetta Griffi. He took his degrees in medicine at the University of Bologna in 1509 and practiced in Bologna and Rome as well as ‘in other Italian cities’[2]. He cured Cardinal Paolo Emilio Cesi of an attack of ‘melancholy’, for which he was several times quoted in Robert Burton's famous *Anatomy of Melancholy* (1621). The date of his death is not known.

In 1538, he published a *Paraphrasis in librum Galeni De inaequali intemperie* which included, in Latin, what would

become his *Traicté de l'entretienement de santé*. In the original, the treatise occupies was presented as a commentary of Galen's *De valetudine tuenda* [3]. The French translation, due to Jean Goeurot, physician to François I, seems to have been successful as it had at least five editions in Paris and Lyon in 1550 [4]. We have not noticed substantial textual differences between them. We deal here with the 1550 edition published in Paris by Jehan Bonfons, 'en la rue neufve Nostre-Dame, à Lymage Saint Nicolas'.

The capacity of some foods to excite the 'appetite of Venus' - or to extinguish it - is considered by Calano among other attributes which define their nature and which include their digestibility, their humoral characteristics, their tendency to produce a good or bad blood, etc [5]. These are the points discussed here.

Ancient Medical Literature and the Attributes of Food Related To Sexual Activity

In his *Totius rei medicae libri VII* (*Seven Books on Medicine*), the Byzantine Greek physician Paulus of Aegina (c. 625-c. 690) devotes a chapter to 'The satisfaction of sexual desire' ('De venere') [6]. 'From sexual enjoyment', he wrote, 'the following advantages may be derived: they relieve plethora, render the body lighter, promote its growth, and make it more masculine; they free the mind from the cares which beset it, and dispel ungovernable anger'. Their beneficial effects against mental or physical diseases are no less numerous: sexual activity offers the best possible remedy against melancholy, brings to their senses those who are insane, cures phlegm, restores the appetite and frees men from a constant abundance of semen during sleep [7]. These benefits and those provided by a good diet were based on the traditional pathology established by Hippocrates and Galen, where 'illnesses were attributed to the unbalanced mixing of the four bodily humours: blood, phlegm, and yellow and black bile' [8]. 'Each foodstuff was associated with the qualities of hot, dry, moist, and cold, with each of the four humours possessing two of their qualities'.

Thus, Paulus of Aegina stated: 'The habits which are most adapted for venery are the hot and humid, and these bear it best'. An abundance of nutritious and good food - *copia alimenti* - are required. You have the choice. 'Of fishes, you have *polypi*', octopuses, 'which are otherwise supposed to excite, and the entire class of mollusca'. Among pot-herbs: *horminum*, that is to say clary sage; *irio* or erysimum or hedge-mustard; *eruca* or rocket; and *rapum* or turnip [9].

The history of the relationship between medicine, diet, health and sex goes back far beyond Paulus of Aegina. The latter exactly repeated prescriptions provided by Oribasius (c. 320-403) about fish and pot-herbs [10]. The latter listed a whole collection of dried vegetables, beans, chickpeas, etc. which are nutritious and produce flatulence - a gas that a plant

such as rue eliminates at the same time as it 'blunts sexual desire' [11]. Then he expends pages and pages on explanations of the 'appropriate time for coitus', the required physical and psychological 'positions' and advice (is it better to make love in the morning before bath and exercise, after lunch or after dinner, etc.?).

Oribasius himself borrows many recommendations from Rufus of Ephesus, who lived in the late first century AD [12]. We recognize in Rufus the references to the stimulating properties of the mollusca, the clary sage, the erysimum, etc. within a whole list of stimulating foods: bread without bran, 'baked in the oven on all sides', 'the meat of young goat, of lamb, of young pork, and, as poultry, hens, heather roosters, partridges, geese and ducks, as all those things are very nutritious'. Marika Galli considers the relationship between food and sexuality in the Bolognese Baldassare Pisanelli's *Trattato della natura de' cibi, et del bere* (*Treatise on the Nature of Foods and Drinks*) of 1583 [13]. She mentions foods which are 'hot and moist at different degrees' such as figs, grapes, pomegranates, pine seeds and soft almonds.

The enumeration above is sufficient to suggest that it would be very difficult, if not pointless, to try to establish which authors or which tradition these sexual-dietary ideas are attached to, for which Paulus of Aegina provides a starting point [14].

On the Humoral Balance: Rocket and Lettuce

Jean Céard has stated that 'herbs and vegetables are little although esteemed in Renaissance dietetic' [15]. Gentilcore specifies: 'Although legumes were one of the most frequently eaten foods during the early modern and modern periods, medical opinion was hostile to them. They were considered a *gross* (heavy and coarse) foodstuff, difficult to digest and the cause of flatulence. Only labourers were thought to have stomachs strong enough to digest them, to the extent that 'bean-eater' became an abusive label' [16]. Tommaso Giannotti Rangoni (1493-1577), who published in 1550 a *De vita hominis ultra cxx annos protrahenda* (*Revelations on the Way of Prolonging Human Life to the Age of 120*), 'vilified foods like vegetable and fruits' which generated 'excess moisture', so that a Spanish doctor, Juan Sorapán de Rieros wrote: 'eating vegetables and falling ill are one and the same thing' [17].

Among the vegetables, the rocket or arugula (Lat. *eruca*) had perhaps the best-known aphrodisiac reputation, still commonly mentioned in nowadays websites. As far as he is concerned, Calano stated: 'The Ancients rightly say that it generates much blood and, for this reason, sexual arousal' [18]. Throughout the sixteenth and seventeenth centuries, this effect was repeated and explained in botanical literature from Leonhart Fuchs (1501-1566) and Jacques Daléchamps (1513-

1588) to the edition of Theophrastus' *Historia plantarum* (c. 371-c. 287 BC) by Johannes Bodaeus van Stapel in 1644 [19].

In Antiquity, Ovid takes the lead in quotations with: 'I prescribe avoidance of the salacious rocket' [20]. Columella develops the topic in the *De re rustica* (*Of Husbandry*):

From Megara let the genital seeds of the bulbs come,
Which are hidden in the Getulian clods of Sicca,
And which are brought together near the fertile Priapus,
The rocket excites drowsy husbands to sex [21].

Columella refers here to Megara, a city of Achaia, between Athens and Corinth, where the Getulians of Africa were notably supposed to live; it was a city whose people had a reputation of being 'very provocative'. Sicca, a Numidian town, perhaps the present Kef, was also called Sicca Veneria, a name on which Columella plays to introduce the belief that Priapus fostered couples to approach each other and get excited for sexual intercourse by the aphrodisiac use of rocket.

One of the most notorious references to the latter appeared in the poet Martial (38-41 AD - c. 103) whose epigram *Against Luperus* mocked him because he 'no longer feels the sting of desire' and pursues everything to recover it, without any success despite the use of 'rocket, lecherous bulbs (*bulbique salaces*) and savory' [22]. 'You start by corrupting pure mouths with money: Venus may not survive such sollicitations'. Juvenal, the latter's friend and painter of corrupt Roman society, appeases Nevolus, an 'obscene protégé' who is worried that he could lose his clients now that he is getting old. He may expect a good future: 'Just think about chewing *erucas*' [23].

The Ancients provided the counterpart to such an attractive aphrodisiac. Pliny the Elder wrote that lettuce, as it has properties quite different from those of rocket, is usually blended with the latter in a salad, so that the amount of heat be tempered and counter-balanced by the chilliness of the lettuce [24]. He specified that the round lettuce with a small root and wide leaf, sometimes called *eunuchion*, is 'the most opposed to venereal ardour' due to its 'refreshing virtue', and suggests that this 'inhibiting' power could be linked with the fact that lettuce 'brings sleep' [25]. In the chapter on rocket, Galen confirmed the alimentary custom stated by Pliny: 'This herb is definitely heating, so that it is not easy to eat on its own without mixing it with lettuce leaves. Its seed is believed to generate sperm and to arouse sexual urges' [26]. Dioscorides, who had distinguished between the 'cultivated' or 'domestic' lettuce and the 'wild' or 'rural' variety, had written that both have more or less the same effect: they 'repress erotic imaginations during sleep', 'dismiss' them and divert the sleeper from the 'venereal surge' [27].

During the Middle Ages, the Byzantine physician Simeon Seth, who in the eleventh century wrote an amazing treatise

Volumen de alimentorum facultatibus (*On the Virtues of Foods*), anchored in the tradition of Hippocrates and Galen concerning the pathology of humours, had no article on rocket but he activated opinions concerning the qualities of lettuce [28]. It 'brings languor to the body' and 'makes men too lazy to have sex'. It also 'dries up the seminal juice of women'. Terence Scully recalls that lettuce, at this time, was considered as being cool and moist in the second degree, on a scale where it was different from several other plants classified as warm and dry: clary-sage, hyssop, marjoram, mint, etc. Significantly, rocket occupied the highest rung with a score of three for heat and dryness. From a humoral point of view, these vegetables were intended to fight with each other on a field where, as Scully stresses, 'early botany tended to be studied primarily if not exclusively for pharmacological purposes' [29].

At the Renaissance, commentaries on Dioscorides especially gave the opportunity for a revival of ideas on the subject. The Florentine Marcellus Virgilius (1464-1521) provided a 1518 edition of Dioscorides' *De Materia Medica* where he argued - on a rather sophisticated and aesthetic level - for the adoption of the famous rocket/lettuce recipe [30]. Pietro Andrea Mattioli or Matthioli (1501-1578), in his commentaries published in 1544, specified that the seeds of lettuce have the same effect when they are drunk with a potion made from poppies and he mentioned a special way of using the vegetable, which was supposed to be very efficient when it is rubbed on the testicles, so that it extinguishes the semen - as in women [31].

Calano is not so precise about the practice, but expresses ideas concerning those who could benefit from lettuce. 'It is asserted that its use much dulls the body and the eyes, and restrains continuous libidinous imaginations during sleep, so that it prevents in an astonishing way the urgings of love' [32]. That is why the Pythagoreans call it *eunuchion* et *spadonia*, from the Lat. word which signifies 'sterile'. Thus, it is recommended for clerics and for the persons - male and female? - Who have chosen to live in celibacy, to whom lettuce must be served as often as possible. The French translation modulates the instruction by saying that the vegetable 'makes a man completely effeminate' [33].

'Increasing Semen': *Napi, Rapa, Turnip, Chickpeas*

Mireille Corbier has reminded us that the Romans distinguished two categories of plants: 'the *legumina*, pod-bearing plants of which one ate the seed pods, including the broad bean, chickpea, lentil, and lupine, and the (*h*)*olera*, of which one ate the root or green stem', like the lettuce or the turnip [34]. Among the vegetables which were intensively cultivated in the garden in the early Middle Ages, M. Montanari states that 'the most common were turnips (also grown over large areas in open fields) and cabbage (kohlrabi, white cabbage, and kale, with cauliflowers becoming popular only at a later date)' [35]. Antoni Riera-Melis provides a

picture for the late Middle Ages, when, with the expansion of cultivated fields, the two types of food 'were easily obtainable for all of rural society': on the one side, 'broad beans, peas, lentils, and chickpeas (...) appeared frequently on peasant tables'; on the other, turnips were some of the *olera* which were the most ordinarily cultivated in the family kitchen gardens [36]. This long-term pre-Renaissance overview must be useful in considering the following foods.

A Scottish physician of the nineteenth century, Francis Adams, devoted many pages to two kinds of *olera*, the *napus* and the *rapum*, and he concluded that it was generally admitted that they were 'two species of the turnip' [37]. Calano asserts: if '*napi* and *rapa* were totally disavowed by Democritus because they cause flatulence', 'Diocles gave them the highest praises as they much stimulate sexual desire, especially if they are cooked with rocket' [38]. Adams states that, in Antiquity, all accounts of the properties of *napi* and *rapa* were aphrodisiacal. As far as we could see, their effect on sex is not mentioned by Columella, Dioscorides or Galen [39]. Be that as it may, it was clearly asserted by Simeon Seth, who says that the turnip, which is 'hot at the second degree and cold at the first', 'increases the genital semen and provokes copulation' [40].

Oribasius had explained that the flatulence produced by food and blood was associated with 'an efficient arousal'. The way Calano writes about chickpeas seems to induce the same relationship and these foods are said to be no less nutritious and *ventosus* than beans, so that 'people think that they excite sexual desire, and that they increase hot genital semen'[41]. Johannes Crato von Krafftheim (1519-1585) condemned the vegetables which produce 'vapours', burn the blood, inflame the liver... and 'are enormously exciting', such as 'rocket, wild thyme, savory, cress, and mustard' [42]. Pisanelli notes, Galli observes, that turnips, carrots, leeks, thistles, artichokes or chestnuts are beneficial to coitus as 'the latter and the emission of wind were considered as two forms of evacuation of bodily superfluities' [43]. Thus, we may conclude with Albala that, in Renaissance medicine, 'windy foods' such as turnips and carrots, not easily digested, produce gases which spread through the whole body and inflate the blood vessels at their extremities, creating arousal [44].

These ideas concerning the seminal benefit brought by turnip and chickpeas must be related to the general process of the absorption of nutrients in the digestive system which operates as a 'cooking process' [45]. The first stage of the process 'starts in the mouth and the throat' and 'ends in the base of the stomach', where the foods are reduced to a 'juice' (chyle). This *coctio* is the most important, as it could be upset 'if it is corrupted by something', for example if too many foods of different varieties have been absorbed, or 'even too much food of one kind, or at an unsuitable moment'. Then, the juice circulates through the veins to the liver, where it is changed into more or less good or bad blood by the second

stage of cooking. This modified blood reaches all the parts of the body through the vessels which operate the third stage of cooking by improving the humours that it encounters. Each of these stages produces excrements or waste which are rejected (faecal matter, urines, sweat) [46]. The semen was the object of two theories described by the physician Nicolas-Abraham de La Framboisière (1560-1636). On one side, for the Ancients, it was defined as 'a benign excrement of the third stage of cooking, coming from what was left from the last food burnt by the spermatic parts'. But the Moderns did not fully agree: for some of them, the sperm is made of pure blood and of 'the spirits carried by the spermatic vessels to the testicles' where it takes its whiteness, consistency and perfection... [47]

Cooling the Libido: Lentils

For Calano, 'those who wish to live in chastity and abstinence must use lentils', but he warns them against a vegetable which could cause elephantiasis, 'a black hardness in the skin' [48]. The accumulation of observations in commentaries in Theophrastus' *History of Plants* and in botanical encyclopaedias by Fuchs or Daléchamps constitutes a convergent number of negative references which justify this status [49]. Galen described lentils as 'a flesh that is full of thick and earthy juices', so that it 'produces even thicker blood with larger amounts of black bile'[50]. Thus, 'anyone who eats excessive amounts of this food contracts what people call elephantiasis and cancer, for thick and dry food necessarily engenders black bile'.

'What the Greeks and Latins say about lentils is even confirmed by the Arabs', we read in a commentary of Theophrastus. The Byzantine Seth wrote indeed that the vegetable, which gives 'thick and poor blood', 'weakens the venereal appetite because it dries the genital semen, so that it helps more than a little those who wish to live chastely'. Oribasius compared the bad characteristics of lentils to those of cabbage and stresses their 'desiccant' effect [51]. The worst preparation consists in boiling them 'with cooked new wine, as cooks do for the common people'. Another menu was - already - appreciated in the fourth century: 'salted pork with lentils' [52].

Good and Horny: Artichokes

"But when the artichoke flowers, and the chirping grasshopper sits in a tree and pours down his shrill song continually from under his wings, in the season of wearisome heat, then goats are plumpest and wine sweetest; women are most wanton, but men are feeblest, because Sirius parches head and knees and the skin is dry through heat'. These are the Hesiod's lines of *Works and Days* by which is introduced by Calano this observation on artichoke: summer is the time when 'women are more inclined to sex, and on the contrary men are lazier'[53]. It has been written that its decoction 'has this great

efficiency of provoking sexual arousal' - where we may see the hand of 'Providence' - and Glaucias, an Illyrian King who ruled from 335 to around 302, has similarly said that it 'helps males to procreate'.

Calano specifies that there was no banquet, gorgeous or solemn, where it was not on the table, and greeted with a round of applause. David Gentilcore has devoted two pages to 'the fortunes of the artichoke', which 'begins its life as variety of cardoon, itself a kind of thistle' [54]. 'Consumed in Naples in the fifteenth century', it travelled to Florence (1466), Venice (1480), Avignon (1532), Paris, etc. But we have to cut the story with Pisanelli's famous treatise of 1583, where artichokes are not only described as 'pleasing to the taste' but as helping 'the genital member to stand erect'. If they 'offer a clue to their popularity', this must be reconstructed from their adverse origins [55].

The *cynara* or *cinara*, Galen stated, contains 'bad juice': its substance is 'woody' and it generates 'black bile', so that 'it is better to eat it thoroughly boiled, served with olive oil, *garum* [fish-sauce] and wine, with the addition of some coriander, or without this sauce, if prepared in a skillet or frying pan' [56]. If such a vegetable does not seem to have some special effect on the genital member, its agricultural, alimentary and culinary qualities are recognized. Columella tells that, 'when its seed shines in red and starts to mature, it is a good time to let it grow', so that people can appreciate it with 'good drinking' [57]. During the Middle Ages, Oribasius, Paul of Aegina and Seth still have only bad words for artichoke: it is 'more esteemed than it deserves', is a food for peasants and is harmful, due a 'bad chyme' which obliges to eat it boiled with oil, fish-sauce, coriander, etc [58].

Did a millennium of silence surround this unpleasant food? It has been observed that, at the end of the Middle Ages, artichokes 'are now far removed from the concept of aesthetic and the canon of garden plants' to be 'extolled by the Andalusian poets' [59]. Soon, a double change occurred in early modern times, Flandrin observes. In the sixteenth century, some 'legumes became fashionable, owing no doubt to Italian influence and perhaps also to the Counter-Reformation'. Among the Mediterranean vegetables which 'vied with melon, oranges, and melons for the hearts of gourmets', artichokes

'could be found on wealthy dinner tables and in countless cookbooks' [60]. Another change took place in the seventeenth century when foods such as 'olives, truffles, and artichokes', which were previously viewed 'as *fruits* suitable to be served as dessert', 'began to be reclassified as *vegetables*', according to a new distinction between 'sweet' and 'savory'. Gentilcore refers to Nicolas de Bonnefons, around 1650, who described artichoke as 'one of the most excellent fruits of the kitchen garden' and offers 'diverse manners' of cooking [61]. He concludes that 'the rage for vegetables suggests how fashions in food were quicker to change than medical opinions'. 'In the regimens, ideas about particular foodstuffs tended to withstand the decline of Galenism and its replacement by chemical or mechanical medicine', with the example of Louis Lémery.

The latter's article of artichokes in his *Traité des aliments* of 1705 or in the English translation of 1745 may give an idea of this change of medical opinions. Lémery wrote: 'Everybody attributes the virtues of increasing seed to the *Artichোক*; I believe those pungent and sharp things wherewith we season *Artichোকs*, such as pepper and salt, contribute more than *Artichোকs* to it. In the meantime, as they contain many oily and balsamic parts, united with essential salts, they may increase the seed, which is also very oily and saline' [62].

Conclusion

Calano's references to Renaissance Italian authors immediately make apparent the difficulty of situating him in the medical dietetics of his time. Names which were closely associated with the critical scrutiny of Pliny's natural history, such as Niccolo Leoniceo, are absent from his treatise. When Calano refers to Paolo Giovio, he is not speaking of one of those who opened a new understanding of Galen, but only of somebody who treated a question of ichthyology, so it seems [63]. Further research might consider his relationship with Rufus, Psellus, Palladius, Oribasius or Marco Fabio Calvo, but this definitely exceeds the scope of the present study.

The vegetables considered above may be listed in a table of their characteristics, reduced to five general features and effects in the process of assimilation.

	Sex	Temperament	Juice	Blood	Semen
Rocket	+	Hot	Good	+ Increase	+
Lettuce	-	Cold	Good	+ Increase?	-
Turnip	+		Good		+
Chickpeas	+	Hot	(bad)		+
Lentil	-	Cold Blackbile	Bad	'big blood, bad' (galen)	
Artichoke	+	Hot	Good		

As is natural and all too easily conceivable, the temperament of the food is regularly associated with the effect of stimulating libido or sexual capacity, as in the case of rocket, turnip, chickpeas, artichoke or pistachio, which might be added to the list; a cool and humid temperament is associated with their reduction, as in the case of lettuce. But this correspondence is not absolutely systematic, as is apparent from cress, another food to be added, which is both hot and bad for sex. Galli has written: 'If it is true that, generally, Venus shows a predilection for nourishing and hot foods, we must abstain from hasty conclusions. Exceptions are not lacking: some cold foods are considered to be extremely aphrodisiac and some which are hot do not affect sexuality or are harmful to it'. And the author gives the example of wine, which is hot and whose effects on sex 'were said to be very different', depending on the individual [64]. She also stresses the fact that, in the 'chain of being', 'the upper part of the latter was associated with the pole of the *hot*, but also with the *cooked* and with *culture*', to use classical terms. 'On the contrary, the lower part was associated with the *cold*, the *raw* and with *nature*' [65]. And that is why, Galli goes on, Grieco situates 'butcher's meat' under the heading of game and poultry and above plants.

The quality of the 'juice' may also induce different effects, if we consider our garden promenade. The juice is ordinarily 'good' in sexual activity, but chickpeas have a rather 'bad' juice with hot humour. The contradiction also extends, sometimes, to therapy, as in the *Libro della cocina*, which dates from the latter half of the fourteenth century. Among the recipes to be served to the sick or convalescent, we read: 'Get dried or fresh chickpeas and set them to cook in oil, salt pepper, saffron and a little rue. Grind them up in a mortar and eat them' [66].

The nature of the blood produced by the foods is also variable, ranging from a better and increased production (rocket), to one which is 'loose' (pistachio) or even 'bad' - and thick - (lentils). In general, as is also understandable, a hot vegetable stimulates the emission of semen. But the relationships between all these elements and digestion are difficult to establish, as Dioscorides and Galen often differ or are not explicit.

Other kinds of food should also have been considered. Albala mentions the supposed effects traditionally attributed to the nature, form or texture of some of them. Oysters are associated with the female genital organ and, hence, with sexual activity. Discussing fish which are not easily digested, and which, for this reason, must be accommodated with 'hot sauce', Calano evokes those which are *lubrici* 'such as eels, congers and lampreys' [67]. This qualification is shared by contemporaries that Calano mentions on other pages. But the word means 'sliding' before coming to mean 'lustful' via 'slippery'. The Venetian Francesco Massari (14..-15..) refers to Pliny in his *Castigationes et annotationes* on the ninth book

of the *Natural History* (1537) when he treats with the eels and congers which are 'long and *lubrici*' [68]. But Pliny's chapter 50 of book XXXII deals with 'aphrodisiacs' without mentioning the eel [69]. Giovio does not attribute such a quality to the fish in the articles 'De anguilla' and 'De congro' of his *On the Fishes of Rome* (1528), as he does with the octopus, the cuttlefish or the calamari [70]. Thus, the French translation, in the *Traicté*, which uses 'lubriques', may induce a misunderstanding on the part of the modern reader.

Curious and unusual is a case related by Thomas Moffett in his *Health's Improvement* of 1655. David Gentilcore reminds us that the latter warned about chickens, 'then a rare luxury', for 'stirring up lust' [71]. The duke of Brunswick died for having eaten them too much.

More appropriate, in a complementary overview, would have been references to truffles or onions. It has been said that ancient medicine and popular tradition attributed to truffles 'an extraordinary nutritional capacity' from which developed, especially in Italian literature, a well-known quality mentioned, for example, by Michele Savonarola (1385-1468): 'the power of activating erotic desire, recommended to old people in their relationships with young and pretty ones' [72]. But Galen, in *On the Powers of Foods*, only writes that 'the nutrition they distribute to the body holds no particular power' and that 'they have no pronounced quality' [73]. This does not prevent Bartolomeo Sacci, or Platina (1421-1481), in his treatise *On Honest Pleasure and Good Health*, from availing himself of Galen to repeat that the truffle is 'un eccitante della lussuria'. It will be the task of Laurent Joubert (1529-1583) to contest this quality in his denunciation of 'popular errors', where he wrote that the truffle is 'very far from producing much semen or from exciting to the venereal act' [74].

The same capacity was broadly attributed to onions during the Italian Renaissance, as Valérie Boudier observes [75]. The latter, who studied the relationship between food and the fine arts during this period, first mentions Pisanelli's previously-quoted *Treatise*, where onions are 'connected with sex' [76]. Boudier then points to one of the paintings by Vincenzo Campi which represents a *Fruit Seller* (1581, New York, private collection) where 'a male person makes faces with a finger of the right hand in the ear while he has a bunch of onions in the other hand'. But a work by Pieter Aertsen (Amsterdam, 1508-1575), who specialized in paintings of food, is also very suggestive. Entitled *Christ and the Woman taken in Adultery*, it represents in the foreground a woman who is supposed to be seduced by a man showing an aphrodisiac string of onions - with cucumbers in a basket and parsnips on the ground [77]. Many observations could be advanced about these and other foods in the painting.

The widespread acceptance in this period of the connection between diet and sexual activity or performance is illustrated in many paintings and other works of art of the

time, especially those which were executed by Continental artists. Below are a few examples of the ways in which artists

depicted it, either directly or by implication.



Pieter Aertsen (Amsterdam, 1508-1575): *Christ and the Adulteress* (1557-1558).
Stockholm: Nationalmuseum. - Public domain.



Joachim Beuckelaer (Antwerpen, 1530-1574): *The Four Elements: Earth* (1570).

London: National Gallery. - Public domain.



Joachim Beuckelaer : *Woman Selling Vegetables*. Antwerp: Rockox House. - Public domain.



Joachim Beuckelaer : *Mercato di campagna* (1566). Roma: Museo di Capodimonte, Galleria Farnese. - Public domain.

References

1. Rachel Laudan, 'A kind of chemistry: the origins of modern French food', *Petits Propos Culinaires* 62 (1999), 8-22; Rachel Laudan, 'Birth of the modern diet', *Scientific American* 238 (2000): 62-67; *Food. A Culinary History from Antiquity to the Present*, ed. Jean-Louis Flandrin and Massimo Montanari (Columbia Univ. Press, 2013); *Banchetti letterari*, ed. Gian Mario Anselmi and Gino Ruozi (Rome: Carocci, 2017); Deborah L. Krohn, *Food and Knowledge in Renaissance Italy. Bartolomeo Scappi's Paper Kitchens* (London-New York: Routledge, 2018); Ken Albala, *Eating Right in the Renaissance* (Univ. of California Press, 2002), 34, 254-5; David Gentilcore, *Food and Health in Early Modern Europe. Diet, Medicine and Society, 1450-1800* (London: Bloomsbury, 2016), 207, n. 51. We have received comments, material and encouragement from V. Boudier, S. Colangelo, L. Giannetti, R. Laudan, J. Murray, H. Newton, M. Nicoud, and S. Salatowsky.
2. 'Calano (Prosper)', in *Dictionnaire des sciences médicales. Biographie médicale* (Paris: Panckoucke, 1821), III, 118; Ugo Rozzo, 'Il medico Prospero Calani e le su amitizie ereticali', *Bolletino della Societa di studi valdesi* 148 (1980): 57-84.
3. 'The whole field of preventive medicine', Gentilcore, *Food and Health*, 181 writes, 'underwent something of a revival during the Renaissance, with Galen as the key ancient authority and with a focus on foods and their nature'.
4. See the list of these editions in Andrew Pettegree, Malcolm Walsby and Alexander Wilkinson, *French Vernacular Books. Books Published in the French Language before 1601* (Leiden: Brill, 2007), I, 240.
5. On the respective nutritious qualities of foods, blood, see Hannah Newton, *Misery to Mirth. Recovery from Illness in Early Modern England* (Oxford Univ. Press, 2018), 38, 45, 53-7, 81-2, etc.
6. Paulus Aegineta, *Totius rei medicae libri VII* (Basel: Per Ioannes Hervagios, 1566), I, 35, 9.
7. On love, friendship, health and illness in early modern times, see Newton, *Misery to Mirth*, 12-4, 18-9, 28-9, 106-14, etc.; in 'popular literature': 169, 172-8, etc. On the relationships between sex and poultry in Renaissance, see Allen J. Grieco, 'From roosters to cocks: Italian Renaissance fowl and sexuality', in *Erotic Cultures of Renaissance Italy*, ed. Sara F. Matthews-Grieco (London and New York: Routledge, 2016), 89-140.
8. Massimo Montanari, 'Introduction. Food systems and models of civilization', in *Food. A Culinary History*, 69-78; Ewald Kislinger, 'Christians of the East. Rules and realities of the Byzantine diet', in *Food. A Culinary History*, 16, 194-206; Terence Scully, 'A cook's therapeutic use of garden herbs', in *Health and Healing from the Medieval Garden*, ed. Peter Dendle and Alain Touwaide (Woodbridge: The Boydell Press, 2015), 60-71, where he provides a useful diagram of the qualities of various foods and synthetic explanations of the system of 'degrees' of vegetables, herbs, spices, etc.
9. There is a small difference of translation in Paulus Aegineta, *The Medical Works*, ed. Francis Adams (London: Welsh et al., 1834), I, 20.
10. Oribasius, *Œuvres*, ed. Ulco Cats Bussemaker and Charles Daremberg (Paris: A l'Imprimerie nationale, 1851), VI, 38, 549 sq. On Oribasius, see Vivian Nutton, *Ancient Medicine. Second Edition* (London and New York: Routledge, 2013), 126.
11. On the relationship between flatulence and legumes, 'one of the most frequently eaten foods during the early modern and modern periods', 'considered a gross (heavy and coarse) foodstuff', only good for the stomachs of labourers, see Gentilcore, *Food and Health*, 64.
12. Oribasius, *Œuvres*, 3, 544-6: 'Du coït (Tiré de Rufus)'. On Rufus, see Nutton, *Ancient Medicine*, 214-6.
13. *Trattato della natura de' cibi, et del bere* (Genoa: Appresso Gieronimo Bartoli, 1587); Marika Galli, 'Conceptions diététiques anciennes et appétits charnels : effets de la nourriture sur la sphère sexuelle', *Seizième siècle* 7 (2011): 99-110. On Pisanelli, see Gentilcore, *Food and Health*, 12-3, 55-6, 65-6, etc.
14. For example, the Pythagorean legend according which the philosopher had forbidden his disciples to eat beans is opportunely discussed by Stefano Colangelo, 'Legumi', in *Banchetti letterari*, 204-9.
15. Jean Céard, 'La diététique dans la médecine de la Renaissance', in *Pratiques et discours alimentaires à la Renaissance*, dir. Jean-Claude Margolin and Robert Sauzet (Paris: Maisonneuve et Larose, 1982), 36; Innocenzo Mazzini, 'Diet and medicine in the ancient world', in *Food. A Culinary History*, 141-52.
16. For a list of the 'warning tables' that 'Renaissance physicians put on numerous vegetables, regardless of actual habits', see Gentilcore's chapter 6 on 'Vegetable food: the vegetarian options', 115 sq. We only mention below some of them. Gentilcore especially collects them in Baldassare Pisanelli, *Trattato della natura de' cibi et del bere* (Venice: Appresso Gio. Alberti, 1636).
17. Gentilcore, *Food and Health*, 115
18. Calano, *Paraphrasis*, 151.
19. Leonhart Fuchs, *L'histoire des plantes* (Lyon: Chez Thibault Payan, 1558), 186; Jacques Daléchamps, *Histoire générale des plantes* (Lyon: Chez les heritiers Guillaume Roville, 1615), 554 ; Theophrastus Eresius, *Historia plantarum libri decem* (Amsterdam: Apud Henricum Laurentium, 1644), 748.
20. See also Guglielmus Insulanus Menapius, *De ratione victus salubris* (Cologne: Apud Iohannem Schoenstenium, 1540), xxx v^o-xxxii r^o.
21. Lucius Junius Moderatus Columella, *Of Husbandry. In Twelve Books: and his Book concerning Trees* (London: Printed for A. Millar, 1745), 424-5. For a French translation, see *Les douze livres de Lucius Junius*

- Moderatus Columella des choses rustiques, traduites de latin en français, par feu maistre Claude Cotereau chanoine de Paris (Paris: Par Jaques Kerver, 1556), 427.
22. Marcus Valerius Martialis, *Épigrammes*, ed. Étienne-Thomas Simon (Paris: Guitel, 1819), I, book 3, 75, 337-9. Voltaire quote Martial's mockery in the Questions sur l'Encyclopédie. Cinquième partie (1771), 195: 'Enchantement'; if the satyrion, a plant of the genre of the orchid, 'was considered by the Greeks and the Romans as the most powerful love potion', 'we must add the wild rocket, the eruca of the Latins'.
 23. Decimus Junius Juvenalis, *Satires*, ed. Jean Dusaulx (Paris: Chez M. Lambet et F. J. Baudouin, 1732), 9, v. 134, 340-3, 351: 'Protectors and obscene protégés'; Juvenalis et Persii satirae, ed. George Long and Arthur John MacLeane (London: Whittaker and Co., 1857), 221.
 24. Pliny the Elder, *Natural History with an English Translation in Ten Volumes. Volume VI. Libri XX-XXIII*, ed. W. H. S. Jones (Harvard Univ. Press, 1961), XIX, xliv, 154-5, 521; Pline l'Ancien, *Histoire naturelle*, ed. Stéphane Schmitt (Paris: Gallimard, 2013), 949.
 25. Pliny the Elder, *Natural History*, XXII, lxx, 142-145, 395-6; Pline l'Ancien, *Histoire naturelle*, 943.
 26. Galen, *On the Powers of Foods*, in Mark Grant, *Galen on Food and Diet* (London and New York: Routledge, 2000), II, 144: 'Rocket'; Galien, *Sur les facultés des aliments*, ed. John Wilkins (Paris: Les Belles Lettres, 2013), II, 52, 159.
 27. Dioscorides, 271-2. On the relationship between 'terrible and amazing dreams' and 'the venerous virulency of the bad humours', which was 'enraged by the warm bed' during illness, see Newton, *Misery to Mirth*, 103.
 28. Symeon Seth, *Volumen de alimentorum facultatibus juxta ordinem literarum digestum* (Paris: Mathurin Dupuis, 1658), 66-7; Kislinger, 'Christians', 202.
 29. Scully, 'A cook's therapeutic use', 65. He refers to Nancy G. Siraisi, *Medieval and Early Renaissance Medicines. An Introduction to Knowledge and Practice* (Univ. of Chicago Press, 1990), 121.
 30. Dioscorides, *Les six livres de la matière médicinale*, translatez de latin en français (Lyon: Chez Thibault Payan, 1559), 201-2
 31. Pietro Andrea Mattioli or Matthioli, *Commentarii in sex libros Pedacii Dioscoridis Anazarbei de Medica materia, iam denuo ab ipso autore recogniti, et locis plus mille aucti* (Venice: Ex officina Valgrisiana, 1565), 519-23; *Commentaires sur les six livres de Ped. Dioscoride Anazarbeen De la matiere medecinale* (Lyon: Par Gullaume Roville, 1572). See Arturo Castiglioni, *Storia della medicina. Primo volume. Dalle origini alla fine del Seicento. Nuova edizione ampliata e aggiornata* (Verona: Mondadori, 1948), 421. Mattioli (1501-1577) was considered as 'one of the most famous and revered physicians of his time, surrounded by a universal regard for his deep culture and great goodness'. His commentaries may be regarded 'as the encyclopaedia of pharmacology of the Rinascimento, a huge treasure of knowledge and a precious mine for those who want to study the history of medicine and therapy' - even if he is sometimes a little garrulous.
 32. Calano, *Paraphrasis*, 161.
 33. Calano, *Traicté*, 36 r^o-v^o.
 34. Mireille Corbier, 'The broad bean and the moray. Social hierarchies and food in Rome', in *Food A Culinary History*, 11, 128-40; Marie-Claire Amouretti, 'Urban and rural diets in Greece', in *Food. A Culinary History*, 6, 79-89. In Athens, 'where the cost of living was relatively low', beggars could not afford 'bread of mallow' but only 'scrawny turnip leaves' according Aristophanes: 'not even the turnip - just the leaves!' On peas and the difference between the Old World and the New World beans, see Gentilcore, *Food and Health*, 64-5, 138. 'The beans grown by Europeans before the sixteenth century were the broad bean (fava) and the black-eyed bean (or black-eyed pea). Prior to the Columbian exchange, the black-eyed bean was called Phaseolus in Latin, and this, rather confusingly, was the name applied to all the New World species of bean when they arrived in Europe'.
 35. Massimo Montanary, 'Production structures and food systems in the early middle ages', in *Food. A Culinary History*, 14, 168-77.
 36. Antoni Riera-Melis, 'Society, food, and feudalism', in *Food. A Culinary History*, 19, 251-67. See also Bernard Rosenberger, 'Arab cuisine and its contribution to European culture', in *Food. A Culinary History*, 17, 207-23 on Spain in the twelfth and thirteenth centuries: 'Of the roots, turnip is mentioned most often'. Nuñez de Oria, rooted in a tradition 'more Arabic than Galenic', 'writes favourably of the Spanish love for mixed salads' (*Gentilcore, Food and Health*, 85).
 37. *The Medical Works of Paulus Aeginata*, ed. Francis Adams (London: Welsh at al., 1834), I, 98; Adam Dickson, *The Husbandry of the Ancients* (Edinburgh/London: Printed for J. Dickson, and W. Creech / G. Robinson and T. Cadel, 1788); Kurth Sprengel, *Historia rei herbariae* (Amsterdam: Sumtibus Tabernae Librariae et Artium, 1808). Louis Lémery, *Traité des aliments* (Paris: Chez Pierre Witte, 1705), 175 notes that 'the turnip looks so much like the one which bears the name rave that gardeners and plowmen only distinguish these two plants by some appearance and by the form of their roots'.
 38. Calano, *Paraphrasis*, 154; *Traicté*, 40.
 39. Dioscorides, *Les six livres*, 181-2; Galen, *Powers*, II, 148: 'You can call this plant turnip or kohlrabi'; Galien, *Facultés*, II, 167-8: 'Que vous souhaitez appeler cette plante gongulis (la rave) ou boucias', etc.
 40. Seth, *Volumen*, 20-21. On the link between diet and reproductive function, see Laura Prosperi, 'Le pouvoir de la nourriture sur la reproduction humaine: discours diététique et différences de genre d'après l'ouvrage de Giovanni Marinello (Italie-France: XVIe et XVIIe

- siècles)', in *Un aliment sain dans un corps sain. Perspectives historiques*, ed. Frédérique Audouin-Rouzeau and Françoise Sabban (Tours: Presses universitaires François-Rabelais, 2007), 291-307.
41. Calano, *Paraphrasis*, 136; *Traicté*, 25 v°.
 42. Johannes Crato von Krafftheim, *Consiliorum et epistolarum medicinalium, liber septimus* (Hanover: Typis Wecheliani, 1611), VII, 147.
 43. Galli, 'Conceptions', 104. On leeks, chestnuts and flatulence produced by legumes, see Gentilcore, *Food and Health*, 63-4.
 44. Albala, *Eating Right*, 148; Gentilcore, *Food and Health*, 65.
 45. Calano, *Traicté*, 18 v°-19 r°. The triple process of digestion was supposed to be due to internal heat, so that, in the eighteenth century, the *Encyclopédie* wrote that stomach was conceived as 'a cooking pot' subjected to fire supplied by the heart, liver, spleen, etc. On cooking, its 'imagery' and diet, see Gentilcore, *Food and Health*, 105-6; Newton, *Misery to Mirth*, 47, 79-82.
 46. 46 Newton, *Misery to Mirth*, 44-54; Michael Stolberg, *Uroscopy in Early Modern Europe*, transl. Logan Kennedy and Leonhard Unglaub (Burlington: Ashgate, 2015).
 47. Nicolas-Abraham de La Framboisière, *Œuvres* (Paris : Veuve Marc Orry, 1613), I, 52-3.
 48. Calano, *Paraphrasis*, 135. Calano, *Traicté*, 25 r°-v°.
 49. Theophrastus, *Historia*, 924.
 50. Galen, *Powers*, I, 96-7 ; Galien, *Facultés*, 61-4.
 51. Oribasius, *Œuvres*, I, 17, 31-3, II, 5, 76, 33, 252.
 52. Oribasius, *Œuvres*, IV, 262.
 53. Hesiod, *Homeric Hymns - Epic Cycle - Homeric*, ed. Evelyn White (London: Heinemann, 1914), v. 582. Calano, *Paraphrasis*, 153; *Traicté*, 39 v°. Gentilcore, *Food and Health*, 117: 'most vegetables had to be eaten at a suitable time of the year', for 'a question of balance'. 'Heating vegetables, like capers, cardoons, artichokes, carrots and radishes were best eaten in cold season, whereas cooling vegetables, like lettuce, endive and squash were best eaten when it was hot'.
 54. Gentilcore, *Food and Health*, 122-3.
 55. On the mythical constitution of the vegetable as a gift of Providence, see John Beckmann, *A History of Inventions, Discoveries and Origins* (London: Bohn, 1846), 212-221.
 56. Galen, *Powers*, II, 143, 'Thorny plants'; Galien, *Facultés*, 156-157.
 57. Columella, *Des choses rustiques*, 427.
 58. Oribasius, *Œuvres*, II, 11, 79-80, 227; Paulus Aegineta, *Totius rei medicae*, I, 74, 10; Seth, *Volumen*, 49-50.
 59. Expiración García Sánchez, 'Utility and aesthetics in the gardens of al-Andalus: species with multiple uses', in *Health and Healing*, 205-27.
 60. Jean-Louis Flandrin, 'Introduction. The early modern period', in *Food. A Culinary History*, 349-73; 'Dietary choices and culinary technique, 1500-1800', in *Food. A Culinary History*, 3, 403-17.
 61. Gentilcore, *Food and Health*, 65, 73.
 62. Lémery, *Traicté*, 121; *A Treatise of All Sorts of Foods, both Animal and Vegetable: also of Drinkables*, ed. D. Hay (London: Printed for T. Osborne, 1745), 101-2.
 63. Giovanna Ferrari, *L'esperienza del passato. Alessandro Benedetti filologo e medico umanista* (Firenze: Olschki, 1996), 85, 258, 286.
 64. Galli, 'Conceptions', 103. 'If soft wine', according to Pisanelli, 'favours coitus because it generates much semen, white wine and old wine are harmful to sexual performances as they dry the semen', etc. Wine was also forbidden to women, as it paves the way for all the vices. On this 'fallibility' of women, which 'legitimized the interventions of the practitioner, and in so doing provided opportunities for gender construction', see Newton, *Misery to Mirth*, 63: 'the doctor could see himself as a gallant hero who rescued the swooning Nature, or as a wise patriarch who restrained her outrageous acts'.
 65. Galli, 'Conceptions', 107.
 66. Scully, 'A cook's therapeutic use of garden herbs', 68-9.
 67. Calano, *Paraphrasis*, 131; Calano, *Traicté*, 21 v°. Jean-Louis Flandrin, 'Seasoning, cooking, and dietetics in the late Middle Ages', in *Food. A Culinary History*, 323: 'Hot sauce included the same spices, but the dominant ingredient was cloves, to which long pepper was sometimes added. The solvent was vinegar uncut by wine or cider; burnt bread, hotter than browned bread, was used as a binder. It will therefore come as no surprise that this very stimulating sauce was served with venison and boar, which were particularly hard to digest, as well as with 'viscous' fish such as the lamprey and large eels', etc.
 68. Francesco Massari, *In nonum Plinii de naturali historia librum. Castigationes et annotationes* (Basel: Froben, 1537), 37.
 69. Pliny the Elder, *Natural History*, XXXII, 1, 139, 549; Pline l'Ancien, *Histoire naturelle*, 1501.
 70. Paolo Giovio, *De romanis piscibus libellus* (Antwerp: Per Ioannem Grapheum, 1528), chapters XXX, XXXIII, XXXVIII. See also Oppian, *Alieuticon, sive de piscibus libri quinque* (Strasburg : Iacobus Cammerlander, 1534).
 71. Gentilcore, *Food and Health*, 55.
 72. Loredana Chines, 'Tartufi e funghi', in *Banchetti letterari*, 338-45. On the difference between young and old men and women, see Newton, *Misery to Mirth*, 46, 53, 72.
 73. Galen, *Powers*, II, 151, 'Truffles'; Galien, *Facultés*, 173-4.
 74. Quoted by Galli, 'Conceptions', 102. For Albala, *Eating Right*, 150, this capacity is 'seemingly due the truffle rarity'.
 75. Valérie Boudier, *La cuisine du peintre. Scène de genre et nourriture au Cinquecento* (Rennes/Tours: Presses univ. de Rennes/ Presses univ. François-Rabelais, 2010), 150-51. Boudier refers to Allen J. Grieco, *Classes sociales, nourriture et imaginaire alimentaire en Italie (XIVe-XVe siècles)* (Paris: EHESS, 1987), thesis, 147 and 215 who stressed the fact that the onion was considered 'as a

symbol of the simple, if not poor, meal'. See also Allen J. Grieco, 'Food and social classes in late medieval and Renaissance Italy', in *Food*, 24, 302-12; Albala, *Eating right*, 82; Newton, *Misery to Mirth*, 108. On food as metaphor for sexual activities in Italian Renaissance, see Laura Giannetti, 'The sausage wars: or how the sausage and carne battled for gastronomic and social prestige in

Renaissance literature and culture', in *Sex, Gender and Sexuality in Renaissance Italy*, ed. Jacqueline Murray and Nicholas Terpstra (London: Routledge, 2019), 9.

76. Pisanelli, *Trattato*, 45. On Pisanelli, see Albala, *Eating Right*, 38-9; Galli, 'Conceptions', 102 sq.
77. We are grateful to Valérie Boudier for information about the vegetables.

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