Continuity in Culinary Aesthetics in the Western Mediterranean: Roman Garum and Liquamen in the Light of the Local Survival of Fermented Fish Seasonings in Japan and the Western Mediterranean

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In considering the relationship between the cuisine of Italy in ancient Roman times and that of modern Italy, it is commonplace to note a certain degree of continuity, particularly with regard to the ‘classical triad’ of the Mediterranean kitchen – bread, wine and oil – for these staple items have remained throughout history central elements in the diets of the region's population. But otherwise there exists a general sense, shared by many food writers, that the cuisine of classical Rome was in an essential way very different from that of modern Italy.

One striking difference is the absence in ancient Roman cookery of a number of foods that feature prominently in modern Italian cookery, including most famously the tomato, as well as other imports to the Mediterranean from the New World in the early modern period, such as beans, zucchini, peppers, etc., or introduced to Italy from the east in the Middle Ages by the Arabs, such as eggplants and spinach, to name but two. Pasta, the single most emblematic element of modern Italian cuisine, was, at least according to most food historians, also unknown in Italy in classical times, having allegedly been developed elsewhere and introduced at some later date.

No less striking than the absence of specific foods is the seemingly very different aesthetic of modern Italian cookery from that in the collection traditionally attributed to Apicius, the most extensive source we have on ancient Roman cookery. Whereas the primary culinary aesthetic of modern Italy can most reasonably be characterized as one of simplicity, with most dishes exhibiting straightforward treatments of one or a few featured ingredients, and with the use of spices and herbs generally highly restrained, the cuisine reflected in the Apicius collection exults in complexity, with many of the recipes including combinations of numerous main ingredients and almost all being finished with complex seasoning combinations or sauces, using multiple spices and herbs and additional liquid flavouring-agents. Of the last mentioned, several are to this day staple ingredients in the cookery of Italy, namely, olive oil, wine and vinegar, but a further one, which along with olive oil is the most frequently used in Apicius, is the famous fermented fish sauce known variously as liquamen or garum, an ingredient which is virtually unknown in modern Italian cuisine.
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The parallel has often been drawn between this use of fermented fish sauces and pastes in the ancient Mediterranean world and the use of unquestionably similar sauces and pastes in modern times throughout south-east Asia. Far less known is the fact that, while widespread use of fermented fish products (FFPs) in Europe diminished greatly in the early Middle Ages, they have continued to be produced and consumed to limited degrees in localities around the western Mediterranean down to the present time. Also little known is the fact that the use of fermented fish sauces and pastes has undergone significant reduction over time in parts of east Asia, including Japan, where FFPs have been largely supplanted as seasoning agents by fermented soybean and wheat products. Yet, in some regions in Japan, as locally in the western Mediterranean, fish-based seasonings have managed to survive.

Regarding culinary continuity across the past two millennia in Italy, the history of the use of FFPs in Asia offers us a possible typological parallel which may shed light on the historical development of the cuisines of the Mediterranean and in particular on the apparent central aesthetic change that the almost complete disappearance of liquamen garum might represent. From this perspective, I consider an important question in the history of the cuisines of the Mediterranean: why did such a fundamental part of ancient Mediterranean cuisines come to be eliminated so thoroughly from the culinary culture of all but a few localities?

I contend that the collapse of large-scale industrial production and distribution of fish sauces in the late stages of the Roman Empire was, in fact, not associated with any significant change in the typology of the cuisine in much of the western Mediterranean region. Specifically, while extensive use of liquid fermented fish seasonings was vastly reduced, other similar glutamate-based – that is, umami – seasonings came to be used more extensively in the popular cuisines of the region, in a very direct sense fulfilling the exact same functional rôle of less-widely available liquamen, etc. Put another way, while there was change in the surface realization of the culinary grammar, the deep-structure remained the same across the historians’ divide of classical antiquity from the medieval period.

Indeed, pace those who claim there is little similarity between the cooking of classical antiquity and that of modern Italy, it is this writer’s contention that at the level of the deep-structure of the cuisine, traditional popular cookery in places such as central and southern Italy, Liguria and Provence (France) changed very little over two thousand years and more.

**Historical perspectives on fermented fish products**

**FFPs in Asia**

A typological analysis of the wide variety of Asian FFPs has been offered by Ishige (1993, 14ff.). There is a first, basic distinction to be made between those fermented products in which the fish is fermented together with some non-fish element, typically boiled
or steamed rice; for such products in general, Ishige uses the Japanese term *narezushi.* The opposing family of products made with only seafood and salt as major constituents he divides again into two categories, namely, those used in liquid form, i.e. fish sauces, and those used in non-liquid form; this last group he further divides between *shiokara,* solid FFPs, and *shiokara* pastes, produced by various means from solid *shiokara.* But in a very real sense, the term *shiokara* is the basic fermented fish product, yielding fermented solid food products and also secondarily pastes; liquids drawn off from the fermented solids yield fish sauces (Ruddle & Ishige 2005, 1ff.).

To the north and east of the core area in south-east Asia, the range of FFPs in use today is limited. According to Ishige 1993 and Ruddle & Ishige 2005, the Koreans and Japanese produce and consume *shiokara* and *narezushi,* while in parts of eastern China, forms of *shiokara* are also known. Of paste products, these authors indicate only the use of shrimp paste in Korea and along the Chinese coast. With regard to fish sauce, outside of a large contiguous area in and around Indochina — southern Myanmar, Thailand, Laos, Cambodia, Vietnam, and southern coastal China (to Fujian province) — there appear on the map offered by Ruddle & Ishige (2005, 3) only outlying isolated areas: part of Java in Indonesia, a small area in western Borneo, Luzon in the Philippines, the Shandong Peninsula in China, and central Japan. In this last case, the extent of the Japanese enclave on the map is misleading in that in recent times Japanese production and use of fish sauces has been quite local and limited. To my knowledge, there are only three areas of small-scale production in Japan: on the Noto peninsula in Ishikawa prefecture, where *ishiri* is produced, in Akita prefecture, where *shottsuru* is produced, and in Kagawa prefecture, whence comes *ikanago-shoyu.*

From a nutritional and dietary standpoint, the value of FFPs is substantial. First and foremost, the process of fermentation allows for long-term preservation of otherwise very perishable foods. Nutritionally, FFPs eaten in substantial amounts can represent a major element of a people’s diet but even when eaten in more limited quantities, as a relish or as flavouring agents, they are sources of various proteins and vitamins that contribute to consumers’ health (Ruddle & Ishige 2005, 10).

From a culinary standpoint, one sees two basic rôles for FFPs: in the case of the *shiokara* products, they can be consumed as snacks, alongside drinks, or as side-dishes within the context of more or less complex meals. The fermented fish pastes and sauces have their main uses as key ingredients in cooked dishes, in compound sauces or simply as condiments to be added facultatively at table to served dishes. In short, fish sauces, added to a bowl of rice or noodles, make for a simple but nutritious, delicious and inexpensive meal: FFPs enhance bland foods with their inherently strong salty and umami flavours.

**FFPs in the West**

Space does not permit a detailed review here of FFPs in classical antiquity; see Curtis (1991) for discussion. However, judging from the attested recipes for *garum* and related
products from classical (and post-classical) sources, it is clear that the basic process for at least certain products was essentially identical to what is carried out in modern times in Asia, with regard to factors such as general ratios of fish to salt, kinds of containers used, method of layering fish and salt, preferred temperatures, use of sunlight and separation of liquids for sauces from residual solids for paste. There can be no doubt that the FFPs of the ancient Mediterranean and those of modern Asia were in essence the same bearers of salty and umami flavours.

As noted, in the recipes of Apicius, fish sauce – there referred to generally as ‘liquamen’ – is included with remarkable frequency, so much so that its use there resembles the use of salt in modern European cookbooks. A question then arises: to what degree do the recipes attributed to Apicius reflect popular or ordinary cookery of ancient Rome? Though it is true that some Apician recipes do not involve expensive ingredients and that they were likely consumed more or less broadly, it is also true that many of them call for the use of imported spices and include food items that, even when not per se exotic, were clearly relatively expensive, such as fresh meat and fish, and therefore not available to much of the Roman population. A plausible characterization of the social status of the Apician collection is that of Grocock & Grainger (2006, 23), who regard the text as one compiled over a considerable span of time: while many recipes surely reflect the high-status cuisine of the elite, others may well have been more widely enjoyed and perhaps reflect ‘urban and cosmopolitan’ culinary habits.

Archaeological evidence from Pompeii and Herculaneum confirms the basic truth of the logical conclusion to be drawn from Apicius, namely that the use of fish sauce in Roman cuisine was widespread and frequent, as noted by Curtis (1991, 174). Indeed, in order to satisfy the large demand for salt fish and fish sauce in the Roman world an impressive large-scale industry arose in those areas of the Mediterranean and nearby Atlantic coasts where there were good sources of salt and easy access to migrating schools of appropriate fish, most notably along the coasts of north Africa and Iberia to the west and east of the Straits of Gibraltar. As was the case with olive oil, fish sauces and salt fish were among the commodities that the Romans brought with them to their colonial outposts, however far they lay from the Mediterranean. The large-scale production of southern Iberia and north-western Africa was matched with equally impressive distribution networks, the operation of which can be traced through the archaeological record of the amphorae in which FFPs (and olive oil) were transported throughout the Roman Empire.

During the later imperial period in the West, archaeological evidence indicates a decline in the manufacture of FFPs after a period of peak activity spanning the first and second centuries AD (Curtis 1991, 178). The parallel can be drawn to what happened with olive oil during these centuries: with disruption of trade routes and loss of some markets, production contracted and the use of the Mediterranean products became increasingly limited to core areas near the points of production, where those products had a traditionally firm position in local life since long before the development of
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industrial production methods and long-distance export. While this decline of large-scale production traceable in the archaeological record is significant, the possibility exists that small-scale domestic production of FFPs and especially products made from small fish, e.g. anchovies, may have continued as before or even expanded, to fill the gap left by cheap industrial products.5

Historical trends in production and use of FFPs

From the early Middle Ages on, mention of fish sauce in the west of Europe becomes rare and when the first recipe collections finally appear in the course of the thirteenth or fourteenth centuries, it is conspicuously absent as an ingredient. How could such a prominent feature of the cuisine of a large part of western Europe so thoroughly disappear? It is in this regard that the parallel between Mediterranean and Asian uses of FFPs may be most useful.

In ancient China, fermented meat and fish products were common flavouring agents; the invention of fermented soybean products more than 3000 years ago, including both pastes and liquid sauces (soy sauce), initiated a gradual process by which the fermented meat and fish products were partially replaced by the vegetable-based products (Ruddle & Ishige 2005, 6). With the arrival of Buddhism and its preference for a strictly vegetarian diet, this process of replacement was likely accelerated and, when Buddhism spread to Japan c. AD 500, the preference of soy sauce to fish sauce perhaps arose there as well (Steinkraus 1996, 510; Hesselteine 1965, 175). While religious belief was a factor in spreading this trend, Ruddle and Ishige (2005, 5) point to economic and aesthetic factors as further reasons why soy products and especially soy sauce have expanded at the expense of FFPs.

From our own perspective, applying principles of dialectological analysis to the distributional patterns and established historical facts concerning FFPs across Asia today, it looks very much that a once large and contiguous area, extending from central Japan, Korea and the nearby Chinese coast in the north all the way down to Indochina and parts of Malaysia and Indonesia, has been partly divided through the spread of an innovation across most of the northern half of the zone: while shiokara has remained popular to various degrees in this northern area, fish sauce has been almost completely supplanted there by soy sauce. In the southern zone, despite the partial acceptance of soy sauce in local cuisines, fish sauces and pastes have maintained their traditional central rôles as flavouring agents. But where replacement has occurred, there has been only a change in the identity of the element, not in its function: fermented soybean products as condiments are to no less a degree than fermented fish condiments providers of salty and umami flavours, used first and foremost to enhance basic starchy and vegetable dishes. Indeed, Ruddle & Ishige (2005, 10) repeatedly emphasize the ‘strong correlation between consumption of fermented aquatic products and rice, with FFPs being added to vegetables eaten with rice.’ Fermented soy products have in places merely taken over some functions of the aquatic analogues.
The essential continuities of cuisine from ancient to modern Italy
With the Asian situation in mind, the apparent elimination of FFPs in the West demands explanation. It is our belief that the virtual disappearance of fish sauce in western Europe has been essentially misunderstood, with the item being confused with its function. In other words, we believe fish sauce and the essential flavours of FFPs were not eliminated from the cuisines of the western Mediterranean but, to a far more significant degree than generally thought, they have been maintained, in part directly through continued use of salted, fermented fish products and in part through increased use of other products which, like soy sauce in Asia, have replaced fish sauce as appropriate providers of salty and umami flavours, used first and foremost – like their Asian counterparts – to enhance basic starchy and vegetable dishes.

Post-classical FFPs in the western Mediterranean
Fish sauce and fish pastes are produced in a few areas around the European shores of the western Mediterranean to this day, albeit in small quantities on an artisanal and/or domestic scale. The most notable production of genuine fish sauce is in and around the town of Cetara in Campania, Italy, where several artisanal producers make fermented fish sauce from anchovies called *colatura di alici*, available now throughout the world as a gourmet item marketed as ‘garum’. Small-scale production of this kind of sauce, along with the residual paste, is known elsewhere in Campania, most notably in the Cilento peninsula. A better known fermented fish paste is the *pissalat* of the Provençal coast around Nice, also made from anchovies with additional flavourings. In neighbouring Liguria, a similar traditional product, *machetto*, is made from anchovies or sardines, though its production, like that of *pissalat*, has dropped off significantly in recent decades.

There are good reasons to assume that current small-scale production of fish sauce and pastes in Italy and southern France are relics of once more widespread artisanal and domestic practices in the past; clearly, within the past century or so, these products have been in decline but how widespread they were in preceding centuries is a question deserving investigation.

While fish sauce and fish paste are nowadays more local curiosities than broadly popular kitchen staples, there is a fermented fish product that is very much a staple of kitchens throughout the western Mediterranean region, namely, salt-cured ‘Mediterranean-style anchovies’: ‘Cured fillets or whole dressed fish are often packed or canned in oil... The curing process, which involves both salting and fermentation, takes at least six months...’ (Gall et al. 2000, 410). These fermented anchovies are produced on an industrial scale in countries around the Mediterranean and elsewhere but also in a smaller-scale, traditional manner in Spain, Italy and France. Perhaps best known is the product of Collioure in the Roussillon region of France, famed for the quality of the fish which are fermented for three months in barrels before packing (Dominé 2008, 359). Though the product itself is ‘shiokara’ and neither a paste nor a sauce, these
anchovies are used with great regularity as flavouring agents, being reduced to a paste through pounding or, in cooked preparations, heated and dissolved in olive oil in the base (soffritto) of innumerable sauces, stews and soups in the cuisines of the region.

**The culinary staples of central and southern Italy through time**

Even in the prosperous times of the early twenty-first century, the diet of central and southern Italy is far less oriented toward the consumption of meat and dairy products than the diets of northern Europe and North America; cereals, especially in the forms of pasta and bread, provide a relatively larger part of the nutritional needs and legumes, vegetables and fruits are more important than in the Teutonic and Anglo-Saxon worlds. If one goes back just a short way in time, the rôle of meat and dairy products and also of fresh fish was considerably less in Italy than today, particularly among the lower economic strata of society. Boiled cereal products and whole and mixed grain breads, along with those same legumes and vegetables, all augmented by small amounts of fats and animal proteins, constituted the bulk of the Italian population’s sustenance, while fresh meats and fish were consumed in significant quantities only among more affluent groups.⁶

It is striking that the dietary landscape of Italy in the early twentieth century corresponds closely to what the dietary landscape of the country most likely was in the first century. That is, one observes that at those two points in history, alongside a diet of the better-off sectors of society, as represented in the cookery of Apicius, in which there was an obvious appreciation of all kinds of fresh meats and a great love of fresh seafood as well, there was, judging from the evidence we have, a diet of the broader masses which was in essence vegetarian, with essentially the same cereal preparations, legumes and other vegetables, augmented by small amounts of fats and animal proteins.⁷ A contrast between diets of more and less well-off groups reflected in relatively greater and lesser amounts of fresh meats and fish consumed is surely, in and of itself, hardly surprising, but what is striking is the lack of recognition by many historians and food scholars of the tremendous degree of continuity that we see in the culinary tradition of the less well-off strata in Italy from classical times to recent modern times.

The widely perceived discontinuity of cuisine of Rome and Italy between classical antiquity and later periods, is the result of the confluence of several errant lines of thought. First, the nature of cuisine in classical Rome and Italy has been misconceived by many who overvalue the literary evidence and view it without proper appreciation of the social context whence it sprang. Even if we accept that the cuisine represented in Apicius was not enjoyed exclusively by the very richest Romans, it also is clearly not representative of how the broader population ate. In parallel fashion, the degree to which the various recipe collections of the Middle Ages and Renaissance from Italy reflect in any meaningful way the eating habits of the broader population has also been badly exaggerated – though the Arabizing use of spices, colourings and sweeteners surely was taken up to a significant degree among those who could afford the requisite ingredients
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and used on special occasions by the less well-off, there is no compelling reason to think these texts were anything but compilations of recipes for the conspicuous consumers of their times. It is therefore logical to assume that there has been essential continuity of the broader population’s diet from classical times to modern times, based in part on the traditional exploitation of local resources of staple food items, secondary foods and relatively inexpensive flavouring agents.

The centrality of umami in central and southern Italy
Cuisine, at least for the non-affluent, is to a considerable degree based on what is most affordable and historically that in turn naturally reflects especially locally available products. But there is more involved than just the practical; there are also aesthetic choices that cultures make regarding which flavours and flavour combinations are most pleasing. As environmental factors persist over time, a given cuisine’s choice of ingredients will tend to remain the same, but new crops and animals might be introduced from afar which thrive in that cuisine’s natural environment and, insofar as they become popular, they change the cuisine. But the most important question is how are new foods used in the recipient culture? To what degree do their use reflect the culinary practices of a foreign culture and to what degree are they adapted and fit into culinary rôles already present in the recipient culture?

As we have seen in the case of the spread of soy sauce in Asia, for various reasons it has replaced fish sauce in many places and this is a noteworthy change in, for example, the cuisine of Japan; it is, however, a relatively superficial change, for the manner of use and the basic flavour contribution it provides matches closely that of the now largely neglected fish sauce.

In the western Mediterranean generally and in central and southern Italy specifically, the decline of the fish sauce industry of imperial Roman times did not lead to any fundamental change in the cuisines of the region. Instead, alongside some continued local use of fish sauce, there was increased reliance on alternative means to fulfil the rôle formerly played by fish sauce. As noted above, salted, fermented anchovy was and is a product that, as used in western Mediterranean kitchens, closely resembles in function and flavour the old fish sauces, providing salty and umami flavours to vegetable and cereal preparations, especially as a dissolved element of the soffritto. Umami flavour, borne by glutamate, is found in especially high concentrations in fermented fish and soy products but it is also present in a number of other foods and, of particular relevance here, in foods which have a long history of use in the cuisines of the western Mediterranean (Kurihara 2009). These foods, like fish sauces and fermented anchovies, are broadly used in Italy as ingredients in various cooked dishes, as companatici (things eaten with bread) and as flavourings for boiled cereal dishes, including pasta. One important group is that of salt-cured (and in some cases fermented) pork products, such as pancetta, prosciutto, lardo and various local sausages. Another group is comprised of the aged hard cheeses that are an integral part of the flavouring of Italian cuisine; Parmesan cheese is
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one of the foods richest in glutamate but many other similarly used Italian hard cheeses, including ewes’ milk cheeses (pecorino), are also strong bearers of umami flavour, as well as having a significant salty flavour element (Di Cagno et al. 2003). Mushrooms and walnuts, two other flavouring agents that have long been popular among all levels of Italian society, deserve mention here too as strong bearers of umami flavour which fill the same rôle as the just-mentioned foods do in many dishes.

While all of the aforementioned umami-bearing ‘substitutes’ for fish sauce have been used in Italy for a very long time and were surely in use in much the way they are used today in classical times, there is one more recent import to the western Mediterranean and Italy that must be mentioned here. The tomato, introduced to Spain and thence quickly to Spanish-dominated southern Italy in the sixteenth century, is among vegetables one of the highest bearers of glutamate and thus of umami flavour. The concentrated umami element of the tomato in cooked sauces is further enhanced through the frequent addition of one or more of the other umami-bearing agents just mentioned. The remarkable profusion of uses of the tomato in the cookery of Italy and other Mediterranean countries, which began far earlier among the lower strata of society than food historians generally believe, makes perfect sense from the perspective of our argument (Buccini 2006, 134–7). As was the case with other American imports — maize, beans, peppers, zucchini, potatoes — the tomato was adapted to a well-established culinary rôle in the local cuisines, and while these products enriched tremendously those cuisines, they did not change them at the basic level of the culinary ‘grammar’.

Conclusion
In certain important respects, the traditional diets of Japan and central and southern Italy are strikingly similar: in both, the preponderance of nourishment has come from cereals, supplemented by considerable amounts of vegetables and small amounts of fats and proteins. In order to improve the aesthetic qualities of this simple diet, both cuisines have traditionally relied on the addition of small amounts of strongly flavoured substances bearing salty and umami flavours. A further parallel is that both cuisines formerly relied greatly on FFMs and especially fish sauces as habitual flavouring agents but, albeit for different reasons, now maintain the use of fish sauces only in a few relict areas. In both cuisines, the reduction in importance of fish sauce has not produced any culinary revolution but rather only an essentially superficial change of flavouring agents, a substitution of soy sauce for fish sauce in Japan and in Italy an increased reliance on other native foods — such as anchovies, pork products, cheese — and the more recently acquired tomato, all strong bearers of umami. From this perspective, we can see at the level of the culinary life of the non-élite strata of Italian society a remarkable degree of aesthetic continuity from classical times down to the present.
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Notes
1. Many thanks to: Amy Dahlstrom, Ernest Buccini, Erik Hill, and Ichiro Yuhara.
3. E.g., the studies by Ponsich & Tarradell 1965, Ponsich 1988. Note that FFPs were also produced in the eastern Mediterranean and Black Sea but we restrict ourselves here to the western Mediterranean.
4. But, whereas olive oil could only be produced where a Mediterranean climate prevailed, FFPs could be produced in northern Europe and the Romans established salting facilities there (e.g. north-western Gaul). For discussions of fish sauce and olive oil in Roman Britain, see Cool 2006, 58ff.
5. While there is ample textual evidence for production of FFPs in the eastern Mediterranean throughout ancient times, corresponding archaeological evidence is minimal, as in the central Mediterranean. Some production methods and environments are more propitious for leaving an archaeological record. Small-scale production, using small fish, baskets, wooden containers, would leave few archaeological traces.
6. See the chapters by Betri, Taddei, Ciampi and Teti in Capatti et al. 1998.
7. On social stratification of diet in classical Italy, see Garnsey 1999, 113ff., Grant 1999, 16ff.

References
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