

# Greek *támisos* and Provençal *toma*: Etymological Evidence for Ancient Celtic Cheesemaking

*Anthony F. Buccini*

On the basis of classical texts and archaeological evidence for early Celtic pastoral practices, Kindstedt – with no mention of linguistic evidence – concludes: ‘it was Celtic cheesemakers who were first (or among the first) to experiment with the making [of] large cheeses.’ Further:

It seems likely that the Celts brought their technologies for producing durable, long-lived cheese wherever they migrated across Europe, which may account for the extraordinary geographic range of Celtic cheeses that were exported to Rome, extending from Toulouse in far southern France to the Menapii region of Belgium and far northwest France, to the alpine regions of eastern France and the Massif Central, to Switzerland and Austria, to Dalmatia in the Balkan peninsula. (2012: 108, 109)

My research has led me independently to very similar conclusions, but central to my reasoning is the linguistic evidence presented below.

Specifically, I consider some words of considerable antiquity relating to dairy production which shed light on the early history of cheesemaking in Europe, words which have hitherto received remarkably little attention from linguists and food historians. One is Gallo-Romance *\*toma* ‘cheese’ (French *tomme*); another is Greek *τάμιος*, attested in Classical Greek with the meaning ‘rennet’. I demonstrate that these words, like other dairy-related words of the western Alps, are of Continental Celtic origin and point to the early development of rennet-based cheese production already in the second millennium BC.

## *Toma*: A Gaulish Word for ‘Cheese’ in the Western Alps

In the centuries preceding and following the Roman conquest of the Western Alps (i.e. from western Switzerland south to the Mediterranean in Provence and northwestern Italy), this region was one whence emanated important innovations in the processing of milk into formed, aged cheeses, as evidenced by descriptions in classical texts and later by the rise of the term *formaticum* for a technological innovation for pressing and shaping processed curds. After the spread of *formaticum* throughout Gallo-Romance territory, it spread secondarily into central and southern Italy, where reflexes of Latin

*caseus* 'cheese' survive but in more specialized uses alongside the intrusive *formaggio*.

In modern times, at the level of the standard languages, one finds throughout almost all western Europe reflexes of but two terms for 'cheese': *caseus* and *formaticum*. At the level of the dialects, however, one also finds in Romance territory a third term occurring throughout an area that corresponds largely to the Western Alpine region, namely *toma*.<sup>1</sup> This word appears with a range of specialized local senses from modest-sized, aged cheeses to fresh cheeses to curds produced by means of rennet (Wartburg 1928: v.13/2, 20-21) and, as with *caseus* in central and southern Italy, *toma* appears to have been ousted by reflexes of *formaticum* in its older role as generic word for 'cheese'.

It appears then that in the Latin/Romance of the Western Alps *toma* was quite plausibly a regional equivalent of *caseus* in the time before the rise of *formaticum*. Yet this word is attested neither in other Romance-speaking areas nor anywhere in the vast body of Latin writings, nor does it have any obvious etymological connexions within Latin. Given its restriction to a formerly Gaulish-speaking region and further to a region with a pre-Roman tradition of cheesemaking, I conclude that in all likelihood it is a Gaulicism which survived the linguistic switch from Gaulish to Latin/Romance.

This conclusion is supported by the occurrence of other dairy terms of likely or certain Gaulish origins which survived in Gallo-Romance varieties and especially those of the Western Alps. Indisputably of Gaulish origin are, for example, dialectal French *mègue* 'whey' (stFr. *petit lait*), from Celtic \**mezgo-*, cf. OIr. *medg*. Similarly, a well-known cheese of the Western Alps (Savoie), *reblochon*, has as its root a Gaulish element. Though the name of this cheese is surely not ancient, it points us to a verb formerly widespread in the northern part of the Western Alps which is ancient and Gaulish in origin: *bléchier* 'to milk' goes back to Gallo-Romance \**bligicare*, derived from Gaulish \**mlig-o-* (cf. OIr. *mligid*; Welsh *blish*, Ir. *bleacht* 'milk') (Maurice-Guilleux 1995). Similarly, French *clai* 'wattle, hurdle, etc.', attested in Medieval Latin as *clida* and with reflexes throughout Gallo-Romance territory in various specific applications, is a Gaulish loanword (Celtic \**klēta*), with direct cognates in Insular Celtic (e.g. Irish *cliath* 'wattle, hurdle'). Though we cannot date the beginning of its technical application in cheesemaking, where it means 'rack on which cheeses are dried' (Fr. *clai/clai* *à fromages*), this usage could well go back to pre-Roman times. Other such Gaulish survivals in Alpine Romance (and German) varieties have been adduced by Hubschmied (1936).

We conclude that Gallo-Romance *toma* 'cheese', which lacks dairy-related correlates in Greek or Latin and is thus unlikely to have been borrowed from those languages, has a dialectal distribution that suggests a Gaulish origin, a theory which is supported by the demonstrable presence of other dairy terms of Gaulish origin in Romance (and Germanic) dialects of the Western Alps.

### Greek τήμιος

Since classical times, when discussions of dairy production are first attested in Greek, the primary word for 'rennet' has been πύρρα (with variants πυετία, πύρα). In the *Geoponika*

18.19 (Dalby 2011: 331), a tenth-century Byzantine text based on much older sources, we are told that *πυρία*, especially from kids, was the most widely used coagulant for making cheese, and this clear statement accords with what we can glean directly from classical sources. This word indicated in particular the curdled milk (and accompanying mucus and gastric juices) taken from the stomach of a suckling animal, and this sense fits well with the likely etymology. Beekes (2009: 1259) sees *πυρία* as a straightforward derivative of *πυός* ‘beestings’, i.e. the rich milk produced by the mother immediately after giving birth, which makes sense both semantically and morphologically. Yet the deeper etymology of the root, as noted by both Beekes and Chantraine (1968: 956), most likely goes back to an IE root *\*pu(H)-* ‘to rot, decay’, represented in English *foul, filth* (Germanic), *putrid, pus* (from Latin), and reflected clearly in Greek *πύθομαι* ‘to putrify’, *πύον/πύος* ‘pus’. To my mind, the derivation of ‘beestings’ directly from a root denoting ‘pus, rot’ makes little sense, but if we consider how the curdled beestings and especially the mucus – the *πυρία* – from the stomach of a just-born kid looks, we can see a reasonable association with *pus*. I therefore suggest that *πυρία* was derived from *πύον* ‘pus, putrification’ and that *πυός* ‘beestings’ was backformed from *πυρία*, given that the curdled milk (used as rennet) was often enough curdled beestings.

There was another word in Classical Greek that meant ‘rennet’, namely, *τάμιος*, attested especially in medical texts, most notably of Theophrastus (born on Lesbos, fl. fourth century BC) and Nikander (born in Ionian Anatolia, fl. third century BC), where it seems to overlap in meaning with *πυρία* ‘rennet’ yet refers to something somehow distinct; in Hesychius (sixth century AD) it appears with a simple gloss of ‘*πυρία*’ (Schmidt 1867: v.4, 127).

Greek *τάμιος* is an odd word that has been treated only briefly in the etymological dictionaries (e.g. Chantraine 1968, Beekes 2009) with no clear solution to its origins having been proposed. The basic oddity of this word resides in that what appears to be suffixal material (*-is-*) does not look in a Greek context like the reflex of an inherited Indo-European suffix, a point duly noted by Chantraine and taken by Beekes to be indicative of the word originating in his non-Indo-European ‘Pre-Greek’ substrate language. Yet the root of *τάμιος* looks very much like it might derive from a widely attested and semantically appropriate Indo-European verbal root, namely *\*temh<sub>1</sub>-* ‘to cut, separate’, which was particularly productive in Greek. The apparent combination of an IE root with a non-IE suffix seems, however, impossibly backwards – one would far sooner expect a non-IE root fitted out with a native Greek suffix inherited from Indo-European. Another peculiar characteristic of *τάμιος* is the fact that it is a feminine *σ*-stem (2nd declension) noun, a relatively small and moribund category in Greek with regard to inherited Indo-European vocabulary which otherwise includes numerous loanwords (some of substratal origin, some Semitic) (Morpurgo Davies 1968: 19–20). A last noteworthy fact about *τάμιος* is that it was considered a Doricism, i.e. a word identified with the Doric dialect(s) of Greek; its marginal survival in Greek in the dialects of the Aspromonte (Calabria) and Tsakonia (Peloponnese) accords

with that claim. Considering these facts, we cannot deny the possibility that *τάμιος* may be a borrowing into Greek from Beekes's Pre-Greek substrate or some other unidentifiable non-IE ('Mediterranean?') language with which the Greeks were in contact: the suffix *-is-* seems to point strongly in that direction and its membership in the category of feminine *o*-stems, along with other loanwords, perhaps lends further support to that view.

Another possible explanation of *τάμιος*, one left unconsidered in the etymological dictionaries, is suggested, however, by the plausible relationship of this word's root with IE *\*temh<sub>1</sub>-*: perhaps *τάμιος* can be analyzed as a loanword from another branch of Indo-European. From this perspective, the membership in the class of feminine *o*-stems with other loanwords maintains its possible relevance and the seemingly non-IE suffix *-is-* might find a plausible explanation. In addition, the identification of the word as a Doricism may rise in significance: the Doric dialects of the Peloponnese and southern Greek islands are closely related to the Northwest Greek dialects and are generally believed to have spread southward from a northwestern homeland in the aftermath of the collapse of Mycenaean civilization (c. 1050 BC). Northwest Greek, centred in the mountainous region of Epirus by the Adriatic, was the neighbour to the south of the Indo-European Illyrian language and possibly of other such 'Palaeo-Balkan' Indo-European languages; unfortunately, these extinct languages, including Illyrian, are very poorly attested and understood. In this location, however, the common ancestor of the attested Northwest and Doric Greek dialects may, through trade or unknown population movements around the Ionian and Adriatic seas and their hinterlands, have been in direct or indirect contact with other Indo-European languages of Italy and the eastern Alps.

82

As we have seen, the Alps constituted an early centre of innovation in dairy production, but how early might cheesemaking have developed there? Could Greek *τάμιος* ultimately be of Alpine origin?

### French/Provençal *tamis*

To my knowledge, no one has hitherto seen a connexion between Greek *τάμιος* and a French word known to professional cooks the world over, namely, *tamis* 'sieve'. Before its modern global success, the word was largely limited in distribution to the Gallo-Romance dialects of France, northern Italy, and western Switzerland, with the earliest attestations in French and Provençal (both *tamis*) starting from the twelfth/thirteenth century (Wartburg 1928: v.13/1, 73ff.); the word is also attested in Medieval Latin as *tamisium*, perhaps before 1000 AD in the Lyon region (Whatmough 1970: 586). We note, however, that the word appears also to have been borrowed into West Germanic at a very early date, before the operation of primary umlaut of *ǣ* (c. sixth/eighth cent. AD), the High German Consonant shift (c. sixth/seventh cent. AD), and probably even well before the Anglo-Saxon conquest (fifth/sixth cent. AD): Eng. *temse* (OE *tames-* c.1050 AD), Dutch *teems*, Frisian *têms*, German (dial.) *Zims*, all meaning 'sieve'.

Two things stand out about the Romance and Germanic reflexes of this word:

1) there is generally great uniformity (allowing for local phonological peculiarities) of form; 2) there is also great uniformity in meaning as a kind of fine sieve. Already in the Middle Ages this kind of sieve had a close association with the sifting of flour, but this association need hardly be original and/or exclusive, as in parts of England it is also associated with beer-making and in France a *tamis* has also always been used to separate solids from liquid. Interesting in this regard is that in a large swathe of Germanic territory, extending through the western dialects of Dutch northward into Frisian and Low German areas, the *teems*, etc. is a traditional tool in cheese and butter making. I suggest that this usage may well be relictal and that the use of sieves bearing cognate names may have been the rule in dairy production in early Latin/Romance varieties of Gaul. It seems quite possible that the early borrowing of the word *caseus* into West Germanic (Eng. *cheese*, Dutch *kaas*, etc.) and spread of the knowledge of making aged cheese into Germanic territory was the very context in which an effective tool of cheesemaking, a specialized sieve, was also diffused northward.

We will return below to the historical details of the Gallo-Romance form *tamis*, etc. but, assuming the word is ultimately of Indo-European/Celtic origin, it seems most likely a derivative of the IE root *\*temh<sub>1</sub>-* 'to cut/separate', as mentioned above with regard to *τάμιος*. Though reflexes of this root are not directly attested in our limited Continental Celtic material, cognates are found in Insular Celtic, e.g. OIr *tamnaid* 'to cut', *taman/tamun* 'stump'. The primary sense of 'cut' seen here is reflected in many cognates in other IE branches though we see in some cases the secondary sense of 'separate'. Consider, for example, these Greek derivatives in all three ablaut grades: 1) e-grade: *τέμενος* 'domain, sanctuary'; 2) o-grade: *τόμος* 'section, piece', *τομός* 'cutting (adj.) sharp', *τομή* 'cutting, thing cut off'; 3) zero-grade: *τμήσις* 'division', Doric/Ionian *τάμνο* 'to cut' (analogically reshaped in Attic *τέμνο*).<sup>2</sup> Greek *τέμενος* 'land set off, separated (as domain or divine sanctuary)' clearly bears the secondary sense; a differently formed Latin derivative of IE *\*temh<sub>1</sub>-*, *templum* 'temple', shows a parallel semantic development. The sense of 'separate' also lies behind Latin (*con-*)*temno* 'despise' (cf. Eng. *contempt*) which presumably started as 'to separate (socially)/shun' and became 'to scorn/despise'.

Gallo-Romance *tamis*, an instrument by which things are separated, fits well here. Interestingly, a connexion of reflexes of IE *\*temh<sub>1</sub>-* with dairy production is perhaps found in Greek *γαλατόμν*, which appears to be a compound of *γάλα* 'milk' and *-τόμν*, perhaps a zero-grade derivation. Hesychius glosses this word as *λάχανον ἄγρον* 'wild herb', presumably indicating a plant used as vegetable rennet and called 'milk-separator'.

### An Etymology of *τάμιος/tamis*

The formal near-identity of and clear semantic relationship between Greek *τάμιος* and Gallo-Romance *tamis* are quite sufficient to justify an attempt to seek a common origin and, as noted above, the evidence inclines us to consider a Celtic source. Assuming that *τάμιος/tamis* is ultimately of Indo-European origin, the root involved must have been

\**temh<sub>1</sub>-* 'to cut/separate'. Taken at face value, the root vowel points to a zero-grade, \**tmh<sub>1</sub>-*, which by Celtic sound laws with a following vowel (-i-) would have indeed regularly yielded \**tam-*, as opposed to (e-grade) \**tem-* or (o-grade) \**tom-*.

As with any attempt to analyze *τάμιος* as an inherited IE form in Greek, the real problem is the suffix, as *-is-* did not exist as a simple derivational morpheme in Indo-European. That is not to say that a suffix of this form did not occur; rather, it did occur as the zero-grade of the ablauting suffix \**-yos-/yōs-/yes-/is-*, which is reflected in several IE branches, particularly in the formation of the comparative grade of adjectives. None of the comparative formations attested, however, align with the apparent formation behind *τάμιος/tamis*, for they all reflect a root in full-grade and the base forms (nom./acc.) have \**-yos-* or \**-yōs-*; of direct relevance here is that the regular comparative in Celtic had full-grade of the root and \**-yōs-*, as in OIr. *sen/siniu* 'old/older' (*sinu* < \**sen-yōs-*) (Jasanoff 1990: 171).

While a Celtic ancestor of *τάμιος/tamis* cannot have been an inherited comparative, it can have been, and perhaps was, a related kind of form, specifically, a forerunner of what is attested as the superlative in Indo-Iranian (Ved. *-iṣṭi(h)a*), Greek (*-ιστος*), and Germanic (Go. *-ists*, Eng. *-est*). It is widely agreed that Proto-Indo-European did not possess morphologically-marked categories of adjectival gradation and that the comparatives and superlatives attested in the core Indo-European branches arose only in the late PIE period and their development was completed in the subsequent period of early dialectal diversification (Cowgill 1970: 114-15). Also generally agreed is that these new adjectival categories grew out of what are referred to as 'elatives', derived adjectives expressing that the thing described had the quality of the base adjective to a great degree. For example, from an adjective PIE \**h<sub>1</sub>wér-u-s* (nom.)/*h<sub>1</sub>ur-éw-* (wk) 'broad', the elative could be derived with the \**-yos-/is-* suffix: \**h<sub>1</sub>wér-yos-* (str.)/*hur-is-* 'exceptionally broad' (Ringe 2006: 64; cf. Meillet 1964: 270). With differences of detail, the elative gave rise to the comparative formations attested in Indo-Iranian, Greek, Germanic, Balto-Slavic, Italic and Celtic (Rau 2014: 327-28).

Secondary to these Proto-Indo-European elatives was a further formation which ultimately gave rise to superlatives in Indo-Iranian, Greek, and Germanic, apparently derived by addition of the zero-grade of the elative suffix \**-is-* and a further individualizing suffix \**-tó-* (cf. Cowgill 1970: 124). Opinions differ as to the original ablaut grade of the root and place of accent in this formation. In the attested superlatives the evidence clearly points to accented full-grade root, but a number of scholars have argued that originally the root was in the zero-grade and the accent on \**-tó-*; Van Beek (2013: 86) calls this view 'communis opinio' (which he rejects) with multiple references. From this perspective, the accent and ablaut pattern of the attested superlatives were analogically reformed according to the pattern of the comparatives, leaving only a few marginal relic forms with the original shape (cf. Rau 2014: 329).

This formation in \**-is-tó-*, I believe, lies behind *τάμιος/tamis*, thus \**tmh<sub>1</sub>-is-tó-*, built either directly from the verbal root \**temh<sub>1</sub>-* or from an intermediary adjectival derivative

(cf. Gk. τομός ‘cutting, sharp’) but with the secondary sense of ‘separate/separating’. Nominalized, *\*tmh<sub>1</sub>-is-tó-* would have meant ‘that which separates exceedingly well’ and was perhaps thus coined to designate a form of animal rennet. Semantically parallel deverbal constructions are attested in Indo-Iranian: Vedic *hán-iṣṭha* ‘best at killing’, Avestan *nas-išta* ‘best at destroying’ (Rau 2014: 332).

The phonological development of such a suffix in Gaulish is clear: *-st-* yielded a sound which in Gaulish attestations was represented graphically in a variety of ways with unknown phonetic value, called by linguists *tau gallicum*, but in some inscriptions it was also rendered simply with «-ss-» or «-s-»: the development was then from *-st-* > *-SS-* (*tau gallicum*) > *-s(s)-* (Eska 1998). Thus, an early Celtic *\*tam-isto-* (< *\*tmh<sub>1</sub>-isto-*) would have yielded unproblematically a late Gaulish *\*tamisso-* and ultimately *\*tamiso-*, the form seemingly borrowed into Gallo-Romance.

A possible objection to my etymology is this: while superlatives in *\*-is-tó-* are attested in Indo-Iranian, Greek, and Germanic, they are not found in Italic and Celtic. These last two branches show superlatives built with a different complex suffix, namely *\*-is-ṛmmo-* Lat. *-issimus*, Proto-Celtic *\*-isamo-* (Cowgill 1970: 125, Jasanoff 1990: 171); indeed, this innovation is central evidence for an Italo-Celtic stage after the dissolution of late Proto-Indo-European. It is then generally assumed that *\*-is-to-* was a PIE formation that was eliminated in Italo-Celtic, of which traces could nonetheless theoretically have survived in those branches. That reflexes of *\*-is-to-* are not attested in Celtic is a further possible objection and, to be sure, unassailable reflexes are wanting, but this fact must be relativized: with our extremely limited knowledge of the Continental Celtic lexicon and the relative lateness of our robust attestations of the Insular Celtic languages (many centuries after the borrowing into Gallo-Romance posited here), it is quite possible that clear relict forms with *\*-is-to-* have simply not survived in the existing material. In this regard, a comparison with Italic, the other Indo-European branch which rejected *\*-is-tó-* for superlative formation, is relevant. There too reflexes of *\*-is-tó-* are exceedingly few, with but three recognized out of all of the attested Latin corpus, of which only one survived into Romance; two of these forms were archaisms related to religious practices (Watkins 1975) and the third, perhaps an old elative form, *iuxta* ‘very closely yoked’ (< *\*yugistā*, with root in zero-grade), which had been lexicalized as a new adjective and thus survived in morphological isolation (i.e. was not reformed as a superlative in *\*-is-ṛmmo-*) (cf. Weiss 2020: 380). For Continental Celtic, there are some attested Gaulish personal names that might reflect formations in *\*-is-tó-*, e.g. *Elvissa*, *Clarisso* (de Bernardo Stempel 1999: 423, De Goede 2014: 24-25). In my view, *τάμιος*/*tamis* are ultimately indirect reflections of a Gaulish archaism parallel to the Latin *iuxta*.

### More on the Origins of Gallo-Romance *tamis* and *toma*

As we have seen, Greek attestations of *τάμιος*, from the fourth century BC to the modern dialects, can all be glossed as ‘rennet’, whereas all the Gallo-Romance forms, *tamis* etc., mean ‘sieve’, and while the semantic and contextual connexions

between the two referents – each a means of separation and the two used sequentially in cheesemaking's crucial process of separating curds from whey quickly and thoroughly – are very close, one wonders how to account for the apparent shift of referent from 'rennet' to 'sieve' in Gallo-Romance, including the dialects of the Western Alps, the area where in my view the original Continental Celtic form *\*tam-isto-* (< *\*tmh<sub>1</sub>-isto-*) 'rennet' likely arose. I say 'apparent shift' because, in fact, the family of forms that mean 'sieve' do not go back directly to the Celtic word for 'rennet' that was borrowed into Greek but rather to a similarly ancient Celtic derivative of *\*tam-isto-* that survived as a borrowing in Latin/Romance and thence passed into West Germanic.

A detailed exposition of the Romance material is warranted but must be left for another time; here, it must suffice to state that the relevant Gallo-Romance forms for 'sieve' go back to a derived form with the suffix *\*-yo-*, thus late Gaulish *\*tamisyo-*. This form is clearly reflected in the Medieval Latin attestations of the word, *tamisium*, and, if we take *tamisium* as the starting point for the attested Gallo-Romance forms, the developments are fairly straightforward. Of particular interest is the development of the sequence *\*-Vsyu*, in which the cluster *-sy-* has yielded widely a voiced and often palatalized sibilant (*-z-*, *-ž-*) with either loss of the yod or its metathesis into the preceding syllable where the vowel in *\*-Vsyu* was non-front (*a*, *o*, *u*), e.g. regional Lat. *pertusium* 'hole' > Fr., Prov. *pertuis*. An unambiguous exact parallel of *tamisium* is wanting but a close parallel is found in late Latin *camisia* 'shirt' > OProv., Piedmontese *camisa*, Fr. *chemise* (»s«=[-z-]), Genoese *camixa* (»x«=[-ž-]); *tamisium* and *camisia* appear to have differed only with regard to gender and the final vowel, with *-a* long preserved in Gallo-Romance whereas *-u(m)* was lost in many varieties (incl. French and Provençal). In those dialects which preserved the final *-u*, the modern dialects show *\*-isyu* as *-izo* (Venetian *tamiso*, »s«=[-z-]) or as *-ižo-* (NIt./Tusc. *tamigio* [*tamižo*]). In many Gallo-Romance varieties, the final *-u* was lost and the then word-final sibilant was in many areas devoiced (and itself often subsequently lost), yielding Fr./Prov. *tami(s)* (dialectally also [*tamiš*]) (Wartburg 1928: v.13/1, 73ff.).<sup>3</sup>

We have then evidence from Greek *τάμισος* for a possible Celtic *\*tam-isto-* 'rennet' and from Gallo-Romance *tamis*, etc. for a very likely late Gaulish *\*tamisyo-* 'sieve (for curds?)', possibly from earlier *\*tam-ist-yo-*. The relationship between our reconstructed forms seems clear both from a Celtic and the broader Indo-European perspective. There is abundant evidence across the family for a Proto-Indo-European suffix *\*-yó-* (with a variant *\*-iyó-*) which was used to derive adjectives and nouns from both verbal and nominal roots and also from nouns formed with suffixes (Weiss 2020: 294ff.). This suffix *\*-(i)yo-* remained productive in Celtic and is attested in a wide array of semantic functions (Pedersen 1976, v.II: 16-17), an array so wide that the meaning of the suffix was clearly fairly bland, something along the lines of 'related to' or 'pertaining to'. In the present case, *\*tam-ist-yo-* must have originally been coined with a sense of 'the thing used in conjunction with rennet (for separation of curds from whey)' and was a

neuter noun, thus *\*tam-ist-yo-m* giving late Gaulish *\*tamisyon*, which was adapted upon borrowing into Latin, giving the attested *tamisium*.

The existence of the Gallo-Romance sieve word, tied to a formerly Gaulish-speaking area in which innovation in cheesemaking is demonstrable in early historical times, lends strong support to the analysis of Greek *τάμιος* as an early borrowing from Continental Celtic. If my proposal is correct, we have, moreover, a basis for interpreting the origin of the otherwise mysterious Gallo-Romance word for cheese, *toma*. The simplicity of this word, lacking any substantial suffix to aid in identification, allows for little analysis on its own: is it pre-Indo-European? Ligurian? The fact that this word occurs, however, essentially only in the Western Alps, the area to which *tamis* and, quite plausibly, *τάμιος* are also linked, allows us to more confidently propose that *toma* ‘cheese’ is in origin also Gaulish, a Celtic derivative of the IE root *\*temh<sub>1</sub>-*; it is then a Celtic analogue of Greek *τομή* ‘a cutting, thing cut off’ but with the secondary sense of ‘the thing separated’, i.e. ‘drained curds’, a sense attested in some modern Gallo-Romance dialects and easily the starting point for the other attested meanings of specific kinds of cheese and the generic meaning of ‘cheese’.

In support of my claim that it is *\*temh<sub>1</sub>-* that is reflected in these Western Alpine words is the fact that in Irish the word for rennet is *binid*, derived from another verb originally meaning ‘to cut/strike’ but in this context clearly also ‘separate’ (Buccini 2022). The Celtic rennet words share this semantic sense, focussing on the achievement of the action, and in this regard contrast with rennet words in Germanic (Eng. *rennet-run* ‘run together’), Romance (Fr. *présure-prendre* ‘take’) and Latin (*coagulum-coagulare* ‘drive together’) which clearly focus on the initial stage of gel-formation. In effect, the Irish word seems to reflect a very old and peculiarly Celtic way of looking at the process of curd-production.

## Conclusion

On the basis of the linguistic evidence, I date the coining of Continental Celtic *\*tam-isto-* ‘rennet’ and *\*tam-ist-yo-* ‘sieve’ to an early stage of the branch, when Celtic phonology and morphology were still close to the late Proto-Indo-European stage and, crucially, to a time when the elative formations discussed above had not yet fallen completely into disuse; conceivably, this could correspond to the brief Italo-Celtic stage, which Cowgill (1970: 114) dates very roughly to *c.* 2000 BC  $\pm$  500, at a time when I believe Proto-Celtic was most likely taking shape in the general area of modern northeastern France and southwestern Germany, as Sims-Williams (2020) has proposed. Of central interest to our discussion is the archaeological evidence, which possibly indicates that, in this period around 2000 BC, a new population began to expand into higher areas of the Western Alps and perhaps began to exploit through transhumance higher elevated pasture lands (Walsh and Mocci 2016: 189). Transhumance implies increased seasonal milk production which, in turn, would be of little use without efficient means to turn the milk into storable and transportable products, i.e. aged cheeses (cf. Pearce 2016).

In such a context, one imagines the societies involved would be highly motivated to experiment with technologies to improve dairy processing, and new forms of rennet and tools for draining whey from curd would be primary desiderata. Considering all the evidence, I believe the coining of \**tam-isto-* 'rennet' and \**tam-ist-yo-* 'sieve' took place sometime in the early second millennium BC in the Western Alps.

If τάμισος is a borrowed word in Greek, it seems impossible to account for its transmission in the context of the historically documented expansion of the Celts in the Balkans (fourth century BC) or their subsequent attack on Greece (third century BC) without the contemporary Greeks being aware of its Celtic origins. It is, however, interesting that τάμισος was identified as a Doricism and the Doric dialect originated in the far northwest of Greek territory. This fact suggests the possibility that the word might have indeed first been borrowed into Northwest Greek at a very early time, even perhaps before the spread of the Dorians southward (from c. 1100 BC), through contact with speakers of one or more intermediary Palaeo-Balkan languages. Again, if a borrowing, τάμισος could well have been originally a commodity, something that could travel, and as a form of rennet, we think not of the fresh stomach or its pus-like contents but rather of the salted, fermented, and desiccated stomach of a young animal, an invention that has considerable advantages over τυρία in some situations, especially in the context of transhumance involving summertime high pastures. From this perspective, τάμισος may be the only attested form of what linguists refer to as a 'Wanderwort', a word that had diffused through a number of languages. It is hardly inconceivable that, with the innovation of a new form of animal rennet, the thing and its name could have spread throughout the Alps, thence down the Carnic and Dinaric Alps of the western Balkans to the edge of the Greek world.

88

Back in the Western Alps, Gaulish \**tamisyon* 'sieve' survived the language shift to Latin/Romance but \**tamiso-* 'rennet' did not; with the new language, the Latin word for rennet, *coagulum*, was taken up and ousted the Gaulish term, though there is no way to judge the speed of the process. Perhaps already at the time of language shift, the referents of the two words were not different. In the case of *tamisyon*, however, it must be the case that the specific kind of sieve to which it referred was distinct from that to which the old Latin term *cribrum* referred; late Latin *saetacium* (It. *staccio*), as a fine sieve made with animal hair, was perhaps coined as a new word, equivalent to (inspired by?) the Gaulish fine sieve \**tamisyon/tamisium*.

With these points in mind, it is not surprising that an apparently old word for cheese, *toma*, managed to survive to the present day in the Western Alps, a place with particularly propitious conditions for milk-production, especially when the rich upland pastures became available through transhumance, and with ample supplies of salt near at hand. And while other peoples in other parts of the Alps may well have played an important part in the prehistoric development of cheesemaking in this region, the linguistic evidence indicates that the Celts of the Western Alps played a central role.

## Notes

- 1 Forms of *toma* occur outside the Western Alpine region in neighbouring parts of Occitan-speaking areas. In addition, reflexes of this word are found in much of Sicily and parts of Calabria and Basilicata (alongside reflexes of *formaticum* and *caseus*), which others have uncritically taken as relics from pre-Roman times. I see them instead in the context of dialectological and historical evidence demonstrating that the word arrived in the Mezzogiorno in the Middle Ages, when under Norman and Angevin auspices colonies of Gallo-Romance speakers from the Western Alpine region were established there, a topic which I have addressed in different culinary contexts (e.g. Buccini 2015: 58ff.).
- 2 A few notes on the IE forms discussed here are warranted. First, *-h-* is used to indicate a 'laryngeal' consonant, of which there were three, each indicated with a subscripted number. Laryngeals were lost in almost all the daughter languages, though they often left traces of their former presence on neighbouring sounds.  
 Second, an important morphological element in IE is called 'ablaut', which refers to patterned (grammatically, derivationally) alternations of vowels. Theoretically, a given morpheme (root, suffix, desinence) could appear under certain conditions in the *e*-grade (with the vowel *-e-*, 'full-grade'), *o*-grade (with *-o-*) or zero-grade (with no vowel); there were also lengthened grades. Grammatical conditioning of ablaut can still be observed: e.g. English *sing-sang-sung* (reflecting in order the three basic grades). In nominal categories, different ablaut and accentual patterns occurred in 'strong' cases (nom., acc.) and 'weak' cases (gen. etc.).  
 Third, in IE the glides *y*, *w* and resonants *l*, *r*, *m*, *n* could function as vowels in some environments. This change of role arose frequently in zero-grades: *y*, *w* were realized as *i*, *u* and resonants as *l m n r*.
- 3 I must leave for elsewhere my discussion of the Breton evidence, especially Vannetais dialect *tanouiz* 'sieve', which lends further support to my argument.

## References

- Beekes, Robert. 2009. *Etymological Dictionary of Greek*, 2 vols (Leiden: Brill)
- Buccini, Anthony F. 2015. 'The Merchants of Genoa and the Diffusion of Southern Italian Pasta Culture in Europe', in *Food and Markets: Proceedings of the Oxford Symposium on Food and Cookery 2014*, ed. by Mark McWilliams (Totnes: Prospect Books), pp. 54-64
- 2022. 'Cé a bhog mo cháis? The Celtic Origins of Irish Cheesemaking', Dublin Gastronomy Symposium 2022, forthcoming
- Chantraine, Pierre. 1968. *Dictionnaire étymologique de la langue grec*, 4 vols (Paris: Klincksieck)
- Cowgill, Warren. 1970. 'Italic and Celtic Superlatives and the Dialects of Indo-European', in *Indo-European and Indo-Europeans*, ed. by G. Cardona and others (Philadelphia: University of Pennsylvania Press), pp. 113-53
- Dalby, Andrew (trans.). 2011. *Geoponika* (Totnes: Prospect Books)
- de Bernardo Stempel, Patrizia. 1999. *Nominale Wortsbildung des älteren Irischen* (Tübingen: Max Niemeyer)
- De Goede, Tim. 2014. 'Derivational Morphology: New Perspectives on the Italo-Celtic Hypothesis' (unpublished doctoral thesis, Leiden University)
- Eska, Joseph. 1998. 'Tau Gallicum', *Studia Celtica*, 32: 115-27
- Hubschmied, Johannes. 1936. 'Ausdrücke der Milchwirtschaft gallischen Ursprungs', *Vox Romanica*, 1: 88-105
- Jasanoff, Jay. 1990. 'The Origin of the Celtic Comparative Type OIr. *tressa*, MW *trech* "stronger"', *Die Sprache*, 34: 171-89
- Kindstedt, Paul S. 2012. *Cheese and Culture. A History of Cheese and Its Place in Western Civilization* (White River Junction, VT: Chelsea Green)
- Maurice-Guilleux, Nicole. 1995. 'Étymologie synchronique et diachronique: le cas de *reblachon*', *Cahier des annales de Normandie*, 26: 347-54
- Meillet, André. 1964. *Introduction à l'étude comparative des langues indo-européennes* (University: University of Alabama Press)

- Morpurgo Davies, Anna. 1968. 'Gender and the Development of the Greek Declensions', *Transactions of the Philological Society*, 67: 12-36
- Pearce, Mark. 2016. 'Hard Cheese: Upland Pastoralism in the Italian Bronze and Iron Ages', in *Summer Farms*, ed. by J. Collis and others (Sheffield: J.R. Collis), pp. 47-56
- Pedersen, Holger. 1976 [1913]. *Vergleichende Grammatik der keltischen Sprachen*, 2 vols (Göttingen: Vandenhoeck & Ruprecht)
- Rau, Jeremy. 2014. 'The History of the Indo-European Primary Comparative', in *Das Nomen im Indogermanischen*, ed. by N. Oertinger and T. Steer (Wiesbaden: Reichert), pp. 327-41
- Ringe, Don. 2006. *From Indo-European to Proto-Germanic* (Oxford: Oxford University Press)
- Schmidt, Mauricius (ed.). 1867. *Hesychii Alexandrini Lexicon...* Sumptibus Hermannii Dufftii, 4 vols
- Sims-Williams, Patrick. 2020. 'An Alternative to "Celtic from the East" and "Celtic from the West"', *Cambridge Archaeological Journal*, 30: 511-29
- Van Beek, Lucien. 2013. 'The Development of the Proto-Indo-European Syllabic Liquids in Greek' (unpublished doctoral thesis, Leiden University)
- Walsh, Kevin, and Florence Mocchi. 2016. 'Driving Forces and Variability in the Exploitation of a High-Altitude Landscape from the Neolithic to Medieval Periods in the Southern French Alps', in *Summer Farms*, ed. by Collis and others, pp.183-201
- Wartburg, Walther von. 1928-. *Französisches Etymologisches Wörterbuch*, 25 vols (Bonn: Klopp)
- Watkins, Calvin. 1975. 'Latin *iouiste* et le vocabulaire religieux indo-européen', in *Mélanges linguistiques offerts à Émile Benveniste* (Leuven: Peeters), pp.527-34
- Weiss, Michael. 2020. *Outline of the Historical and Comparative Grammar of Latin* (Ann Arbor: Beech Stave)
- Wharmough, Joshua. 1970. *The Dialects of Ancient Gaul* (Cambridge: Harvard University Press)