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## *Etumos Apistos*, “Truly Doubtful”: Confounding Etyma in Scientific Nomenclature

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### Abstract

From the early 16<sup>th</sup> century, Western European science systematically resorted to Latin and Greek, the two fundamental languages of its culture, to construct their terminology. The various Renaissance anatomical atlantes, the early 18<sup>th</sup> century zoological and botanical taxonomies, the neo-Hellenisms of the late *Ancient Régime* chemists ... scientific nomenclature at large, systematically relied upon the premise of a shared cultural soil, regardless of nation of origin, mother tongue or field of knowledge. The neologism, the neo-Greek and/or neo-Latin construct shall, thus, be a common reference to all Western European languages and, consequently, the eventual linguistic mediator would not have to worry about transmission values except for lesser (spelling, phonetic, morphological, syntactical) adaptations and for fine, even subtle adjustments of the technical or the semi-technical terms. And yet, that confidence does not always turn out to be trustworthy and there are too many instances in which the source language etymon and the target language etymon do not match and the linguistic mediator, the translator or interpreter, is forced to rethink the inferred ‘univocal’ nature and the referential invariability of the terminology that is to be transferred.

## 0 Premises

When translating science and technology, we often trust on that univocal relationship that Ortega criticizes and are confident that, except for orthographic or ortho-phonetic adjustments, the triangulation of the ‘transparent’ terminology (especially in compounds and noun phrases) shall allow us to pursue our work within rather safe boundaries. The same way a vessel is doubly secured in place by means of anchors and moorings, that unswerving relationship rests upon two pillars of ‘revealed truth’: the reference to a canonical language and the presence of proper nouns (be they eponyms or derived eponyms), in the *terminus technicus* of the SL (henceforth L1) translation unit (henceforth *transleme*).

# 1 The Two Groups of 'Truth'

## 1.1 The Etymon of the Canonical Language

### 1.1.1 Goods Inherited: Latin and Greek

When Ortega's dictum on scientific translation is published, three hundred years have elapsed since René Descartes decided to break with Latin and write science in the vulgar tongue. The *Discours de la méthode pour bien conduire sa raison, et chercher la vérité dans les sciences* was anonymously published in Leiden in June 1637 and José Ortega y Gasset wrote his essay between May and June 1937. Descartes' excuse was to put an end to medieval Scholasticism. The true reason was the attempt by France to substitute Classical cultural hegemony, which, in Western Europe, still was Latin. Eventually, despite Linnaeus groundbreaking and perennial taxonomies (*Systema naturae* 1735) and the works of other noteworthy individuals before and after him, the pincer of French cultural *hybris* and Protestant anti-Roman bigotry began to dissolve the *lingua franca/koiné* values of Latin from the middle of the 17<sup>th</sup> century onwards. Today, while Latin and Greek are no longer compulsory secondary education subjects, understanding their affixes and their compound constituents remains indispensable for the better command of scientific terminology. Also, as already mentioned above, (neo)Classical etymology is felt to be a 'transparent' referential value and a lighthouse for translation. But this is not mathematically true and the resulting risks are the subject matter of the present paper.

### 1.1.2. Goods Acquired: French and English

In the wake of Latin and from the Baroque onwards, several languages assumed the role of communication languages<sup>1</sup>. French became the language of diplomacy and still is that of fashion, gastronomy and ballet. Since the Renaissance, Italian will be the language of fine arts and music. German will not only set down the linguistic milestones of the 19<sup>th</sup> century, but will also be predominant in geology and chemistry, let alone in philosophy and psychoanalysis. After WWII, English and Russian turned hegemonic in their respective areas of influence until English becomes universal with the demise of the Cold War and the reunification of Europe.

In our present world, English functions as the cultural and commercial heir to Latin in the West, albeit without the support of Empire or Church. But it is in no way comparable to the values of the antedated, Greco-Latin etyma. The nomenclatures of the synchronic natural languages, stemming from more or less related parallel cultures, are more resistant to change and will not result in erroneous interpretations as may be the case with languages genetically related to each other. With a metaphor taken from Roman law, we could argue that the individual is not so prone to trans-form the goods acquired adventitiously and by contract, by cognate relationship, but will be rather feel inclined to do so with those agnate, received and inherited from one's father through the *ius sanguinis*, since the individual deems to have and hold the judicial *plena propretas*: the right of use (*usus*), enjoyment (*fructus*) and abuse (*abusus*) over those goods.

## 1.2 The Etymon of the Proper Noun

The second safety-lock of our terminological trust is the 'sacred' value of the proper noun: from the Modern Period onwards and for most of the Western World, a proper noun is considered untouchable: untranslatable, irreplaceable.

Now statistically, this is not true. When we analyse the lexical field of biology in our background corpus we have the following data: in botany, out of 574 geonymic eponyms 31 (5%) are appropriated and 116 (20%) appropriate the proper noun and/or triangulate the common noun by translation; and out

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<sup>1</sup> Alcaraz (2000: 43) calls them *niveladores*

of 111 anthroponymic eponyms 70 (63%) are appropriated and 6 (5%) appropriate the proper noun and/or triangulate the common noun by translation. In zoology, out of 189 geonymic eponyms 46 (24%) are appropriated and 84 (44%) appropriate the proper noun and/or triangulate the common noun by translation; and out of 55 anthroponymic eponyms 24 (42%) are appropriated and 13 (22%) appropriate the proper noun and/or triangulate the common noun by translation. This does not exclude the possibility of hybrid transfers, including appropriation and triangulation as well as substitution, be it cultural (what Vinay and Darbelnet dubbed *adaptation*) or not, nor does it rule out full or partial omissions due to ignorance of the referent which is needed for the triangulating translation procedure.

Within our corpus, eponymy and derived eponymy offer different translation options:

- a) the incorporation of the eponym in the 'lay' level of the language, and not those of the 'semi-technical' calques or Greek-Latin 'technical' levels<sup>2</sup>
- b) the choice among different culturally opposed options, with (anthroponymic) syntheses, additions or reductions
- c) the 'denaturalization' or forsaking an eponym of the target language culture (N2)
- d) the change of a third language culture (N3) anthroponym for one of a different N3
- e) the exchange of geonym for anthroponym and viceversa.

## 2 The Corpus

The corpus belongs, first and foremost, to the health sciences and to physics, chemistry, botany and zoology, mineralogy and astronomy; to liberal and social sciences such as art, linguistics, psychology, theology, philosophy, history, geography, plus some other odd examples. We divide the terms into three diaphasic levels: 'lay' (e.g. Spanish *hierro*, Portuguese and Italian *ferro*, French *fer*, English *iron*, Danish *jern*, Swedish *järn*, German *Eisen* or Dutch *ijzer*), 'semi-technical' (typically, but not only, calques or adaptations which can be ortho-phonetic like Spanish *cauterio*, *crisótilo*, *diafragma*, *hipocorístico* or *hipóstasis*; phonetic like *vagina*; suprasegmental like Spanish *cartilago* and semantic (called in English *loantranslations*), like the Spanish Arabism *tabique* or German *Scheidewand* for Latin *septum*) and 'technical', (adoptions (borrowings), at least in spelling and *de visu*, like Spanish and English *hepatitis* or English *phthisis*, which has three valid phonetic realizations: ['θaɪsɪs], ['taɪsɪs] and ['fθaɪsɪs]). Our greater attention should be devoted to the 'lay' level and to the oral over the written medium. First, because linguistic and cultural substitutions are easier to detect and second because, with oral mediation (simultaneous or consecutive interpreting and *chuchotage*), the time pressure makes it more likely for linguistic interferences to occur.

Almost all the Spanish translations were taken from Beigbeder Atienza's two-volume bilingual dictionary. The medical ones come from Beatty et al (2004) bilingual *Stedman* and the monolingual *Diccionario terminológico de ciencias médicas* (DTCM) coordinated by Navarro Beltrán. Some examples have been drawn from Van Hoof and other scientific and technical translation references, apart from minute contrasts from Wikipedia.

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<sup>2</sup> Alcaraz (200: 42 s) understands something else under 'semi-technical' and 'technical'. We have preferred to maintain this threefold division both for translation purposes and for the categorization of diaphasic changes within the linguistic contrast.

## 3 Categorization of Translation 'Risks'

### 3.1 Introduction

As mentioned above, within the bilingual contrast the translator will have to face a whole range of potential 'risks' that might handicap his work, especially if, as usual, he is working under time pressure. Sometimes the range is narrowed, as when we contrast a Romance language with a Germanic language of solid scientific tradition like German itself. This language has been, since the early Middle Ages, notably resistant to the appropriation (adoption or borrowing and adaptation or calque) and has preferred, if at all, the recourse to semantic adaptation (loan translation), especially with semantically transparent compounds or derivations. In other cases, the risk lies in what we might dub 'spurious common denominator by induction' sci. lexical coincidence or near coincidence in various Western languages which will notoriously increase the possibility of an error. *Mutatis mutandis*, we could recall, with the non-marked and common core language, the bewilderment of a tourist in Iberia when confronted with Spanish *cerveza* or Portuguese *cerveja*, which bear no similarity with French, Italian, English, Dutch and German *bière*, *birra*, *beer*, *bier* or *Bier* (except for the Spanish *birra*, which is kurolectic, juvenile slang); while the Spanish waiter does not realize that his *jamón* like its French counterpart *jambon* (< *jambe* "leg") or even English and Dutch *ham* (both from Common Germanic \**ǵam-* "curved", cf. Spanish *corva*), are not only totally unrelated to German *Schinken*, Swedish *skinka* or Danish *skinke* (< Old High German *scinco* "thigh" < Indoeuropean \**[s]keng-* "curved")<sup>3</sup>, but even to Portuguese *presunto* or Italian *prosciutto* (both from Latin *per sunctus* < *per siccatus* "very dry"). Within our corpus, the C1, the first cervical vertebra, will be *atlas* in Spanish. French, English and German, but Italian adapts it as *atlante*; and while the C2 will be *axis* in Spanish. French and English, Italian chooses the adaptation *epistrofèa* and German the transparent reference of the mother tongue: *zweiter Halswirbel* ("second neck vertebra"). Going down the spine to its caudal and distal end, Latin *coccyx* is adapted in French *coccyx*, English *cóccix* and Italian *coccige*, while Spanish prefers Greek *coxis* instead. In a German surgery, physician and patient will use German *Steißbein* for oral communication, but the written and formal term is *os coccygis*. This Germanic tradition can also be seen in English *shoulder blade* and German *Schulterblatt*, vs. the 'technical' Latinism *scapula* or the Italian adaptation *scapula*, again in contrast with the Greek adaptations in Spanish *omoplato/omóplato* (*escápula* being less usual) or French *omoplate*.

Let us now see the different options that present themselves to the linguistic mediator.

### 3.2 The Translation Options

#### 3.2.1 A Classical tongue: Latin or Greek

Normally, a Romance target language (L2) will replace the original source language (L1) term with a Latinism, a Graecism or a hybrid of both. Thus, German *Weltanschauung* is appropriated in English, while Spanish prefers the Greek-Latin compound *cosmovisión* and Jacob Grimm's linguistic neologisms *Ablaut* and *Umlaut* (appropriated in English) are substituted by the neo-Greek constructs *apofonía* and *metafonía* in Spanish.

This option can be absolute, as with the German morphological adoptions (except, as always, for the obvious transliteration) of Greek *Antibiotikum/Antibiotika* vs. the English, Spanish/Portuguese, French and Italian adaptations *antibiotics*, *antibióticos*, *antibiotiques* and *antibiotici*. But the morphological appropriations can also be partial and depend on the diaphasic level, as with the English

<sup>3</sup> Drosdowski, Günther & Grebe, Paul. 1963. *Der Grosse Duden 7. Herkunftswörterbuch. Die Etymologie der deutschen Sprache*. Mannheim Wien and Zürich: Bibliographisches Institut AG Duden Verlag.

foreign plurals, i.a. *dogmata* and *cherubim* vs. *dogmas* and *cherubs* or *indexes* in library management and *índices* in mathematics or *antennas* in electronics vs. *antennae* in zoology.

### 3.2.1.1 An Alternative Classical Tongue: either Latin or Greek,

#### 3.2.1.1.1 The Absolute Alternative Option

The absolute alternative option, —i.e. the decision to choose the technical term in either Latin or Greek— can be seen in the Spanish, French, Portuguese and Italian adaptations *peroné*, *pérone*, *perónio* and *peroneo* (< Greek *perónē* “pin”, “brooch”) vs. the English adaptation *fibula* (< Latin *fibula* “pin”, “brooch”); while, in Art, *fibula* is common to all and only suffers minor ortho-phonetic modifications.

#### 3.2.1.1.2 The Alternative Option, according to the Field or Subfield of Specialized Knowledge

According to Fluck (1976: 92), Latin would predominate in anatomy and Greek in pathology within the field of medicine. Certain is that the ‘technical’ references to tumors make use of the Greek components *-cele* (“tumor”, “hernia”, “tumefaction”) or *-oma* (“tumor”, tumefaction”). This dichotomy can also be seen in contrasts like *vértebra*, *vertebra*, *vertèbre* vs. *spondilopathy*, *Spondylopathie*, *spondylopathie*, *espondilopatía* or *articulación*, *Artikulation*, *articulation*, *articolazione*, *articulação* vs. *artrosis*, *arthrosis*, *Arthrose*, *arthrose*, *artrosi* and *artrose*, to mention just a few. But it is not consistent.

Something similar can happen with various false cognates: English *conductor* is Spanish *conductor* in physics, but *revisor* (*de autobús*) and orchestra *director*; *relapse* is *relapso* in theology but *recidivo* in pathology.

#### 3.2.1.1.3 The Partial Alternative Option of a Hybrid, with one Etymon of the same Origin and the other one of the Second Classical language

We best see this specific option in a single but marked example: the English neo-Graecism *logorrhea* in contrast with the Spanish Graeco-Latin hybrids *verborrea/verborragia* with the same meaning.

#### 3.2.1.1.4 The Absolute Alternative Option of a Linguistically Common Etymon (Latin or Greek) but Originating in a Different Lexeme

We can also observe this phenomenon in neo-Latin adaptations like Spanish and Portuguese *cúbito*, Italian *cubito* and French *cubitus* (all from Latin *cubitus*) vs. English and German *ulna* (< Latin *ulna*) or in the neo-Greek *otorrinolaringólogo* in Spanish or French *oto(-)rhino(-)laryngologiste* instead of the more adequate Italian *otorinolaringoiatra*. It is well-known that, in chemistry, *nitrogen* (Greek “saltpeter producer”) is *azote* (erroneously derived from Greek *αζῶος* (*azōos*) “lifeless”) in French (cf. Maillot 1997: 253). In mineralogy, the ‘semi-technical’ neologisms *amianto* in Spanish and *asbestos* in English can be told apart from Spanish *asbesto* and English *amianthus*, both in their diaphasic level and in the frequency of use. Finally, we can also call to mind the replacement of Medes by Persians, in Spanish *Guerras médicas* and French *Guerres médicales* vs. *Persian Wars* (o *Graeco-Persian Wars*) *Perserkriege*, *Perzische Oorlogen*, *Perserkriegene* and *Guerre persiane* in English, German, Dutch, Danish and Italian; or e.g. the Spanish-English contrast *Guerras Púnicas* and *Carthaginian Wars* (though *Punic Wars* is also possible).

#### 3.2.1.1.5 The Option of a Different Spelling

Since it is generally unexpected, differences in spelling represent a major obstacle everywhere within our corpus, with a *quid pro quo* frequency that turns it practically into a minefield. We see it in English *rubella* and Spanish *rubeola* or in *Maglemosian/MagleBOSEAN* (*culture*) and (*cultura*)

*maglemoisense*<sup>4</sup>. Similarly, German *Neoplasie*, Spanish and Italian *neoplasia* or French *néoplasie* contrast with English *neoplasm* and Portuguese *neoplasma*. The English Hellenism *syncope* will be Spanish *síncope* in medicine, but *síncopa* in linguistics. Being Latin, incapable (like English and like French) of pronouncing the velar voiceless fricative corresponding to the Greek letter  $\chi$ , it was assimilated to the voiceless velar plosive /k/, 'reminding' the reader of the etymological friction by adding an *h* to the *c* in the digraph *ch*. In the transmission of the digraph to a nonRomance language like English<sup>5</sup> and in examples containing the Greek prefix *ἀρχ-/ἀρχι-*, orthographic and phonetic adoption is invariably found: *archaebacteria*, *archaeopteryx*, *archaic*, *archangel*, *archbishop*, *archdiocese*, *archdeacon*, *archaeology*, *archduke*, *archenteron*, *archesporium*, *archetype*, *archimandrite*, *archipelago*, *archiphoneme*, *archiplasma*, *architecture*, *archive*, *archmage*, *archpriest* among many others. On the contrary, a direct heir to Latin like Spanish shows a wide range of ortho-phonetic varieties: *arquebacteria*, *archaeopteryx*, *arcaico*, *arcángel*, *arzobispo*, *archidiócesis*, *arqueología*, *archiducque*, *arquénteron*, *arquesporio*, *arquetipo*, *archimandrita*, *archipiélago*, *arquiplasma*, *arquitectura*, *archifonema*, *archivo archimago* and *arcipreste*, including paronymic synonyms like *archidiácono* and *arcediano*.

Spelling differences according to the *national standard* imply a further problem. Leaving well-known ones like the *-mme/-m* (e.g. *gramme-gram*, *programme-program*), *-or/-our* (e.g. *armour/armor*) *-re/-er* (*metre/meter*) or *-ce/-se* (e.g. *defence/defense*, *vice/vise*), American English writes i.a. *aluminum* for British *aluminium*, *mollusk* for *mollusc*, *pedology* for *paedology*, *diarrhea* for *diarrhoea*, *electron tube* instead of *electronic tube* or *carburetor* and not *carburetter*; and these 'national' differences can be found in any technical or scientific field.

### 3.2.1.1.6 The Option of a Different Affix or Bound Morpheme

This feature is well marked in chemistry, *scilicet* in the different 'readings' of the formula *NaCl*, where only German *Natrium Chlorid* and Dutch *Natriumchloride* duly reflect the binomial components; and where we have Spanish *cloruro de sodio/sódico*, Italian *cloruro di sodio*, French *chlorure de sodium*, Portuguese *cloreto de sódio* and English *sodium chloride* (cf. Maillot 1997: 252). On the contrary, the 'lay' and non-marked lexemes, like Spanish and Portuguese *sal*, Italian *sale*, French *sel*, English, Danish and Swedish *salt*, German *Salz* or Dutch *zout* do not invite confusion. Something similar occurs with Spanish *permanganato de potasio* which retains the K of the formula  $KMnO_4$ , in German with *Kaliumpermanganat*, rejecting the etymologies that stem from their own culture. Let us bear in mind that *Kalium*, mediated by medieval Latin, comes from Arabic *al qalya* ("vegetable ash"), while neo-Latin *potassium* (as dubbed by Humprey Davy in 1807) comes from German *Potasche* ("pot ash").

## 3.2.2 The Option of the Vulgar Tongue

### 3.2.2.1 The Absolute Option of a Vulgar Tongue

A typically/topically Germanic option, we can observe this 'cultural' tendency in two examples of pathologies which have very similar spellings in English. In the first one, the isolated Italian adaptation *morbillo* (< Latin *morbilius*, cf. *morbilli virus*), stands alone versus the general tendency in favour of the vulgar tongue that we see in Spanish *sarampión* and Portuguese *sarampo*<sup>6</sup>, German *Masern*, Dutch *mazelen*, English *measles*, Danish *maeslinger* or Swedish *mässling*, (all from Common Germanic \**mas-* "spot") or the separate and unrelated example of French *rougeole* etymologically hybrid of *rubéole*. The second one is *German measles* (*rubella* in the 'technical' diaphasic level after Henry Veale 1894). In German it is *Röteln* since the middle of the 18<sup>th</sup> century and, in Spanish and Italian, *rubeola*; in

<sup>4</sup> For more examples of spelling changes, cf. Van Hoof (1999: 203-205).

<sup>5</sup> Though not in German, for instance.

<sup>6</sup> In Spanish, two different etyma are offered: Low Latin *sirimpio*, *-onis* for the DRAE and Greek *ξηραμπέλινος* (*xērampélinos* "of the colour of a dry vine leaf") for the DTCM.

Portuguese *rubéola* and *rubéole* in French, ultimately all from Latin *rubeus* "reddish". This is more than common in anatomy. We find *radius* in English and French, *radio* in Spanish and Italian, or *rádio* in Portuguese vs. the native German option *Speiche*. We also see it in the French, Italian, Portuguese Latin adaptations *sternum*, *sterno*, *esterno* or in the Spanish *esternón* adaptation of Greek *στέφνον* ("breast"), in contrast with the Germanic compounding of English and German *breastbone* and *Brustbein*. The same is true of chemistry. The French neo-Hellenisms *oxigène* and *hydrogène* (de Morveau and Lavoisier 1787), indicate the capacity of these gases to produce acid and water. German makes use of its habitual semantic adaptation and gives *Sauerstoff* and *Wasserstoff*; similarly *nitrogen* as *Stickstoff* ("matter that smothers"), although, here, German does not adapt semantically the Greek neologism but rather reinterprets the etymological values ("lifeless") of French *azote*. Outside the natural sciences, we can observe this e.g. in prehistory, as in the 'technical' *homo rhodesiensis*, which can be replaced in English by the 'lay' *Rhodesian man*; or, in geography, in the general Germanic (except English) substitution of Latin *mare balticum* by "East(ern) Sea": *Ostsee* in German, *Oostzee* in Dutch, *Oossee* in Afrikaans, *Østersøen* in Danish, *Østersjøen* in Norwegian bokmål, *Östersjön* in Swedish and *Eystrasalt* in Icelandic and Feroese.

### 3.2.2.2 The Absolute Option of a Vulgar Tongue that Coincides with or Translates the Original

The best example for the preference of a vulgar tongue which is deemed a correct translation option may be Sigmund Freud's *Das Ich und das Es* (1923) where *Es*, *Ich* and *Über-Ich* were arbitrarily given as *id* and *ego*, *superego* in James Strachey's canonical version (1953-1966). On the contrary, Spanish has *Ello*, *Yo* and *Super-yo*, since the Luis López-Ballesteros y de Torres (1924) translation, although the Latin names are also used.

### 3.2.2.3 The Option of a Vulgar Tongue in only one of the Components

Examples would be French *synthèse de l'eau* vs. Spanish *hidrosíntesis* or German hybrid *Muskelatrophie* vs. the purely neo-Greek compounds in Spanish, French, English, Italian and Portuguese *amiotrofia*, *amyotrophie*, *amyotrophy* and *amiotrofia*. We can also observe this in the 'semi-technical' German *Weißer Jura* or *Weißjura* and its English adaptation *White Jurassic* or *White Jura*, which will normally be matched to *jurásico superior* in Spanish, although the historical overlapping is not precise.

### 3.2.2.4 The Option of a Different Vulgar Tongue

In chemistry, W has two adapted lexemes in Spanish: the originally Swedish compound *tungsten(o)* (Swedish "heavy stone") and the originally German compound *wolfram(io)* (German "wolf cream"). Spanish, but also Portuguese can choose. German (and curiously enough Swedish itself) only accepts *Wolfram*. English French and Italian prefer the adaptations *tungsten* or *tungstène*, while acknowledging that W stands for *Wolfram*. The IUPAC has not been able to reach a consensus.

### 3.2.2.5 The Option of a Vulgar Tongue Depending on the Field of Knowledge

English *pectoral* will be Spanish *pectoral* in anatomy and in liturgy; but, in pharmacology, Spanish *pastillas pectorales* will be replaced by the native and transparent *cough drops*. Greek *καρκίνος* (*carcínos*) is the 'lay' name of the mollusc we call *crab* and Hippocrates used it as a formal metaphor for some cancerous tumours. In Greek mythology, Karkinos, the giant crab that Hera sent to assist the Hydra against Herakles in the Lerna lagoon, was transmuted by the goddess into a constellation. In Roman culture, Aulus Cornelius Celsus, the scholarly contemporary of Emperor Augustus, triangulated the mollusc and all the other referents into *cancer*. In Spanish, this Latin lexeme has become a tetrad: *cáncer*, *cangrejo*, *chancro* and *canthro*. The spelling adaptation *cáncer* is valid for oncology, astronomy and astrology; the ortho-phonetic adaptations *chancro* and *canthro* for general pathology and botany

respectively; *cangrejo* for zoology and hopology<sup>7</sup> as well as a formal metaphor, in sailing ships. To choose but one other of the languages contrasted in the present paper, German reduces the four 'teeth' of Spanish to two. Latin *cancer* is triangulated as *Krebs* for oncology, astronomy, astrology, zoology, botany, hopology and musicology<sup>8</sup>; it is also found in the mercantile oral half-slang as a formal metaphor to refer to books returned unsold. The second 'tooth' is the ortho-phonetic adaptation *Schanker*, correlative to English *canker*, Spanish *chancho*, French *chancre* and Italian and Portuguese *cancrio*. Greek *carcinoma* will be retained for oncology, like the redundant neo-Hellenism *carcinoma* in English, Spanish, Italian and Portuguese, French *carcinome* or German *Karzinom*, together with other odd fifteen terms.

### 3.2.3 The Option of an Alternative Source Language, Mediated by a Classical Language or not

Just a couple of instances. Firstly, the Arabic article, fused by metanalysis, in Spanish *azufre* or the Gothic *swibls* that resulted in German *Schwefel*, Swedish *swafel* and Dutch *zwavel*, instead of accepting Latin *sulfur*, which is masked as Greek in *sulphur* in British though not in American English. The second example is taken from botany: English *larch* comes from German *Lärche* and, ultimately, from Latin *larix* and could be 'genetically confused' with the Spanish Arabism *alerce*, whose similarity with the Latin form is, for Corominas (1955-1957: 108), no more than accidental isomorphism.

### 3.2.4 The Option of a Term that Includes an Eponym or a Derived Eponym in one or both Languages in Contrast

#### 3.2.4.1 Geonyms

The specific option by means of which a specific language may opt for a genonymic reference instead of the 'common' Graeco-Latin term can be exemplified with the German compound *Nilpferd* ("Nile horse"): its approximation to Greek *ἵπποπόταμος* (*hippopótamos* "river horse"). A similar and rather idiosyncratic example can be observed in the contrast between Spanish *ácido pícrico* and the English derived geonym *lyddite* (from the Kentish town of Lydd), documented since 1888.

#### 3.2.4.1.1 Controversial Geonyms

In European geography, one of the oldest examples is probably German, English, Dutch, Danish, Norwegian (both bokmål and nynorsk) and Swedish *Genfer See*, *Lake Geneva*, *Meer van Genève*, *Genevesøen*, *Genfersjøen* and *Genèvesjön* to refer to what Julius Caesar, using a pleonastic and redundant metanalysis, named *lacus lemanus* (i.e. "lake" in Latin + the adaptation of the word for "lake" in the Celtic language of the Helvetii) in 58 b.C., in imitation of Greek *Λεμάνη λίμνη* (*Lemánē lîmnē*) or *Λεμάνος λίμνη* (*Lemános lîmnē*); the lake is still called *Lac Lemán*, *Lago Lemán* or *Lago Lemano* in French, Spanish, Italian and Portuguese. It is only logical that controversial geonyms crop up in shared and/or bordering territories (*The English Channel/La Manche*, *Strait of Dover/Pas de Calais*, *Danzig/Gdansk*, *Falklands/Malvinas*, *Sajalín/Karafuto*), also when referring to historical events like battles that are part of two or more historical traditions (*La Moskova/Borodino*, *Blenheim/(Zweite) Schlacht bei Höchstädt*). These eponyms can be easily guessed depending on which 'side' the target language culture, the N2 lies. Even in cases where this is not necessarily given, the N2 will respond to one historiographical tradition or another, and the resulting eponym will also be easily perceived: the

<sup>7</sup> A neologism taken from Greek *ὄπλον* (*hóplon*) "weapon". Within this lect or register, *Krebs* and *cangrejo* refer to two parts of the late medieval and Renaissance body armour: the breastplate in German and the articulated protections for elbow pits and knee hams in Spanish.

<sup>8</sup> The German musical term *Krebskanon* (also known as *retrograder Kanon*), typical of the Baroque and of Johann Sebastian Bach, the Latin *canon cancrizans*, becomes *crab canon* in English, *canon à cancrizans* in French, *canone cancrizzante* or *canone retrogrado* in Italian and *canon cancrizante* or *canon retrógrado* in Spanish; but in none of them, except in German, is the metaphor transparent.



*Deutscher Krieg* will be *Guerre austro-prussienne* in French, *Austro-Prussian War* in English, *Guerra austro-prusiana* in Spanish and *Guerra austro-prussiana* in Italian; but not in Dutch, which will typically follow the German nomenclature and give *Duitse Orlog*. On the other side of the world, the naval *Battle of (the Strait of) Tsushima* is that of the *Sea of Japan* for the Japanese; but Europe knew of it through the Russian Empire and adapted its geonym: *Цусимское сражение* (*Tsusimskoye srazheniye*). Even word-order can be a matter of dispute and result in transfer problems: German *Deutsch-französischer Krieg* and French *Guerre franco-prussienne* neither say the same thing, nor foreground the same countries. True is that, as we shall see with the anthroponymic controversies, a synthesis can eventually be agreed upon: the battle of *Königgrätz* is that of *Sadowa*, for the French and English historiography, and Spanish can compromise by calling it *La batalla de Sadowa-Königgrätz*. And yet, not even the fact of having being allies helps, as shown by the examples *Battle of Corunna* (city)/*Batalla de Elviña* (village), *Battle of Barrosa* (beach)/*Batalla de Chiclana* (town), *Battle of Salamanca* (city)/*Batalla de los Arapiles* (mountains), all of them corresponding to the *Peninsular War/Guerra de Independencia*. And to the translator's ultimate despair, not even sharing language and country assures a common eponymy, since we have alternative names for the American Civil War battles, from the very first shot: *Bull Run* for the Union and *Manassas (Junction)* for the Confederates.

### 3.2.4.2 Anthroponyms

#### 3.2.4.2.1 'Lay' Anthroponyms

Within the 'lay' level in both languages, in order to give English *Jovian planet* Spanish *planeta gaseoso* omits the anthroponymic reference and translates the common noun. With one degree difference in the diaphasic scale, the 'lay' level is found in American English *Gehrig's disease* for what the Spanish 'semi-technical' level calls *esclerosis lateral amiotrófica*. The difference of two degrees in the diaphasic scale can be seen in the 'lay' level *Rhodes grass* vs. the 'technical' *chloris gayana* in Spanish. Chemistry examples include *Condy's crystals* vs. the 'semi-technical' *permanganato de potasio* (although *cristales de Condy* also exists in Spanish). We have derived eponyms in the Spanish neo-Latin 'technical' adoption *salicornia* (< Latin *salis* "salt" + *cornu* "horn") vs. the English agnominal (respicial and sacral) derived eponym, the 'opaque' *samphire* (< Saint Pierre)<sup>9</sup>. And let us finally refer to the common hereditary culture with the 'semi-technical' adaptation *óxido cuproso* vs. the 'lay' level *crocus of Venus* or to Anglo-Saxon culture with the Latin adaptation *salvelina* in Spanish vs. the Dickensian *Dolly Varden trout*.

#### 3.2.4.2.2 Alternative Anthroponyms

There are several possibilities, distributed into two groups or sections. In the first section, the change implies choosing an anthroponym belonging to the same N1. As a first subordinate option the L2 adds another N1 anthroponym to the one already given, as *Penrose diagram* and *diagrama de Penrose-Carter* in physics. The second one does the opposite, like *Calvin-Benson-Bassham cycle* and *ciclo de Calvin (Benson)* in botany. The third one chooses between two anthroponyms with the same referent. In electricity, the *Kelvin double bridge* is *punteo doble de Thomson* in Spanish and both anthroponyms refer to the same person, since William Thomson became Lord Kelvin in 1892 (example apud Maillot 1997: 211). Within the second section, the change takes place by substituting an N3 anthroponym present in the TL1 by an anthroponym stemming from a different N3, as with the cognominal *frangipani* (arguably derived from the Frangipani/Frangipane of the Italian nobility) by the nominal *plumeria* (from the French Charles Plumier) in botany.

<sup>9</sup> The taxonomic explanation is as follows: 'agnominal' (< Latin *agnomen*) because it is a personal and not a hereditary by-name, 'respicial' (< Latin *respicere* "to respect") because it is a title of respect and 'sacral' because it refers to a saint. It is etymologically 'opaque' like *galoshes* (< Late Latin *gallica* (*solea*) "Gallic shoes"), not 'translucid' like *cerium* (< goddess Ceres) nor 'transparent' like canary, that obviously relates to the Canary Islands (for the terminological analyses, vid. Calvo 2014 and 2015).

### 3.2.4.2.3 Controversial, Culturally Disputed Anthroponyms

As with the geonyms, we can recall some of the anthroponymic culturally-bound controversies in sciences. Provided the L2 does not belong to one of the two cultures in dispute<sup>10</sup>, there are two options:

a) to choose one of both, as with English *franklin* vs. French *statcoulomb* and Spanish *franklin* or English *Boyle's law* vs. French *loi de Mariotte* and Spanish *ley de Mariotte*

b) to synthesize them, like English Pott's fracture and French fracture de Dupuytren, but *fractura de Dupuytren* or *de Pott* in Spanish or Graves' disease in English, *Basedowsche Krankheit* in German and *enfermedad de Graves-Basedow* in Spanish.

### 3.2.4.2.4 Tabooed, Culturally Rejected Anthroponyms

We can also find examples of anthroponyms that are rejected by the N2, due to prestige motivations or not. As an instance of the first case, we have the disability which was baptised by Pierre Prévost, the Swiss philosopher and physician, as *daltonisme* in reference to the 18<sup>th</sup> century English chemist and physicist John Dalton who had both suffered and diagnosed it. English prefers to call it *colour blindness*, rejecting that association as offensive. As an instance of the second case, the rays that Wilhelm Roentgen called *X-Strahlen* (1895) because he did not know their identity, were nominally rebaptised (*Röntgenbild*, *Röntgentherapie*, etc.) in German to honour his memory, but retain the original nomenclature (*X-rays*, *rayos X*, and so on), in many European languages.

### 3.2.4.2.5 Denaturalised Anthroponyms

While it remains a rather uncommon occurrence within our catalogue of options, it can well happen that an anthroponym of the N2 culture is forsaken by that very culture in favour of an N3 one or even of a perfectly non-eponymous term. Thus, in the Spanish to English contrast, *Ulloa's ring* vs. *halo de Bouger* in the first case and *Malaspina glacier* vs. *glaciar somontano* in the second one

### 3.2.4.3 Criss-cross Eponymy: Geonyms for Anthroponyms or Viceversa

Less commonly, one type of eponym can be substituted by another one, like the English geonym *Inverness cape* and the Spanish adapted nominal anthroponym *macfarlán*. This is even possible when it 'affects' an N2 referent, as seen in the aeronautical geonym *Cuban eight* and the Spanish nominal anthroponym *Immelmann doble*. And finally, to bring our analysis to the close, we can observe this phenomenon in a variant denomination of the already-mentioned nominal anthroponym *Ulloa's ring/circle* and the Spanish geonym *espectro (de) Brocken*, most probably through French *espectre (de/du) Brocken* and ultimately from German *Brockengespenst*.

## 4 Conclusions

We have seen that the translation options can be divided into two large groupings: those that fall back upon the Graeco-Latin etymology and those that opt for the vulgar, be it their own native language or any non-Classical language. Anthroponyms are considered a separate category. From the point of view of frequency, chances are that the linguistic mediator will come across the 'pure' varieties: either Latin/Greek or native tongue instead. Resorting to the native tongue should not worry him if the translation is e.g. from/to German, since he knows that, within the 'lay' level, German will make use of the native vocabulary or of semantic adaptations. As for the 'technical' level, at least in medicine and in some natural sciences, German will certainly rely on the neo-Greek and/or neo-Latin nomenclature.

<sup>10</sup> Examples of culturally controversial eponyms abound in chemistry and the IUPAC's terminological wavering has been of little help, e.g. the derived nominal anthroponyms *kurchatovium* (USSR) vs. *rutherfordium* (USA) or *nielsbohrium* and *hahnium* versus the derived toponym *dubnium*.

The most important problem in the first grouping is that of adoption vs. adaptation, above all the morphological adaptation possibilities (e.g. plurals) in languages like German and English. But the choice of one or the other Classical language also represents a handicap, since it often depends on the (sub-)field of specialised knowledge and the differing orthographic and transliteration conventions can make the translator's work more bewildering.

Within the grouping of the vulgar tongues —apart from what already has been said about German, the 'lay' level of language and the oral medium of communication: and also independently of the language in question, but bearing in mind the options offered by the oral exchange of information among specialists— the statistically greater risks are the options that depend on the (sub-)specialised field of knowledge.

Eponymy, not only that of natural sciences and of the technical jargons, but also those that are found in human and social sciences like geography and history represent a real bait because of the 'real-estate' values inherent to the proper nouns and the —perhaps obvious— inertia to use the same proper nouns found in his own culture. For, indeed, culture, as well as historiographical tradition or political controversy, can seriously interfere with language transfer, above all if the proper noun belongs 'naturally' to a given language/culture and that language/culture, against all odds and forecasts, ignores or rejects it... the intermediary may not be able to react in time.

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