

Universal Terminology

CHAPTER 11: UNEVEN TERMS

This chapter is about any terms, which give problems at any level from their creation time to the final understanding by end users. An exhaustive descriptive approach is tentatively undertaken in order to demonstrate the cost of management of these terms as well as the lowering of the final quality of the terminology. This process has to be considered in the most global context of an international multilingual terminology, including its development, its maintenance and its long term evolution.

An inventory of uneven terms is created: terms are grouped into classes of problems. Each class will be illustrated by possibly several examples issued from different sources. The consequences resulting from their defaults will be emphasized in relation to the multiple usages of the terminology by different users in different contexts.

This document is the chapter 11 of the book Universal Terminology which presents a global documentation on the \mathbf{T}_{logy} .

Contents

11.1 About uneven terms	2
11.2 Classes of uneven terms	4
11.3 Syntactically ambiguous terms	6
11.4 Inventory of ambiguous terms	7
11.5 Log of updates	11
11.6 Credentials	11

11.1 About uneven terms

In general anatomists give little attention to the wording of terms and consider them simply as a sequence of characters to be edited by a secretary. This traditional approach was adequate as long as the size of the terminology was limited to a few thousands entries. Terminologia Anatomica in 1998 had some 7500 entries and this could be considered as an upper limit.

A modern terminology of anatomy accounts typically to more than 50'000 entries. And each entry may have synonyms and related terms, and the whole must be multiplied by the number of publication languages. The management of terms becomes a crucial and critical task, to which adequate tools and methods should be directed. The time of spreadsheets in 6 columns is over. A loose implementation limits the use of the terminology by computer programs and excludes automatic navigation by adequate tools.

It is evident that regular terms are easier to control than irregular terms. Therefore, the need to limit the number of uneven terms is legitimated. This chapter makes a significant inventory of such terms and gives proposals to lower their occurrences.

Independently, of the manpower necessary to the setup and the maintenance of a large terminology, the criteria of the quality of the terminology should be evoked. Hand controlled terms present a significant increase of number of errors compared to auto generated terms. The availability of parsers and language processing tools are of considerable importance for a today modern high quality terminology.

Several authors have examined the Terminologia Anatomica of 1998, and have published list of comments, controversial opinions and errors. The authors of the *T_{logy}* not necessarily endorse such lists of desideratas, but they are aware of the numerous hurdles on the way to a modern, clean and scientific terminology. Let enumerate below a few papers of interest on the present topic.

[Whitmore, 1999]

This paper is by the author of Terminologia Anatomica of 1998 and must be a first reading, before discussions and criticisms. It sets the decor in which this terminology appears.

[Rosse, 2001]

This paper is by the author of the Foundational Model of Anatomy. It focuses on the semantic of the terminology and points to some weaknesses of TA98 on a formal point of view, like the part-whole relationships which are implied rather than explicitly modeled. This early paper clearly positions Terminologia Anatomica and evokes its potential for further developments.

[Mareckova et al., 2001]

This paper considers TA98 and examines different occurrences of linguistic errors. It collects and comments numerous examples of errors of different types. The paper concludes on the need to incorporate linguistic experts when preparing a new version of the terminology.

[Kachlik et al., 2008]

This article is both an historical reference for the developments of anatomical terminologies and an actualized list of necessary changes and observed pitfalls. It provides valuable observations on the role of Latin in the terminology. It also discusses the needs which are different for anatomists and clinicians.

[Kachlik et al., 2015]

This article is a recent and complete summary of the status of TA98 and mentions the (weak) points on need of further discussions. It insists on the dual aspect of the field of education and the clinical medicine. It presents several proposals for further discussions.

Finally, a terminology is primarily dependant on the expertise of its authors. They were uniquely anatomists in the past, but for tomorrow, including linguists and computer scientists is no more than an option, it is a necessary condition. Multiple expertises and team working are now essential.

11.2 Classes of uneven terms

1	Syntactically ambiguous terms: terms which can be interpreted with two or more meanings due to an ambiguous syntax.
2	Distant noun adjective pairs: terms using a variant of the official syntax, without equivalent in other major languages.
3	Usage of words with multiple meanings: terms using words with multiple meanings for which the disambiguation does not lead to a unique solution, or need an expertise not available to casual users.
4	The genitive versus adjective dilemma: terms which are built either with a genitive expansion or with an adjective, when the other solution would be preferable.
5	Traditional term: terms issued from the tradition of the language, possibly largely accepted as such, but presenting an ambiguity of meaning.
6	Usage of prepositions: terms presenting a preposition, which is not part of the list of accepted prepositions. The usage of preposition is in discussion.
7	Usage of unexpected word categories: usage of adverbs is prohibited, usage of determiners or non qualitative adjectives is restricted.
8	Vague terms: terms with insufficient specificity, even if they are presently unique.
9	Duplicate terms: terms which are present two or more times in the entire terminology for their language, but limited to the official terms.
10	Eponyms: terms including a proper name, but limited to the official terms.
11	Usage of ordinals: terms with a ordinal number should preferably be replaced by specific words, when possible.
12	Usage of cardinals and invariants: terms with invariants should be avoided, when possible. At minima, they should be moved as official synonyms.
13	Usage of plural terms: terms at plural are normally avoided.
14	Usage of units of type set or paired set is recommended.
15	Usage of foreign words: terms presenting a mix of words from different languages (like a Latin word) should be avoided.
16	Desirability of synonyms: synonym terms should be limited in number.
17	Usage of abbreviations.

Table 11.1: 17 classes of uneven terms.

There is an infinite number of potential problems with the terms implied in a terminology and only an open list can be considered. This inventory is limited to the terms denoting a unit. Any derived term for the entities of the unit are not considered here, because they are systematically auto generated and consequently validated by this process. They are the terms for pairs, sets, paired sets, left and right members and genitive forms for expansion of other terms. The auto generation process is documented in another chapter.

A term is uneven in one or more languages but corresponding terms in different languages are not necessarily all uneven. The definition of universal terms and the auto translation in any language is potentially able to reach the ulti-

mate goal of absence of uneven terms. But it is admitted for any language that a percentage of uneven terms is acceptable. The present inventory documents the uneven terms and helps to decide about their acceptability.

The known classes of problems shown by uneven terms listed in table 11.1. Then the following sections of this chapter are each centered on one class, considered in details, with multiple examples from the \mathbf{T}_{logy} .

11.3 Syntactically ambiguous terms

When performing a syntax analysis of a term, whatever is the language, a unique syntax tree should be determined. In case of two or more valid syntax trees, the term is declared to be ambiguous. It means that the syntax alone does not permit to understand what is meant by this term; only additional semantic information of the domain of anatomy allows a final deciphering. Such situations exist in all languages. The main role of a terminology being the transfer of a precise and certified information to its users, ambiguous terms must be unconditionally discarded. Anyway such a situations is not frequent and this rule is rapidly applied, despite a few known terms would be replaced.

Ambiguous terms are detected by human search or by program. Such a program is call a parser of the language. When the parser successfully find a parse tree of the analyzed term, it suffices to declare this tree as wrong and the parser will continue its search; if it finds a second parse tree, the term is ambiguous. Human search is difficult and poorly successful if not accomplished by an expert of the language and the domain of anatomy. In the inventory below, the Latin terms are all analyzed by a Latin parser based on a Latin dictionary, documented elsewhere.

11.4 Inventory of ambiguous terms

Exhaustibility in this matter is not guaranteed, but even if ambiguous terms are not easy to detect, they bring so much problems in the management of the terminology, making them visible, that we can consider the inventory below as significant. It should be kept in mind that some examples can be repeated multiple times with light variations.

The following list of examples is temporarily not sorted on any criteria. Such an improvement must be done later.

<p>LA: <i>arcus pedis longitudinalis</i> EN: <i>longitudinal arch of foot</i> FR: <i>arche longitudinale du pied</i> ES: <i>arco longitudinal del pie</i> RU:</p>	<p style="text-align: right;">→TAH244</p> <p>The ambiguity is about the adjective longitudinalis: there is no way to know if we must understand arcus longitudinalis at nominative or pedis longitudinalis at genitive. The syntax provides no issue.</p>
<p>LA: <i>meatus nasi communis</i> EN: FR: ES: RU:</p>	<p style="text-align: right;">→TAH11254</p> <p>The ambiguity is about the adjective communis: there is no way to know if we must understand meatus communis at nominative or nasi communis at genitive. The syntax provides no issue, but the fact nasi communis is somewhat odd favours the true meaning of meatus communis.</p>
<p>LA: <i>sulcus sinus occipitalis</i> EN: FR: ES: RU:</p>	<p style="text-align: right;">→TAH485</p> <p>The ambiguity is about the adjective occipitalis: there is no way to know if we must understand sulcus occipitalis at nominative or sinus occipitalis at genitive. The syntax provides no issue.</p>

<p>LA: <i>fascia abdominis visceralis</i> EN: FR: ES: RU:</p>	<p style="text-align: right;">→TAH1902</p> <p>The ambiguity is about the adjective <i>visceralis</i>: there is no way to know if we must understand <i>fascia visceralis</i> at nominative or <i>abdominis visceralis</i> at genitive. The syntax provides no issue.</p>
<p>LA: <i>musculus flexor carpi radialis</i> EN: FR: ES: RU:</p>	<p style="text-align: right;">→TAH2007</p> <p>The ambiguity is about the adjective <i>radialis</i>: there is no way to know if we must understand <i>musculus flexor radialis</i> at nominative or <i>carpi radialis</i> at genitive. The syntax provides no issue. Multiple similar examples are present.</p>
<p>LA: <i>musculus transversus perinei superficialis</i> EN: FR: ES: RU:</p>	<p style="text-align: right;">→TAH3429</p> <p>The ambiguity is about the adjective <i>superficialis</i>: there is no way to know if we must understand <i>musculus superficialis</i> at nominative or <i>perinei superficialis</i> at genitive. The syntax provides no issue.</p>
<p>LA: <i>sinus trunci pulmonalis</i> EN: <i>sinuses of pulmonary trunk</i> FR: <i>sinus du tronc pulmonaire</i> ES: RU:</p>	<p style="text-align: right;">→TAH3727</p> <p>The plural of <i>sinus</i> is not visible in Latin and French: there are 3 such sinuses. Only the formal term is able to solve this ambiguity in any language.</p>
<p>LA: <i>valvula foraminis ovalis</i> EN: <i>valvule of foramen ovale</i> FR: <i>valvule du foramen ovale</i> ES: <i>válvula del foramen oval</i> RU:</p>	<p style="text-align: right;">→TAH3685</p> <p>The English term is a mix of Latin and English. The text <i>foramen ovale</i> is not translated in English and it appears as a nominative form, despite it is in this term a genitive. The other languages are regular.</p>
<p>LA: <i>arcus labiorum inferior</i> EN: <i>inferior arch of lips</i> FR: <i>arche inférieure des lèvres</i> ES: RU:</p>	<p style="text-align: right;">→TAH15657</p> <p>This is a typical Latin term with an adjective not qualifying the preceding noun! Such a construction is part of the traditional Latin. Here the adjective <i>inferior</i> qualify the <i>arcus</i> and certainly not the genitive plural immediately in front of it. Not a problem for an expert in Latin, but ...</p>

<p>LA: <i>ramus septi nasi</i> EN: <i>nasal septal branch</i> FR: <i>rameau de la cloison du nez</i> ES: RU:</p>	<p style="text-align: right;">→ TAH3834</p> <p>This term illustrates the absence of clear rules for the use of nouns versus adjectives when qualifying an entity. The problem is general in most languages. Here, Latin and French are using two nouns (septum and nose), while the English translation is with two adjectives.</p>
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<p>LA: <i>fascia iliopsoatica</i> EN: <i>iliopsoas fascia</i> FR: <i>fascia iliopsoat-ique</i> ES: RU:</p>	<p style="text-align: right;">→ TAH1907</p> <p>Anteriorly, the Latin term was <i>fascia iliopsoas</i>, syntactically not really acceptable, the genitive should be preferred, giving <i>fascia iliopsoatis</i> or <i>fascia musculi iliopsoatis</i>. But the adjectival form is to be preferred, like other languages. The English term could preferably be translated to <i>iliopsoatic fascia</i>.</p>
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<p>LA: <i>canalis pudendalis</i> EN: <i>pudental canal</i> FR: <i>canal honteux</i> ES: <i>conducto pudendo</i> RU:</p>	<p style="text-align: right;">→ TAH3440</p> <p>In order to be consistent with the rest of the terminology, the Latin adjective <i>pudendus</i> should be preferred, giving <i>canalis pudendus</i>.</p>
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11.5 Log of updates

30 Mar 2022 Standardisation of the file as a chapter.

10 Jan 2022 Creation of the file.

11.6 Credentials

This document is part of the book "Universal Terminology" accompanying the website on Terminologia Anatomica. It expresses the vision of the authors of the \mathbf{T}_{logy} about the foundations of the science of ontology, supporting the here presented terminology. Despite it is as exact as possible, close to the reality of the database of the terminology and the surrounding software, approximations, errors and ambiguities are possible and should be considered as independent of their willingness and intents.

Identified comments about the content of the website and its presentation are welcome. An appropriate answer will be given when pertinent.

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