Parallèles 37(2) October 2025

Options in the diaphasic intralingual translation of multi-word medical terms: Functionalist and Peircean perspectives combined

Aage Hill-Madsen
Aalborg University

Abstract

Situated at the crossroads between Intralingual Translation Studies and terminological research, this article investigates the reformulation of English multi-word medical terms into layman's expressions. Theoretically, the investigation combines a functionalist approach to (the study of) translation with Meylaerts and Marais' (2023) Peircean translation theory. Based on the functionalist emphasis on the centrality of *choice* in translation, the investigation charts the micro-level translational *options*, i.e. the micro-level strategies, at the intralingual translator's disposal, deducible from a sample of around 250 paired source-target items. From Meylaerts and Marais (2023) is adopted the notion of *orientation*, which holds that translation may be oriented towards the *representamen* (the vehicle or 'surface' of the source sign), the *interpretant* (meaning) or the *object* (the 'external reality' referred to by the sign). The investigation charts how two basic options, viz. *representamen* and *interpretant* translation, underpin a number of more specific options. At the *representamen* level, a number of strategies familiar from Translation Studies are identified, such as literal translation, synonymy and superordination. At the *interpretant* level, the options primarily consist in the specification of circumstantial elements and semantic participants. In future research, it remains to be investigated whether these findings apply to terminologies beyond medicine.

Keywords

Diaphasic intralingual translation, multi-word terms, medicine, translational options

CONTACT

Aage Hill-Madsen, hill@ikl.aau.dk, Aalborg University, Kroghstraede 3, DK-Aalborg E, Denmark

 DOI:10.17462/para.2025.02.04

1. Introduction

Situated at the cross-roads between philology and Translation Studies, this article investigates the translation of English medical terminology into popularized wordings, also English, aimed at non-experts. These translations, in fact, combine *intra-* and *interlingual* aspects: They are *intralingual* in so far as source terms and target expressions alike belong to a modern English lexicon, albeit very different sections of it. They feature an *interlingual* aspect also, in all those cases where source term components originate in either Latin or Greek. Given the language-internal aspect of the translations, the investigation is situated within a relatively new and expanding branch of descriptive Translation Studies, which is the subfield concerned with *intralingual translation* (see, e.g., Pillière & Albachten, 2024), ultimately originating in Jakobson's (1959) tripartite translation typology, where the intralingual category was first introduced. The present article investigates intralingual translation across a registerial, or *diaphasic*, boundary (see Petrilli, 2003; Gottlieb 2008; 2018; Hill-Madsen, 2022; Hill-Madsen, 2024a), viz. between a specialized and a lay register, in the present case within the domain of healthcare. As a continuation of Hill-Madsen (in press), which focused on the diaphasic intralingual translation (henceforth *Diaph-intra*) of Greek-derived single-word terms only, the present study is concerned with multi-word terms of both Latin and Greek origin. Apart from Hill-Madsen (in press), the investigation builds on Hill-Madsen (2015) and Hill-Madsen and Pilegaard (2019), both of which represent rather limited studies of the popularization of English medical terms. These studies note how the diaphasic intralingual translations are often based on a morphemic approach, taking the individual lexical morphemes of these terms as their basic source unit. However, closer examination uncovers a more complex situation, and so the present study represents a more comprehensive and focused investigation of the Diaph-intra of (specifically) multi-word medical terms, with the specific aim of charting the translational mechanisms involved. For theoretical underpinnings, the investigation will be based on functionalist translation theory and functional linguistics, as well as certain key tenets in the semiotic theory of C. S. Peirce. The theoretical foundations will be outlined in Section 2 and methods and materials in Section 3. Findings and sample analyses will be presented in Section 4.

2. Theoretical foundations: Conceptual intersections

2.1. Foundations in Peircean semiotic theory: Representamen vs. interpretant translation

As noted above, one of the theoretical points of departure for the present inquiry is C. S. Peirce's semiotic theory, and it adopts Meylaerts and Marais' (2023) assumption that translations can be variously oriented towards different aspects of the source sign (the sign vehicle, the meaning or the referent). The present study thus ultimately relies on C. S. Peirce's model of semiosis, in which three different aspects or elements are brought together in a triadic sign relationship. Peirce's famous definition is the following:

> A sign, or representamen, is something which stands to somebody for something in some respect or capacity. It addresses somebody, that is, creates in the mind of that person an equivalent sign, or perhaps a more developed sign. That sign which it creates I call the interpretant of the first sign. The sign stands for something, its object. (Peirce, 1932, 2.228)

The *representamen*, in other words, is the sign vehicle or expression; the *object* is the referent of the sign, i.e. the thing or phenomenon in 'external reality' being referred to or reflected by the sign vehicle, and the *interpretant* is what is usually synonymized as *meaning* as a cognitive or conceptual phenomenon. For present purposes, the importance of Peirce's sign theory is, in the words of Meylaerts and Marais (2023), that

> [...] translation is a process that can originate in either the representamen, the object or the interpretant, or any relationship between them, to various degrees. [...] The implication is [...] [not] that we reduce the process of translation to any one of the three relata in the sign. [Rather,] empirical translation processes start with or are focused, to a greater or lesser extent, on one of these relata, only to include all three in a dynamic relationship. (pp. 5-6)

Briefly told, in the classification chosen by Meylaerts and Marais (2023) for their *Handbook of Translation Theory and Concepts*, *representamen* translation is equated with translation that takes its point of departure in "linguistic material" (p. 3), with 'ordinary', interlingual translation as the most obvious example. *Object* translation (with phenomena in 'external reality' as its source material) is instanced in *biotranslation* or *biosemiotic* translation (e.g. Kull & Torop, 2003; Kull, 2023). While not relevant to the present investigation, a (highly specialized) example of *object* translation, taken from the field of molecular genetics, is the translation of an mRNA sequence of nucleotides (the building blocks of DNA) as source material into a sequence of amino acids (proteins) as target material (example taken from Kull, 2023). In the third category, *interpretant* translation, the source material consists in concepts (Meylaerts & Marais, 2023, p. 3), instantiated in various kinds of *epistemic translation* (see Bennett, 2023), i.e. translation between knowledge systems, as in the popularization of specialized knowledge. Significant to present purposes are the two concepts of *representamen* and *interpretant* translation, in that the Diaph-intra of multi-word medical terms can be seen to involve a mixture of the two types, to varying degrees: As the findings in Section 4 will show, certain terms are translated through a wholly *representamen*-oriented approach, meaning that semantic components on the target side can be traced back to distinct components of the source term as *representamen*, i.e. to distinct words and morphemes constituting the source term 'surface'. In other terms, certain components of meaning on the target side are not traceable back to source *representamen* elements but reflect (parts of) the conceptual content of the multi-word source term as a whole.

2.2. Underpinnings in functionalist translation theory and linguistics: The centrality of choice

The very notion of translational 'orientation' or 'approach' introduced in Subsection 2.1 above (*representamen* and *interpretant* orientation, specifically) reflects a key premise derived from functionalist translation theory (Vermeer & Reiss, 1984; Vermeer, 1996; Vermeer, 2000; Nord, 1997), which is the centrality of *choice* in translation. The tenets of Vermeer's, Reiss' and Nord's *Skopos* theory are well-known: The three translation scholars prescriptively emphasize the purpose and context, including target audience, of the future target text as the proper determinant of translators' decisions in the production of a target text. Since a multitude of different purposes are imaginable for any given translation task, different purposes will, and *should*, manifest themselves in different choices being made by the translator in the actual wording of the target text (when the TT is a verbal-language text). In this regard, *Skopos* theory parallels functionalist language theory, especially the systemic-functional variety (SFL), whose descriptions of language are equally premised on the notion of *choice* (see, e.g., Halliday, 2013; Hasan, 2013; Halliday & Matthiessen, 2014). Actual language production is sequential choice-making, which implies the presence of paradigmatically organized sets of *options* from which selections must be made (between, e.g., a declarative and an interrogative clause, between modalizing a verb or not, between different lexical synonyms etc.). No further reference to the linguistic categories specific to SFL will be made here, however. The theoretical notions to be drawn on are simply those of *choice* and (*paradigmatic sets of*) *options*: If these underpin language production as such, it is assumed here that they apply to translation as well (see also

Hill-Madsen, 2024b), given that translation is (simply) the specific type of language production that is carried out under the restraints of prior semiosis (the source text). Accordingly, what the present investigation is really concerned with in mapping 'translational mechanisms' (see introductory section) is identifying the translational *options* facing the (diaphasic intralingual) translator of multi-word medical terms. These options will be charted through an inductive approach to the data (see next section): In analytically determining the actual decisions made by the translators, it is possible to infer the paradigmatic sets of options from which the choices have been made.

3. Methods and materials

3.1. Source of data and selection criterion

The investigation relies on data exclusively sourced from one single open-access document titled *Medical Terms Simplifier*, published by the European Medicines Agency (EMA) (2022). The EMA is the EU's medicines regulator, responsible for authorizing medicinal products for marketing in membership countries. The *Simplifier* document is not an actual text, but really a kind of glossary of specialized medical terms, each accompanied by a simplified, non-specialized counterpart (EMA, 2022, p. 3). Being primarily designed for EMA text producers, the *Simplifier* provides (intralingual) translations of medical terminology into layman's terms, e.g. *adipocytes → fat cells*. The *Simplifier's* translations are thus ready-made expressions that may be used and inserted directly by writers into actual texts aimed at non-expert readerships, especially instructional and informational materials such as *Patient Information Leaflets* (PILs) and the *European Public Assessment Report – Summary for the Public*, also published by the EMA (see also Hill-Madsen, in press). From the *Simplifier* document, altogether 246 source-target pairs (specialized source terms coupled with their diaphasic intralingual translations) were selected. This exact number was arrived at as a result of the single selection criterion applied, which concerned the composition of the source terms: As outlined in the introductory section, the investigation is focused on the Diaph-intra of *multi-word* medical terms, and so all multi-word source terms, and those only, were selected.

As in Hill-Madsen (in press), the advantage of using the EMA *Simplifier* document as the source of sampling was that, in terms of the well-known *type-token*[1] distinction, all target items are *types* that are likely to be instantiated as tokens across a number of specific lay-oriented texts published by the EMA. A different sampling method, such as the compilation of source-target pairs from a corpus of 50 or 100 actual texts such as PILs, would have been less likely to yield an exhaustive list of (multi-word source term) *types*. Certain less frequent source-target pair types would most probably not have been captured in this way. By selecting data from the EMA *Simplifier*, the inclusion of all multi-word source terms as *types* was guaranteed, irrespective of their frequency of instantiation in actual lay-oriented texts.

3.2. Contextual characteristics and etymology of source terms

While, as noted above, the target items in the *Simplifier* list are intended for use in lay-oriented texts, the source items are, according to the authors of the document, medical terms originating in two particular specialized medical text types, viz. summaries of medicinal product characteristics and assessment reports relating to such products (EMA, 2022, p. 1), both of

[1] *Type-token* corresponds to the Saussurian distinction between *langue* and *parole*, i.e. language as an abstract system of lexical and grammatical units/items (*types*) vs. the concrete instantiation of such units (*tokens*) in actual language use, i.e. in individual texts. Thus, in the preceding sentence, the word *language* is one *type* that is instantiated in two *tokens*. In Peircean terms, *types* would be classified as *symbolic legisigns*. It is, however, beyond the scope of the present study to pursue the Peircean terminology any further.

which are aimed at medical experts such as physicians and pharmacists. Regarding the more specific semantic domain of the terms, the authors point out that the list "concentrates on side effects and similar terms [...]" (Ibid.). It should be noted, however, that the list also includes certain anatomical and biochemical terms and terms for certain types of medical treatment.

Regarding the etymology of the source terms, virtually all are either 1) Greek or 2) Latin in origin or, in many cases, 3) a mixture of the two languages, i.e. typically with one word of Greek origin and one of Latin. 4) Certain terms, though clearly a minority, also feature a word (in rare cases more than one) of Germanic (Anglo-Saxon) origin. Examples of category no. 1 (terms wholly of Greek origin) are *cholestatic hepatitis* (from *χολή* (*kholḗ*, 'bile'), *στάσις* (*stásis*) = 'arrest', *ἧπαρ* (*hêpar*, 'liver') and the nominalizing suffix *-ῖτις* (*-îtis*, 'pertaining to'), specifically used to indicate a pathological condition)[2] and *peritoneal dialysis* (from *περιτόναιον* (*peritónaion*), an anatomical term referring to the membrane that covers the lower intestines, and *διάλυσις* (*diálysis*) = literally 'separation', 'dissolution' or 'discharge'. 2) Wholly Latin-derived terms are, e.g., *aqueous humour* (from *aqua* = 'water' and *humor* = 'moisture') and *lumbar vertebra* (from *lumbus* = 'loin' and *vertebra* = 'joint'). An example of 3) a mixture of the two languages is the term *cerebral oedema* (from Latin *cerebrum* = 'brain', and Greek *οἴδημα* (*oìdema* = 'swelling'), and another is *cervical dystonia* (from Latin *cervix* = literally 'neck', but here specifically referring to the lower part of the uterus, and Greek *δυστονία* = 'lack of tone/tension'). Finally, an instance of 4) terms containing one or several words of Germanic origin is *indwelling intravenous cannula*. Where *indwelling* is an Anglo-Saxon word, the other two are both Latin (*intravenous* = 'inside the veins' and *cannula* = 'tubes'). The term as a whole refers to tubes that are inserted into a vein for a clinical purpose.

It may be noted that, despite the Greek and Latin origin of many of the individual words constituting the source terms, many of these words are in fact relatively modern *coinages*, belonging to so-called Neo-Latin, i.e., a vocabulary associated with the field of medicine in particular. This lexicon consists of word coinages from either Latin or Latinized Greek morphemes (Powell, 2006). A good example is the above-mentioned *dystonia*, which is formed from the three Greek morphemes *dys-*, *ton-* and *-ia.* According to the Oxford English Dictionary, the term was coined by the German physician H. Oppenheimer in 1911 as *Dystonie* and adopted into Medical English the following year (OED, n. d.). What should also be noted, however, is that, given the study's main focus on the diaphasic *translation* of the terms, very specific details regarding the exact historical origin of source words (such as the year of coinage, as in the case of *dystonia*) are not considered relevant for the analysis of the individual terms to be considered in the Findings section. Only the language of origin (Greek, Latin or English) will be mentioned, where relevant.

4. Findings

In accordance with the functionalist underpinnings set out in Section 2, the semiotic and translational mechanisms involved in diaphasic translation of multi-word medical terms will here be represented as *interrelated sets of options*. For the modelling of such sets or paradigms, SFL supplies the useful notation shown in Fig. 1 below, to be applied throughout this article. The logic of the notation is the following: Square brackets ('[') mean 'or', indicating different options in a paradigmatic set, while curly brackets ('{') mean 'and', indicating parallel sets of options. In parallel sets, a choice must be made within each set simultaneously. Capitalized words to the left of a bracket (square or curly) indicate a 'headline' or superordinate kind of phenomenon of which the options are more specific subcategories.

[2] In the analyses, etymological information regarding specific Latin and Greek source term components is taken from Glare (2002) and Montanari (2015).

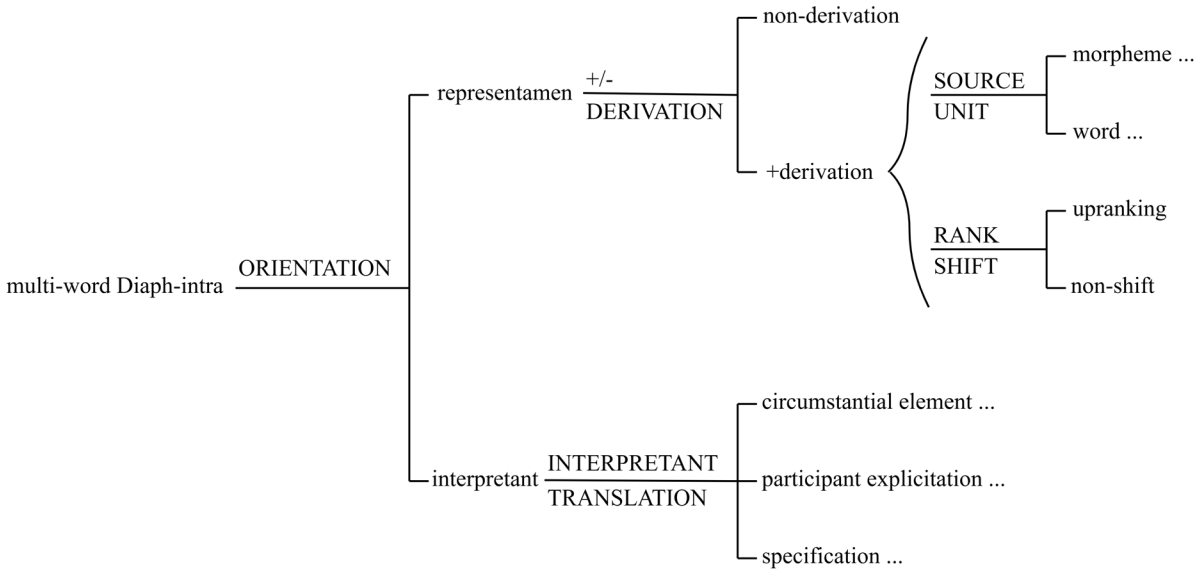

Figure 1. The most general sets of options in the Diaph-intra of multi-word medical terms

To be read from left to right, the diagram in Fig. 1 represents the initial set of options (technically termed a *system*) introduced in Subsection 2.1 above, which is the distinction between [representamen] and [interpretant][3] translation, and it depicts, as further sets of options (further so-called *steps in delicacy*), the more specific implications of adopting either of the two types of orientation. Options issuing from the feature [representamen] will be detailed in Subsection 4.1 and those following on [interpretant] will be commented on in 4.2.

4.1. [Representamen] translation

As Fig. 1 showed, if the option [representamen] is selected in ORIENTATION, a new set of options opens up, named *+/−DERIVATION*. This set is concerned with the very question of whether or not a given source *representamen* element (a morpheme or a word – see below) has a distinct counterpart on the target side (cf. Hill-Madsen, 2020), i.e. whether a target element has been derived from the source item or not. Example (1) below is an instance of [non-derivation]:

> Example (1)
> ST: *myeloproliferative diseases* →
> TT: *a slow-growing cancer with> production of too many blood cells of a particular type that can cause blockages*[4]

The source morpheme *myel-* (from Greek *μυελός* (*muelós*, 'marrow')), which refers to the site of blood production in the body (viz. the bone marrow), does not have any counterpart in the TT. In the case of the two source *representamen* elements *-proliferative* and *diseases*, on the other hand, [+derivation] has been selected: *-proliferative* has a corresponding target entity in *production of too many blood cells*, and *diseases* has a match in *cancer* (the more specific question of *how* such examples of *representamen* translation may be characterized will be dealt with later).

[3] In the running text of the article, names of options from a paradigmatic set will be surrounded by square brackets (a tradition from SFL). The square brackets around a term indicate that the term has a place in one of the diagrammed paradigms.

[4] Page references for the individual examples are given in the appendix.

4.1.1. Options following on [+derivation]

As Fig. 1 above showed, [+derivation] gives rise to two simultaneous sets of options (indicated by the curly bracket), viz. SOURCE UNIT and RANK SHIFT. Translational source units may be either morphemes or words, and they may, in the 'journey' to the target side, either maintain their grammatical rank[5] ([non-shift]) or be made to occupy a higher rank ([upranking)]. Both options in SOURCE UNIT give rise to further, more delicate options:

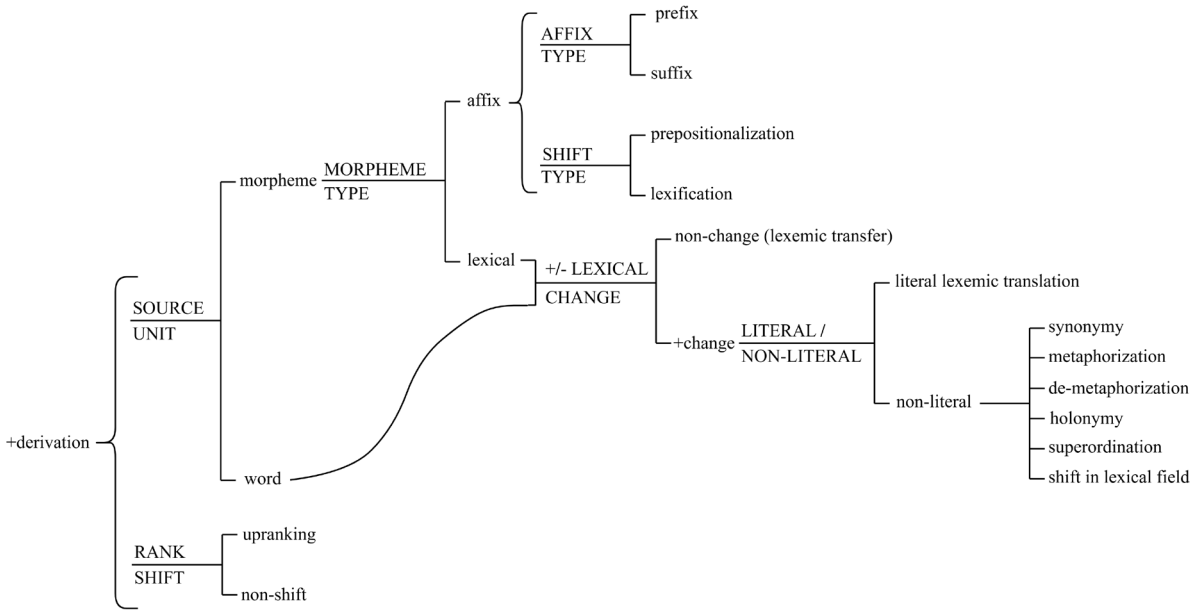

Figure 2. [Representamen] translation graphed from the entry condition [+derivation]

The set of options named MORPHEME TYPE in Fig. 2 reflects the fact that source morphemes may be either lexical ones or affixes. The options following on [affix] will be detailed in Subsection 4.1.5. Fig. 2 further shows that if a source unit is [lexical] (either a lexical morpheme or a word), two further options open up in a set named +/−LEXICAL CHANGE.[6] The two options are [non-change] vs. [+change], referring to the possibility of transferring an item unchanged vs. replacing it with a different *representamen* unit on the target side. The latter option ([+change]) covers two subcategories, viz [literal lexemic translation] (see also Hill-Madsen, in press) and [non-literal], of which the [non-literal] category is a superordinate one comprising a number of more specific subcategories (to be detailed in Subsection 4.1.4).

Subsection 4.1.2 below details the manifestation of the individual options in SOURCE UNIT, including combinations with options in RANK SHIFT.

4.1.2. The option [non-change (lexemic transfer)]

As indicated above, [non-change] or *lexemic transfer* refers to the 'copy-pasting' of a source lexeme (realized either at morpheme or word level), without any kind of translation, into the target expression. The term *lexemic transfer* emphasizes that the source-target correspondence consists in the identity of *lexeme* between source and target, but not necessarily of grammatical unit (morpheme/word/phrase).

In terms of etymology, by far the majority of source lexemes undergoing lexemic transfer are

[5] The grammatical ranks (or 'syntactic levels') recognized by SFL (and adopted here) are *clause* – *phrase* – *word* – *morpheme* (see, e.g., Halliday & Matthiessen, 2014).

[6] As Fig. 2 shows, the system +/−LEXICAL CHANGE has a so-called *disjoined* entry condition. In other words, if a source unit is *either* a lexical morpheme *or* a word (words being in all cases lexical when they feature as components of multi-word terms), then the options represented in +/−LEXICAL CHANGE open up.

ultimately Latin in origin and only a smaller proportion Greek. However, the Latin-derived items are in a number of cases ones that have been in common use in English since the Middle Ages (cf. Baugh & Cable, 2002, ch. 7) and so are unlikely to be seen as conspicuously 'Latinate' by the average, native speaker of English. Thus, the whole group of lexemes to which [non-change/lexemic transfer] applies represent all three etymological categories: Core-vocabulary English items (which also include items of Germanic origin), Latinate items and Greek items.[7]

As regards the first etymological category of source terms, it is their membership of the core, everyday vocabulary of English that may be assumed to explain why they have been transferred to the target side without any further kind of translational change. The group comprises items that tend to be non-specific in meaning or refer to some kind of superordinate phenomenon, e.g. *substance, disease, procedure, treatment, disorder, sens(ation), reaction, urgency, medicine* and *pain*, and certain items that refer to some of the major organs or body parts, such as *heart, spine, vessels, liver* and *muscles*. A few items referring to more specific disorders/events that may be considered part of the 'knowledge repository' of the average adult also belong in this category, e.g. *cancer, tumour, ulcer* and *stroke*. On the source side, the majority of items in this group occupy word rank (i.e. feature as independent words), and the grammatical rank is in most cases (34 out of 44) preserved across the source-target divide ([non-shift] in the paradigm of RANK SHIFT). Examples are:

(2) *ectopic <u>pregnancy</u> → <u>pregnancy</u> developing outside the womb*
(3) *pericardial <u>disease</u> → <u>disease</u> of the membrane around the heart*

Only in a minority of cases is a core-vocabulary source item a morpheme, undergoing a syntactic rank shift to word on the target side, as in:

(4) *muscle <u>relax</u>ants →*
medicines used to <u>relax</u> muscles <including muscles that help the patient to breathe>

Example (4) is a case where the ST lexical morpheme (*relax-*) forms part of a word with specialized status, viz. *relaxant*, which refers to a specific subgroup of medicinal products ("an agent that reduces tension and strain, particularly in muscles" (Law & Martin, 2020d)). Upranked to word level on the target side, however, and stripped of the ST desinence *-ant*, the lexeme (*relax*) becomes recognizable as a core-vocabulary item.

In the second etymological subgroup, i.e. the (more 'conspicuously') Latinate items, some cases of lexemic transfer involve the same type of rank shift as in Example (4), i.e. morpheme to word. Examples are:

(5) *<u>ovar</u>ian hyperstimulation syndrome →*
when the <u>ovaries</u> over-respond to treatment <causing nausea, weight gain and diarrhoea>
(6) *<u>bil</u>iary cirrhosis → liver damage caused by build-up of <u>bile</u>*

[7] It may need to be pointed out that the question of etymology has not been incorporated in the paradigmatic representation of translational *options* because it should not be. This is because etymology is a feature of the source terms that is independent of what may be 'done' to them in translation. The paradigmatic representations are concerned with the *translational* options only.

On the source side, the Latin origin of the lexemes is accentuated by the adjectival forms of the words encapsulating the lexemes, realized in the adjectival desinences *-an* (from Latin *-anus*) and *-ary* (from *-arius*). Only when transferred to the target side and changed into nouns do the items become recognizable as words that must be considered well-known to the average, adult, native speaker of English. Other cases, where even the word on the target side may not necessarily be known to average speakers are pairs such as (7) *prostatic → the prostate*, (8) *cervical → the cervix*, and (9) *macular → macula*. As the examples reflect, most of the lexemes in the 'Latinate' source category refer to organs or body parts.

In the final etymological category (Greek-derived source lexemes), items undergoing lexemic transfer ([non-change]) tend to be specialized terms on the source side. While in most cases the surface form of the term (i.e. the term as *representamen*) can be presumed to be known to the average, adult speaker of English, the precise, specialized *meaning* of the terms is less likely to be fully known to non-specialists. This is the type of 'migration' of specialized terms into non-specialized registers that is known as *de-terminologization* (Meyer & MacIntosh, 2000). Both morpheme and word rank on the source side are represented. Examples are:

(10) *chromosomal translocation →*
when parts of genes are rearranged between two chromosomes
(11) *peritoneal dialysis →*
type of dialysis <involving circulating fluid into the abdomen and then allowing the fluid to flow out>

4.1.3. The option [literal lexemic translation]

In the set of options named LITERAL/NON-LITERAL (see Fig. 2), [literal lexemic translation (*LLT*)] applies to source lexemes of Greek or Latin origin that are actually *replaced by* an English lexeme, viz. the literal equivalent (cf. Chesterman, 1997), such as the Latin source item *ped-* (nominative case: *pes*) translated into English *foot*. Etymologically, a little more than half the source items undergoing LLT are Latin (45 lexemes – morphemes as well as words – as *types* in the corpus) and the other slightly smaller group are Greek-derived (34 items). Across the two etymological categories, two general semantic groupings (not exhaustive) are recognizable, of which one concerns organs or 'body parts' and the other may be headlined as '(pertaining to) physiological processes' or 'events related to the body'. Examples of the former grouping are:

(12) *cervical* (Latin, from *cervix*) → *neck*
(13) *pulmon-* (Latin, from *pulmo* → *lung*
(14) *dermat-* (Greek, from *δέρμα* (*derma*)) → *skin*
(15) *kerat-* (Greek, from *κέρας* (*kéras*) → *the cornea*.

Examples of 'physiological processes' or 'events related to the body' are:

(16) *nasal congestion* (Latin, from *congestio*), → *blocked nose*
(17) *febrile neutropenia* (Latin, from *febris*) → *low levels of white blood cells with fever*
(18) *orthostatic hypotension* (Greek, from *στατικός* (*statikós,* 'related to standing') →
feeling dizzy or lightheaded on standing or sitting up because of a drop in blood pressure
(19) *tardive dyskinesia* (Greek, from *κίνησις* (*kínēsis*, 'movement') →
uncontrolled movements of the face and jaw

Whereas, as already indicated, the two etymological groups of source lexemes fall into more or less the same kinds of semantic subtypes, there are clear differences with regard to their rank: Latin source lexemes undergoing LLT occupy morpheme vs. word rank in more or less equal numbers (31 occurrences of [morpheme] and 25 of [word] rank). Latin lexical morphemes undergo rank shift 'upwards' to word or phrase rank in the translation whereas word-rank source items generally maintain rank:

(20) *sublingual tablet → a tablet which is placed under the tongue where it dissolves*
(21) *digital ulcers → sores on the fingers and toes*

In Example (20), inside the source word *sublingual, lingu-* is a lexical morpheme that has been expanded into the independent word *tongue* and combined with a determiner (*the*) on the target side. In (21), the ST word *ulcers* is translated into the TT word *sores* in the target expression.

Greek lexemes to which [literal lexemic translation] applies, on the other hand, almost inevitably occupy source morpheme rank on the source side, as in Examples (22) and (23) below. Like the Latin-derived morphemes, they are inevitably shifted to the rank of word or phrase in the translation. Only in a small minority of cases (8 instances) is the rank on the source side that of word, with this rank maintained in the translation in all instances (see Example 24).

(22) *cholestatic hepatitis → build-up of bile leading to inflammation of the liver*
(23) *lipodystrophy syndrome → changes in the distribution of body fat*
(24) *ovarian cysts → sacs of fluid within the ovaries*

The reason for the relatively consistent statistics (43 instances of morpheme-to-word rank shift out of 51 instances of [LLT] with a Greek source lexeme) is that a majority of originally Greek lexemes in medical terms are so-called *confixes*, in the terminology of Donalies (2000), which means that they are lexical morphemes that only occur in combinations with other morphemes, lexical or grammatical, when they form part of specialized terms (so-called *neoclassical compounds*; see Bauer, 1998; Lüdeling, 2006). Thus, in Example (23), the word *lipodystrophy* consists of altogether four different Greek-derived morphemes, of which two are lexical (*lip-* = 'fat', and *-troph-* = 'nourish') and two (*-dys-* and *-y*) are grammatical. In English, on the other hand, the lowest grammatical rank open to lexemes is in most cases word rank (cf. Halliday, 2004), which makes the source-to-target 'move' from morpheme to word (or phrase) rank inevitable.

4.1.4. [non-literal] lexical changes

As Fig. 2 showed, the option [non-literal] in the set named LITERAL/NON-LITERAL is the gateway to a set of more specific lexical changes. For convenience, this subset is reproduced in Fig. 3 below:

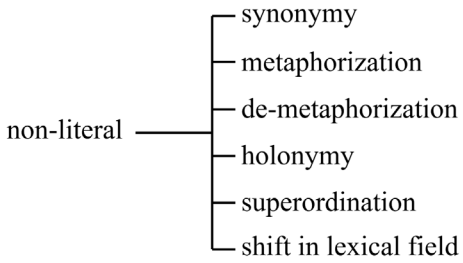

Figure 3. Subcategories of non-literal lexemic changes

The [non-literal] subcategories will be exemplified one by one in the following, but, for reasons of space, their combination with options in RANK SHIFT (see Fig. 2) will only be commented on to a limited extent.

[Synonymy]:
Synonymy is the shift type defined by Chesterman (1997, p. 102) as the one which "selects not the "obvious" equivalent but a synonym or near-synonym for it [...]." Fourteen instances have been identified in the corpus, of which most feature a core-vocabulary item, or at least one that can be taken to be well-known to ordinary, adult speakers of English, on both sides of the source-target divide, e.g. (25) *complicated → difficult* and (26) *impair- → reduce*. One case of a Greek-derived source lexeme translated by means of a synonym of the literal equivalent is *-plastic* (from *πλαστικός* (*plastikós*), ultimately from the verb *πλάσσω* (*plássō*, literally 'to mold', or 'to form'). This lexeme occurs in the source term (27) *aplastic anaemia*, which is translated as *produc-* in the target expression *when bone marrow stops producing new blood cells produce* in one instance and as *make* in the following pair:

(28) *myelodysplastic syndromes →*
when the bone marrow does not make enough healthy blood cells or platelets.[8]

[Metaphorization]:
Metaphorization is instantiated only six times in the corpus, with the same metaphor occurring in three of these cases. This repeated metaphor is the following, involving a well-known military trope about the body's immune system:

(29) *primary immunodeficiency disorder → when body defences are reduced from birth*

The three other target expression metaphors are: (30) *radiofrequency* translated as radio waves, (31) *corneal opacity* translated as *clouding of the cornea*, and (32) *photosensitising agent* translated as *a medicine 'switched on' by <a special type of> light* […] .

[De-metaphorization]:
De-metaphorization occurs only three times in the corpus, of which one is (33) *bolus injection* (with *bolus* ultimately derived from Greek *βῶλος* (*bôlos*, 'clod, lump')) rendered non-metaphorically in the target expression as *a full dose injected in one go.*

[Holonymy]:
As a linguistic concept, *holonymy* refers to a part-whole relation between two lexical items (Lyons,1977; Murphy, 2006). For present purposes, then, [holonymy] (as a translational option) is here used to refer to a 'movement' from the 'part' on the source side to the 'whole' on the target side. Cases of [holonymy] in the corpus involve relations between body parts, of which one example out of seven altogether is:

(34) *pleuritic pain → a type of chest pain*

In (34), the source lexemic morpheme *pleur-* is derived from Latin *pleura*, which refers to a membrane that envelops the lungs (Law & Martin, 2020e). TT *chest* is thus the 'whole' which encompasses the *pleura* among other 'component parts'.

[8] It may be noted that the two haematological disorders referred to by the source terms (*aplastic anaemia* and *myelodysplastic syndrome*, respectively) are not the same (see Law & Martin, 2020a; 2020c), although the two diaphasic translations may create that impression.

[Particularization] and [superordination]:
Two types of microstrategies have been identified that are here termed *particularization* and *superordination* (cf. Molina & Hurtado-Albir, 2002; Lu et al., 2024), with the former referring to the 'movement' from a lexeme with a more general sense to one (or several) with a more specific sense, and the latter referring to the opposite 'movement', i.e. from 'more specific' to 'more general'. As in Hill-Madsen (in press), the two strategies are akin to the well-known sense relation types *hyponymy* and *hyperonymy* (see Lyons, 1977), but may not in all cases registered be completely in accordance with these two lexical-semantic concepts in their strict sense, i.e. the 'taxonomic' relation between two lexical items as 'class' and 'subclass' (as in *flower – rose*) or the reverse.[9] Examples of *particularization* are:

(35) *peripheral arterial <u>disease</u> → <u>reduced blood flow</u> in arteries of the legs and arms*

As in Example (35), the source item in connection with [particularization] is typically a word with the general sense of 'medical condition', such as *disease, disorder* or other item, for which the corresponding target item specifies the more precise nature of the 'problem' (*reduced blood flow* in (35)). By rendering the 'problem' in more tangible terms, the strategy may also be conceived of as 'concretization'.

With [particularization] instantiated 14 times in the corpus and [superordination] 23 times, the two are the third- and fourth-most frequent microstrategy types, after *lexemic transfer* and *literal lexemic translation*. It is fully to be expected of [superordination] to be more frequent in the corpus than its opposite, given that it enables more specialized, and semantically highly specific, lexical items to be replaced by target items that are either confined to a non-specialized register or shared by the specialized medical register with a vocabulary known to lay readers. An example is:

(36) *<u>capillary</u> leak syndrome → leakage of fluid from <u>blood vessels</u> …*

Thus, in (36), the specialized source term *capillaries* (referring specifically to "an extremely narrow [type of] blood vessel, approximately 5–20 μm in diameter" (Law & Martin, 2020b)) is replaced on the target side with the general term *blood vessels*, thereby avoiding the specialized term, which cannot be assumed to be commonly known to lay readers.

[Shift in lexical field]:
The last subtype of [non-literal] lexemic change is here termed *shift in lexical field* (see also Hill-Madsen, in press), to refer to a type of translation that establishes a relatively distant semantic relation between source and target item, viz. one that is far from literal equivalence and not characterizable in terms of the well-known lexical sense relations like those above (*synonymy*, *superordination*, etc.) either. Rather, the source-target relation consists in a mere semantic relatedness through co-belonging to the same lexical field. The option is relatively frequently instantiated in the corpus (45 occurrences). Examples are:

(37) *a<u>vascul</u>ar necrosis → death of bone tissue due to interruption of <u>blood supply</u>*
(38) *bone (mineral) <u>dens</u>ity → a measure of <u>how strong</u> the bones are*

In certain cases, such as Example (37) and (38) above, it *is* actually possible to pinpoint the

[9] Chesterman (1997, p. 102), whose inventory of shift types actually includes one termed *hyponymy*, similarly appears to use the term in a broader sense than the strictly 'taxonomic' one (the relation between a 'class' and a 'subclass').

more specific nature of the semantic relatedness: In (37) the relation between ST *-vascul-* ('vessel', i.e. referring to blood vessels) and TT *blood supply* is one of 'contiguity', given that blood supply in the organism happens via blood vessels. In (38), the relation is one of 'cause-and-effect', rather, with 'density' to be seen as a factor producing 'strength' (*how strong*). However, the exact nature of the relation is in many cases elusive, and so no subclassification of this type of lexical change has been attempted.

4.1.5. Translation of affixes

As previously mentioned, the paradigmatic set named MORPHEME TYPE in Fig. 2 features two options: [lexical] and [affix]. The latter gives rise to two more delicate sets of options, reproduced in Fig. 4 below for convenience:

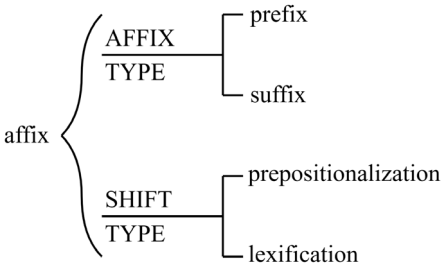

Figure 4. Options following on the entry condition [affix]

Many of the terms in the corpus contain either Latin or Greek prefixes, as in terms such as (39) *intraspinal analgesic*, and/or suffixes, also Latin or Greek, such as (40) *avascular necrosis.* In many cases, such affixes act as source units in the corpus, i.e. have a distinct representation on the target side.

[prefix]:

In the diaphasic translation of prefixes, somewhat different patterns are observable in the two etymological categories (Greek and Latin). Thus, virtually all prefixes in the Latin category undergo *prepositionalization*, which is possible because the prefixes in these cases have their origins in independent prepositions, as in the following examples:

(41) *extracorporeal membrane oxygenation →*
a technique to oxygenate the blood outside the body …
(42) *percutaneous endoscopic gastrostomy →*
a feeding tube inserted through the skin into the stomach

In most cases with these Latin-derived items, the direct English prepositional equivalent is chosen in the translation, as in (41) *extra-* → *outside*, and (42) *per-* → *through*.

Greek prefixes, on the other hand, have more diverse origins. Most originate in prepositions also, such as *e*(*c*)- (literally 'out of' or 'outside'), as in (43) *ectopic pregnancy* → *pregnancy developing outside the womb*, and *peri-* (literally 'around', as in (44) *periocular infections* → *infections around the eyes*. As examples (43) and (44) show, some of the Greek prefixes originating in prepositions are translated by means of *prepositionalization* (like the Latin ones), whereas others are not. This in particular pertains to the two prefixes *hypo-* (literally 'under') and *hyper-* (literally 'over'), which are consistently *lexified*, rather than *prepositionalized* in the translation. In the present corpus, *hypo-* is lexified as *drop* ((45) *hypotension* → *a drop in blood pressure*), and *hyper-* is variously lexified as as *high*, *high levels of*, *excessive*, *too much* and *raised*, e.g. (46) *ocular hypertension* → *raised pressure in the eye*. Other Greek prefixes

that do not stem from prepositions are *ortho-* (from the adjective *ὀρθός,* (*orthós*), literally 'straight'), as in *orthostatic hypotension → feeling dizzy or lightheaded on standing or sitting up because of a drop in blood pressure* (already brought as Example 18), and *auto-* (from the pronoun *αὐτός* (*autós*, literally 'self')), as in (47) *autoimmune disease → a disease caused by the body's own defence system attacking normal tissue*. [Lexification] is also employed in the translation of the two relatively frequent prefixes *a-* and *dys-*, both of which are 'born' prefixes, which means that in Ancient Greek they only occur as such and do not originate in independent words such as prepositions. The former (*a*(*n*)-, the so-called *privative a-*, which expresses negation, is variously lexified as *stops / blocks / interrupts / very brief loss of*. The other 'born' prefix, *dys-* (expressing 'difficulty' or 'malfunction'), is lexified as *abnormal / not … enough / uncontrolled / inability*.

[suffixes]:
With a few exceptions, Latin-derived suffixes are adjective-forming ones such as *lumbar*, *pulmonary*, *postmenopausal, febrile, sensory, ovarian* and *percutaneous*. These are in most cases prepositionalized in the translation: *-al*, which occurs in altogether ten different source items, is thus translated as *in / to / around / on / of*, as in (48) *pleural effusion → fluid around the lungs*. Only one Greek adjective-forming suffix is registered in the corpus, viz. *-ic* (with instantiations in 17 different source tokens in the corpus, however), which is also prepositionalized in the majority of cases, e.g.: (49) *nasogastric tube → a tube through the nose to the stomach*). The majority of Greek-derived suffixes are nominalizing ones, such as *-sis* (plural *-ses*), *-itis*, *-cy*, *-ia, -y* and *-oma*. In most cases, they are lexified in the translation, typically by means of a lexical item denoting a specific type of pathological state, such as *condition, complication, inflammation, excess, build-up, need* and *cancer*.

4.2. [Interpretant] translation

As noted in the introductory section, many of the EMA *Simplifier*'s diaphasic intralingual translations contain items that cannot be traced back to any specific lexical or grammatical morpheme or word in the source term. Such target items must be traced to components of meaning that are only inherent in the multi-word term as a whole, but not traceable to any specific ST word or morpheme. They are, in other words, instances of [interpretant] translation, as defined in Subsection 2.1. A typical example is (50) *pulmonary artery → the blood vessel that leads from the heart to the lungs*, in which the TT string *that leads from the heart* cannot be traced back to any *representamen* elements on the source side but must be analyzed as 'additional information' that is part of the definition of the pulmonary artery as an anatomical phenomenon. Three main subtypes of [interpretant] translation have been identified in the corpus, with each of the three and their more specific subcategories to be detailed in the subsections below:

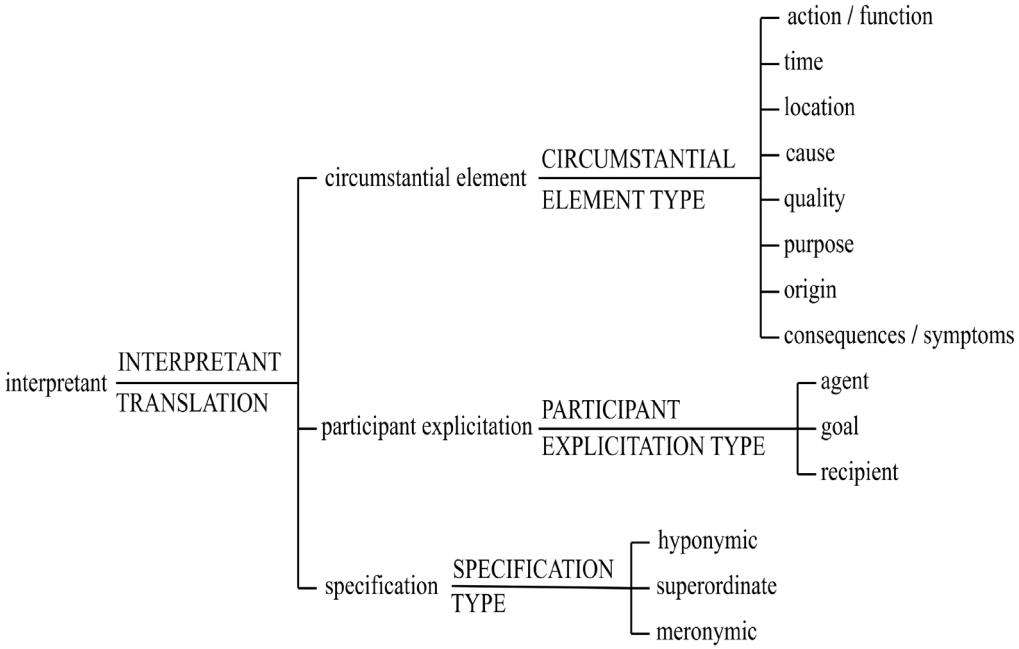

Figure 5. Subcategories of [interpretant] translation

4.2.1. Subcategories of [circumstantial element]

As Fig. 5 above shows, the first subcategory of INTERPRETANT TRANSLATION, viz. the option named [circumstantial element], comprises subtypes that largely (though not completely) match the well-known semantic categories of adverbial meaning, i.e. [location], [cause], [time], etc.).[10] Thus, the type of information supplied in Example (50) above was 'locative', specifying the position of the artery in the body. The most prominent semantic categories identified (apart from the 'locative' category) will be exemplified below.

[Action/function]:

(51) *cardiac arrest → heart stops beating*
(52) *cerebrovascular disease → disease of the blood vessels supplying the brain*

In (51), the TT item *beating* specifies the *action* of the heart, whereas in (52) the TT item *supplying the brain* may be interpreted more specifically as information about the *function* of the blood vessels in question.

[Quality]:

(53) *post-herpetic neuralgia → long-lasting nerve burning pain that may occur after shingles*

TT *long-lasting* and *burning* are both qualities characterizing the *nerve … pain* (ST *neur-* + *-algia*) that are nowhere indicated in any surface components of the source term. Denoting 'qualities', such TT items tend to take the form of adjectives in premodifying position in the TT noun phrases (which is the predominant grammatical rank of TT expressions).

[Cause]:

(54) *peripheral oedema → swelling especially of the ankles and feet <due to fluid retention>*

[10] As the following examples will show, however, the target items are not necessarily adverbial in terms of *grammatical* function.

The underlined TT string indicates the cause of the swelling (ST *oedema*) in the lower extremities, which is the build-up of fluid. It may be noted that the TT element of 'interpretant' translation is surrounded by the sign '*<*', which is frequently used in the EMA *simplifier* document to indicate to users (the EMA's text producers) that this is an 'optional' element that may be inserted or omitted in accordance with the specific textual circumstances of the individual text producer's text in which the diaphasic translation is to be incorporated.

[Consequences/symptoms]:

(55) *haemolytic anaemia →*
excessive breakdown of red blood cells <causing tiredness and pale skin>

(56) *oral mucositis →*
inflammation of the lining in the mouth <ranging from soreness and redness to severe ulceration>

The opposite of 'cause' is of course 'consequence', as manifested in the *tiredness and pale skin* which *haemolytic anaemia* gives rise to (Example 55). In some cases, such circumstances are clearly to be interpreted as symptoms, as in the *soreness, redness* and *severe ulceration* (Example 56), of which the underlying biomedical cause is *inflammation … in the mouth*.

4.2.2. Subcategories of [participant explicitation]

The second option in INTERPRETANT TRANSLATION, [participant explicitation], refers to cases where, as the name of the option reflects, a 'participant' is explicitly inserted in the TT item. *Participant* refers to a type of semantic role in verb-argument structures, or what is known as semantic *figures* in SFL (see Halliday & Matthiessen, 1999). A *figure* is a semantic configuration of a type of process/activity with its concomitant 'participants', i.e. types of semantic roles, such as 'Agent', 'Goal' or 'Recipient', that are associated with the process type. According to Halliday and Matthiessen (1999, 2014), semantic *figures* have their most 'natural' (or, in SF parlance, *congruent*) grammatical realization in clauses, i.e. in S–V–O structures, with 'participants' realized in the grammatical subject and object and actions/processes in the verb. However, naturally occurring language – specialized registers of language use in particular – can often be seen to defy this 'principle', with figures being grammatically realized in, or *downranked to* (noun) phrases rather than clauses (see Halliday & Matthiessen, 1999; 2014). This, precisely, is the case with many of the terms in the present corpus, one example being a term (realized in a noun phrase) like *radiofrequency ablation*, which refers to the process of using radio waves to destroy cancer cells. The semantic process-participant configuration is partially recognizable in the term in itself, with *radiofrequency* (= radio waves) representing the Agent and *ablation* (literally 'removal', from Latin *ab-ferre* = 'take/move away') representing the process. What enables the semantic figure to be realized in a phrase rather than in a clause is the possibility (inherited from Latin in this case) of nominalizing the process: By adding the nominalization suffix *-ion* to the (Latin supine) stem *-lat-*, a verb noun, or *nomen actionis*, is created which is able to function as Head of the noun phrase. However, though detectable in the source term, the semantic figure is incomplete, with only the Agent and the Process recognizable. The socalled *Goal*, i.e. the semantic entity that is directly affected by the process/action, is missing, but made explicit on the target side of the diaphasic translation: (57) *radiofrequency ablation → destroying cancer cells with heat generated from radio waves*. In other cases, the semantic entity made explicit is the Agent of the figure, as in:

(58) *avascular necrosis → death of bone tissue due to interruption of blood supply*

Bone tissue is here specified as the element that dies, i.e. is the agent of the process of dying, due to interruption etc. It may be noted, however, that this is a case where the grammatical rank has been preserved from source to target, which means that the semantic figure is realized in a noun phrase on both sides and has not been 'upranked' to a clause-level realization on the target side, as was the case in (57).

The final type of semantic 'participant' that may be explicitated is the Recipient, as in (59) below, where *the patient* is specified as the receiver of the treatment in question:

(59) *enzyme replacement therapy →*
therapy in which <u>the patient</u> is provided the enzyme that is lacking

4.2.3. Subcategories of [specification]

The third and final option in INTERPRETANT TRANSLATION, [specification], covers the insertion of further information concerning a target microunit (typically a word) that *is* derived from a source *representamen* element. The specification may be either [hyponymic], [superordinate] or [meronymic]. One example of each subcategory are the following:

(60) [hyponymic]: *acid regurgitation → <u>stomach</u> acid flowing up into the mouth*
(61) [superordinate]: *oestrogen-receptor negative tumour →*
where the cancer cells do not have receptors for <u>the hormone</u> oestrogen on their surface
(62) [meronymic]: *cervical dystonia →*
twisting and pulling of the neck and head caused by abnormal tightening of neck <u>muscles</u>

In Example (60), the insertion of the TT item *stomach* specifies the (sub)type of *acid* in question, which is not represented by any *representamen* in the ST. Example (61) is the opposite case, with TT *hormone* indicating the superordinate category to which *oestrogen* belongs. Finally, in (62), while TT *neck* is a literal lexemic translation of ST *cervic-*, the TT item *muscles* specifies the relevant *part* of the neck that may be affected by *dystonia* (= 'abnormal tightening').

5. Summing up

Applying a combined functionalist and Peircean approach, this article has charted the translational options specifically related to the diaphasic intralingual translation of multi-word medical terms. Options were identified at two different levels: *Representamen* and *interpretant. Representamen* translation was shown to involve strategies such as *derivation*, where source elements have distinct counterparts in the target language, and *non-derivation*, where they do not. Further options include lexical changes, such as *literal lexemic translation*, *synonymy*, *metaphorization*, and *shifts in lexical field*. The study has also examined the translation of prefixes and suffixes, noting patterns in how Latin and Greek affixes are handled. Two translational options were identified, viz. *prepositionalization* and *lexification*, both of which may be assumed to be specific to terminological Diaph-intra. Changes in grammatical rank were identified as a distinct type of *representamen*-level shift, always consisting in the 'movement' of an item up the rank scale, typically from morpheme to word rank. An overview of all *representamen*-level options is represented in Fig. 6 below, which is a reproduction of the network illustration in Fig. 2, but with one example for each option inserted:

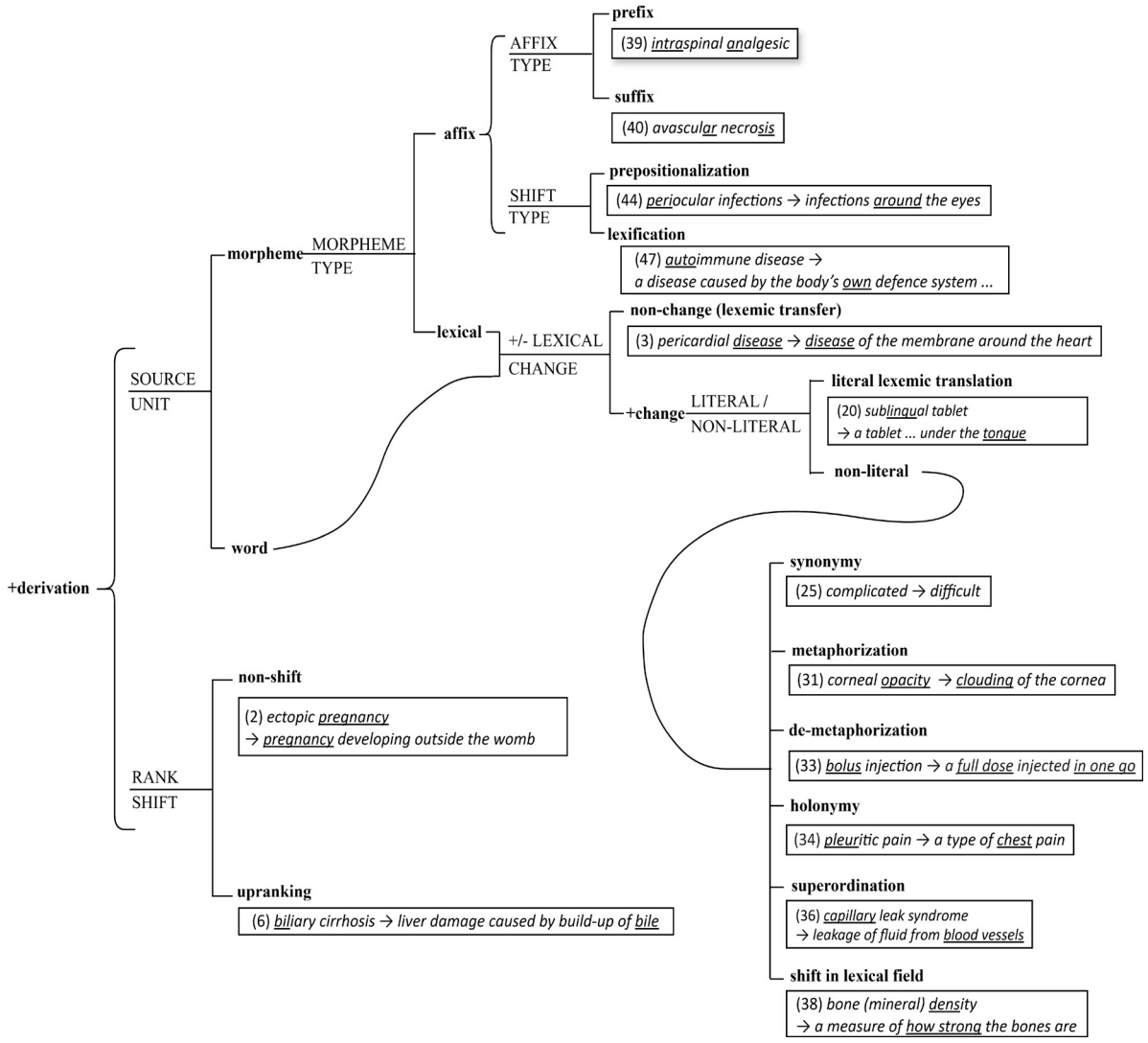

Figure 6. Options in [representamen] translation with examples

Interpretant translation, on the other hand, was shown to involve the addition of information on the target side that is not explicitly present in the source term but inherent in its overall meaning. This includes circumstantial elements (e.g., location, cause, consequences), participant explicitation (e.g., of the agent or recipient of an action), and various forms of specification (hyponymic, superordinate and meronymic). Fig. 7 below is a reproduction of Fig. 5, providing an overview with examples inserted:

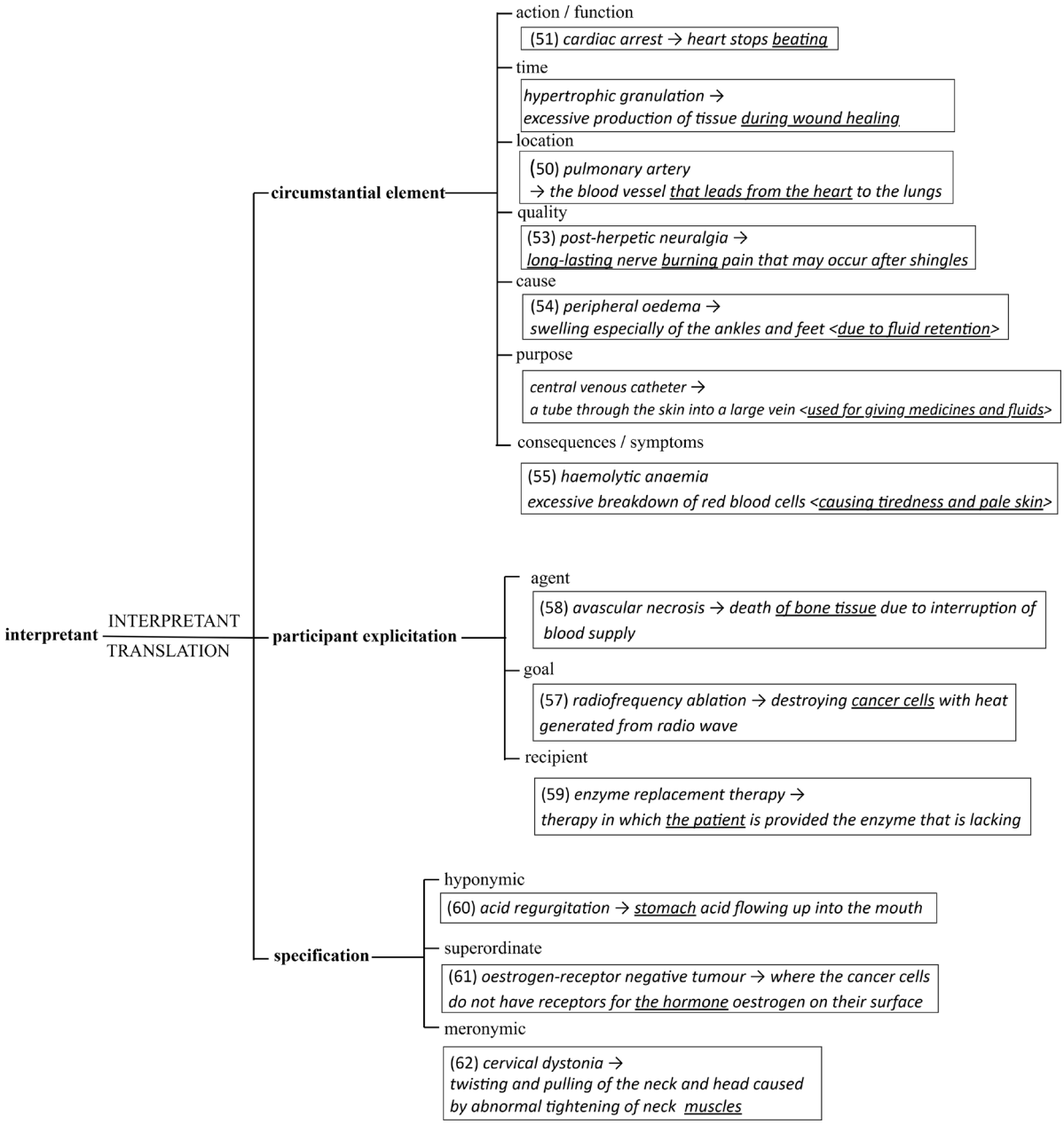

Figure 7. Options in [interpretant] translation with examples

Overall, the study's findings highlight the complexity and variety of strategies involved in translating multi-word medical terms for lay audiences, thus contributing to a deeper understanding of diaphasic intralingual translation. It should be emphasized, however, that the findings are not necessarily generalizable beyond the Diaph-intra of *medical* terminology. Given the particular nature of this terminology – the fact that, as previously noted, many medical terms are composed of *confixes* which are in many cases individually translatable – the intralingual translation options relevant to other domain-specific terminologies (law, engineering, finance, etc.) with different etymological and syntactic characteristics may well be very different. That, however, is a question for future research.

6. References

Bauer, L. (1998). Is there a class of neoclassical compounds, and if so is it productive? *Linguistics, 36*(3), 403-422. https://doi.org/10.1515/ling.1998.36.3.403

Baugh, A. C. & Cable, T. (2002). *A History of the English Language* (5th edition). Routledge.

Bennett, K. (2023). Approaches to knowledge translation. In R. Meylaerts, & C. Marais (Eds.), *The Routledge Handbook of Translation Theory and Concepts* (pp. 443-462). Routledge.

Chesterman, A. (1997). *Memes of Translation: The spread of ideas in translation theory*. John Benjamins.

Donalies, E. (2000). Das Konfix. Zur Definition einer zentralen Einheit der deutschen Wortbildung. *Deutsche Sprache, 2*, 144-159.

European Medicines Agency. (2022). *Medical Terms Simplifier.* https://www.ema.europa.eu/en/documents/other/ema-medical-terms-simplifier_en.pdf

Glare, P. G. W. (2002). *Oxford Latin dictionary*. Clarendon Press.

Gottlieb, H. (2008). Multidimensional translation. In A. Schjoldager, H. Gottlieb & I. Klitgård (Eds.), *Understanding translation* (pp. 39-66). Academica.

Gottlieb, H. (2018). Semiotics and translation. In K. Malmkjær (Ed.), *The Routledge Handbook of Translation Studies and Linguistics* (pp. 45-63). Routledge.

Halliday, M. A. K., & Matthiessen, C. M. I. M. (1999). *Construing Experience through Meaning: A Language-based Approach to Cognition*. Cassell.

Halliday, M. A. K. (2013). Meaning as choice. In L. Fontaine, T. Bartlett & G. O'Grady (Eds.), *Systemic Functional Linguistics: Exploring choice* (pp. 15-36). Cambridge University Press.

Halliday, M. A. K., & Matthiessen, C. M. I. M. (2014). *Halliday's Introduction to Functional Grammar* (4th edition). Routledge.

Halliday, M. A. K.. (2004). *Lexicology*. In M. A. K.. Halliday & C. Yallop (Eds.), *Lexicology: A short introduction*. Continuum.

Hasan, R. (2013). Choice, system, realisation: Describing language as meaning potential. In L. Fontaine, T. Bartlett & G. O'Grady (Eds.), *Systemic Functional Linguistics: Exploring Choice* (pp. 269-299). Equinox.

Hill-Madsen, A. (2015). Lexical Strategies in Intralingual Translation between Registers. *Hermes – Journal of Language and Communication in Business, 54*, 85–105. https://doi.org/10.7146/hjlcb.v27i54.22949

Hill-Madsen, A. (2020). SFL and Descriptive Translation Studies: Systemic-functional grammar as a framework for the analysis of shifts in translation. *Globe: A Journal of Language, Culture and Communication*, *10*, 143–169. https://doi.org/10.5278/ojs.globe.v10i.5883

Hill-Madsen, A. (2022). Transformational strategies in diaphasic translation: three case studies. *Perspectives – Studies in Translation Theory and Practice, 30*(4), 643–661. https://doi.org/10.1080/0907676X.2021.1953085

Hill-Madsen, A. (2024a). A typology of the various aspects of diaphasic intralingual translation – a systemic-functional approach. In L. Pillière, & Ö. B. Albachten (Eds.), *The Routledge Handbook of Intralingual Translation* (pp. 196-216). Routledge.

Hill-Madsen, A. (2024b). Intralingual translation in didactic practice: five case studies. *Semiotica, 257,* 49–79. https://doi.org/10.1515/sem-2022-0097

Hill-Madsen, A. (in press). Diaphasic intralingual translation of neoclassical compounds in the field of medicine: Micro- and macrostrategies. *Across Languages and Cultures*.

Hill-Madsen, A., & Pilegaard, M. (2019). Variable scope for popularization of specialized terminology: The case of medico-pharmaceutical terms. *Fachsprache – Journal of Specialized Communication, 41*(1-2), 22–40. https://doi.org/10.24989/fs.v41i1-2.1623

Jakobson, R. (1959). On linguistic aspects of translation. In R. A. Brower (Ed.), *On Translation*. Harvard University Press.

Kull, K. (2023). Biosemiotic approaches. In R. Meylaerts, & C. Marais (Eds.), *The Routledge Handbook of Translation Theory and Concepts* (pp. 77-93). Routledge.

Kull, K., & Torop, P. (2003). Biotranslation: Translation between Umwelten. In S. Petrilli (Ed.), *Translation, Translation* (pp. 315-328). Rodopi.

Law, J. & Martin, E. (2020a). Aplastic anaemia. *Concise Medical Dictionary*. https://www.oxfordreference.com/display/10.1093/acref/9780198836612.001.0001/acref-9780198836612-e-400?rskey=HQ0tje&result=3

Law, J. & Martin, E. (2020b). Capillary. *Concise Medical Dictionary*. https://www.oxfordreference.com/display/10.1093/acref/9780198836612.001.0001/acref-9780198836612-e-1442?rskey=a8L8sb&result=1

Law, J. & Martin, E. (2020c). Myelodysplastic syndrome. *Concise Medical Dictionary*. https://www.oxfordreference.com/display/10.1093/acref/9780198836612.001.0001/acref-9780198836612-e-13549?rskey=wTjYI7&result=1

Law, J. & Martin, E. (2020d). Relaxant. *Concise Medical Dictionary*. https://www.oxfordreference.com/display/10.1093/acref/9780198836612.001.0001/acref-9780198836612-e-8691?rskey=OrAPj9&result=1

Law, J. & Martin, E. (2020e). Pleura. *Concise Medical Dictionary*. https://www.oxfordreference.com/display/10.1093/acref/9780198836612.001.0001/acref-9780198836612-e-7926?rskey=6MHPrG&result=1

Lu, H., Hao, X., & Zhang, Y. (2024). Popularization and scientization in terminology translation: A case study of interlingual terminological shifts in the Chinese-English translation of San Ti (Three Body). *Terminology. International Journal of Theoretical and Applied Issues in Specialized Communication, 30*(2), 1-35. https://doi.org/10.1075/term.23015.lu

Lüdeling, A. (2006). Neoclassical compounding. In K. Brown (Ed.), *Encyclopedia of Language and Linguistics* (pp. 580-582). Elsevier.

Lyons, J. (1977). *Semantics*. Cambridge University Press.

Meyer, I., & MacIntosh, K. (2000). When terms move into our everyday lives: An overview of de-terminologization. *Terminology. International Journal of Theoretical and Applied Issues in Specialized Communication, 6*(1), 111-138. https://doi.org/10.1075/term.6.1.07mey

Meylaerts, R., & Marais, C. (Eds.). (2023). *The Routledge Handbook of Translation Theory and Concepts*. Routledge.

Molina, L., & Hurtado-Albir, A. (2002). Translation Techniques Revisited: A Dynamic and Functionalist Approach. *Meta – Journal Des Traducteurs, 47*(4), 498-512. https://doi.org/10.7202/008033ar

Montanari, F. (2015). *The Brill Dictionary of Ancient Greek*. Brill.

Murphy, M. L. (2006). Meronymy. In K. Brown (Ed.), *Encyclopedia of Language and Linguistics* (pp. 13-15). Elsevier.

Nord, C. (1997). *Translating as a Purposeful Activity*. St. Jerome.

Oxford English Dictionary (n.d.). Dystonia. https://www.oed.com/search/dictionary/?scope=Entries&q=dystonia

Peirce, C. S. (1932). *Collected Papers of Charles Sanders Peirce*, Vol. 2 (A. W. Burks, C. Hartshorne & P. Weiss, Eds.). Harvard University Press.

Petrilli, S. (2003). Translation and semiosis. Introduction. In S. Petrilli (Ed.), *Translation Translation* (pp. 17-38). Rodopi.

Pillière, L., & Albachten, Ö. B. (Eds.). (2024). *The Routledge Handbook of Intralingual Translation*. Routledge.

Powell, J. (2006). Latin. In K. Brown (Ed.), *Encyclopedia of Language and Linguistics* (pp. 719-722). Elsevier.

Reiß, K., & Vermeer, H. J. (1984). *Grundlegung einer allgemeinen Translationstheorie*. Max Niemeyer Verlag.

Vermeer, H. J. (2000). Skopos and commission in translational action. In L. Venuti (Ed.), *The Translation Studies Reader* (pp. 221-232). Routledge.

Vermeer, H. J. (1996). *A skopos theory of translation (Some arguments for and against)*. TexTconText.

7. Appendix: Page references for examples

Example no.	Page no. in the EMA *Simplifer*
1	55
2	26
3	65
4	54
5	62
6	11
7	11
8	17
9	59
10	18
11	24
12	17

13	30
14	23
15	46
16	56
17	30
18	42
19	80
20	79
21	83
22	18
23	48
24	62
25	44
26	73
27	4
28	54
29	43
30	2
31	20
32	67
33	13
34	68
35	65
36	15
37	10
38	13
39	5
40	10
41	29
42	64
43	26
44	65
45	41
46	59
47	10
48	68

49	56
50	71
51	16
52	17
53	68
54	65
55	35
56	61
57	71
58	10
59	28
60	2
61	60
62	18