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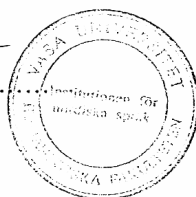
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## **Neologisms in LSP of Greek/Latin origin and their translation from English/German into Greek**

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The creation of neologisms in science and technology which derives from the need to name new concepts that take the form of new lexical entities is accomplished either through a totally new lexical entity or through terms borrowed from other languages, such as Greek, Latin and French (Sager 1990: 79)<sup>1</sup>. Thus, a neologism which until recently was regarded as "a meaningless word coined by a psychotic" according to Webster's Third New International Dictionary (1966), and is absent from classical linguists such as Bloomfield (1933), Harris (1951) and Lyons (1977), has developed to a word recently created or borrowed, a new meaning of an older word, i.e. a semantic shift, "a lexical unit perceived as recent by language users" (Rey, 1970 in: Rey 1995:64)<sup>2</sup>. In other words, a neologism may comprise one of the following: a) new meanings in new lexical units, i.e. new lexemes for new concepts; b) new meanings or 'semantic fillings'<sup>3</sup> in previously existing lexical units; and c) new lexical units for already existing concepts.

### **Different aspects of Greek/Latin neologisms**

The study of neologisms is well documented from a linguistic point of view, e.g. their morphosyntactic features<sup>4</sup>. Apart from the linguistic point of view explaining the constituent elements of a neologism there is the invisible aspect of the psychological and sociological motivations, which have not yet been examined on a satisfactory level. On the communicative level, every creation of a neologism is strongly associated with an individual situation, with a particular language community and the use of it in particular

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<sup>1</sup> In both cases, the creation of new terms applies mainly to the English language.

<sup>2</sup> On the other hand, this means that a neologism stops being a neologism when people begin to get used to it. In order to speak about neologisms, it is thus meaningful to refer to them according to the date of their creation or formation and to speak for example of "neologisms of the 90s".

<sup>3</sup> 'semantische Auffüllungen' according to Kalverkämper (1998:315).

<sup>4</sup> We must add here that more and more syntactic and stylistic phenomena in specialist communication are being treated in our days (Schröder 1997:17). Apart from the point of view of linguistics, the language of science has been studied mostly in sociology and philosophy (Gadamer, Wittgenstein, Foucault, Bachelard, Piaget, Kuhn).

situations. The communicative aspect of a neologism is important to translation, for the translator must be aware of the function of the neologisms in a specific language situation in order to render the equivalent term in the TL. So, special communication must be regarded as a social phenomenon where the situation, the subject, the intention of communication and the communication partners vary (Kvam 1997:4). If we consider language as having a specific social skopos or as a 'language for a certain purpose', LSP is special communication with 'specific purposes' (Kvam 1997:13).

When examining the communicative aspect the question that arises is why languages such as Greek and Latin still have the power to inspire and motivate languages such as English, German and French to create new words or to adopt and give new meanings to older Greek and Latin words. For example the confixes, i.e. the words or parts of words deriving from Ancient Greek and Latin are united with other constituents of other languages. The result is the description of new notions, objects, cultural trends or scientific achievements. The wealth of Greek and Latin is used in modern technology, e.g. *modem* (= *modulator*+*demodulator*) while, lately, their combination with the dynamism of other languages has led to a very strong and productive result, not only in the classical fields of medicine and biology but also in denoting modern notions such as *cyberspace* and *e-mail*. Derivation is another way to create subject-specific neologisms. Here, "Greek and Latin are fully employed in English and provide a complex system of fine distinctions" (Gledhill 2000:21). Another advantage of the use of Ancient Greek and Latin is that they are dead languages and, consequently, stable, thus permitting a limitation of polysemy and a greater clarity (Sager 1990:93). So, according to Wittgenstein, the meaning of LSP terms is guaranteed by a controllable use of the word and regularity in the use of the word; this regularity must be open to inter-subjective inspection<sup>5</sup> and it seems that the use of Greek/Latin neologisms satisfies this regularity to a high degree. Another trait of LSP terminology is that as in every word or term formation use is made of existing words or terms, so Greek and Latin have the advantage of contributing to a potential lexical economy (Sager 1990:93). For reasons of linguistic economy, the majority of neologisms are created by already existing linguistic material (Schippan 1987:258). As a pragmatic aspect of the use of Greek and Latin we may mention that special subject groups can rely on these two languages as the terms they use belong to the special subject languages, which allow them to confirm, augment or modify their knowledge (Sager 1990:102). A good example for the constant or 'recycled' use of Greek and Latin in LSP are the different LSP terms which use the same

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<sup>5</sup> Wittgenstein 1958, § 293, in: Salthe (1997:15).

lexeme to express a different meaning, e.g. the German lexeme *Interferenz*, first used in physics, is also used in contrastive linguistics<sup>6</sup> or the chemical term *valence*, later used in linguistics.

As a general rule and for the reasons we have just mentioned, Latin and Greek are still the main word stock for delivering LSP terms to the European languages speaking scientific communities, facilitating the communication between them (Sager 1990:86)<sup>7</sup>.

### **Creation and use of LSP neologisms**

Since a small community dealing with science and technology creates new scientific terms, these terms are used at conferences or in specialised journals and lately in databases (Sager 1990:81). The creation of terminology is defined as 'the verbal description of a concept' (Picht & Draskau 1985:65), i.e. terminology concerns terms *and* concepts of a scientific domain, though some scientists may say that 'the facts speak for themselves' and that science might not need language in a particular way. The focusing on the context of a scientific text "still implies that language is peripheral and used in a mechanistic or representational way" (Gledhill 2000:27). The fact that neologisms as new forms of language express new meanings and propagate ideas outside the scientific community (Halliday 1998) shows just how important the language of science is to the whole language community. In a Firthian approach this means that (scientific) language may be considered to be a function of society and fundamental in the construction of human knowledge. Consequently, natural language not only constitutes the vehicle of the scientific message but also determines and shapes it (Kretzenbacher 1994:17 f.)<sup>8</sup>.

As far as the creation of neologisms is concerned, Greek and Latin possess internationally accepted terms, confixes and potential for word creation, and the English language still makes generous use of them when creating a neologism, especially in

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<sup>6</sup> We owe this example to Kretzenbacher (1994:28).

<sup>7</sup> These internationalisms are favoured even by the developing countries at the same time as classical Arabic or Sanskrit (Sager 1990:86 f.).

<sup>8</sup> A quite recent example for the importance of natural language when it comes to naming a new phenomenon is the term *AIDS*. In the beginning the term that designated this syndrome was *GRID* (*Gay-Related Immune Deficiency*) and later it was changed into *AIDS* when scientists found out that *GRID* also affected women and male heterosexual drug users. In this case, science made use of the natural language to correct a medical error or to augment scientific knowledge.

medicine (e.g. *-itis*, *-ome*, *haem(o)-*). Yet, we must admit that the degree of anglicization of science depends on the subject experts have to deal with: The more universal a science, i.e. the more it affects different cultural communities, the more English is dominant. To transfer this hypothesis into practice and according to Weinrich (1985:55), the first scientific domain which is mostly affected by the English language, i.e. the domain where the English language prevails, is genetics as a branch of medicine, the second domain which is less affected by English comprises psychology and linguistics and the third and least affected domain by the English language is history and philosophy. This means that medicine concerns all cultural communities while history and philosophy are the most culture-bound of all sciences<sup>9</sup>.

### **Translation of LSP neologisms**

Since the scientific community communicates in a major language, mostly English, it may take a relatively long time before these terms are translated in other languages. As long as a small and homogeneous scientific community all over the world internally uses the new terminology, the scientific terms need no translation since they are used and understood in the language in which they have been created. Often, the need for translation appears after a specific community has communicated with other members or groups of a different community, scientific or non-scientific. In this case, a new vocabulary for the target community must be found so that two different linguistic communities can communicate with one another (Sager 1990:81).

When the receptor language realises the need to find a term which assumes the equivalent function of the SL-term it must at the same time look for a term which can fit into the system of the TL, into its lexicon, pronunciation, orthography, the particular vocabulary, etc. At this moment, "the most obvious and laziest solution but also the internationally most efficient one" is borrowing (Rey 1995:105). The easiest way to borrow is from Greek and Latin, regarding the common linguistic European background<sup>10</sup>.

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<sup>9</sup> Skudlik comes to confirm Weinrich's statement when she explains that the knowledge of the English language among German scientists is much higher among natural scientists and less high among lawyers, historians, literary scientists and theologians (1990:121 and 304 f.).

<sup>10</sup> Latin and Greek dominated and still dominate terminology in biology and medicine. We must not forget that Latin was the European scientific lingua franca until the 18th century. This emphasises what practice has shown, namely that terms of Greek/Latin origin are more easily adaptable to the different languages.

What happens with the Greek-based terms created in another language when they have to be translated in Greek? It is not obvious that this situation does not present translation problems at all. First of all, translation problems start at a lexical level when neologisms are translated from English or German into Greek. In this case, the Greek translator is quite often tempted not to pay considerable attention to the translation of a lexeme coined in Ancient Greek since he may think that this remains exactly the same in Modern Greek. Yet, this is not always the case, because the Greek language has evolved over the centuries and, consequently, a word adopted from Ancient Greek will not necessarily be morphologically and semantically the same in Modern Greek. Hence, in the case where new words of Greek origin are created for example in English or in German and taken over by the Greek language it is not self-evident that these terms will be in use in Modern Greek. A good example is the German *Legasthenie* which etymologically derives from Ancient Greek (from *legein* (*to speak, to say*) and *astheneia* (*weakness, disease*)). The Greek language uses the Greek term *δυσλεξία* (=dyslexia) deriving from the loanword *dyslexia*<sup>11</sup>. Thus, there are roughly two kinds of neologisms of Greek origin: neologisms, which are used in Greek (e.g. the terms *nanotechnology*, *Plasmatechnik*, *magnetoelectronics*) and neologisms, which are not used in Greek (e.g. the German terms *Parodontose*, *Legasthenie*). In this case we speak of "pseudogrecisms". These terms consist of Greek components but they are not always understandable to an ordinary Greek reader e.g. in a German text as the examples above show us.

To further explain the situation from the viewpoint of translation we must go into the details of the translation methods of neologisms.

The finding of new equivalents for provisional terminological gaps<sup>12</sup> such as neologisms before the attempt to translate them is accomplished through:

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<sup>11</sup> It is still uncertain in which language "dyslexia" was first coined. While the Oxford English Dictionary locates the first use of this term in Germany by the German ophthalmologist Rudolph Berlin in 1883 (Richardson 1992:46), two Greek dictionaries that we consulted write again two different things: Bambiniotis (1998) writes about an English origin, and Triantafyllidis (1999) writes about a French origin.

<sup>12</sup> "provisional gaps" ("vorläufige Lücken") is the term Koller uses for all 1:0 correspondences in translation

**-Citation word** (phonological, graphemic and morphological adoption of the SL-term in the TL-term),

**-Direct loan** (SL-term is transferred to TL, according to phonological, graphemic and morphological norms of TL),

**-Loan translation** ("literal" translation of the SL-term),

**-Similar term** in TL,

**-Paraphrastic translation,**

**-Combination of different translation methods.**

**Citation word:** It is a method of transfer very important to the Greek language (*Zitatwort* according to Koller) when it comes to neologisms where no Greek equivalent has been found. The source language oriented citation word must not be confused with the target language oriented direct loan where phonological, graphemic and morphological norms of TL are adopted. As the Greek alphabet is different from the Latin, citations (in the Latin alphabet) are very frequent in the Greek language, particularly in the case of LSP neologisms. In languages, which use the Latin alphabet, citation words - at least in the beginning of their use - appear in inverted commas or in italics. The differences between the Greek and Latin alphabet do not impose inverted commas or italics of a citation word in the Latin alphabet, which, on the contrary, occurs in a Greek text. Most citation words are abbreviations or blendings such as the compound and clipped term *cyborg* (= *cybernetic organism*), which is a blending of Greek origin, the abbreviations *AIDS* (= *Acquired Immune Deficiency Syndrome*) with three Latin and one Greek components, *SCNT* for *Somatic Cell Nuclear Transfer* and *PID* for *preimplantation diagnostics*. This technique is very popular in the formation of neologisms and is preferred to the long version, which is composed of several words.

**Direct loans:** Direct loans of Greek origin have sometimes to be morphologically and phonologically adapted to the linguistic standards of the Modern Greek language, e.g. the German term *Allergologie* is *αλλεργιολογία* (= *allergiolōgia*) in Greek, or *telematics* is *τηλεματική* (= *tīlematikī*) in Greek, which is a morphological amalgam of the two

words *telecommunication* and *informatics*<sup>13</sup>. As the confix *tele-* is of Greek origin, the Greek language keeps the Greek confixal element and renders the term as  $\mu$  (=tilematiki). There are also direct loans where the only change is the transliteration of the Latin into the Greek alphabet, e.g. *carcinogenesis* (=  $\mu$ ).

**Loan translation:** The practice has demonstrated that loan translation - apart from the pseudogrecisms - cannot be applied in the case of neologisms from Ancient Greek and their translation in Modern Greek. Examples of neologisms of Latin origin are *donor cell*, which in Greek is  $\mu$  (=kyttaro doritis) or *recombinant*, which in Greek is  $\mu$  (=anasyndyastikos). Yet, things are not always this clear. An example from the world of medicine is the term *hemicellulose* that is half Greek and half Latin. The translator into Greek may translate *cellulose* (which was created in French) into Greek as  $\mu$  (=kyttarini) or adopt the Latin term *cellulose* and create the new term  $\mu$  (=imikellulosi), which then becomes a direct loan. Very recent examples from genetics are the terms *transgenic* and *transgenics/transgenesis*. In Greek *trans-* may be translated as  $\mu$  - (=dia-) or even remain the same as in its Latin origin:  $\mu$  - (=trans-). On the other hand, in the case where both constituents are Latin, the Greek translator has to decide whether to translate the term into Greek or to preserve the term of Latin origin.

**Similar term in TL:** A simple example of a term with similar translation in the TL is the term *globalization*. In the Greek language *globalization* has been translated as  $\mu$  (=pagosmiopiisi):  $\mu$  - (=pagosmio-) has taken over the part of *global-* and corresponds to *world-* in English. Another example for a similar term in the TL is the English term *in-vitro-fertilization* created of Latin words. The Greek translation  $\mu$   $\mu$  (=exosomatiki gonimopiisi) means *out-of-body-fertilization*.

**Paraphrastic translation:** This type of translation method for neologisms is almost always used where a term is applied for the first time, even among specialists or where communication between special language and everyday language is concerned. For clarity reasons, paraphrastic use of a term can also happen intralinguistically. In this case, *xenotransplantation* ( $\mu$   $\mu$  in Greek =xenometamosheysi) may be paraphrastically explained as *the transfer of organs or tissues from a donor of one*

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<sup>13</sup> The appearance of these terms is closely connected with the cooperation of different disciplines.



*species to a recipient of another.* This definition will be needed in the beginning because a simple neologism is not motivated and thus cannot be transparent and self-explanatory<sup>14</sup>. In Greek *xeno-* means *foreign* so the Greek translation of the term - half loan, half direct loan translation - may be the most motivated and transparent of all. Even so, the Greek reader will not fully understand the LSP term without its definition with the help of a paraphrastic translation as in any other language. Yet, when the term is repeated, the LSP term must find a TL-equivalent term.

**Combinations:** We have just seen the translation methods used in the case of neologisms. We must add some combinations of the above mentioned translation solutions for neologisms. Especially in revolutionary fields such as biotechnology, genetics or informatics where newly coined terms make their appearance almost daily, their equivalents are sometimes difficult to be found immediately in the TL. So, these terms of Greek/Latin origin may be transferred in a combination of the methods mentioned above. For example, the term *multimedia* knows three different translations: a) it is either translated as  $\mu$  (=polymesa), b) cited as it is (*multimedia*) or c) a combination of both, i.e. translated into Greek *and* cited in brackets at the same time ( $\mu$  (*multimedia*)).

Many of the Greek and Latin-based neologisms belong to already existing lexical units, which describe new concepts thus creating semantic shifts. The lexical units that form neologisms are mostly compound terms, blendings and abbreviations and usually appear in science and most often in disciplines such as medicine and biology, but also in technology. With the increasing role of these disciplines (e.g. genetics, biotechnology) newly created Greek and Latin terms will constantly augment. Since these terms are created in other languages than Greek (mostly U.S. English), it is evident that the translation into Greek will sometimes be problematic. The above mentioned translation methods (citation word, direct loan, loan translation, similar term in TL, paraphrastic translation, combination of different translation methods) have demonstrated the different solutions when trying to translate Greek or Latin-coined terms into Greek.

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<sup>14</sup> The English example *xenotransplantation* is as little motivated as the German *Xenotransplantation*.

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