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STRUCTURAL MODELS OF SOMATISMS IN THE NORWEGIAN LANGUAGE

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The development of any language has always been the focus of close attention and thorough study in linguistics, especially at different historical stages. The Norwegian language is a good example to trace the development of anatomical terminology based on its historical stages, including Norwegian somatisms as well as those from other languages, mainly Latin and Greek, including the word-forming elements. Starting with Ancient Scandinavian through the period of Christianity, the Hanseatic League and further on, several structural models have been identified and distinguished. Each period is associated with adoption and adaptation (assimilation) of somatisms. The first group includes one-word somatisms of Germanic origin, one-word non-assimilated and assimilated somatisms of Latin or Greek origin. The second and the largest group consists of two-word somatisms formed by compounding according to different models based on different parts of speech (noun, adjective, numeral, and verb) and the word-forming elements. Each element in a collocation is represented by either a norwegianized Latin or a native part. Three-word somatisms are not so numerous in anatomical terminology. Despite its seeming simplicity, compounding is an interesting phenomenon for studying due to many patterns of combining words in the formation of somatisms. Concerning compounding special remarks are made, taking into account combinatory flexibility and plasticity of the Norwegian language, which makes it possible to enrich its anatomical vocabulary at low cost and to use its own language capacity and resources for developing this language segment.

Keywords: Norwegian language, somatisms, body parts, anatomical vocabulary, structural models, compounding.

INTRODUCTION

The development of any language at different historical stages has always been the focus of close attention. Being a part of professional terminology medical terminology is not an exception and has always been in the purview of linguistics. It is especially inspiring and challenging to discover how this or that language develops and builds its medical terminology, considering not only the native vocabulary but also the influx of other words from other languages. Regarding the history of the language and the periods in its development the following questions can be raised: to what extent can the historical aspect influence the formation of professional terminology on the whole and medical one in particular and what structural models can be singled out considering the historical roots of somatisms in anatomical vocabulary formation? In this case, the Norwegian language seems to be a good example to follow as it has a great number of somatisms and has passed through some distinct stages in its historical development. Moreover, such research can give rise to comparing the structural models in other languages, making the medical vocabulary an inexaustible source of knowledge for both linguists and medical practitioners.

The objective of this article is to analyze the development of anatomical terminology in the Norwegian language and somatisms in particular, taking into account the historical background and the development of the language through historical stages, thereby grouping the Norwegian somatisms according to their structural models and subsequently identifying some language peculiarities and traits. The lexical corpus was formed according to the following criteria: the Norwegian word must be a noun in the common case denoting this or that body part or a part of the body system, including body fluids, either in singular or in plural form used in the Norwegian medical encyclopedia [Store medisinske leksikon] and registered by such dictionaries as "Stor Russisk-Norsk Ordbok" compiled by Valeriy Pavlovich Berkov [Berkov, 2002], "Stor Norsk-Russisk Ordbok" compiled by Vladimir Dmitrievich Arakin [Arakin, 2001 a, b], "Det Norske Akademis Ordbok" and "Norsk-Russisk Ordbok".

1. GROUPS OF NORWEGIAN SOMATISMS BASED ON HISTORICAL BACKGROUND

The Norwegian language belongs to the group of North Germanic languages of the West Scandinavian branch. With its two distinct and rival norms — Dano-Norwegian (Bokmål, or Riksmål) and New Norwegian (Nynorsk), it demonstrates some remarkable features concerning its vocabulary, particularly the anatomical one. Being one of the oldest parts of any language stock because of its direct relatedness to people and their everyday activities the latter is one of the most interesting and attractive for scientific research. The role of such vocabulary in any language is indisputable but the genesis and development deserve a special study considering its historical background. The anatomical vocabulary in the Norwegian language is primarily based on the Bokmål norm (the Dano-Norwegian form). It has passed some important stages in its development in which is some groups of somatisms can be distinguished, including the Norwegian words and borrowings from the other languages, Latin and Greek being the most abundant sources of somatisms. We can suppose that the origins of somatisms denoting the basic body parts could be traced to Proto-Scandinavian, or Ancient Scandinavian, where we find the inscriptions carved in futhark — the runic alphabet dated from AD 200 to 600, which is the oldest evidence of any Germanic language but due to the scantiness of the material (fewer than 300 words) [Scandinavian languages…] makes it impossible for us to think of including many somatisms, at least during this period. We can predict that it is with the emergence of Old Scandinavian (600–1500) when a lot of somatisms appeared in the Norwegian language, particularly during 1150 to 1350. They belong to Old Norse language — a parent language of the modern Norwegian language. It is a classical North Germanic language used from approximately 1150 to 1350, the term "Old Norse" comprising Old Norwegian as well as Old Icelandic.

Numerous examples are found on the basis of "Det Norske Akademis Ordbok". Some of them, for example, *arm* 'arm' and *hake* 'chin', are marked as "of common Germanic/Germanic origin". Most of them, though, are marked as "of Old Norse origin", e. g. *bryn* 'eyebrow', *finger* 'finger', *fot* 'foot', *gane* 'palate', *hals* 'throat/neck', *hjerne* 'brain', *hjerte* 'heart', *hæl* ' heel', *kinn* 'cheek', *kne* 'knee', *legg* 'leg/shin/calf', *lever* 'liver', *lunge* 'lung', *mage* 'stomach', *munn* 'mouth', *negl* 'nail', *nyre* 'kidney', *rygg* 'back', *strupe* 'pharynx', *svelg* 'fauces/larynx/pharynx', *tann* 'tooth', *tarm*

'gut', *tinning* 'temple', *tunge* 'tongue', *tå* 'toe', *vev* 'tissue' etc. Such somatisms as *albue* 'elbow', *ankel* 'ankle', *ben* 'leg', *brusk* 'cartilage', *bryst* 'chest', *hode* 'head', *hud* 'skin', *hule* 'cavity', *hånd* 'hand', *ledd* 'knuckle/joint', *marg* 'bone marrow', *milt* 'spleen', *nese* 'nose', *virvel* 'vertebra', *øre* 'ear', *øye* 'eye' etc. are marked by "Det Norske Akademis Ordbok" as "dansk form" with simultaneously mentioning them as the corresponding, equivalent or even relative to the forms in Old Norse, making reference to Old Danish in case of *brusk*, *bryst*, *hode*, *hud*, *hule*, *ledd*, *marg*, *milt*, *nese*, *øye*, *øre*. Such somatisms as *hånd*, *marg* and *virvel* are registered as "probable Danish form". In spite of the fact that Norwegian and Danish have Old Norse as the same source language, it is in these forms that the somatisms labelled as "dansk form" exist in present-day Norwegian both orthographically and semantically. This needs a separate study as suppression process of the Norwegian language by the Danish one lasted for many years, even centuries. Among the other somatisms registered by this dictionary are somatisms of Middle Low / Low German origin or "probable of Middle Low / Low German origin", e. g. *ansikt* 'face', *hofte* 'hip', *kjeve* 'jaw', *knokkel* 'knuckle', *krøs* 'mesentery', *leppe* 'lip', *skulder* 'shoulder' etc. Instances of multiple assimilation are noted, for example, from Latin through Middle Low German as in case of *bekken* 'pelvis', from Greek through German in case of *skjelett* 'skeleton', and from Greek through Late Latin and Middle Low German in case of *mandel* 'amygdala'.

The second period is directly related to the advent of Christianity when Latin borrowings started penetrating into the Norwegian language. The first contacts were established with the Roman Empire during the first four centuries AD [Berkov, 2012, p. 37; Norway — Vikings, Fjords, Sami]. It is possible to assume that some borrowings came into Norway during Viking Age (about 800 to 1050) when Scandinavia became open to Europe due to the Christianization and the Latin alphabet came into use with the advent of Christianity [Berkov, 2012, p. 58; Norway — Vikings, Fjords, Sami]. For example, the Viking chiefs established relations with Christian monarchies and the church, especially in Normandy and England [Norway — Vikings, Fjords, Sami]. Such contacts can also be traced to the 12th century when in 1152 or 1153 a Pope's legate (the English cardinal) Nicholas Breakspear arrived to Norway to strengthen the influence of the Roman Empire on Europe [Danielsen et al., 2003, p. 82]. The most abundant influx of new words was during

the Middle Ages due to a rapid development of scientific terms based on Latin and Greek roots. It is through monastery culture that a lot of Latin words entered Norwegian. This was of paramount importance for developing medical vocabulary and new medical words in the Norwegian language. This group includes one-word somatisms presented by the unchanged Latin forms such as *abdomen, aorta, atrium, epiderm/epidermis, fibula, mediastinum, pleura, plexus, retina* etc. which have remained orthographically unchanged and are used alongside their parallel Norwegian words, the so-called *doublets*, e. g. *abdomen* and *buk*, *fibula* and *leggben/leggbein*. But many underwent certain orthographic changes and became norwegianized Latin forms. Some of them, though, e. g. *epikard*, *myokard* and *perikard* etc. retained the first Greek component unchanged. The main changes are given in Table 1.

Some of them, for example, *alveol*, *appendiks*, *atrium*, *kapillar*, *kornea*, *diafragma*, *epikard*, *erytrocytt* etc. have a parallel Norwegian word, e. g. *blindtarmvedheng/blindtarmsvedheng* for 'appendiks', *lungeblære* for 'alveolus', *hårkar* for 'kapillar'. Many of one-word somatisms were later used in compound words as parts in various combinations. Here, the next period in the development of the Norwegian language is to be mentioned as being an important one concerning the peculiarities of word formation.

Numerous loan translations may have entered Norwegian during the period of the Hanseatic League, or Hansa, when the League dominated in northern Europe in its commercial activity from 14th to 16th century. It is during that period when the Norwegian cities like Trondheim first and after it Bergen became chief prosperous trading ports building a vocabulary bridge between the two languages. To definitely say whether a somatism is a loan translation or not, it is worth checking its etymology. Sometimes it is enough to find the corresponding word in the donating language. In this paper, we present eleven somatisms in Norwegian as examples of typical loan translations with possibly entering the Norwegian language through the Low German language. Also, it is quite possible that during this period a lot of anatomical loan translations were coined in the Norwegian language on the basis of the corresponding terms from German, which is demonstrated by the common parts that we can see in the examples in Table 2.

As seen from the table, the examples of loan translations in the Norwegian language demonstrate part by part translation, sometimes being

Table 1. **Orthographic changes of norwegianized Latin/Greek somatisms in the Norwegian language**

Orthographic changes	Examples
Change final ‘a’ into ‘e’	arteria > arterie, cella > celle, lympha > lymfe, vena > vene
Omission of final ‘-a’	membrana > membran, pupilla > pupill, tonsilla > tonsill
Omission of ‘-um’	dendritum > dendritt, ligamentum > ligament, omentum > oment
Omission of ‘-us’/’-on’ with doubling of ‘t’	alveolus > alveol, leukocytus > leukocytt, skeleton > skjelett, thrombocytus > trombocytt
‘-us’/ ‘-on’ > ‘ -e’/ ‘-ie’	ganglion > ganglie, nervus > nerve, bronchus > bronkie
‘sk’ > ‘skj’	skeleton > skjelett
‘c’ > ‘k’	capillus > kapillar, conjunctiva> konjunktiva, cornea > kornea, cranium > kranium, cuticŭla > kutikula, epicardium > epikard, myocardium > myokard, pancrĕas > pankreas, pericardium> perikard
c+‘-ŭl’ > ‘kel’ with omission of ‘-us’	muscŭlus > muskel, ventricŭlus > ventrikkel
‘tas’ > ‘ tet’	extremĭtas > ekstremitet
‘x’ > ‘ks’	appendix > appendiks, axon > akson, extremĭtas > ekstremitet, phalanx > falanks
‘ph’ > ‘f’	diaphragma > diafragma, lympha > lymfe, oesophăgus> øsofagus/oesofagus, phalanx > falanks
‘eu’ > ‘ev’(very rarely)	neuron > nevron but: pleura > pleura
‘th’ > ‘t’	epithelium > epitel, erythrocytus > erytrocytt, thorax > toraks
‘ch’ > ‘k’	bronchus> bronkie, trachēa > trakea

identical (*mandel — Mandel*) or nearly identical to the German word (*blindtarm — Blinddarm*), having the same meaning but being spelt according to the rules both in Norwegian and German. Thus, it cannot be ignored that German also had some influence on the Norwegian together with Latin.

The compound structure of Norwegian somatisms make us suppose that they were formed and appeared in the Norwegian language along-

Table 2. **Norwegian loan translations from German**

Somatism	Norwegian word	German word
artery	pulsåre	Pulsader
atrium	forkammer	Vorkammer
caecum	blindtarm	Blinddarm
cerebellum	lillehjerne	Kleinhirn
cornea	hornhinne	Hornhaut
duodenum	tolvfingertarm	Zwölffingerdarm
iris	regnbuehinne	Regenbogenhaut
retina	netthinne	Netzhaut
tonsil	mandel	Mandel
trachea	luftrør	Luftröhre
ventricle	hjertekammer	Herzkammer

side the other somatisms taken from and formed in the same way as in the German language in which compounding is the basic way of formation of anatomical terms. Compounding as the way of word formation is a versatile means of enriching vocabulary of the recipient language. The anatomical one is no exception. Apart from loan translations of somatisms the Norwegian language armed with such a tool as compounding formed even more variants for its own language needs. In our study, the Norwegian anatomical terminology is represented by three groups of examples. The first one includes those ones consisting of names of body parts/fluids and anatomical structures related to them such as tunic, membrane or cavity, e. g., *be(i)nhinne* 'periosteum', *blodkar* 'blood vessel', *brystbein* 'breastbone', *bukhinne* 'peritoneum', *bukspyttkjertel* 'pancreas', *kneledd* 'knee joint', *leggbein* 'fibula', *lendevirvel* 'lumbar vertebra', *lungehinne* 'lung pleura', *nesehule* 'nose cavity', *nyrebekken* 'renal pelvis', *pannehule* 'forehead sinus', *ryggmarg* 'spinal cord', *spyttkjertel* 'salivary gland', *strupehode* 'larynx', *tannbein* 'dentin', *øye(n)bryn* 'eyebrow', *øye(n)vipp(e)* 'eyelash' and many others. Some somatisms consist of either a common word / common words not pertaining to the field of anatomy, e. g. *livmor* 'uterus/womb', *spiserør* 'gullet/esophagus' or a common word unrelated to anatomy and a somatism, thereby posing to metaphoric meaning in such collocations as well, e. g. *armhule* 'armpit',

brystkasse 'chest', *endetarm* 'rectum', *håndflate* 'palm', *kragebein* 'clavicle / collarbone', *korsben* 'sacrum', *korsrygg* 'loin', *leddbånd* 'ligament/tendon', *luftveier* 'airway passages', *lungelapp* 'lung lobe', *lungespiss* 'lung apex', *magesekk* 'stomach', *nesebor* 'nostril', *nyregang* 'ureter', *ryggsøyle* 'spinal column / spine/vertebral column', *skulderbelte* 'shoulder girdle', *skulderblad* 'shoulder blade', *spolebein* 'ulna/radius', *tannkjøtt* 'gum', *urinrør* 'urethra', *øye(n)lokk* 'eyelid' etc.

The second group comprises hybrid somatisms by which we mean somatisms in which compounding underlies the formation of two-word somatisms where:

— the first part is a norwegianized Latin/Greek part and the second is a part in Norwegian either in singular, e. g. *lymfekar/lymfeåre* 'lymph vessel', *lymfekjertel* 'lymph gland', *lymfeknute* 'lymph node', *lymfevev* 'lymphatic tissue', *nervevev* 'nerve tissue', *pleurahule* 'pleural cavity' or in plural form, e. g. *lymfeknuter* 'lymph nodes', *lymfeårer* 'lymph vessels', *veneklaffer* 'vein valves' etc.;
— the first part is Norwegian and the second part is a norwegianized Latin/Greek part, e. g. *blodcelle* 'blood cell', *hjertemuskel* 'heart muscle/myocardium', *hulvene* 'vena cava', *lungearterie* 'lung/pulmonary artery', *lungevene* 'lung/pulmonary vein', *magemuskler* 'belly muscles', *ringmuskel* 'sphincter' etc.;
— both elements in a somatism are norwegianized Latin/Greek parts, e. g. *epitelceller* 'epithelial cells', *muskelceller* 'muscle cells', *portvene* 'portal vein' etc.;
— the first part is Norwegian and the second part is a non-assimilated Latin/Greek part, i. e. with no change, e. g. *lungehilus* 'lung hilus' etc.;
— the first part is a non-assimilated Latin/Greek part and the second part is a norwegianized Latin/Greek or vice versa, e. g. *gliaceller* 'glial cells', *melanocytt* 'melanocyte', *nevroglia* 'neuroglia' etc.

Such hybrid combinations are typical in modern medical terminology when Latin/Greek and the other language — Norwegian in our case — reside in a state of natural symbiosis [Lysanets, Bieliaieva, 2018]. Beyond doubt, this is an amazing linguistic phenomenon deserving attention and study. In case of Norwegian, a lot of variants, or patterns, are seen and their number in the language is really great.

Being the most productive way of making the names of body parts in the Norwegian language, compounding demonstrates some other peculiarities. Thus, the third group is based on compounding using the

other part of speech, namely, adjective, e. g. *basalganglier* 'basal ganglia', *hovedbronkie* 'main bronchus', *lillehjerne* 'cerebellum', *mitralklaff* 'mitral valve', *pulmonalklaff* 'pulmonary valve', *sentralnervesystem* 'central nervous system', *smålapp* 'lobule', *storhjerne* 'cerebrum', *stortå* 'a big toe', *trikuspidalklaff* 'tricuspid valve' etc., sometimes with the connective letter -o-, e. g. *atrioventrikulærklaff* 'atrioventricular valve' or a numeral (which is quite rare due to anatomical specificity and scantiness of such body parts), e. g. *tolvfingertarm* 'duodenum'. Prefixes denoting position can also be used, compounding two-word and three-word somatisms, e. g. *mellomgulv* 'diaphragm', *mellomfot* 'metatarsus', *mellomfotsbein* 'metatarsal bone', *mellomhånd* 'metacarpals', *mellomhåndsbein* 'metacarpal bone', *mellomøre* 'middle ear', *overhud* 'epidermis', *overkjeve* 'upper jaw / maxilla', *overleppe* 'upper lip', *underarm* 'forearm', *underkjeve* 'lower jaw / mandible', *underleppe* 'lower lip' etc.

Some examples include the words compounded on the basis of three elements, including different parts of speech and either only Norwegian noun, e. g. *brystskillevegg* 'mediastinum', *bukspyttkjertel* 'pancreas', *regnbuehinne* 'iris', *skjoldbruskkjertel* 'thyroid gland', *tolvfingertarm* 'duodenum' etc. or a noun in Norwegian and a norwegianized Latin/Greek noun in different succession, e. g. *bindevevsmembran* 'connective tissue membrane', *hjertemuskelcelle* 'heart muscle cell', *nervecellekropper* 'nerve cell bodies' etc.

It is worth noting that compound consist of two parts: a modifying word and a modified one, where the modified word, or the head of the compound, contributes to the dominant meaning, determines the part of speech and can be inflected while the modifying part does not change [Goumovskaya, 2007]. In terms of occupying the position of either a modifying or a modified part in the Norwegian language one and the same part can change its position, depending on the semantic aspect. Here, the question of combinatory flexibility and plasticity of the language can arise. By it we first of all mean the capacity of a language to be flexible and plastic in creating a lot of combinations based on positional change of parts in a collocation and using its own vocabulary resources, for example, *'hals'* in *halsvirvel* 'cervical vertebra' and *lårhals* 'hip neck' where *'hals'* changes its positions in the word helping to form a new word with a new anatomical meaning. Some more examples of combinatory plasticity are *'ledd'* in *leddbrusk* 'joint cartilage' and *skulderledd* 'shoulder joint', *'hinne'* in *bukhinne* 'peritoneum' and *hinnebueganger*

'membraneous arches' or *'virvel'* in *halsvirvel* 'cervical vertebra', *lendevirvel* 'lumbar vertebra' and *virvelbue* 'vertebral arch'. Obviously, the place of an element in a combination is due to strict demands of anatomy as a science. A typical example is the combinations based on the component *'hjerte'* as only the first (modifying) part in the term, e. g. *hjertehinne* 'epicardium', *hjertekammer* 'ventricle', *hjerteklaff* 'heart valve', *hjertemuskel* 'heart muscle / myocardium', *hjertepose* 'pericardium' etc., or based on the norwegianized Latin/Greek component *'lympfe'*, e. g. *lymfekar*, *lymfekjertel*, *lymfeknute*. On the other hand, the second component can remain unchanged, e. g. *'hule'* in *armhule* 'armpit', *brysthule* 'chest cavity', *bukhule* 'abdominal cavity, *pannehule* 'forehead sinus'.

As the language developed, more and more words appeared in it to serve the needs of medical terminology and denoting this or that anatomical structure, including eponyms, e. g. *Bowmans kapsel* 'Bowman's capsule', *Glissons kapsel* 'Glisson's capsule', *His' bunt* 'His bundle', *Malpighis legemer* 'malpighian bodies/corpuscles', *Purkinje-celler* 'Purkinje corpuscles/cells', *Purkinjefibre* 'Purkinje fibres', *Schlemms kanal* 'Schlemm's canal', *Tenons kapsel* 'Tenon's capsule', *Wolffs gang* 'wollfian duct' etc. This model also follows the model of compounding where a modifying part is presented by an eponym — the proper noun denoting the name of a scientist, anatomist or a researcher used in the possessive case.

The process of adapting and adopting in the Norwegian language seemed to go along with the process of developing its own medical vocabulary as a lot of somatisms have appeared in the language during its historical development. Demonstrating its flexibility and balancing between its native forms and borrowings from the other languages like Greek and Latin the Norwegian somatisms have acquired some peculiarities, which makes it possible to distinguish certain groups based on structural models, or patterns.

2. STRUCTURAL MODELS OF SOMATISMS IN THE NORWEGIAN LANGUAGE

Despite its seeming simplicity of structural models typical of most Germanic languages (affixation, compounding, conversion), some peculiarities can be identified. The following models can be distinguished in the Norwegian anatomical terminology:

1. One-word somatisms of both Germanic and Latin or Greek origin, the latter being presented by unchanged Latin/Greek forms like

abdomen, *aorta*, *atrium*, *epidermis*, *fibula*, *mediastinum*, *pleura*, *plexus*, *retina* etc. and they can be referred to as non-assimilated somatisms. This group also comprises the so-called assimilated somatisms — norwegianized Latin somatisms, e. g. *alveol* 'alveolus', *bronkie* 'bronchus', *celle* 'cell' and others.

2. Two-word somatisms in which two parts of speech can be combined and make up one term. Here, depending on their origin, the parts can be presented by:

— two Norwegian nouns, e. g. *blodkar* 'blood vessel', *brysthule* 'chest cavity', *hjørnetann* 'canine', *håndledd* 'wrist', *kinntann* 'molar', *melketann* 'milk tooth', *munnhule* 'mouth cavity', *skinnebein* 'tibia' etc.;
— two norwegianized Latin/Greek nouns, e. g. *muskelfiber* 'muscle fibre', *nervecelle* 'nerve cell' etc.;
— a Norwegian noun and a norwegianized Latin/Greek noun occupying the first or the second place in a somatism, sometimes with no change in Latin/Greek part, e. g. *aortaklaff* 'aortic valve', *brystmuskel* 'chest muscle', *leggmuskel* 'calf muscle', *nervebunt* 'nerve bundle', *nyrearterie* 'kidney artery', *tannemalje* 'tooth enamel', *urinleder* 'ureter', *urinblære* 'urinary bladder' etc.;
— a Norwegian adjective and a Norwegian noun, e. g. *lilletå* 'little toe', *tykktarm* 'large intestine', *tynntarm* 'small intestine' etc.;
— a Norwegian verb and a Norwegian noun, e. g. *bindevev* 'connective tissue' etc.;
— a Norwegian numeral and a Norwegian noun/nouns, e. g. *tolvfingertarm* 'duodenum';
— a Norwegian prefix denoting position and a Norwegian noun, e. g. *overarm* 'upper arm', *underhud* 'hypodermis', *underkropp* 'lower body part' etc.

3. Three-word somatisms of Norwegian and Latin/Greek origin are registered, e. g. *hovedpulsåre* 'aorta' etc., sometimes with a prefix of Latin/Greek origin, e. g. *epitelvev* 'epithelial tissue'. Here, the structural patterns also follow the compounding model, with a modifying and a modified part occupying its proper place, depending on their anatomical notion, sometimes with preposition as a part of it. Of special note in this group are the compounded forms with the connective -s-, e. g. *bindevevscelle*, *bindevevshinne*, *bindevevsfibre*, *bindevevskapsel*, *blindtarmsvedheng*, *endetarmsåpning*, *underarmsknokler* etc.

The total number of somatisms under study is approximately 252, the group of two-word somatisms accounting for 133 somatisms (52.77 %) and the group of one-word somatisms accounting for 96 somatisms (38.09 %). The group of three-word somatisms makes a negligible share — 23 somatisms, making up only 9.12 %. As it was expected, the figures prove that the group of one-word somatisms lays the foundation for the group of two-word somatisms. They interact with one another making a lot of variants of two-word somatisms due to combinatory flexibility and plasticity. The structural models based on the distribution of components in two-word group of somatisms are given in Table 3.

Table 3. **The structural models within the group of two-word somatisms**

Structural model	Number
Two Norwegian parts	89
The first part is a norwegianized Latin/Greek part and the second is a part in Norwegian either in singular or in plural form	12
The first part is Norwegian and the second part is a norwegianized Latin/Greek part	17
Both elements in a somatism are norwegianized Latin/Greek parts	5
The first part is Norwegian and the second part is a non-assimilated Latin/Greek part	1
The first part is a non-assimilated Latin/Greek part and the second part is a norwegianized Latin/Greek or vice versa	9
Total	133

As it is seen from the table, the somatisms based on two Norwegian parts make up the leading group, which again points to the capacity of the language to use its combinatory flexibility and plasticity and proves the uniqueness of the Norwegian language to build anatomical vocabulary, using its own resources.

Depending on the part of speech and word-forming elements, some interesting findings are summarized in Table 4.

To study and illustrate the matter further and to present the quantitative ratio of the structural models, it seems reasonable to analyze them in the anatomical text chosen at random, for example, “Lungene” [Store medisinske leksikon] and summarize the data in the table below. The examples were taken by line-by-line principle according to the inclusion criteria.

Table 4. **Distribution of parts of speech and word-forming elements in Norwegian somatisms**

Parts of speech / word-forming element	Two-word somatisms	Three-word somatisms
noun + noun	105	8
adjective + noun	13	5
verb + noun	1	5
numeral + noun	—	1
prefix +noun	14	4
Total	133	23

Table 5. **The distribution of structural models of somatisms in Norwegian based on anatomical text**

Structural model	Examples	Number
One-word somatisms of either Germanic and assimilated and non-assimilated Latin/Greek parts	brisselen, lungene, hjertet, nerver, venene, arteriene, bronkiene, pleura, epitelet, mesotel, alveoler, fibrene, bronkiolene, muskulatur, cilier, bronkiol, kapillarer	17
Two Norwegian parts	brysthulen, ribbeina, brystkassen, blodkarene, spiserøret, luftrøret, brystveggen, bukhulen, lungespissen, lungeflatene, lungeroten, lungelapper, lungesekken, lungehinnen, brysthinnen, luftblærer, lungevevet, brystvirvel, bindevev, bruskkam, flimmerhår, lungevene, lungeblærer	23
Two norwegianized Latin/ Greek parts	segmentbronkier, nervesystemet, sylinderepitel	3
A Norwegian part and a norwegianized Latin/Greek part occupying the first or the second place in a somatism, sometimes with no change in Latin part (two-word somatisms)	hulvenene, lungehilus, hovedbronkiene, lymfekar, lymfeknuter, plateepitel, bronkialtreet, lappebronkier, begerceller, lungealveoler, bronkiolveggen, lungearterie, alveolgang, kapillarnett, alveolåpninger	15

End of Table 5

Structural model	Examples	Number
A Norwegian adjective and a Norwegian noun (two-word somatisms)	midtlapp, smålapper	2
A Norwegian numeral and a Norwegian noun/nouns (two-word somatisms)	—	—
A Norwegian prefix denoting position and a Norwegian word (two-word somatisms)	mellomgulvet, lungeoverflaten	2
Three-word somatisms of only Norwegian or of Norwegian and Latin/Greek origin	hovedpulsåren, brystskilleveggen, ribbeinsbue, lungesekkbladene	4
Total		66

As it is seen from Table 5, out of 66 somatisms presented in the paper one-word, two-word and three-word somatisms of Germanic/Norwegian origin account for 33 instances, including Norwegian adjectives and word-forming elements as parts of a somatism, whereas those of norwegianized Latin/Greek somatisms, including one-word somatisms, also account for 33 instances, once again proving the resourcefulness of the Norwegian language in anatomical vocabulary, on the one hand, and the ability of the language to assimilate the foreign words, on the other hand, thereby balancing between the Norwegian and borrowed forms. One-word somatisms, both of Germanic and Latin/Greek origin, though of not such a large number in this text, form the base for making these combinations, thereby increasing the number of two-word somatisms enormously.

CONCLUSION

The Norwegian anatomical terminology has passed through several periods in its development which are closely connected with the historical stages. Different somatisms ranging from simple ones to more sophisticated in notion appeared in it at different stages, enriching the language and making it universal for medical practitioners. It is in a way universal, on the one hand, due to many borrowings from Latin and Greek but, on the other hand, when it comes to the native corpus of

words, some interesting phenomena can be discovered. Also in spite of the dominance of English, for example, accounting for 80–90 % of all the borrowings over the past decades in Norwegian [Berkov, 2012, p. 102] and intrusion of English into Norwegian in the field of science [Livanova, 2015, p. 141], it is anatomical terminology, including somatisms, that remains relatively stable and rigid in resistance and avoidance of intrusion of English borrowings, partly due to the presence of hybrid forms — norwegianized Latin somatisms. They make the English language in a way useless "to assist" Norwegian in vocabulary formation as similar words have already been coined due to Latin. We should also primarily focus on flexibility and plasticity of the Norwegian language in generating so many forms using, in fact, not so many language tools, compounding being the most productive and universal. All the native words and those borrowed from the other languages over the centuries of language development have laid a solid foundation for the language to somehow experiment with them and use them for its practical purposes. They entered the language gradually, making the anatomical segment more and more sophisticated in denoting body parts and giving rise to new somatisms when it became necessary. Moreover, combinatory flexibility and plasticity are a highly efficient tool for producing so many somatisms, enabling the Norwegian language to enrich its vocabulary at low cost in its natural inner resources and even making them unlimited in scope.

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СТРУКТУРНЫЕ МОДЕЛИ СОМАТИЗМОВ В НОРВЕЖСКОМ ЯЗЫКЕ

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Развитие любого языка на разных исторических этапах всегда находится под пристальным вниманием и тщательно изучается в лингвистике. Норвежский язык является хорошим примером, позволяющим, основываясь на его исторических этапах, проследить развитие национальной анатомической терминологии, включая норвежские соматизмы, а также заимствования из других языков — латинского и греческого, в том числе словообразовательные элементы. Начиная с древнескандинавского периода через период христианизации, Ганзейского союза и далее, идентифицированы и определены несколько структурных моделей норвежских соматизмов. Среди них можно выделить группу соматизмов, состоящих из одного слова германского происхождения, и ассимилированных и неассимилированных соматизмов латино-греческого происхождения. Вторая, наибольшая по числу группа, включает соматизмы, состоящие из двух слов, образованные словосложением в соответствии с разными моделями и имеющие в своем составе разные части речи (имя существительное, имя прилагательное, имя числительное, глагол) и словообразовательные элементы, в которых части занимают разные позиции в сложном по структуре соматизме, причем они представлены или норвегизированным латинским, или норвежским словом. Также

выделены соматизмы, состоящие из трех элементов, число которых не так велико в норвежской анатомической терминологии. Несмотря на кажущуюся простоту, словосложение представляет собой интересное явление для изучения вследствие наличия вариантов моделей комбинирования слов при образовании соматизмов. Особый интерес представляет в этом случае норвежский язык, демонстрирующий гибкость и пластичность для обогащения своего анатомического словарного запаса при минимальных затратах и использующий свои собственные ресурсы для развития этого языкового сегмента.

Ключевые слова: норвежский язык, соматизмы, части тела, анатомическая лексика, структурные модели, словосложение.

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