

# On the regularity of metonymy across languages (exemplified on some metonymies in medical discourse)<sup>1</sup>

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## Abstract

The topic of metonymy regularity has cropped up in several recent articles, a welcome sign of growing interest in this phenomenon, which may eventually contribute towards shedding more light on the phenomenon of metonymic competence, paralleling metaphoric competence (Littlemore & Low, 2006). However, in order to deal with this complex phenomenon one should be clear about the circumstances of the use of metonymy. Two issues pertaining to the use of metonymy that play a central role in Slabakova, Cabrelli Amaro & Kang (2013 & 2016) are mentioned in the very title of their study – novel metonymy and regular metonymy. In this article I draw attention to some problems with the assumption that these are opposites of each other and then examine what Slabakova, Cabrelli Amaro & Kang consider to be regular metonymy. I demonstrate that while their novel metonymies are not really so different from the regular ones, there is another sense of metonymy regularity in cognitive linguistics, where metonymy seems to come closest it can to novelty. This phenomenon, referred to as regular metonymy, logical metonymy or logical polysemy, crosses boundaries of languages and cultures. This is illustrated on several sets of examples from medical discourse in a number of languages.

**Key words:** metonymy; regular metonymy; logical metonymy; novel metonymy; medical discourse.

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## 1. Introduction

### 1.1. Prologue: Moon (metonymically) as a part of Mars

By way of introducing the topic of this article, let us consider the following tweet by Donald Trump (June 8, 2019):

- (1) *For all of the money we are spending, NASA should NOT be talking about going to the Moon - We did that 50 years ago. They should be focused on the much bigger things we are doing, including Mars (of which the Moon is a part), Defense and Science!*

Trump has rightly been ridiculed for many things he has done or said. And we can be pretty sure that no one has ever said that Moon is a part of Mars. But we should not really take these words superficially to just establish a fact that a meronymic sort of relationship obtains between the two celestial bodies in question, such that Mars is a whole and Moon is one of its parts. Taking into account some words that Trump uttered just before that, specifically the much bigger things, we may realize both Mars and Moon are used as indirect designations for something else, most likely something like exploratory projects or programmes. And one project can of course be part of another. So it turns out that Trump is not as unbelievably ignorant as he seemed at first, but just extremely sloppy and careless in communicating what he had in mind. In fact, Trump is not really so exceptional in taking this type of shortcuts in speech. We all often talk about things like the theft of two van Goghs in 2002, or about finishing Oscar Wilde, or being exhausted after London. All these proper names are used metonymically as shortcuts to refer to something that is either wider or narrower in scope than just what these names primarily refer to, just like Trump did in (1) above.

Assuming that what we have just seen in our first example is metonymic in nature, we might ask ourselves what kind of phenomenon is it, considering the fact that it has escaped the attention of many people and that it has apparently not been used by anyone before. In other words, should we consider it a novel metonymy? We might also contemplate about its being somehow irregular, and therefore rare and/or inconspicuous.

### 1.2. The goals and the organization of the article

It is my main goal in this article to show that what we have witnessed above in Trump's utterance is nothing out of the ordinary. Like many other instances of metonymy to be discussed below, it is neither novel (at least in the strict sense of the word) nor irregular. After some introductory remarks on the nature of metonymies (and on how they are similar to and different from metaphors), I discuss in Section 2 the question whether there are really novel metonymies at all, claiming that strictly speaking there can be none, or at

least that there have hardly been (or will be) any novel metonymies around lately (or in the foreseeable future). Then I take on the issue of the regular nature of many metonymic patterns in Section 3, illustrating this on various types of examples, but mainly on several types of metonymies used in medical discourse that exhibit quite a high degree of regularity not only in English but also across languages (drawing on examples from German, Danish, Croatian, Slovakian, Spanish, Italian, Romanian, Turkish, Finnish and Hungarian). Finally, Section 4 sums up my main findings.

### 1.3. *Metonymy (vs. metaphor)*

In order to see the issue of the novelty and regularity of metonymies in a proper perspective, it is necessary to make a couple of general notes on the nature of metonymy, as contrasting with metaphor. Within the cognitive linguistic framework, metaphor and metonymy have been contrasted with respect to four central points of difference, although it has been repeatedly claimed that the borderline between the two is blurred (cf. Barcelona, 2000a and 2000b; Ruiz de Mendoza, 2000). The first three of these points of difference, are very important in the present context as they help understand on theoretical grounds why we can quite often come across novel metaphors, but not novel metonymies. The last point of difference is a practical consequence of the first two, and helps us see why metonymies, unlike metaphors, are often regular.

It is widely accepted that, metonymy is based on contiguity or association, whereas metaphor is based on similarity. The two also differ in terms of the number of conceptual domains involved. The standard view is that a metonymic mapping occurs within a single domain, while metaphoric mappings take place across two discrete domains.

Metaphor and metonymy are generally different with respect to the directionality of conceptual mappings involved. Metaphors typically employ a more concrete concept or domain as source in order to structure a more abstract concept or domain as target. In the majority of cases, elements from the physical world are mapped onto the social and mental world. Metaphorical mappings are thus normally unidirectional, and the source and target are not reversible (cf. Kövecses, 2002: 6). Metonymic mappings can, in principle, proceed in either direction, from the more concrete part of the domain (subdomain) to the more abstract one and the other way round, but of course not simultaneously. According to Radden and Kövecses (1999: 22), “[i]n principle, either of the two conceptual entities related may stand for the other, i.e., unlike metaphor, metonymy is basically a reversible process.”

Another crucial point of difference between metaphor and metonymy has to do with the number of mappings taking place: metaphors may work

on the basis of a set of correspondences (though some may exploit only one), while metonymic mappings are based on a single correspondence (cf. Ruiz de Mendoza & Peña, 2002).

Metaphor and metonymy are also said to have different functions. Lakoff and Johnson (1980: 36f) say that metaphor is “principally a way of conceiving of one thing in terms of another, and its primary function is understanding,” while metonymy “has primarily a referential function, that is, it allows us to use one entity to stand for another.” However, both of the above statements have to be relativized. While Lakoff and Johnson see metonymy as having primarily referential function they are aware of its additional functions and point out not only that metonymy is “naturally suited for focusing” (Lakoff & Johnson, 1980: 37ff), but that it can just like metaphor have a role in construal. It makes it possible for us to see and understand things in alternative ways.

Finally, due to the fact that metonymy is based on contiguity, while metaphor is based on similarity obtaining between conceptually discrete, and therefore conceptually distant, domains, the type of polysemy these two cognitive operations bring about is very different. In the case of a conceptual metaphor, for any domain that can function as the target domain, we may expect to have more than one potential source domain, e.g. TIME can be conceptualized as MOVEMENT, COMMODITY, PHYSICAL OBJECT, etc. Conversely, one and the same source domain can be used for different target domains, e.g. we can use the domain of MOVEMENT, more specifically JOURNEY to metaphorically conceptualize TIME, LOVE, etc. However, there is not much regularity in what can be used metaphorically to conceptualize something else, and what not, and as a result of this metaphors leads to a more ad hoc type sort of polysemy of lexical items associated with the source domain. The conceptual distance in the case of metonymy is smaller (we remain within a single domain), and the number of choices is relatively restricted. As a result, metonymic shifts within similar specific domains will tend to be very similar, and the lexical items enjoying the same ontological status within these domains will behave in the similar way, i.e. they will function as metonymic vehicles exhibiting the same type of shift (e.g. lexical items denoting some types of minerals, plants, etc. will come to denote some objects made from them), resulting in more regularity. This is not to deny the systematicity of conceptual metaphors. We know very well that they can be organized in whole systems, but the dominant organizing principle is hierarchy, i.e. the systematicity is “vertical:” a general metaphor can be a family of related submetaphors (their source domain can be quite different), and these can exhibit a number of more specific mappings (which are sometimes considered to be very specific metaphors in their own right) which link to a multi-

tude of lexical items associated with the domains involved. On the other hand, the systematicity of metonymies is of the “horizontal” type.

## 2. Can metonymies really be novel?

The issue of novel or creative metonymies has not been one of the focal interests in cognitive linguistic literature, but a number of recent publications (e.g. Slabakova, Cabrelli Amaro & Kang, 2013a & b, 2016; Van Herwegen, Dimitrou & Rundblad 2013; Falkum Lossius, Recasens & Clark 2017) discuss it. All these articles take it for granted that there is such a thing as novel metonymy. However, my central intention in this article is to question this assumption.

Metaphors can clearly be novel, as a result of human creativity, and both the new ones and the already existing ones could be used creatively (put to use in a different context). Metonymies can of course also be used creatively, but I would like to argue that there is very little genuine novelty when it comes to metonymies. Of course, all metonymies must have been at one point novel, resulting from creativity, but there is little room for that in the present, for reasons to be presented somewhat later. One could perhaps expect more novelty occasionally as we move towards more specific, low-level metonymies (and therefore also in specialized language, such as medical discourse, for example), but hardly any at the high-level end of the continuum.

There are several reasons why there should in principle exist very little novelty when it comes to novel metonymies. First of all, note that, as we stated above, metonymy is an intra-domain phenomenon. What is more, it exploits a very limited range of relationships, just part for whole, whole for part and perhaps part for part (the existence of which is called into question by a number of authors).

Let us now try to simulate, using very simple mathematics, what possibilities there are for metaphors and metonymies, respectively, if a certain number of conceptual domains are involved. Starting with just 10 domains that we assume to each exhibit 10 salient parts that can be involved in metonymic operations, we end up with 100 metonymies of the WHOLE FOR PART type, 100 metonymies of the PART FOR WHOLE type and 900 metonymies of THE PART FOR PART type if they are all reversible, totalling 1,100 metonymies.

The formula for the number of combinations consisting of two elements from a set containing  $n$  elements but without permutations, as metaphors are normally not reversible is:

$$\frac{(n)(n-1)}{2}$$

The result would of course not be the same in the case of conceptual metaphor. 10 different domains would produce only 45 different combinations of two domains (without permutations).

If we applied this procedure to 100 domains that we assume to each exhibit 10 salient parts that can be involved in metonymic operations, we end up with 1,000 potential metonymies of the WHOLE FOR PART type, 1,000 potential metonymies of the PART FOR WHOLE type and 9,000 potential metonymies of the PART FOR PART type if they are all reversible, totalling 11,000 metonymies. In the case of conceptual metaphor 100 different domains would produce 4,950 different combinations of two domains (without permutations), i.e. 4,950 potential metaphors. However, as the number of domains rises, there are more and more potential metaphors, and the scale eventually tips in favour of metaphors. With 250 domains there would be 27,500 metonymies and as many as 31,125 metaphors, with 300 domains there would be 33,000 metonymies, outweighed by 44,850 potential metaphors.

We should, however, bear in mind that it is highly unlikely that there are as many as 10 salient elements in all domains that are viable as metonymies. That number practically never exceeds 3 in special cases, but is more likely to be somewhere between 1 and 2 in practice, which greatly reduces the number of resulting metonymies. Needless to say, not all metonymies are reversible. Finally, we should also keep in mind that, as we said above, metaphorical mappings are sometimes also considered to be very specific metaphors in their own right, and these were not taken into account in the above simulation. So we see that on purely theoretical grounds there should exist many more conceptual metaphors than metonymies. It follows from this that the room for novel conceptual metaphors is significantly greater than for novel metonymies.

Returning to the issue of how many elements in a domain typically partake in metonymic shifts, we see that if we take a look at various metonymies that can be used to refer to doctors, the number is indeed restricted. Let us now take a look at some expressions used in health discourse.

We see that the expression *white coat* seems to be the first if not the only option (in spite of the fact that the tradition is apparently not more than 100 years old, and not universal). Its counterparts are common in many languages: *weisser Kittel* (German), *hvid frakke* (Danish), *bijeli mantil* (Croatian), *biely plášť* (Slovakian), *fehér köppeney* (Hungarian), *valkoinen takki* (Finnish), *haina albă*, (Romanian), *bata blanca* (Spanish), *capotto bianco* (Italian), *pullto të bardhë* (Albanian), *beyaz ceket* (Turkish). It is interesting that one of the ele-

ments present in many visualisations of physicians—the stethoscope—is never used with a metonymic function. The closest we can get to metonymic inferencing are expressions like *the man with the stethoscope* or *on the other side of the stethoscope*. An obvious candidate in the case of a surgeon is *scalpel* or *lancet*, similar to the names of musical instruments that metonymically stand for musicians (*The sax has got the flu today*), but this possibility is not made use of. Actually, Toupin (2018) discusses a number of names for the physician in the history of English that have metonymically evolved from medical instruments, such as *clyster*, *leech*, *pisspot*, or *quack* and *pills*. None of these seems to have survived the test of time as a viable metonymy, i.e. as a salient enough instrument to refer to a physician although the INSTRUMENT FOR AGENT metonymy seems to be working in some other areas. When it comes to referring to names of diseases, we see that names of body parts can be sometimes used metonymically to refer to a medical condition involving that body part (e.g. *frozen shoulder*), as discussed in more detail in Section 3 below. Another possibility of informal metonymic reference to a disease in case of eponymic terms is to use just the truncated eponym (e.g. *Crohn* instead of *Crohn's disease*), a phenomenon that will also be discussed in detail in Section 3. Health practitioners may refer to their patients metonymically by using the name for their disease (*The appendicitis arrived 30 minutes ago* or *A Crohn should always be careful about what...*). This means that 10 domains are quite likely to produce only 60 metonymies, which contrasts with 45 metaphors. With 15 domains, we may expect 90 metonymies, and this is already less than the number of potential metaphors, which is 105. In case 20 domains are involved, the ratio is 120:190 in favour of metaphors, and the difference grows exponentially as we increase the number of domains. This clearly shows that the number of instances of potential low-level metonymies in particular domains may indeed be very limited in practice.

Let us now take a look at what is discussed in literature under the heading of novel/creative metonymy. We first look how these are defined, or, if not defined in any particular way, how they are described, and also at the specific cases of novels considered to be novel/creative.

Frisson & Pickering (2007: 597, 600), to which most of these recent studies of novel metonymies refer to, only talk about novel senses of metonyms, i.e. unfamiliar metonyms (contrasting these with lexicalised senses and familiar metonyms, respectively). It is clear that they are not talking about novel metonymy. We should note their careful phrasing. They say that a novel metonym is an instance of a(n existing) metonymy type or pattern and that metonyms can develop novel senses. So they clearly draw a distinction between the type and the token level. Metonym is an instance of an actually lexicalized metonymy type. According to Frisson and Pickering, we can have a novel example or instances of metonymy when we start using an

expression metonymically in the same way as we use some other items belonging to a set, e.g. when a new eponymous name of a medical condition after its addition to the medical terminology is used in a truncated form. Thus the term *Purkinje fibers* denotes part of the conduction system of the heart which initiates and coordinates the electric signal that causes the rhythmic and synchronized contractions of the atria and ventricles. It was named after the Czech anatomist and physiologist Jan Evangelista Purkyně, who discovered them in 1839. The term seems to have been used for the first time in a medical book in 1960.<sup>2</sup> We find it in a truncated form, i.e. as a metonym, in an article published in 1970: ... yet under the same conditions propagation from muscle to Purkinje still took place.<sup>3</sup> It is an instance of the well-established metonymy of the type PHYSICIAN FOR THE DISEASE ASSOCIATED WITH HIM/HER.

Slabakova, Cabrelli Amaro & Kang (2013a & b, 2016) do not actually define novel metonymies, but just contrast what they call “regular metonymies,” i.e. widely conventionalized metonymies such as *Paris is in a huff* (CAPITAL FOR GOVERNMENT), with those that are “not widely conventionalized although they use the same mental processes” (2013a: 226). At the same time, they admit being “mindful of the fact that regular and novel metonymy are not mutually exclusive, but rather two opposites on a cline of metonymy conventionalization.” This effectively means that novelty of a metonymy is equated with its conventionalization, which is tightly linked to the frequency of its use. It follows that the metonymy novelty that Slabakova, Cabrelli Amaro & Kang (2013a) keep talking about is not a phenomenon at the type level, but only the novelty at the instance or token type. This is a sort of rule-governed creativity, and not a rule-breaking type. What Slabakova et al. call novel metonymies are just analogical formations on the basis of what the current system allows.

Paradoxically, this is precisely where and how metonymies can be regular. As we have seen above, the appearance of a new medical eponym is quite likely to lead to its truncation in due time, resulting in metonymy, i.e. in the addition of a new instance to the already existing set of metonymic expressions realizing a given metonymic type, in this case the metonymy of the type PHYSICIAN FOR THE DISEASE ASSOCIATED WITH HIM/HER. Similarly, when Czechoslovakia dissolved into the Czech Republic and Slovakia in 1993, Bratislava emerged as a new instance of the CAPITAL FOR GOVERNMENT metonymy, but it could hardly be considered a novel one. The system itself is in no way changed, apart from the fact that certain metonymic patterns in

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<sup>2</sup> Gardner, E., Gray, D. J., O’Rahilly, R. 1960. *Anatomy: a regional study of human structure*. Philadelphia: W. B. Saunders.

<sup>3</sup> Mendez, Carlos, William J. Mueller, Xavier Urguiaga. 1970. Propagation of impulses across the purkinje fiber-muscle junctions in the dog heart. *Circulation Research* 26: 135–150.



it are further strengthened. This becomes even more obvious when we take a look at the actual examples that Slabakova, Cabrelli Amaro & Kang discuss as novel metonymies. There is hardly anything novel about a *good Agatha Christie*, the metonym that forms part of the title of their 2016 article. This is a well-known type of metonymy, AUTHOR FOR HIS/HER WORK, examples of which can be easily found (even for authors far less well-known than Agatha Christie).

### 3. The regularity of metonymy

It transpires from what we have seen so far that discussions of novel metonymies in recent literature are actually not really discussions of what we would expect novel metonymies to be. All these articles rather just bring up new instances of some existing and well-established metonymic patterns. The term that they use for this phenomenon, regularity, is less than fortunate. As already mentioned, what Slabakova, Cabrelli Amaro & Kang see as novel is opposed to regular, but what is understood under the regularity of metonymy in the cognitive linguistic literature is something very different. It has been noted in the literature that, in contrast to metaphor, metonymy can be quite regular, or logical. This is the reason why some patterns of metonymic shifts are referred to as regular or logical (and producing regular polysemy) (cf. Brdar, Zlomislíć, Šoštarić & Vančura, 2009; Sweep, 2010, 2012; Jódar Sanchez 2014).

This can be very well observed in an area where metonymies and metaphors compete, viz. in providing nouns that are normally non-countable with a countable sense, and the other way around (cf. Gradečak-Erdeljić, 2004). Metaphorical processes underlie the creation of so-called partitive expressions, e.g. a cake of soap, a blade of grass, a loaf of bread, etc., while metonymy is involved when these are simply preceded by an indefinite article, and/or provided with the plural morpheme in order to activate a special related sense, e.g. a sugar, two sugars (two pieces/cubes of sugar), two coffees 'two cups of coffee', etc. Metonymy seems to be more regular in the sense that the special construal with a fairly predictable result can be coerced onto practically any noun belonging to a set of co-hyponyms of a given hyperonym.

This is the reason why phenomena such as animal grinding (Copestake & Briscoe, 1995; Pustejovsky & Bouillon, 1995), and such like, are also called regular polysemy (Copestake & Briscoe, 1995), systematic polysemy (Nunberg, 1995). This same sort of regularity in the application of metonymy can also be observed in health communication. What is more, this regular sort of metonymy-based polysemy seems to be available cross-linguistically in very

many cases. I illustrate this on three kinds of phenomena, all of which basically rest on the metonymy of the type WHOLE FOR PART:

- names for body parts used to denote a medical condition of that body part
- eponymous names of diseases
- names for branches of medicine.

### 3.1. *Medical conditions named after the part of the body affected*

Names of medical conditions, i.e. diseases and disorders, can take various forms, which is not surprising taking into consideration the number of medical conditions affecting humans (the 10<sup>th</sup> revision of the *International Statistical Classification of Diseases and Related Health Problems*, known as ICD-10, provides as many as 70,000 codes). A number of medical conditions are called after the body part affected, often in combination with some other element that may denote the cause of the disorder or one of its salient symptoms. Some of these are realized as X's Y construction, where Y denotes a body part. Let us look at some examples.

*Golfer's elbow* (also called *medial epicondylitis*) is the inflammation of the medial epicondyle on the inside of the elbow associated with repeated use of the wrist flexors, as in golf. A synonymous term is *pitcher's elbow*. This appears to be a BODY PART FOR THE DEFORMATION OF THE BODY PART metonymy, but it is actually slightly more complex in this case because it involved two metonymies. Note that the definition of this condition specifies that it is the inflammation of the tendons of the elbow, not the whole elbow. So the name of a body part stands just for a part of it. This means that the whole complex has a concept associated with the lexeme *elbow* functioning as the metonymic source for two metonymies, i.e. a single metonymic source is simultaneously linked with two metonymic targets, producing a situation similar to what in classical rhetoric is called *metalepsis*.

The situation is very similar in the case of the medical term *tennis elbow* (also known as *lateral epicondylitis*). In this case it is not the inside but the outside of the elbow that is affected. Again this is a complex of two metonymies relating to each other just like in the previous example.

Another term with *elbow* as Y in the construction X's Y is *student's elbow* (or *olecranon bursitis*). This is a condition of swollen or inflamed back of the elbow in people who lean a lot on their elbows, as for example in people who study while leaning on their elbows, hence *student's elbow*. This condition is also called *miner's elbow* or *plumber's elbow*, because these jobs involve a lot of crawling on their elbows. Needless to say, these are again combinations of two metonymies, just like *athlete's foot* (*tinea pedis*), a fungal infection typically beginning between the toes.

The term *Morton's foot* (named after Thomas George Morton, although it was first correctly described by a chiropodist named Durlacher) is sometimes used to refer to a benign neuroma of an intermetatarsal plantar nerve, which is a nerve innervating the sole of the foot. This is again a case of interacting metonymies, but is different from the above. Here we find two metonymies superimposed on each other, i.e. as a cumulative metonymy coming in layers or tiers, such that the target concept of one of them is simultaneously the source concept for the other. What is meant by *foot* is something inside it, i.e. the intermetatarsal plantar nerve, and then the nerve stands for the neuroma on it, which makes it a series of two WHOLE FOR PART metonymies. This condition is also called *Morton's neuroma*, which is a non-metonymic term. However, the term *Morton's foot* (after the American orthopaedic surgeon, Dudley Joy Morton) is also used to refer to a different condition, when the second toe is longer than the big toe. Its alternative name, *Morton's toe*, is of course more appropriate. While the former is again a two-tiered metonymy, the latter, is just a simple one. The condition, also known as *Morton's triad*, *Morton's syndrome* or *Morton's foot syndrome*, has stirred with some disputed anthropological and ethnic stipulations. Morton himself called it metatarsus atavisticus, claiming that it is an atavism stemming from prehuman grasping toes. This condition has also been called the *Greek foot* (contrasting with the *Egyptian foot*, where the big toe is longer) because it was considered ideal by Greek sculptors. The Statue of Liberty in New York exhibits this condition, as it follows the same aesthetic standard that was adopted by Romans and later revived in the Renaissance period. A whole bunch of other terms is also applied to this condition: *royal toe*, *LaMay toe*, *Sheppard's toe*, *boss toe*, *Turkey toe* and *Viking toe*.

A second construction belonging here consists of a premodifying adjective and the noun denoting a body part or organ. *Frozen shoulder*, also known as adhesive capsulitis, is a condition characterized by stiffness and pain in the shoulder joint. The term *irritable bowel syndrome* (IBS), originally called *irritable colon syndrome*, is sometimes truncated to just *irritable bowel*, and thus belongs here, as in the following example where it is contrasted with some other names of diseases:

(2) ***Irritable bowel*** is not *colitis*, *infectious*, or *cancer*. Its symptoms are magnified by eating and stress.

Consider also *fatty liver* (hepatic steatosis), the name for a condition of the liver characterized by excess build up fat in it.

These tend to have metonymic counterparts in many other languages, as can be seen from the following table.

<b>English</b>	<i>tennis elbow</i>	<i>frozen shoulder</i>	<i>athlete's foot</i>
<b>German</b>	<i>Tennisellenbogen</i>	<i>gefrorene Schulter</i>	<i>Athletenfuß</i>
<b>Spanish</b>	<i>codo del tenista</i>	<i>hombro congelado</i>	<i>pie de atleta</i>
<b>Croatian</b>	<i>teniski lakat</i>	<i>smrznuto rame</i>	<i>atletska noga</i>
<b>Hungarian</b>	<i>teniszkönyök</i>	<i>fagyasztott váll</i>	<i>atlétaláb</i>

Table 1. Medical conditions metonymically named after the body part affected across languages.

### 3.2. Eponymous names of diseases

Eponyms are often defined as words derived from proper nouns denoting mostly persons, real or fictitious, or places, and very rarely from proper names denoting events, as for example in:

- (3) a. *It's an alarming thought that an automatic **diesel** can reach 100 kph within 6.6 seconds.*
- b. *In club **badminton**, this is usually where you stop and choose players for the next game.*

Eponyms can be realized in a number of ways, as we have already seen, ranging from nouns to derived adjectives and verbs. If we concentrate on the nominal ones, we see that they can be realized as simple NPs, i.e. bare nouns consisting of just the proper name, normally the last name in the case of personal names (e.g. *diesel* in (3a) above). However, they can also be realized as more complex noun phrases, with the eponymic part functioning as the possessive part – either the synthetic genitive (e.g. *Pott's fracture*) or following the preposition of in the periphrastic variant (e.g. *the circle of Willis*), or functioning as the premodifier part followed by a common noun functioning as the head of the noun phrase (e.g. *Rokitansky–Aschoff sinuses*).

Some, but not all, eponyms realized as bare NPs can be interpreted as elliptical constructions, the common noun functioning as the head can often be omitted (e.g. *Alzheimer's* for *Alzheimer's disease*, or *Apgar* for *Apgar test*). Eponyms realized as bare synthetic genitives are, however, normally understood as ellipses, although the growing tendency in spelling that can be observed is to omit the apostrophe and treat the genitive 's as if it were an original part of the name, which seems to indicate an alignment with the former type of construction (cf. *Last week the Alzheimer's was confirmed* vs. *The Alzheimers was just diagnosed about six months ago...*).

It is quite obvious that the prototypical simple eponyms like *Alzheimer('s)* or *Apgar* are clear cases of metonymy. Eponyms used in medicine can denote a number of concepts, such as disease, (mal)formation, test, procedure, etc. Concentrating on those that denote diseases we can again observe a sort of

regularity of extensions. Most of full constructions can be routinely reduced to just the proper name, which is a metonymy (DOCTOR/RESEARCHER FOR THE DISEASE STUDIED/DISCOVERED BY HER OR HIM): *Alzheimer, Crohn, Addison, Kliknepfeler, Parkinson, Down, Cushing, Williams, Hashimoto*, etc.

- (4) *Many of the common symptoms of **Crohns** were controlled with consistent exercise and sleep.*
- (5) *After ruling out any obvious cause of anemia, Celiac and **Crohns** were the main contending diagnoses.*
- (6) *In the study in question, individuals with **Hashimotos** were identified (defined by the researchers as individuals with anti-thyroid peroxidase levels of greater than 121.0 IU/mL.*

These NPs can be further extended metonymically in a fairly regular fashion to refer to a patient suffering from the disease in question:

- (7) *HIMEC monolayers derived from intestinal mucosa of four different subjects – 2 controls, 1 ulcerative colitis, and 1 **crohns** were cultured in 75cm<sup>2</sup> tissue culture ...*
- (8) *Unlike the NOD2 polymorphisms both UC and **Crohns** were equally likely to have the Asp299Gly polymorphism.*

But even full names of diseases can be extended in the same way to refer to patients:

- (9) *The study ... by the group from the Erasme University Hospital in Brussels found the allele frequency of this polymorphism to be increased in both **Crohn's disease** (11%) and ulcerative colitis (10%) compared with controls (5%).*

What is more, the abbreviations for diseases can also be used in that way:

- (10) *In a study comparing the abundance of bacteria in mesenteric lymph nodes in **CD** and healthy controls,...*

Again, many of these metonymic extensions find regular counterparts in languages other than English. Cf. some German (11–12), Slovakian (13), Spanish (14) and Hungarian (15) examples with Crohn:

- (11) *Heilbar ist **Crohn** nicht.*  
'Crohn is not curable'
- (12) *Analog sollte bei einem **Crohn** mit Symptomen, die...*  
'In analogy, one should in the case of a Crohn (patient) with symptom which...'
- (13) *Mnoho ľudí s **Crohnom** má aj určitý stupeň intolerancie laktózy.*  
'Many people with Crohn also have some degree of lactose intolerance'

- (14) *Los pacientes con **Crohn** y otras enfermedades diarreicas tienen una incidencia mayor de piedras en el riñón, el cual está vinculado a este problema.*  
'Patients with Crohn and other diarrheal diseases have a higher incidence of kidney stones, which is linked to this problem.'
- (15) *Februárban béltükrözés során diagnosztizáltak **Crohnnal**.*  
'After a colonoscopy she was diagnosed with Crohn('s) in February.'

### 3.3. Names for branches of medicine

In our last case study, we consider regular metonymic extensions of the names for branches of medicine. Krišković (2016) observes that names for various branches of medicine can be used metonymically to refer to other related concepts. Let us illustrate this on the example of pathology. This lexeme can be used not only to refer to "the study of the causes and effects of disease or injury and especially the branch of medicine that dealing with the laboratory examination of samples of body tissue for diagnostic or forensic purposes", but to many other contiguous concepts. It can, of course, be used metaphorically, as in (16) and (17):

- (16) *As the façade of democracy crumbles, at the same time, what is now being exposed is the pathology of our society – a kind of systemic psychopathy that has been locking people into a tunnel vision of American exceptionalism and an oligarchic government;...*
- (17) *We are thus able to offer both broad insights into the roots of China's phantom urbanization and a careful tracing of the specific development and effects of the **pathology** of ghost cities for the first time.*

The term *pathology* can be used metonymically to refer to pathological features considered collectively (18), to the typical behaviour of a disease (19), or to a pathological condition (20):

- (18) *The **pathology** of MS: new insights and potential clinical applications... The pathological hallmarks of the multiple sclerosis (MS) lesion consist of focal demyelination, inflammation, scar formation, and variable axonal destruction.*
- (19) *The purpose of this article is to introduce the **pathology** of atherosclerotic lesions to provide a rational basis for their clinical management. For each human individual, the natural history of the pathology of arterial lesion development lasts >40 years.*
- (20) *The **pathology** of frozen shoulder remains unclear, with information usually derived only from recalcitrant cases. Arthroscopy and open exploration of the frozen shoulder have increased our understanding of both the macroscopic and microscopic appearances. The pathology affects the glenohumeral capsular tissue and is particularly localised to the coracohumeral ligament in the rotator interval.*

It can also be used to refer to the part of body affected by a disease (21), a sample of suspicious tissue taken for testing (22), the test and its result (23):

- (21) *We showed in our study that the involvement of hidden parts of small arteries and especially veins in the compression conflict can be better visualized with an angled endoscope placed in front of the **pathology**.*
- (22) *When requesting **pathology**, please make sure the lab encloses the corresponding report with matching case numbers inside the pathology envelope.*
- (23) *The **pathology** from the bronchoscopic biopsy observed abundant fungal hyphae which was stained.*

Finally, *pathology* can be used in the sense of a hospital department and its physical locale, i.e. the building where in which it is situated:

- (24) *Since our **Pathology** is open round the clock we are able to get our reports faster and hence no time is wasted in starting the treatment.*
- (25) *They stepped out of the **Pathology**.*

This sort of regularity can be observed with many other names for branches of medicine, although, of course, not all of the above shifts can be observed in all cases. This regularity holds across languages, too. Cf. some Croatian examples with the Croatian counterpart for nephrology:

- (26) *... i svi liječnici koji rade na **nefrologiji**....*  
'... and all the physicians working at the nephrology (lit. on nephrology)'
- (27) *Ispit iz Nefrologije*  
'exam in Nephrology'
- (28) *Nova nefrologija i hematologija na Švarči*  
'New nephrology and haematology at Švarča.'

#### 4. Conclusions

The topic of how speakers cope with unfamiliar metonymies has cropped up in several recent articles, which is a welcome sign of growing interest in this phenomenon, which may eventually contribute towards shedding more light on the phenomenon of metonymic competence, paralleling metaphoric competence. We have seen in the course of examining some authentic examples of metonymy that the phenomena of the novelty and regularity of metonymy are not two opposites on a continuum.

Metaphors can be novel, as a result of human creativity, and both the new ones and the already existing ones can be used creatively. Metonymies can also be used creatively, but I have provided evidence that there is very little genuine novelty when it comes to metonymies. One could perhaps expect more novelty occasionally as we move towards more specific, low-

level metonymies (and therefore also in specialized language, such as medical discourse, for example), but hardly any at the high-level end of the continuum.

There are several reasons why there should in principle exist very little novelty when it comes to novel metonymies. Metonymies, unlike metaphors, often tend to be regular in the sense that they can apply to a whole set of lexical items sharing a property that forms the bases for the extension in question. This regularity can be observed in everyday language, but also in more specialized registers, such as health communication. I have demonstrated that a number of metonymic patterns in this specialized register exhibit a high degree of regularity. This phenomenon, referred to as regular metonymy, logical metonymy or logical polysemy, crosses boundaries of languages and cultures. The same patterns of metonymic extension seem to be found in many more or less related languages. Needless to say, this regularity is not absolute. There are a number of factors that can block its application in a single language, or even across languages.

In view of the above, this article is another step towards a better understanding of figurative competence, especially metonymic competence. The topic of how speakers cope with unfamiliar metonymies has cropped up in several recent articles (cf. Brdar-Szabó, 2016), paralleling metaphorical competence (Littlemore & Low, 2006). This is a welcome sign of growing interest in this phenomenon, but we are still a long way from fully understanding it. On a more applied (linguistic) level, as metaphorical and metonymic expressions can be found in specialized types of language, including health communication, a better understanding of the regularity of metonymy in various discourse types in which health practitioners and patients interact, may help improve their mutual understanding. This in turn has welcome positive effects on the functioning of the whole healthcare system.

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