Metaphor and metonymy as a means of economy of expression

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This paper deals with metaphor and metonymy in word formation from an onomasiological perspective. As the treatment of both metaphor and metonymy in word formation has previously been rather neglected, it aims to show that they play an indispensable role in the formation of new naming units, both morphologically simple and complex, and that they are instrumental in achieving the economy of expression and effability in instances where literal description might fail to do so. The discussion of metaphor and metonymy in word formation is based on an onomasiological model originally based on that of Štekauer's, with some major modifications, and the examples used for illustration are taken from the realm of natural organisms.

1. Introduction

The discussion of the place of metaphor and metonymy in word formation has been rather neglected. Metaphor and metonymy have been either completely excluded from word formation, or the discussion of their role has been restricted to specific forms. An example of the former approach to metaphor and metonymy is Štekauer's onomasiological model, in which the processes of semantic shift (including metaphor and metonymy) are referred to as idiosyncratic coinages that are part of the lexical (but not the word-formation) component (cf. Štekauer 2011: 22). Examples of studies that focus on specific forms only are Benczes (2006), which deals with metaphor and metonymy in NN compounds, or Barcelona (2008), which analyses the interaction of metaphor and metonymy in bahuvrihi compounds.

In this paper, I aim to offer an onomasiological viewpoint on the role that metaphor and metonymy have in the formation of new naming units. I aim to show that metaphor and metonymy are an inherent part of word-formation and that they are instrumental in achieving an economical expression of the resulting form.

In §2, I will provide a theoretical basis for the approach to metaphor in naming. In §3, I will describe the advantages of names for natural organisms in the study of onomasiology. In §4, I will describe the onomasiological model which serves as the background for the description of the role of metaphor and metonymy in word formation. In §5, I will discuss the ways in which metaphor and metonymy contribute the economy of form, namely their effect on the complexity of the onomasiological structure, their contribution to a simpler expression of salient features, their capacity to express features that otherwise resist literal expression, and their capacity to condense multiple local features.

2. Image/resemblance metaphor

The approach taken to metaphor in this paper is that of image or resemblance metaphor. Lakoff defined image metaphors as "one-shot" metaphors, which "map only one image onto one other image" (Lakoff 1993: 229). Thus, unlike conceptual metaphors, which are based on conceptualization and map concepts, image metaphors are based on sensory perception and map mental images. A mental image in Lakoff's approach is understood as a static visual image, e.g. shape and colour.

Grady (1997) expanded the notion of image metaphor by a behavioural element, introducing the notion of resemblance metaphor, and described it as an overlap of perceived features from both source and target domains. In literature, the discussion of image/resemblance metaphors is based solely on visual perception, such as Lakoff's (1993) image of an hourglass, Grady's (1997) behaviour-based metaphor *Achilles is a lion*, and Ureña & Faber's (2010) dynamic and static images in marine biology.

However, in compliance with Ureña & Faber's claim that "a mental image need not refer to a 'mental picture' but can also refer to sensory images or image simulations in different sensory modes" (Ureña & Faber 2010: 125), I understand image/resemblance metaphors as metaphors that can also be triggered by other types of sensory perception but vision, such as smell, taste, and sound.

Another difference from the above mentioned studies on image/resemblance metaphor is that their treatment of metaphor is semasiological, i.e. they treat metaphors from the decoder's perspective, cf. the terms source and target domains, where the source domain is the name lending entity and the target domain is the concept to be named. In this paper, I approach metaphor from the coiner's point of view, i.e. how metaphoric naming units come into existence.

In my view, onomasiology in general, not only metaphor and metonymy, is in principle anchored in cognitive linguistics. As will be apparent below, other main themes of cognitive linguistics, such as perception and conceptualization of extra-linguistic reality, levels of categorization, prototypes, and saliency, are also inherent in onomasiological investigations. It is then only natural that the onomasiological models on which my approach is based, those of Štekauer and Grzega, are viewed as cognitive (cf. Štekauer 2005: 8 and Grzega 2007: 5, respectively).

3. Naming units under investigation

All the naming units used as examples in this paper come from the realm of natural organisms. They were chosen for a number of qualities that well suit onomasiological research.

Firstly, an identical referent, e.g. a bird species, is distributed, at least part of the year, over large geographical areas, as most European birds inhabit the whole of the Eurasian space. This means that terms for the same bird species are found in all languages spoken on this territory.

The identity of the concepts is achieved for study by the fact that natural organisms are discrete natural concepts and not constructs of social or cultural reality. We are thus not studying

human inventions, cf. Blank's (2003) onomasiological analysis of the terms for the match in a number of languages, which may culturally vary, but identical concepts stable in time and space. Also, natural organisms are not as prototypical to our everyday experience as, for example, the eye (cf. Tagliavini 1949; Blank 2003), so the names denoting them do not belong to the central core of our vocabulary. This fact allows for greater variability of names within individual languages, which manifest a high level of lexical creativity, leading to a larger sample of names for investigation.

Another important quality of names for natural organisms is a high level of polygenesis, i.e. they were coined in the individual languages without the interference from other languages. This was achieved by the fact that the bulk of names were formed by the country folk with little geographical mobility.

The high level of polygenesis is also apparent within various local names, leading to a number of synonyms within one language. Most natural organisms, very often the non-prototypical ones, have a high number of local names with varied motivation. For example, the names for the long-tailed tit are motivated by the colour of patches on its body, the quality of its plumage, the shape of the body with the conspicuous tail, its overall size, its vocalization, its habitat, the shape of the nest, and the material of the nest. This high level of synonymy is especially important as we may contrast different naming strategies applied to one specific species within one language.

4. Onomasiological model

As has been already mentioned, the onomasiological model used in this paper as a background for the discussion of metaphor and metonymy in word formation has its starting point in Štekauer (1998) and was partly influenced by Grzega (2007). It was originally elaborated to fully account for the creation of names for natural organisms as when the original models were applied several shortcomings became apparent.

A full description of the model and its differences from the original goes beyond the purpose of this paper, thus I will focus on those aspects which are most relevant for the current study. My description will focus on the three main levels of the model, namely the perceptual (Štekauer's conceptual level), the onomasiological, and the onomatological.

4.1 *Perceptual level*[1]

At the perceptual level, the extralinguistic referent is analysed and "both the more general, 'global' features and the more specific, 'local' features of a concept are processed" (Grzega 2005: 77).

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[1] The terms *perceptual* and *conceptual* (cf. Štekauer's model) in the name for this level appear to be complementary, as the analysis of an extra-linguistic referent may be based either on perception or conceptualization. As the analysis of all naming units in this paper is based on perception, the term *perceptual level* will be used.

The global features classify the referent into an existing cognitive category, and the local features serve as the distinguishing marker within this category. So, for example, if I see a new organism, thanks to its ability to fly and its characteristic shape (global features) I classify the referent into the already existing mental category BIRD "by comparing the overall image of the referent with other images already in the mind" (Grzega 2007: 6), in other words by comparing it to the prototype of the category (cf. Rosch 1978), and its characteristic colour of wings (a local feature) may be the distinguishing marker within this category.

The ability of language users to categorize the extralinguistic reality, i.e. how specific their cognitive categories are, is determined by their experience. Generally speaking, where one sees a blue tit, another sees a tit, and someone else a bird, only. The highest level of categorization in natural organisms seems to be Berlin's (1992) life-forms, "ranging from five to ten, and among them they include the majority of all named taxa of lesser rank. These life-form taxa are named by linguistic expressions that are lexically analysed as primary lexemes, for example, *tree, vine, bird, grass, mammal*" (Berlin 1992: 15). As is apparent, this folk taxonomy does not correspond to the scientific one.

The local feature can either be static (a salient physical feature) or dynamic (an activity or relation to another entity), and in either case the local feature has a complex internal structure.

The conceptual structure of the former is

ASPECT / PART (QUALITY) FOR THE WHOLE

This, in fact, is double metonymy. The salient feature refers to one of the possible aspects of the referent – ASPECT FOR THE WHOLE, e.g. shape, colour, size, and at the same time this aspect refers to a part only or the referent as a whole, – PART FOR THE WHOLE. The third part of this structure is the quality itself, e.g. what shape, what colour, or what size. At the onomasiological level, however, not all the members of the structure will eventually find their linguistic expression.

Thus, for example, in *black-headed gull*, both QUALITY and PART are expressed, with ASPECT being left out, and in *soap-scented toadstool,* QUALITY and ASPECT are expressed, with PART being left out. In *blue tit, tailor[2],* and *variegated toadstool,* QUALITY, PART, and ASPECT are expressed only, respectively.

The conceptual structure of the dynamic local feature comprises, as suggested by Štekauer (1998), the determining and determined constituents – the determining constituent is an entity in a metonymical relation to the referent, and the determined constituent expresses the type of the relation or merely an activity.

Thus, for example, in *ant-eater*, the referent is in a metonymical relation to the ant (the determining constituent), the relation being expressed by the determined constituent *eat*. In *screecher*, a local name for the swift, the conceptual structure includes the determined constituent only, as no determining constituent is expressible.

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[2] The naming unit is motivated by the bird's conspicuous tail.

4.2 *Onomasiological level*

At the onomasiological level, the global features become the onomasiological base and the local features the onomasiological mark. As suggested above, at this level the language user determines how much of the onomasiological structure becomes linguistically expressed, with some of the constituents being left unexpressed.[3]

Importantly, unlike in Štekauer's approach, it is also the onomasiological base that may remain unexpressed. Consider the following examples of naming units denoting three different birds:

(1) a. *devil swallow*
     b. *devil bird*
     c. *devilling*
     d. *devil*

(2) a. *emmet hunter*[4]
     b. *eten bird*
     c. *emmet*

(3) a. *black-headed gull*
     b. *blackhead*

Example (1) consists of local names for the swift, a bird whose salient feature BLACK is expressed metaphorically. The first three names (1a-c) have the onomasiological base expressed, though at a different level of specificity, by the constituents *swallow, bird, -ling*, respectively, but in the last one, *devil*, the onomasiological base remains unexpressed.

In (2) are local names for the wryneck, a bird typically feeding on ants. In all these names, the referent is in metonymical relation to ants, expressed by the determining constituent, and the type of relation is given by the determined constituent. Thus, *emmet hunter* has all the constituents of the onomasiological structure expressed, *eten bird* has the determining constituent and the onomasiological base expressed, whereas in *emmet* the determining constituent is expressed only.

Traditionally, the formation of the morphologically simple naming units *devil* and *emmet* is not considered to be part of word formation, the names being instances of semantic shift, metaphor and metonymy, respectively. However, their morphologically complex counterparts suggest that such naming units undergo the same onomasiological process. We can consider them to be an extreme case of economy of expression, where one constituent of the whole onomasiological structure is expressed only, in which, however, the basic onomasiological structure of the onomasiological mark and base is still retained.

The distinction between the two naming units in (3) lies again in the (non-) expression of the onomasiological base. Nevertheless, as *blackhead* is still morphologically complex, the non-

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[3] Cf. Štekauer's onomasiological types.
[4] *Emmet* and *eten* are dialectal terms for the ant.

expression of the base does not lead to its eviction from word formation processes; traditionally, it causes its shift to the category of exocentric compounds.

We can also find examples of the onomasiological base being unexpressed in other languages, e.g. Czech names for various families of dragonflies, *šídlo* 'dragonfly' (lit. 'awl') next to *šídl-atka* 'dragonfly' (lit. 'awl+suf.'), or local names for the sorrel, a plant known for its sour juice, *šťáva* 'sorrel' (lit. 'juice') next to *šťav-lík* and *šťav-el* both 'sorrel' (lit. 'juice+suf.').

The non-expression of the onomasiological base may also be systematic, as in English names for butterflies, in which the onomasiological base *butterfly*, apparently for its three-syllable structure, is never expressed, as in the butterfly names *blue, white, yellow* based on the colour of their wings; these terms would traditionally be classified as instances of conversion.

4.3 *Onomatological level*

At the onomatological level, the features from the perceptual level find their linguistic expression. The underlying principle in choosing the expression is *in search of*. We scan our known world *in search of* the linguistic material that will express the specific feature. This can be a literal expression, if the feature is expressible literally; or we can search in other conceptual domains (or even the same one) to find the same salient feature, this time yielding a metaphoric or metonymical expression, respectively.

(4)   a.   EN[5] *black martin*
       b.   CS *vlaštovka černá* (lit. 'black swallow')
       c.   FR *martinet noir* (lit. 'black martinet')

(5)   a.   EN *collier*
       b.   EN *devil bird*
       c.   CS *papežník* (lit. 'pope+suf.')
       d.   CS *uhlíř* (lit. 'collier')
       e.   SK *kominár* (lit. 'chimney sweep')
       f.   FI *tervapääsky* (lit. 'tar swallow')

Example (4) consists of names for the swift in which the salient feature BLACK is expressed literally, whereas in (5) the same salient feature in the same bird is found in other domains, namely collier, devil, pope[6], chimney sweep, and tar. The search for the salient feature(s) from the perceptual level in other domains thus significantly broadens the choice of naming possibilities at the onomatological level.

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[5] The two-letter codes for languages are in compliance with the international norm ISO 639-1.
[6] Apparently from times when people judged the colour of the pope's garment from that of the local priest.

5. Metaphor and metonymy and the economy of form

The choice between the literal and non-literal expression, however, is not always free. A lot of salient features would simply be too long to be expressed literally or would resist literal expression altogether. Even in those cases where there seems to be a choice, the use of metaphor (and metonymy) enables us to form naming units with greater economy; of course, at the cost of their transparency. Together with Körtvélyessy et. al., I see the concept of semantic transparency to be "interrelated to that of meaning predictability" (Körtvélyessy et. al. 2015: 85). Metaphor in principle lowers the degree of meaning predictability in naming as it is not clear which salient feature(s) triggered the metaphoric expression, in other words which salient features were mapped.

Current studies that deal with "the fundamental conflict in word formation (and language in general), that between the explicitness of expression and the economy of expression" (Štekauer et al. 2005: 2) in onomasiological research focus their attention on onomasiological types (OTs), specifically on "the degree and the nature of completeness of morphematic representation of the onomasiological structure" (Körtvélyessy et. al. 2015: 92).

It will be shown below that it is also metaphor that has the capacity to affect the morphematic representation of the onomasiological structure towards a more economical expression (see §5.1); both metaphor and metonymy also allow for a morphologically simpler expression of salient features that would require a lengthy literal description (see §5.2) or would be literally inexpressible (see §5.3). Finally, I aim to show that metaphor also enables us to condense more salient features from the perceptual level into one linguistically simple expression (see §5.4).

5.1 *Affecting the complexity of the onomasiological structure*

The effect of metaphor on the onomasiological structure is twofold – it affects the expressibility of the onomasiological base as well as the complexity of the structure of the onomasiological mark.

5.1.1 *Affecting the expressibility of the base*
If we go back to (4), in which the salient feature BLACK in the various names for the swift is expressed literally, we can see that, as the colour is expressed by an adjective, such naming units always need to have at least one more constituent of the onomasiological structure expressed; be it the base, as in all instances in (4), or another constituent from the structure of the mark, as in *blackhead*, in this case PART. In naming units in which the feature BLACK is expressed metaphorically, this condition disappears. Thus, we may find *devil* next to *devil bird* or naming units, such as *collier*, the Czech *uhlíř* 'collier', and the Slovak *kominár* 'chimney sweep'. Although the latter mentioned are morphologically complex, in the naming process they are used as one unit, so from the onomasiological perspective we should see them as monemes.

The need for the economy of expression becomes more apparent when the adjectival onomasiological mark is a multi-word expression, as in the English names for *Tricholomopsis rutilans*, a mushroom with a purple cap and yellow gills.

(6)   a.   *purple-and-yellow agaric*
       b.   *plums and custard*

While the two metaphors, *plums* and *custard*, express the same salient features as the literal terms, they also enable the onomasiological base to remain unexpressed, achieving a more economical expression, of course at the cost of the transparency of the ontological category the referent belongs to.

5.1.2 *Affecting the onomasiological structure of the mark*
Metaphor also enables the compression of the constituents of the onomasiological structure of the mark into a formally less complex expression. Example (7) gives different English names for the treecreeper, a bird known for climbing up trees, and example (8) gives different French names for *Chironex fleckeri*, a jellyfish which can kill people with its venom.

(7)   a.   *treecreeper*
       b.   *tree mouse*
       c.   *squirrel bird*

(8)   a.   *piqueur marin* (lit. 'marine stinger')
       b.   *guêpe de mer* (lit. 'wasp of sea')

In (7) the semantic constituents TREE-CREEP-AGENT can have literal realization as in *tree-creep-er*, or the agent and the determined constituent are compressed into metaphoric *mouse,* as in *tree mouse*, or the agent and both determined and determining constituents are compressed into *squirrel*, as in *squirrel bird*.

The French examples in (8) exhibit the same pattern; the onomasiological structure STING$_{VERB}$-AGENT is either expressed literally in the morphologically complex *piqu-eur* 'stinger', or the same structure can find its expression in the metaphorical *guêpe* 'wasp', again compressing the agent and the determined, verbal, constituent into one monomorphemic realization.

The same type of compression may be found in names in which the onomasiological mark is of static nature, as in the names for the black-headed gull:

(9)   a.   *black-headed gull*
       b.   *blackhead*
       c.   *masked gull*
       d.   *hooded maw*

In (9) both metaphoric expressions, *masked* and *hooded,* compress the two constituents QUALITY (black) and PART (head) from the perceptual level into one, as both mask and hood can be understood as dark coverings of the head, allowing for a shorter, binominal, structure of the respective naming units. The same binominal structure can be achieved by omitting the onomasiological base, as in *blackhead*; the metaphors, however, this time retain the

onomasiological base, achieving a higher level of transparency of the ontological category of the referent.

The economy of expression at the onomasiological level may thus be achieved not only by not expressing some of the constituents from the onomasiological structure, which leads to different onomasiological types in Štekauer's approach, but also by compressing some of these constituents into one formal expression with the use of metaphor.

5.2 *Achieving a simpler expression of a salient feature*

Metaphor not only affects the onomasiological structure of the naming unit but also enables the expression of salient features that would otherwise require a multi-word literal description. Example (10) consists of different names for *Hygrocybe chlorophana*, a mushroom whose salient feature is the bright yellow colour.

(10) a. EN *golden waxcap*
      b. EN *sulphur-colored hygrophorus*
      c. CS *voskovka citronová* (lit. 'lemon waxcap')

The literal expression of the salient feature BRIGHT YELLOW (or any other shade of the colour) would most likely prove to be uneconomical for naming purposes, so by searching in other conceptual domains at the onomatological level, we succeed in capturing the complexity of the feature while confining ourselves to a simple expression by the use of metaphor, as in the metaphorical *golden*, *sulphur*, and *citronová* 'lemon$_{ADJ}$', which all express a bright yellow colour.

This ability to supply a simple term for a salient feature that would otherwise require a multi-word expression is more apparent in names in which the onomasiological mark is expressed metonymically; in this case, the salient feature has been searched for within the same conceptual domain. The following example comprises names for the sparrow hawk, a bird of prey typically feeding on (any) small birds:

(11) a. EN *sparrow hawk*
      b. EN *chicken hawk*
      c. SW *speckhök* (lit. 'finch hawk')
      d. CS *vrabčák* (lit. 'sparrow+suf.')
      e. ES *arrapapájaros* (lit. 'catch small-birds')

In (11) the only language that in a simple term distinguishes small birds and larger birds is Spanish, with its *pájaro* and *ave*, respectively, so the Spanish *arrapapájaros* can be considered to be literal. In the remaining languages, we can see various small birds that represent the salient feature SMALL BIRD, namely *sparrow*, *chicken*, and *finch*, which is an instance of A MEMBER OF A CATEGORY FOR CATEGORY metonymy.

A more illustrative example of this type of metonymy is given in (12), which are names for the swift, a bird that nests on vertical surfaces only.

(12) a. DE *steinschwalbe* (lit. 'rock swallow')
    b. DE *mauerschwalbe* (lit. 'wall swallow')
    c. DE *turmschwalbe* (lit. 'tower swallow')
    d. DE *kirchschwalbe* (lit. 'church swallow')
    e. CS *skalníček* (lit. 'rock+suf._{DIM}')
    f. ZH 楼燕 (lit. 'tower swallow')
    g. MN ᠲᠠᠭᠲᠠᠭᠠᠠ᠊ ᠬᠠᠷ᠊ ᠬᠠᠷᠢᠶᠠᠠᠠ (lit. 'tower swift')

A salient feature, such as VERTICAL SURFACE, would hardly find its way into the name for the bird, so various instances of vertical surface on which the bird nests are chosen instead, as e.g. in the four local German names that include the metonymy A MEMBER OF A CATEGORY FOR CATEGORY in *stein* 'rock', *mauer* 'wall', *turm* 'tower', and *kirch* 'church', which are all morphologically simple terms.

5.3 *Beyond literal expression*

So far, we have dealt with salient features for which we have at least some choice between a literal and non-literal expression. Nevertheless, metaphor is also instrumental in expressing features either for which the literal description would be too long for naming purposes or for which there is no possibility of literal description whatsoever.

Ineffability, or the difficulty or impossibility to express percepts and other experiences in words (i.e. literally), is of a different degree for different perceptual modes. "It is arguable for example that, in English at least, it seems generally easier to linguistically code colors than (non-musical) sounds, sounds than tastes, tastes than smells" (Levinson & Majid 2014: 415). Levinson & Majid (2014) make a distinction between linguistic codability (a literal expression) and indirect conveyability (a metaphoric expression). The level of codability may differ in different languages, as for example the language "Yéli Dnye lacks clear color terms (or any word for 'color'), certainly none beyond white, red and black: so to convey 'It is blue' in Yéli Dnye you would have to say, for example, 'It has the surface appearance similar to the shallow sea over sand'" (Levinson & Majid 2014: 410). In other words, where codability is impossible it is replaced by conveyability. Metaphor thus conveys the feature within formal limits suitable for naming needs.

An example of a feature which to a high degree resists linguistic codability is SHAPE. In (13) are names for the swift, a bird often seen as a silhouette flying above our heads.

(13) a. EN *anchor bird*
    b. HU *sarlósfecske* (lit. 'sickle+swallow')
    c. CS *kosak* (lit. 'scythe+suf.')
    d. CS *nůžky* (lit. 'scissors')
    e. CS *vidlák* (lit. 'pitchfork+suf.')

In general, it is thinkable that we describe SHAPE literally, but such description would go far beyond the suitable length for a name. The metaphor thus allows for an economical expression where the literal one would fail to do so.

In compliance with the conceptual structure of the static feature at the perceptual level, any ASPECT is also subject to PART FOR WHOLE metonymy. Thus, as is apparent from Figure 1, (13a) applies to the silhouette of the whole bird in flight, whereas in (13b-c) it is only the shape of the spread wings and in (13d-e) it is the shape of the tail that is salient at the perceptual level. In none of these names, the constituent PART is expressed; however, as has been noted above, it is only a matter of the naming strategy at the onomasiological level what constituents of the onomasiological structure are finally expressed; consider naming units, such as *spoonbill*, *pintail*, and *sabretooth*, metaphorically expressing the quality of the shape as well as expressing the part it refers to.

anchor (13a)

sickle (13b)   scythe (13c)
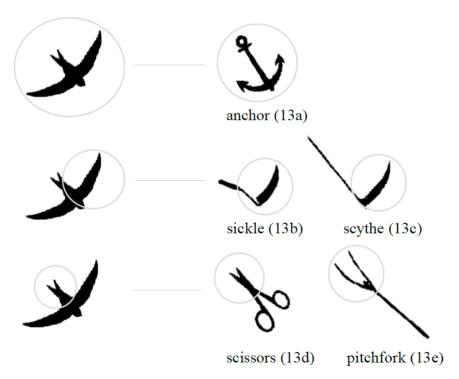
scissors (13d)   pitchfork (13e)

Figure 1: Metaphorical mappings in the names for the swift expressing SHAPE

In order to find a linguistic expression for the salient feature SOUND, we can either *search for* similar characteristics of the perceived vocalization in the realm of the phonemic system of our language, which results in onomatopoeia (for a detailed treatment of the correspondences between the natural sounds and a language's phonemic system, see Tsur 2001), use a verb which generally characterizes the sound (usually lexicalized onomatopoeia), or find the characteristic features of the sound in other domains, which leads to a metaphoric expression. Example (14) consists of names for the long-tailed tit, a bird whose salient feature is, among other things, its vocalization.

(14)   a.   EN *churr*
        b.   EN *churn*
        c.   EN *creak mouse*
        d.   CS *pilař* (lit. 'saw+suf.')
        e.   EN *bellringer*
        f.   CS *sýkora psí* (lit. 'dog tit')
        g.   EN *dog-tail*
        h.   SK *pánský psík* (lit. 'lord's dog')
        i.   DE *hundsmeise* (lit. 'dog tit')
        j.   DE *querrelmeise* (lit. 'quarrel tit')

Examples (14a-b) represent pure onomatopoeia, (14c)[7] is an instance of the salient feature SOUND expressed by a verb denoting sound, and the remaining examples are metaphoric, in which the characteristic qualities of the vocalization were found in the domains of sound producing entities – the saw, bell, dog, and the act of quarrelling. It is important to note that individual domains may reflect a different part of the bird's vocalization (cf. Kos 2014: 81).

The quality of sound can no longer be expressed *literally,* as all three approaches mentioned above are to a large extent approximative. None of the approaches seems to be more economical than the others; nevertheless, it appears that onomatopoeia and metaphor attempt to grasp the qualities of the perceived sound more faithfully than a general verb denoting sound.

Salient features for which there is no possibility of non-metaphoric expression altogether are, for example, SMELL or TASTE. "The specific qualities of smells […] are not lexically codable in English since there are arguably no words that identify the precise properties of smells" (Levinson & Majid 2014: 411). As an illustration for the impossibility of expressing the quality of SMELL and TASTE any other way but metaphorically may serve the wine aroma wheel[8], in which all wine aromas are described metaphorically.

In (15) we see names which were motivated by their smell or taste. *The miller* is a mushroom whose smell is described as that of freshly ground flour, and *oyster plant*'s leaves are said to taste of oysters.

(15)   a.   *the miller*
        b.   *oyster plant*

Metaphor in such cases does not only allow a more economical expression; rather, it is the only possible way to express such salient features.

5.4 *Condensing multiple local features*

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[7] The constituent *mouse* in *creak mouse* is not metaphoric, as it represents the onomasiological base with an older term for the titmouse.

[8] https://www.winearomawheel.com/

At the perceptual level, some referents may also be analysed by more than one local feature. As an example consider the two English names for the ghost orchid, whose flower is white in colour, has a characteristic shape, due to the lack of leaves seems to be floating in the air, and grows in marshes, an environment which is associated with supra-natural entities.

(16)   a.   *ghost orchid*
       b.   *white frog orchid*

All these salient features are condensed in the metaphoric expression *ghost*, as all the colour, the particular shape, the ability to float in the air, and marshes are characteristic of ghosts. Alternatively, in *white frog orchid* there is no compression of the features into one simple expression – two of the features are expressed separately, the colour and the shape (by a different metaphor), and the two remaining features are missing altogether. By using the metaphor *ghost*, we thus succeed in expressing more local features from the perceptual level with less linguistic material than the literal *white* and the metaphor for the shape only *frog*; again, though, at the cost of transparency.

6. Conclusion

From an onomasiological perspective, metaphor and metonymy in word formation do not represent a creative choice only, as suggested by the title of Benczes (2006), but one of the two basic principles of the expression of salient features, analysed at the perceptual level. At the onomatological level, these features may thus be expressed literally or may be searched for in a different, or even the same, conceptual domain. Finding the salient feature in a different conceptual domain yields a metaphoric expression and finding it in the same one yields A MEMBER OF A CATEGORY FOR CATEGORY metonymy.

   The structural possibility at the onomasiological level not to express the onomasiological base leads to the fact that the resulting naming unit may be morphologically simple. I come to the conclusion that such naming units, though being morphologically simple, are coined on the same onomasiological principle as the morphologically complex ones, as both are formed with the conceptual structure of an onomasiological base and a mark. The formation of these simple units, traditionally classified as semantic shift, should thus be treated on a par with the traditional categories of compounding, affixation, etc.

   Although the employment of metaphor and metonymy does not necessarily lead to a more economical form of expression, the potential to do so is apparent. The economy may be achieved by affecting the complexity of the onomasiological structure, either by allowing the non-expression of the onomasiological base or by compressing the constituents of the onomasiological structure of the mark into a formally less complex expression; it may also be achieved by the ability to provide a simple expression for features that would necessarily need to be complex, if expressed literally, and metaphor also enables the expression of features that would otherwise resist a literal expression altogether. Last but not least, metaphor allows for the

expression of multiple features, analysed at the perceptual level, into one word, a phenomenon, which can be understood as an implosion of several mental images into one word.

The potential of metaphor and metonymy to form a more economical expression may play its role in the choice of the linguistic form at the onomatological level if both, literal and non-literal, options are possible. As proved by Štekauer et al. (2005), certain sociolinguistic factors influence the choice between economy of expression and its transparency as, for example, the level of education appears to play a role: "while native speakers with university education prefer more precise names, lower educated speakers are more frequently driven by the principle of economy of expression" (Štekauer et al. 2005: 46). The comparison of local bird names, coined by country folk, and standard names, often coined by scientists, suggests a higher frequency of metaphoric names coined by country folk (cf. Kos 2011). However, the exact correlation between the use of metaphor (and metonymy) and the sociolinguistic factors needs to be further studied in more detail.

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