WHAT'S *DOG* GOT TO DO WITH IT?
MOTIVATION BEHIND DENOMINAL (ANIMAL) VERBS

ALISA EGOROVA
University of Potsdam
aegorova@uni-potsdam.de

HANS-GEORG WOLF
University of Potsdam
hg-wolf@uni-potsdam.de

Abstract

This paper investigates the motivation behind denominal conversion of animal nouns to verbs as well as their resultant senses. Upon critical consideration of previous accounts of animal verb senses and their possible sources, the argument is put forward that animal verbs are not uniform in their semantics and cannot therefore be considered a separate conceptual category or analysed as such. Previous findings are then reinterpreted from the point of view of frame-based accounts of denominal conversion. Animal verbs are shown to be generated by the same grammatical generalisations as other denominal verbs of English, with their metaphoricity appearing to be a concomitant rather than a driving factor in the grammatical act of their conversion.

Keywords: animal verb, denominal conversion, zero derivation, frame, metaphor, metonymy, zoosemy

1. Introduction

Denominal animal verbs, as in, e.g. *dog$_v$ an enemy*, *horse$_v$ around playfully*, *frog$_v$ it down the street*, *beaver$_v$ away at a new project,* etc. straddle the line between semantics and grammar, their vivid metaphoricity seemingly intertwined with a concomitant change of the grammatical category from a noun to a verb. Due to a surprisingly large number of such items in the English lexicon, it has been widely assumed that these verbs are the product of a specific conceptual mechanism (or a set of mechanisms) available in the linguistic knowledge of English speakers and responsible for converting animal nouns to (mostly) metaphorical denominal animal verbs with roughly similar semantics (e.g., Deignan, 2005; Kiełtyka, 2016). This thinking is reflected, for example, in Martsa's (2013) decision to devote a separate subchapter of his book *Conversion in English: A Cognitive Semantic Approach* to the analysis of conceptual underpinnings of animal verbs as a distinct verbal category, with

the rest of denominally converted verbs treated collectively under the heading "N>V conversions".

Furthermore, the generation of denominal animal verbs in English and across a number of other languages has been subsumed under a somewhat broader notion of "verbal zoosemy", which stands for the "metaphor-metonymy interface" (Kiełtyka, 2016, p. 25) producing both denominal and non-denominal metaphorical verbs with human-specific meanings on the basis of the people are animals metaphor, as in, e.g. *dog*_v *them down* or *bark*_v *orders*. It has further been argued that zoosemy, including verbal zoosemy, is one of the "novel categories of semantic change" (Kleparski, 2013, p. 59), alongside other novel categories, such as "foodsemy" (e.g. **sugar** *baby*) and "gustasemy" (e.g. **sweet** *home*), bringing about lexical items via recurring metaphorical and metonymic mappings sprouting from the source domains of ANIMALS, FOOD and HUMAN SENSORY EXPERIENCE respectively.

This paper argues against both distinguishing denominal animal verbs as a separate category of denominal verbs on the basis of their conspicuous metaphoricity and designating verbal zoosemy, or at least the generation of denominal animal verbs, a separate subcategory or mechanism of language change. To this end, existing accounts of animal verb semantics are subjected to critical inspection with the aim of showing that none of the existing classifications fully accounts for the diversity of the existing animal verb senses. The findings of previous studies are then recontextualized, and a new theory of the motivation for denominal animal verb coinage is put forward; specifically, the verbs are interpreted from the point of view of event-frame-based theories of denominal conversion (e.g. Clark & Clark, 1979). Consequently, it is demonstrated that the motivation behind the semantics of such verbs as well as behind the very act of their conversion is rooted in the event-frame underlying each individual instance of conversion – not in the semantics and/or the metaphorical potential of parent animal nouns. Finally, it is suggested that denominal animal verbs are primarily a product of frame-based *grammatical* generalisations equally responsible for other denominal verbs of English, with the PEOPLE ARE ANIMALS metaphor being relegated to the status of a powerful and fertile metaphorical *context* upon which such generalisations operate – not a separate mechanism of language change.

2. Previous Accounts of Animal Verb Conversion and Semantics

This chapter first surveys selected derivational accounts of possible motivation for the conversion and the resultant semantics of animal verbs, and subsequently discusses the shortcomings of these accounts. Finally, the derivational approaches are contrasted with the results of a large-scale exploratory diachronic study of animal verb semantics based on semantic field analysis.

2.1. Derivational Accounts of Denominal Conversion of Animal Nouns

The question of motivation for animal verb semantics has been tackled in cognitive semantics more than once, specifically because the figurative nature of these verbs, as evident as it is at first glance, appears easy to capture with the help of the Conceptual Metaphor and Metonymy Theory (CMMT). Ever since Deignan's (2005, pp. 154-164) corpus-based investigation of metaphor in natural language established a peculiar relation between the grammatical properties of animal terms and their figurativeness (namely, in Deignan's corpus data, animal terms mostly displayed literal meanings when used nominally, while adjectival and verbal uses were almost exclusively figurative and referred to human actions and attributes), cognitive linguists have been trying to explain how exactly the meanings of metaphorical animal verbs (and adjectives) originate. For reasons of space, this article will not review all existing accounts of animal verb semantics, but instead focus on the most informative ones.

Before delving into the details of each, it should be noted that derivational accounts of animal verb semantics are united by the assumption that N > V conversion does not only involve identity at the level of the morphological form (e.g. (*a*) dog_N = (*to*) dog_v) but also necessitates semantic contiguity between the *parent* noun and the verb. Ergo, the meaning of an animal verb must be (at least partially) derivative of the lexical meaning of the corresponding animal noun, and, thus, traceable–via discernible *conceptual pathways* (see Kövecses, 2015)–back to the respective animal designated by the parent noun. It is the identification of these conceptual pathways that has been the main objective of cognitive semanticists researching animal verbs, whose theories are presented below.

In their investigation of animal verb + particle constructions (termed *critter constructions*), Panther and Thornburg (2012) posit that the meaning of such verbal formations is not predictable but "motivated, in that it can be traced back to a folk model of the animal in question" (p. 67). In their view, the meaning shift accompanying the conversion from an animal parent noun to a denominal verb occurs in two phases. Specifically, the first conceptual operation is the WHOLE (OF ANIMAL ICM) FOR PART (OF ANIMAL ICM) metonymy, whereby the meaning of the animal noun is narrowed down to only encompass the *main meaning focus* BEHAVIOUR in the Idealised Cognitive Model (ICM) of the respective animal. In the second phase, the selected animal behaviour is mapped over to the domain PEOPLE via the PEOPLE ARE ANIMALS metaphor. For example, in *rat_v out*, the animal noun first evokes the ICM of the rodent, which is metonymically (WHOLE FOR PART) narrowed down to one particular behavioural feature associated with rats, in this case VILE BEHAVIOUR, since "rats are believed to embody vile character and behavioural traits" (Panther & Thornburg, 2012, p. 73). This characteristic is, in turn, metaphorically mapped onto the component IMMORAL BEHAVIOUR in the domain PEOPLE, which is further specified via the final operation of "sense specialisation" to mean the action of 'informing on a

fellow human'. The authors do not elaborate on the last step of the process, i.e. the operation of sense specialisation, and how the component of IMMORAL BEHAVIOUR in people is further specified to denote the action of informing on someone, and not, e.g. committing murder, selling drugs, etc.; instead, they acknowledge that sense specialisation "provides for the idiosyncratic, non-predictable but motivated meaning of the verb + particle gestalt" (Panther & Thornburg, 2012, p. 72).

In turn, Martsa (2013) widens the scope of his investigation beyond critter constructions and attempts to account for the entirety of denominal animal verbs in English. In doing so, he makes an important observation about the semantics of animal verbs as a group: he notes that the meanings of animal verbs are not homogeneous, and that, by extension, the verbs then must differ as to the conceptual pathways producing them. By way of solution to this problem, Martsa (2013, pp. 155ff.) proposes a three-tier classification of animal verbs:

1. Metonymic verbs produced by either of the two metonymies: YOUNG ANIMAL FOR BRINGING THAT ANIMAL FORTH and ANIMAL FOR CATCHING/EXTERMINATING THAT ANIMAL, e.g. *calve*$_v$*, cub*$_v$*, kitten*$_v$*, puppy*$_v$*,* etc., and *fish*$_v$*, flea*$_v$*, whale*$_v$*, rat*$_v$*, seal*$_v$*,* etc., respectively.

2. Metaphorical verbs derived from animal nouns via people are animals metaphor, in which no direct connection is apparent between the lexical meaning of the parent noun and the resultant metaphorical meaning of the derived verb. For example, the human-related meaning of *squirrel*$_v$ *(away)* 'to hide something of value away' (e.g. OED > 1939 *I been squirrelin' money away*.) appears to have no immediate semantic connection to the core lexical meaning of *squirrel*$_n$ 'a red-furred rodent', or further lexicalised senses of *squirrel*$_n$, e.g. 'squirrel skin, fur', 'contemptuous term for other animals or people', etc (see OED Online, *squirrel, n.*). The origin of the sense of the denominal verb, however, becomes apparent if one considers the fact that hiding away nourishment is a behaviour typically displayed by squirrels in nature. Thus, the meaning of the denominal verb cannot be said to be directly derived from the lexical meaning of the parent noun. Instead, it seems to derive from the speaker's encyclopaedic knowledge about the referent of the parent noun. Further examples in this category, according to Martsa (2013, p. 157) include *hair*$_v$ 'run fast'*, ferret*$_v$ 'search busily, rummage'*, dog*$_{v\_1}$ 'follow maliciously'*, wolf*$_{v\_1}$ 'eat quickly and greedily', etc.

3. Metaphorical animal verbs derived from previously lexicalized human-related metaphorical senses of parent nouns via the following pathway:

animal$_{\text{NOUN\_ANIMAL}}$ *metaphor* animal$_{\text{NOUN\_HUMAN}}$ *metonymy* animal$_{\text{VERB\_HUMAN}}$
$\Rightarrow$ lexicalised $\Rightarrow$ $\rightarrow$

The first step of this conceptual pathway is the PEOPLE ARE ANIMALS metaphor, followed by the AGENT FOR ACTION metonymy, "whereby the person expressed metaphorically by an animal name stands for the activity typical of that person"

(Martsa, 2013, p. 157) For example, *chicken*_{n_animal} 'a domestic fowl' first gave rise to the metaphorical sense *chicken*_{n_human} 'a cowardly person', which was then metonymically converted to *chicken*_{v_human} 'to withdraw from an undertaking for lack of nerve'. Further examples include *beaver*_v 'work industriously', *monkey*_v *with* 'interfere with something', *pig*_{v_1} 'eat sloppily and greedily', etc.

Martsa acknowledges that Category 2 verbs pose a problem for his derivational approach to animal verb conversion: it is difficult to postulate a relation of canonical N > V conversion between a(n) (animal) noun and a(n) (animal) verb whose lexical meanings do not display overt semantic contiguity. To circumvent this problem, Martsa (2013, p. 210) adopts Langacker's (1987, p. 154, as cited in Martsa, 2013) conception of encyclopaedic meaning, positing that there is no clear distinction between the lexical meaning of animal nouns and the extralinguistic knowledge of animals that speakers possess. The meaning of an animal noun is thus expanded to include the whole ICM of the respective animal, which can then be treated as the source of semantic content for Category 2 verbs, or as Martsa words it:

> In processing the meaning of converted items, speakers' encyclopaedic knowledge is of utmost importance, for it guarantees the predictability and, as a result of this, the motivatedness (or non-arbitrariness) of the meanings of converted items (2013, p. 211).

As to the specific animal attributes that are subject to metaphorical projection via the PEOPLE ARE ANIMALS metaphor in Categories 2 and 3, Martsa (2013, p. 153) proposes four main meaning foci: HABITAT, APPEARANCE, SIZE, and BEHAVIOUR. It is not further specified whether there are any mechanisms motivating the choice of particular animal qualities on a case-by-case basis, e.g. *wolf*_{v_1} *down* 'eat greedily' highlights the manner of eating of the mammal, whereas in *dog*_{v_1} 'to pursue insistently' the focus is on the hunting behaviour, even though both behaviours are equally displayed by both canines and should therefore be equally available for metaphoric projection in the corresponding ICMs.

In his investigation of various facets and linguistic expressions of HUMANS ARE ANIMALS metaphor, Kiełtyka (2016) largely adopts Martsa's (2013) account of denominal animal verb semantics and modifies it by conflating Categories 2 and 3 into one, while arguing that the semantics of all metaphorical animal verbs (with human-related meanings) results from a singular conceptual pathway – namely PEOPLE ARE ANIMALS followed by AGENT FOR ACTION (cf. Martsa's Category 3 above). However, in cases where there is not a lexicalised human-related metaphorical parent noun for a verb to be derived from (cf. Martsa's Category 2 above), Kiełtyka (2016, p. 98) postulates a "zoosemic gap", writing:

> In the case of noun-verb zoosemic pairs like *dog*_N and *dog*_V or *ape*_N and *ape*_V, where nouns do not have the distinct, lexicalized metaphoric senses from which zoosemic verbs could be directly derived, the role of missing nominal zoosemic senses (labelled below as *zoosemic*

gaps [emphasis added]) are, as it were, taken over by the knowledge speakers possess of some animals, i.e. of real-word dogs, apes, rabbits, pigs and parrots, respectively.

2.2 Shortcomings of Derivational Approaches to Animal Verbs

A quick inspection of the senses of animal verbs in the Oxford English Dictionary Online[1] (OED) suffices to determine that the conceptual models of animal verb meaning presented above do not do justice to the plurality of senses that even a single item can display. For example, *dog*$_v$ has the following main senses[2]: (1) 'to follow like a dog, to pursue persistently (and maliciously)'; (2) 'to drive/chase with dogs'; (3) 'to fasten by means of a heavy clamp'; (4) '(†) to be called up last for disputation and examination for a degree'; (5) '(†, rare) to guard like a dog'; (6) 'to hold back, be unwilling to undertake a risk, to avoid'. While senses (1), (2), and (5) appear to have an evident connection to the animal ICM and could, therefore, be derived via one of the models[3] in 2.1, senses (3), (4), and (6) remain unaccounted for as they do not seem metaphorically tied to the canine. Even with the dog-related senses (1) and (2), none of the models explains why specifically the attributes of "following maliciously" in (1) and "guarding" in (5) are projected into the verb, and not such attributes of dogs as living in packs, nursing one's young with great care, territorial scent-marking and sniffing, etc.

In light of the palette of senses of *dog*$_v$, a critical inspection of the models in 2.1 reveals that the premise that a metaphorical animal verb *must* be a direct function of the PEOPLE ARE ANIMALS metaphor acts as a constraining factor, clouding the view of the variegated semantics of animal verbs, instead of facilitating their description. For example, in an attempt to rationalise a semantic link between a rat, the animal, and the human action of informing on someone in *rat*$_v$ *out*, Panther and Thornburg (2012) resort to postulating a much more abstract metaphor (namely VILE BEHAVIOUR OF A RAT IS IMMORAL BEHAVIOUR OF A HUMAN) than is needed to account for the actual lexical meaning of *rat*$_v$ (*out*) 'inform on someone', and consequently end up having to propose a further conceptual operation of "sense specialisation" that delivers the final "idiosyncratic" meaning of the verb.

Similarly, acting on the assumption that conversion *must* involve semantic derivation from a parent noun, Martsa (2013) divides metaphorical animal verbs into ones having a previously lexicalized metaphorical parent noun with related

---

1 All definitions and usage examples featured henceforth are either formulated on the basis of or directly quoted from the *OED Online* entries for the respective animal terms.
2 The numeration of the senses as given here may deviate from that of the OED *Online* on the grounds that similar meanings were conflated and counted together.
3 Undoubtedly, *dog*v is not part of a *critter construction*, which Panther and Thornburg (2012) centre on, as it is not a particle verb; however, it does not follow from their model that the particle determines either the process of "sense specification" or the conceptual pathway underlying the meaning of the animal verb.

semantics (Category 3), e.g. *chicken*$_{\text{N\_HUMAN}}$ 'a cowardly person' serving as a source for metonymic conversion to *chicken*$_{\text{V\_HUMAN}}$ 'to withdraw from an undertaking for lack of nerve', and those having no such nouns (Category 2), e.g. *squirrel*$_{\text{v}}$ *(away)* 'to hide something of value away', which has no nominal counterpart, such as *squirrel*$_{\text{N\_X}}$ denoting a human person engaged in storing things of value away. This dividing line effectively separates *wolf*$_{\text{v\_1}}$ *(down)* 'eat quickly and greedily' (Category 2) from *pig*$_{\text{v\_1}}$ *(out)* 'eat greedily and sloppily' (Category 3). In Martsa's theory, *wolf*$_{\text{v}}$ *(down)*, which does not have a metaphorical parent noun *wolf*$_{\text{N\_HUMAN}}$, must receive its meaning directly from the animal ICM, whereas the semantics of *pig*$_{\text{v\_1}}$ *(out)* must stem from the behaviour of a person referred to as *pig*$_{\text{n\_human}}$ 'a greedy, lazy, or fat person', even though both verbs are conspicuously similar in their semantics and clearly reflect the manner of eating of the respective animal. Furthermore, to be able to maintain a connection between the semantics of non-metaphorical parent nouns and the metaphorical animal verbs in Category 2, Martsa resorts to redefining lexical meaning of animal nouns as entirely encyclopaedic. However, the specific mechanism whereby particular animal attributes are chosen in the conceptually rich animal ICMs (e.g. senses (1)-(6) of *dog*$_{\text{v}}$ above) is left unspecified, even though Martsa (2013, p. 211) claims that the animal attributes projected into the verb are "predictable". In turn, Kiełtyka (2016), beholden to the same conception of semantic contiguity as a foundation for N > V derivation, modifies Martsa's classification by introducing a placeholder notion of "zoosemic gap" for Martsa's Category 2 verbs, positing that all metaphorical animal verbs with human-related meanings are the product of the interface between the people are animals metaphor followed by agent for action metonymy, regardless of whether the human-related senses taken over by the animal verb have been lexicalised in the parent noun or not. This modification, however, does not provide a solution to the problems of Martsa's (2013) classification broached above.

Overall, the models of animal verbs semantics presented above seem to be primarily shaped not by linguistic data, but by the necessity to uphold two critical assumptions built into the derivational view of denominal animal verb conversion: (1) the necessity of semantic contiguity between the lexical meaning of the parent noun and the metaphorical animal verb, and (2) the preordination of the people are animals metaphor as a major part of any possible conceptual pathway producing metaphorical animal verbs. These assumptions appear to hinder rather than facilitate an objective and holistic description of the conceptual pathways bringing about the eclectic menagerie of animal verb senses available in English.

2.3 A semantic field exploration of animal verbs

The most comprehensive account of the semantics of animal verbs to date is offered by Egorova's (2022) diachronic study of 96 metaphorical animal verbs with a total of 156 distinct primary senses, which delves into the chronology of sense development of such verbs, paying special attention to the earliest attestation

dates of each particular verb or their multiple senses in case of polysemous verbs (e.g. *dog*$_v$ above). Not yet affected by general processes of semantic change, the earliest senses of animal verbs are believed to be the most revealing of the conceptual pathways motivating the conceptual operation of N > V conversion in the cognition of the contemporary English speakers. Most importantly, Egorova's study does not commit to the pre-existing assumptions underlying derivational approaches described in 2.1.; specifically, neither semantic contiguity between the parent noun and the respective metaphorical animal verb, nor the people are animals metaphor is presupposed to play a role in the semantics of all verbal items in the data set.

In order to recreate the fullest possible picture of the lexical meaning of the parent animal noun as well as the associations, "spectral senses" (see Kleparski, 2017) and cultural conceptualisations tied to it around the attested time of N > V conversion, Egorova conducted large scale investigations of the semantic fields around the metaphorical animal verbs under analysis, including morphologically related items, such as the parent noun, adjectives, adverbs, further semantically related nouns and verbs as well as fixed expressions and even individual OED *Online* quotations containing the animal term (or morphologically related items). At the final stage of analysis, the CMMT toolkit was used to identify, where possible, the metonymic and/or metaphorical mappings connecting the given sense of the metaphorical animal verb and the related contemporary sense(s) lexicalised in the respective semantic field. The verbs were then grouped into the following five categories according to the most salient conceptual pathways underlying their conversion:

1.   ANIMAL FOR THE ACTION IN WHICH IT IS INVOLVED → PEOPLE ARE ANIMALS
               lexicalised in (a metonymic) verb$_0$ lexicalised in verb$_1$

Verbs of this category first originate as metonymic verbs involving the animal in question and are later metaphorically expanded to include human actions, e.g. originally metonymic *hound*$_{v\_0}$ 'hunt, chase, or pursue with hounds' (OED> 1528 *Geue the wolffis cumis..Thame [the flokis] to deuore, than ar thay put to flycht, **Houndit**, and slane be thare weill dantit doggis*.), undergoing metaphorical expansion into further contexts: *hound*$_{v\_1}$ 'hunt, pursue, harass like a hound' (OED> 1605 *It is..by following, and as it were, **hounding** Nature in her wandrings, to bee able to leade her afterwardes to the same place againe*.). Further examples include *mouse*$_{v\_0}$ '(first attested: a1275) esp. of a cat, owl, or fox: to hunt for or catch mice' metaphorically extended to *mouse*$_{v\_1}$ '(first attested: 1575) hunt or search industriously or cautiously (like a predator hunting a mouse)', or *ferret*$_{v\_0}$ '(first attested: c1450) to hunt with ferrets, take (rabbits) with ferrets' metaphorically mapped onto PEOPLE in *ferret*$_{v\_1}$ '(first attested: 1580) rummage, search about (like a ferret hunting its prey)', etc.

2.   <u>ANIMAL FOR AN ATTRIBUTE OF THE ANIMAL</u>   →   <u>PEOPLE ARE ANIMALS</u>
     lexicalised (if at all, in parent noun or lexical field)   lexicalised in verb

Most numerous in the data set (over half of all data points), these verbs demonstrate a projection of a clearly attributable feature from the animal ICM into the human domain. In contrast to Panther and Thornburg (2012) and Martsa's (2013) Category 2 verbs, the selection of the specific animal attribute to be mapped onto people in the verb semantics is considered as neither "idiosyncratic", nor taking place at the innovative speaker's volition at the moment of conversion – in most cases, prior to the point of conversion, the respective animal attributes have been highlighted in the animal ICM by related lexical items predating the verb. For example, *wolf*$_{v\_1}$ *(down)* 'eat quickly and greedily' first attested in 1862 (OED> 1862 *[She] used to..***wolf** *her food with her fingers.*) is predated by *wolfish*$_{ADJ}$ 'ravenously hungry', which is first attested in 1842 (OED> 1842 *My appetite was growing decidedly* **wolfish**.). Furthermore, the metaphorical link between wolf and hunger appears to go back as early as the 15th century when *wolf*$_N$ was attested with the sense 'a ravenous appetite or craving for food' (OED> 1576 *The water cureth that sore feeling, which most men name the* **Wolfe**.), and featured in such expressions as *to keep the wolf from the door* 'to ward off hunger or starvation'. In this category, the observed main meaning foci for metaphorical projection include ANIMAL BEHAVIOUR, e.g. *cock*$_v$ 'behave boastfully', USE BY PEOPLE, e.g. *pig*$_{v\_2}$ *(together)* 'crowd people together like pigs', *badger*$_v$ 'harass or hound like dogs in badger hunting', and MODE OF LOCOMOTION, e.g., *snail*$_v$ 'move very slowly', *frog*$_v$ 'move quickly, leap'.

3.   <u>PEOPLE ARE ANIMALS</u>   →   <u>(HUMAN) AGENT FOR ACTION</u>
     lexicalised in parent noun   lexicalised in verb

Constituting the second largest category in the dataset, these verbs are analogous to Martsa's Category 3 verbs: they result from metonymic expansion of a metaphorical animal noun referring to a human agent, with the semantics of the animal verb unambiguously stemming from the respective human agent and not their animal namesake. For example, *rat*$_v$ *(out)* '(first attested: 1935) be disloyal, inform on someone' is much better explained as metonymically incorporating the behavioural features of the earlier *rat*$_{N\_HUMAN}$ '(first attested: 1818) a person who gives information, esp. of an incriminating nature, on another person to the police or other authority, an informer' and not as a direct metaphorical projection from the ICM of the rodent (cf. Panther and Thornburg, 2012). Further examples include *skunk*$_v$ '(first attested: 1851) fail to pay (a bill, creditor)' ← *skunk*$_{N\_HUMAN}$ '(first attested:1816) a dishonest, mean, or contemptible person, fraudster'; *chicken*$_v$ *(out)* (see 2.1 above), etc.

4.   <u>OBJECTS ARE ANIMALS</u>   →   <u>OBJECT INVOLVED IN ACTION FOR ACTION</u>
     lexicalised in parent noun   lexicalised in verb

In this category, metaphorical animal nouns referring to an object are metonymically expanded to denote an action involving that object, e.g. dog_{v_3} '(first attested: 1591) fasten by means of a heavy clamp' (OED> *iiij li. of leade to **dog** the stones together of ye steple windowe*) can be traced back to the metaphorical dog_{N_OBJECT} '(first attested: 1373) a heavy clamp for supporting something (e.g. part of a building), or fastening it in place' (OED> *1470…**dogges** of Iren for the corne mylle*). Further examples include rat_{v_1} '(first attested: 1904) backcomb, tease hair' metonymically derived from rat_{N_OBJECT} '(first attested: 1863) a crescent-shaped pad, made of hair or a similar material, over which a person's hair is arranged to give the required volume in various hairstyles', $pony_v$ '(first attested: 1847) to prepare (a lesson, text) by means of a pony or crib; plagiarise' derived from $pony_{N\_OBJECT}$ '(first attested: 1827) a literal translation or summary of a text used as a study aid, a crib', etc.

5. One-off pathways

These verbs or verbal senses seem to be generated by one-off, narrow-context conceptual pathways, which are not applicable to other items in the dataset and, thus, not productive. For example, $wolf_{v\_2}$ '(first attested: 1910) delude with false alarms' (OED> *Those whose interest it was to **wolf** the credulous public out of their pence.*) seems to be semantically conditioned by the predating fixed expression *to cry wolf* '(first attested: 1858) raise a false alarm (in allusion to the fable of the shepherd boy who deluded people with false cries of "Wolf!")'. Remarkably, the meaning of $wolf_{v\_2}$ does not derive in any way from the attributes of the mammal itself, nor is it related to any lexicalised senses of $wolf_n$ – it appears to have been isolated directly from *to cry wolf* via the PART (OF LINGUISTIC SIGN) FOR THE WHOLE (OF LINGUISTIC SIGN) ontological metonymy (cf. Kövecses & Radden, 1998, p. 45), essentially defying the presupposition of semantic contiguity between the parent noun and the verb, which is central to derivational accounts of N>V conversion. Further examples include fox_v 'intoxicate, befuddle, get drunk' possibly stemming from *†to catch/hunt the fox* 'get drunk'; $rabbit_v$ (*away*) 'chatter, talk volubly' likely derived from *rabbit-and-pork* '(Brit. Rhyming slang) to talk', etc.

Egorova's study sketches a wide spectrum of possible conceptual pathways underlying the formation of metaphorical animal verbs, with a number denominal animal verbs first originating as metonymic verbs and later being metaphorically extended into the human domain, while other verbs appear motivated by a metaphorical transfer of animal attributes directly from the respective animal's ICM, yet other animal verbs incorporate behavioural attributes clearly attributable to people metaphorically tagged with animal nicknames, and still other verbs derive from names of objects jargonised as animals and denote processes involving these objects. Conspicuously, it is only in Categories 1 and 2 that genuine animal attributes are metaphorically mapped onto people via the PEOPLE ARE ANIMALS metaphor (note that in Category 1 this conceptual pathway is not

the basis for the N > V conversion per se, but rather metaphorisation of initially metonymic verbs is a further step in the process of semantic change after the initial conversion has taken place). Furthermore, in terms of semantic contiguity between the parent noun and the denominal verb, it follows that the metaphorical meaning encapsulated by an animal verb need not derive from the respective parent noun, as it can be traceable to other items in the semantic field, such as adjectives, as in *wolf*$_{v\_1}$ *(down)* and *wolfish*$_{adj}$ above, earlier metonymic verbs, as in *hound*$_{v\_0}$ and *hound*$_{v\_1}$ above, fixed expressions, as in *wolf*$_{v\_2}$ and *to cry wolf* above, etc.

It needs to be pointed out that despite the wealth of data accumulated, Egorova's (2022) study still fell short of the goal of fully accounting for the plurality and diversity of metaphorical senses of animal verbs in English, with Category 5 serving as a catch-all category for the verbs whose idiosyncratic senses (and the underlying conceptual pathways) were not amenable to systematic classification.

3. Reinterpreting Conceptual Mechanisms Generating Denominal Animal Verbs in Light of Frame-Based Accounts of Denominal Conversion

In contrast to earlier studies, the plurality of conceptual patterns underlying the semantics of metaphorical animal verbs as discerned by Egorova (2022) calls into question the legitimacy of treating metaphorical animal verbs as a conceptually distinct sub-category among other denominal verbs of English. The data suggest that the motivation behind act of conversion of animal nouns to verbs ranges from a direct metaphorical transfer of animal attributes to a human agent via PEOPLE ARE ANIMALS (Categories 1 and 2 in Egorova's data), on one end of the spectrum, to singular semantic transfers taking place in narrow contexts with little or no connection to the actual ICM of the verbalised animal (Category 5), on the other. In light of these findings, the assumption that denominal animal verbs make up a more or less homogeneous sub-category of denominal verbs generated by the speakers based on a shared (set of related) generalisation(s) involving the PEOPLE ARE ANIMALS metaphor should be treated with caution.

By the same token, doubt is cast on the veracity of derivational accounts of denominal conversion, in which denominal verbs are considered a function of the semantic properties of their source nominals (e.g. Baeskow, 2006; Kiparsky, 1997). This perspective is foundational for most existing accounts of denominal animal verbs (surveyed in 2.1), which uniformly interpret metaphorical animal verbs as a metaphorical function of the denotation of animal nouns or, taking a broader perspective, animal ICMs, purportedly activated by animal nouns. If this assumption were to be accepted, one would expect animal verbs to display roughly similar semantics and underlying conceptual pathways as a group, which is at odds with the findings of Egorova's (2022) large scale exploratory study.

Derivational accounts of denominal conversion have generally been widely critiqued in the literature, with Dirven (1999, p. 277, emphasis in the original) remarking that "situating the conversion process at the word level is relatively naive and simplistic, as if such processes occur *in abstracto*." By contrast, frame-based accounts (e.g. Clark & Clark, 1979; Dirven, 1999; Kövecses & Radden, 1998; Michaelis & Hsiao, 2021) converge on the interpretation of denominal conversion as taking place at the predicate-argument level, i.e. within a particular event-frame involving a set of participant roles, one of which is occupied by the referent of a prospective "parent" noun. In an instance of language use involving innovative N > V conversion, the parent noun is considered to be metonymically projected into the verbal slot, while the rest of the participant roles fill in the remaining argument slots in the corresponding argument structure selected on the basis of the relevant event type (see Michaelis & Hsiao, 2021). For example, in *The boy porched the newspaper* equivalent to 'The boy placed the newspaper on the porch', the goal within the motion-frame, i.e. *porch,* comes to stand metonymically (via DESTINATION OF THE MOTION FOR THE MOTION) for the action at the centre of the frame, while the remaining participants take up the argument slots provided by the argument structure.

At first glance, frame-based metonymic accounts of denominal conversion are at odds with the conspicuously metaphorical nature of animal verbs: it seems that the metaphoricity of these verbs must be accounted for by further conceptual operations, even if such verbs are not derived directly from the semantics of their parent nouns (as would be stipulated by derivational accounts). It also needs to be acknowledged at this point that proponents of frame-based accounts of denominal conversion almost uniformly focused on metonymic verbs in their analyses, with Clark and Clark (1979) explicitly rejecting metaphorical denominal verbs from their dataset: "Each verb had to have a non-metaphorical concrete use as far as possible" (p. 769). However, Clark and Clark's (1979) seminal categorisation of denominal verbs according to the participant role donating the corresponding noun to the verbal slot proves surprisingly apt at explaining the diverse semantics of metaphorical as well as metonymic animal verbs. In fact, animal verbs fit in six out of the total of nine groups of denominal verbs offered by the authors:

1. Not surprisingly, most denominal animal verbs (or verbal senses in case of polysemous units) occur in the category of *agent* verbs, in which the referents of the parent nouns play the role of the agent in the corresponding event frame, e.g. ewe_v '(of a ewe) give birth to a lamb', pig_{v_0} '(of a sow) give birth to piglets', dog_{v_1} *the enemy* 'pursue maliciously', pig_{v_1} *dinner* 'eat greedily', *hound* $_{v\_1}$ *the fugitives* 'pursue, harass like a hound', rat_{v_1} *out one's accomplice* 'inform on', $chicken_{v\_1}$ *out of a deal* 'withdraw for lack of nerve', etc. Noticeably, the semantic content of *agent* animal verbs can be: (1) either purely metonymic (e.g. ewe_v, pig_{v_0}), or (2) based on metaphorical mappings reaching to the corresponding animal ICMs (dog_{v_1}, pig_{v_1}, *hound* $_{v\_1}$), or (3)

based on the attributes of a human agent metaphorically lexicalised under an animal name (*rat*$_{v\_1}$ *(out)*, *chicken*$_v$ *(out)*).

2. *Experiencer* animal verbs include verbs whose parent noun's referent plays the experiencer role in the event frame, e.g. *badger*$_v$ *the officials* 'subject to persistent harassment; pester, bother (like a hound would a badger)', *buffalo*$_v$ *the audience* 'overpower, overawe, or constrain by superior force or influence (like a buffalo would be by its handlers)', *sardine*$_v$ *oneselves into a bus* 'pack closely, as sardines would be in a tin; crowd, cram', etc.

3. In *locatum* verbs, the theme in a motion-frame donates the corresponding noun to the verbal slot, e.g. *worm*$_{v\_1}$ *a puppy* 'expel worms from X', *horse*$_{v\_1}$ *the men* 'supply X with horses', *louse*$_{v\_1}$ *up the bed* 'infect X with lice', *flea*$_{v\_1}$ *the beds* 'remove fleas from X', etc.

4. *Goal* verbs are coined when in a resultative event-frame, the result comes to stand for the action, e.g. the metonymic *calve*$_v$ 'give birth to a calf', *kitten*$_v$ 'give birth to a kitten' as well as the metaphorical *ass*$_v$ *the policeman* 'to make an ass of', *gull*$_v$ *the onlookers* 'to make a gull (a fool) of', *butterfly the meat* 'split in two and spread out flat', etc.

5. *Instrument* verbs include both metaphoric animal verbs in which the instrument of the action comes to stand for the action (cf. Egorova's Category 4), e.g. *dog*$_{v\_3}$ *the logs* 'secure the logs with a dog clamp', *rat*$_{v\_1}$ *hair* 'tease hair over a pad', *pony*$_v$ *one's way through Latin* 'cheat with the help of a pony', etc., as well as metonymic verbs going back in history to the times when animals themselves were seen as instruments, e.g. *ferret*$_{v\_0}$ *conies* 'take/hunt with ferrets', *hawk*$_{v\_0}$ 'hunt game using a trained hawk', *dog*$_{v\_2}$ *beasts* 'drive/chase with dogs', etc.

6. Among miscellaneous verbs, Clark and Clark (1979) distinguish the frame of crops which generalises over contexts of harvesting crops or animals, e.g. *fish*$_v$ 'to catch fish', *shark*$_v$ 'to catch sharks', *fox*$_v$ '(U.S) to hunt foxes', etc.

Noticeably, Clark and Clark's classification is capable of accounting for both metaphorical and metonymic animal verbs in a seamless way and without having to draw a harsh demarcation line between the two types (cf. Martsa's Category 1 vs 2 & 3). Specifically, in the case of *agent* verbs, it can be inferred that both literal and metaphorical referents of animal nouns can take up the agent role in an event frame and be projected into the verbal slot, e.g. *pig*$_{v\_0}$ '(of a sow) give birth to piglets' vs *pig*$_{v\_1}$ *dinner* '(of a human) eat greedily', with the metonymic and the metaphorical senses being predicated not on categorial properties of pigs as animals, but on the respective agents in the event-frame underlying the communicative situation in which the initial conversion took place and inferable from the earliest senses and usage examples. The same holds true for Group 4 (*goal* verbs) and Group 5 (*instrument* verbs), which comprise both literal and metaphorical animal-noun referents either constituting the result of an action or used as instruments in an action. Interestingly, Group 5 metonymic verbs involving the given animal, such as *ferret*$_{v\_0}$ *conies* 'take/hunt with ferrets',

hawk$_{v\_0}$ 'hunt game using a trained hawk' can develop metaphorical human-related meanings down the line in the process of further semantic development, i.e. *ferret*$_{v\_1}$ *up and down in one's house* '(human) rummage, search about' or † *hawk*$_{v\_1}$ *after advantage* '(human) hunt after, endeavour to catch or gain' (cf. Egorova's Category 1 in 2.3).

In addition, the frame-based approach to denominal conversion of animal verbs also explains the tendency for polysemy displayed by these verbs (e.g. senses of *dog*$_v$ in 2.2): as long as an animal term keeps resurfacing as part of various event-frames in the course of situated language use, it retains the potential to develop further verbal senses provided that the speakers consider it salient enough for conversion within the given event-frame. As with the enantiosemous senses of *dog*$_{v\_1}$ '(first attested: 1519) to pursue relentlessly and with malicious intent' vs. *dog*$_{v\_6}$ '(first attested: 1905, U.S. sports slang) to hold back, to idle', "the contradictory interpretations appear able to develop because they arise in contexts where they would not be confused" (Clark & Clark, 1979, p. 794).

Furthermore, the frame-based account offers an organic explanation to Egorova's (2022) Category 5 animal verbs (see 2.3), whose semantics appear to derive from previously lexicalised occasional contexts of use. It can therefore be argued that Egorova's Category 5 verbs are not outliers in the dataset, as it might seem at first glance, but, in fact, the most compelling evidence for frame-based nature of denominal conversion, revealing that the meaning of animal verbs is motivated by the event-frame of its origin – not by the semantics of the respective "parent" noun or the criterial features of animal nouns as a category.

Returning to the aspect of metaphoricity, it appears that the metaphorical nature of most animal verbs does not play a role in the "conceptual mechanics" of their conversion from nouns to verbs, contrary to what has been assumed previously. The application of Clark and Clark's classification to the analysis of animal verbs shows that both metaphoric and non-metaphoric animal verbs can be produced via the same frame-based grammatical generalisations, e.g. AGENT FOR ACTION in *agent* verbs or INSTRUMENT FOR ACTION in *instrument* verbs. Importantly, the same grammatical generalisations are also responsible for the production of other denominal verbs in English, e.g. *to butcher a cow, to author a book*, *to pen a note*, etc., with N > V conversion being "by far the commonest method of forming denominal verbs in English" (Clark & Clark, 1979, p. 768). Since the same grammatical generalisations are operational in N > V conversion regardless of whether the frame-internal participant roles are filled with referents designated by metaphorical or non-metaphorical nouns, it can be argued that denominal animal verbs are not different from other denominal verbs of English in terms of conceptual mechanisms motivating their conversion. Their metaphoricity, on the other hand, appears to primarily stem from the deep-rooted and highly productive metaphorical *contexts* (in Kövecses' (2015) sense) of PEOPLE ARE ANIMALS and OBJECTS ARE ANIMALS, which are firmly anchored in the English lexicon as well as in the culturally specific encyclopaedic

knowledge shared by English speakers. Consequently, denominal animal verbs seem to originate at the intersection of these powerful metaphorical contexts and the prolific frame-based grammatical generalisations governing N > V conversion in English.

4. Conclusions

This paper discussed the question of motivation behind conversion as well as the resultant senses of denominal animal verbs. Having critically analysed the strengths and weaknesses of the predominantly derivational accounts of the semantics of animal verbs and compared them to the findings of Egorova's (2022) exploratory semantic field study, this paper called into question the status of metaphorical animal verbs as a conceptually homogeneous sub-category different from other denominal verbs of English, as was assumed in previous literature on the topic. Similarly, the assumption that metaphorical animal verbs are formed from parent animal nouns/ICMs by a specific conceptual mechanism (or set of related mechanisms) available in the linguistic knowledge of English speakers and involving the PEOPLE ARE ANIMALS metaphor was challenged as well.

Furthermore, the conceptual pathways responsible for various categories of animal verbs in Egorova's (2020) data were re-interpreted in the light of event-frame-based theories of denominal conversion (e.g. Clark & Clark, 1979; Dirven, 1999; Michaelis & Hsiao, 2021), which define N > V conversion as a conceptual process taking place in a given situation of speaking and thus tied to and situated in the underlying event-frame. Thus, in an act of conversion, the referent of one of the participant roles within the event-frame metonymically comes to stand for the centrepiece of the frame, i.e. the event itself. The application of Clark and Clark's (1979) classification of denominal verbs to Egorova's data on animal verbs has proven much more effective at accounting for the diversity of metaphorical and metonymic meanings that denominal animal verbs have historically displayed as well as for the polysemy (and at times also enantiosemy) of individual items. As a result, it was demonstrated that the metaphoricity of animal verbs is not a factor per se motivating the grammatical act of their conversion – as with other denominal verbs, the conversion of animal nouns to verbs is motivated and governed by event-frame-based *grammatical* generalisations, e.g. AGENT FOR ACTION in *agent* verbs, which are responsible for the productivity of conversion as a general word-formation mechanism in English. The metaphoricity of most denominal animal verbs, on the other hand, was attributed to the power and productivity of such metaphorical *contexts* as PEOPLE ARE ANIMALS and OBJECTS ARE ANIMALS, which are historically anchored in the English lexicon and deeply rooted in the encyclopaedic knowledge of English speakers. Thus, "verbal zoosemy" as a separate conceptual mechanism/category of language change producing human-specific metaphorical verbs from animal

nouns could not be confirmed. On the contrary, the main appeal of this paper is to re-conceptualise metaphorical animal verbs as a product of the intersection of two powerful vectors of motivation for language change: grammatical generalisations governing denominal conversion, on the one hand, and metaphorical fertility of the source domain ANIMALS, on the other.

References

Baeskow, Heike. 2006. Reflections on Noun-to-Verb Conversion in English. *Zeitschrift Für Sprachwissenschaft*, *25*(2), 205–237. https://doi.org/10.1515/ZFS.2006.008

Clark, Eve V., and Clark, Herbert H. 1979. When Nouns Surface as Verbs. *Language*, *55*(4), 767–811. https://doi.org/10.2307/412745

Deignan, Alice. 2005. *Metaphor and Corpus linguistics*. John Benjamins. https://doi.org/10.1075/celcr.6

Dirven, René. 1999. Conversion as a Conceptual Metonymy of Event Schemata. In K.-U. Panther and G. Radden (eds.), *Metonymy in Language and Thought*, 275–287. John Benjamins. https://doi.org/10.1075/hcp.4.16dir

Egorova, Alisa. 2022. *Hunting Down Animal Verbs: An Investigation into The Mechanisms of Meaning Transfer Underlying English Verbal Zoosemy* [MA thesis]. University of Potsdam. https://publishup.uni-potsdam.de/55770

Kiełtyka, Robert. 2016. *Various Faces of Animal Metaphor in English and Polish*. Peter Lang. https://doi.org/10.3726/978-3-653-05784-3

Kiparsky, Paul. 1997. Remarks on Denominal Verbs. *Complex Predicates*, *64*, 473–499.

Kleparski, Grzegorz. 2017. The Semantics of Dog Revisited: In Search of Phraseologically Embedded Spectral Zoometaphors. In R. Kiełtyka and A. Uberman (eds.), *Evolving Nature of the English Language,* 81–92. Peter Lang.

Kleparski, Grzegorz. 2013. Historical Semantics: A Sketch on New Categories and Types of Semantic Change. In J. Fisiak and M. Bator (eds.), *Historical English Word-Formation and Semantics,* 59–88. Peter Lang.

Kövecses, Zoltán. 2015. *Where Metaphors Come From: Reconsidering Context in Metaphor*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190224868.001.0001

Kövecses, Zoltán., and Radden, Günter. 1998. Metonymy: Developing a Cognitive Linguistic view. *Cognitive Linguistics*, *9*(1), 37–78. https://doi.org/10.1515/cogl.1998.9.1.37

Martsa, Sándor. 2013. *Conversion in English: A cognitive Semantic Approach*. Cambridge Scholars Publishing.

Michaelis, Laura A., and Hsiao, Allen M. 2021. Verbing and Linguistic Innovation. *Frontiers in Communication*, *6*, 604–763. https://doi.org/10.3389/fcomm.2021.604763

Oxford English Dictionary Online [OED]. https://www.oed.com/

Panther, Klaus-Uwe, and Thornburg, Linda L. (2012). Conceptualizing Humans as Animals in English Verb Particle Constructions. *Language Value*, *4*, 63–83. https://doi.org/10.6035/LanguageV.2012.4.4