Bleeding, droning and yowling in(to) frames

JENS FLEISCHHAUER, THOMAS GAMERSCHLAG & WIEBKE PETERSEN
(Heinrich-Heine University Düsseldorf, SFB 991)

Most decompositional approaches are confined to representing event structural properties whereas the idiosyncratic lexical content is often reduced to an unanalyzed atomic root as, for example, in the framework of Rappaport Hovav & Levin 2010. Thus, eventive verbs of emission would be represented as in (1), in which the specific type of emission appears as a subscripted modifier root of the primitive predicate ACT.

(1) a. *bleed*: $\text{ACT}_{\langle\text{BLEED}\rangle}(x)$
    b. *drone*: $\text{ACT}_{\langle\text{DRONE}\rangle}(x)$

Representations in this fashion, however, neglect the semantic differences that exist between verbs of substance emission like *bleed* in (1a) and verbs of sound emission like *drone* in (1b): while the ACT-predicate indicates that both verbs denote activities, it does not follow from (1) that the emission of substance is monotonically related to the progression of the event in (1a), i.e., that the quantity of emitted substance increases in the course of the event. By contrast, there is no relation between the progression of the event and the emission of a sound in (1b) such that any property (quantity, intensity or whatever) necessarily increases in the progress of the event. This difference is evident in the context of verbal degree gradation: *sehr* 'very' specifies the quantity of emitted blood in (2). If the verb is used in a progressive construction as in (2a), the quantity of blood at a certain stage of the event is specified whereas the perfective-like construction in (2b) refers to the total amount of emitted blood:

(2) a. *Die Wunde war sehr am   Bluten.*
       the wound was very at.the bleeding
       'The wound was bleeding a lot.'
    b. *Die Wunde hat sehr geblutet.*
       the wound has very bled
       'The wound bled a lot.'

Grammatical aspect does not affect the interpretation of degree gradation in case of verbs of sound emission. In both examples in (3), *sehr* indicates the intensity (= loudness) of the emitted sound.

(3) a. *Der Motor ist sehr am   Dröhnen.*
       the engine is very at.the droning
       'The engine was droning a lot.'
    b. *Der Motor hat sehr gedröhnt.*
       the engine has very droned
       'The engine droned a lot.'

Decompositional representations like those in (1) are not able to capture this difference between verbs of substance emission and verbs of sound emission as they do not represent the relation that holds between the event and the emitted stimulus.

Even within the same subclass, verbs of emission exhibit grammatical asymmetries which are not predicted by the representations in (1). For instance, in German, motion verbs can be derived from verbs of sound emission such as *jaulen* 'yowl' as in (4):

(4) a. *Der Welpe jault.*
        the puppy yowls
        'The puppy yowls.'
     b. §*Das Motorrad jault.*
         the motorbike yowls
        'The motorbike yowls.'
     c. *Das Motorrad jault   über die Kreuzung.*
        the motorbike yowls over the crossing
        'The motorbike yowls over the crossing.'
        §*Der Welpe jault   unter das Bett.*
        the   puppy yowls under the bed
        'The puppy yowls under (dir) the bed.' (Kaufmann 1995:91)

As already observed by Kaufmann (1995) and Levin & Rappaport Hovav (1995) among others, the motion verb use of sound emission verbs is accessible only if the specific sound can be interpreted as a side-effect of motion as in (4c) whereas this use is not licensed if such a relation does not hold as in (4d). At the same time, the sortal restrictions of the verb in the basic use and the derived use are reversed as illustrated by the contrast between (4a,b) and (4c,d). Neither the accessibility of the motion verb use nor the change in sortal restrictions is adequately captured by representations as in (1). What is needed instead is a representational framework which allows for making reference to the co-occurrence of sound and motion as well as to the relation between the type of emission and the progress of the event.

In the talk, we present an approach to emission verbs in terms of Barsalou frames (Barsalou 1992, Petersen 2007). Frames of this type consist of recursive attribute-value structures which allow for zooming into conceptual structures to any desired degree. This gives us access to meaning components which are essential for an explanation of the asymmetries illustrated in (2) to (4) above. In particular, it is possible to capture the relation between grammatical aspect and the type of emission by making explicit reference to the way the quantity of the emitted entity changes in the course of the event. In addition, the co-occurrence of verbs of sound emission with directional PPs can be constrained with reference to particular frame components. Here, we will argue that the subframe referring to the emission of a particular sound must be related to the subframe representing directed motion in a way that the sound emission is caused by and coextensive with the directed motion.

Barsalou, L. W. 1992. Frames, concepts, and conceptual fields. In A. Lehrer & E. F. Kittay (eds.), *Frames, fields, and contrasts*, 21–74. Erlbaum: Hillsday.
Kaufmann, Ingrid. 1995. What is an (im)possible verb? Restrictions on Semantic Form and their consequences for argument structure. *Folia Linguistica* XXIX/1-2: 67–103.
Levin, B. & Rappaport Hovav, M. 1995. Unaccusativity. The MIT Press, Cambridge, Mass.
Petersen, W. 2007. Decomposing Concepts with Frames. In Baltic International Yearbook of Cognition, Logic and Communication, Vol. 2, 151–170.
Rappaport Hovav, M. & B. Levin. 2010. Reflections on manner/result complementarity. In Rappaport Hovav, M., Doron, E. & Sichel, I. (eds.), *Syntax, lexical semantics, and event structure*, 21–38. Oxford University Press, Oxford.