
Predicting the semantics of English nominalizations: A frame-based analysis of *-ment* suffixation

LEA KAWALETZ & INGO PLAG
(Heinrich-Heine-Universität Düsseldorf)

It has long been known that derivational affixes can be highly polysemous, exhibiting a range of different, often related, meanings. For example, the nominal suffix *-age* can produce ‘condition, state, rank, office of X’, ‘collectivity of X’ or ‘list of X’, to name but a few possible readings (see Marchand 1969: 234-236). Bauer et al. (2013: 641) formulate the problem as follows:

We must be able to account for the substantial evidence that affixes (or morphological processes, if the theorist prefers) are frequently semantically underspecified, and subject to polysemy and meaning extensions of various sorts.

This phenomenon has recently attracted considerable attention, especially since the publication of Lieber’s seminal *Morphology and lexical semantics* (Lieber 2004, cf. e.g. Trips 2009, Uth 2011). In the pertinent literature, it is commonly assumed that affix polysemy arises through some kind of interaction of the affix with the meaning of the base (cf. e.g. Plag 1998).

This paper investigates the polysemy of the English nominal suffix *-ment* using a sample of deverbal neologisms dating from the past 100 years. The dataset, which was compiled with dictionary as well as corpus data, includes a wide variety of semantic verb classes. The analysis will be restricted here to the largest semantic subclass of base verbs in the data set, that is, psych verbs (cf. Levin 1993). By focusing on neologisms instead of lexicalized word forms, we can investigate how speakers actually employ this affix to form new words, as is beautifully spelled out in (1).

- (1) Not surprisingly I was shocked by a few of the responses, but once I got over that initial moment of dumbfoundment (I’m making up my own words today) I decided to click on “load more comments” (WebCorp 2012)

In order to find patterns in the transition from input to output semantics, both the base verbs and the derivatives were coded semantically. For the psych verb bases, the classification found in Levin (1993) and in the VerbNet project (Kipper et al. 2008) formed the basis of our analysis. The semantics of the derived nouns, on the other hand, was encoded with common semantic categories such as event, state, and experiencer. Both input and output categories were then implemented in a frame-based approach (Barsalou 1992a, 1992b).

With regard to input semantics, the analysis of the data reveals that *-ment* mainly attaches to a clearly defined sub-class of psych verbs, namely amuse verbs. These are object experiencer verbs such as enrage, stagger and upset, which “describe the bringing about of a change in psychological or emotional state” (see Levin 1993: 191).

Within this class, *-ment* derivatives can denote events by transposing the verb meaning into the noun, or can induce a metonymic shift from event to stimulus or to result state. Of these, the result state reading clearly exhibits the highest token frequency.

This clear pattern can be modeled in a frame-based approach. Given a generalized causation frame for amuse verbs (see Figure 1), *-ment* consistently selects one of three nodes in any given context: the referent node of the verb frame, resulting in a transposed event reading, the first argument node, that is, the stimulus, or the result state of the event, which does not act as a syntactic argument. Interestingly, *-ment* does not select the second argument node (experiencer).

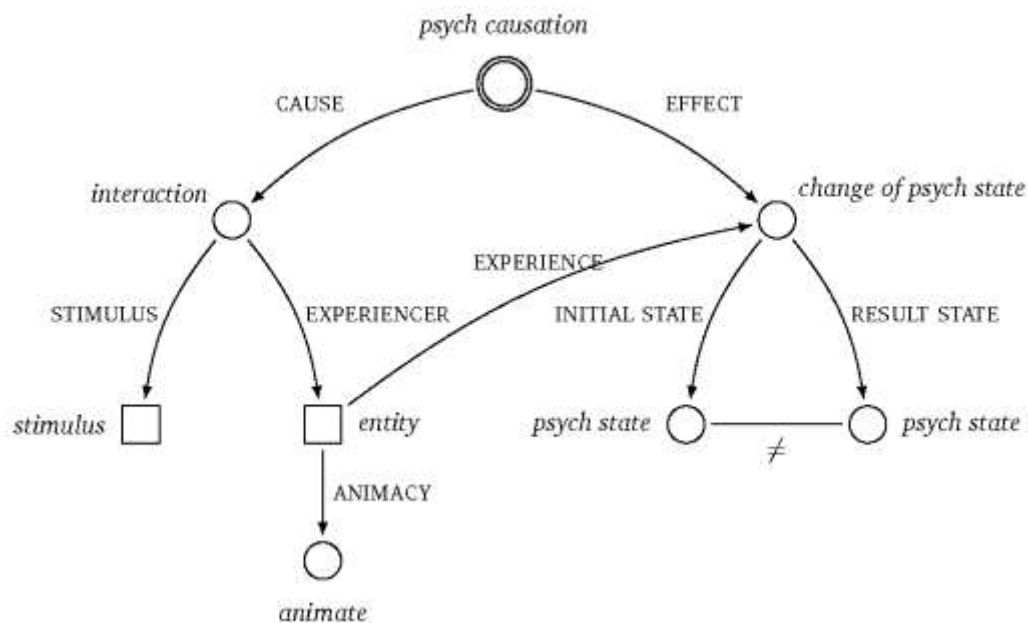


Figure 1: Causation frame for AMUSE VERBS

The results of our analysis indicate that derived neologisms are formed according to predictable semantic patterns which can be modeled in frames. Our findings thus support an approach in which the semantics of a derivational process is describable as its potential to perform specific operations on the frames of its bases. These operations underlie selectional restrictions. For instance, *-ment* seems to exhibit a universal averseness to readings with an [+animate] component, such as experiencer.

- Barsalou, L. W. (1992a). *Cognitive psychology: An overview for cognitive sciences*. Hillsdale, NJ: Erlbaum.
- Barsalou, L. W. (1992b). Frames, concepts, and conceptual fields. In: Lehrer, A. and Feder Kittay, E. (eds), *Frames, fields and contrasts*. Hillsdale, NJ: Erlbaum, pp. 21–74.
- Bauer, L., Lieber, R., & Plag, I. (2013). *Oxford reference guide to English morphology*. Oxford: Oxford University Press.
- Kipper, K., Korhonen, A., Ryant, N., & Palmer, M. (2008). A large-scale classification of English verbs. *Language Resources and Evaluation* 42 vol. 1, pp. 21–40.
- Levin, B. (1993). *English verb classes and alternations: A preliminary investigation*. Chicago: University of Chicago Press.
- Lieber, R. (2004). *Morphology and lexical semantics*, Cambridge/New York: Cambridge University Press.

- Marchand, H. (1969). The categories and types of present-day English word-formation. Munich: Beck.
- Plag, I. (1998). The polysemy of -ize derivatives: The role of semantics in word formation. In: Booij, G. & van Marle, J. (eds), *Yearbook of Morphology 1997*, Dordrecht: Foris, pp. 219–242.
- Trips, C. (2009). *Lexical semantics and diachronic morphology: The development of -hood, -dom and -ship in the history of English*, Tübingen: Niemeyer.
- Uth, M. (2011). *Französische Ereignisnominalisierungen: Abstrakte Bedeutung und regelhafte Wortbildung*, Berlin: De Gruyter.