

Word- or root-derived? A semantic test for instrument denominal verbs in Italian

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We present a novel semantic test aimed at establishing whether Italian instrument denominal verbs (IDVs), i.e., verbs where the corresponding noun is an instrument in the event expressed by the verb (Adams 1973; Clark & Clark 1979, a. o.), are word- or root-derived.

In spite of the label *denominal*, IDVs are taken to fall into two groups, i.e., those which are derived from nouns and those which are derived from roots (Kiparsky 1982, 1997; Arad 2003, 2005). In the former case, there is a direct derivational relation between V and N. In the latter, there is no derivational relation between V and N, since both are derived from one and the same root (Marantz 2000; Arad 2003, 2005).

In languages like English, IDVs are zero-related to the Ns, that is, no morphology indicates the derivational relation between them: e.g., *tape*_V – *tape*_N; *hammer*_V – *hammer*_N. Word-derived verbs are distinguished from root-derived ones via semantic cues (Kiparsky 1982, 1997; Arad 2003). The former – but not the latter – entail the existence of the corresponding noun (Arad 2003). Roughly, one cannot *tape* without a *tape* (noun-derived verb) whereas it is possible to *hammer* without a *hammer* (root-derived verb). The contrast between (a) *He hammered the nail with a rock* and (b) **She taped the picture to the wall with pushpins* (both from Kiparsky 1982), is taken to be a proof of *tape* being noun-derived and *hammer* being root-derived and, thus, used as a diagnostics to establish whether a verb is noun- or root-derived.

This syntactic test is not uncontroversial (Rimell 2012). First, other factors may contribute to the difference in acceptability between (a) and (b), e.g., unacceptable sentences may result from the choice of an element whose manner of use is too different from the manner of use of the instrument noun (Harley & Haugen 2007). In addition, some unacceptable sentences become acceptable in specific scenarios (Harley & Haugen 2007). Lastly, we claim that since the criterion used for identifying noun- and root-derived verbs is semantic, a semantic test is more appropriate to measure the semantic entailment of existence of the instrument noun.

In order to address this issue, we propose a novel semantic test aimed at distinguishing root-derived verbs from noun-derived ones, focusing on Italian IDVs. As in English, they are zero-related to the instrument noun (Fabrizio 2013), e.g., *martellare* ‘hammer_V’ – *martello* ‘hammer_N’; *recintare* ‘fence_V’, *recinto* ‘fence_N’.

Through an online questionnaire, we asked 89 participants to name the “top 10 instruments” for 26 IDVs. Participants were instructed to only write instruments that they thought could be used to perform the actions described by the verbs, which were presented in isolation to maximize the semantic factor. For each verb, all the instrument nouns produced by all the participants were considered, with their frequencies. Based on the number of instrument nouns produced by all the participants for each verb, three classes of verbs were identified:

- i. **Noun-derived verbs** (18/26): for these verbs, few instrument nouns were produced by the participants (range: 1-3); for each verb, the base N represents at least the 71% of the total occurrences (range: 71%-100%). Examples of these verbs are: *grattugiare* ‘to grate’, *segare* ‘to saw’, *sciare* ‘to ski’, *martellare* ‘to hammer’, *incatenare* ‘to chain’, etc. The verbs of this class semantically entail the existence of the instrument nouns, which is proved by the fact that all the participants named few instrument nouns and that the base N was produced by all the participants as the first instrument.

- ii. **Root-derived verbs** (4/26): for these verbs, a higher number of instrument nouns was produced by the participants (range: 6-15), none of which represents more than the 36% of the total occurrences (range: 17%-36%). These verbs are *evidenziare* ‘to highlight’, *profumare* ‘to perfume’, *colorare* ‘to color’, *recintare* ‘to fence’. The verbs of this class are independently derived from a root and do not entail the existence of the incorporated nouns: with these verbs, the apparently incorporated noun was never pronounced as the first instrument and – interestingly – for *recintare* ‘to fence’ and *colorare* ‘to color’, the nouns *recinto* and *colore* were not produced at all.
- iii. **Parasynthetic verbs** (4/26): these verbs, which are both denominal and prefixed, are taken to be noun-derived (Iacobini, 2004; Serrano-Dolader, 2015). These verbs are: *insaponare* ‘to soap’, *sciacquare* ‘to rinse’, *avvelenare* ‘to poison’, *incollare* ‘to glue’. In spite of being noun-derived, these verbs elicited an intermediate number of instrument nouns (range: 5-12). The base nouns were however the most frequently produced for all the verbs. A possible explanation for the behavior of this group of verbs – that do not neatly pattern with either root- or noun-derived verbs – lies in their meaning. As a matter of fact, these verbs are derived from nouns that denote substances, which can be found in different objects: precisely these objects were produced as instrument nouns. For e.g. *poison*_V, the base noun is *poison*_N, which can be found within *mushrooms*, *medications*, *food*, and can be administered with a *syringe*. These are all the instrument nouns which were produced for the verb *avvelenare* ‘to poison’.

Through our semantic test, we identified three classes of IDVs in Italian: noun-derived (i), root-derived (ii), and parasynthetic verbs (iii). We claim that our test is more suited than acceptability judgments: first, it directly tests the semantic entailment of existence of the instrument; second, it is less prone to the problems observed for acceptability judgments, as mentioned above; lastly, it can be applied to different languages, allowing researchers to make cross-linguistic comparisons on IDVs and also to extend it to other denominal verbs.

References:

- Adam, V. 1973. *An introduction to modern English word-formation*. London: Longman Group Limited.
- Arad, M. 2003. Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs. *Natural Language and Linguistic Theory*, 21: 737–778.
- Arad, M. 2005. *Roots and Patterns: Hebrew Morphosyntax*. Dordrecht: Springer.
- Clark, E. V., Clark, H. H., 1979. When nouns surface as verbs. *Language*, 55:767–811.
- Fabrizio, C. 2013. The meaning of a noun converted into a verb. A semantic exploration on Italian. *Rivista di Linguistica*, 25(2), 174 – 219.
- Harley, H., Haugen, D. J. 2007. Are there really two different classes of instrumental denominal verbs in English? *Snippets*, 9–10.
- Iacobini, C. 2004. Parasintesi. In Grossman, M., Rainer, F. (Eds.), *La formazione delle parole in italiano*. Tübingen: Niemeyer.
- Kiparsky, P. 1982. Lexical morphology and phonology. In Linguistic Society of Korea (Ed.), *Linguistics in the Morning Calm*. Seoul: Hanshin, 3–92.
- Kiparsky, P. 1997. Remarks on denominal verbs. In A. Alsina, J. Bresnan, P. Sells (Eds.), *Complex Predicates*. Stanford: CSLI, 473–499.

- McIntyre, A. 2015. Denominal verbs. In P. O. Müller, I. Ohnheiser, S. Olsen, F. Rainer (Eds.) *Word-Formation: An International Handbook of the Languages of Europe*. Berlin, Boston: De Gruyter Mouton, 1406–1424.
- Rimell, L. 2012. *Nominal roots as event predicates in English denominal conversion verbs*. Ph.D. dissertation, New York University.
- Serrano-Dolader, Z. 2015. Parasyntesis in Romance. In P. O. Müller, I. Ohnheiser, S. Olsen, F. Rainer (Eds.) *Word-Formation: An International Handbook of the Languages of Europe*. Berlin, Boston: De Gruyter Mouton, 524–536.