

Instrumental -er nominals revisited (-er nominalizations, agent, instrument)

1. Rappaport Hovav & Levin (1992) established two major correlations concerning English -er nominals. (A) -Er nominals have complement structure (CS), irrespectively of the thematic role of the external argument, iff they are eventive (1a-e vs. 1f-g). (B) An instrumental reading is possible only for the nominals derived from verbs for which the expression of an instrumental performing a 'subject' role is available (2) vs. (3); thus instrumental -er nominals refer only to *intermediary* instruments and not to facilitating ones (4). In syntactic approaches to nominalization (e.g. Borer 1993, Alexiadou 2001, van Hout & Roeper 1998), (B) isn't discussed, and (A) is captured by assuming that in (1a-e) a verbalizing head signalling event structure is present thereby licensing CS. In this paper we argue that *non-CS* instrumental and *CS* -er nominals both include VoiceP and vP, thus accounting for (B). This suggests a dissociation of verbalizer layers introducing events from the licensing of CS (cf. Alexiadou 2007, Harley 2007).
2. Following Marantz (2001), Embick (2003), Arad (2005), we assume that there are two distinct cycles for word formation: a root cycle, where a functional head, n in our case, attaches directly to the root, and an outer cycle, where this category determining head attaches outside some other functional heads (v/Voice). The former correlates with idiosyncratic meaning, semi-productivity and excludes argument structure. The latter correlates with compositional meaning, productivity and includes argument structure. See the discussion on the differences between 'rotor' (root cycle) and 'rotator' (outer cycle) in Marantz (2001).
3. We propose the structure in (5) for human external argument -er nominals. Adopting the Voice Hypothesis (Kratzer 1996), according to which Voice introduces external arguments, the individual denoted by the -er nominal is the external argument of the event entailed by it (van Hout & Roeper 1998). We can also identify a v layer (verbalizer, event head) on the basis of two arguments: a) Morphology: a verbalizing v head (e.g. -ize) can be found with such -er nominals (6). b) Modification by adjectives such as *beautiful* or *good*. When combined with -er nominals such adjectives are ambiguous between an intersective and a non-intersective reading (7). The second reading is available as the nominal contains an event variable (Larson 1998). Since the root $\sqrt{\text{COLON}}$ itself doesn't introduce an event variable, this is introduced by v. c) As such formations are absolutely productive and non-idiosyncratic, they cannot be root nominalizations.
4. We propose that instrument non CS -ers also have the structure in (5) on the basis of four arguments. a) The instrumental reading is possible only when the instrument functions as an intermediary as opposed to a facilitating one ((B) 2-4, see Kamp & Rossdeutscher 1994, Alexiadou & Schäfer 2006). This coupled with the Voice hypothesis suggests that Voice is present. b) Instruments contain a vP, as they contain verbalizing morphology (8) (an agentive interpretation is still possible). c) If v is present, (9) should be similar to (7). But in English modification via an eventive adjective is possible in the absence of a verb as the nominal source (10-11). We thus consider Romance data, where the event reading of the adjectives is only found in prenominal position (12). We find event modifying adjectives only with deverbal instrument nouns, not with root-derived ones (13-14). d) Such nouns are productive/non-idiosyncratic and cannot be root derived.
5. If CS and non CS nominals have the structure in (5), how can we explain correlation (A)? (1f-g) refer to individuals specialized/designed for a specific purpose without necessarily having been involved in an actual event, the individuals in (1a-e) have necessarily been involved in an event. We claim that the -ers in (1f-g) are similar to *generic middles* (15) in several ways: Middles don't make reference to an actual event having taken place; they are derived statives (Ackema & Schoorlemmer 1995). Middles ascribe a dispositional property to their internal argument, -ers to their external argument. In middles, the external argument may not be syntactically projected, in -ers it is the internal argument that is left out. In both, the non-projected argument is semantically available, interpreted as generic ONE. The only way to express such arguments is via the use of the beneficiary P *for* (the NP is again generic 16a-b; in -ers it can also be an incorporated predicate restrictor 16c). In middles the verb's event variable (and the implicit argument) is bound by a generic/dispositional operator (Lekakou 2005). In the same vein, we propose that in +CS -ers the event variable in vP is bound by an episodic Asp^o (17a), while in non-CS -ers by a dispositional Asp^o (17b, cf. Ferrari 2005). We suggest that the absence of CS from (17b) has to do with this dispositional Asp^o, which explains the interpretation of the implicit argument. Assuming that the projection of a specific object contributes to the unfolding of an actual event, its presence is incompatible with generic semantics (cf. Borer 2005). Similarly, CS can be absent in other generic constructions (18 from Goldberg 2001).

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Data

- (1) a. ... is a great **defuser** of pent-up emotions (causer)
 b. ... a **holder** of a Visa or Mastercard (holder)
 c. ...as a dazzled **admirer** of the Washington of the West (experiencer)
 d. A protein that is a potent **inducer** of new blood vessel growth (instrument)
 e. a **grinder** of imported coffee → necessarily an agent/not an instrument
 f. a grinder → machine intended for grinding things
 g. lifesaver, fire-fighter, teacher → a person educated for a specific job
- (2) a. Mary opened the can with the new gadget (intermediary)
 b. The new gadget opened the can
- (3) a. Bill ate the food with a fork (facilitating)
 b. *The fork ate the meat
- (4) a. opener (agent or instrument)
 b. eater (agent but **not instrument**)
- (5) a. [-er [VoiceP[vP [RootP]]]]
- (6)

<u>ROOT</u>	<u>Root + v</u>	<u>Nominal</u>
√COLON	colon-ize	coloniz-er
√MOBIL	mobil-ize	mobiliz-er
- (7) a good colonizer
 (i) *x is good and x is a colonizer*
 (ii) *x is good in colonizing*
- (8)

<u>ROOT</u>	<u>Root + v</u>	<u>Nominal</u>
√FERTIL	fertil-ize	fertiliz-er
√VENTIL	ventil-ate	ventilat-or
- (9) a. fast elevator b. fast calculator
- (10) a. John is a just king b. Olga is a fast horse
- (11) I drank a quick cup of coffee = I quickly drank a cup of coffee
- (12) a. Un **buon** attaccante (Italian, from Cinque 2003)
 b. A forward good at playing forward (nonintersective)
 c. #A good-hearted forward (intersective)
 a'. Un attaccante **buono**
 b'. A forward good at playing forward (nonintersective)
 c'. A good-hearted forward (intersective)
- (13) a. *o rapida masina a'. o masina rapida (Romanian)
 b. *un rapido coche b'. un coche rapido (Spanish)
 a fast car a car fast
- (14) a. un rapid calculator a'. un calculator rapid (Romanian)
 b. un rapido calculador b'. un calculador rapido (Spanish)
 a fast calculator a calculator fast
- (15) This mountain climbs easily
- (16) a. These books read easily for young children
 b. a wiper for windshields
 c. can-opener
- (17) a. [+event]-er: [n [ASP_{EPISODIC} [VoiceP[vP [RootP]]]]]
 b. [-event]-er: [n [ASP_{DISPOSITIONAL} [VoiceP[vP [RootP]]]]]
- (18) The sewing instructor always cuts ∅ in straight lines