

A functional account for the productivity of English *-er* nominals*

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Yook, Cheongmin and Yong-hun Lee. A functional account for the productivity of English *-er* nominals. *Linguistic Research* 33(3), 463–485. This paper offers a descriptive generalization on the English *-er* nominalization based on a functional-cognitive-semantic concept *habituality* as a condition on *-er* nominalization. Fairly an extensive literature on this topic has so far been offered in terms of syntactic structures, particularly arguments structure of the base verbs. Many of these research works do shed a new light on the various facets of English *-er* nominalization, but still missing from these discussions is a comprehensive understanding of the phenomena revolving around these nominalizations. These works simply exclude from their discussion the *-er* nominals that are derived from nouns, adjectives, prepositions, and various phrases simply because they do not involve argument structure. Various proposals couched in functional-semantic framework offer a comprehensive account for this phenomenon. Our proposal is an effort in this line of approach. We argue that *-er* nominalization is allowed if habituality or durativity is secured enough to be considered as representing inherent properties. (Hallym University · Chungnam National University)

Keywords *-er* nominalization, habituality, durativity, argument structures

1. Introduction

English *-er* nominals, together with the *-ee* nominals, have long been one of the popular research topics, not only in traditional grammars but also in modern theoretical studies. Diachronically, *-er* nominals have a long history, dating back to Old English (see Kastovsky 1971, among others), which in turn borrowed the suffix

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from Latin. Synchronically, they seem to expand their usage across various categories and in terms of the number of tokens.

In the contemporary theoretical studies, English *-er* nominals have been a target of fruitful research in various theoretical frameworks. For example, Barker (1998), Ryder (1991, 1999), Panther and Thornburg (2001), and Heyvaert (2011) offer a semantic-functional-cognitive account, while numerous studies including Rappaport Hovav and Levin (1992), Baker and Vinokurova (2009), Alexiadou and Schäfer (2010), Bowers (2011), Borer (2013), McIntyre (2014), and Härtl (2015) offer syntactic analyses based on the argument structure of the base verb. Each of these studies does shed a new light on the various facets of *-er* nominalization, but still missing from these discussions is a comprehensive understanding of the phenomena revolving around *-er* nominalization. For example, since the seminal works of Chomsky (1970), Grimshaw (1990), and Rappaport Hovav and Levin (1992), various efforts have been made to account for the word-formation mechanism of these *-er* nominals in terms of argument structure and the verbal phrase structure of the nominals. Although quite convincing and revealing, these works automatically exclude the *-er* nominals which do not involve verbal bases simply because they do not involve argument structure. As is well-known, however, a large number of *-er* nominals in English are made from non-verbal bases such as nouns, adjectives, and prepositions.¹

As a case of interface between syntax and morphology, these nominals indeed seem to exhibit various linguistic aspects that would otherwise not be observable. As mentioned above, research on this topic seems to be exploding recently. Why are English *-er* nominals that much intriguing? In this paper, we suggest a descriptive generalization that may account for the conditioning factors in forming *-er* nominals in English. For that purpose, in Section 2, we briefly review the historical development of these nominal expressions, citing some of the corpus-linguistics research results. In Section 3, we review three kinds of previous accounts: the prescriptive account such as in the Oxford English Dictionary, syntactic approaches based on argument structure, and semantic-functional-cognitive approaches. Many of the previous works, especially Roeper (1988), Levin and Rappaport Hovav (1988), Rappaport Hovav and Levin (1992), van Hout and Roeper (1998), Lieber (2005),

¹ For a corpus-based study on the expansion of the *-er* nominal in English and German, see Scherer (2005).

Alexiadou and Schäfer (2010), McIntyre (2014), analyze English *-er* nominalization in terms of the argument structure of their base verbs. We will show that this line of analysis, although revealing, shed a new light only on a fraction of the variegated data. As an alternative account, we propose, in Section 4, our own analysis based on the notion of ‘habituality’ or ‘durativity’, and try to cover various kinds of *-er* nominals including non-deverbal nominals. In Section 5, we extend our proposal to English *-ee* nominals, which pose a potential problem for syntactic analyses. Finally, in Section 6, we draw a conclusion.

2. Historical development of English *-er* nominals

It is generally agreed that English *-er* suffix originates from Latin *-arius*, as in *ordinarius* ‘overseer’ (Scherer 2005). Thus, Old English *-ere* and *-are* as in *sangere* ‘singer’ came from the Latin suffix. The nominal suffix *-er* is often confused with the original part of some nouns, such as in (1), which are well-known as instances of back-formation.²

- (1) *burglar* 1268, *burgle* 1872
peddler 1307, *peddle* 1650
auditor 1377, *audit* 1557
actor 1566, *act* 1585
editor 1649, *edit* 1791
bartender 1836, *bartend* 1948

Therefore, discussion on the English nominal suffix *-er* should not include these examples. It is quite clear that these examples have nothing to do with either Latin suffix *-arius* or the English nominalizer *-er* under discussion. It is also clear, however, that the very existence of these words may have influenced the expansion of *-er* nominalization in English.

It is generally believed that English *-er* nominalization is most productive with verbal bases, which is known as deverbal *-er* nominals. True it is, we still witness

² Hereafter, the number following the example indicates the year when the example was first attested in the record. For more relevant examples and discussion, see Marchand (1969).

various other types of *-er* nominalization, as shown in (2).

- (2) verb + *-er* (e.g., *writer*)
 noun + *-er* (e.g., *glover*)
 adjective + *-er* (e.g., *loner*)
 preposition + *-er* (e.g., *downer*)
 verb + *-er* + particle (e.g., *passerby*)
 quantifier + measured unit + *-er* (e.g., *four-footer*)
 adverb phrase + *-er* (e.g., *homeward-bounder*)
 conjoined verbs + *-er* (e.g., *rock and roller*)
 verb phrase + *-er* (e.g., *do-gooder*)

As examples in (2) show, not only verbs but nouns, adjectives, prepositions, and even phrases with internal elements can feed *-er* nominalization. Ryder (1999: 269) highlights: “[T]he *-er* nominalizing suffix found in words like *singer* and *foreigner* is one of the most productive derivational morphemes in English, and has been so since the Old English period.” Ryder further remarks: “Moreover, from that period to this, it has been expanding its use, in the range of both its bases and its referents” (p. 269). In Old English, the root of the *-ere* suffix was either verbal (as in *andettere* ‘one who confesses’ and *andettan* ‘to confess, acknowledge’) or nominal (as in *tolnere* ‘tax-gatherer’ and *toln* ‘toll, custom, duty’). However, the syntactic category of the base for *-er* nominalization has been extended to cover categories other than verbs and nouns, as we saw in (2). There is thus an extremely wide variety of *-er* nominals in Present-day English. We have simple nouns and verbs (e.g., *porker*, *writer*), adjectives (e.g., *foreigner*, *loner*), prepositions (e.g., *downer*, *upper*), particle + verb constructions (e.g., *onlooker*), verb + particle constructions with and without an ‘extra’ *-er* and with the particle preceding or following the *-er* suffix (e.g., *butt-inner*, *passer-by*, *washer-upper*), and even a variety of phrases (e.g. *get-rich-quicker*, *on-the-goer*, *two-footer*). A few more relevant examples are given in (3).

- (3) a. humans and animals (e.g., *left-hander*, *mouser*)
 b. plants and food (e.g., *broiler*, *creeper*)
 c. instruments and clothing (e.g., *romper*, *stapler*, *sweeper*)
 d. locations (e.g., *diner*, *kneeler*³, *New Yorker*, *sleeper*)

e. events and activities (e.g., *breather*, *nail-biter*, *no-brainer*, *gully-washer*)

Nowadays, even non-native speakers of English seem to participate in creating *-er* nominals (e.g., *toefler*). Considering the fact that the referents for Old English *-ere* forms are overwhelmingly, though not exclusively, human beings, it is quite surprising to see that in Present-day English, the referent of the *-er* nominals ranges from animals and plants to instruments and locations and even events and activities. In short, *-er* nominalization has become more and more productive not only in extending its base categories but also in its phrasal structures. In the next section, we will pay attention to similar examples and discuss the syntactic issues arising in simple versus complex form of *-er* nominalization.

3. Can a uniform account be obtainable?

3.1 The oxford english dictionary

The online Oxford English Dictionary (OED)⁴ mentions that “[I]n its original use, the suffix *-ārjo-z* was added (like Latin *-ārius*) to nouns, forming derivative nouns, with the general sense ‘*a man who has to do with the thing denoted by the primary noun, and hence chiefly serving to designate persons according to their profession or occupation*’ (italicized emphasis is ours). Citing examples such as Old English *hatter*, *slater*, *tinner* and Middle English *bowyer*, *lawyer*, *sawyer*, the OED also mentions that *-er* suffix is extended either after the analogy of these or by assimilation to French derivatives to produce forms like *brazier*, *clothier*, *collier*, *glazier*, *grazier*, *hosier*. The OED remarks that “the English words of this formation not referring to profession or employment are comparatively few,” providing examples such as *bencher*, *cottager*, *outsider*, and *villager*.

As the OED remarks, how can we characterize a family of words, chiefly belonging to modern colloquial English, that denote things or actions such as *header*, *back-hander*, *fiver*, *out-and-outer*, *three-decker*, not to mention recently coined forms

³ A *kneeler* is a kind of chair, especially one can kneel on this chair in Catholic churches. cited from Heyvaert (2011).

⁴ <http://www.oed.com/view/Entry/63869?rkey=NqkIq6andresult=5#eid>

such as *toefler*, *htmler*, *blogger*? The above-mentioned OED definition does not seem to fully cover the semantic variety of many examples. Take a look at the following examples.

- (4) *baker* (a baked potato)
bestseller (something that sells well)
broiler (a broiled chicken)
reader (a compilation of literature which reads easily)
scratcher (a lottery ticket that is scratched)

These examples simply do not fit into the OED definition. All the examples suggest that they refer to the so-called theme argument of the base verb and not human beings.

Quite a few examples in the similar vein are given in the literature. Consider the following.

- (5) *diner* (a place to dine in)
sleeper (a train where one can sleep in),
toploader (a washing machine which one loads from the top)

In these examples, *-er* nominals denote the complement of a preposition modifying the verb where the preposition is often locational. Along with the OED-style traditional explanation, it is well known that the English nominalizing suffix *-er* has several meanings including an agentive interpretation (verb + *-er* = one who verbs) and an instrumental interpretation (verb + *-er* = a thing with which one verbs). One of the key issues regarding the English *-er* suffix is then to explain how we can derive new words out of this suffix. In other words, we have to account for the rule or mechanism governing *-er* word formation.

3.2 Syntactic versus semantic approaches

As mentioned in Section 1, the literature on English *-er* nominalization has long been polarized into syntactic versus semantic approaches. As for the syntactic approaches to *-er* nominalization, many scholars have suggested that all *-er*

nominalizations reflect the argument structure of their base verbs and that these verbs should have an external argument (or the underlying subject) to allow *-er* nominalization. For example, consider verbs like *dance* and *arrive*. English verb *dance* is so-called intransitive verb and has only one argument, which is realized as the subject that is also called an external argument. Given this argument structure of the verb *dance*, we can readily apply the *-er* derivation so that we have *dancer*. Now consider the English verb *arrive*. This verb is traditionally called an unaccusative verb, which has a single internal argument, but which is later realized as the subject (see Burzio 1986). Therefore, we cannot derive **arriver* from *arrive*, because it has no external argument, under syntactic analysis. For this approach, see Levin and Rappaport Hovav (1988), Rappaport Hovav and Levin (1992), Baker and Vinokurova (2009), Alexiadou and Schäfer (2010), Bowers (2011), Borer (2013), McIntyre (2014), Härtl (2015), among others. Employing different underlying phrase structures for these base verbs, they try to show the semantic, syntactic differences and similarities of various types of *-er* nominals. One of the strong arguments made in this syntactic approach is that since unaccusative verbs do not have an external argument, they cannot serve as bases for *-er* nominalization. As supporting evidence, for example, Levin and Rappaport Hovav (1988) provide the following examples.

- (6) a. unaccusative verbs: *disappear, wilt, last, transpire, wane, open, freeze, cook, dry*
 b. **disappearer, *wilter, *laster, *transpirer, *waner, *opener, *freezer, *cooker, *drier* (intransitive meanings)⁵

These verbs are in general classified as unaccusatives, which are claimed to have no subjects but themes and do not allow *-er* nominalizations, as shown by the examples in (6b). The prediction seems to be borne out. Most of the analyses along syntactic approaches, however, simply put aside other various types of *-er* nominals that are produced from non-verbal bases. Theory-internally, the examples in (5) and (6) also pose a potential problem for syntactic approaches, because the referents of the *-er* nominals are theme argument and not external one.⁶

⁵ Here *cooker* is unacceptable as intransitive agentive meaning, but it is of course acceptable if interpreted as an instrument.

⁶ For a critique, see Ryder (1999) and references therein.

As an alternative to this kind of syntactic approaches, a functional-semantic-cognitive approach has been suggested in the literature. For this approach, see Barker (1998), Ryder (1999), Panther and Thornburg (2001), and Heyvaert (2011). As Heyvaert (2011) notes, cognitively-oriented research on *-er* nominalization has argued in favor of a purely semantic or conceptual analysis of *-er* derivation. According to Heyvaert, a group of *-er* nominals that derive from cooking verbs (e.g., *baker* ‘a food (meat, fruit or vegetable) that is suitable for baking’, *broiler* ‘a young chicken suitable for broiling’, *fryer* ‘a young chicken or rabbit suitable for frying’, *roaster* ‘a kind of meat suitable for roasting’, and *steamer* ‘an edible clam’) is problematic for syntactic analyses because *-er* nominals may bear a wide range of semantic relations to the verbs from which they are derived. Heyvaert instead suggests that all these and other problematic cases can readily be accounted for in terms of her two notions, ‘patientives’ and ‘obliques’. Instead of introducing her theory in detail, we will present our own descriptive explanation along the line of the functional-semantic approach.

4. A proposal for a descriptive generalization

Since English *-er* nominals are basically nouns, it naturally follows from this very fact that they should share all the properties of the syntactic category called Noun. For the purpose of our discussion, it suffices to cite a very simple definition of Noun from the online OED: “A word used as the name or designation of a person, place, or thing; the class or category of such words.” It is readily admissible that nouns designate an inherent property or a characteristic that has a certain amount of duration. This property is termed as ‘durativity’ in this paper.

We simply do not use nouns for a fleeting or one-time occurrence of some event. For example, compare the following.⁷

- (7) a. He taught English to the local children just once.
 b. #He is a teacher.
 c. #He is an English teacher.

Suppose that a person visited a local village for a short time, say, a couple of

⁷ For relevant discussion, see Ryder (1999: 282), who uses concepts like habitual or durative.

hours or one day, and happened to have a chance to teach English to the local children. In this case, it is quite unnatural to call the person a teacher or an English teacher, as indicated by the # mark in 7b-c). We cannot call the person an English teacher or a teacher for that matter, even though the person factually taught English. In this situation, teaching English is simply not the person's job and just a one-time event. In other words, this one-time event is not the person's inherent property and thus is not enough for us to apply this noun to the agent of this event.

A similar case can be found in the following examples from Cohen (2005).

- (8) a. Mary drinks on her birthday (and only then).
- b. Mary is a birthday drinker.
- c. Mary is a Christmas drinker.

Suppose that Mary drinks on her birthday, and this is one of her inherent properties that characterize her. Suppose further that her birthday happened to be on December 25 in a particular year, coincidentally. In this case, it is okay to assert that Mary is a birthday drinker, as in (8b). However, it is not natural or logical to say that Mary is a Christmas drinker, as in (8c). Why is it so? Mary's drinking is correlated with her birthday, but there is no inherent relationship whatsoever between her drinking and Christmas. Note that her birthday may not coincide with Christmas in other years. Therefore, it is not felicitous to call Mary a Christmas drinker. From these two cases, it naturally follows that English *-er* nominals should meet some felicitous conditions such that *-er* nominalization is possible only if the meaning of the base is *habitual* or *durative* enough to represent some degree of inherent properties of the referent. Here in this section, this line of reasoning will be basically extended to English *-er* nominals. We will show that various kinds of English *-er* nominals can best be accounted for in terms of the general condition for something to be a noun such as inherent properties just mentioned.

4.1 Profession names and some analogical cases

Typical expressions involving *-er* suffix are found in profession names such as *dancer*, *driver*, *player*, *singer*, *teacher*, and so on. Then it is quite clear why some putative *-er* forms such as *doer* and *maker* often sound odd when standing alone.

These are not names of profession. Such forms, however, become perfectly fine when a modifier is added that helps limit the event schemas, as in *hair-doer*, *hat-maker*, and *dress-maker*. The reason seems to be clear: Expressions like *doer* and *maker* are so vague that they do not designate a specific profession and hence non-sense, while *hair-doer*, *hat-maker*, and *dress-maker* specifically refer to particular professions.⁸ With enough priming effect like this, even *beer* and *doer* can be felicitous, but these expressions would otherwise not be quite natural.

As an extension of this usage, English *-er* nominals can readily refer to sort of ‘job-like’ durative or habitual properties. For example, *drinker*, *flirterer*, *jogger*, *smoker*, *swimmer*, *toefler*, *early-riser*, and *frequent asker* express the idea that the referent of these expressions executes the activity denoted by the base verb almost as regularly as a profession. If the activity or property denoted by the base verb can be considered as a habit, then *-er* nominalization is more felicitous. The more regular and procrastinate, the more felicitous the *-er* nominalization becomes. In this sense, the following examples from Ryder (1999: 282), which are frequently cited in the literature, are quite interesting.

(9) a. Legal secretary about her boss:

I swear, the moment I need to talk to Max, he's suddenly gone. I'm beginning to think he's a professional *vanisher*, not a lawyer.

b. When I get busy, I tend to forget to water my plants. It's a good thing I've got a plant that's a *wilter*. The minute it gets a little low on water, it wilts, so it's a reminder it's time to water everything again.

c. So many old melodramas ended in death-bed scenes that the actors who played in them had to be good *dyers*.

As is well-known, verbs like *vanish*, *wilt*, and *die* are telic verbs and thus cannot be iterated. By definition, these verbs cannot express habitual or durative events. However, given enough priming effects as in (9), these verbs can express some kind of habit. In these examples, an activity that usually happens only once is put in a context where it can be construed as habitual, which can be readily recognized by the modifiers. If someone vanishes, the activity is finished once and for all.

⁸ Interestingly, Ryder (1999: 281) cites a Biblical expression “to meet one’s Maker, he is a doer” and a graffiti found in New York “Don’t be a beer, be a doer” in her footnote.

However, in (9a), the person named Max repeats this activity as if it is his habit. This is why the speaker mentions that he is a *professional vanisher*. By juxtaposing *vanisher* and *lawyer*, the speaker insinuates that *vanisher* is kind of a profession in this particular context. In (9b), the verb *wilt* means ‘for a plant to become limp through heat, loss of water, or disease’ and once a plant wilts, the activity is done. Since this plant repeats wilting every day, it becomes like a habit. That is why the speaker calls it a *wilter*. Regarding (9c), the verb *die* is a telic one and cannot be repeated. However, as indicated by the plural ending in the expression ‘actors’, this event is interpreted to be repeated in (probably) different dramas as a habit. That is why the speaker calls them *good dyers*.

The contrast between one-time events and habitual ones can be clearly observed in the following examples taken from Ryder (1999: 282).

- (10) a. ?I don't want this skirt any more. The one time I washed it, it was a *fader*.
 b. The problem with natural-fiber textiles is that they're *faders*.
- (11) a. ?Her husband was a *disappearer* one day.
 b. It's hard to collect child support from ex-husbands because they're *disappearers*.

In both (10) and (11), note that the bad cases (the *a*-sentences) are related to purely one-time event, while the good cases (the *b*-sentences) are related to plurality, which in turn express some extent of genericity or habituality in a broad sense. This is why the *b*-sentences are all contrastively better than the *a*-sentences.

So far, we have shown that even one-time activity can lead to *-er* nominalization, if the event denoted by the base verb is interpreted to be habitual or durative enough. This observation seems to be crucial for so-called unaccusative verbs, which are generally known for their resistance to *-er* nominalization under syntactic analyses. Since Rappaport Hovav and Levin's seminal work (1992), a number of scholars have argued that unaccusative verbs do not allow *-er* nominalization (see, especially, Rappaport Hovav and Levin 1992: 147, re-cited from Ryder 1999: 274).

- (12) unaccusative verbs: *disappear, wilt, last, transpire, wane, freeze, cook, dry* (intransitive, unaccusative uses)
 supposedly ungrammatical *-er* nominals based on these verbs:
**disappearer, *wilter, *laster, *transpirer, *waner, *opener, *freezer, *cooker, *drier* (intransitive meaning)

Without any pragmatic context or priming effect, these expressions clearly sound awkward. As we have seen in (11) and (12), however, these *-er* nominals can be felicitously used in some pragmatic contexts where habituality or durativity is expressed enough. It thus naturally follows that one of the conditioning factors on English *-er* nominalization may not be the types of verbs based on the existence of external argument but rather habituality or durativity expressed by the base word. In the next section, this solution will be extended to nonverbal *-er* nominals in English.

4.2 Nonverbal bases of English *-er* nominals

As mentioned in Section 1, syntactic approaches try to show the derivational structure of *-er* nominals, mostly based on the argument structure of the base verbs (see, particularly, Grimshaw 1990, and the subsequent works in this line). This type of research automatically excludes English *-er* nominals that are derived from nonverbal bases. In addition to the deverbal *-er* nominals, there are various types of *-er* nominals that are derived from nouns, adjectives, prepositions, numerals, and some form of phrases (see the examples in (2) of Section 1). All these cases simply remain unaccounted for under syntactic approaches.

Under the current analysis, however, they can be accounted for in terms of *habituality* or *durativity*. In other words, if the event denoted by the base secures a certain degree of habituality or durativity, then *-er* nominalization is readily allowed. Take the case of *Londoner* as an example. If someone stays in London only for a short period of time, then *-er* nominalization cannot apply. How long is long enough then? Maybe the right amount of time period will be determined by pragmatic factors. In some extreme cases, we see that a foreigner claims that he/she is a *Londoner* after he/she stays just a couple of days in London. In this case, the validity of this person's claim is not about linguistics but about practical psychology. One thing that can be figured out from this putative context is that the speaker has

strong enough logical grounds for his/her assertion. In other words, in his/her possible world, the speaker firmly believes that he/she is a Londoner since he/she satisfies the condition for being called a Londoner.

Some more similar examples include *cottager*, *villager*, and *northerner*.⁹ Consider the following:

- (13) a. nouns: *left-hander*, *two-footer*, *sixth-grader*, *no-brainer*, *stapler*,
mouser
 b. adjectives: *foreigner*, *loner*
 c. prepositions: *upper*, *downer*
 d. phrases: *come-backer*, *on-the-goer*, *get-rich-quicker*, *right-to-lefter*,
drive-it-yourselfer

Each of these examples does show a certain degree of habituality, durativity, or genericity. Let us discuss some of the examples in detail. First, *left-hander* in (13a) cannot be applied to a person who uses his or her left-hand only for once. Left-handers should at least show the tendency to use their left-hands regularly either for genetic reasons or intentionally (as in base-ball games). *No-brainer* in (13a) means ‘an action or decision requiring no brain, no thought.’ This expression can be used for any action or decision requiring no brain, no thought, regardless of the kinds or places. In other words, this expression is related to some inherent property of an action or decision, which is not temporary or fleeting. *Foreigner* in (13b) can be used for anyone who is from a foreign area and this fact is always true once he or she is from a foreign area. In a sense, this fact is an inherent property of that person and that is why *-er* nominalization is felicitous. Similarly, *villager* can be applied to a person who lives in a village for a certain amount of time so that living in a village (for a certain period of time) can be considered as the person’s inherent property. In (13d), *come-backer* means ‘the coming back of a baseball toward the pitcher’. Again, this expression applies to any ball of this sort as a general property. *Right-to-lefter* means ‘a putt in golf that rolls from right to left’. This expression would not have existed if this kind of putting happened just once. Since this happens so often among the golfers that they need to designate such putting by a noun.

⁹ For these and more examples, see Barker (1998).

Finally, *drive-it-yourself-er* in (13d) refers to a rental truck that you drive yourself. Again, this special type of trucks is numerous and people need to refer to this type of trucks. In short, a certain level of habituality, durativity, and/or genericity is the minimum condition for *-er* nominalization to apply.

In connection with this observation, the following examples from cooking, which pose a serious potential problem to syntactic approaches such as Rappaport Hovav and Levin (1992), Alexiadou and Schäfer (2010), and Bowers (2011) are indeed borne out under the present analysis. According to many syntactic approaches, the following examples cannot be allowed because these verbs have internal arguments only. It must be repeated here that under the syntactic analysis only an external argument but not a theme allows *-er* nominalization. For example, Burzio (1986: 161) cites *killer*, *walker*, but **arriver*. According to Burzio, *killer* and *walker* have an external argument, but *arriver* has only an internal argument (and for this reason this type of verb is called unaccusative). If this is correct, then the following examples are problematic because the referent of the expressions is a theme and not an external argument.

- (14) *baker* (a baked potato), *bestseller* (something that sells well), *broiler* (a broiled chicken), *cooker* (apples that are easily cooked), *reader* (a compilation of literature which reads easily), *scratcher* (a lottery ticket that is scratched),

According to the above-mentioned syntactic theories based on, particularly, argument structure, the expression *baker* is quite acceptable, if it refers to someone who bakes something. It has such meaning and in this case it has an external argument. However, as shown in (14), if *baker* refers to a baked potato, then it is a problem. Here ‘potato’ is an internal argument or an object but not an external argument and, therefore, under the syntactic approach, *-er* nominalization cannot apply. All the other examples in (14) pose the same problem for syntactic approaches.

In contrast, under the analysis proposed in this paper, they can be explained quite readily. Suppose people tend to bake potatoes quite often and baking, rather than, say, broil, has become one of the inherent or habitual properties of potatoes. Then we can use *baker* for potatoes. For another example, take *bestseller*. Suppose

that many people (i.e., sellers) sell a particular book. This very fact becomes a property of the book and not of the people who sell it. In other words, ‘bestselling’ becomes an inherent property of the particular book and we can now apply *-er* nominalization.

Confronting with this fact, some works like Rappaport Hovav and Levin (1992) propose that so-called middle constructions allow *-er* nominalization. Indeed, the majority of the *-er* nominals related to cooking processes such as *baker*, *boiler*, *broiler*, *fryer*, *roaster*, and *steamer* do allow middle formation. This is shown in the following:

- (15) a. The man *broiled* the chicken.
b. The chicken *broiled* slowly.

The logic here is that the chicken is an internal argument in (15a), but it becomes an external argument in the middle construction (15b). This is why the verb *broil* allows *-er* nominalization, resulting in *broiler*. However, the following section discusses cases where the referent of *-er* nominals is not an external argument but an object of a preposition, and these cases pose more serious potential problems for this kind of syntactic approaches.

4.3 Instruments, locations, and other non-arguments

Regardless of the theoretical frameworks, almost all previous works seem to have reached a consensus such that a subset of English *-er* nominals denote instruments, together with agents. Therefore, *opener* can either mean a person who opens something (agentive *-er*) or an instrument by which we open something (instrumental *-er*). Note that instruments are neither an external arguments nor an internal argument that can become the subjects of middle constructions. Some proposals (e.g., Levin and Rappaport Hovav 1988; Alexiadou and Schäfer 2006) distinguish two types of instruments, namely intermediary versus facilitating instruments and further claim that only intermediary instruments are able to perform the action in some sense autonomously, while facilitating instruments are not. Consider the following examples cited from Levin and Rappaport Hovav (1988).

- (16) Facilitating instruments
 a. Bill ate the meat with a fork.
 b. *The fork ate the meat.

- (17) Intermediary instruments
 a. Doug opened the can with the new gadget.
 b. The new gadget opened the can.

Interestingly, they point out that *-er* nominals referring to facilitating instruments such as **eater* ‘instrument you eat with’ is not acceptable, while *-er* nominals referring to intermediary instruments such as *opener* ‘instrument you open a bottle with’ is acceptable. Then syntactic approaches such as Levin and Rappaport Hovav (1988) do not discuss cases other than so-called intermediary instruments. Consider the following example.

- (18) *shitter* ‘place where one shits’
putter ‘place a person customarily puts things when they first walk into their house or office’
kneeler ‘place where you put your feet in catholic churches’
teether ‘something a baby teethes (on)’
diner ‘a place to dine in’
sleeper ‘a train where one can sleep in’
toploader ‘a washing machine which one loads from the top’

The examples in (18) simply resist to any putative analysis proposed in syntactic approaches. That is, the base verbs of these expressions do not have an external argument or the subjects of middle constructions. Furthermore, they do not belong to what Levin and Rappaport Hovav (1988) call intermediary instruments. Under the current proposal, however, they can be accounted for in terms of habituality or durability. Take, for example, *shitter*. A particular place may not be so called, if someone happens to shit just once in that particular place. Rather it would be so dubbed when many people would shit in that particular place and this fact is rather widely known to the people of the given context. Ryder (1999: 276) reports on more examples that defy any such syntactic categorization. These examples are so

variegated that a unified syntactic categorization does not seem to be obtainable. Consider the examples cited from her.

- (19) a. *nail-biter*, *laugher*, *weeper*, *yawner*, *ho-hummer* ‘events such as movies or games that cause the viewer to perform this action’
 b. *page-turner* ‘a book that you keep turning the pages of, i.e. a gripping book’
 c. *double-breather* ‘a difficult action that you breathe twice to prepare for rather than just once’
 d. *stair-climber* ‘an exercise machine that makes you perform an action like climbing stairs’
 e. *white-knuckler* ‘an event that causes your knuckles to go white from fear or stress’

These examples are in fact not related to the events denoted by the base verbs. Rather, they are indirectly connected to the contents denoted by the base verbs. All these examples, however, have one thing in common: They refer to some inherent property of the referent. They do not have uniform syntactic structures, and thus we even cannot identify which can possibly be an external argument and which can possibly be the subject of middle construction in these examples or which is an intermediary instrument. In fact, some of the examples have no relationship with the referents, not to mention argument structures. Take just one example, say, *nail-biter*. Nail-biting occurs as a result of some event such as movies or games that causes the viewer to perform this action. Linguistically, there is no correlation between nail-biting and the particular event of movie-watching or book-reading. Under the current proposal, *nail-biter* can be accounted for as follows. Accumulated by the same person or by a multitude of people, an event of this sort can arouse similar reaction from the experiencers and nail-biting becomes almost an inherent property of that event. Then *-er* nominalization readily obtains.

Even more revealing is the case of *garager*. As discussed in Ryder (1999: 278), we would only know that it can refer to something that could be coded as a noun and that participates in a schema containing garages. Thus, it might mean the followings.

- (20) *garager*

- a. a garage man
- b. the kind of car that is always in a garage being fixed
- c. the car that is kept in the garage (rather than in the driveway)
- d. an event that often takes place in a garage, such as a garage sale

Since the one and the same expression *garage* has at least four different meanings, as shown in (20), it is in no way convincing to claim that it has one syntactic structure or argument structure, as putatively assumed in the syntactic approaches mentioned above. It would be equally not convincing to claim that there are four different lexical items that have their own argument structures but that they happen to be homophonous. Furthermore, ‘garage’ is not a verb and thus has no argument structure in whatsoever senses.

A functional-semantic-cognitive approach (e.g., Ryder 1999; Panther and Thornburg 2001; Heyvaert 2011; among others) appeals to the notion of schema: “A schema is a cognitive knowledge structure made up of components with specified relationships to each other” (Ryder 1999: 277). This approach further assumes that one most salient factor ‘profiles’ the relationship and this is the semantic content of the *-er* nominals. Coming back to the example in (20), there can be various sorts of relationship among the potential participants regarding a garage and the schema can be determined by the speaker or the speaker’s linguistic experiences. Suppose that the speaker is considering having a garage sale. In this case, the event of garage sale will be the most salient profile regarding the garage. For this speaker, therefore, *garager* means an event that often takes place in a garage, such as garage sale, as in (20d).

In this paper, we do not particularly buy this line of cognitive linguistics approach, but instead try to offer a descriptive generalization as a unified analysis of English *-er* nominals. Our analysis is indeed quite sympathetic with the functional-cognitive-style analysis. The difference is that our analysis is based on the notion of *habituality* or *durativity*, which may not be totally different from the notion of the most salient profiling schema of cognitive linguistics. Just as in functional-semantic-cognitive approaches to *-er* nominals, we try in this paper to cover a full range of the phenomena under one umbrella concept, instead of accounting for a small fraction of *-er* nominals.¹⁰

¹⁰ An anonymous reviewer points out that the current proposal may not account for the following data.

5. An extension to English *-ee* nominalization

Traditionally, the suffix *-ee* is known as a passive or patient counterpart of the active or agentive suffix *-er* in English grammar (see Bengtsson 1927). For example, an *employer* is a person who employs someone, while an *employee* is a person who is employed by an employer. The contrast here is quite clear. Jespersen (1905: 111) also cites *vendee* (1547) ‘the person to whom a thing is sold; the purchaser’. Some more examples to the point are provided from Barker (1998).

- (21) a. They could witness the behavior of the *electees* to be sincere. (1593)
- b. The family ... are too nearly connected with the *biographee*. (1841)
- c. For the baptist to touch the head of the *baptisee* with the water. (1871)
- d. A second trial is made to test the length of time during which the *experimentee* can maintain his previous grip. (1891)
- e. The United States Senate yesterday returned the Tariff Bill to the Conference Committee without giving the Senate *conferees* any instructions. (1894)

However, there has been a quite extensive literature that shows that the referent of *-ee* nominals may not involve passive/patient (particularly, see Barker 1998, and references therein). Consider the following examples cited from Barker (1998).

- (22) *escapee* - *escaper*; *absentee* - *absenter*; *arrivee* - *arriver*; *dinee* - *diner*; *deferee* - *deferrer*; *infiltree* - *infiltrator*

None of these examples have passive or patient meaning. For example, *escape* is an

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- (i) a. Today's speaker is from Seoul. And this is his first speech ...
 - b. This morning somebody broke the window in my office. I saw the breaker of the window running away ...
 - c. Zack does not believe the story of creating this universe. He says he doesn't know the creator of this world.

All these examples provided by the reviewer are clearly cases of one-time event and thus have nothing to do with our central concept of habituality. As is well-known, [N-er + of NP] denotes the agent of the event but not a job or habit. Therefore, we believe this type of data should be separated from general cases of *-er* formation that we discuss here.

intransitive verb and thus has no passive meaning. In other words, *escaper* and *escapee* are one and the same. In addition, these examples cannot be accounted for in any analysis that presupposes an external argument as a condition for *-er* nominalization because some of these verbs are classified as unaccusatives (see Burzio, 1986).

An even more serious problem for those syntactic approaches can be found in the following examples.

- (23) There is something about the Doctor that all at once converts the *trotter* into the *trottee*. (1818) (Here *trot* = to present someone for amusement, as in a salon.)

As we see in (23), both *trotter* and *trottee* are used in the same sentence, which are derived from the same base verb *trot*. Again, we assume, incorrectly and unnaturally, that there are two different lexical items of *trot* and only one of them has an external argument so that it allows *-er* formation, under any of the syntactic approaches that requires an external argument as condition on *-er* nominalization.

According to Barker (1998), at least 7 percent of *-ee* nominals (32 word types) are formed from the subject of intransitive verbs, which are given in the following.

- (24) The retiree retired.
escapee, standee, resignee, dinee, enlistee, returnee, advancee, arrivee, ascende, deferee, embarkee, relaxee, sittee, waitee

How then can we account for these examples under the present proposal? Note that both *-er* and *-ee* are simply nominalizing suffixes without serious semantic content. That is, the minimum meaning of these suffixes is that the referent of the derived nominal is simply a noun and as such it can be perceived by the speaker and the hearer, just like other nominal suffixes like *-ness*, *-ity*, and *-tion*. In addition, both *-er* and *-ee* can be most felicitously employed if habituality or durativity can profile some degree of inherent properties of the referent. Compare the transitive verb *kill* and the intransitive verb *escape*. In case of *kill*, the two most salient participants will be a person/thing that performs killing (agent) and a person/thing that experiences killing (patient). The contrast is clear in any pragmatic sense. In this case, *killer* is interpreted as an agentive noun, while *killee*

a patient one. In contrast, there is just one participant in the case of *escape*. Therefore, either *escaper* or *escapee* does not make any meaningful contrast, which in turn allows for both forms.

6. Conclusion

In this paper, we have shown that a variety of *-er* nominals in English fail to be accounted for under syntactic analyses that presuppose argument structure. There are numerous cases where simply no argument structure can be assumed as in de-nominal *-er* nouns and de-adjectival *-er* nouns. As an alternative, we have proposed an analysis that may pretty much be in line of a functional-semantic-cognitive approach in the sense that some semantic notions such as *habituality* and *durativity* are needed as a condition on *-er* nominalization. These notions play a role in deciding the referent of the *-er* nominals as its inherent property.

In Section 3, we reviewed previous accounts, especially the prescriptive account such as the Oxford English Dictionary style explanation, the syntactic approaches based on argument structure, and the cognitive-functional approaches. In particular, we pointed out various potential problems couched in syntactic approaches, which are not from theory-internal problems as well as theory-neutral ones. Works like Roeper (1988), Levin and Rappaport (1988), Rappaport Hovav and Levin (1992), van Hout and Roeper (1998), Lieber (2005), Alexiadou and Schäfer (2010), and McIntyre (2014) analyze English *-er* nominals in terms of argument structure and argue that only the verbs that have external arguments allow *-er* nominalization. We showed that, under this line of analysis, many *-er* nominals derived from nouns, adjectives, prepositions, and phrases are automatically excluded. As an alternative, we proposed, in Section 4, an account that bases itself on semantic notions like *habituality* and *durativity*, since these notions are critically related to profiling the referents of *-er* nominals as their inherent properties. We then extended this proposal, in Section 5, to the cases of English *-ee* nominals, which are interchangeably used with their *-er* counterparts, especially in case of those derived from intransitive verbs. Scrutinizing each individual nouns of the form *-er* and *-ee* may surely reveal that our proposal should be somehow refined and detailed. Only in that case will our proposal turn out to be successful, which only waits for another place of scrutiny.

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