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To Be "a Boat Load Healthier" and Not to "Care a Single Scrap": On the Adverbialization of English Size Nouns

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ABSTRACT

While the grammaticalization of English size nouns into vague quantifiers has already received a considerable amount of scholarly attention, their subsequent syntactic expansion beyond the nominal domain remains an under-researched area. In particular, little has hitherto been written about the possible factors contributing to the emergence of additional adverbial uses of such items. Based on synchronic corpus data, this paper therefore aims to partially fill in this gap by providing an analysis of the adverbialization patterns of nine nominal forms of this kind, namely *bit*, *scrap*, *shred*, *heap*, *heaps*, *load*, *loads*, *lot*, and *lots*, whose empirical tokens have been classified into six categories: (i) verbal inherent modification, (ii) verbal extent modification, (iii) adverbial ambiguous, (iv) object-pronominal, (v) adjectival modification of positives, and (vi) adjectival modification of comparatives. The results demonstrate that in the verbal domain, most of the analyzed forms reveal a preference for pronominal uses, in which they function as an argument of the verb rather than a genuine degree adverb, while in the adjectival domain, a majority of the items, especially 'large size' nouns, exhibit a conspicuous propensity to combine with the comparative forms of adjectives/adverbs. Moreover, it is shown that there exists a strong positive correlation between the items' respective degrees of grammaticalization in the quantifier function and their extents of adverbialization, operationalized as the proportion of pertinent attestations in corpus samples. Thus, the study underscores the role of frequency in grammaticalization on the one hand, and points to the importance of paradigmatic analogy on the other.

Keywords: grammaticalization; adverbialization; size nouns; English; corpus-based study

INTRODUCTION

Coined by Brems (2007; 2011; 2015), the term *size noun* refers to a nominal item which, in addition to its basic lexical meaning, has developed a secondary scalar sense, paraphrasable as 'a little' or 'many/much.' Most size nouns (or SNs, for short) originally function partitively, i.e. they indicate parts, portions, or sets of what the concomitant nominal refers to (e.g. *some bits of bread*). As noted by Traugott (2008), partitives indeed tend to develop into vague quantifiers (e.g. *a bit of patience*), and then also into adverbs (e.g. *wait a bit*).

However, while the former stage of the above-mentioned process has already attracted a fair share of attention cross-linguistically (see, among others, Brems, 2003; 2007; 2011; 2015; Giacalone Ramat, 2019; Herda, 2019a; 2019b; 2020), the latter generally remains a largely under-researched area (cf. De Clerck & Brems, 2016). Drawing on data extracted from the Corpus of Global Web-Based English (henceforth also GloWbE), this paper therefore aims at partially filling in this gap by offering an account of the adverbialization patterns of nine English SNs which have undergone varying levels of grammaticalization as quantifiers, and which have nonetheless

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retained their original partitive meanings (cf. Brems, 2003; 2007; Herda, in press), namely *bit*, *scrap*, *shred*, *heap*, *heaps*, *load*, *loads*, *lot*, and *lots*.

The point of departure for the study will be the observation that all of the above-listed SNs have undergone a certain extent of adverbialization, as illustrated by (1)–(9). Notably, all the corpus examples provided here are cited in their original forms.

(1) It always helps to leave your garden **a little bit messy**. (GloWbE)
(2) I don't **care a single scrap**, my dear, in respect to the friend I'm speaking of, for any judgement but my own. (GloWbE)
(3) Anyone who **cares a shred** about humanity must be deeply concerned about this state of affairs. (GloWbE)
(4) Used to be too serious about things, but he's **mellowed a heap** and seems like an absolute genuine guy who knows the game so well. (GloWbE)
(5) Because the one that's marked as being the Lumia is **HEAPS shakier** than the one marked as the iPhone 5. (GloWbE)
(6) It's a little spendy, but it's **a boat load healthier** than a cola, and the flavor is a durably memorable complement to the delicious food. (GloWbE)
(7) I know that things have **improved** for me **loads** but i know i still get frustrated by the panic and sickness in the mornings but I will treat it as morning sickness, take away its importance and let it go. (GloWbE)
(8) One thing which became clear is that Paul **works A LOT** and peppered through much of our chat, were lots of the sales and marketing techniques which enable him to keep performing week after week, throughout the year. (GloWbE)
(9) When we left Japan it was the longest time I had ever live in one place, having **travelled lots** as a child myself. (GloWbE)

The empirical investigation revolves around three primary research questions. First, what are the respective SNs' extents of adverbialization, operationalized as the proportion of their adverbial attestations in the corpus sample? Second, what is the empirical distribution of their adverbial attestations between degree modifier uses, extent modifier uses, uses involving positive forms of adjectives/adverbs, and uses involving comparative forms of adjectives/adverbs? And third, how collocationally open is each of the SNs in the adverbial function? To answer the last question, it was necessary to calculate two measures of productivity, namely type-token ratio (TTR) and hapax-token ratio (HTR), i.e. the number of, respectively, types of modified predicates and hapax collocates divided by the total number of adverbial uses of a given SN. Additionally, the current degrees of adverbialization of the analyzed SNs were compared with their respective percentages of quantifier uses, as established by Herda (in press), in order to see whether these two grammaticalization phases are positively correlated.

The paper is organized as follows. First, I briefly outline general facts pertaining to the grammaticalization of SNs into quantifiers and adverbs. Next, I provide an account of the method used in the empirical investigation and offer a discussion of the obtained results, including a comparison thereof with those reported on in Herda (in press). Finally, I summarize the main conclusions reached in the study and suggest prospects for future research on the topic.

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THE GRAMMATICALIZATION OF SIZE NOUNS

FROM NOUN TO QUANTIFIER

As mentioned above, a large number of SNs derive from so-called partitives, also known as classifiers (cf. Lehrer, 1986) or measure nouns (cf. Brems, 2003), which are the linearly first nominal elements in binominal constructions whose main function consists in "bounding or unitizing the entities expressed by the second constituent" (Verveckken, 2015, p. 48; cf. also Quirk et al., 1985). Equally noteworthy as regards the semantics of partitive nouns is the fact that they exhibit more or less specific lexical requirements pertaining to the kinds of nouns with which they may co-occur (Brems, 2011; Doetjes, 1997). By way of illustration, the partitive *scrap* used literally may only combine with concrete nouns referring to substances of rather solid consistency (cf. *scraps of meat* vs. **scraps of water*).

As demonstrated by Brems (2003; 2007; 2011; 2015), there is a strong tendency for English partitives incorporating a "conception of [their] typical size" (Langacker, 1991, p. 88) to develop into indefinite (vague) quantifiers, which, in contrast to definite ones, i.e. numerals, are "imprecise in their specification of number or amount" (Jackson, 2013, p. 119). According to Doetjes (1997) and Claridge and Kytö (2014), it is likewise possible for this type of quantifiers to imply the degree of intensity rather than the quantity of what the concomitant nominal stands for, as is the case with mass psychological nouns, such as *patience* or *wisdom*. Depending on whether a given quantifier points to a non-specific high or low quantity/degree, it can be referred to as either multal or paucal (Huddleston & Pullum, 2002).

The above-discussed phenomenon exemplifies a larger linguistic process known as grammaticalization, whereby items/constructions possessing lexical (descriptive) content, in specific syntagmatic environments, increase their functional potential and develop more abstract, grammatical meanings (cf. Hopper & Traugott, 2003; Kuryłowicz 1965). The initial phase of the transition of partitives into quantifiers therefore manifests itself in semantic generalization, or, more precisely, "the semanticization of quantifier meaning through repeated pragmatic inferencing of size or scalar implications that are part of the lexical semantics of the [partitive noun]" (Brems, 2011, p. 108). This semantic change further constitutes an instance of subjectification, understood here as "a shift from the [partitive noun] contributing to propositional content to expressing meaning that indexes speaker relatedness" (Brems, 2011, p. 231).

The meaning schematization involved in the grammaticalization of SNs has a number of distributional reflexes. First of all, grammaticalized partitives undergo collocational broadening (cf. Brems, 2003; 2011), i.e. they start to regularly co-occur with animate and abstract nominals. Furthermore, such items lose compatibility with other quantifiers (cf. Keizer, 2007), e.g. *seven lots of land* vs. **seven lots of fun*, although exceptional in this respect are 'small size' nouns functioning as negative polarity items, capable of combining with the numeral *one*, which, in this context, plays as emphatic role (cf. (10)–(11)).

(10) You have not provided **one shred of evidence** that any of those groups of people I have mentioned who rose up against a foreign occupying power, a foreign occupying power that consistently behaved with genocidal savagery against the people of the lands they had invaded became "new bosses just as bad as the old" you haven't done it because you can't. (GloWbE)

(11) No amount of effort could bring **one scrap of light** into the darkness. (GloWbE)

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Additionally, partitive nouns affected by grammaticalization start to exhibit highly restricted modification patterns, in that they can only be pre-modified by the positive forms of quantification-reinforcing adjectives (cf. Brems, 2003; 2011), such as *little* (e.g. *a little bit of time*) or *whole* (e.g. *a whole lot of questions*). However, 'small size' nouns displaying negative polarity are again exceptional here, as they may co-occur with the superlative forms of adjectives implying smallness (cf. (12)) as well as with the adjective *single* (cf. (13)). In both cases, the modifiers serve the purposes of emphasis.

(12) I'd be disgusted if any journalist labelled Alex Salmond a serial child abuser on Twitter without **the slightest shred of evidence.** (GloWbE)
(13) And before you claim they were: Show me **a single scrap of evidence** that anyone depicted in the pictures above was ever arrested or questioned by the Secret Service. (GloWbE)

Paucal nominal quantifiers likewise cannot be pluralized, which likewise distinguishes them from partitives. Those representative of the multal category, by contrast, are susceptible to pluralization, yet it must be underlined that plural morphology applied to such items does in fact not perform its basic function, i.e. that of unitization, as in *heaps of sand* 'untidy piles of sand' or *lots of land* 'parcels of land'. In such cases, pluralization instead yields an intensifying effect, i.e. it amplifies the inherent scalar implications of a particular 'large size' noun (cf. Brems, 2011; Herda, 2019b).

FROM QUANTIFIER TO ADVERB

Crucial to the present study is the observation that the next step in the evolution of nominal quantifiers consists in their syntactic context expansion (cf. Himmelmann, 2004), i.e. adverbialization (cf. Brems, 2011; De Clerck & Brems, 2016; Doetjes, 1997; Traugott, 2008). However, as De Clerck and Brems (2016) point out, whereas the development of partitives into quantifiers has been investigated quite extensively across languages, still little is known about the expansion of nominal quantifiers to adverbial contexts. Especially noteworthy here is that while it may be notoriously problematic to determine the syntactic status of a vague quantifier, adverbialized items of this kind are special in that "extension to increasingly more syntactic contexts is considered to be a symptom of further grammaticalization since it presupposes that reanalysis of the expression concerned has taken place" (De Clerck & Brems, 2016, p. 168).

First and foremost, adverbialized quantifiers may function as either degree or extent modifiers (cf. Bolinger, 1972). In the former case, they combine with items invoking degree scales, such as gradable adjectives/adverbs as well as some classes of verbal predicates known as degree verbs, e.g. psychological verbs like *hate* or *love*, allowing modification with respect to the intensity of the eventualities which they denote. In the latter case, by contrast, what such adverbs modify is the temporal extension, i.e. duration or frequency, of the situations denoted by the concomitant eventive verbs, e.g. *sleep* or *walk*. Notably, however, there exist verbs allowing both the degree and the extent reading, which may lead to interpretational ambiguities (Quirk et al., 1985: 603). For instance, *suffer a lot* in (14) may be taken to indicate either a long duration of the pertinent individual's suffering or a high intensity thereof.

(14) He even told me that I **suffered a lot** and would not make me suffer even more by asking to wait for nothing. (GloWbE)

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Both degree and extent modifiers can nevertheless be further divided according to whether they derive from multal or paucal quantifiers. Adverbs connected with the former type of quantifiers are traditionally labelled as boosters, whereas those related to the latter category typically come under the name of diminishers or, if used in non-assertive contexts, minimizers (cf. Claridge & Kytö, 2014; Quirk et al., 1985).

In the scarce literature devoted to the expansion of grammaticalized partitives to adverbial settings, two main scenarios as to how the change initially manifests itself have been proposed. According to one of them, the early adverbial uses of nominal quantifiers involve extent rather than degree modification, the former being functionally closer to the prototypical instances of vague quantification by virtue of indicating numbers, i.e. frequencies, or amounts, i.e. durations (cf. Claridge & Kytö, 2014; Herda, 2019a). The other observation is that as far as adverbial uses of SNs in the adjectival domain are concerned, they tend to initially involve comparative variants of adjectives/adverbs, especially the form *more* (cf. Norde et al., 2014), as in *a lot more*. What deserves special attention here is the fact that in English, both vague (multal) quantification as well as degree modification of comparatives may be expressed by the same well-established item, namely *much* (cf. *(not) much water*, *much better* vs. **much good*). Thus, the latter scenario is further supported by the tendency for grammaticalization to be, at least in some measure, shaped by the forces of paradigmatic analogy, which "refers to structural or semantic similarity the speaker perceives between a particular (source-)construction and a (target-)construction which invites him to parse the former as an instance of the latter" (Delbecque & Verveckken, 2014, p. 663).

It is nonetheless vital to draw a distinction between adverbial uses of nominal quantifiers and instances in which the quantifier syntactically functions as the direct object in a sentence. Attestations of the latter type will be considered pronominal rather than adverbial here. In fact, pronominal uses may be analyzed as elliptical quantifier attestations, since in such cases, the verb implies a certain nominal complement, which may be taken to have been omitted (cf. (15)–(18)), or it is possible to assume the omission of semantically general complements such as *things* or *stuff* (cf. (19)–(22)). Following De Clerck and Brems (2016), such attestations, by dint of generating degree/extent inferences, may facilitate the adverbialization of SNs, which is why pronominal uses will be taken into account in the empirical analysis pursued here.

(15) Given that it **costs a heap** and is compulsory, who should bear the cost? (GloWbE)
(16) Hopefully I'll get A for all my subjects considering I've **spent heaps** on the Sciences and Math... (GloWbE)
(17) No need to do any clown tricks, just hang out and **drink a shit load**. (GloWbE)
(18) You've said you've been quite obsessed and **reading lots** about it, since you found out you are a carrier. (GloWbE)
(19) To begin with why don't you **tell us a little bit** about yourself -- where were you born? Raised? Schooled? (GloWbE)
(20) The major problem today is that unsatisfied customers hardly complain, they simply stop buying such goods and services without testing the marketer **know even a shred** as to what went wrong and where. (GloWbE)
(21) I've had the nicest team ever to work with, I've **learned LOADS**, and I've had a really nice time! (GloWbE)
(22) It is because Californians **have a lot** in common that they do not obey the sqrt(n) law. (GloWbE)

Notably, in pronominal uses, the SN, which either directly follows the verb (e.g. *learn a bit about something*) or is separated by the direct object (e.g. *teach someone a lot*), can typically be the subject of a passive sentence, as opposed to the case with adverbial uses (cf., e.g., *They talk/know a lot about that* and *A lot is talked/known about that* vs. *They slept/grew a lot* and **A lot was slept/grown*). However, pronominal uses should be distinguished from clearly elliptical quantifier attestations, in which the omitted element can be easily retrieved from the immediate syntagmatic environment of the utterance, as in (23)–(24).

(23) I'm a slave to **cookbooks**, have **loads** and keep getting them sent to me, but my favourite is The Vegetable Bible by Sophie Grigson, more a reference bible than a cookbook. (GloWbE)
(24) Thank you for the **good wishes** and I'm sending **lots** your way too xx (GloWbE)

METHOD

As stated before, the present study focuses on nine English SNs, namely *bit*, *scrap*, *shred*, *heap*, *heaps*, *load*, *loads*, *lot*, and *lots*. To answer the research questions listed in the Introduction, the 1.9-billion-token Corpus of Global Web-Based English (GloWbE), which represents 20 regional varieties of (typically informal) English used on the Internet (i.e. American, Canadian, British, Irish, Australian, New Zealand, Indian, Sri Lankan, Pakistani, Bangladeshi, Singaporean, Malaysian, Philippine, Hong Kong, South African, Nigerian, Ghanaian, Kenyan, Tanzanian, and Jamaican) was searched for adverbial and object-pronominal uses of the expressions under analysis. The specific aim was to obtain a random sample consisting of up to 250 relevant attestations per SN, of which a maximum of 125 include instances representative of the verbal domain, and a maximum of 125 involve instances representative of the adjectival domain. The underlying idea here is that adverbialization ideally involves syntactic expansion to the adjectival and the verbal domains alike. Thus, the restriction imposed on the maximum number of uses in the two environments enabled a better characterization of the distribution of the analyzed SNs beyond the nominal domain. In particular, it is impossible to claim that a SN displays a high level of adverbialization if it tends to be used adverbially in one environment only.

As for the SNs which, based on a preliminary corpus examination, were shown to have developed (at least relatively) frequent uses pertinent to the purposes of the pursued investigation, i.e. *bit*, *heaps*, *loads*, *lot*, and *lots*, the data collection process involved generating, by means of the corpus search engine, a random sample of 1000 occurrences of a given SN. Next, it was necessary to filter out irrelevant attestations, and, if need be, repeat the procedure until the above-mentioned limits had been reached, at the same time removing occasional doublets. When it comes to the remaining SNs, i.e. *scrap*, *shred*, *heap*, and *load*, it was necessary to examine all of their attestations in the corpus, fishing out relevant (adverbial and pronominal) examples. In the case of attestations belonging to the verbal domain, the following subcategories were then distinguished: (i) adverbial degree modifier (DM), (ii) adverbial extent modifier (EM), (iii) adverbial ambiguous, i.e. allowing both the degree and extent modifier reading (AMB), and (iv) pronominal (PRON). Occurrences belonging to the adjectival domain, on the other hand, were further subdivided into those involving (i) positive (POS) and (ii) comparative (COM) forms of adjectives/adverbs, the latter also including uses with the excess operator *too*. To check statistical significance, Fisher's exact test was employed. Importantly, the number of all adverbial uses of a given SN in the sample divided by 250 (the highest possible number of tokens per SN) was taken to reflect the current

degree of its adverbialization. The frequency adverbialization values were then compared with those pertaining to the SNs' grammaticalization as quantifiers, as reported on in Herda (in press), in order to see whether the extents of these two grammaticalization stages are positively correlated, which involved the calculation of Pearson's correlation coefficient.

To shed more light on the collocational range of each of the adverbialized SNs, two common measures of productivity were additionally calculated, namely type-token ratio (TTR) and hapax-token ratio (HTR), i.e. the number of, respectively, types of modified verbs/adjectives/adverbs and hapax collocates divided by the number of all adverbial uses of a particular SN. The comparative form *more*, whether appearing adnominally (e.g. *a lot more things*) or otherwise (e.g. *a lot more interesting*; *to sleep a lot more*; *to know a lot more*), was taken to instantiate a single collocate type, and the same applies to the form *less*. Moreover, the deverbal form *thanks* (as in *thanks heaps*) was analyzed as instantiating the degree verb *thank*. Notably, the obtained values were rounded up to two decimal places.

RESULTS

ADVERBIALIZATION PATTERNS OF THE ANALYZED SIZE NOUNS

Shown in Table 1 is the empirical distribution of the scrutinized SNs in the verbal and the adjectival domain.

TABLE 1. Empirical distribution of the analyzed SNs beyond the nominal domain

SN	Uses						Total
	Verbal domain				Adjectival domain		
	DM *n* (%)	EM *n* (%)	AMB *n* (%)	PRON *n* (%)	POS *n* (%)	COM *n* (%)	
bit	77 (30.80%)	15 (6%)	7 (2.80%)	26 (10.40%)	81 (32.40%)	44 (17.60%)	250 (100%)
scrap	8 (80%)	0 (0%)	0 (0%)	1 (10%)	1 (10%)	0 (0%)	10 (100%)
shred	2 (50%)	0 (0%)	0 (0%)	1 (25%)	0 (0%)	1 (25%)	4 (100%)
heap	23 (16.43%)	4 (2.86%)	2 (1.43%)	31 (22.14%)	1 (0.71%)	79 (56.43%)	140 (100%)
heaps	60 (24%)	17 (6.80%)	2 (0.80%)	46 (18.40%)	16 (6.40%)	109 (43.60%)	250 (100%)
load	7 (3.57%)	3 (1.53%)	1 (0.51%)	60 (30.61%)	0 (0%)	125 (63.78%)	196 (100%)
loads	37 (14.80%)	14 (5.60%)	4 (1.60%)	70 (28%)	2 (0.80%)	123 (49.20%)	250 (100%)
lot	27 (10.80%)	22 (8.80%)	7 (2.80%)	69 (27.60%)	4 (1.60%)	121 (48.40%)	250 (100%)
lots	14 (5.60%)	17 (6.80%)	5 (2%)	89 (35.60%)	0 (0%)	125 (50%)	250 (100%)
Total	255 (15.94%)	92 (5.75%)	28 (1.75%)	393 (24.56%)	106 (6.63%)	726 (45.38%)	1600 (100%)

As can be noted, the SN *bit* exhibits the highest degree of adverbialization (224/250, i.e. 89.60%), followed by *heaps* (204/250, i.e. 81.60%), *lot* (181/250, i.e. 72.40%), *loads* (180/250,

i.e. 72%), *lots* (161/250, i.e. 64.40%), *load* (136/250, i.e. 54.40%), *heap* (109/250, i.e. 43.60%), *scrap* (9/250, i.e. 3.60%), and *shred* (3/250, i.e. 1.20%). What may appear surprising at first glance is that the SN *heaps* turned out to display a higher level of adverbialization than the well-established *lot*, the difference between them in the frequency of adverbial uses being statistically significant ($p < .05$), a finding which can nonetheless be accounted for in terms of three facts. First, the sample is composed of informal data, which may obviously diverge from patterns attested in standard language. Second, the discussed results do not reflect absolute frequencies. And third, there is a tendency towards renewal of older grammaticalized expressive forms, i.e. they tend to be replaced with novel, more vigorous expressions with the same meaning contents. Another unexpected observation, which likewise can be elucidated with reference to the three aforementioned facts, is that *lot* displays a very similar level of adverbialization to that of *loads*, the difference between them not being statistically significant ($p > .05$). However, the values for the 'small size' nouns *scrap* and *shred*, due to the scarcity of their relevant attestations, do not permit any strong conclusions, which is why the two items will be largely disregarded in the discussion concerned with the general tendencies observed in the data.

In the verbal domain, a majority of the analyzed SNs most frequently participate in pronominal uses, which seems to strengthen the hypothesis that pronominalization constitutes an intermediate stage between nominal quantification and adverbial modification. The only exceptions here, apart from *scrap* and *shred*, are *bit* and *heaps*, both of which reveal a preference for degree modifier contexts. Nevertheless, apart from *lots*, the SNs functioning as adverbs seem to prefer degree verbs over eventive predicates, which, in turn, casts doubt on the claim that extent modification fuels the adverbialization of English nominal quantifiers. In the adjectival domain, on the other hand, the SNs, again except for *bit*, exhibit a clear preference for comparative forms of adjectives/adverbs, which substantiates the assumption pertaining to the role of paradigmatic analogy in the expansion of multal quantifiers to adverbial settings.

Table 2 presents a juxtaposition of the adverbialization frequency values (ADV) and those concerning the SNs' respective degrees of grammaticalization in the quantifier function (QUANT), the latter determined by Herda (in press).

TABLE 2. Adverbial and quantifier uses of the analyzed SNs

SN	*bit*	*scrap*	*shred*	*heap*	*heaps*	*load*	*loads*	*lot*	*lots*
ADV	0.90	0.04	0.01	0.44	0.82	0.54	0.72	0.72	0.64
QUANT	0.81	0.1	0.64	0.54	0.87	0.46	0.95	1	1

The data shown in Table 2 reveal that there is a strong positive correlation between the scrutinized SNs' degrees of grammaticalization in the adverbial and the quantifier function ($r = .73$, $p < .05$), which, coupled with the diachronic observations made in Traugott (2008), indicates that a high frequency of a SN's quantifier occurrences tends to facilitate its development of additional adverbial uses.

In the following parts of the text, the scrutinized SNs are discussed separately in more detail with respect to their adverbial attestations. In each case, two productivity measures are revealed, i.e. TTR and HTR, and a number of representative corpus examples are provided.

BIT

As shown in Table 1, *bit* exhibits the highest degree of adverbialization among the SNs under scrutiny, which should not come as a surprise given that the 'small size' noun at issue has the longest history of quantifier and adverbial uses (cf. Brems, 2007; Claridge & Kytö, 2014; Traugott, 2008). Apart from a significant frequency of adverbial attestations, *bit* displays a considerable productivity level. More precisely, among its 224 adverbial tokens, there are 179 collocate types, of which as many as 163 are hapax legomena. Hence, the relevant TTR value stands at 0.80, while the HTR is 0.73. With its remarkable collocational freedom, the adverbially used SN *bit* does not reveal many strong preferences pertaining to its verbal or adjectival/adverbial collocates. The items most frequently modified by *bit* include the comparative marker *more* (22 relevant occurrences), as in (25), the excess operator *too* (7 occurrences), as in (26), and the verb *change* (6 occurrences), as in (27).

(25) So maybe you could have **a bit more class** and not attack fellow United fans. (GloWbE)
(26) I'm also not sure when the podcast will launch but November feels **a bit too soon**. (GloWbE)
(27) You can type as many times as you want and shout it, but it doesn't **change it one bit**. (GloWbE)

As indicated by (27), *bit*, even when used adverbially in non-assertive contexts, may be preceded by the numeral *one*, which achieves an emphatic effect here.

SCRAP

Of the 6502 occurrences of *scrap* in the investigated corpus, only 9 were recognized as adverbial attestations of the SN under scrutiny. Among the relevant tokens, there are 6 collocate types, of which 5 are hapax legomena. Thus, the TTR is 0.67, while the HTR is 0.56, even though it should be emphasized that the values are not really meaningful given the general scarcity of the SN's adverbial uses. The only recurrent collocate of the adverbially used *scrap* is the verb *care* (4 occurrences), as in (2) and (28). The remaining instances involve the verbs *depend* (1 occurrence) in (29), *help* (1 occurrence) in (30), *matter* (1 occurrence) in (31), and *mess* (1 occurrence) in (32) as well as the adjective *bothersome* (1 occurrence) in (33).

(28) I don't **care** if I do – not **a scrap**! (GloWbE)
(29) So she got up from the blue sofa, and the yellow button in the looking-glass got up too, and she waved her hand to Charles and Rose to show them she did not **depend on them one scrap**, and the yellow button moved out of the looking-glass, and all the spears were gathered into her breast as she walked towards Mrs. Dalloway and said "Good night."
(30) It will not **help a scrap** to win the war, but there is the possibility of penalising somebody who is perfectly innocent because we have passed a law for another purpose entirely. (GloWbE)
(31) On the other hand, if we're still unbeaten by then it won't **matter a scrap**! (GloWbE)
(32) But I haven't **messed one scrap** with the tracking done on the day.

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(33) One minor reservation I receive is that PCA seems to erroneously find certain browser / system -related applications, because of example VideoCacheView, and because of the automatic quarantine this made it **a scrap bothersome**. (GloWbE)

As can easily be noted, *scrap* in its adverbial uses typically occurs in negative polarity contexts, similarly to the case with its quantifier attestations (cf. Herda, in press). In such settings, the SN under analysis is likewise compatible with the numeral *one* (cf. (29) and (32)) as well as the adjective *single* (cf. (2)), both serving the function of emphasis.

SHRED

The query *shred_n* performed on the corpus revealed 2773 attestations of the SN *shred*, of which a mere 3 are adverbial uses. Each token represents a different collocate type, which is why both the TTR and the HTR values stand at 1, even though, similarly to the case with *scrap*, these measures are not meaningful here in view of the general paucity of the pertinent attestations of *shred*. Among the 3 collocates of the adverbially used *shred* are the verbs *care* (cf. (3)) and *wrong* (cf. (34)) as well as the comparative form *better* (cf. (35)).

(34) On the day when We shall summon all men with their record, whoso is given his book in his right hand – such will read their book and they will not be **wronged a shred**. (GloWbE)
(35) You really are a female version of Abbott. Not **a shred better**. (GloWbE)

However, it must be added that (34) is in fact the English rendering of a fragment of the Quran, hence the adverbial employment of *shred* may be assumed to stem from translation-related interference. More importantly, the SN *shred*, like *scrap*, normally occurs in negative polarity settings in its adverbial attestations, which in fact likewise applies to its quantifier uses (cf. Herda, in press).

HEAP

The command *heap_n* revealed 8724 attestations of the SN *heap*, yet the number of adverbial uses of the SN at issue stands at 109. Among them, there are 28 types of verbal/adjectival/adverbial collocates, of which 20 are hapax legomena. Hence, the TTR is 0.26, while the HTR is 0.18. As can be seen, both values are considerably lower than those attested for *bit*, which is in fact unsurprising given that in contrast to *bit*, *heap* is not yet conventionalized as an adverb, as reflected in its current dictionary definitions. Notably, the relatively low productivity of the adverbial uses of *heap* translates into the item's stronger collocations than is the case with *bit*. The most frequent collocates of the adverbially used SN *heap* include the comparative forms *more* (54 occurrences), as in (36), *better* (8 occurrences), as in (37), *easier* (4 occurrences), as in (38), *cheaper* (3 occurrences), as in (39), *less* (3 occurrences), as in (40), *worse* (3 occurrences), as in (41), as well as the verbs *thank* (11 occurrences), as in (42), and *help* (3 occurrences), as in (43).

(36) Sara, you are most certainly an inspiration to me, and yes you did go into the full-time blogging quickly but I find that **a whole heap more inspiring**! (GloWbE)
(37) That's **a heap better** than he anticipates. (GloWbE)

(38) This means you don't have to do any punching down behind the socket and that makes the installation **a heap easier**. (GloWbE)
(39) On towards Geneva, sticking to the secondary roads which are quite good really – more scenic and **a whole heap cheaper**. (GloWbE)
(40) Can you at least see how some of us would trust Mozilla **a whole heap less** now? (GloWbE)
(41) This year could have a been **a whole heap worse**, that's for sure. (GloWbE)
(42) Once again, **thanks a heap** for the article. (GloWbE)
(43) This place is **helping me a whole heap**. (GloWbE)

Notably, among the adverbial uses of *heap* representative of the adjectival domain, there is moreover one attestation involving the positive form of an adverb:

(44) Anyhow, times were most definitely about to start to changing with folks acting **a heap differently** as that decade of the 60s unfolded, but in that first year of the new decade, everything was pretty much the way they had been during the best of times. (GloWbE)

Equally noteworthy is the fact that, as evidenced by most of the above-cited examples, the SN *heap*, even when employed adverbially, may be intensified by *whole*.

HEAPS

As mentioned before, *heaps* was shown to display the highest level of adverbialization within the group of the analyzed 'large size' nouns. The 204 adverbial uses of the SN *heaps* include 59 collocate types, of which 43 are hapax legomena. The TTR value therefore stands at 0.29, while the HTR is 0.21. Thus, apart from a higher frequency of adverbial attestations, *heaps* turned out to be more productive, i.e. collocationally open, in the adverbial function than *heap*. Among the most frequent collocates of the adverbially used SN *heaps* are the comparative forms *more* (64 occurrences), as in (45), *better* (19 occurrences), as in (46), and *cheaper* (6 occurrences), as in (47), as well as the verbs *thank* (31 occurrences), as in (48), *help* (7 occurrences), as in (49), and *love* (6 occurrences), as in (50).

(45) There was no romantic relationship in the equation, but there was something **heaps more important**: my sense of self. (GloWbE)
(46) I'm sure I can write **heaps better** than you and that egghead combined without being my native language. (GloWbE)
(47) It's a bit like therapy, only way quicker and **heaps cheaper**. (GloWbE)
(48) **Thanks heaps**, enjoy your time and take good care! (GloWbE)
(49) Action Heros Handbook gives very practical advise about how to do it (having a prepared speech and a getaway vehicle ready **helps heaps**, as well as notes of apology and money so you can pay for having ruined a wedding). (GloWbE)
(50) Most importantly to my wife Yukiko, you are the best and I **love you heaps**. (GloWbE)

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What also deserves special attention as far as *heaps* is concerned is the SN's significantly greater compatibility with the positive forms of adjectives/adverbs than is the case with the other 'large size' nouns ($p < .05$). In such cases, *heaps* typically combines with evaluative items, its most frequent collocate being *good* (3 occurrences), as in (51). The other relevant attestations include, for instance, *exciting* (1 occurrence) in (52) and *cool* (1 occurrence) in (53).

(51) This things **heaps good** but it better be made well enough (GloWbE).
(52) OooOoo00o0o going on placement for 5 weeks sounds **heaps exciting** and a little scary! (GloWbE)
(53) i reckon it sounds **heaps cool** but i reckon what would be even cooler is if it was a wii game and came with with it's own little like touch sensitive/sound sensitive 2x2metre dance mat so that u could actually learn the steps (GloWbE)

Notably, as opposed to *heap*, *heaps* does not typically combine with intensifiers, which suggests that as far as 'large size' nouns are concerned, plural morphology indeed performs a function analogous to that of free intensifying elements.

LOAD

The command *load_n* revealed as many as 41972 attestations of *load*, of which only 11 were recognized as its adverbial uses in the verbal domain, and approximately 150 as degree modifier attestations representative of the adjectival domain. Since in the latter case, the predetermined limit (125) was exceeded, it was necessary to randomly filter out the excess tokens. Finally, the sample was found to contain 136 adverbial uses of the SN under analysis. Among them, there are only 18 collocate types, of which 13 are hapax legomena. Thus, the TTR and the HTR values for *load* are conspicuously low, and stand at, respectively, 0.13 and 0.10. As can be expected, the adverbially used SN *load* has strong collocational preferences, its most common collocate being the comparative form *more* (99 occurrences), as in (54). The other recurrent collocates of *load* include the comparatives *better* (14 occurrences), as in (55), *less* (4 occurrences), as in (56), and *easier* (3 occurrences), as in (57), as well as the verb *thank* (3 occurrences), as in (58).

(54) In that respect, in your absolutism you have **a shed load more** in common with the ADL than I do. (GloWbE)
(55) That made me feel **a whole load better** and gave me some much needed additional confidence to go out there. (GloWbE)
(56) If we just faced fact and worked with what we've got the world would be **a load less scary**. (GloWbE)
(57) Using this app makes the whole process of uploading pictures to your Twitter account **a load easier**!? (GloWbE)
(58) **Thanks an ocean load** for this very eye opening article Phil! (GloWbE)

A distinguishing feature of the SN *load* as both a quantifier and an adverb is that it tends to co-occur with a wide range of non-standard intensifiers (cf. Herda, in press). Apart from *shed* in (54), *whole* in (55), and *ocean* in (58), the relevant examples include *shit* (cf. (59)), *crap* (cf. (60)), and *bucket* (cf. (61)).

(59) I don't know if you guys are watching the animated series but they are doing what i had hoped they would do with the war, **extend the stories a shit load**, adding value and emotion to the fights, brilliant! (GloWbE)
(60) In my opinion, it is **a crap load more beneficial** to stay in school, you can only get a low-end job without it.:) (GloWbE)
(61) You will find one unless it has 50% fat and costs **a bucket load more** (GloWbE)

LOADS

Among the 180 adverbial uses of the SN *loads* in the dataset, there are 41 collocate types, of which 29 are hapax legomena. The TTR is therefore 0.23, whereas the HTR value stands at 0.16. Thus, in addition to displaying a higher frequency of adverbial occurrences, *loads* is markedly more productive in the adverbial function than *load*. However, *loads* exhibits a smaller proportion of adverbial attestations and a lower level of productivity than *heaps* and, especially, *bit*. The most frequent collocates of the adverbially used SN *loads* are the comparative forms *more* (101 occurrences), as in (62), and *better* (8 occurrences), as in (63), as well as the verbs *love* (11 occurrences), as in (64), *miss* (7 occurrences), as in (65), and *help* (5 occurrences), as in (66).

(62) I'm currently listening to alot of Fugazi, Queens of the Stone Age, Sonic Youth, Radiohead, Led Zeppelin, Soundgarden, Smashing Pumpkins, Mclusky... plus **loads more**. (GloWbE)
(63) I've currently got her running Windows 8 which works **loads better** than Vista did on her. (GloWbE)
(64) And as Dr. Angelou said "don't give up" **love you loads** xoxo. (GloWbE)
(65) I will **miss Elisabeth loads and loads**. (GloWbE)
(66) They **helped me LOADS** when I was prepping for my AD and FI. (GloWbE)

Interestingly, the scrutinized sample contains two attestations of *loads* modifying the positive forms of an adjective and an adverb, namely *close* (1 occurrence) in (67) and *soon* (1 occurrence) in (68).

(67) Sorry, but I've been **loads close** to cult members and their speech patterns. (GloWbE)
(68) I am sure the others will be **loads soon** (GloWbE)

As can be seen, *loads*, in contrast to *load* and similarly to *heaps*, is not typically pre-modified by intensifiers, which further substantiates the claim regarding the role of pluralization. Nevertheless, an emphatic effect may be achieved with the help of reduplication (cf. (65)) or capitalization (cf. (66)).

LOT

The 181 adverbial attestations of the SN *lot* in the dataset include 63 collocate types, of which 42 are hapax legomena. Accordingly, the relevant TTR value stands at 0.35, while the HTR is 0.23. Thus, even though the difference between *lot* and *loads* in the proportion of adverbial uses in the sample is not significant, the former turned out to be considerably more productive as an adverb than the latter. Nevertheless, it should be underlined that the productivity of *lot* in the adverbial function is substantially lower than that of *bit*, which may be connected with the fact that although both SNs are now very well-entrenched in English, the grammaticalization of the latter commenced earlier than that of the former (cf. Traugott, 2008; Claridge & Kytö, 2014). Among

the most common collocates of the adverbially used SN *lot* are the comparative forms *more* (76 occurrences), as in (69), *better* (8 occurrences), as in (70), *less* (5 occurrences), as in (71), and *worse* (4 occurrences), as in (72), as well as the verbs *help* (8 occurrences), as in (73), and *thank* (4 occurrences), as in (74).

(69) Keep in mind that personal development **means a lot more** than just focusing on all your abilities. (GloWbE)
(70) All I can say is that it's **a whole lot better** than 1976. (GloWbE)
(71) Right now, I'm thinking of "moving down", i.e. out of California to a state where I can buy my house for cash, can work remotely to my employer for perhaps 15% less, spend less, **work a lot less**, and make damn sure I don't reach one penny over Obama's steadily diminishing "rich man" income line. (GloWbE)
(72) I suppose it could have been **a lot worse** with the way the last series started in Oakland, but after managing to even up the series before leaving town the Jays are inching their way back to that 500 mark. (GloWbE)
(73) Mentally, it **helped us a lot**. (GloWbE)
(74) **Thanks a lot** that was a really great job. (GloWbE)

Also noteworthy are the 4 attestations of *lot* involving the positive form of the adjective *different* (3 occurrences), as in (75), and the obsolete adverb *longly* (1 occurrence) in (76).

(75) Sure, in many ways it is **a lot different** than ours, but that's what makes it so wonderful. (GloWbE)
(76) The item is waiting **a lot longly** to turn into a Wholesale NFL Jerseys Outlet cocoon, our moth huge strenght with proving to be one is Cheap Authentic NFL Jerseys Wholesale the most highly effective. (GloWbE)

LOTS

Among the 161 adverbial attestations of *lots* identified in the dataset, there are 34 collocate types, of which 27 are hapax legomena. Hence, the TTR is 0.21, whereas the HTR value stands at 0.17. Notably, in the case of *lot* and *lots*, and in contrast to the pairs *heap* and *heaps* as well as *load* and *loads*, pluralization does not lead to a higher frequency or productivity of adverbial attestations, a finding which can possibly be explained in terms of a generally much more advanced conventionalization of *lot* as both a quantifier and an adverb. The most frequent collocates of the adverbially used SN *lots* include the comparative form *more* (118 occurrences), as in (77), as well as the verbs *love* (5 occurrences), as in (78), and *help* (3 occurrences), as in (79).

(77) We will go back–there's **LOTS more** to see! (GloWbE)
(78) **Love you lots** Kayleigh you are a daughter to be proud of. (GloWbE)
(79) I have been Muslim for 3 years and it has **helped lots**. (GloWbE)

DISCUSSION AND CONCLUSION

The obtained results indicate that the SNs under scrutiny exhibit significant differences in their collocability with degree verbs and eventive predicates as well as positive and comparative forms of adjectives/adverbs. The SNs displaying the highest frequencies of adverbial uses in the data are *bit*, *heaps*, *lot*, and *loads*, even though when it comes to productivity, i.e. collocational openness, the order is slightly different, namely *bit*, *lot*, *heaps*, and *loads*.

Except for *scrap* and *shred*, whose adverbialization is conspicuously limited, what all of the analyzed SNs have in common is that they most frequently combine with the comparative form *more*. This tendency is the most pronounced in the case of non-conventionalized adverbs, such as *loads* and *lots*, and the least visible in the case of the well-established adverb *bit*, a finding which strengthens the hypothesis pertaining to the initial stage of the adverbialization of SNs. In the verbal domain, in turn, most of the SNs under examination exhibit a considerable proportion of pronominal attestations, which suggests that pronominalization may fuel the transition of nominal quantifiers into adverbial modifiers.

The analyzed SNs' respective degrees of grammaticalization in the quantifier function are moreover positively correlated with their extents of adverbialization, which implies that an advanced level of the former tends to facilitate the latter. However, it seems that the expansion of such vague quantifiers to adverbial contexts is in some measure shaped by paradigmatic analogy, as suggested by the fact that the scrutinized SNs share many of their most frequent collocates. Among the pertinent items are, aside from *more*, the comparative forms *better*, *cheaper*, and *easier* as well as the verbs *help*, *love*, and *thank*, the last one typically occurring within the '*thanks (a)* SN'-phrase. That analogy plays a role in the investigated phenomenon is likewise evidenced by the general tendency for the adverbial uses of 'large size' nouns in the adjectival domain to involve the comparative, rather than positive, variants of adjectives/adverbs, as is the case with the standard multal quantifier/adverb *much*. Since the aforementioned collocates are in most part positively colored, it further appears that the adverbialization of SNs is to a certain extent guided by semantic prosody patterns.

As far as the distribution of SNs is concerned, it should be added that adverbialized 'small size' nouns appearing in negative polarity settings, just as in the case of their quantifier uses, may be preceded by the numeral *one* and the adjective *single*, both of which perform an emphatic function in this context. In a similar vein, it is not infrequent for the singular forms of 'large size' nouns, as opposed to the plural variants thereof, to be pre-modified by intensifiers, which indicates that the effect of pluralization on SNs is equivalent to that of free intensifying items. Furthermore, it is possible to put additional emphasis on adverbially used 'large size' nouns by means of capitalization or reduplication.

Since the analysis pursued here only provides a synchronic snapshot of the adverbialization of SNs, this study should be complemented with a fine-grained diachronic investigation aimed at determining the chronology of emergence of adverbial uses of particular items as well as the sources of the assumed analogical extensions. Additionally, data from more languages are needed in order to establish whether the strong positive correlation observed between the degrees of grammaticalization of SNs in the quantifier function and their extents of adverbialization holds cross-linguistically.

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