Exclamative Clauses: a Corpus-based Account

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1.   Introduction

This paper reports the findings of an empirical study of exclamative clauses in English, which is intended to complement the accounts presented both in the comprehensive reference grammars (e.g. Quirk et al. 1985; Biber et al. 1999; Huddleston and Pullum 2002), and in the more theoretically-oriented literature (e.g. Elliott 1974; Michaelis and Lambrecht 1996; and Zanuttini and Portner 2003).

Exclamative clauses represent one of the clause types in the familiar four-term system presented in descriptive reference grammars such as Quirk et al. (1985) and Biber et al. (1999), the other types being declarative, imperative and interrogative.[1]

Exclamatives are formally distinguishable from the other clause types: they have an initial exclamative phrase with exclamative *what* or *how* (e.g. *What fun the conference was!; How enjoyable the conference was!*), the exclamative clause is reducible to just this phrase (e.g. *What fun!; How enjoyable!*); and subject postponement is possible (e.g. *What fun was the conference!; How enjoyable was the conference!*). Exclamative clauses normally have the force of an exclamatory statement, a statement overlaid by an emotive element. Thus the exclamative *What fun the conference was!* differs from the declarative *The conference was fun* in its implicature that the extent of the fun is to be located at an extreme point on a scale. Semantically, there is a close semantic parallel with *The conference was such fun.* But there is also a difference: the declarative sentence with *such* asserts, rather than presupposes, that "The conference was fun". Consequently it could more readily serve as a response to a question such as *How was the conference?* (whereas *What fun the conference was!* would sound strange because of the presupposed status of the proposition that supplies the answer).

Exclamatives typically give expression to the speaker's affective stance or attitude (sometimes reinforced by an interjection such as *Wow, Gee,* or *Oh*: see example (13) below). The situation towards which the speaker's attitude is expressed is presented in the form of a presupposed open proposition, and thus is backgrounded as uncontroversial information by the speaker. This claim draws support from the incompatibility of exclamatives with 'non-factive' verbs (e.g. you can say *I recall what fun the conference was!* but not *I believe what fun the conference was!*). The affective stance associated with exclamatives arguably derives from what Michaelis and Lambert (1996) refer to as their 'scalar implicature': the value of the variable expressed by the exclamative phrase is not specified, simply interpretable as extraordinary. Thus *How enjoyable the conference was!* implicates that the property of enjoyability denoted by the exclamative phrase lies at the extreme end of some contextually given scale, that it is greater than any alternatives that one might consider.

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[1] Huddleston and Pullum (2002), however, argue that the differences between 'open' and 'closed' interrogatives are sufficient to warrant positing a five-term system rather than the more familiar four-term system.

Writers who invoke semantic/pragmatic criteria in defining the class of exclamatives invariably include a wider range of sentence types than formal criteria would allow. For example Michaelis and Lambrecht 1996, who adopt a Construction Grammar approach, include sentences of the type *Was that conference fun!*. Such sentences (labelled 'exclamatory-inversion sentences' by McCawley 1973) certainly can convey an illocutionary force similar to that of exclamative clauses, but they can do so only indirectly insofar as the structural class to which they belong is that of interrogative. Elliott (1974) accepts as exclamative sentences such as *The conference was such fun!* and *The conference was so enjoyable!*. To be sure, there are pervasive grammatical parallels between *such/so* and *what/how*, but they are distributionally different; *such* and *so* are not obligatorily clause-initial, and they can occur in imperatives (e.g. *Don't be so messy!*) and interrogatives (e.g. *Why did you make such a mess?*). Furthermore sentences with *such/so* differ from their exclamative counterparts with *what/how* in asserting rather than presupposing the proposition. Zanuttini and Portner (2003) accept as exclamatives clauses of the type *The fun we had!*. However these are NPs rather than clauses – and more importantly Nps which, unlike *What fun!* and *How enjoyable!*, are not analysable as elliptical exclamatives. They belong, rather, with NPs such as *The way he brags!* and *The luck I have!*, which can plausibly be associated with extraposed-subject sentences containing an attitudinal predicate of the type *It's amazing/extraordinary/remarkable the way he brags*. Such extraposed-subject sentences are regarded by Michaelis and Lambrecht (1996) and Zanuttini and Portner (2003) as exclamatives. However they differ from exclamative clauses in that the statements they express assert, rather than merely implicate, the speaker's affective state. Zanuttini and Portner even accept extraposed subject clauses introduced by items other than exclamative *how* and *what* (e.g. *It's amazing what he brags about*), despite the fact that these fail to express the sense of scalar extent that is a hallmark of 'true' exclamatives.

2. The Database

This study was based on a 9,600,000-word collection of written and spoken corpora which together yielded 2061 tokens (see Table 1).[2]

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Table 1. Exclamative clauses in the written and spoken corpora

	What		*How*	
	No	Per million	No	Per million
Writing (7 million words)	314	44.9	1102	157.4
Speech (2.6 million words)	242	93.0	403	155.0
Total	556	57.9	1505	156.8

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Written English was represented by seven standard one million-word corpora, all of which were designed to be as closely parallel as possible in terms of size, number of texts and genre categories: the Brown University Corpus ('Brown'), the Lancaster-Oslo/Bergen Corpus ('LOB'), the Freiburg Brown Corpus ('Frown'), the Freiburg LOB Corpus ('FLOB'), the Australian Corpus of English ('ACE'), the Wellington Corpus of New

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[2] All of the corpora used in this study are available on a CD-ROM distributed by the ICAME organisation in Bergen <icame@hit.uib.no>, except for ICE-AUS. For kindly granting me access to ICE-AUS, held at Macquarie University in Sydney, I wish to thank Professor Pam Peters.

Zealand English ('WC'), and the Kolhapur Corpus of Indian English ('Kol'). The size, number of texts and genre categories in the original Brown corpus are matched as closely as possible in the other corpora. There are fifteen genre categories in Brown which, for the purposes of making register-based generalisations, have been subdivided into four overarching categories: 'press' (176,000 words of reportage, editorials and reviews), 'general prose' (412,000 words covering, religion, popular lore, biography, government documents, etc.), 'learned/scientific' (160,000 words), and 'fiction' (252,000 words). The texts span a period from the early 1960s to the early 1990s. Those collected for Brown and LOB were first printed in 1961, while the sampling date for their two counterparts produced at the University of Freiburg was set in the early 1990s, in order to both facilitate the study of recent language change in American and British English, and to validate comparisons with ACE (1986), WC (1986-1990) and Kol (1978).

Spoken English was represented by the 500,000-word London-Lund Corpus of Spoken British English ('LLC') and Bergen Corpus of London Teenage Language ('COLT'), the one million-word Wellington Corpus of Spoken New Zealand English ('WSC'), and the 600,000 words of spoken texts from the Australian component of the International Corpus of English (ICE-AUS). With the exception of COLT these corpora all contain some monologic as well as dialogic material produced by adult speakers.

3.   Similarities between Exclamatives and *Wh*-interrogatives

Exclamative clauses are structurally similar to *wh*-interrogatives in some respects, structurally different in others. While both feature the fronting of a non-subject *wh*-phrase, they differ in that the only *wh*-items allowed in exclamatives are those which can express degree, namely *how* and *what*. Furthermore the fronting is obligatory in exclamatives, but not in *wh*-interrogatives. When subject-auxiliary inversion does occur in exclamatives, it tends to have a rhetorical or literary flavour, as in the examples below: [3]

(1)   What a strange land was this Hindustan! [Kol P08, 680]
(2)   How much more then would such an exhortation be a counsel of despair.
        [FLOB D12, 87]

Another similarity between exclamative and *wh*-interrogative clauses is that the *wh*-phrase may originate from a subordinate clause (from the clause *to be* in (3) and *grown men looked in skirts* in (4):

(3)   What a great time-saver the new harbour bridge proved to be. [WC G33, 124]
(4)   he'd started a brawl with one of Mobius' men over *how silly he thought grown men looked in skirts*. [Frown N23, 187]

As in *wh*-interrogatives so in exclamatives it is possible for the *wh*-phrase to function as complement to a preposition:

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[3] The location of each example cited from the database is indicated in square brackets by means of three pieces of information: the corpus, the text category, and the line number (except for ACE, which has word rather than line numbers) in the written corpora/tone unit number in LLC. Unfortunately text category and line number information was not available for COLT or WSC.

(5)   my three whole-poem examples show *to what a pitch of excellence he could attain in*
        this art. [FLOB G60, 125]

(6)   I never realised *what a big deal this boat race has developed into*. [WC E16, 39]]

Given the structural similarities between exclamative and *wh*-interrogative clauses it is not surprising that, in the absence of prosody/punctuation, structural ambiguity is possible (when the *wh*-phrase is subject). Consider:

(7)   "*What evil lurks in the heart of man?*" he said in a bass whisper. [ACE K21, 4070]

Here the ambiguity survives even with punctuation: the question mark suggests a question ("What is the amount of/nature of the evil that lurks in the heart of man?"), but the selection of *said* rather than *asked* in the quoting clause favours an exclamatory statement interpretation ("A remarkable amount of evil lurks in the heart of man!"). Ambiguity is more likely (in fact quite common) in subordinate clauses, since the subject normally precedes the predicator in both *wh*-interrogatives and exclamatives, and the prosodic/punctuational differences that generally block one or the other reading in the case of main clauses here tend to be less salient or even absent, as in (8):

(8)   But no-one knows *what ingenious associations led to the first element being*
        transformed to farthing. [LOB G51, 141]

(8) is ambiguous between the interrogative interpretation "No-one knows what nature of ingenious associations led ...", and the exclamative interpretation "No-one knows the remarkable degree of ingeniousness of the associations that led ...").

There may even be, in some contexts, a pragmatic similarity between the two possible interpretations, making it difficult to determine which is the intended or most appropriate one. If I say *How inconsiderate are you!* the indirect complaint force relates on one reading to its question force as an interrogative (albeit a rhetorical question, to which only an uncooperative addressee would be tempted to supply an answer), and on another to its exclamatory force as an exclamative (the speaker's disapproval stemming from the assessment that the addressee's degree of inconsiderateness was extraordinary).

4.   Properties of Main Clause Exclamatives

In this section we take a closer look at the structural properties of main clause exclamatives.

4.1. *How*-exclamatives

Exclamative *how* has two uses, modifier and adjunct, in both of which it expresses degree. The first use is illustrated in (9) - (12) below:

(9)   And how right he was. [ACE B15, 3255]
(10)   But how little love we give him. [Brown B08, 165]
(11)   Oh my poor suffering sweet, if you could only relax and love and let yourself be
        loved, *how easily things would work themselves out!* [Frown K04, 149]
(12)   How very true that was, how very true. [FLOB R05, 182]

In the first three cases exclamative *how* modifies, respectively, an adjective (9), a determiner (10), and an adverb (11), as can interrogative *how* (compare: *How right was he?*; *How little love do we give him?*; *How easily would things would work themselves out?*). Its use in (12) to modify another degree modifier is one that is not shared by interrogative *how* (**How very true was that?*). Furthermore the semantic role of *how* within exclamative clauses is different from that within *wh*-interrogatives: in exclamatives the degree of the property in question is understood to be extraordinary, but in interrogatives it is simply unspecified (an indication of its location on the relevant scale being anticipated in the answer). Thus, while in the case of (9) we understand that "he was right to a remarkable degree", in the case of the interrogative *How right was he?* we merely understand that the degree of his rightness can be located at some point on a scale.

The second use of exclamative *how*, as an adjunct, is illustrated in (13):

(13)   Boy, how they practised. [ACE A40, 8534]

Here there is a clear difference with interrogative *how*, which is normally concerned with manner/means rather than degree. Thus while (13) means "They practised to an extraordinary degree", *How did they practise* means "In what manner did they practise?".
The degree meaning is possible in interrogatives, but only with a small number of verbs of 'pleasing' such as *please, like, love* and *enjoy*, as in the interrogative counterpart of (14) below, *How do the Americans love to debunk?*).

(14)   How the Americans love to debunk! [LOB C17, 70]

There are three syntactic classes of exclamative *how*-phrase (frequencies for which are presented in Table 2): adjectival phrases as in (9) and (12), adverbial phrases as in (11), (13) and (14), and noun phrases as in (12).

Exclamative *how*-phrases may serve a range of syntactic functions (see Table 2 for frequencies).

Table 2. Classes and functions of exclamative *how*-phases*

Class			Function		
	No	%		No	%
AdjP	980	65.1%	Subjective predicative	777	59.4%
AdvP	359	23.9%	Adjunct	352	26.9%
NP	165	11.0%	Object	101	7.7%
PP	1	0.7%	Subject	68	5.2%
			Objective predicative	5	0.4%
			Prepositional complement	5	0.4%
Total	1505	100%	Total	1308	100%

*Functions can only be determined for non-elliptical exclamative clauses

The most common were subjective predicative complement as in (9) and (12), adjunct as in (11), (13) and (14), and object as in (12) above. Less commonly an exclamative *how*-phrase may function as subject as in (15), objective predicative complement as in (16), or prepositional complement as in (17):

(15) How much had built up from that first ideal [LOB P06, 58,59]
(16) How small we have made God! [Kol K02, 119]
(17) You can't believe how many bowls and pans he's gone through [Frown P16, 132]

4.2. *What*-exclamatives

Exclamative *what* is an adjective which functions as a modifier in NP structure, as in:

(18) What a place that is. [ACE W06, 1001]
(19) Oh, Grand-dad, what big words you use. [WC K60, 64]
(20) What determination it had aroused! [Kol K17, 1590]

As Table 3 shows, the vast majority of *what*-exclamatives had a count exclamative NP (predominantly singular as in (18), rather than plural as in (19)), rather than non-count as in (20).

Table 3. Classes and functions of exclamative *what*-phrases*

Class			Function		
	No	%		No	%
Count singular	432	77.7%	Subjective predicative	121	62.4%
Count plural	24	4.3%	Object	50	248.0%
Mass	50	9.0%	Prepositional complement	11	5.7%
			Subjective predicative	12	6.2%
Total	556	100%	Total	194	100%

*Functions can only be determined for non-elliptical exclamative clauses

When the exclamative phrase is headed by a singular count noun, exclamative *what* occurs with a following *a(n)*. It differs from interrogative *what*, which serves as a determiner without the following *a(n)* (compare *What place is that?*). When the head is a plural noun or a mass noun, the NP assumes the same form as in interrogatives (compare *What big words do you use?*; *What determination had it aroused?*). However they differ in meaning: in exclamatives *what* is always concerned with degree (indicating that a remarkable degree

of the property in question is applicable), interrogative *what* usually with identity ("That is a remarkable place!" versus "What is the identity of that place?"; "You use remarkably big words!" versus "What kind of big words do you use?"; "What an extraordinary degree of determination it had aroused!" versus "What type of determination had it aroused?"). When the head noun is gradable, however, both exclamative and interrogative *what* are concerned with degree, and the only difference has to do with the implicature expressed by exclamatives that the property in question is remarkable. Compare the exclamative in (21) with its interrogative counterpart *What fuss have the papers made about me?* ("How much fuss have the papers made about me?").

(21)   What a fuss the papers have made about me. [ACE G05, 983]

Exclamative *what*-phrases may serve a range of syntactic functions (see Table 3 for frequencies). As for their counterparts with *how*, the most common is subjective predicative complement as in (18). The other functions represented are object as in (19), (20) and (21), prepositional complement as in (5) above, and subject as in (1).

5.   Elliptical Exclamatives
There are two common types of elliptical exclamative. Firstly, there are those, as in (22) and (23), where the exclamative clause consists of just the exclamative phrase, usually an NP or adjective phrase:

(22)"Jesus," says Lucy. "What a dump." [WC K41, 56]
(23)   And I was just sitting there thinkin"Oh my God, how embarrassing".
        [ICE-AUS S1A-094, 340]

Secondly, there are those consisting of the exclamative phrase plus a clause. The clause may be finite as in (24), or non-finite as in (25) and (26):

(24)   What a shame the series could not finish there. [ACE C13, 2834]
(25)   And how marvellous to be able to share it with you all through the wonderful medium of television. [ICE-AUS S1B-036, 140]
(26)   What a waste of time talking to older brother and sister. [WC K37, 232]

The corpora revealed two trends. The first, as Table 4 indicates, was for ellipsis to be more common with *what*-exclamatives than *how*-exclamatives.

Table 4. Ellipsis in exclamatives

	What		*How*	
	No	%	No	%
Speech	204	84.3%	81	20.1%
Writing	158	50.3%	116	10.5%
Total	362	65.1%	197	13.1%

One significant factor influencing this difference is undoubtedly that *how*-exclamatives occur comparatively more often as subordinate clauses than do *what*-exclamatives (see further below). The rate of ellipsis for subordinate *how*-exclamatives across the corpora was only 3.7%, as against 39.9% for main *how*-exclamatives.

The second trend - as shown in table 4 - was for elliptical forms of both types of exclamative to be more common in speech than in writing. The vast majority of *what*-exclamatives were elliptical in the spoken corpora, but just over half in the written corpora. Similarly, *how*-exclamatives were more often elliptical in the spoken corpora than in the written corpora.

6. Subordination of Exclamative Clauses

As Table 5 shows, *what*-exclamatives occur mainly as main clauses rather than subordinate clauses, whereas *how*-exclamatives occur mainly as subordinate clauses.

Table 5. Main versus subordinate exclamative clauses

	What		*How*	
	No	%	No	%
Main	482	86.7%	393	26.1%
Subordinate	74	13.3%	1112	73.9%
Total	556	100%	1505	100%

Subordinate exclamatives serve a range of functions in the matrix construction (see Table 6).

Table 6. Functions of subordinate exclamative clauses

Function	What		How	
	No	%	No	%
Object	62	83.8%	744	66.9%
Prepositional complement	10	13.5%	287	25.8%
Extraposed subject	1	1.4%	37	3.3%
Noun complement	1	1.4%	11	1.0%
Adjective complement	0	0.0%	28	2.5%
Subject	0	0.0%	5	0.4%
Total	74	100%	1112	100%

The most common functions were object of verb as in (27), and complement of preposition as in (28):

(27)   Mr Partlow could still feel a cold sweat on his slightly gray temples as he remembered *what a near thing chemistry had been for him at Hanford*. [Brown P27, 25]

(28)Even now I am appalled at *how little anyone knows of what they really are*. [Brown P11, 108]

Considerably less common were extraposed subject as in (29), complement of noun as in (30) complement of adjective as in (31), and subject as in (32): [4]

(29)   Some people love to crack tile and it's amazing *what beautiful designs they come up with as a result of their cracking good time*. [Brown F06, 72]

(30)   You've no idea *what agony love can cause in a human heart*. [Kol K16, 13]

(31)   We're always amazed *how often people do take us seriously*. [ICE-AUS S1A-026, 190]

(32)   I don't know why I did that, except that it all hit me at once: Mom's weirdness, Dad's scatteredness, *how screwed up everything was*. [Frown P28, 166]

The expressions governing subordinate exclamatives represent a range of semantic classes, including 'knowing' (as in (33)), 'telling' (34), 'aboutness' (35), 'surprise' (36), and 'significance' (37).

(33)   "I've been in government and I can tell some pretty hairy stories about personnel difficulties, so I know *what a problem he was*." [Brown G36, 75]

(34)   He wanted badly to tell him *how sorry he was for the hard, offhand way he had sometimes behaved to him*. [LOB K06, 134]

(35)   He then began his lecture, expatiating on the excellent qualities of the earth bath, *how invigorating it was*, etc. [LOB G56, 132]

(36)   Speed in decoding came quickly and it was surprising *how many of the numbers and answers one could memorise*. [ACE G24, 5105]

(37)   She'd find her place in life all right, no matter *what a mess her father had made of things*. [Frown P11, 140]

7.   Register and Dialect Variation
A number of trends involving register and dialect emerged in the corpora.

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[4] Huddleston and Pullum (2002:993) disallow - wrongly, as (30) shows - the noun complement function, claiming that "while a number of nouns allow interrogatives as core complements, none allow exclamatives".

7.1. Register Variation

The corpora revealed a tendency for exclamatives to occur more frequently in registers marked by personal involvement and informality (see Table 7).

Table 7. Exclamative clauses and register variation in writing*

Register	*What*	*How*
Fiction	100	307
Press	39	119
General	29	132
Learned/ Scientific	4	29

*Frequencies have been normalised (tokens per million words)

Thus, of the four written genre categories, exclamatives were most frequently found in fiction and least frequently in learned/scientific writing. The remaining two genre categories fell between these extremes: *what*-exclamatives were more popular in press than in general prose, but this order was reversed with *how*-exclamatives.

The stronger dispreference for *what*-exclamatives than for *how*-exclamatives in learned/scientific writing - the most formal and impersonal of the four genre categories - is reflected more broadly in the greater dispreference that we find for *what*-exclamatives in writing in general: the frequency of *what*-exclamatives was less than half that in speech, whereas *how*-exclamatives were marginally more popular in writing than in speech.

7.2. Dialectal Variation

A comparison of the older Brown and LOB corpora with their more recent Frown and FLOB counterparts (see Table 8) reveals that *what*-exclamatives have undergone a mild decrease in popularity in both British writing and American writing. *How*-exclamatives have also declined in British writing, but in American writing they flout the trend towards decline, with a mild increase.

Table 8. Exclamatives and dialectal variation in writing*

		What	*How*
BrE	LOB	53	191
	FLOB	43	181
AmE	Brown	38	143
	Frown	33	164

* Tokens per million words

Interestingly, there is one genre - fiction - which as Table 9 indicates has enjoyed an overall increase in popularity in recent decades (with the single exception of *how*-exclamatives in American fiction, where there has been a small decrease). *What*-exclamatives have increased from LOB to FLOB, and from Brown to Frown, while *how*-exclamatives have increased from LOB to FLOB.

Table 9. Exclamatives and dialectal variation in fiction*

		What	*How*
BrE	LOB	99	361
	FLOB	111	408
AmE	Brown	75	254
	Frown	87	246

* Tokens per million words

8.   Conclusion

We have argued that the exclamative clause type is to be limited to constructions with an initial exclamative phrase containing *what* (as modifier) or *how* (as modifier or adjunct), since only in these has there been a grammaticalisation of the illocutionary force of exclamatory statement. Exclamative clauses derive an attitudinal overlay from the implicature that the value of the variable expressed by the exclamative phrase is interpretable as extraordinary in extent. Structurally, exclamatives share a number of properties with interrogatives, and this gives rise to ambiguity, especially in subordinate clauses. Interrogation of the spoken and written corpora enables us to quantify a number of distributional patterns associated with exclamatives in English. These include the tendency - particularly strong with the *what*-type - for exclamative clauses to be reduced to just the exclamative phrase, the tendency for the exclamative phrase to serve as a subjective predicative, and the tendency for *how*-exclamatives to be more strongly favoured than *what*-exclamatives in written - and particularly formal written - discourse.

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