A preposition is something which you should never end a sentence with

A corpus-based study on preposition stranding

Eva Dimitriadis

Abstract

This study examines to what extent preposition stranding is used in connection with *which*, *whom* and *who* in three different UK papers. Also what factors influence the use of preposition stranding has been studied. The hypothesis that pied-piping is more common than preposition stranding has been confirmed.

A factor that has a certain influence on the use of preposition stranding is the style of the paper. The more formal of the papers studied, *The Times*, did not use preposition stranding to the same extent as the other two, *The Sun* and *Today*.

The subject domain of the texts has influence on the use of preposition stranding, with more informal domains such as sports and miscellaneous (e.g. gossip) using stranding to a higher extent than the other domains, e.g. business, politics and culture. The prepositions themselves also influence the use of preposition stranding with some prepositions, such as *on*, *with*, *for* and *into*, that are likely to appear stranded and others, such as *in* that are likely to appear pied-piped.

Keywords: preposition stranding, pied-piping, corpus study, CobuildDirect, UK papers.

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1.   Introduction

There is a standard English which is used throughout the world. This standard English is not supported by an academy of some sort, but it is the one that appears in grammars and dictionaries. However, this standard English is not entirely fixed, but there is variability within the standard and one of these variations is the use of pied-piping, e.g. "Which country is Paris in?" and stranded prepositions, e.g. "In which country is Paris?"(Biber et al 1999: 18).

English grammar books used in Swedish upper secondary schools say that prepositions should normally be placed before the words they belong to, but also that they should be placed last in clauses with relative and interrogative pronouns. Where the prepositions are placed affects the formality of the sentence, according to one of these grammar books (Ljung & Ohlander 1992: §256B), e.g. informal "Who did she talk to?" and formal "To whom did she talk?". The informal variant is called preposition stranding, with the preposition stranded at the end of the sentence, whereas the formal variant is called pied-piping, with the preposition before the *wh*-word. The prescriptive approach to prepositions is that stranding should be avoided, however the descriptive approach shows that stranding does indeed exist.

2.   Aim

The aim of this study is to examine to what extent preposition stranding is used in different kinds of texts. The research questions are:

- To what extent do journalists at three different UK papers use preposition stranding with *which*, *whom* and *who*?
- What factors influence the use of stranding, e.g. the preposition, the style of the newspapers, the subject domain of the articles with stranded prepositions?
- Which is more common, preposition stranding or pied-piping?

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3.   Theoretical background

In this section there will be a presentation of what preposition stranding is, some history of its use, and also the factors that decide if a preposition is to be stranded or pied-piped.

3.1   Preposition stranding

According to Biber et al, a preposition is stranded "if it is not followed by its complement or, where the preposition is bound to a preceding verb, by the prepositional object" (1999: 105). They state that preposition stranding is mostly found in interrogative clauses (1), relative clauses (2) and passive constructions (3) (examples from Biber et al 1999: 105; emphasis added).

    (1)   What more could a child ask **for**?

    (2)   "Without the money to pay for your promises, your manifesto is not worth the paper it is written **on**," said Mr Lamont.

    (3)   If you get sat **on** it is because you allow yourself to be sat **on**.

In all of these, except for the passive constructions, it is often possible to place the preposition before its complement, see (4) and (5), so called pied-piping.

    (4)   **For** what more could a child ask?

    (5)   Without the money to pay for your promises, your manifesto is not worth the paper **on which** it is written, said Mr Lamont.

3.2   History

Historically, preposition stranding was introduced into the English language during the Middle English period, with the oldest recorded example from the middle of the 13th century (see Bergh & Seppänen 2000:295). However, it was not common at that time to use stranding. In studies on 14th and on 15th century works only a small percentage preposition stranding was reported. Only 2-3% of the studied prepositional *wh*-relatives were stranded, e.g. (6) (see Bergh & Seppänen 2000:303-307) (emphasis in the original).

    (6)   That Fortune wolde that he moste twynne/ Out of that place, **which** that I was **inne**
                                       (The Squire's Tale, c. 1395)

In Early Modern English the use of stranding had increased to around 12-14% which was followed by a decrease to 2% in the Late Modern English. See examples (7) and (8) from Bergh & Seppänen (emphasis in the original).

> (7)   And bid her hasten all the house to bed, **which** heavy sorrow makes them apt **unto**
> (Romeo and Juliet, 1596)
>
> (8)   The first royalty **whom** Mama ever waited **on** in the White House was Queen Marie of Rumania   (BrownCorpus, 1961)

The figures mentioned above are for written English only, since obviously there are no records of the earlier varieties of spoken English. However, research on spoken English of today shows that preposition stranding is more common in speech than in writing, at least together with *which*, with an average of 20% (Bergh & Seppänen 2000: 307).

3.3 Preferred preposition stranding

There is not always a free choice whether you strand or pied-pipe a preposition. There are cases when preposition stranding is preferred and pied-piping might sound strange to a native speaker. One of the cases when stranding is preferred is when the preposition is part of a phrasal verb, something which both Huddleston & Pullum (2002: 269) and Johansson & Geisler (1998: 76) mention. There are of course many more, but some examples of phrasal verbs are: *account for*, *ask for*, *look out for*, *rely on*, and *run through*. *Look out for* is a phrasal prepositional verb, however, it is still phrasal and stranding is preferred. According to Huddleston & Pullum it is not possible to give rules for this preference, since it depends on the verb and preposition ((2002: 269). They say that some are fossilised and therefore always occur together with a stranded preposition. Following are some examples of sentences with phrasal verbs and stranded prepositions. Each stranded example is followed by a less frequent and more or less questionable pied-piped example. Example (9) is from Johansson & Geisler (1998:76) and examples (10), (11), (12) and (13) are from Google.com. Only the short strings, e.g. *what you ask for* and *for what you ask*, were used for the searches on Google.com. (Henceforth emphasis added in examples)

> (9)   The cues which we talked about and **which** I've just briefly **run through**
> (BIRM: GS0006)
>
> ? The cues which we talked about and **through which** I've just briefly **run**
>
> (10)   But be careful **what** you **ask for**.   (403,000 hits on Google)

? Just a caution **for what** you **ask**. (19,400 hits on Google)

(11) It's important to know when to ask for help and **who** you can **rely on** when you do ask, but certainly never be afraid to ask. (934 hits on Google)

? Be careful however to select self help materials from a credible source **on who** you can **rely**. (9 hits on Google)

(12) Find at least one other passionate person on your job **whom** you can **rely on** for moral and emotional support. (15,600 hits on Google)

? If you already have people in your life **on whom** you can **rely**, well and good. (10,800 hits on Google)

(13) No longer are they reliant on the state marketing boards, **which** did not really **look out for** the farmers' interests. (156,000 hits on Google)

? There are some factors however that might threaten it, and **for which** we all should **look out**. (792 hits on Google)

As is found by searching Google, it is possible to pied-pipe the preposition in phrasal verbs, but as the higher numbers of hits show, it is preferred to use the stranded examples.

According to Johansson & Geisler (1998: 76) the cases above are examples of when preposition stranding is *obligatory*. Their study is corpus-based and in that sense descriptive, but their approach is a prescriptive one, since the searches on Google show that people use both stranding and pied-piping, at least for some of the cases, where the authors state it is *obligatory*. However, Johansson & Geisler are correct in the sense that the *obligatory* strandings are more common than the opposite examples. Maybe the word to use instead of *obligatory* is *highly probable* or *preferred* since it is more probable that some phrases are used stranded.

Biber et al agree with the preferred stranding of prepositions when there is a strong connection between the preposition and the preceding word. Their word for the preference is "normal" (Biber et al 1999: 107), i.e. it is "normal" to have a stranded preposition in those cases, see examples (14), (15) and (16) from Biber et al.

(14) **Who** are you **looking for**? (conv)
(15) **What** else can we **depend on**? (fict)
(16) **What** were you **referring to**? (news)

Another case where preposition stranding is *highly probable* is in idiomatic constructions such as *(get) rid of* (Johansson & Geisler 1998: 77), see examples (17) and (18):

(17) I bought an Acer 5000 1.6 GHz a year ago **which** I **got rid of** when the opportunity came around. (554 hits on Google)

(18) ? My stay in Dresden was marked by an amorous souvenir **of which** I **got rid**, as in previous similar circumstances, by a diet of six weeks.
(1 hit on Google)

Huddleston & Pullum write of cases where pied-piping and stranding is "inadmissible or disfavoured" (2002: 628-631). They say pied-piping is disfavoured, i.e. stranding is preferred, in "subordinate interrogative clauses functioning as complement of a preposition" (2002: 629) and give the example (19):

(19) We can't agree **on which** grant we should apply **for**.

In this case it is inadmissible to use pied-piping since that will result in two prepositions next to each other, which, according to Huddleston & Pullum, is not permitted, as in their example (20):

(20) * We can't agree **on for which** grant we should apply.

In *Longman Grammar of Spoken and Written English* Biber et al state that "speakers and writers often prefer the structure with a stranded preposition" where there is a choice (1999: 105). One example that Biber et al. discuss is preposition stranding in independent *wh-*questions (1999: 105-108). They have looked at the registers conversation, fiction, news and academic prose and distinguish between five different structures (1999: 105-106):

Preposition + *wh*-word, full VS clause:
   ***In** [which sport, apart from rowing,] could you do that?* (news)

Preposition + *wh*-word, full SV clause:
   *You can't drink it **with** [what]?* (conv)

Preposition + *wh*-word, fragment:
   *Was she really going to clear everything out of here? **For** [what]? **For** [whom]?* (fict)

Stranded preposition, full clause:
   *[What age group] are you applying to work **with**?* (conv)

Stranded preposition, fragment:
   A. *I wish daddy was back.*
   B. *[What] **for**?* (conv)

What Biber et al. found in their corpus searches was that there are prepositions that are more "commonly used as stranded prepositions: *about*, *after*, *at*, *by*, *for*, *from*, *in*, *like*, *of*, *on*, *to*, *with*" (Biber et al 1999: 106). There are other prepositions "attested as stranded prepositions (1 to 5 instances in the material examined): *against*, *around*, *into*, *near*, *off*, *through*, *under*, *up*" (ibid.).

Furthermore, Biber et al (ibid.) state that, out of the five structures studied, the structures with a stranded preposition in a full clause are the most common, at least in conversation, fiction and news. It exists in academic prose, but is not that common. The structure with stranded preposition in fragments occurs in conversation and fiction, but not in news or academic prose.

If we look at Biber et al's findings concerning news we find that the most common structure is stranded preposition in full clauses followed by preposition + *wh*-word, fragment and preposition + *wh*-word, VS-clause (ibid.).

In their discussion of the results they declare that preposition + *wh*-word is not what most writers or speakers choose to use, except in academic prose. Where it does occur, in the other registers, "the prepositional phrase is generally an adverbial which is fairly independent in relation to the verb" (Biber et al 1999: 107). They give the following examples (21) and (22) (ibid.):

(21) **For what** reason had she introduced them then? He asked. (fict)

(22) **In which** county is Weymouth? (news)

3.4 Preferred pied-piping

As mentioned earlier, there is not always a free choice whether to strand or pied-pipe a preposition. Johansson & Geisler (1998: 74-76) claim that there are several cases where pied-piping is *obligatory* or *highly probable* as discussed above. One example of this is when a noun such as *way*, *extent*, *point*, *sense*, *degree*, *time* and *moment* is placed before an adverbial expression; see (23), (24) and (25).

(23) There is a **point at which** it becomes time to accept reality.
(1,890,000 hits on Google)

(24) This awareness could be determined by measuring the **degree to which** the teacher signals that a point of view expressed in a given message is intended to represent a subjective perspective and that other points of view on the issue may, are likely to, or surely do exist.   (1,880,000 hits on Google)

(25) There are several **ways in which** a fossil may be formed.

(3,070,000 hits on Google)

The searches on Google were for the strings in bold only.

Prepositions with a *high probability* of pied-piping include *beyond*, *under*, *during* and *underneath*, according to Johansson & Geisler (1998: 75). There are examples of both stranded as well as pied-piped phrases with *under* on Google, see example (26). In example (26) the search was for the entire string, not just the bold parts, as opposed to earlier searches when only the preposition, the *wh*-word and possibly one or two more words were searched for. Hence the lower number of hits on Google.

(26) the conditions **under which** people live   (2,450 hits on Google)

the conditions **which** people live **under**   (88 hits on Google)

A third instance with *obligatory* pied-piping is when the sentence is complex or very long, see example (27) with the following questionable example.

(27) There are also Fast Breeder Reactors **in which** more fissile material is produced than is consumed   (BIRM: GS0077)

? There are also Fast Breeder Reactors **which** more fissile material is produced **in** than is consumed   (Johansson & Geisler 1998:75)

The question mark in the example above indicates that it is a questionable construction, whereas the asterisk (*) below indicates that the construction is incorrect.

There are other cases where it is inadmissible or disfavoured to use preposition stranding. Examples are when the preposition "precedes a content clause" (Huddleston & Pullum 2002: 630) as in example (28) from Huddleston and Pullum in comparison with the ungrammatical one:

(28) **To whom** did she declare that she was not going to take any more abuse?

* **Who** did she declare **to** that she was not going to take any more abuse?

In a content clause the content of the verb comes after the verb, e.g. "You said *that you liked her*" and "I wonder *what he wants*." with the content clause in italics. In the example above the content is after the word "declare": "*that she was not going to take any more abuse*?

Another case where pied-piping is preferred is when the prepositional phrase is a complement of a larger prepositional phrase. See example (29) from Huddleston & Pullum contrasted with the ungrammatical stranded suggestions:

(29) **From under which** couch did you rescue the pen?
    * **Which** couch did you rescue the pen **from under**?
    * **Under which** couch did you rescue the pen **from**?

Furthermore when the "gap occurs at the end of the subject NP" (Huddleston & Pullum 2002: 630) pied-piping is preferred, see example (30) with the ungrammatical sentence following (example from Huddleston & Pullum):

(30) To the left is a door **to which** the key has been lost.
    * To the left is a door **which** the key **to** has been lost.

When there is the possibility to use both pied-piping and preposition stranding, research shows that it is more common to choose pied-piping instead of stranding, at least in spoken English and with the relativizer *which* (Johansson & Geisler 1998: 77).

Sometimes there is a relatively free choice between using a stranded or a pied-piped construction, but there are situations when stranding is preferred and others when pied-piping is preferred.

In section 4.0 there will be a description of the material as well as a description of how the investigation was carried out.

4.   **Material and Method**

The material used in this study is three subcorpora taken from the 56 million words of the Bank of English which are accessed through the COBUILD*Direct* interactive corpus access tool. In this study the three subcorpora used were: Times (5,763,761 words), Today (5,248,302 words) and Sunnow (5,824,476 words). Searches were made to see to which extent these three English newspapers use pied-piping and preposition stranding and what differences there are between them. A short presentation of each paper follows (information on the papers was found on www.en.wikipedia.org):

The Times is a quality paper which is seen as serious and has "high standards of journalism" (www.en.wikipedia.org). It is a paper read by business people. *The Times* has always been considered a Conservative paper; however, in the last two elections it has supported the Labour party.

Today existed between 1986 and 1995 as a middle-market tabloid. It was never successful.

The Sun is a daily published tabloid and it has "the highest circulation of any English language newspaper in the world" (www.en.wikipedia.org). *The Sun* started as a Labour paper, turned Conservative with Margaret Thatcher, and finally turned back to Labour again with Tony Blair. Mostly the "news" in *The Sun* concerns celebrities and the Royal family. All three papers are (were, in the case of *Today*) owned by the same owner, Rupert Murdoch.

For each of the newspapers several searches were conducted. To find examples of pied-piping the search queries were: preposition+*which* (e.g. *on*+*which*), preposition+*whom* (e.g. *to*+*whom*) and preposition+*who* (e.g. *by*+*who*). To find examples of preposition stranding the queries were: *which*+1,8preposition (e.g. *which*+1,8*at*), *whom*+1,8preposition (e.g. *whom*+1,8*of*) and *who*+1,8preposition (e.g. *who*+1,8*for*). The number 1,8 indicates that the preposition is found in any position between the first and the eighth word after the node words *which*, *whom* or *who*. The reason for maximising the distance to eight words between the node word and the preposition was to avoid complexity, both in the sentences but also when searching. Consequently, in this study there are no cases where the preposition is placed at a longer distance than eight words from the *wh*-word, but a limitation had to be made. When making these searches there were many hits; however only a few were of preposition stranding. This meant that the hits had to be analysed as to whether the preposition was stranded or not. Where there were more than 500 hits, only the first 500 were analysed. The result from that analysis was then used to extrapolate the number for all of the hits. E.g. when searching for a stranded *for* combined with *which*, there were 1,376 hits. Of these 500 were analyzed and 23 were with a stranded preposition. 1,376 was divided by 500 giving the result 2.752. This number was then multiplied with 23 giving the extrapolated number of 63.

The prepositions analysed were: *of*, *in*, *to*, *for*, *with*, *on*, *by*, *at*, *from* and *into*. These were among the first eleven prepositions on a preposition frequency list found on a website for a book called *Word Frequencies in Written and Spoken English* by Geoffrey Leech, Paul Rayson and Andrew Wilson. Their study is based on the British National Corpus (BNC). The preposition *as* was actually the tenth preposition on their list, but after making some initial searches, without hits, it was decided to instead use the eleventh preposition on the list: *into*.

Of course it would have been possible to choose prepositions at random, but in this case it was decided to use frequency as method of selection.

When the excerpts from the papers were analysed the examples with stranded prepositions were divided into seven different subject domains: sports, business, politics, science, culture (film, literature, travel, TV), crime stories and miscellaneous. Miscellaneous was chosen when the excerpt did not fit in with the other domains. This was done in order to get an idea of in what contexts the stranded prepositions were mostly used. Had the excerpts been of only one sentence they would have been very hard to categorize, but they consist of 512 characters, a fact which makes it possible to categorize the excerpts, although hard sometimes. A fact important to mention is that only the hits were studied, i.e. when the numbers were extrapolated, only the hits within the 500 first analysed sentences were divided into subject domains.

When analysing verbs and deciding if they are phrasal or not, i.e. if the verbs are preferred with stranded preposition or not, the *Cambridge Advanced Learner's Dictionary* was used as a help.

In section 5.0 the results and an analysis of them will be presented.

5.   Results and Analysis

This section will present the results of the searches in the COBUILD*Direct* corpus. Each of the *wh*-words will be presented one at a time with the results per paper and per stranded and pied-piped preposition. However, first there will be a short presentation of some aspects of the corpora for each paper.

5.1   Word frequencies

There are between 8.2 and 8.8 million words in each of the corpora and Table 1 gives the average numbers of each *wh*-word per million words. Figure 1 shows the same but in a bar chart.

Table 1   *Average number per million words*

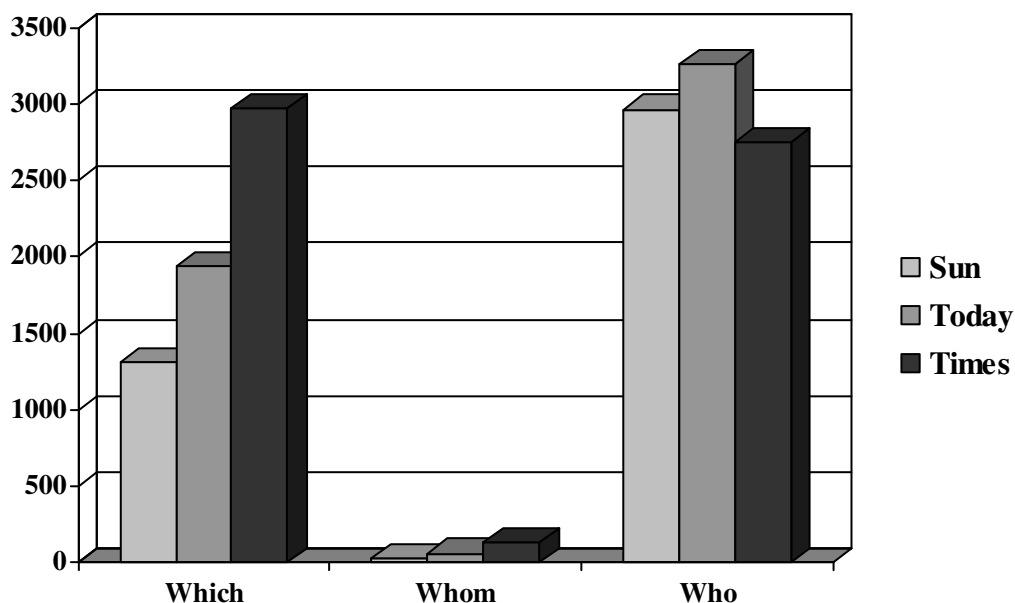| Wh-word	Sun	Today	Times
Which	1,308	1,943	2,972
Whom	34	63	139
Who	2,965	3,264	2,748

Figure 1   *Average number per million words*

The words *which*, *whom* and *who* are not very frequent in any of the subcorpora studied, at least compared to the results of the prepositions in the following table and figure. *The Times* has a higher frequency of *which*, which suggests that it writes more about abstract and inanimate things than people. *The Sun* and *Today* have a higher frequency for *who* than for *which*, which indicates that they write about persons more than about abstract things. *Whom* is not used very much in any of the papers, but *The Times* uses it more than twice as often as the others, which indicates a more formal style of writing.

Table 2 gives the average numbers of each preposition per million words and Figure 2 the same picture but in a bar chart. The prepositions are presented in frequency order according to the BNC.

Table 2   *Average number per million words*

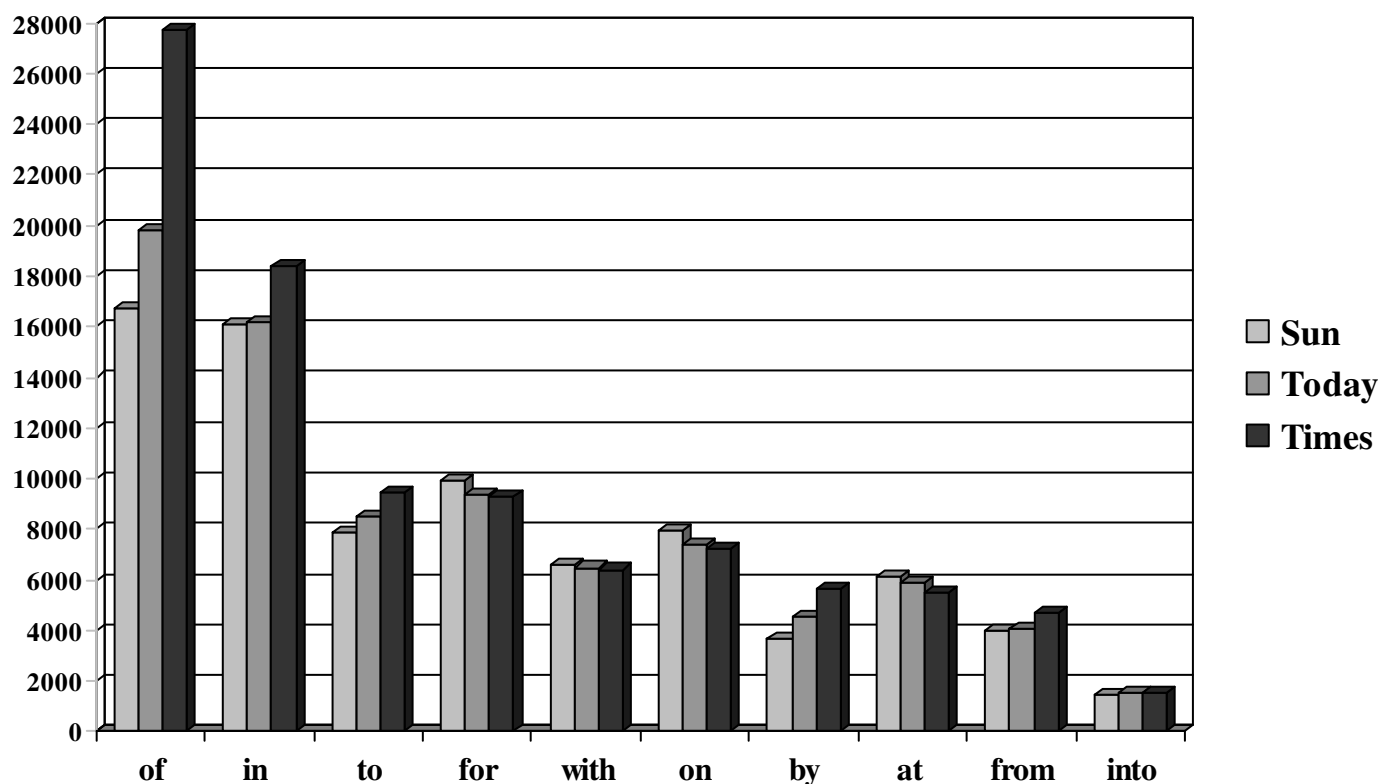| Preposition	Sun	Today	Times
Of	16,757	19,788	27,728
In	16,073	16,173	18,368
To	7,836	8,531	9,466
For	9,899	9,353	9,309
With	6,625	6,484	6,401
On	7,941	7,374	7,258
By	3,688	4,517	5,633
At	6,154	5,901	5,480
From	4,008	4,041	4,688
Into	1,473	1,538	1,512

Figure 2 *Average number per million words*

There are quite large differences between the papers as to how much they use the different prepositions; in particular for the prepositions *of*, *in* and *by* where the differences are in the thousands. And *to*, *for*, *on* and *from* have differences of more than 500. It is either *The Times* or *The Sun* which stand out, whereas *Today* is the more average of the three papers, at least concerning preposition use in comparison with the other two papers.

As is clearly visible in Figure 2, the frequency order of the prepositions does not agree between the newspaper corpora and the BNC. The reason for that is unknown, but it might have to do with the content of the corpora. The three corpora studied in this essay consist of texts from newspapers whereas the BNC consists of all kinds of written text; e.g. "extracts from regional and national newspapers, specialist periodicals and journals for all ages and interests, academic books and popular fiction, published and unpublished letters and memoranda, school and university essays" (www.natcorp.ox.ac.uk/corpus/index.xml), as well as spoken text.

5.2   Results per relative pronoun

In this section the results per *wh*-word will be presented, analysed and discussed.

5.2.1 Which

Table 3 shows the number of pied-piped and stranded prepositions occurring with *which* in the three papers. The results in the two tables in this section are presented according to frequency order of the stranded prepositions in *The Sun*.

Table 3   *Number of pied-piped and stranded prepositions for WHICH in the three papers. Numbers in italics are extrapolated, the others are actual hits.*

Paper Preposition	Sun		Today		Times	
	Pied	Strand	Pied	Strand	Pied	Strand
For	37	*20*	107	*28*	228	*63*
In	360	*14*	575	*43*	1367	0
With	32	14	63	9	213	*21*
Of	99	*11*	188	0	574	0
At	28	4	47	0	145	*8*
To	27	*3*	63	*32*	292	*24*
From	30	3	66	4	182	*4*
On	55	*2*	92	10	267	*16*
By	8	0	31	3	81	*4*
Into	2	0	10	0	48	5
Total	**678**	**71**	**1242**	**129**	**3397**	**145**

There is a big difference between the number of pied-piped and stranded prepositions, with a huge predominance for pied-piping. Concerning the pied-piped prepositions, *The Times* is the paper that uses them most. There is a big difference between *The Times* and the other two in the use of all the prepositions. The difference between the papers is not that big, in numbers, with regards to the stranded prepositions, but *Today* and *The Times* have twice (or almost twice) as many as *The Sun*.

Table 4 gives the same information as Table 3, but in percentages.

Table 4   *Number of pied-piped and stranded prepositions for WHICH in the three papers. Percentages.*

Paper Preposition	Sun		Today		Times	
	Pied	Strand	Pied	Strand	Pied	Strand
For	65	35	79	21	78	22
In	96	4	93	7	100	0
With	70	30	88	12	91	9
Of	90	10	100	0	100	0
At	88	12	100	0	95	5
To	90	10	66	34	92	8
From	91	9	94	6	98	2
On	97	3	90	10	94	6
By	100	0	91	9	95	5
Into	100	0	100	0	91	9

If we instead look at the prepositions and see how many percent of them are pied-piped and stranded we see that only a few of them get a result of more than 20% stranding. It is the prepositions *for* and *with* which have the highest percentages. Also *to* has a high percentage stranding, at least in *Today*.

When categorizing the stranded prepositions with *which* in subject domains there is no difference between the papers. The prepositions are stranded in almost all subject domains in all three papers, see Figure 3. As mentioned earlier (Section 4.0) only the actual hits are represented in this figure, not the extrapolated hits. This fact is true for Figures 4, 5 and 6 as well.
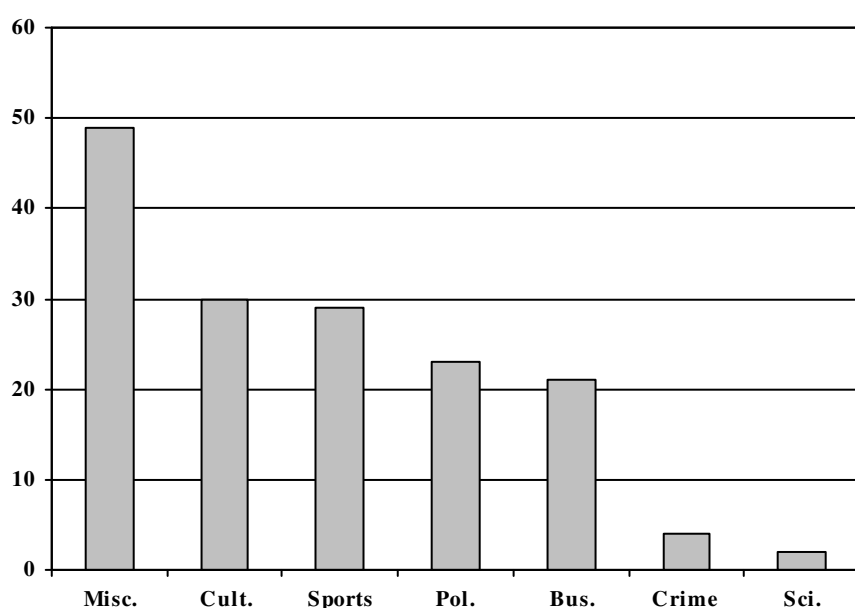

Figure 3   *Subject domains of stranded prepositions with WHICH*

Of all the stranded prepositions found in the searches there are only two examples categorized as science, and they both occur with *which*, see examples (31) and (32):

    (31)   AIT practitioners test the children's hearing and find out **which** frequencies they have trouble **with**.   (Today – science)

    (32)   By trapping and tagging red squirrels and then seeing **which** tree they feed **from**, Dr Lurz has discovered their food preferences in conifer plantations.   (Times – science)

Seeing as science is an academic domain and quite formal, and consequently a pied-piped construction is likely to be used, it is not surprising that there are not more stranded prepositions in this domain.

Miscellaneous, culture and sports are the three most frequent subject domains of stranded prepositions with *which* and especially with the prepositions *for* and *with*. Examples are (33), (34) and (35):

(33)   He said: 'I do think those people who marry into my family find it increasingly difficult to do so because of all the added pressure and finding that they're put into positions **which** they are simply not trained **for** and the strains and stresses that become in some cases almost intolerable'.   (Today – miscellaneous)

(34)   Chelsea have made the most attractive offer – one **which** I am happy **with**.
                                                                            (Sun – sports)

(35)   Joan Crawford would have loved a part like this, one **which** Ms Kidman apparently fought tooth and painted nail **for**.   (Times – culture)

That there are no more than four stranded prepositions with *which* occurring in crime stories is probably due to the fact that people, i.e. *who*, are the ones that commit crimes, not things, i.e. *which*.

Examples (33) and (34) are quotes which have been transcribed in the papers. Since it is more common to use strandings in spoken, as opposed to written, English, the quotes are likely to affect the number of stranded prepositions.

There were some indications that the domain influences the use of stranded prepositions. Science is a formal domain, consequently very few stranded prepositions were found in this domain. However, even though there are quite a few stranded prepositions in the domain miscellaneous it seems more like a coincidence if the prepositions are stranded.

If we continue and study the excerpts concerning the cases of preferred stranding (see Section 3.3) they are all found in the material, see examples (36), (37) and (38) for phrasal verbs and (39) and (40) for idiomatic constructions:

(36)   He needed to convince people in power that he had genuinely taken such pledges, **which** may **account for** the delay in giving him the green light in Test cricket.
                                                                            (Times)

(37)   Sponsors of awards will compile a shortlist, **which** will be **voted on** by a panel made up of sponsors, brokers and analysts.   (Times)

(38)   That aside the tale is depressingly familiar; the younger devoted long term mistress, the older adoring wife who has chosen not to know those details **which** are too painful to **cope with**.   (Today)

(39)   Thanks to her reputation as a jet-setting freeloader, it comes as no real surprise that she is patron of a charity **which comes up with** regular foreign jaunts.
                                                                            (Today)

(40)   Without prompting, he fills me in on the rumours **which** have somehow **passed
       me by**.   (Today)

After studying the excerpts for *for* and *with* it was found that there are almost as many
preferred preposition strandings as there are stranded constructions that have been chosen by
the author of the text. Some of the stranded prepositions *probably* could have been pied-piped
instead, see examples (41) and (42).

(41)   We got a point **which** we would have **settled for** before the game, but we didn't go out
       and look for a draw.   (Sun)

       for which we **settle**   (7 hits on Google)

(42)   That aside the tale is depressingly familiar; the younger devoted long term mistress, the
       older adoring wife who has chosen not to know those details **which** are too painful to
       cope with.   (Today)

       with which to **cope**   (13,800 hits on Google)

In example (41) the word *point* is not the same as the *point* that yields an *obligatory* pied-
piping.

       The cases where Johansson & Geisler wrote about *obligatory* pied-piping (see Section
3.4), are found in the material, see examples (43), (44) and (45):

(43)   But this protection only lasts until the menopause, exactly the **time at which**
       women begin to catch up with men.   (Sun)

(44)   I've always admired the **way in which** George Michael has handled the question of
       his sexuality until now.   (Sun)

(45)   IF MANCHESTER CITY are to avoid relegation this season, the **point at which**
       mission impossible became mission still highly improbable arrived when Nicky
       Summerbee gave the home side the lead for the first time this season.
                                                            (Times)

To sum up the section about *which* it is possible to say that the subject domain of the articles
does seem to influence the use of stranded or pied-piped prepositions to a certain extent. The
domain science is a perfect example of that. The style of the paper does seem to influence the
stranding a bit. Stranding is considered more informal than pied-piping and *The Sun* and
Today use stranded prepositions to a higher extent than *The Times*, at least if we compare the
total sums for stranded and pied-piped prepositions in Table 3. This fact agrees with the styles

of the papers. If the prepositions themselves affect the use of stranding will be discussed in Section 5.4.

5.2.2 Whom

Preposition stranding is considered informal, whereas pied-piping is considered formal. This fact is interesting regarding *whom* which also is considered formal (Ljung & Ohlander 1992: §213). With formality in mind, there should not be any stranded prepositions at all together with *whom*.

Table 5 gives the number of stranded and pied-piped prepositions occurring with *whom* in the three corpora. The results in the two tables in this section are presented according to frequency order of the stranded prepositions in *The Sun*.

Table 5   *Number of pied-piped and stranded prepositions for WHOM in the three papers.*

Preposition \ Paper	Sun Pied	Strand	Today Pied	Strand	Times Pied	Strand
With	27	3	44	1	101	2
To	11	2	29	2	72	0
For	17	1	44	0	76	2
Of	50	0	79	3	226	2
On	7	0	6	0	9	0
From	2	0	6	0	20	0
In	2	0	4	0	13	0
By	1	0	4	1	6	0
At	0	0	1	1	2	0
Into	0	0	0	0	0	0
Total	**117**	**6**	**217**	**8**	**525**	**6**

As mentioned earlier (see 5.1) there are not very many *whom* in the corpora for the papers. As with *which* a great majority of them are used with pied-piped prepositions. Table 6 gives the percentages.

Table 6 *Number of pied-piped and stranded prepositions for WHOM in the three papers. Percentages.*

Paper / Preposition	Sun Pied	Sun Strand	Today Pied	Today Strand	Times Pied	Times Strand
With	90	10	98	2	98	2
To	85	15	94	6	100	0
For	94	6	100	0	97	3
Of	100	0	96	4	99	1
On	100	0	100	0	100	0
From	100	0	100	0	100	0
In	100	0	100	0	100	0
By	100	0	80	20	100	0
At	0	0	50	50	100	0
Into	0	0	0	0	0	0

The problem with percentages is that they can get a bit skewed. If we look at the prepositions *at* and *by* they get very high numbers in *Today*, however, there are only two *at whom/whom at* and one is stranded and the other pied-piped. The situation is almost the same for *by*. Consequently we cannot totally trust the figures in percentages. If we disregard them, the prepositions with the highest number of stranding are the same as for pied-piping: *with*, *to*, *for* and *of*.

All subject domains, except science, are represented in the excerpts studied. Miscellaneous is the domain with the highest number of stranded prepositions followed by sports.
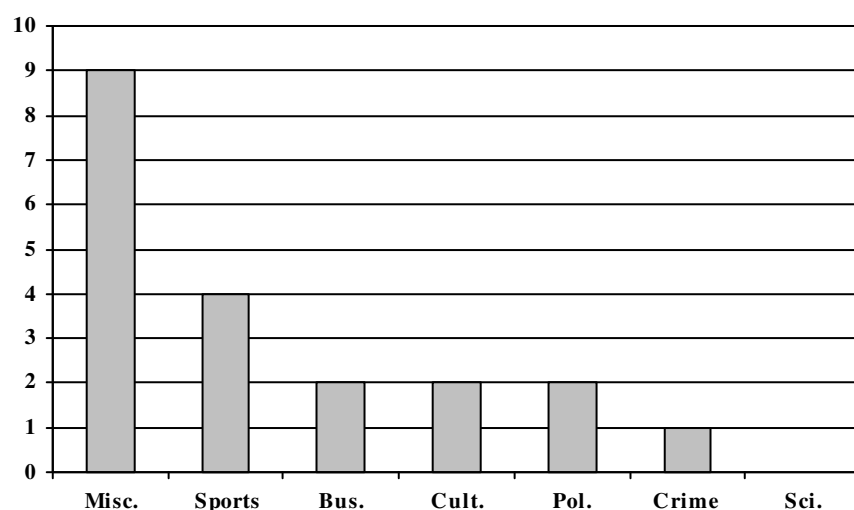

Figure 4 *Subject domains of stranded prepositions with WHOM*

The prepositions with most strandings are *with* and *of*, examples thereof are (46) and (47):

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(46) My boyfriend, **whom** I've been **with** for about six months, is 33.
(Sun – miscellaneous)

(47) Last year there was a buzz surrounding Elistica, the mercurial PJ Harvey and Blur; but the frontrunners were Bush **whom** nobody here had ever heard **of**), Portishead, the Stone Roses and Oasis pretty much in that order.   (Times – miscellaneous)

In contrast to *which* the results for *whom* do indicate that the subject domain might influence a stranded preposition. There are almost as many strandings in the miscellaneous domain as there are strandings in all the other six domains, which does indicate that journalists writing about miscellaneous topics tend to use stranding to a higher extent than journalists in the other domains.

Of the twenty stranded occurrences there are only three that are *preferred*. They all appear in *Today* and with the preposition *of*. The first one concerns the idiomatic construction *get rid of* which appears once, see example (48). On Google there are only two instances with *of whom we got rid* which shows that the stranding alternative is the preferred. One of the two instances on Google has doubled the preposition *of* and even misspelled it, see example (49):

(48) One of the reasons that I have come out of this so badly is that I was wrongly advised by my first solicitor, **whom** I had to **get rid of**.   (Today)

(49) Abandoned are the employees **of whom** we **got rid** off. (termination)
(Google)

The second and third occurrences of *preferred* stranding are the phrasal verb *accuse of*, see examples (50) and (51):

(50) Correa replaces John Davenport, **whom** he **accuses of** 'getting Lennox boxing like a robot
(Today)

(51) Hardliners renewed their wrath against Israel – and against moderate Palestinians **whom** they **accuse of** treachery in agreeing to the Norwegian-brokered peace settlement.
(Today)

In neither of these examples is it possible to pied-pipe the preposition.

The other papers do not have any *preferred* stranded prepositions with *whom* and the examples could just as well have been pied-piped, see example (52), (53) and (54):

(52) But once a boy is man enough to marry or join the Army, he and his parents, not the police, should decide **whom** he sleeps **with**.   (Sun)

or   (…) should decide **with whom** he sleeps.

(53) The truth is judged by how much you can pay and **whom** you pay it **to**.
(Sun)

or   The truth is judged by how much you can pay and **to whom** you pay it.

(54) ’Pa-paa pa-paa pa-paa pa-paa pa-pa-pa” go friends when Pearl & Deaners mention at dinner parties **whom** they work **for**.   (Times)

or   (…) mention at dinner parties **for whom** they work.

To sum up the section about *whom* it is possible to say that the subject domain of the articles does seem to influence the use of stranded prepositions. The style of the newspaper seems to have no effect at all concerning stranding with *whom*. The formality of *whom*, however, seems to affect the use of stranding, since there are very few stranded occurrences with *whom*. As mentioned earlier, the question whether the prepositions themselves affect the use of stranding or not, will be discussed in Section 5.4.

5.2.3 Who

The five most frequent stranded prepositions used with *who* are *on*, *with*, *of*, *from* and *for*. There are not very many pied-piped hits on either of them. In contrast to *which* and *whom* the prepositions with *who* are stranded more often than pied-piped. Both *The Sun* and *Today* have a majority of stranded prepositions, whereas *The Times* uses stranding and pied-piping to almost the same extent. As mentioned earlier (see 5.1) *The Times* does not use *who* as much as the other two papers. The results in the two tables in this section are presented according to frequency order of the stranded prepositions in *The Sun*.

Table 7   *Number of pied-piped and stranded prepositions for WHO in the three papers. Numbers in italics are extrapolated, the others are actual hits.*

Paper / Preposition	Sun		Today		Times	
	Pied	Strand	Pied	Strand	Pied	Strand
On	21	*105*	14	*38*	17	*2*
With	3	*44*	2	*53*	0	*14*
Of	32	*17*	19	77	27	28
From	1	*16*	1	0	0	*3*
For	1	*13*	2	*20*	0	*3*
At	2	*11*	1	6	0	0
By	1	9	0	7	0	0
Into	0	9	2	4	1	0
To	14	0	8	*16*	16	8
In	5	0	2	0	2	0
Total	**80**	**224**	**51**	**221**	**63**	**58**

Interesting to note is that *in* is not found stranded at all in any of the three corpora.

The fact that *The Times* does not use *who* as much as the other papers does not explain the quite big difference in preposition use in connection with *who*. It is more formal to use a

preposition together with *whom* and since the style of *The Times* is more formal, maybe they use the combination preposition with *whom* instead of with *who*.

Table 8 gives the percentages of the pied-piped and stranded prepositions for *who*.

Table 8   *Number of pied-piped and stranded prepositions for WHO in the three papers. Percentages.*

Paper / Preposition	Sun		Today		Times	
	Pied	Strand	Pied	Strand	Pied	Strand
On	17	83	27	73	89	11
With	6	94	4	96	0	100
Of	65	35	20	80	49	51
From	6	94	100	0	0	100
For	7	93	9	91	0	100
At	15	85	14	86	0	0
By	10	90	0	100	0	0
Into	0	100	33	67	100	0
To	100	0	33	67	67	33
In	100	0	100	0	100	0

In Table 8 we can see that there are cases when 100% are either stranded or pied-piped. As with *whom* the numbers are a bit skewed since for some of the prepositions there is only one or two hits, either stranded or pied-piped, thus 100%.

Concerning the subject domains of stranded prepositions with *who* in Figure 5, we can see that there is a big difference between sports and miscellaneous and the rest of the domains.
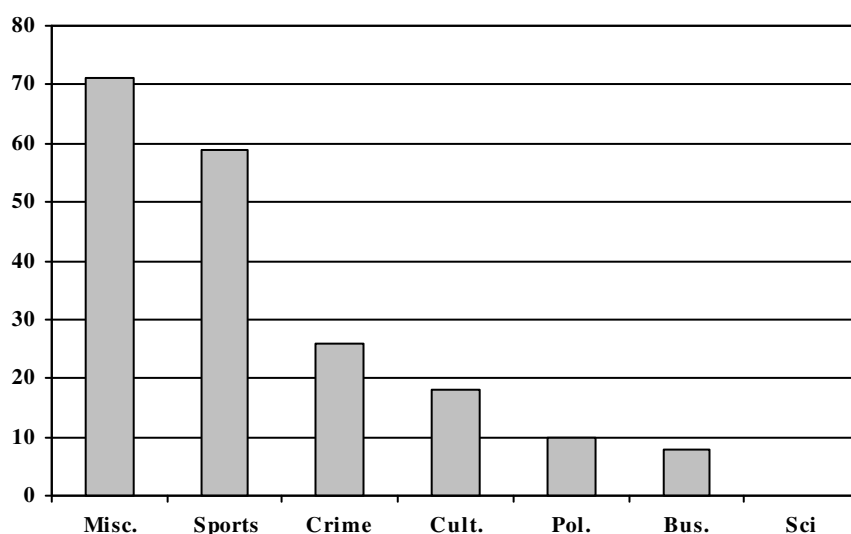

Figure 5   *Subject domains of stranded prepositions with WHO*

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The prepositions that are used the most are *on*, *of* and *with*, see (55), (56) and (57), where (56) is also a preferred stranding with a phrasal verb:

(55) An as he explains, this is what is so alien about a fairy not what we do in bed or **who** we do it **with**, but that we talk about love, we have made love the centre of our days
(Times – miscellaneous)

(56) Giles's claims back up American track gold medallist Gwen Torrence, **who** accused some of her rivals **of** using banned substances and insisted drug-taking was rife.
(Today – sports)

(57) MILLIONAIRE boxing and leisure promoter Frank Warren, 46, is a Sinatra fanatic **who** put **on** his biggest-ever London show. (Sun – miscellaneous)

As with *whom*, there seem to be a connection between the subject domain and a stranded preposition. Journalists writing about miscellaneous and sports seem to use more strandings than others, but it has also to do with the verb the journalists have chosen.

The preferred strandings are quite common in the material. Phrasal verbs such as *go on*, *keep on*, *accuse of*, *deal with*, *rely on* and so on, are numerous in the excerpts studied, see (58), (59) and (60):

(58) The first victim was the unsuspecting Eamonn Andrews, **who went on** to present the show in its early years. (Sun)

(59) Instead it was a woman she'd had run-ins with before, **who** had wrongly **accused** her **of** abusing children in a nursery school. (Today)

(60) Are they established businesses **who** can be **relied on** to maintain gas supply?
(Times)

To sum up this section it is yet again possible to say that the subject domain does seem to influence the use of stranded prepositions. As with *which* it is possible to say that the style of the newspapers might influence the use of stranded prepositions. Both *The Sun* and *Today* have more than twice as many informal stranded prepositions than pied-piped, whereas *The Times* has almost the same number of stranded as of pied-piped prepositions. The Sun and Today are considered to be more informal in their style. Whether the prepositions themselves affect the use of stranded preposition or not will be discussed in section 5.4.

5.3 The influence of subject domains on stranding

So far in this study it has not been possible to come to an obvious conclusion as to whether the subject domains influence the stranding. In order to get a clearer picture all the occurrences of stranded prepositions have been categorized in subject domains and placed in a

bar chart, see Figure 6. The two domains most common with stranded prepositions are sports and miscellaneous.
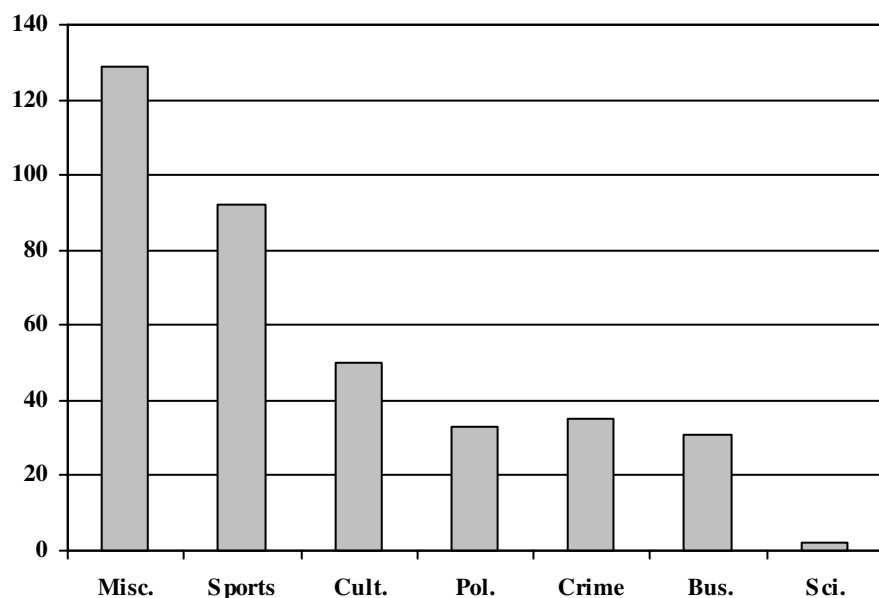

Figure 6   *Number of stranded prepositions per subject domain*

That the stranded prepositions are distributed in this way among the domains is probably due to the topics. Sports and miscellaneous (gossip and so forth) are not as formal as e.g. business and political matters. The level of formality between different sections of the newspapers probably differs quite a lot. Consequently the majority of the stranded prepositions are found in informal subject domains. Thus is it possible to say that the subject domain does influence the use of preposition stranding.

5.4   The influence of individual prepositions on stranding

In the previous sections each *wh*-word has been presented one at a time, but in order to see if the prepositions themselves influence the stranding or not we need to study all stranding and pied-piping found in this study. Table 9 gives the total sums of stranding and pied-piping per preposition. The results in the tables in this section are presented according to frequency order of the stranded prepositions.

Table 9 *Number of pied-piped and stranded prepositions*
for all wh-words and all papers. Based on extrapolated
numbers and actual hits.

Preposition	Pied-piped	Stranded
On	488	173
With	485	161
For	512	150
Of	1294	139
To	532	87
In	2330	57
At	226	30
From	308	30
By	132	24
Into	63	18
TOTAL	6370	869

As is clearly visible in Table 9 a majority of the prepositions are used pied-piped. The prepositions *on*, *with*, *for* and *of* are the only ones with more than a hundred occurrences, which does not say much, but Table 10 gives the total percentages of stranding and pied-piping in this study.

Table 10 *Number of pied-piped and stranded prepositions*
for all wh-words and all papers. Based on extrapolated
numbers and actual hits. Percentages.

Preposition	Pied-piped	Stranded
On	74	26
With	75	25
For	77	23
Of	90	10
To	86	14
In	98	2
At	88	12
From	91	9
By	85	15
Into	78	22

There are four prepositions that are used stranded in more than 20% of their occurrences: *on*, *with*, *for* and *into*. These four prepositions are not the four most common in the corpora studied. In fact, *into* is the least common of the ten studied prepositions. Since the occurrences of *into* in this study are quite few, consequently there do not need to be very many stranded occurrences to get a high percentage.

A fact worth noting is that *in*, which is the second most frequent preposition in this study, is stranded only in 2% of its occurrences.

If the stranded prepositions are *preferred* strandings to a high extent, this could be a clue to whether the preposition itself influences the use of stranding or not. Therefore, all the excerpts of the stranded prepositions were studied in order to get an idea of what kind of stranding they gave examples of; i.e. if they were *preferred* or *dispreferred*. After a closer look at the four most stranded prepositions it was discovered that in 53% of the occurrences these prepositions were *preferred* strandings, e.g. used in phrasal verbs such as *care for*, *get into*, *ask for*, *rely on*, *deal with*, and so on. However, when analysing the six least stranded prepositions the number of *preferred* strandings were as high as 61%. Table 11 gives the percentages of preferred and dispreferred strandings per preposition.

Table 11 *Preferred and dispreferred strandings. Percentages.*

Preposition	Preferred	Dispreferred
On	75	25
With	39	61
For	44	56
Of	77	23
To	0	100
In	36	64
At	72	28
From	61	39
By	80	20
Into	62	38

With these figures we can conclude that six of the prepositions (*on*, *of*, *at*, *from*, *by* and *into*) are likely to occur in phrasal verbs and idiomatic constructions that demand a stranded preposition. However, only two of these, *on* and *into*, have a higher occurrence of stranded prepositions than 20%, which leads to the conclusion that preferred strandings do not automatically yield a high occurrence percentage.

To conclude this section it is possible to say that the prepositions themselves do seem to influence the use of stranding. The prepositions *on*, *with*, *for* and *into* are more likely to appear as stranded prepositions, whereas *in* is more likely to appear pied-piped.

6.   Conclusion

This study has examined to what extent preposition stranding is used in three different UK newspapers (*The Sun*, *Today* and *The Times*) and what factors influence the use of stranding.

Ten of the most frequent prepositions were studied, using the subcorpora *Sunnow*, *Today* and *Times* from the BNC. The hypothesis was that pied-piping is more common than preposition stranding, a hypothesis that was confirmed.

As regards what factors influence the stranding the stranded prepositions were categorized into subject domains. A connection was discovered between the use of stranding and the subject domain of the articles, with more informal domains such as sports and miscellaneous showing a higher number of strandings than the other domains.

The styles of the newspapers were found influential to a certain extent on the use of stranding. *The Times* is considered more formal and the use of preposition stranding is less common in comparison with the two others.

The prepositions themselves influence the use of preposition stranding. When analysing the prepositions it was found that there are prepositions that are more likely to appear stranded and others that are unlikely to appear stranded.

A possible topic for future studies on preposition stranding could be formal versus informal contexts. It would be interesting to study the difference between formal texts such as academic texts in comparison with informal texts such as personal letters.

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