

VERBAL FORMS IN SPECIALIZED WRITTEN DISCOURSE

GORDANA DIMKOVIĆ-TELEBAKOVIĆ

University of Belgrade

Abstract: The frequency and the distribution of verbal forms are analyzed *in eleven professional texts for six fields of transport and traffic engineering, in a corpus of 7,215 lexemes. The analysis shows that passive forms, for example, occur far less than active forms. Certain functions and meanings of the most frequently used verbal forms are then discussed.*

Keywords: *transport and traffic engineering settings, verb forms*

1. Introduction

Swales (1997:131-2) provides us with a list of scientists who have examined, among other linguistic phenomena, tenses, modal verbs, voices and aspects in English research articles (RAs) in various specialized areas. His survey shows that the fields of transport and traffic engineering have rarely been investigated. I therefore consider this analysis justifiable on both practical and theoretical grounds.

This article is, in a way, a continuation of the author's paper published in *Romanian Journal of English Studies* (2008:113-123), and it reports on some results obtained from a more comprehensive analysis (for details see Dimković-Telebaković 2003:252-309).

2. Aims and Corpus

Verbal forms are explored in specialized written discourse in order to reveal how often certain forms occur and what functions and meanings they may have when used in specialist texts in the fields of transport and traffic engineering.

The corpus is built from eleven specialized texts, issued in British and American journals, magazines and books (see Annex I and Dimković-Telebaković 2003, 2009). The corpus comprises 7,215 lexemes distributed in the analyzed texts as follows: postal and telecommunications traffic (PTT) – 960 words, air traffic (AT) – 1,354 lexical units, road and

urban transport (RUT) – 1,303 lexemes, railway transport (RT) – 1,145 words, waterways transport (WT) – 814 lexical units, and intermodal transport (IT) – 1,639 words.

The following verbal forms are looked at: voice, aspect, tense, mood; both finite and non-finite forms are discussed. Modal verbs are paid special attention.

3. Results

3.1. The Frequency and Distribution of Verbal Forms in Eleven Texts Analyzed

After the frequency and distribution of verbal forms have been examined, the achieved results are presented in *Table 1* and *Table 2*. The tables illustrate that verbal forms are very often used in English, i.e. 2,208 lexemes make up verbal forms out of 7,215 lexical units analyzed. In other words, the ratio between nonverbal and verbal forms in the texts is 69.4% versus 30.6%, as shown in *Diagram 1*.

Table 1 Verbal forms in six fields of transport and traffic engineering (according to frequency criterion)

Verbal forms	PTT	AT	RUT	RT	WT	IT	Total	%
	Number							
Actives	73	130	10	82	79	133	603	27.3%
Passives	35	36	52	25	30	30	208	9.4%
Present Simple	33	42	56	47	39	91	308	13.9%
Present Continuous	3	3	3	2	-	9	20	0.9%
Present Perfect	4	6	3	6	3	9	31	1.4%
Past Simple	2	24	27	6	5	21	85	3.8%
Past Continuous	-	-	-	-	-	1	1	0.05%
Past Perfect	-	1	1	-	-	-	2	0.1%
Past Perfect Continuous	-	-	2	-	-	-	2	0.1%
Future Simple	1	10	5	14	4	5	39	1.8%
Present Infinitives	33	73	59	32	28	38	263	12.0%
Perfect Infinitives	3	1	-	13	3	6	26	1.2%
Present Participles	16	15	23	23	16	38	131	5.9%
Perfect Participles	-	-	3	-	-	-	3	0.15%
Past Participles	36	43	62	43	29	58	271	12.3%
Gerunds	4	14	12	12	8	28	78	3.5%
Imperatives	-	-	-	1	-	-	-	0.05%
Subjunctives	-	-	-	-	-	1	1	0.05%
Modals	13	29	20	14	9	11	96	4.3%
Conditionals	1	18	13	2	-	5	39	1.8%
							2,208	100.0%

Table 1, *Table 2* and *Diagram 2* demonstrate that active forms are more often used than passive forms (27.3%: 9.4%, i.e. a ration of nearly 3 : 1). The relation between actives and passives, as used in various fields of traffic and transport engineering, is presented in *Diagram 4*

and *Diagram 5*. Tarone et al. (1981) claim that active or passive forms are chosen based on rhetorical purposes. Bazerman (1984:177) maintains that verbal forms are used to convey certain meanings in written discourse.

Tense usage also proves that this is true (see Dimković-Telebaković 2008:120-1). Eight English tenses are looked at here, which is illustrated in *Table 1* and *Table 2*. The former table demonstrates verbal form frequency, and the latter their distribution. The most frequently used tense in the texts is the Present Simple (13.9%). Past participles (12.3%) and present infinitives (12.0%) are also often used in the analyzed texts, whereas the present participle (5.9%) occurs considerably less. Quirk et al. (1985, ch. 3) state that neutral terms (i.e. “-ing forms” and “-ed/-en forms”) are more often employed in the relevant literature than the terms “present” and “past participles”, but I use the latter to differentiate present participles from gerunds. *Diagram 3* shows how frequently these forms occur in the texts.

Table 2 Verbal forms in six fields of transport and traffic engineering (according to verbal form distribution)

Verbal forms	PTT	AT	RUT	RT	WT	IT	%
Actives	28.4%	29.2%	23.7%	25.5%	31.2%	27.5%	27.3%
Passives	13.6%	8.0%	11.6%	7.8%	11.9%	6.2%	9.4%
Present Simple	12.8%	9.4%	12.5%	14.6%	15.4%	18.8%	13.9%
Present Continuous	1.2%	0.7%	0.7%	0.6%	-	1.9%	0.9%
<i>Table 2 (continued)</i>							
Present Perfect	1.6%	1.3%	0.7%	1.9%	1.2%	1.9%	1.4%
Past Simple	0.8%	5.4%	6.0%	1.9%	2.0%	4.3%	3.8%
Past Continuous	-	-	-	-	-	0.2%	0.05%
Past Perfect	-	0.2%	0.2%	-	-	-	0.1%
Past Perfect Continuous	-	-	0.4%	-	-	-	0.1%
Future Simple	0.4%	2.2%	1.1%	4.3%	1.6%	1.0%	1.8%
Present Infinitives	12.8%	16.4%	13.2%	9.9%	11.1%	7.9%	12.0%
Perfect Infinitives	1.2%	0.2%	-	4.0%	1.2%	1.2%	1.2%
Present Participles	6.2%	3.4%	5.1%	7.1%	6.3%	7.9%	5.9%
Perfect Participles	-	-	0.7%	-	-	-	0.15%
Past Participles	14.0%	9.7%	13.9%	13.4%	11.5%	12.0%	12.3%
Gerunds	1.6%	3.1%	2.7%	3.7%	3.2%	5.8%	3.5%
Imperatives	-	-	-	0.3%	-	-	0.05%
Subjunctives	-	-	-	-	-	0.2%	0.05%
Modals	5.0%	6.5%	4.5%	4.3%	3.5%	2.3%	4.3%
Conditionals	0.4%	40%	2.9%	0.6%	-	1.0%	1.8%

							100,0%

Modals (4.3%), the Past Simple (3.8%), gerunds (3.5%), the Future Simple (1.8%), conditionals (1.8%), the Present Perfect (1.4%) and perfect infinitives (1.2%) are less frequently

used. The Present Continuous (0.9%), perfect participles (0.15%), the Past Perfect (0.1%), the Past Perfect Continuous (0.1%) and the Past Continuous (0.05%) are rarely used, as well as imperatives (0.05%) and subjunctives (0.05%). Barber (1962) and Wingard (1981) also claim that continuous verbal forms are very seldom in use in professional and scientific written discourse.

Diagram 1 Verbal forms related to other lexical units in specialized texts in transport and traffic fields

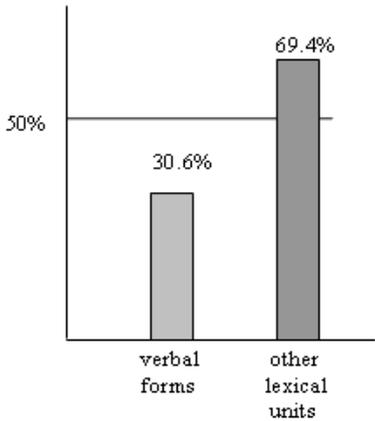


Diagram 2 The relation between active and passive verbal forms in specialized texts in transport and traffic fields

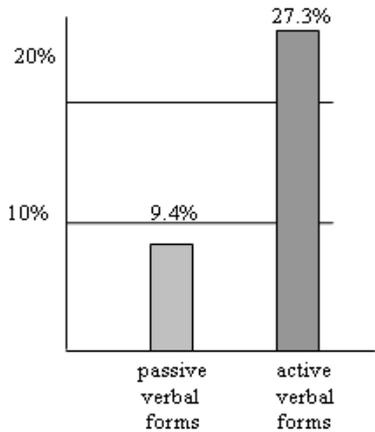
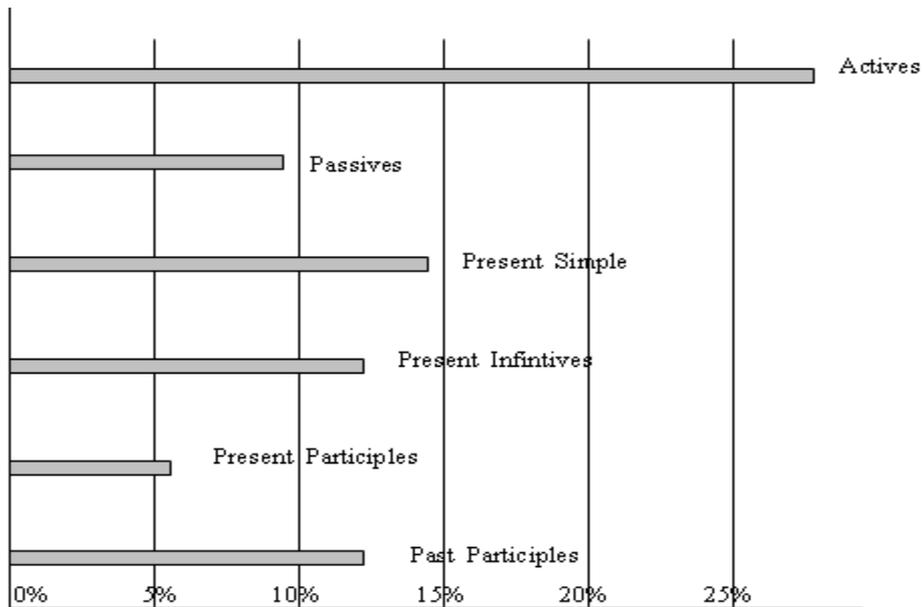
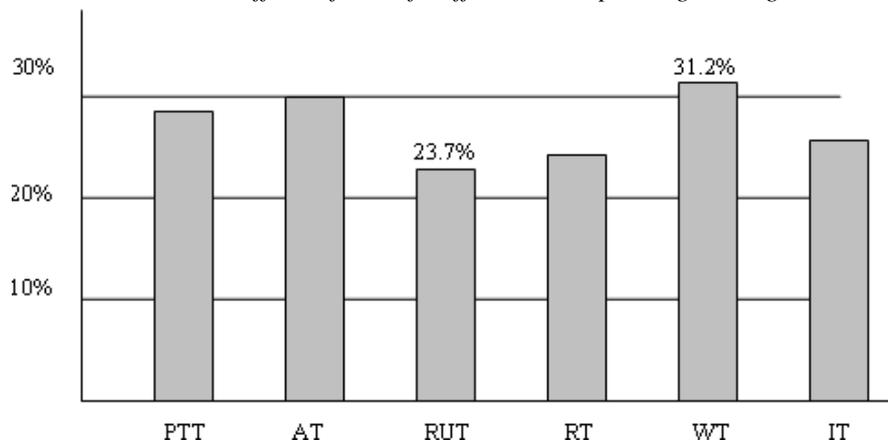


Diagram 3 The most commonly used verbal forms in eleven specialized texts in traffic fields



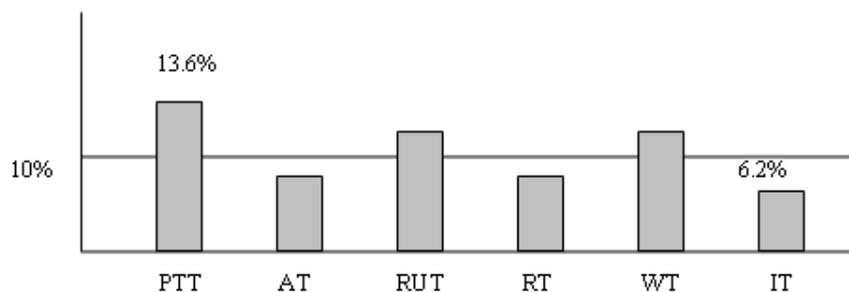
As far as verbal form distribution is concerned, the highest percentage of active forms (31.2%) is identified in waterways transport texts, while the lowest rate (23.7%) is displayed by road and urban transport texts. This is shown in *Diagram 4*.

Diagram 4 Active verbal form distribution in different fields of traffic and transport engineering



PTT texts, on the other hand, contain the highest value for passive forms (13.6%), and intermodal transport texts the lowest value (6.2%). *Diagram 5* illustrates these results.

Diagram 5 Passive verbal form distribution
in different fields of traffic and transport engineering



3.2. Some Functions and Meanings of the Most Frequently Used Verbal Forms in Two Specialist Texts

This section of the article reports on results obtained from two texts – one on air traffic and the other on telecommunications traffic (see Dimković-Telebaković 2003:258, 268). According to the analysis, the most commonly used verbal forms are the Present Simple, past participles and present infinitives. Here are the functions and meanings of these verbal forms identified in the two texts:

The *Present Simple* expresses the present state and a specific situation (e.g. “works”; see also Malcolm 1987), may refer to topic generalizations (e.g. “is”; cf. Malcolm 1987), can make claims (e.g. “is”, “becomes”), can explain previous claims (e.g. “is based”, “depend”, “is said”, “prevents”, “is called”), can refer to topic specification (e.g. “is posed”, “is”, “illustrates”, “receives”, “has”, “receive”, “send”, “transmits”, “repeats”, “reinforces”), can express ability (e.g. modal active “can send”, modal passive “can be transmitted”), and can express necessity (e.g. modal passives “must be encoded” and “must be carried”).

Past participles are used as part of the present passive (e.g. “is posed”, “is based”, “is called”), of the past passive (e.g. “was launched”, “were introduced”, “were called”, “were coded”), of the passive infinitive (e.g. “to be equipped”), as part of the Past Perfect (e.g. “had shown”), or of the Present Perfect (e.g. “have attracted”, “has consisted of”, “has been designed”), to shorten passive relative clauses (e.g. “faced”, “equipped”, “shown”), as adjectives (e.g. “advanced”, “engineed”, “transmitted”), as part of set phrases (e.g. “at a specified carrier frequency”), and as part of modal passives (e.g. “must be encoded”, “can be transmitted” and “must be carried”).

Present infinitives are mainly used to express aims (e.g. “to fly”, “to become”, “to be equipped”, “to fulfil or develop”, “to utilize”, “to develop”, “to choose”, “to build”, “to send”, “to provide”), as part of the Future Simple (e.g. “will be”), as part of present modal (e.g. “can

send”), as part of the Future-in-the-Past (e.g. “would have”, “would cost”, “would derive”), and as part of impersonal constructions (e.g. “is to be sent”).

4. Conclusions

The case study shows that nearly 1/3 of all forms, used in the examined specialized written texts, are verbal forms. This finding points to the conclusion that these forms play a very important role in English specialist written discourse in the fields of transport and traffic engineering. The obtained results also reveal that actives occur more often (27.3%) than passives (9.4%) in these settings. Apart from active and passive forms, the most frequently employed verbal forms in the texts are the Present Simple (13.9%), past participles (12.3%) and present infinitives (12%), whereas present participles (5.9%), modals (4.3%), the Past Simple (3.8%) and gerunds (3.5%) are less used. Conditionals (1.8%), the Future Simple (1.8%), the Present Perfect (1.4%), perfect infinitives (1.2%), the Present Continuous (0.9%) and the Past Perfect Continuous (0.1%) and perfect participles (0.15%), the Past Continuous (0.05%), subjunctives (0.05%) and imperatives (0.05%) are even less frequently used in the analyzed texts.

Based on the analysis of only two texts out of eleven, the most frequently used verbal forms proved to have the following meanings and functions: the *Present Simple* can express the present state and a specific situation, can refer to topic generalizations, can make claims or explain the previous claims, can refer to topic specification, and can express ability or necessity, when combined with modals. *Past participles* can be used as adjectives, as part of present or past passive, as part of passive infinitives, as part of modal passives, as part of the Present or Past Perfect, as part of certain set phrases, and to shorten passive relative clauses. *Present infinitives* are mainly used to express aims, or can be used as part of the Future Simple, as part of present modal, as part of the Future-in-the-Past, and as part of impersonal constructions.

These results have teaching implications. ESP practitioners should help their students learn verbal form usage in specialist written discourse appropriately.

References

- Barber, C.L. 1962. ‘Some measurable characteristics of modern scientific prose’ in *Contributions to English Syntax and Phonology*. Stockholm: Almqvist and Wiksell, pp. 1-23.
- Bazerman, C. 1984. ‘Modern evolution of the experimental report in physics: spectroscopic articles’ in *Physical Review*, 1893-1980, *Social Studies in Science*. 14, pp. 163-96.

- Dimković-Telebaković, G. 2003. *Savremeni engleski jezik struke i nauke* [*Contemporary English for Occupation and Science*]. Novi Sad/Moskva: Naše slovo.
- Dimković-Telebaković, G. 2008. 'English Tenses in Use' in *Romanian Journal of English Studies*. 5, pp.113-123.
- Dimković-Telebaković, G. 2009 (1995). *English in Transport and Traffic Engineering*. 5th edn. Beograd: Saobraćajni fakultet.
- Malcolm, L. 1987. 'What rules govern tense usage in scientific articles?' in *English for Scientific Purposes*. vol. 6/1, pp. 31-43.
- Quirk, R., S. Greenbaum, G. Leech, and J. Svartvik. 1985. *A Comprehensive Grammar of the English Language*. Harlow: Longman.
- Swales, J.M. 1997 (1990). *Genre Analysis: English in academic and research settings*. Cambridge: CUP.
- Tarone, E., S. Dwyer, S. Gillette, and V. Icke. 1981. 'On the use of the passive in two astrophysics journal papers' in *ESP Journal*. vol. 1/2, pp. 123-40.
- Wingard, P. 1981. 'Some verb forms and functions in six medical texts' in *English for Academic and Technical Purposes: Studies in Honor of Louis Trimble*. L. Selinker, E. Tarone and V. Hanzeli (eds.). Rowley, Mass.: Newbury House, pp. 53-64.

Annex I

The following texts are analyzed in this article:

'New Airbus Industrie Airliners on Course for Long-haul Era', *ICAO Journal*, January 1992; 'Evolution of the Commercial Airliner', *Scientific American*, September 1995; 'Faster Interchange', *Cargoware International*, April 1992; 'Rail Linkages to Ship, Barge and Truck', *Transportation Research*, March 1992; 'Siemens Opens LRV Plant', *Progressive Railroading*, April 1992; *The European Project ERTMS*, UIC and CENELEC, Stockholm, 1993; 'Protecting the Entire Ship', *Marine Log*, February 1993; 'Port Equipment and Services', *The Dock and Harbour Authority*, October 1988; 'Some Basic Features of Satellite Communications', *Understanding Communications Systems* by D.L. Cannon and G. Luecke; 'Intelligent Network Overview', *IEEE Communications Magazine*, March 1993; 'Getting a Ford HEV on the Road', *IEEE Spectrum*, July 1995.

The texts can be found in Dimković-Telebaković 2003 and 2009.

Notes on the author:

Dr. Gordana Dimković-Telebaković is an Associate Professor of English at the University of Belgrade. She is the author of the following books: *Language and Upbringing* (1993), *Contemporary English for Occupation and Science* (2003), *Some Explorations in Fuzzy Semantics* (2007), *English in Transport and Traffic Engineering* (5th ed. 2009), *Tests, Examination Papers and Essay Topics in English* (5th ed. 2009), *Some Elements of English Grammar* (2010).