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Proper Names as a High Transitivity Feature: Testing of the Transitivity Hypothesis

1 Introduction

The syntagmatic aspects of proper names usage are largely language-specific.[1] However, there are hypotheses, proposed at the Transitivity Hypothesis (hereinafter TH) framework,[2] which predict a certain universal syntactic behaviour of proper names. To my knowledge, these hypotheses have not been empirically tested yet. Therefore, the aim of this article is to test some of them, concretely hypotheses predicting property of relationships between proper names, on the one hand, and the aspect, negation/affirmation, and dative object, on the other.

2 The Transitivity Hypothesis

The TH is one of the influential theories of transitivity, especially in cognitive linguistics.[3] According to the authors of the TH, "[t]ransitivity is a crucial relationship in language, having a number of universally predictable consequences in grammar".[4] Furthermore, transitivity is viewed as a property of a sentence which comprises ten components (see Table 1) – each component involves a different facet of the effectiveness or intensity with which the action is transferred from one participant to another. So, transitivity "can be broken into its component parts (…), they allow clauses to be characterized as MORE or LESS Transitive: the more features a clause has in the 'high' column in 1A–J, the more Transitive it is".[5] The most important aspect of the TH lies in the prediction which hypothesizes the relationships between the components: "If two clauses (a) and (b) in a language differ in that (a) is higher in Transitivity according to any features 1A-J, then, if concomitant grammatical or semantic difference appears elsewhere in the clause, that difference will also show (a) to be higher in Transitivity".[6] Component features should co-vary extensively and systematically, so "whenever two values of the transitivity components are necessarily present (...) they will agree in being either both high or both low in value".[7] The co-variation has to be viewed not in the strict sense, but as a tendency.[8]

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1 HANKS, P. Proper Names: Linguistic Status. In *The Encyclopedia of Language and Linguistics*. Oxford 2006, p. 3370.
2 HOPPER, P., THOMPSON, S. Transitivity in Grammar and Discourse. *Language* 56, 1980, p. 251–299.
3 cf. GEERAERTS, D., CUYCKENS, H. (eds.) *The Oxford Handbook of Cognitive Lingusitics*. Oxford 2007.
4 HOPPER, P., THOMPSON, S., supra note 2, p. 251.
5 HOPPER, P., THOMPSON, S., supra note 2 , p. 253.
6 HOPPER, P., THOMPSON, S., supra note 2 , p. 255.
7 HOPPER, P., THOMPSON, S., supra note 2 , p. 254.
8 THOMPSON, S., HOPPER, P., Transitivity, clause structure, and argument structure: Evidence from conversation. In *J. Bybee & P. Hopper (eds.) Frequency and the Emergence of Linguistic Structure*. Amsterdam, Philadelphia 2001, p. 27–56.

Table 1: Transitivity parameters

		high T	low T
A	PARTICIPANTS	2 or more	1
B	KINESIS	action	non-action
C	ASPECT	telic	atelic
D	PUNCTUALITY	punctual	non-punctual
E	VOLITIONALITY	volitional	non-volitional
F	AFFIRMATION	affirmative	negative
G	MODE	realis	irrealis
H	AGENCY	A high in potency	A low in potency
I	AFFECTEDNESS of O	O totally affected	O not affected
J	INDIVIDUATION of O	O highly individuated	O non-individuated

3 The Transitivity Hypothesis and proper names

Proper names are mentioned with regard to two parameters in the TH, viz. AGENCY and INDIVIDUATION of object. In this study only the parameter INDIVIDUATION of object is observed.

According to the TH, "[a]n action can by more effectively transferred to a patient which is individuated than to one which is not".[9] Properties of nouns which indicate high individuation of object (left column) and low individuation (right column) are shown in Table 2.

Table 2: Properties of nouns which indicate high and low individuation of object.

INDIVIDUATED	NON-INDIVIDUATED
proper	common
human, animate	inanimate
concrete	abstract
singular	plural
count	mass
referential, definite	non-referential

Since the presence of the proper name object in the sentence is considered as a high transitivity feature of the parameter INDIVIDUATION, proper name objects should co-vary extensively and systematically with the other high transitivity features; this study scrutinizes the relationships between proper names, on the one hand, and the aspect, negation/affirmation, and indirect dative object[10], on the other. These parameters are not chosen accidentally; first, they belong in

9 HOPPER, P., THOMPSON, S., supra note 2, p. 253.

10 Compare HOPPER, P., THOMPSON, S., ibid., p. 259: "INDIRECT OBJECTS should in fact be Transitive O's [objects] rather than what might be called 'accusative' O's". For more details see ČECH,

independent parameters,[11] second, they are formally well distinguishable.

4 Data and methodology

The data used in this study come from the Prague Dependency Treebank 2.0 (hereinafter PDT).[12] This corpus is annotated on morphological, syntactic, and semantic level; for the purpose of this analysis data annotated on the analytical layer were used (cca 1.5 mil tokens).

The PDT annotation distinguishes several types of proper names, concretely

- given name;
- surname, family name;
- member of a particular nation, inhabitant of a particular territory;
- geographical name;
- company, organization, institution;
- product;
- other proper name: names of mines, stadiums, guerilla bases, etc.[13]

In this study, proper names have been considered as whole, so, all types were taken into account. It is necessary to note that the PDT consists only of articles in newspapers and journals, therefore, all conclusions are valid just for this text type.[14]

As for the methodology, the frequency characteristics were observed.[15] Therefore, tested hypotheses were formulated stochastically:

1. *proper name objects have a tendency to occur more frequently with perfective predicate verbs than common noun objects*;
2. *proper name objects have a tendency to occur more frequently with affirmative predicate verbs than common noun objects*;
3. *proper name objects have a tendency to occur more frequently as indirect dative objects than as direct accusative objects*.

In all cases the frequency distribution in the PDT[16] was observed and differences between proper

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R., Testing of the Transitivity Hypothesis: Double Object Verbs and Aspect in Czech. (2009, in press)

11 cf. OLSEN, M. B., MACFARLAND, T., Where's Transitivity? Paper presented at the *Seventh Annual Formal Linguistic Society of Mid-america conference*, May 17–19 1996, The Ohio State University.

12 HAJIČ, J. et al., *Prague Dependency Treebank 2.0*. Philadelphia, 2006.

13 For more details see HANA, J. et al. *Prague Dependency Treebank 2.0. Manual for Morphological Annotation*. ÚFAL Technical Report No. 2005-27. 2005. [cit. 2009-10-14]. Available from WWW: http://ufal.mff.cuni.cz/pdt2.0/doc/manuals/en/m-layer/html/index.html

14 Compare BIBER, D. et al., *The Longman Grammar of Spoken and Written English*. London 1999, where the impact of the text types on grammar is well illustrated.

15 Although the frequency approach is not suggested in HOPPER, P., THOMPSON, S., supra note 2,frequency is used as a main testing parameter for the TH in THOMPSON, S., HOPPER, P., supra note 8.

16 Particular corpus queries can be sent upon request (radek.cech@osu.cz)

name objects and common name objects distributions were tested by the chi-square test, see the next section.

5 Results

5.1 Proper names and aspect

According to the hypothesis, there should be a co-variation between proper name objects and perfective verbs. So, the frequency of proper names objects which are dependent on perfective and imperfective predicative verbs, respectively, were observed. The same procedure was used for common nouns, see Table 3.

Table 3

	perfective verb	imperfective verb	percentage of proper names objects
proper name object	382	270	58.6%
common noun object	5255	5878	47.2%

$\chi^2 = 32.01$

Table 3 shows that proper name objects have a tendency to occur more frequently with perfective verbs than common noun objects, and that differences between distributions are statistically significant, at the significant level p=0.05.[17] So, the hypothesis is corroborated.

5.2 Proper names and affirmation/negation

Proper name objects should appear more frequently with affirmative predicate verbs than common noun objects. As Table 4 shows, the prediction is not false and distributions are statistically significant, at the significant level p=0.05.

Table 4

	affirmative predicate	negative predicate	percentage of proper names objects
proper name object	744	48	93.9%
common noun object	13794	1215	91.9%

$\chi^2 = 4.23$

5.2 Proper names and indirect/dative object

The relationship between proper names and the type of object (i.e., direct vs. indirect) is probably

17 For probability level p=0.05 and degrees of freedom df=1 chi-square critical value equals 3.841.

the only one of the observed relationships which is intuitively expected. It is well known that indirect dative objects have a strong tendency to occur as a recipient, beneficient, possessor, expirient, and iudicant, and that inanimate indirect objects connect to only a few predicates in Czech.[18] Therefore, the semantics of indirect objects allows to anticipate the tendency of proper name objects to occur more frequently as indirect objects than common noun objects. The results corroborate the prediction – differences between distributions are statistically significant, at the significant level p=0.05, see Table 5.

Table 5

	indirect dative object	direct accusative object	percentage of proper names objects
proper name objects	130	252	34.0%
common noun objects	540	4715	10.3%

$\chi^2 = 191.89$

6 Conclusions

The study reveals that there are statistically significant differences between the syntactic behaviour of proper name objects and common noun objects, with regard to the aspect and affirmation/negation of predicative verb, and type of object (direct vs. indirect). Therefore, the results corroborate the prediction given by the TH.

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18 GREPL, M., KARLÍK, P. *Skladba češtiny*, Olomouc 1998, p. 245-246.

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Summary

The aim of the article is to test empirically hypotheses which predict syntactic behaviour of proper names, concretely relationships between proper name objects, on the one hand, and aspect, affirmation/negation, and indirect object, on the other. These hypotheses were formulated at the Transitivity Hypothesis framework. The language data stored at the Prague Dependency Treebank were used for the testing.